MORRISON HERSHFIELD

REPORT

DESIGN AND CONSTRUCTION REPORT

Highway 138 Intersection Improvements at Headline Road

G.W.P. 4004-21-00

W.P. 4034-21-01

Presented to:

Ministry of Transportation
1355 John Counter Blvd. P.O. 4000
Kingston, ON
K7L 5A3

Ontario

Project No. 201979405 December 18, 2023

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December 18, 2023
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December 18, 2023
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Date

Ontario

Public Record

This Design and Construction Report (DCR) has been made available online for public review on the project website: http://www.highway138roundabout.ca/

We are interested in hearing any comments or concerns that you may have with the study. Comments must be received no later than January 26, 2024. Please send any comments or requests to either of the following:

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Information will be collected 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 any accessibility requirements in order to participate in this project, please contact one of the Project Team members listed above.

Ce document hautement spécialisé n'est disponible qu'en anglais en vertu du règlement 671/92, qui en exempte l'application de la Loi sur les services en français. Pour de l'aide en français, veuillez communiquer avec le ministère des Transports, Bureau des services en français au: 905-704-2045 ou 905-704-2046.

For their records in accordance with the Class Environmental Assessment (EA) process, the following office of the Ministry of the Environment, Conservation and Parks has received notice of the Study Completion:

Ministry of the Environment, Conservation and Parks
Kingston Office
1259 Gardiners Road, Unit 3
Kingston, ON K7M 8S5

EXECUTIVE SUMMARY

Morrison Hershfield Limited (MH) was retained by the Ontario Ministry of Transportation (MTO) to prepare the Detail Design and Class Environmental Assessment (EA) Study for intersection improvements to the Highway 138 and Headline Road (County Road 44) intersection in the Township of South Stormont, in the United Counties of Stormont, Dundas and Glengarry. The project generally includes:

- Construction of a single-lane roundabout and approaches designed with a radius that will accommodate large vehicles.
- Modifications to the intersection alignment (shift to the east) to improve sightlines to the intersection.
- Installation of new concrete islands with curb and gutter on roundabout approaches and modification of entrance connections.
- Drainage improvements including general grading and clean out of ditches, culvert flushing and cleanout, removal of vegetation, and culvert replacements and storm sewer replacement.
- New illumination (lighting) at the roundabout and approaches.
- Landscaping along the approaches and within the central island.
- Utility relocations to facilitate the new roundabout footprint.

Construction works as described within this DCR are expected to commence in Spring 2024.

This study has followed the approved planning process for a Group B project in accordance with the *Class Environmental Assessment for Provincial Transportation Facilities* (2000) with the opportunity for public input throughout the study. This DCR has been prepared to provide background information about the study, present the proposed improvements to Highway 138 (at the Headline Road Intersection in the United Counties of Stormont, Dundas and Glengarry), describe construction staging and proposed mitigation, and provide an overview of the public consultation that has occurred throughout the study to date.

This study was initiated as an outcome of the Transportation Environmental Study Report (TESR) prepared for “Highway 138 Improvements from Highway 401 to Highway 417,” prepared by Stantec Consulting Ltd. in June 2017.

The consultation process involved several stakeholders including regulatory agencies, Indigenous communities, local interest groups, and members of the public. A “Notice of Study Commencement” was published in local area English and French newspapers including the *Cornwall Standard Freeholder* (English) on December 18, 2021, and *Cornwall Express* (French) on December 22, 2021. A “Notice of Online Public Information Centre” was published in the *Cornwall Standard Freeholder* (English) on September 12, 2023, and the *Alexandria Glengarry News* (English) and *Cornwall Express* (French) on September 13, 2023. Furthermore, a project website (www.highway138roundabout.com) was used as a mechanism to engage those with an interest in the project. A targeted 14-day Online Public Information Centre (PIC) was held between September 12 to September 26, 2023, to engage members of the public to provide feedback on the design.

Highway 138 will be closed for approximately four (4) weeks in Spring 2024 to allow for the construction of the roundabout. During this period, a detour through local roads will be implemented. Short term closures to private property entrances will be required during construction. The contractor will co-ordinate these closures with private property owners. All other work will be conducted within the MTO right of way and municipal roadways.

A number of protection and mitigation measures were identified and developed to address potential impacts resulting from the work. These measures form the basis of an environmental monitoring and inspection program which will be implemented throughout construction.

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

List of Tables

List of Figures

TABLE OF CONTENTS

Page

List of Appendices

1. SUMMARY DESCRIPTION OF THE UNDERTAKING

1.1 Introduction to the Project & Purpose of This Report

Morrison Hershfield Limited (MH) has been retained by the Ontario Ministry of Transportation (MTO) to undertake the Detail Design Study for intersection improvements to Highway 138 at the Headline Road (County Road 44) intersection. The proposed roundabout is planned to calm traffic, reduce speeds, and decrease the potential and severity of collisions. A roundabout will also allow for improved traffic operations, including shorter travel times and reduced vehicle queue lengths.

This Design and Construction Report (DCR) expands on the Transportation Environmental Study Report (TESR) "Highway 138 Improvements from Highway 401 to Highway 417", prepared by Stantec Consulting Ltd. (Stantec) in June 2017. The 2017 TESR received environmental clearance and identified anticipated environmental effects and proposed mitigation measures. This DCR presents a more in-depth assessment of existing environmental conditions, anticipated environmental impacts, and proposed mitigation measures associated with construction works. The DCR also followed-up on the 2017 TESR's identified requirements for assessment of the anticipated environmental impacts and proposed mitigation measures associated with the local roads detour which was not part of the TESR Study Area.

This Study has followed the approved planning process for a Group B project in accordance with the *Class Environmental Assessment for Provincial Transportation Facilities* (2000) with the opportunity for public input throughout the Study. This DCR has been prepared to provide background information about the Study, present the proposed improvements to the Highway 138 and Headline Road intersection, describe construction staging and proposed mitigation, and provide an overview of the public consultation that has occurred throughout the Study to date.

1.2 Study Area

The Highway 138 Study Area at the Headline Road intersection is located within the Township of South Stormont, in the United Counties of Stormont, Dundas and Glengarry. **Figure 1** illustrates the location of the Highway 138 roundabout project limits.

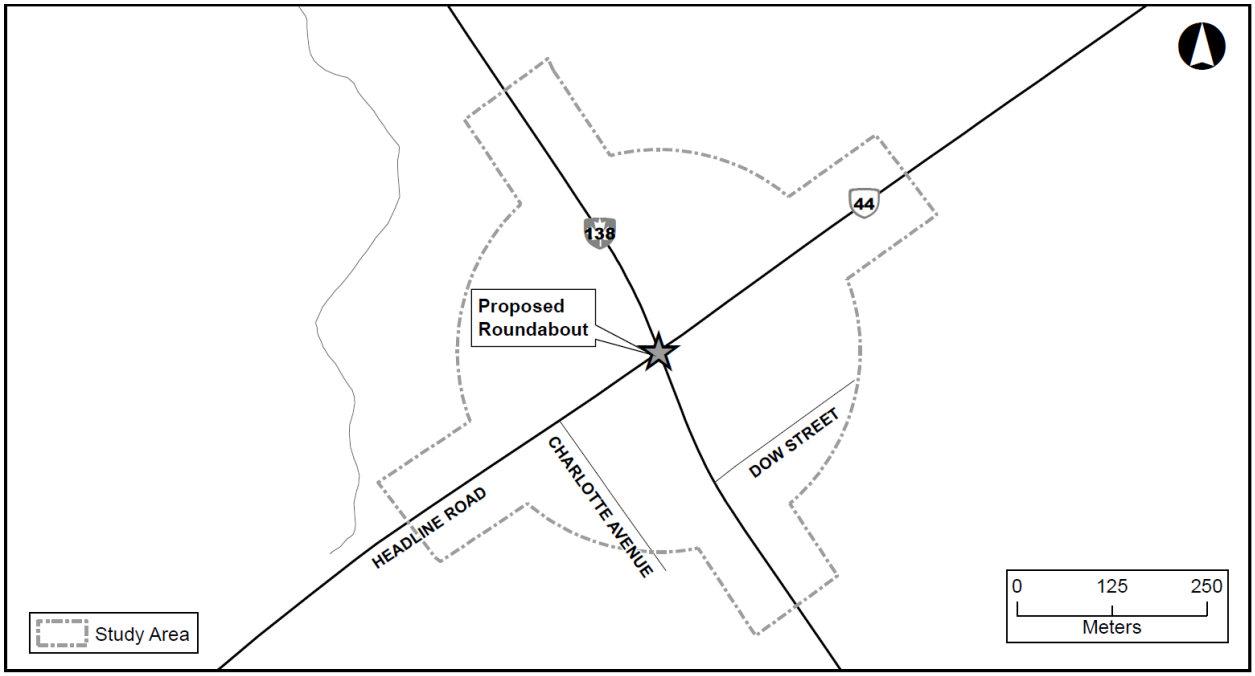


Figure 1: Key Map – Highway 138 Intersection Improvements at Headline Road

1.3 General Description of the Undertaking

The general scope of the construction works for the Highway 138 intersection improvements at Headline Road includes the following:

- Construction of a single-lane roundabout and approaches designed with a radius that will accommodate large vehicles.
- Modifications to the intersection alignment (shift to the east) to improve sightlines to the intersection.
- Installation of new concrete islands with curb and gutter on roundabout approaches and modification of entrance connections.
- Drainage improvements including general grading and clean out of ditches, culvert flushing and cleanout, removal of vegetation, and culvert replacements and storm sewer replacement.
- New illumination (lighting) at the roundabout and approaches.
- Landscaping along the approaches and within the central island.
- Utility relocations to facilitate the new roundabout footprint.

Construction works as described within this DCR are expected to commence in Spring 2024. Additional design, construction and traffic management details for the above information are provided in **Section 5** of this DCR.

2. ENVIRONMENTAL ASSESSMENT PROCESS

2.1 Ontario Environmental Assessment Act

The Ontario Environmental Assessment Act (OEAA) allows for a planning and decision-making process so that potential environment impacts are considered prior to a project's initiation. The OEAA applies to provincial ministries and agencies; municipalities such as towns and cities, and public bodies such as conservations authorities and Metrolinx. Within the Environmental Assessment (EA) process, public consultation is mandatory; this allows the public, Indigenous communities, and government agencies to become involved. Examples of projects that go through the EA process include public roads and highways; transit projects; waste management projects; water and wastewater work; resource management, and flood protection projects.

There are two types of Environmental Assessments: Individual and Streamlined.

Individual EAs are prepared for large-scale, complex projects with the potential for significant environmental impacts. They require the approval of the Ministry of the Environment, Conservations and Parks.

Streamlined EAs can be used for routine projects that have predictable and manageable environmental effects. Proponents of these types of projects follow a self-assessment and decision-making process. Approval is not directly granted for each project. Examples of streamlined self-assessment processes include Class Environmental Assessment; Electricity Projects Regulation; Waste Management Projects Regulation, and Transit Projects Regulation. Projects planned that follow a streamlined process are:

- Pre-approved or exempt (Minister's approval is not required).
- Conditional upon being planned according to the streamlined process.
- Not required to conduct a higher level of assessment such as an individual environmental assessment.

The *MTO Class Environmental Assessment for Provincial Transportation Facilities* was approved under the Ontario Environmental Assessment Act in 1999 and amended in 2000. The MTO Class EA defines groups of projects based on the complexity of their activities and outlines the consultation and documentation that must be followed to ensure compliance. The following principles underlie the Class EA process for Group A, B and C projects:

- Transportation engineering principles.
- Environmental protection principles.
- External consultation principles.
- Evaluation principles that are intended to achieve the best overall balance of these principles.
- Documentation principles.
- Bump-up principles.
- Environmental clearance principles to proceed.

This study was conducted in accordance with the requirements of the MTO *Class Environmental Assessment for Provincial Transportation Facilities*, 2000 (Class EA) for a Group B Project.

2.2 MTO Class Environmental Assessment Group B Requirements

The MTO Class Environmental Assessment for Provincial Transportation Facilities (Class EA) is an approved streamlined EA process under the Ontario Environmental Assessment Act. The MTO Class EA defines groups of projects based on the complexity of their activities, and outlines the consultation, documentation and formal EA process that must be followed to ensure compliance.

The preparation of this DCR fulfills the requirements for a Group B project under the Class EA process. Group B projects are major improvements to existing facilities. Types of projects include:

- Highway and freeway improvements that provide a significant increase or modification in traffic capacity, access, or footprint.
- Major realignments.
- Improvements to existing transitways and ferryboat dock/terminals.
- New provincial service, maintenance, or operation facilities.

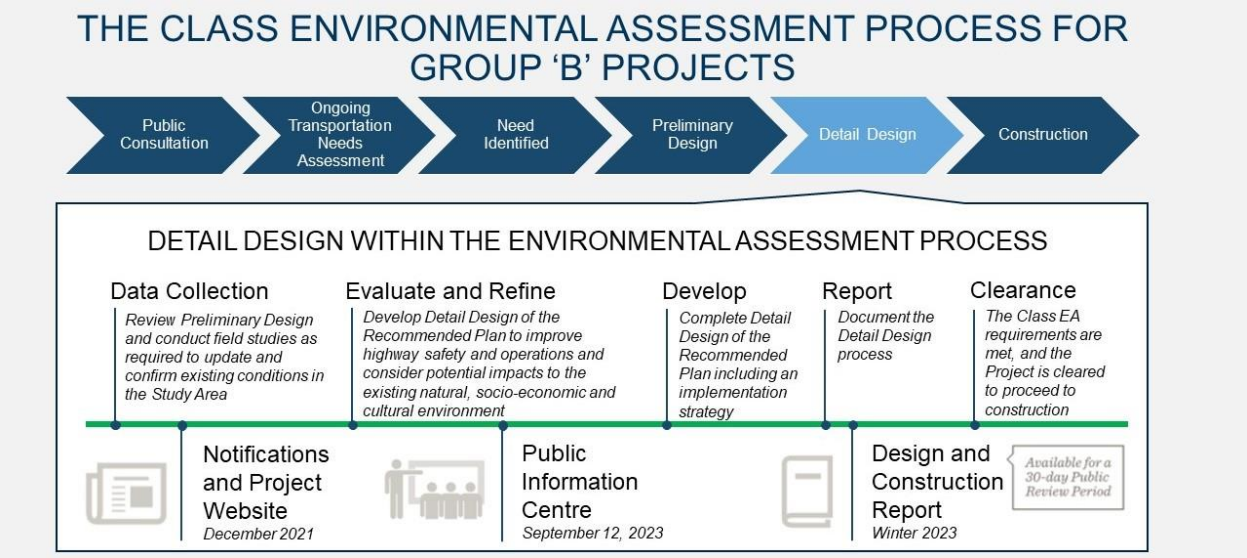


Figure 2: Class Environmental Assessment for a Group B Project

As required under the Class EA, this DCR is being made available for a 30-day public review period. The Project Team will respond to all comments generated during the 30-day public review; however, there is no opportunity to request a Part II Order (bump-up) from the Minister of the Environment, Conservation and Parks. A "Notice of Completion" was published in the *Cornwall Standard Freeholder* (English) on December 12, 2023, and the *Cornwall Express* (French) on December 13, 2023, to notify the public of the DCR review period and review locations. Letters have been sent notifying government agencies, Indigenous communities,

municipalities, emergency services, utilities and members of the public on the detour and study mailing list of the DCR submission and 30-day public review period.

3. CONSULTATION

Consultation is an integral component of the MTO Class EA process and essential to the successful completion of the study. Consultation must be inclusive, timely and clear to be effective, and aims to achieve the following goals, as outlined in the MTO Class EA:

- Identify public concerns and values.
- Identify agency concerns.
- Collect information about the existing environment.
- Provide relevant information regarding decisions and potential effects.
- Provide regulatory compliance regarding the EA process.

The Consultation Plan developed for this study uses various tools and techniques to consult and engage with various interested groups (Government Agencies, Municipalities, Indigenous Communities, and the Public). The overall objectives are to both provide information about the study and to obtain input at key stages to assist the Study Team in making recommendations.

As such, the consultation program for this study was developed based on the following principles:

- Consult with the most directly affected stakeholders.
- Constructively address the input received.
- Provide information pertaining to the impacts to associated with the project.
- Use the appropriate tools and techniques for the various consultation groups.
- Make all reasonable efforts to proactively resolve concerns.

Our overall approach is intended to foster a two-way dialogue with interested stakeholders and provide a process that was transparent, open, traceable, timely, accountable, respectful, and defensible.

The primary tools and techniques that are used to assist the consultation process included:

- Public Notifications
- Project Website
- Public Information Centre

The consultation process involves a number of stakeholders including Indigenous communities, regulatory agencies, local interest groups, and members of the public. Notices were published in local newspapers to advise of the project. Copies of the communication materials issued for this study can be found in **Appendix A**. Those identified with a potential interest in the project were added to our mailing list and invited to provide comments. The complete list of stakeholders can be found in **Appendix B.**

3.1 Public and Agency Consultation/Engagement during the Detail Design Phase

3.1.1 Study Commencement

A “Notice of Study Commencement” was published in the *Cornwall Standard Freeholder* (English) on December 18, 2021 and *Cornwall Express* (French) newspapers on December 22, 2021. The notice appeared in both English and French as per the *French Languages Services Act*. Letters providing notification of study commencement were also mailed to all those listed on the external mailing list on December 20, 2021. Copies of the study commencement material can be found in **Appendix A.**

In addition to the published Notice of Study Commencement, correspondence advising of the study were sent to identified stakeholders. Several stakeholders responded to the “Notice of Study Commencement” by submitting comments to the project contacts listed in the Ontario Government Notice (OGN)/brochure. The main concerns raised by the public were related to impacts and access to their property, the overall purpose of the roundabout, and potential speed reductions. All comments were provided with responses in the manner in which they were received.

Copies of correspondence and comments received by the Project Team throughout the duration of the study are provided in **Appendix C.**

3.1.2 Project Website

A website was also developed for the project (www.highway138roundabout.com) as a tool to engage parties or groups with an interest in the project. The website provides information in both English and French on study background, purpose, the EA process and a PowerPoint Presentation outlining the Detail Design. Throughout the study, stakeholders have provided comments on the Detail Design.

The website hosted all pertinent information such as notices, displays from public meetings, and reports for public review. The website also included a “Contact Us” feature to allow the public to submit comments and questions.

The contents of the website were provided in both French and English, and include:

- Home
- About the Project
- About the Study
- Consultation
- Documentation
- Contacts
- Roundabout Education
- FAQS

3.1.3 Online Public Information Centre

A "Notice of Online Public Information Centre" was published in the *Cornwall Standard Freeholder* (English) on September 12, 2023, and in the *Alexandria Glengarry News* (English) and the *Cornwall Express* (French) newspapers on September 13, 2023. The purpose of the notice was to engage members of the public to provide feedback on the design.

Letters notifying Indigenous communities, government agencies, municipalities, emergency service providers and members of the public of the Online PIC were prepared and distributed to all those originally contacted at project commencement as well as anyone (including residents) subsequently added to the project's stakeholder mailing list throughout the duration of the study.

The Online PIC materials were posted on the project website in both English and French. Recipients of the letter were invited to review the Online PIC on the project website (www.highway138roundabout.ca) and provide comments by September 26, 2023.

A copy of the Online PIC materials are provided in **Appendix A**.

3.1.4 Study Completion

A "Notice of Completion" was published in the *Cornwall Standard Freeholder* (English) on December 12, 2023, and the *Cornwall Express* (French) on December 13, 2023. The purpose of the notice is to outline the recommended design and traffic staging plans, to notify the public of the start of the formal 30-day public review period of this DCR and review locations and to provide an additional opportunity to provide comments and concerns to the Project Team.

Letters notifying government agencies, Indigenous communities, municipalities, emergency services and members of the public of the DCR filing were prepared and distributed to all those originally contacted at project commencement as well as anyone (including residents) subsequently added to the project's stakeholder mailing list throughout the duration of the study.

Recipients of the letter were invited to review the document and provide comments within the 30-day public review period at the project website (www.highway138roundabout.ca).

A copy of the Notice of Completion OGN and letters are provided in **Appendix A.**

3.2 Indigenous Communities and Organizations Consultation

All project notifications, including Notice of Study Commencement, Notice of Online Public Information Centre and the Notice of Completion were sent directly to the following Indigenous communities/organizations by MTO:

- Métis Nation of Ontario
- Mohawks of Akwesasne

No comments were received from either Indigenous community as a result of this correspondence. Letters sent to Indigenous Communities can be found in **Appendix A**.

3.3 Local Government, Government Agencies, and Utility Companies Consultation

3.3.1 Local Governments

The Township of South Stormont, the United Counties of Stormont, Dundas, and Glengarry, and the City of Cornwall were contacted as part of the study.

Staff were advised of the project via letters sent by the project team during the Notice of Study Commencement, Notice of Online Public Information Centre, and Notice of Completion (refer to **Appendix A**).

3.3.2 Government and Regulatory Agencies

Government and regulatory agencies identified as having a potential interest in the project were also contacted. They were advised of the project via letters sent by the project team during the Notice of Study Commencement, Notice of Online Public Information Centre, and Notice of Completion (refer to **Appendix A**).

3.3.3 Utility Companies

At the outset of the Detail Design, MH conducted a review of the existing and planned utility infrastructure systems based on inventory data, planning information and other relevant reports. Following this review, MH contacted all applicable utility companies with a request to provide a key contact during the design phase. Follow up consultations with utility companies and municipal services providers continued to occur throughout the design phase to identify any specific concerns with the proposed Project. The list of utility companies contacted during the study included:

- Hydro One Networks Inc.
- Cogeco
- Bell Canada

Based on discussions with the aforementioned utilities, relocations are being undertaken in advance of the project works.

3.4 Comments Received

As a result of the consultation undertaken for this study, several comments were received. **Table 1** details the comments, issues and concerns raised based on verbal and written comments from the time of study commencement for the Detail Design, to the time the DCR was filed.

Table 1: Summary Comments and Responses

Commenter	Comment	Response
Landowner	I know the roundabout is coming but this all could have been done with huge yellow curbing and turn only signs in curbing to force and all traffic trying to pass on the right-hand side, in both directions – when those on Highway 138 are trying to turn on to Headline Road or Country Road #44. This is where and how "all" the accidents happen. Reduce speed from St. Andrews West to Cornwall Centre Road to 60 km/h	The roundabout will see an overall improvement and increased safety for all roadway users. This is especially true for those who would have made the left that now can do so in comfort knowing that they do not have to wait for gaps in traffic. In addition, the roundabout will provide increased safety for pedestrians crossing either County Road 44 or Highway 138 by use of proposed pedestrian crossovers at all legs of the roundabout. Speed reductions will be reviewed within the project limits to assist in slowing vehicles entering and exiting the roundabout.
Landowner	Requested an English notice and other information in English,	Provided the website and direction to find the English notice on the website. A hard copy of the letter was mailed on January 21, 2022 to their home address.
Director of Public Works, Township of South Stormont	Attached is Contact Information for Class EA and Detailed Design for the Headline – 138 Roundabout.	Thank you.
Funeral Friends	Attached are our questions. 1. Will we receive notice when project starts? 2. We have a business and would like to know how our customers will access the business when the project starts? 3. Am I going to have the same width of entrance to my business (Funeral Friends) 4. How long do you feel we will be affected by this project at this corner Headline + Hwy 138 Is the project starting 2022 Spring? Some more questions. 1. Is the entrance you are leaving (our main entrance now) on Headline Road going to be the same size as it is now ? 2. Will there be any compensation if our business suffers a serve loss?	1. Yes, a formal notice will be provided by the Contractor prior to construction activities starting. 2. The intent is to provide access to your business throughout the construction. The Contractor will coordinate with you and provide ample notice in advance of entrance closures but will ensure that vehicles can access your business at all times. 3. As per the attached Recommended Plan, the existing entrance on Highway 138 will be removed. The existing entrances off Headline Road will be reconstructed to match the east limit of the existing entrance to permit all vehicle movements into your business and be designed to current MTO standards. 4. The final construction duration is not yet known, but the expectation at this time is at least one full construction season. As the design progresses, we will notify you of any significant changes that may impact your business. The intent is for construction to begin in early 2023. 1. Your entrance on Headline Road is going back in the same location to the same size it is today. Should there be need for any changes for whatever reason we will reach out to discuss. At this time I do not see any reason why your entrance would change. 2. While it is not anticipated that the construction of the highway improvements will have a significant impact on your business, should this occur, there are avenues you can take to make a claim with the Ministry for losses attributable to construction. For more information please contact Nancy Sinclair at Nancy.Sinclair@ontario.ca or (613) 329-4670.
St. Andrew Parish	Contact information form for Highway 138 project attached: St. Andrew Parish supports the project but wants to know if and how it impacts Parish property adjoining the project area.	At this stage of the design, there is a possibility of impacts only to the property immediately adjacent to the Headline Road and Highway 138 intersection, which we are working to minimize impacts. Given your location along County Road 18, no impacts or property acquisition are necessary as part of this contract for your property.
Laurencrest Youth Services Inc.	Expressed no interest in project.	N/A
Landowner	Hello, I am sending you a quick message to tell you how excited I am to have a roundabout put in place for this corner. More and more this corner has become increasingly dangerous. I often fear turning left from that corner when traffic gets heavy as drivers are continuously going around vehicles in turning lanes. Also if I have to turn left the large transports coming on to Headline have little room to make the turn, it often turns in to frustrating moments for them as they don't want to make the turn unless I go first, which I never do because of traffic trying to go around them. This project can't come soon enough for the safety of all drivers, passengers and residents of this area. It is much needed and long overdue. Thank You, Phil	Hello, Thank you for your interest in this project. We appreciate your comments regarding your experience with turning and traffic at the Highway 138 and Headline Road intersection. Please feel free to reach out with any additional comments or questions regarding this project.

Commenter	Comment	Response
MCM	Please note that we had some changes in our office (name of ministry, staff, and physical location): • Note that, as of October 17, 2022, the responsibility for administration of the *Ontario Heritage Act* and matters related to cultural heritage recently transferred from the Ministry of Tourism, Culture and Sport (MTCS) to the Ministry of Citizenship and Multiculturalism (MCM). Individual staff roles and contact information remain unchanged. • We are now located at 400 University Ave (vs 401 Bay Street). However, we have been asking proponents to **send only electronic notices and documentation**. • Could you please update your contact list to include: • Karla Barboa, Team Lead - Heritage | Heritage Planning Unit (Citizenship and Multiculturalism) | 416-660-1027 | Karla.Barboza@ontario.ca • Joseph Harvey, Heritage Planner | Heritage Planning Unit (Citizenship and Multiculturalism) | 613-242-3743 | Joseph.Harvey@ontario.ca For future projects, please send the initial notice to me. You may also want to contact the Ministry of the Environment, Conservation and Parks for an updated Government Review Team List at 416-314-8001 or 1-800-461-6290. I would appreciate if you can send us an electronic copy of the Notice of Online Public Information. The PIC boards also mention that an archaeological assessment was undertaken for this project and that there is no known or potential built heritage resources and cultural heritage landscapes within the study area. Could you please inform us the Project Information Form number of the archaeological assessment as well as the completed screening checklist Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes with any supporting documentation for our review?	Thank you for your interest in this project. We have updated our contact list with your new information and added Joseph to our list. As requested, please find attached an electronic version of the Notice of Public Information Centre. Regarding your query about the archaeological assessment, the Project Information Form Number is P035-0362-2021, MHSTCI File Number 0015644. The Stage 1 Archaeological Assessment Report, along with the confirmation letter regarding its entry on the Public Register of Archaeological Reports have been included in this email. Should you have any questions regarding the attached material or the project, please feel free to contact me directly. Thank you.
Landowner	Good morning, Do you think the roundabout will be able to go ahead this spring? Thank You.	Good afternoon Construction is currently anticipated to commence in spring 2024, subject to final utility relocations and property approvals. Thank you again for your interest in the project.
United Counties of Stormont, Dundas and Glengarry	Our comments on the project, and material provided are as follows: 1. The County does not object to the use of both SDG 18 and SDG 33 (Power Dam Drive) to accommodate the closure / detour of Headline Road west of Highway 138. It is strongly encouraged that signage be erected on Highway 138 north of County Road 18 and Brookdale Ave just south of Cornwall Centre Road to provide sufficient advance notification to drivers approaching the closure and detour. 2. The online material provides no indication if there will be pedestrian infrastructure that would facilitate a protected crossing of Highway 138. The County would strongly encourage the Ministry to consider a protected crossing for cyclists and pedestrians as part of the design. Note, access to the South Stormont recreational trail is located off of Headline Road, just west of Highway 138. 3. The County would appreciate further details on the landscaping plan for the roundabout and what the Ministry will be doing to ensure landscaping will be well-manicured and maintained. County staff would encourage some type of location recognition (e.g. “Welcome to SDG”) be incorporated as part of the landscaping design. 4. County also note that the Ministry intends to complete the paving of Highway 138 from the City of Cornwall to County Road 43 as part of this contract. Although the County supports paving this section of the Highway and implementing the minor intersection improvements at Highway 138/ County Road 18; the County, the City of Cornwall, Mohawks of Akwesasne and local OPP continue to advocate that the Ministry also complete the outstanding intersection improvements identified within the Highway 138 Transportation Environmental Study Report prepared by Stantec in June 2017. The intersections that were identified for improvements include: Valade Road, Archambault Road, Wheeler Road, 2 Meyers/ McPhail Road, Guidon / Cameron Road,	Good day, I hope this e-mail finds you well. Thank you for your interest in this study and your comments given on behalf of the United Counties of SDG Department of Transportation Services. I will address your comments in the same order you sent them as follows: 1. Throughout the construction phase, signage will be strategically placed in highly visible locations to inform approaching vehicles of closures and detours. While the exact locations for the signage are yet to be finalized, we appreciate your comments regarding the United Counties of SDG preferred location and will advise once a decision has been reached. 2. The Ministry reviewed the need for sidewalks and pedestrian crossings at this intersection and due to the lack of pedestrian use it was determined that infrastructure was not required at this location. Cyclists counts also showed minimal use of the intersection and a dedicated cycling facility was not warranted. Cyclists will be able to safely navigate the roundabout in concert with motor vehicles. The geometry of the roundabout and its approaches have been designed to limit fastest paths to no greater than 40 km/h. 3. Please see Sheets 46-48 in the attached 90% contract drawings which show the landscaping plans for the intersection. Consideration was taken to use low maintenance trees and shrubs to minimize maintenance requirements. MTO will be responsible for maintaining the landscape. At this time there are no plans to include any type of location recognition as part of the landscape design as ownership and maintenance of such infrastructure will be the responsibility of MTO.

Commenter	Comment	Response
	Willy Allen Road, Amell & Ranald George Road, Campbell Road, Mcdonald Road and Rombough Road. 5. 5) The County would appreciate the opportunity to comment on the detailed design prior to tendering as the work impacts County infrastructure	4. The Ministry appreciates the County of SDG's desire to have the remaining recommended improvements for Highway 138 constructed. The Ministry is actively taking steps to include the delivery of the remaining improvements in our 5-year plan. 5. Please find attached our 90% contract drawings which you can review and comment on. The largest impact to County infrastructure would be the watermain relocation drawings on Sheets 24 and 29-30. I ask that if you plan on providing comments, please do so by November 1, 2023. The Ministry appreciates your continued engagement and will ensure to keep you updated on any developments related to the project. If you have any further comments or questions, please do not hesitate to contact me directly.
Raisin Region Conservation Authority	Thank you for the opportunity to review and provide comments on the Environmental Assessment for the Highway 138 Intersection Improvements at Headline Road. The RRCA has reviewed this file as per our delegated responsibility from the Province to represent provincial interests regarding natural hazards identified in Section 3.1 of the Provincial Policy Statement (PPS, 2020) and as a regulatory authority under Ontario Regulation 175/06 (RRCA's Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation). RRCA staff have also provided comments with respect to the Clean Water Act. Location (Reference Map 1) 1. The subject site is located within the jurisdiction of the Raisin Region Conservation Authority (RRCA). • Any Planning Act applications including zoning amendments should be circulated to the RRCA for natural hazard review. • Any development within or adjacent to a natural hazard or within or adjacent to a wetland may be regulated by the RRCA and require a Conservation Authorities Act permit. Natural Hazards (Reference Map 2) 1. There are no known watercourses within or adjacent to the subject site 2. There is no known flooding hazard area on the subject site. 3. There are no areas of hazardous soils (i.e., organic muck) mapped within or adjacent to this site. Wetlands (Reference Map 3) 1. There are mapped unevaluated wetlands adjacent to the subject site. These wetlands have not been designated as provincially significant wetlands. • These wetlands may be providing flood attenuation from rainfall events. • The RRCA does not presently regulate development within or adjacent to nonprovincially significant wetlands Source Water Protection (Reference Map 4) 1. The project site is located within the Raisin-South Nation Source Protection Region. 2. The project site is located within the Raisin Region Source Protection Area. 3. The project site is not located near a municipal drinking water source. 4. There are no mapped Significant Groundwater Recharge Areas near or adjacent to the project site. 5. The project site is located over a groundwater aquifer, which has been evaluated through the Assessment Report. The vulnerability rating is assessed as "medium" and "high". • There are no policies in the Source Protection Plan to prohibit development within this area. • The SDG Counties Official Plan has recommendations for development in these areas (SDG Counties Official Plan S. 4.3.3.7)	Thank you for your comments on the Highway 138 and Headline Road Intersection improvements. We appreciate your comments, and interest in this project. The information you provided on behalf of the Raisin Region Conservation Authority is greatly appreciated and will be used to assist us in the assessment of impacts resulting from our design, and the Contract Documentation produced for this project. Please don't hesitate to reach out should you have any further questions or comments. Thank you.

Commenter	Comment	Response
	Conclusion Based on the RRCA's review of the Location, Natural Hazards, Wetlands, and Source Water Protection, the RRCA has no objection at this time. There are no features on or adjacent to the subject property that are regulated by the RRCA under Ontario Regulation 175/06 and therefore a permit from the RRCA is not required.	
l'ÉÉC Sainte-Lucie	Hello Mr Brandao, I am the principal of l'ÉÉC Sainte-Lucie on 17337 Dow st, Long Sault ON. Our school is one block away from the future site of the 138 roundabout. I think that it is a fantastic idea to have a roundabout as it will help the flow on the 138 in a safer manner. Would it be possible to be advised when the construction will begin as I am sure that the traffic will impact our school day including our daycare provider. Needless to say, parents will be in a hurry at the beginning and at the end of the day. I would like to advise them so that they can take the necessary measures in their daily commute to and from school. I can provide you with a detailed school schedule if needed indicating our traffic high times to facilitate our collaboration. Thank you for your time. We look forward to hearing from you.	Bonjour, Thank you for reaching out. Construction is tentatively scheduled to begin spring 2024, usually once the snow clears. The Contractor could begin as early as April. At least two weeks before construction begins, the Contractor will be sending out letters to stakeholders indicating when they intended to start construction. We will make sure you are on that stakeholder list. Thank you for the offer to provide a detailed school schedule. Yes please, if you send it to me, I can make sure it gets handed over to the Contractor for their situational awareness. I'm not certain that they'll be able to have any mitigation measures during the high traffic times, but they might be able to plan certain disruptive operations accordingly. Thank you and please let me know if you have any questions or concerns.
l'ÉÉC Sainte-Lucie	Hello Mr Brandao, Thank you for the quick response. Here is a school schedule: **7:45 - 8:15 AM** - Bus and car arrival at school (high traffic) **11:30 - 12:30 PM**- Lunch period (Minimal traffic) **2: 10 - 2:40 PM** - Bus and car arrival at school (high traffic) I will send out a letter to my parents and the school transportation in the spring advising them of the possible traffic delay. Thanks for the information!	N/A

4. EXISTING ENVIRONMENTAL CONDITIONS

Existing environmental conditions in the vicinity of the proposed improvements to Highway 138 are detailed in the following sections.

4.1 Aquatic Ecosystems/Fish and Fish Habitat

Background data specific to fish and fish habitat (i.e., thermal regime, fish community) were reviewed through a review of previous MTO reports, the MNDMNRF Fish ON-Line mapping tool, RRCA stream assessment reports and the Aquatic Resource Area (ARA) mapping layer within the LIO database. Based on this review, there is no potential for fish or fish habitat within the Project Study Area.

A fisheries field investigation is not warranted as all works will be greater than 30 m from any potential fish habitat. Although there are multiple drainage features immediately adjacent to the Highway 138 and Headline Road intersection, these features are not anticipated to support fish habitat and likely convey seasonal run-off during the spring freshet as well as runoff from storm events.

4.2 Terrestrial Ecosystems

The terrestrial field inventory was conducted in accordance with the *MTO Environmental Reference for Highway Design* (2013). Field investigations were conducted by Stantec staff in May and June 2016 in order to ground-truth the background information collected as well as to improve upon the knowledge of terrestrial SAR and SAR habitat existing conditions within and adjacent to the Study Area.

Morrison Hershfield undertook additional field investigations on September 23, 2021, and July 8th, 2022 to attain, confirm and augment background information (i.e., 120 m surrounding the Highway 138 and Headline Road intersection). Incidental wildlife observations during the field investigations were the result of visual confirmation, auditory confirmation, or detection of other evidence of a species presence (i.e., tracks, scat, feeding signs).

The field investigations were conducted in accordance with the MTO's *Environmental Reference of Highway Design* (2013) terrestrial ecosystems requirements and included the classification of vegetation communities and search for SAR and their habitat within 120 m of the Highway 138 and Headline Road project area. The updated existing conditions are documented in the Natural Sciences Existing Conditions and Impact Assessment Report (Morrison Hershfield, November 2023).

4.2.1 Bedrock and Soils

The project area is located within the Lake Simcoe- Rideau Ecoregion (Ecoregion 6E), which extends from Lake Huron in the west, to the Ottawa River in the east and include most of the Lake Ontario shore and the St. Lawrence River Valley in Ontario. It encompasses 6,311,957 ha (6.4%) of the province. The underlying bedrock is comprised of Paleozoic dolomite and limestone from the Ordovician and Silurian ages. The Frontenac

Axis (an arch of rock between Algonquin Park and the Adirondacks) is an exemption where granites and gneisses from the Precambrian age are mixed with Orovician limestone and sandstone. Most of the bedrock is covered with rolling terrain of ice-laid materials. The eastern portion of the ecoregion is underlain by glaciomarine deposits which are a result of brief post-glacial incursions of salt water from the Champlain Sea along the St. Lawrence valley. The ecoregion is comprised of Gray Brown Luvisols (43%), and Melanic Brunisols (27%), Gleysols (14%) and Humo-ferric Podzols (5%). Most of the substrates provide a high capacity to buffer acidic atmospheric deposits, before they reach the surface water (Crins, et.al., 2009).

4.2.2 Vegetation Communities

To remain consistent with the previously submitted Terrestrial Ecosystems Existing Conditions Report completed by Stantec in 2016, the vegetation communities identified within the project area during the MH 2021 and 2022 field investigations were classified using the Ecological Land Classification for Southern Ontario (Lee et. al, 1998). This system provides a standard for comparing similar communities across Ontario using a multilayer vegetation inventory (canopy, sub-canopy, ground cover), and supports the management of natural resources.

Based on the information presented in the 2016 report by Stantec, ELC field investigations were completed within the Highway 138 and Headline Road project area in May of 2016 along the Highway 138 ROW. The ELC communities identified by Stantec (and confirmed by MH in 2021 and 2022) are presented in **Figure 3**. Species specific surveys were not completed within the project area at this time.

The Highway 138 and Headline Road project area, and adjacent 120 m, consisted of a mixture of natural and disturbed vegetation communities, indicative of construction and maintenance activities from nearby rural residences and businesses.

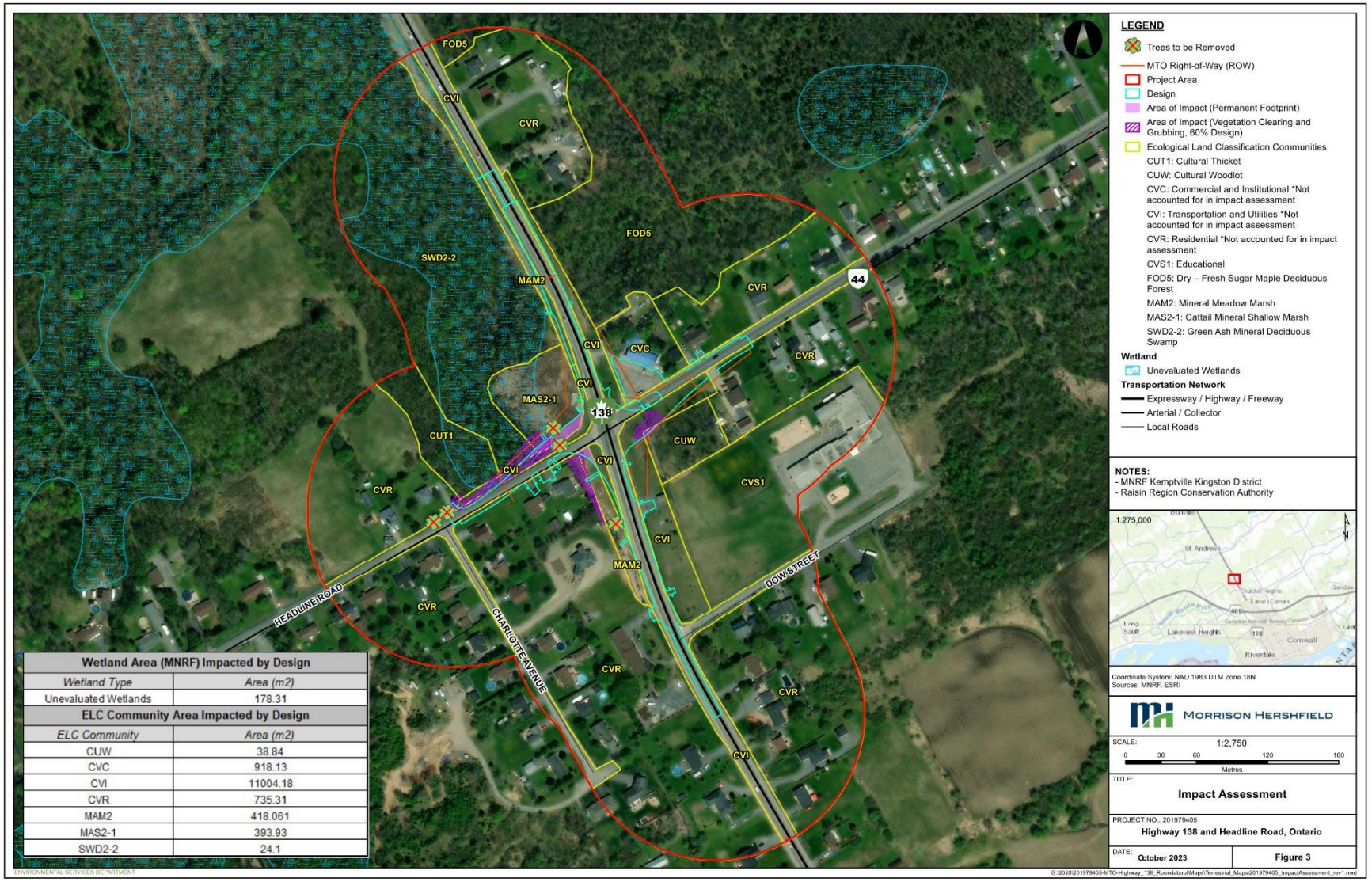
The project area consisted of ten (10) Ecological Land Classification communities, including designations from the 2016 Stantec report, and updated classifications by MH based on the 2021 and 2022 site visits: Commercial and Institutional (CVC), Transportation and Utilities (CVI), Residential (CVR), Educational (CVS), Mineral Cultural Thicket (CUT1), Dry to Fresh Sugar Maple Deciduous Forest (FOD5), Mineral Meadow Marsh (MAM2), Cattail Mineral Shallow Marsh (MAS2-1), Green Ash Mineral Deciduous Swamp (SWD2-2), and Cultural Woodland (CUW).

Table 2 provides a list and description of the communities identified within the project area, including dominant plant species occurring within each community. **Figure 3** illustrates the ELC mapping for the study area.

Table 2: Ecological Land Classification (ELC) Ecosites Present Within the Project Area

Ecosite Name	Description of Ecosite	Dominant Species Identified within Ecosite
CVC **Commercial and Institutional**	These anthropomorphic areas consist of commercial or institutional businesses and generally include disturbed and maintained landscapes.	Maintained lawn.
CVI **Transportation and Utilities – Highway**	These anthropomorphic areas consist of roads, highways, rights of way (ROW), towers, pipelines, airports, railways, marinas, etc.	Species observed within the ROW included Common Reed (*Phragmites australis*), Wild Parsnip *(Pastinaca sativa),* Bird's-foot Trefoil (*Lotus corniculatus),* White Sweet-clover (*Melilotus alba*), Black Medick (*Medicago lupulina*), Common Milkweed (*Asclepias syriaca*), Spotted Knapweed (*Centaurea stoebe*), and Ox-eye Daisy (*Leucanthemum vulgare*).
CVR **Residential**	These anthropomorphic areas consist of residential properties and adjacent maintained landscapes.	Maintained lawn.
CVS **Educational**	This anthropomorphic area consists of the Centre Educatif Ste. Lucie school, and adjacent maintained landscapes.	Maintained lawn.
CUT1 **Mineral Cultural Thicket**	This community presents tree cover <25% and shrub cover >35% and often contains a large proportion of non-native plant species resulting from, or maintained by, cultural or anthropomorphic- based disturbances.	Species observed included Glossy Buckthorn (*Frangula alnus),* Apple species (*Malus sp.*) Hawthorn species (*Crataegus sp.),* Green Ash saplings (*Fraxinus pennsylvanica),* Common Pricklyash (*Zanthoxylum americanum*), Trembling Aspen (*Populus tremuloides*), and American Basswood (*Tilia americana*).
FOD5 **Dry – Fresh Sugar Maple Deciduous Forest**	This community is dominated by >75% deciduous tree species within the canopy cover, and include Green Ash, White Elm, Willow and maple associates. Soils are moist to fresh, supporting a dense undergrowth.	Species observed in canopy include Sugar Maple (Acer saccharum), Green Ash, Bur Oak (Quercus macrocarpa), Green Ash, American Elm (*Ulmus americana*), and American Basswood. Understory consists of Black Cherry (*Prunus serotina*), Trembling Aspen, Bitternut Hickory (*Carya cordiformis*) Common Buckthorn, Currant species (Ribes sp.) and Woodland Strawberry (*Fragaria vesca*).
MAM2 **Mineral Meadow Marsh**	This community is typically dominated by emergent hydrophytic vegetation and may include tree and shrub cover up to <25%. Seasonal flooding occurs, with depths less	Species observed include invasive Phragmites (Phagmites australis ssp. americanus), Wild Parsnip (Pastinaca sativa), Common Milkweed, Smooth Brome (Bromus inermis), Poverty Oat Grass (Danthonia spicata), and New England Aster (Symphyotrichum novae-angliae).

Ecosite Name	Description of Ecosite	Dominant Species Identified within Ecosite
	than 2 m.	
MAS2-1 **Cattail Mineral Shallow Marsh Ecosite**	This community presents variable flooding regimes in the spring and dry conditions in the summer. Tree and shrubs consist of <25% of the total cover. Grasses or sedges typically dominate this ecosite.	Species observed include Narrow-leaved cattail, Reed Canary Grass, and Sensitive Fern.
SWD2-2 **Green Ash Mineral Deciduous Swamp**	This community is comprised of >25% tree cover with trees greater than 5 m in height and is dominated >75% by deciduous species including Green Ash, Black Ash, Red Maple, White Elm and Silver Maple.	Species observed include Green Ash, American Basswood, Silver Maple (*Acer saccharinum*), Prickly Ash, Common Buckthorn, Fly Honeysuckle (*Lonicera canadensis*), Marsh Marigold (*Caltha palustris*), Northern Bugleweed (*Lycopus americanus*), Sensitive Fern (*Onoclea sensibillis*), Water Parsnip (*Sium suave*), Beaked Sedge (*Carex rostrata*) and moss sp.
CUW **Cultural Woodland**	This community presents 35% to 60% tree cover within its ecosite, providing open areas for understory growth beneath the canopy.	Species observed include White Elm, White Ash, Prickly Ash, Wild Parsnip, Common Mullein (*Verbascum thapsus*), Bull Thistle (*Cisium vulgare*), Spotted Knapweed (*Centaurea stoebe*), Tansy (*Tanacetum vulgare*), Common St. John's Wort (*Hypericum perforatum*), Black-eyed Susan (*Rudbeckia hirta*), Aster and Goldenrod species.



Wetland Area (MNRF) Impacted by Design	
Wetland Type	*Area (m2)*
Unevaluated Wetlands	178.31
ELC Community Area Impacted by Design	
ELC Community	*Area (m2)*
CUW	38.84
CVC	918.13
CVI	11004.18
CVR	735.31
MAM2	418.061
MAS2-1	393.93
SWD2-2	24.1

Figure 3: ELC Communities within the Study Area

4.2.2.1 Rare Vegetation

Most plant species within the province are given an S Rank (1-5) by NHIC to set protection priorities for rare species. Species ranked from S1-S3 are considered rare in the province of Ontario.

Results from the NHIC background review and correspondence with the MNRF Kemptville District did not return records of rare flora immediately within or adjacent to the project locations.

Rare vegetation species were not observed during the 2021 and 2022 field investigations.

4.2.3 Designated Significant Natural Areas

Designated Significant Natural Areas are defined by resource agencies, municipalities, or the government as natural areas which have special or unique ecological, recreational, or aesthetic values or functions.

Results of the background review did not identify any Designated Significant Natural Areas, Areas of Natural and Scientific (ANSI's) or Provincially Significant Wetlands (PSW's) within the project area.

Constraints Schedule B3 (Natural Heritage Systems) of the Counties Official Plan identifies the Green Ash Mineral Deciduous Swamp (SWD2-2) community as a Significant Woodland.

4.2.4 Significant Wildlife Habitat

A Significant Wildlife Habitat (SWH) screening exercise was conducted using the *Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E* (MNRF, 2015) to determine the presence of Candidate SWH within the project area. The criteria schedules are intended to be used during development projects to identify and protect SWH in the planning process.

The four (4) categories of SWH within Ecoregion 6E include:

- Seasonal Concentration Areas
- Rare Vegetation Communities or Specialized Habitat for Wildlife
- Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)
- Animal Movement Corridors

The following sections discuss each Significant Wildlife Habitat and confirm the presence or absence of candidate habitat within Highway 138 and Headline Road project area based on the results of the background review and MH field investigations.

4.2.4.1 Seasonal Concentration Areas

Some species of animals gather from geographically wide areas at certain times of the year. This could be to hibernate or to bask (e.g., some reptiles and bats), over-winter (e.g., deer yards), or to breed (e.g., bird breeding colonies). Maintenance of the habitat features that

result in these concentrations can be critical in sustaining local or even regional populations of wildlife. Based on information collected during the Morrison Hershfield 2021 and 2022 field investigations, the following seasonal concentration areas may be present:

- **Candidate Reptile Hibernaculum** may be found within any forested ecosite with suitable hibernaculum features (such as rock piles) present. Confirmed reptile hibernaculum were not observed or recorded within the project area during the Morrison Hershfield field investigations.
- **Candidate Bat Maternity Colonies** may be present in the Green Ash Mineral Deciduous Swamp (SWD2-2) community, the Dry – Fresh Sugar Maple Deciduous Forest (FOD5) and Cultural Woodland (CUW) communities within the larger forested community outside of the project area where tree species with diameters greater than 25 cm DBH were observed. Candidate Bat Maternity Colonies were not observed or recorded within the project area during the MH field investigations.

4.2.4.2 Rare Vegetation Communities and Specialized Habitat for Wildlife

Rare Vegetation Communities often contain unique species, particularly plants, which depend on specialized habitats for survival and cannot readily move or find alternative habitats. According to the *Significant Wildlife Habitat Criteria Schedule for Ecoregion 6E,* there were no significant habitat areas found within the project area for rare vegetation communities.

Specialized Habitat for Wildlife can include old-growth forests, calving areas for moose, cliffs, and habitat for bird species requiring large blocks of habitat (generally greater than 25 ha in size). Based on information collected during field investigations, the following specialized habitat for wildlife areas may be present within and/or adjacent to the project area:

- **Candidate Denning Sites for Mink, Otter, Marten, and Fisher** may be present within the forested Green Ash Mineral Deciduous Swamp (SWD2-2) community adjacent to the Mineral Meadow Marsh (MAM2); however, denning sites were not observed or recorded within the project area during the MH field investigations.
- **Candidate Woodland Raptor Nesting habitat** may be present within the larger forested communities situated adjacent to the project area; however, raptor nests were not observed or recorded within the project area during the MH field investigations.
- **Candidate Amphibian Breeding Habitat (Woodland)** may be present within the Green Ash Mineral Deciduous Swamp (SWD2-2) community, as woodlands with permanent ponds containing water until mid-July are likely to be used as breeding habitat. Standing/pooled water was confirmed during the July 2022 field visit, and one (1) Wood Frog was identified in 2021, confirming the likelihood for the forest to be used as breeding habitat for amphibians.
- **Candidate Seeps and Springs habitat** may be present within the Green Ash Mineral Deciduous Swamp (SWD2-2) community, as Marsh Marigold (a groundwater indicator plant species) was identified during the 2021 and 2022 field investigations.

4.2.4.3 Habitat for Species of Conservation Concern

Species of Conservation Concern includes species that may be locally rare or in decline, but that have not yet reached the level of rarity that is normally associated with "endangered" or "threatened" designations under the Endangered Species Act (ESA) and/or Species at Risk Act (SARA). Rare wildlife status is based on species listed as Special Concern under the ESA, Global Rank (G-rank) or Provincial Rank (S-rank) status, identified through the National Heritage Information Centre. The *Significant Wildlife Habitat Technical Guide* (MNRF, 2000) suggests that the highest priority for protection should be provided to habitats of the rarest species (on a scale of global through to local municipality); it also states that habitats that support large populations of a species of concern should be considered significant.

Based on the background review and MH field investigations, six (6) provincial species of concern have the potential to be present within the general vicinity of the project area:

- Barn Swallow (*Hirundo rustica*)
- Common Nighthawk (*Chordeiles minor*)
- Eastern Wood-pewee (*Contopus virens*)
- Evening Grosbeak (*Coccothraustes vespertinus*)
- Monarch (*Danaus plexippus*)
- Wood Thrush (*Hylocichla mustelina)*

Barn Swallow are known to utilize human-made structures for nesting opportunities, and the buildings and residential homes surrounding the project area may provide appropriate habitat. During the MH field investigations, Barn Swallow were not observed within the project area.

Common Nighthawk, Eastern Wood-pewee, Evening Grosbeak and Wood Thrush may use the Green Ash Mineral Deciduous Swamp (SWD2-2), Dry – Fresh Sugar Maple Deciduous (FOD5), Cultural Woodland (CUW) and Cultural Thicket (CUT) communities within the project area for nesting and perching activities. These bird species were not observed within the project area during the MH field investigations.

Monarch butterflies may forage on nectar producing plants within the ROW and meadow communities (MAM2) within the project area. Although Monarch was not observed during the MH field investigations, Milkweed plants (host plant of the Monarch butterfly) were observed within the Transportation and Utilities (CVI) community adjacent to Highway 138, south of Headline Road.

4.2.4.4 Animal Movement Corridors

According to the *Significant Wildlife Habitat Technical Guidelines for Ecoregion 6E* (MNRF, 2015), the following potential Animal Movement Corridors may be present:

- **Candidate Amphibian Movement Corridor** may be present within the Green Ash Mineral Deciduous Swamp (SWD2-2), Mineral Meadow Marsh (MAM2) and Cattail Mineral Meadow Marsh (MAS2-1) communities situated in the project area, as corridors may be found in all ecosites associated with water.

- **Cervid Movement Corridors** may be present within the larger forested Green Ash Mineral Deciduous Swamp (SWD2-2) and Dry – Fresh Sugar Maple Deciduous (FOD5) communities situated outside the project area, as cervids (members of the deer family) will use corridors found in all treed ecosites.

4.3 Wildlife

4.3.1 Herpetofauna

According to the Ontario Reptile and Amphibian Atlas (ORAA), nine herpetofaunal species have been recorded within the 10 km x 10 km atlas square encompassing the Project Study Area. The nine records for herpetofauna include one SAR turtle species and eight amphibian species.

Responses from the MNRF, RRCA and MTO did not provide additional records of herpetofauna species within the surrounding project area.

One (1) Wood Frog (*Lithobates sylvaticus*) was observed within the Green Ash Mineral Deciduous Swamp (SWD2-2) community during the MH 2021 field investigations within the Highway 138 and Headline Road project area.

4.3.2 Avifauna

According to the Ontario Breeding Bird Atlas (OBBA), there were 33 breeding bird species, including two (2) SAR, recorded within the one (1) 10 km x 10 km atlas square encompassing the project area.

During the 2022 field investigations, several common avian species were observed within the project area including: American Robin (*Setophaga ruticilla*), Black-capped Chickadee (*Poecile atricapillus*), Cedar *Waxwing (Bombycilla cedrorum), and* Red-eyed Vireo (*Vireo olivaceus*).

On July 30, 2022, Migratory Birds Regulations (MBR) under the Migratory Birds Convention Act (MBCA) were updated, where: the nests of species in a new Schedule 1 includes those that reuse their nests, and whose nests therefore are protected year-round, and establishes the minimum number of months for which the nest must have been unoccupied by a migratory bird before the protection can be lifted. Species listed on Schedule 1 that may be encountered within the general project area include heron species, egret species and Pileated Woodpecker (*Dryocopus pileatus)*. Evidence or observations of Schedule 1 species were not identified within the project area during the field investigations.

4.3.3 Mammals

While species range maps and iNaturalist records indicate the project area is likely to support a variety of mammals that make use of forest and open habitats such as Raccoon (*Procyon lotor*), Eastern Gray Squirrel (*Sciurus carolinensis*), White-tailed Deer (*Odocoileus virginianus*), Eastern Cottontail (*Sylvilagus floridanus*), Coyote (*Canis latrans*), Marten (*Martes americana*) and Red Fox (*Vulpes vulpes*).

No mammal species or signs of presence (i.e., nesting, scrapes, sheds etc.) were observed within the Highway 138 and Headline Road project area during the MH 2021 or 2022 field investigations.

4.3.3.1 Insects

According to the Ontario Butterfly Atlas (OBA), there were a combined total of 36 butterfly species identified within the one (1)10 km x 10 km atlas square encompassing the project area, including one (1) SAR record.

Responses from the MNRF, RRCA and MTO did not provide additional records of butterfly species within the project area.

Two (2) individual bumblebee species (*Bombus sp.*), and one (1) cabbage moth (*Mamestra brassicae*) were observed foraging within the Cultural Meadow (CUT) and Transportation/Highway (CVI) communities during the MH 2021 field investigations within the Highway 138 and Headline Road project area.

4.3.4 Species at Risk

Background data collected within the project area identified records of nine (9) provincially designated Endangered or Threatened SAR likely to occur within the general area based on background review, existing conditions on site, and the known habitat preferences for SAR:

Threatened:

- Bank Swallow (*Riparia riparia*)
- Bobolink (*Dolichonyx oryzivorus*)
- Chimney Swift (*Chaetura pelagica*)
- Eastern Meadowlark (*Sturnella magna)*

Endangered:

- Butternut (*Juglans cinerea*)
- Northern Myotis (*Myotis septentrionalis*)
- Eastern Small-footed Bat (*Myotis leibii*)
- Little Brown Myotis (*Myotis lucifugus*)
- Tri-colored Bat (*Perimyotis subflavus*)

Preferred nesting habitat for Bank Swallow (steep vertical surfaces) are not located within the project area. Chimney Swift are known to utilize human-made structures and hollow trees for nesting opportunities; the residential homes surrounding the project area may provide appropriate habitat. Bobolink and Eastern Meadowlark require large expanses of meadow habitat for nesting activities; the vegetation communities within the project area do not support the habitat requirements for these species due size and routine landscaping maintenance (i.e., mowing).

One (1) Butternut individual was recorded on iNaturalist (citizen science database) approximately 1.5 km away from the Highway 138 and Headline Road intersection. Butternut were not observed within the project area during the MH field investigations or documented from the 2016 Stantec report.

Four (4) SAR bats have the potential to be present within the forested communities in the project area, as they roost in treed areas consisting of deciduous, coniferous or mixed tree species measuring 10 cm diameter-at-breast height (DBH) and above. The Green Ash Mineral Deciduous Swamp (SWD2-2), Dry – Fresh Sugar Maple Deciduous Forest (FOD5) and Cultural Woodland (CUW) vegetation communities were observed to have individual trees measuring 10 cm DBH and above.

4.4 Groundwater

The overburden thickness within the Project Study Area is generally quite thin ranging from 9 to 15 m. The Project Study Area is located on the Bobcaygeon Formation within the Simcoe Group and is made up of limestone, with minor shales in the upper part (Ontario Geological Survey, 2011). Potable water is generally sourced from the deep bedrock aquifer based on the well records (MECP, 2021a). The inferred local groundwater direction is likely southerly towards the St. Lawrence River.

The study area is located on the Bobcaygeon Formation within the Simcoe Group and is made up of limestone, with minor shales in upper part (Ontario Geological Survey, 2011). There are approximately forty-six (46) water wells recorded in the WWIS (Ministry of the Environment, 2018) within the study area. These wells vary in depth from 9 mbgs to 36 mbgs. Potable water is generally sourced from the deep bedrock aquifer based on the well records. The pumping rates for the existing wells range from 5 to 50 gallons/minute (GPM) with no high yielding wells (yield rate more than 60 L/s as defined by the Ontario Well Regulation) (Regulation 903 as amended under the Ontario Water Resources Act R.R.O. 1990).

According to Ontario Source Protection Information Atlas, selected region of the project area comes under the HVA zone with a vulnerability score of 6. This means that the water in the region can move relatively faster from the ground to the aquifer and is more vulnerable to contamination.

4.5 Socio-Economic Environment

4.5.1 Existing Land Uses

Highway 138 is a provincial highway connecting Highway 417 in the north with Highway 401 and the City of Cornwall in the south. Highway 138 also functions as a link to the City of Ottawa and the Province of Quebec. Locally, Highway 138 provides access to adjacent agricultural lands and for local communities including St. Andrews West, Strathmore, Martintown, Moose Creek, Warina and Monkland. In addition to general traffic, Highway 138 is a provincial highway used as an emergency access corridor by emergency vehicles as well as a transportation route by school buses and cyclists. The study area is located in the Township of South Stormont within the United Counties of Stormont, Dundas and Glengarry where dominant land uses are commercial, agricultural and rural (refer to **Figure 4** below).

Land use around the study area varies and includes active row crop agriculture, forested wetlands, urban areas, and low-density residential areas. The 2017 TESR identified traffic control as being warranted at the Highway 138 / Headline Road intersection based on traffic volumes and the existing operations of the intersection. Traffic control at this location will improve traffic operations and has the potential to minimize collisions.

Based exclusively on digital aerial imagery available online, the Project Study Area and its immediate surrounding environs can be characterized as primarily rural-residential, with some local businesses (e.g., Funeral Friends), the École élémentaire catholiquede Sainte-Lucie (a French-language Catholic elementary school located to the southeast of the intersection), and surrounding woodlands. Beyond the Project Study Area, the surrounding area is comprised of rural residences located on both sides of Headline Road and Highway 138, coupled with agricultural lands and active farm operations interspersed throughout. An active aggregate extraction operation (Cornwall Gravel's McLeod Quarry) and metal recycling operation (AIM Recycling and Kenny U-Pull) are located approximately 2.5 km east of the intersection.

Figure 4: Existing Land Uses within and Near the Study Area

4.5.2 Official Plans and Policies

4.5.2.1 United Counties of Stormont, Dundas and Glengarry Official Plan (2018)

The Township of South Stormont is subject to the United Counties of Stormont, Dundas and Glengarry Official Plan (2018). The United Counties of Stormont, Dundas and Glengarry Official Plan (2018) sets out goals and objectives for development in the County for 20 years (2017-2037) including regard for the social, economic, and natural environment of the County. This Plan establishes a policy-driven framework for land use planning for the County and its six municipalities. The Plan accentuates the best attributes and amenities of the County, fosters a progressive approach to community and economic development within an environmentally friendly context, provides for the wise use of renewable and non-renewable resources, and streamlines the planning approvals process.

The United Counties of Stormont, Dundas and Glengarry Official Plan (2018) Land Use Schedule A4 sets out land use designations for the Township of South Stormont, refer to **Figure 5**. Relevant details pertaining to the Official Plan policies and how they affect land uses within the Project Study Area are presented below.

The County had a 2016 Census population of 65,353 residents and approximately 28,000 occupied housing units. The rate of growth in population and housing across the County has slowed since 2001 relative to the longer-term historic trend. A range of factors contribute to this trend including recession, the continued out-migration of younger aged adults and the aging demographic trend occurring throughout Ontario, particularly in areas outlying the major urban centres.

An aging population has also contributed to a faster rate of growth for new housing than the rate of growth in population over recent Census periods. This housing growth will be an important consideration in planning for future growth and development in the County since an aging population results in smaller household sizes and affects housing demand and land needs.

As of the 2011 census there were 19,800 jobs in the County. Employment in the County declined from 2006 to 2011 and, like most of Eastern Ontario, the economy has seen a shift away from traditional manufacturing and primary sectors to public administration and service sector industries.

Under the *Planning Act, 1990*, the Province is the approval authority for the Regional Official Plan. Accordingly, all planning decisions under the United Counties of Stormont, Dundas and Glengarry Official Plan (2018) shall conform with Provincial plans and be consistent with the Provincial Policy Statement (PPS), 2020.

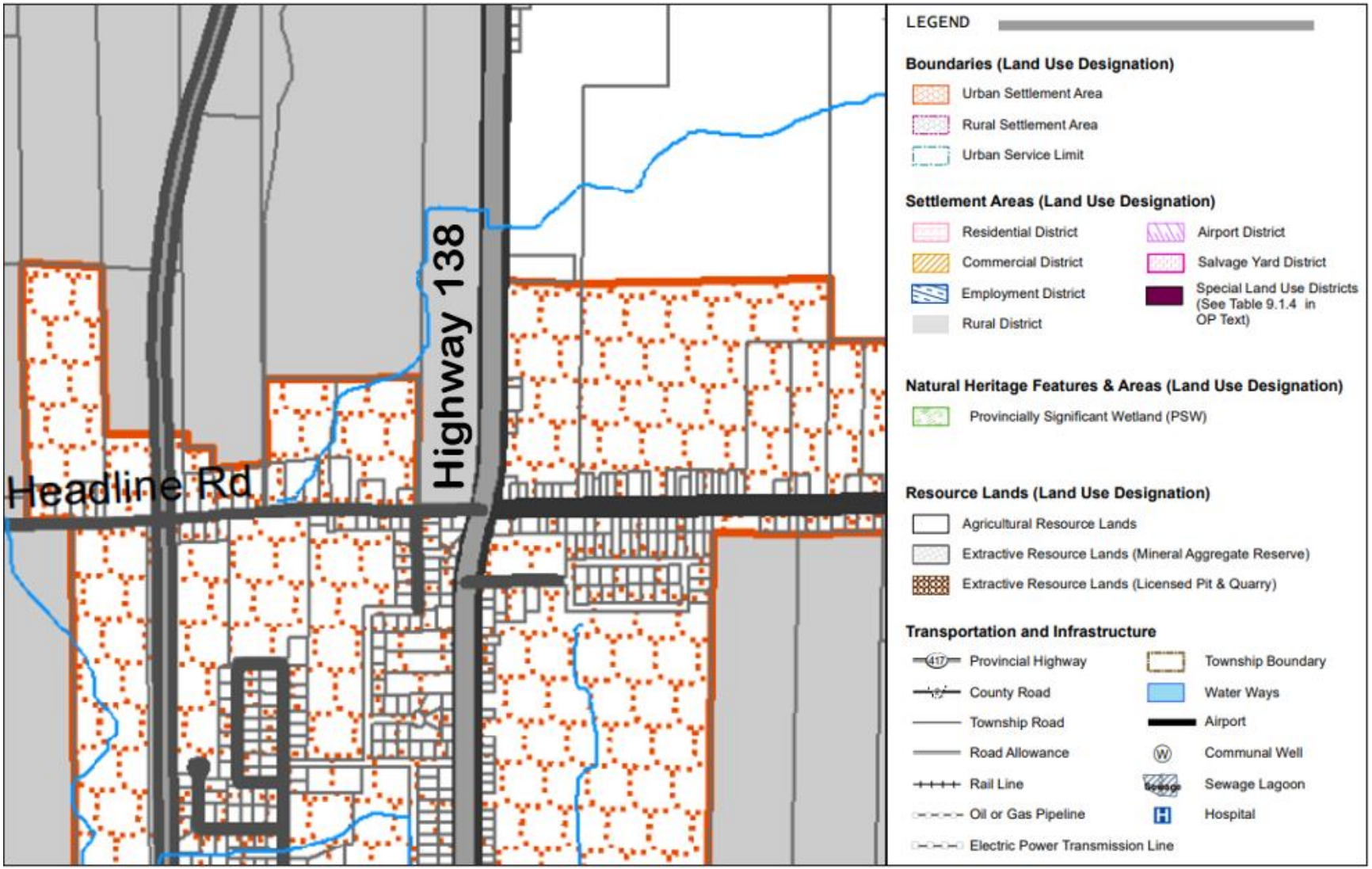


Figure 5: Land Use Schedule A4 of the United Counties of Stormont, Dundas and Glengarry Official Plan (2018)

The following summary of population, total private dwellings, and private dwellings occupied by permanent residents are based on 2016 Statistics Canada data (refer to **Table 3**). Place of work status, mode of transportation to work, and the breakdown of industry are based on 2016 Statistics Canada data (refer to **Table 4**). This information is only available at the Township level from Statistics Canada.

Table 3: Population Numbers and Dwellings

Municipality	Population	Total Private Dwellings	Private Occupied by Usual Residents
South Stormont	13,110	5,277	5,151

Source: Statistics Canada, 2016

Table 4: Place of Work Status, Industry and Mode of Transportation to Work

Municipality	Place of Work Status	Industries	Mode of Transportation to Work
South Stormont	Worked at home: 395 Worked outside Canada: 25 No Fixed Workplace Address: 710 Worked at Usual Place: 5,315	Health Care: 930 Retail Trade: 890 Manufacturing: 760	Car, truck, van – as a driver: 5,515 Car, truck, van – as a passenger: 325 Public transit: 40 Walk, bicycle and all other modes: 145

Source: Statistics Canada, 2016

The Official Plan designates the majority of the Project Study Area as Urban Settlement Area per Schedule A4 of the United Counties of Stormont, Dundas and Glengarry Official Plan (2018). Moreover, Schedule A4 designates a portion of adjacent lands as a Rural.

Urban Settlement Area

Lands located east of Highway 138 and southwest of the Headline Road intersection are designated “Urban Settlement Area“ by Land Use Schedule A4 of the Township of South Stormont Official Plan (2018).

Rural

Lands located northwest of the Highway 138 / Headline Road intersection are designated “Rural” by Land Use Schedule 4 of the Township of South Stormont Official Plan (2018). Section 3.3. of the Official Plan states that rural lands are those not located within a designated settlement area or within a prime agricultural area. The Rural designation is characterized by wide open spaces or countryside setting with cross-road settlements, scattered residential uses, woodlands, pits and quarries and a variety of other rural-type uses. Rural lands are classified in the Official Plan by several Land Use Districts and

Resource Lands. Each of these districts and resource lands constitute a separate land use designation.

Development is typically serviced by individual on-site water supply and sewage disposal systems. These systems must conform to Section 4.3.3 of the Official Plan. The focus of land use activities in the rural lands will be resource or resource-related (e.g., Extractive Resource Lands, environmental protection lands or lands occupied by natural heritage features and areas).

According to Section 3.3 of the Official Plan, the Province is responsible for the management of Crown lands pursuant to the Public Lands Act. Development and alteration on or above Crown Land requires a work permit issued by the Province and may also require a form of occupational authority under the Act.

Permitted uses include low density housing, resource-related or rural service commercial uses, recreational and resort commercial uses serving the tourism and leisure industries, highway commercial uses on major roads, agricultural uses, agricultural-related uses, on-farm diversified uses, forestry and conservation activities, natural resource management activities, bed and breakfast establishments, open space and cemeteries.

4.6 Cultural Heritage

A Cultural Heritage Assessment Report (CHAR) was completed by Archaeological Services Inc. (ASI) as part of the Environmental Existing Conditions Report for Highway 138 improvements from Highway 401 to Highway 417 prepared by Stantec in November 2016.

As documented therein, there are no built or cultural heritage resources located within or near the Project Study Area.

There are 18 cemeteries, including eight Active and 10 Inactive within the Township's geographic boundary (Township of South Stormont, 2017). However, there are no Active, Inactive and/or Abandoned cemeteries located within or in proximity to the Project Study Area.

A review of the Township of South Stormont's Heritage Register confirmed the absence of registered properties within the Project Study Area. Based on review of the Heritage Register there are no registered properties within the Project Study Area (Township of South Stormont, No Date).

4.7 Archaeology

Pursuant to the Class Environmental Assessment for Provincial Transportation Facilities (MTO, 2000) and the *Ontario Heritage Act* (1990), a Stage 1 Archaeological Assessment (AA) was completed in Fall 2021. In accordance with the Archaeological Assessment Technical Guidelines (1993), this study identified and assessed features throughout the Project Study Area. It is noted that most of the study area is within 300 m of a source of water including the South Raisin River and unnamed tributaries, and therefore have potential. However, no registered archaeological sites were identified within 1 km of any part of the Project Study Area.

The only features of historic Euro-Canadian related archaeological potential include both Highway 138 and Headline Road. There were no features indicating high potential for precontact Indigenous sites such as sources of potable water, elevated topography or nearby registered archaeological sites.

Based on the above information, the Stage 1 background research and visual assessment of the Highway 138 and Headline Road intersection improvement lands determined that the study area does not have the potential for archaeological remains due to intensive and extensive disturbances, low and wet conditions and previous assessment. As such, no further archaeological assessment is required within the Project Study Area.

The Stage 1 Archaeological Assessment for the Highway 138 Roundabout (P035-0362-2021) was entered onto the Ontario Public Register of Archaeological Reports on April 20, 2022.

5. MAJOR FEATURES OF THE PROPOSED WORK

5.1 Convert Headline Road Intersection to a Roundabout

The project scope includes conversion of the existing two-way stop control intersection of Highway 138 and Headline Road with a modern single-lane roundabout. The roundabout will enhance operations and safety, and has been designed to include the following main components:

- Construction of a single-lane roundabout and approaches designed with a radius that will accommodate large vehicles.
- Modifications to the intersection and roadway alignment (shift to the east) to improve sightlines to the intersection.
- Installation of new concrete islands with curb and gutter on roundabout approaches and modification of entrance connections.
- Drainage improvements including general grading and clean out of ditches, culvert flushing and cleanout, removal of vegetation, and culvert replacements and storm sewer replacement.
- New illumination (lighting) at the roundabout and approaches.
- Landscaping will be located along the approaches and within the central island.
- Utility relocations to facilitate the new roundabout footprint.

Construction is anticipated to commence in Spring 2024. To review General Arrangement drawings please refer to **Appendix D**.

5.2 Drainage improvements

MH conducted a field investigation of the project site on September 29, 2021. Existing culverts around the intersection were inspected, including driveway culverts and two cross-culverts under Highway 138 and Headline Road. The locations of the culverts are presented in **Figure 6** below.

Headline Road to the east of the intersection will continue to be drained by the storm sewer, which will be replaced and realigned to match the proposed design. Headline Road to the west of the intersection and Highway 138 will continue to be drained by roadside swales but will also be fitted with curb and gutter systems with curb outlets and rip-rap spillways. While it is recommended that ditch inverts be 0.5 m below the bottom of the roadway granular base layer, this was not achievable for most ditches within the project area due to the flat topography and decision not to significantly raise the roadway within the project limits. In general, proposed swales will follow existing drainage patterns, except for the SE corner of the roundabout. In the existing condition, drainage in the SE corner sheet flows to the CL-Culvert 1 where it crosses Headline Road and Highway 138 to the wetland. In the proposed condition, a small swale will be constructed behind the curb to redirect drainage to the SE swales and outlet. Some additional flow is redirected along Headline Road on both the east and west sides due to the change in roadway alignment. The total area being redirected is relatively small and is not anticipated to have a significant impact to either McIntosh Creek

(Raisin River watershed) or the Eastman Drain (South Raisin River watershed). Additionally, the project area is located 2.3 km from the Raisin River and 3.2 km from the South Raisin River. Both floodplains were analyzed in GIS and were found to be well outside the limits of the proposed works. Therefore, no floodplain impacts will result from this project. Proposed land use changes are minimal and include the widening of Headline Road and Highway 138 near the proposed roundabout and some changes to existing entrances. The total increase in impervious area is approximately 0.04 ha, or a 1.6% increase across the project site.

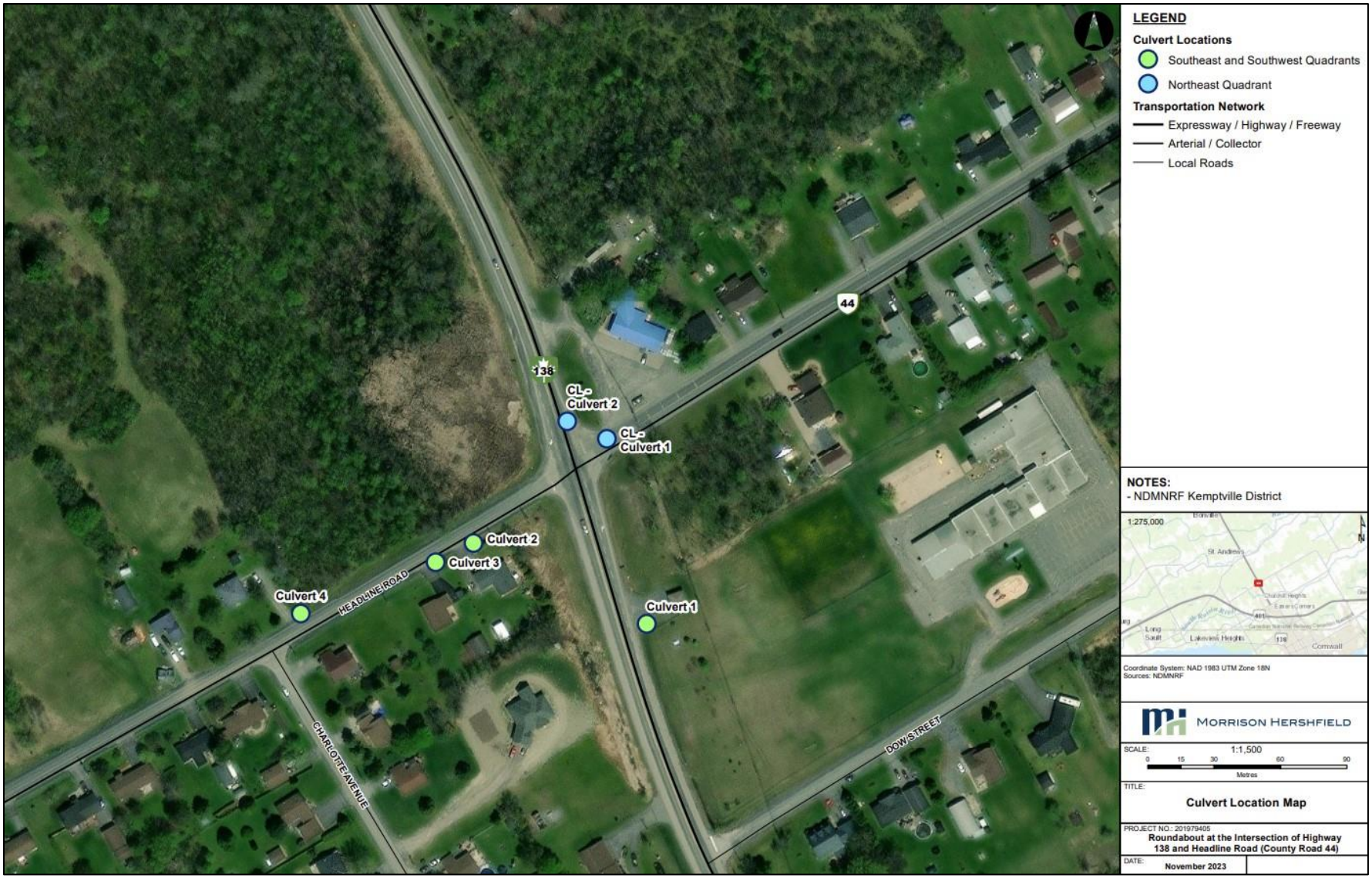


Figure 6: Culvert Locations within the Study Area

5.3 Traffic Staging

Based on current traffic volumes and the existing operations of the intersection, intersection traffic control has been identified as being warranted at the Highway 138 / Headline Road intersection. The introduction of the roundabout will result in improved safety for road users, while also ensuring the uninterrupted flow of traffic in the area.

Staged construction of the work will be completed in order to facilitate construction of the roundabout while maintain traffic operations as much as possible. To facilitate the project works, traffic staging will occur in the following four stages:

- **Stage 1**, traffic will be maintained on Highway 138 with a minor shift to the west. A temporary roadway will be constructed to facilitate construction during subsequent stages. Access to and from Headline Road will be maintained.
- **Stage 2**, traffic will be shifted onto the temporary road while construction is completed on west part of the roundabout. Access to and from Headline Road will be maintained.
- **Stage 3** will see construction of Headline Road west connection, splitter islands, roundabout truck apron and inner circle. For a 4 week stretch during this stage, access to and from Headline Road West from Highway 138 will be temporarily closed. During this closure period, a detour route will be in place using Dundas Street (CR 18/36), Power Dam Drive and Cornwall Centre Road. **Figure 7** illustrates the locations of the detour route.
- During **Stage 4**, traffic will use the new roundabout. Work will include removal of the detour route, final grading of the shoulders and embankments, final driveway tie-ins and surface course paving.

Highway 138 will remain open throughout construction. Advance notification of construction and the full closure will be provided to the public, school boards, and emergency services via newspaper and radio notices and advance signage on the highway.

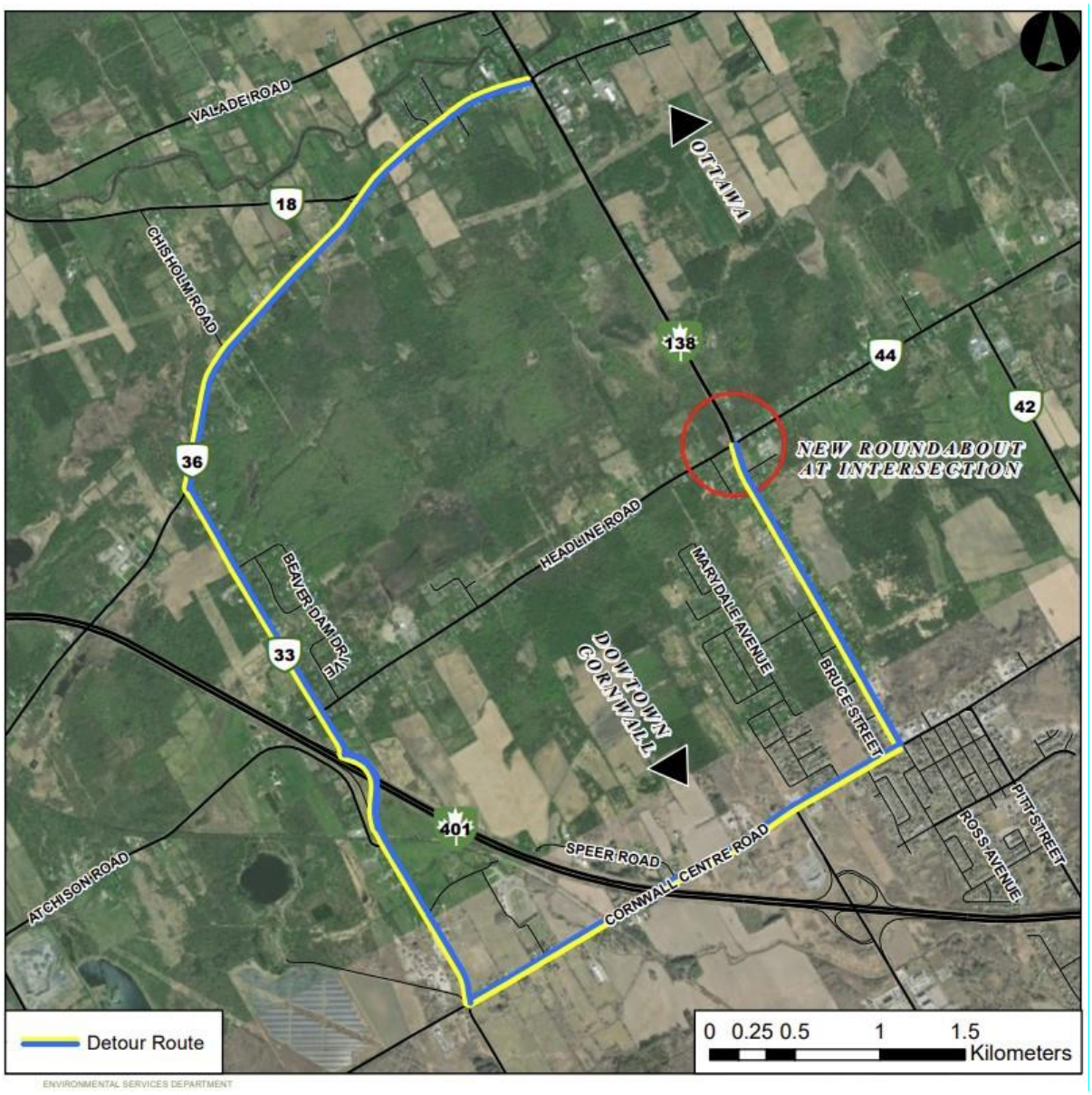


Figure 7: Detour Route

5.4 Property Acquisition

Property acquisition is required from seven (7) properties along Headline Road and Highway 138 to facilitate the new roundabout. Temporary Limited Interests will be required from four (4) properties to facilitate construction of the new roundabout. There will be one lane in the circulatory roadway and one lane approach and departing lane for each leg. Discussions are currently underway with the owners of the properties that have been identified as required for the project works.

5.5 Electrical

The electrical design for this project is intended to enhance the lighting within the new roundabout and ensuring compliance with various regulations.

The electrical design involves the adaptation of existing lighting positions to optimize their illumination of the roundabout. These modifications are integral to achieving our goal of improved visibility and safety.

All electrical adjustments will be executed in strict accordance with the standards set by the Ministry of Transportation Ontario (MTO), regional guidelines, and the Accessibility for Ontarians with Disabilities Act (AODA). These rigorous standards guarantee that the project's electrical components are not only functional but also accessible and inclusive for all members of the community.

Temporary lighting will be used during the construction of the roundabout to ensure the efficient and smooth traffic management during construction.

5.6 Roadside Safety

The recommended alternative for Headline Road is a single-lane roundabout. This improvement was selected as the preferred alternative as it met the following:

- Provides improved traffic operations, including shorter delay in travel time and vehicle queue lengths for the overall intersection.
- Has the potential to decrease the number and severity of collisions.
- Provides traffic calming with reduced speeds.
- Has the potential to act as a gateway feature in a key transition area.

The roundabout was designed to accommodate the navigation of some commercial (e.g., light and medium duty vehicles) and personal use vehicles (e.g., motorcycles, SUVs, pickup trucks, passenger vehicles, etc.).

Additional signage will be installed at the roundabout and on the approaches.

Full illumination will be installed at the new roundabout at Headline Road, as per the MTO Policy for Roundabout Lighting.

6. ANTICIPATED ENVIRONMENTAL IMPACTS AND ASSOCIATED MITIGATION

The anticipated environmental impacts and associated mitigation measures proposed in this section are based on the information provided in the 2017 TESR and additional field investigations and assessment completed as part of this study.

6.1 Fisheries and Fish Habitat Environmental Impacts

As stated in **Section 4.1**, impacts to fish and fish habitat are not anticipated due to the project being greater than 30 m from any potential fish habitat.

6.2 Terrestrial Ecosystems Environmental Impacts

Construction activities that have the potential to impact vegetation and terrestrial communities within the project area include vegetation clearing and grubbing a result of the roundabout construction within the Highway 138 and Headline Road intersection.

Wild Parsnip and Poison Ivy, noxious and invasive weeds, were observed throughout the ROW within the project area during the 2021 and 2022 field investigations: Caution should be used when conducting work within those areas for worker safety.

The removal of trees, shrubs and herbaceous vegetation will be required within the majority of the natural and cultural vegetation communities identified within the project area due to the roundabout construction and road realignments. Refer to **Table 5** for a summary of impacts to ecosites within the project area.

Table 5: Impacts to Ecosites Present Within the Project Area

Ecosite Name	Anticipated Impact
Green Ash Mineral Deciduous Swamp (SWD2-2)	Anticipated 220 m^2 to be impacted by vegetation and tree removal.
Cattail Mineral Meadow Marsh (MAS2-1)	Located in the northwest quadrant of the intersection, is anticipated to have 1205 m^2 removed to accommodate the roundabout design
Mineral Meadow Marsh (MAM2)	Primarily containing herbaceous plants indicative of past disturbance due to regular road maintenance (e.g., Phragmites and Wild Parsnip) it is anticipated to have 478 m^2 of area removed.
Cultural Woodland (CUW)	Likely 6.7m^2 to be impacted due to the road realignment for the roundabout.
Cultural Thicket (CUT)	Anticipated 1.93 m^2 to be impacted.

Ecosite Name	Anticipated Impact
Deciduous Maple forest (FOD5)	Anticipated 9.55 m^2 area to be impacted.

In addition to vegetation clearing and grubbing activities impacting existing vegetation communities within the project area, five (5) individual trees are required for removal based on design impacts. Two (2) of the trees are located at the western-most project limits adjacent to private property, (1) within the CVI community south of the Cattail Mineral Meadow Marsh (MAS2-1), one (1) directly within the Cattail Mineral Shallow Marsh (MAS2-1) and one (1) within the Mineral Meadow Marsh (MAM2) west of Highway 138 and south of Headline Road.

Clearing of vegetation should be kept to a minimum whenever possible, and existing trails and roads should be used to avoid disturbance to vegetation and prevent soil compaction. The following additional measures to minimize impacts to terrestrial communities and vegetation on site are recommended:

- Surplus material resulting from vegetation removal operations shall be managed according to **OPSS 180: General Specification for the Management of Excess Materials** and **O.Reg 406/19**.
- Vegetation removals shall be conducted according to **OPSS.PROV 201: Construction Specification for Clearing, Close Cut Clearing, Grubbing and Removal of Surface and Piled Boulders**.
- In the event of accidental damage to trees, or unexpected vegetation removal, vegetation shall be replaced / restored with native species according to **Non-Standard Special Provision (NSSP) 1396: Construction Specification for Planting**.
- Disturbed vegetation/soils within the impacted areas shall be re-established as soon as weather/conditions permit to provide stabilization to exposed soils and minimize sedimentation according to **OPSS 206 Construction Specification for Grading** and **OPSS 802 Construction Specification for Topsoil**.
- Following completion of grading and topsoil application, disturbed areas will be re-seeded with a standard roadside seed mixture as specified in **OPSS 804 Construction Specification for Seed and Cover**.
- During ditching works, any tree roots greater than 25 mm in diameter shall be cut off cleanly according to **OPSS.PROV 801: Construction Specification for the Protection of Trees**.
- Due to the presence of Invasive Phragmites in areas flagged for vegetation removals, **NSP NSTI-06: Invasive and Noxious Vegetation Disposal and Burial**.

6.2.1 Designated Natural Areas

Results of the background review did not identify Areas of Natural and Scientific (ANSI's) or Provincially Significant Wetlands (PSW's) within the project area; however, the Cattail Mineral Shallow Marsh (MAS2-1) identified by the LIO and NHIC databases is considered an unevaluated wetland which is not regulated by Agencies. An unevaluated wetland is a wetland that has not yet been assessed using the Ontario Wetland Evaluation System.

Construction of the roundabout will result in an impacted area of 1205 m^2. As unevaluated wetlands have no formal status, there are no regulatory restrictions or protections on these features.

6.2.2 Wildlife and Wildlife Habitat

Construction activities that have the potential to impact wildlife and wildlife habitat include:

- Loss of wildlife habitat due to vegetation removal
- Noise during construction

Most wildlife species will move away from noise and disturbance during construction activities. However, some wildlife species may remain within the work limits. As per **NSSP No. 001A860: Prevention of Wildlife Harassment**, no wildlife encountered during construction may be harassed or killed. Therefore, if any wildlife are encountered within the work limits that do not, or cannot, move away safely on their own, they should be moved to a similar, safe location outside of the work area by someone experienced in wildlife relocation. It is noted that SAR species and migratory birds receive additional protection and mitigation measures as detailed in this report.

Nesting migratory birds are protected under the *Migratory Bird Convention Act* (MBCA). The following mitigation measures are recommended to avoid impacts to migratory birds protected under the MBCA:

- The Contractor is responsible for abiding by **NSSP OC EN 03: Migratory Bird Protection** and will not destroy active nests or eggs of protected migratory birds. As such, all vegetation removals and clearing should be completed outside of the active breeding bird season, which begins April 1 and ends August 31 of any given year (nesting zone C2).

If nesting activity (nest building, carrying nesting material etc.) and/or nests or eggs/young are found during construction, all activity in the area should temporarily cease, until the Contractor retains an Avian Biologist to determine whether the nests/eggs/young belong to a migratory bird species. Any nests found belonging to migratory birds must be protected while they are active with a species appropriate buffer (determined by the Avian Biologist), within which no work can occur until such a time that the nest is no longer active.

6.2.3 Species at Risk

Potential suitable habitat was identified within the general vicinity of the project area for five (5) endangered and/or threatened SAR protected under the ESA including Chimney Swift and four (4) bat species (Northern Myotis, Eastern Small-footed Bat, Little Brown Myotis and Tri-colored Bat). Habitat for Chimney Swift include human made structures and hollow trees, and bat SAR utilize forest communities for roosting. Components of the proposed design that have the potential to impact SAR including the removal of trees and shrubs required for the road realignments associated with the roundabout design.

SAR bats and Chimney Swift have the potential to use trees within the Green Ash Mineral Deciduous Swamp (SWD2-2) and the Cultural Woodland (CUW) communities for maternity roosting habitat or nesting opportunities.

Based on the vegetation survey results from the 2021 and 2022 field investigations, tree species situated within the Green Ash Mineral Deciduous Swamp (SWD2-2) area identified for clearing and grubbing are small diameter pioneer species including Trembling Poplar (*Populus tremuloides*), Green Ash (*Fraxinus pennsylvanica*) and American Basswood (*Tilia americana*) with an understory that includes Glossy Buckthorn (Rhamnus cathartica), an invasive shrub species. Standing stags were observed within this community, however they were recently dead Ash trees with little to no obvious signs of decay (e.g., cavities or peeling bark). Trees observed within this community were not observed to have cavities for SAR bat roosting or Chimney Swift nesting opportunities; it is more likely that preferred habitat for SAR bat and Chimney Swift is located within the larger Deciduous Swamp community outside of the project area or the Sugar Maple Forest (FOD5) located on the east side of Highway 138, which has been less impacted by previous construction and contain an abundance of preferred tree species (e.g., maples and oaks) and large diameter trees.

Similarly to the Green Ash Mineral Deciduous Swamp (SWD2-2), the corner of the Cultural Woodland (CUW) community that is identified for vegetation removal is unlikely to support confirmed bat SAR and Chimney Swift roosting or nesting habitat, as tree species observed during the 2021 and 2022 field surveys include a few White Elm individuals, small diameter White Ash (*Fraxinus americana*), and standing snags (Ash species) less than 25 cm in diameter, with a dense colony of Prickly Ash in the understory. It is likely that bat SAR and Chimney Swift would find preferred roosting and nesting habitat within the larger Deciduous Swamp (SWD2-2) or Sugar Maple Forest (FOD5) outside of the immediate project area.

Although SAR were not confirmed on site, and the potential for nesting or roosting activities is considered low within the project area, adherence to appropriate mitigation measures and wildlife timing windows will minimize potential impacts to SAR from proposed construction activities.

Based on the results of the 2021 and 2022 field investigations, it is deemed unlikely that these species would utilize the areas being impacted by vegetation removal for roosting or nesting opportunities (due to tree size, tree community) and are thus unlikely to be impacted by the proposed work; however, if the Contractor encounters a SAR within the work limits at any time that is likely to be impacted by the operations:

- The Contractor shall immediately notify the Contract Administrator and suspend operations within the area identified by the Contract Administrator, as per **OPSS PROV 100: MTO General Conditions of Contract**. Work shall remain suspended within that area until otherwise directed by the Contract Administrator in writing**.**

6.3 Erosion and Sediment Control Mitigation

Disturbed soils will be properly contained to prevent migration of materials and sediments beyond the work limits and into adjacent communities using **OPSS-804: Construction Specification for Temporary Erosion Control** and **OPSS-805: Construction Specification for Temporary Sediment Control**.

6.4 Groundwater

According to the MECP, Water Well Information System (WWIS) forty-six (46) records were found for private water supply wells within 500 meters (m) of the project area; however, based on the expected depth of excavations required for the proposed work, it is unlikely that any wells will be located within the radius of influence of any water taking source locations. The presence/absence and actual locations of potable water wells within 500 m of the dewatering locations shall be verified by a field survey prior to dewatering/construction activities.

It is expected that the work will likely involve grading, curb and gutter installation, road construction for the realignment and paving and will likely occur at or above the existing grades and excavation below 2 mbgs will not be required. Given the hydrogeological conditions, the groundwater dewatering during this work is expected to be relatively minor, with less than 50,000 L/day, and therefore the project will not need to register in EASR. The zone of influence will not extend beyond the area immediately adjacent to the excavations. The dewatering effluent will likely be disposed of to a ditch located down-gradient from the work or to the ground. No impact on groundwater or surface water is anticipated because of the dewatering. If the proposed design changes, and those changes require deep excavations for the planned construction (>2 mbgs), the dewatering requirements will need to be reassessed.

The Ontario Water Resources Act (OWRA) provides that all water users whose supplies are interrupted shall be provided an alternate source. If a water well interference complaint is received by MTO, the Contractor, or through other channels (i.e., the MNR or MECP), and the complaint concerns a water well within 500 m of the construction project, then the Contractor shall carry out the following actions:

- Immediately provide an interim potable water supply (within 12 hours).
- Notify the MECP of the complaint (if they are not already aware).
- Retain a qualified professional to conduct a site investigation, determine the cause and provide recommendations to correct the problem.
- If it is found that the water well interference resulted from the project, the water supply will be restored to its original condition, or better.

If construction dewatering is required, all work area dewatering hoses will be directed to a filtration system prior to being discharged. It is expected that any water taking required for the excavations will be discharged to the roadside ditches and allowed to infiltrate.

6.5 Noise

An Environmental Noise Assessment was carried out for the Recommended Plan as part of the Preliminary Design and EA Study. The Assessment was carried out in accordance with the MECP / MTO Noise Protocol and the MTO Noise Guide (Stantec, 2016). The Assessment analysed existing noise conditions and compared them to future noise levels expected from the proposed improvements under a future ‘do-nothing’ and the future ‘Recommended Plan’ scenarios. After the intersection improvements, the change in sound level is not anticipated to exceed 5 decibels (dBA) or greater at any of the noise receptors

within and in proximity to the Project Study Area (Stantec, 2016). In addition, the change in sound level at all identified Outdoor Living Areas (OLAs) is less than 5 dB. Therefore, noise mitigation measures are not warranted (Stantec, 2016).

There will be a temporary increase in noise levels and vibration during construction. Wherever possible, the Contractor will be required to comply with all applicable requirements of the contract and municipal noise by-laws regarding the operation of any construction equipment.

Noise impacts are expected to be temporary and unavoidable. General mitigation measures include:

- Equipment to be properly maintained and in good working order to limit noise emissions. As such, all construction equipment should be operated with effective muffling devices that are in good working order.
- Any initial noise complaint will trigger verification that the general noise control measures agreed to are in effect.
- In the presence of persistent noise complaints, all construction equipment will be verified to comply with MECP NPC-115 guidelines.
- If noise level emissions for the construction equipment in use exceed the sound level criteria for construction equipment contained in the MECP NPC-115 guidelines, the contractor is required to comply with the sound level criteria where quieter alternative equipment is reasonably available.
- Any noise complaints will be forwarded to the MTO Contract Administrator so they can be addressed.

6.6 Air Quality

The proposed intersection improvements will provide a negligible increase in traffic capacity and result in a minimal widening of the paved surface of an existing provincial transportation facility. The proposed improvements are expected to result in a minor increase in future traffic volumes, and air quality and climate change impacts associated with future Highway 138 operations are not expected to differ appreciably from existing operations levels. Thus, an Air Quality Impact Assessment was not carried out as part of this study, and no mitigation is required for operational impacts on air quality, climate change and greenhouse gas (GHG) emissions.

A temporary impact to air quality through the generation of dust, fumes and odours may occur during construction from equipment operations. The Contractor will ensure measures are taken to prevent emissions from impacting the air and surface water or escaping beyond the right-of-way. They will also minimize odour and fume impacts by properly maintaining and providing pollution control devices on the equipment and by avoiding idling.

Re-entrained road dust, which is the primary source of traffic related particulate matter (PM_{10}), will be controlled by the Contractor where problematic by reducing the amount of dust precursors on the road. For example, this may be achieved by minimizing tracking of mud and other debris onto the highways and by sweeping and washing any issue areas more frequently and thoroughly.

6.7 Operation of Machinery

The Contractor must ensure that machinery arrives on site in a clean condition and is maintained free of fluid leaks, invasive species and noxious weeds for the duration of construction. The Contractor must also ensure that:

- Wash, refuel and service machinery and store fuel and other materials for the machinery a minimum of 30 m from any surface water features to prevent any deleterious substances from entering the water.

Applicable OPSS for equipment use includes **OPSS.PROV 182**.

6.8 Contaminant and Emergency Spill Response

Based on the findings from the records review there is a potential for environmental impact to the Site in the form of unknown fill quality. This was identified based on the historical use at the Site or surrounding properties. There were 2 properties with medium-risk of potential contamination and an auto body shop offsite that pose a low-risk of contamination to the project site.

The site is not subject to O.Reg. 406/19 Notice and Planning requirements as per Section 8(1.1) of the regulation as the following circumstances apply to the project:

- The Site is considered Community Land Use and has never been, in whole or in part, an Enhanced Investigation Area within the meaning of O. Reg. 406/19.
- Majority of the excavated materials will be reused on site and the project will generate less than 2000 m3 of excess soil to be disposed of off-site.
- The project is not intended for remediation of the site.
- No additional investigation is recommended at this time for compliance with O. Reg 406/19. However, if the excess soil volume increases over 2,000 m3, the site will no longer be exempt and filling of notice will be required. Additional soil investigations and reporting may also be required for support of filing of notice to comply with O.Reg 406/19.
- Notwithstanding, environmental assessments/investigations have been undertaken for due diligence. The results will be provided in the Soil Management Plan along with measures for management or mitigation as needed.

For the proposed works within the project area, the Contractor must develop a response plan that is to be implemented immediately in the event of a sediment release or spill of a deleterious substance as well as keep emergency spill kits on site (and in heavy machinery) in case of emergency.

All spills shall be reported to the Ministry of Environment, Conservation and Parks (MECP) Spills Action Centre (1-800-268-6060), Parks Office, as well as to MNRF Kemptville District if there is potential for impacts to natural areas, or wildlife resources.

6.9 Socio-Economic Impacts and Mitigation

Partial and full closures of Headline Road could result in an increase in response time for emergency vehicles as well as increase in transportation time for school buses and other vehicles.

To mitigate impacts of traffic during construction and detour operations, the following measures will be considered in the traffic management plan as a minimum:

- A communication strategy which may include website posts, advertisements in the print media, brochures and radio spots, and Advanced Notification Signing (ANS) will be provided to inform drivers, residents and stakeholders a minimum of two weeks in advance of the closure and allow daily commuters to plan accordingly, either by adjusting their schedules to accommodate the additional time to travel through the detour route or by selecting an alternative route, if feasible.
- Alternative Route Signing (ARS) designed to inform drivers of the formally signed detour route D-1 will be installed for those already on Highway 138.
- Contact will be made with identified local business and community stakeholders who may be impacted, in advance of the detour to allow businesses and goods carriers to adjust their delivery schedules and/or routes.
- Signage placed along the detour route to caution motorists about pedestrians. Local residents will be asked to minimize on-road activity during this period.
- Emergency Medical Services and Fire departments will be notified of the construction, highway closures and detours.

The Ontario Provincial Police (OPP) will also assist with the Highway closure and speed control, should it be required.

6.10 Road User Safety

To avoid impacts to the safety of road users, additional signage will be installed at the roundabout and on the approaches.

6.11 Cultural Heritage and Archaeological Resources

6.11.1 Impacts and Mitigation Measures to Cultural Heritage Resources

Based on the findings of previous studies, impacts to cultural heritage resources are not anticipated as they are not located within the study area. However, should cultural heritage remains be encountered during construction, work must stop in that area and the Contract Administrator and Ministry of Citizenship and Multiculturalism must be notified immediately.

6.11.2 Impacts and Mitigation Measures to Archaeological Resources

Based on the Stage 1 Archaeological Assessment, the study area has been determined to not have the potential for archaeological remains due to intensive and extensive disturbances, low and wet conditions and previous assessment.

Should archaeological resources be identified during the Contractors operations, work must stop in that area and the Contract Administrator and Ministry of Citizenship and Multiculturalism must be notified immediately. Should any human remains be encountered during construction, the Ontario Provincial Police, the Ministry of Government and Consumer Services and the Ministry of Citizenship and Multiculturalism must be notified immediately. If previously undocumented archaeological resources be discovered, there may be a new archaeological site and therefore the proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork in compliance with the Ontario Heritage Act.

7. SUMMARY OF ENVIRONMENTAL EFFECTS, PROPOSED MITIGATION & COMMITMENTS TO FUTURE WORK

An array of protection and mitigation measures were identified and developed to address potential impacts resulting from the work, as identified in **Table 6**. These mitigation measures form the basis of an environmental monitoring and inspection program which will be implemented throughout project construction.

Table 6: Protection and Mitigation Measures

I.D. #	Issues/Concerns/ Potential Effects	Concerned Agencies	I.D. #	Mitigation/Protection/Monitoring
1. Highway Safety, Construction Traffic and Emergency Services Access	Traffic Impacts: Access, disruptions/ delays caused by lane closures	Ontario Provincial Police, Emergency Management Services, School Boards, property owners, motorists travelling through the area	1.1	• Stage construction activities to avoid / minimize traffic delays to residents, property owners and motorists travelling through the study area to the extent possible. • Ensure any entrance modifications/upgrades are staged to reduce access restrictions to the extent possible.
2. Natural Heritage	Causing Serious Harm to Fish: Potential impacts to fish and fish habitat	Ministry of Natural Resources and Forestry and Fisheries and Oceans Canada	2.1	• As project works will be located greater than 30 m from any potential fish habitat, impacts are not anticipated
	Impacts to Terrestrial Ecosystems – Migratory Birds	Ministry of Natural Resources and Forestry	2.2	The following mitigation measures are recommended to avoid impacts to migratory birds protected under the MBCA: • The Contractor is responsible for abiding by **NSSP OC_EN_03: Migratory Bird Protection** and will not destroy active nests or eggs of protected migratory birds. As such, all vegetation removals and clearing should be completed outside of the active breeding bird season, which begins April 1 and ends August 31 of any given year (nesting zone C2). If nesting activity (nest building, carrying nesting material etc.) and/or nests or eggs/young are found during construction, all activity in the area should temporarily cease, until the Contractor retains an Avian Biologist to determine whether the nests/eggs/young belong to a migratory bird species. Any nests found belonging to migratory birds must be protected while they are active with a species appropriate buffer (determined by the Avian Biologist), within which no work can occur until such a time that the nest is no longer active.
	Impacts to Terrestrial Ecosystems – Wildlife and Wildlife Habitat	Ministry of Natural Resources and Forestry	2.3	To avoid impacts to wildlife species within the work limits, the following mitigation should be followed: • As per **NSSP No. 001A860: Prevention of Wildlife Harassment**, no wildlife encountered during construction may be harassed or killed. • If any wildlife are encountered within the work limits that do not, or cannot, move away safely on their own, they should be moved to a similar, safe location outside of the work area by someone experienced in wildlife relocation.
	Operation of Machinery: Potential for change in contaminant concentrations in soils and water and spread of invasive species	Ministry of Natural Resources and Forestry	2.4	The Contractor must ensure that machinery arrives on site in a clean condition and is maintained free of fluid leaks, invasive species and noxious weeds for the duration of construction. The Contractor must also ensure that: • Heavy machinery access will be limited to areas within the existing right-of-way (ROW); and • Wash, refuel and service machinery and store fuel and other materials for the machinery a minimum of 30 m from any surface water features to prevent any deleterious substances from entering the water.
	Impacts to Terrestrial Ecosystems – Vegetation / vegetation communities	Ministry of Natural Resources and Forestry, Municipality	2.5	Recommended mitigation measures to protect terrestrial habitat and vegetation include: • Surplus material resulting from vegetation removal operations shall be managed according to **OPSS 180: General Specification for the Management of Excess Materials** and **O.Reg 406/19**. • Vegetation removals shall be conducted according to **OPSS.PROV 201: Construction Specification for Clearing, Close Cut Clearing, Grubbing and Removal of Surface and Piled Boulders**. • In the event of accidental damage to trees, or unexpected vegetation removal, vegetation shall be replaced / restored with native species according to **Non-Standard Special Provision (NSSP) 1396: Construction Specification for Planting**. • Disturbed vegetation/soils within the impacted areas shall be re-established as soon as weather/conditions permit to provide stabilization to exposed soils and minimize sedimentation according to **OPSS 206 Construction Specification for Grading** and **OPSS 802 Construction Specification for Topsoil**. • Following completion of grading and topsoil application, disturbed areas will be re-seeded with a standard roadside seed mixture as specified in **OPSS 804 Construction Specification for Seed and Cover**. • During ditching works, any tree roots greater than 25 mm in diameter shall be cut off cleanly according to **OPSS.PROV 801: Construction Specification for the Protection of Trees**.

I.D. #	Issues/Concerns/ Potential Effects	Concerned Agencies	I.D. #	Mitigation/Protection/Monitoring
				• Due to the presence of Invasive Phragmites in areas flagged for vegetation removals, **NSP NSTI-06: Invasive and Noxious Vegetation Disposal and Burial**.
	Protection of SAR	Ministry of Natural Resources and Forestry	2.6	While Species at Risk are not anticipated to be impacted by the proposed works, should the Contractor encounter a SAR within the work limits at any time that is likely to be impacted by the operations: • The Contractor shall immediately notify the Contract Administrator and suspend operations within the area identified by the Contract Administrator, as per **OPSS PROV 100: MTO General Conditions of Contract**. Work shall remain suspended within that area until otherwise directed by the Contract Administrator in writing.
	Erosion and Sediment Control	Ministry of Natural Resources and Forestry	2.7	Disturbed soils will be properly contained to prevent migration of materials and sediments beyond the work limits and into adjacent communities using **OPSS-804: Construction Specification for Temporary Erosion Control** and **OPSS-805: Construction Specification for Temporary Sediment Control**.
3. Cultural Heritage and Archaeological Resources	Loss of, or disturbance to built heritage resources	Ministry of Citizenship and Multiculturalism	3.1	As cultural heritage resources are not located within the study area, no impacts to cultural heritage resources are anticipated as part of the project works. • Should cultural heritage remains be encountered during construction, work must stop in that area and the Contract Administrator and Ministry of Citizenship and Multiculturalism must be notified immediately.
	Loss of, or disturbance to archaeological resources	Ministry of Citizenship and Multiculturalism, Ontario Provincial Police	3.2	No impacts to Archaeological Resources anticipated. • In the event human remains are encountered Measures will be implemented to protect the site as per **OPSS 100 – General Conditions of Contract** and the Ontario Provincial Police, the Registrar of Cemeteries Regulation Unit (Ministry of Government and Consumer Services) and the Archaeology Programs Unit, Programs and Services Branch Unit of the Ministry of Citizenship and Multiculturalism must be notified immediately. • Should previously undocumented archaeological resources be discovered, there may be a new archaeological site and therefore the proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork in compliance with the Ontario Heritage Act.
4. Human Health	Potential impact of noise during construction	Ministry of Environment Conservation and Parks and Municipalities	4.1	Noise impacts are expected to be temporary and unavoidable. Whenever possible, municipal Noise By-Laws shall be adhered to during construction. Mitigation measures include: • Equipment to be properly maintained and in good working order to limit noise emissions. • Equipment to be operated with effective muffling devices. • Persistent noise complaints shall be investigated.
	Potential impact on air quality during construction	Ministry of Environment Conservation and Parks and Municipalities	4.2	A temporary impact to air quality through the generation of dust, fumes and odours may occur during construction from equipment operations. The Contractor will ensure measures are taken to prevent emissions from impacting the air and surface water or escaping beyond the right-of-way. They will also minimize odour and fume impacts by properly maintaining and providing pollution control devices on the equipment and by avoiding idling. • Re-entrained road dust, which is the primary source of traffic related particulate matter (PM10), will be controlled by the Contractor where problematic by reducing the amount of dust precursors on the road. For example, this may be achieved by minimizing tracking of mud and other debris onto the highways and by sweeping and washing any issue areas more frequently and thoroughly.
	Contaminant and Emergency Spill Response	Ministry of Environment, Conservation and Parks, Ministry of Natural Resources and Forestry, Ministry of Labour and Municipalities	4.3	For the proposed works within the project area, the Contractor must develop a response plan that is to be implemented immediately in the event of a sediment release or spill of a deleterious substance as well as keep emergency spill kits on site (and in heavy machinery) in case of emergency. • All spills shall be reported to the Ministry of Environment, Conservation and Parks (MECP) Spills Action Centre (1-800-268-6060), Parks Office, as well as to MNRF Kemptville District if there is potential for impacts to natural areas, or wildlife resources.
	Potential impacts to pedestrian safety	Ministry of Labour and Ministry of Health and Long-Term Care	4.4	To avoid impacts to the safety of road users, additional signage will be installed at the roundabout and on the approaches.

8. ENVIRONMENTAL APPROVALS AND PERMITS

8.1 Endangered Species Act & Species at Risk Act

Species at Risk are protected and listed under the Endangered Species Act (ESA) or Species at Risk Act (SARA). Endangered and Threatened Species are protected under the provincial Endangered Species Act, which specifically prohibits willful harm to endangered species that are listed in regulations under the Act and the willful destruction of, or interference with their habitats.

While four (4) provincially designated endangered or threatened SAR were identified as having the potential to exist within the forested communities within the general project area, based on the findings of field investigations and the scope of work, it is deemed unlikely that these species would utilize the areas being impacted by vegetation removal for roosting or nesting opportunities (due to tree size, tree community) and are thus unlikely to be impacted by the proposed work. As such, provided the mitigation measures specified in this DCR are implemented, the project will not require an authorization or permit under the ESA.

8.2 Migratory Bird Convention Act

Under the *Migratory Birds Convention Act*, 1994 (MBCA), no work shall be permitted to proceed that would result in the destruction of active nests or the harassing, wounding or killing of birds protected under the MBCA and/or any regulations therein. No contravention to MBCA are foreseen assuming all mitigation measures listed in **Section 6.2.2** are being implemented.

8.3 Township of South Stormont Noise Emission By-Law

Works undertaken by MTO do not require approval under local noise bylaws to engage in work during prohibited times.

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APPENDIX A: **CONSULTATION MATERIALS**

SPORTS

COVID-19 STRIKES LEAFS

Tavares and Kerfoot both sidelined after positive tests

TERRY KOSHAN

Toronto Maple Leaf captain John Tavares has entered COVID-19 protocol. *CLAUS ANDERSEN/GETTY IMAGES*

VANCOUVER Maple Leafs captain John Tavares and forward Alex Kerfoot have been placed in COVID-19 protocol.

The Leafs made the announcement Friday morning, a couple of hours before the team was scheduled to practice at the University of British Columbia.

For precautionary reasons, the practice has been cancelled.

Leafs players and travelling staff were tested on Thursday in Vancouver and the club learned of the testing results early on Friday morning.

All players and training staff will undergo additional testing on Friday.

The Leafs' next game is scheduled for Saturday night against the Canucks.

That COVID-19 has impacted the Leafs isn't overly surprising considering the rapid spread of the virus both in the National Hockey League and in society in general.

On Thursday, Tavares spoke on the enhanced COVID protocol measures instituted by the NHL this week.

"When we got (to Vancouver from Edmonton), we heard that news of more testing, basically (staying) at the hotel, just getting out for a walk and getting some fresh air, not going out to eat on the road," Tavares said.

"Some of those things are similar to (protocols) last year. Ideally, you don't want to be going backward, but it's the nature of the beast and circumstances that are part of it.

"We're just trying to do the right things and as a team continue to be mindful and as smart as we can be, making those conscious decisions and to continue move forward.

"Whether it's us or the rest of society, we hope things improve quickly."

Jason Spezza can get back to work.

Theleague announced on Friday that following an appeal by the Maple Leafs centre, commissioner Gary Bettman upheld the six-game suspension of Spezza, but reduced it to four games.

Spezza has sat the past four Toronto games and with the reduction, is eligible to return to the lineup on Saturday when the Leafs play Vancouver.

Spezza had been suspended for six games for kneeing Winnipeg Jets defenceman Neal Pionk in the head in a game on Dec. 5. That came after Pionk had kneed Leafs defenceman Rasmus Sandin in the right leg.

Pionk, who suffered a concussion on the Spezza hit, was suspended for two games for his knee on Sandin. The latter remains on the sideline with a leg injury.

In the appeal, heard on Tuesday afternoon, the NHLPA argued that Spezza's hit on Pionk did not violate the NHL's definition of kneeing, which is "the act of a player leading with his knee and in some cases extending his leg outwards to make contact with his opponent."

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Photo du jet SkyCare stationné à l'aéroport régional de Cornwall le mardi 14 décembre 2021. Photo gracieuseté de l'Aéroport régional de Cornwall.

L'aéroport de Cornwall contribue au don d'organes pour sauver des vies

NICK LAURIN

SUMMERSTOWN, Ontario - L'aéroport régional de Cornwall a contribué à sauver des vies après avoir facilité l'envoi de deux dons d'organes le mardi 14 décembre.

Des médecins se sont envolés de l'aéroport après avoir recueilli un cœur et un foie auprès d'un donneur décédé à Cornwall.

Pour être viable, un greffé du foie doit recevoir le nouvel organe dans les huit heures suivants le prélèvement sur son donneur. Pour un cœur, ce délai n'est que de quatre à six heures.

Une équipe de médecins a été acheminée de Toronto à l'aéroport de Cornwall tôt mardi matin par SkyCare Air Ambulance. Entreprise Airlines a ensuite livré les médecins et leur précieuse cargaison à deux patients dans le besoin situés dans une autre partie de la province.

Steve Small, directeur de l'aéroport régional de Cornwall, a déclaré que l'aéroport voit ce genre de service quelques fois par an.

En plus de soutenir des services qui sauvent des vies, comme le don d'organes, l'aéroport régional de Cornwall accueille également l'école d'aviation de Cornwall, qui, selon Steve Small, compte environ 15 étudiants à tout moment et en diplôme plus de 100 chaque année.

Plus tôt cette année, l'aéroport régional de Cornwall a également soutenu les services de police locaux qui ont effectué une recherche dans le fleuve Saint-Laurent après avoir reçu un rapport sur un bateau abandonné dans le fleuve.

L'avenir de l'aéroport régional de Cornwall est un peu incertain, après que la ville de Cornwall a annoncé son intention de mettre fin à l'accord de gestion qu'elle avait avec le canton de Glengarry sud.

La ville et le canton financent et gèrent conjointement l'aéroport, mais en vertu de l'accord actuel, la ville de Cornwall paie 85% des coûts de l'aéroport, tandis que Glengarry sud en paie 15%.

Justin Towndale, conseiller de la ville de Cornwall, a déclaré que malgré le vote de ses collègues en faveur d'un avis de résiliation de l'entente, celle-ci resterait en vigueur pendant au moins deux ans.

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Ontario

December 6, 2021
<IC Primary Contact_ Full Name>
<Title>
<Agency>
<Address>
<City_PR_PC>

Subject: Detail Design and Class Environmental Assessment Study for Highway 138 Intersection Improvements at Headline Road, Township of South Stormont G.W.P. 4004-21-01 | W.P. 4043-21-01

Dear < IC Primary Contact_ Full Name >:

The Ministry of Transportation Ontario (MTO) has retained Morrison Hershfield Limited (MH) to undertake the Detail Design and Class Environmental Assessment (EA) Study for intersection improvements at the Highway 138 and Headline Road (County Road 44) intersection. The project is located in the Township of South Stormont, within the United Counties of Stormont, Dundas and Glengarry. A key map showing the location of the study area is attached.

The purpose of this letter is to provide you with the opportunity to meet with the project team virtually to learn further details on the project and provide input into the process. This project involves the conversion of the Highway 138 / Headline Road intersection to a single-lane roundabout. The proposed roundabout is planned to calm traffic to reduced speeds and decrease the potential and severity of collisions. A roundabout will also allow for improved traffic operations, including shorter travel times and reduced vehicle queue lengths. The proposed project involves improvements to an existing provincial transportation facility (Highway 138) and will cause a widening of the intersection's footprint beyond the existing highway platform. The proposed project may also require the acquisition of private property outside the existing Highway 138 right-of-way.

This project has been classified as a Group B undertaking under the MTO *Class Environmental Assessment for Provincial Transportation Facilities* (2000) with the opportunity for Indigenous Peoples and public input throughout the study. Group B Projects are considered to be approved under the Ontario *Environmental Assessment Act* subject to compliance with the MTO Class EA process, and the application of mitigation measures where necessary.

Information collected during these Detail Design Studies and Class Environmental Assessments will be used in accordance with the *Freedom of Information and Protection of Privacy Act*. All information and comments, with the exception of personal information and other protected information, will become part of the public record. Please contact me if you have accessibility requirements in order to participate in this project.

The MTO recognizes that your community is likely prioritizing a COVID-19 response to protect the health and well-being of your community, and as a result, this may impact your ability to respond to MTO projects.

If you would like to arrange a meeting, require additional information, or have any questions or comments, please contact me by email at **Peter.A.Copping@Ontario.ca** or by phone at **613-539-3148**. MTO will continue to engage with (First Nation) as this project progresses.

Sincerely,

Peter Copping
Indigenous Liaison Specialist
East Region Operations
Ministry of Transportation
1355 John Counter Blvd, PO Box 4000
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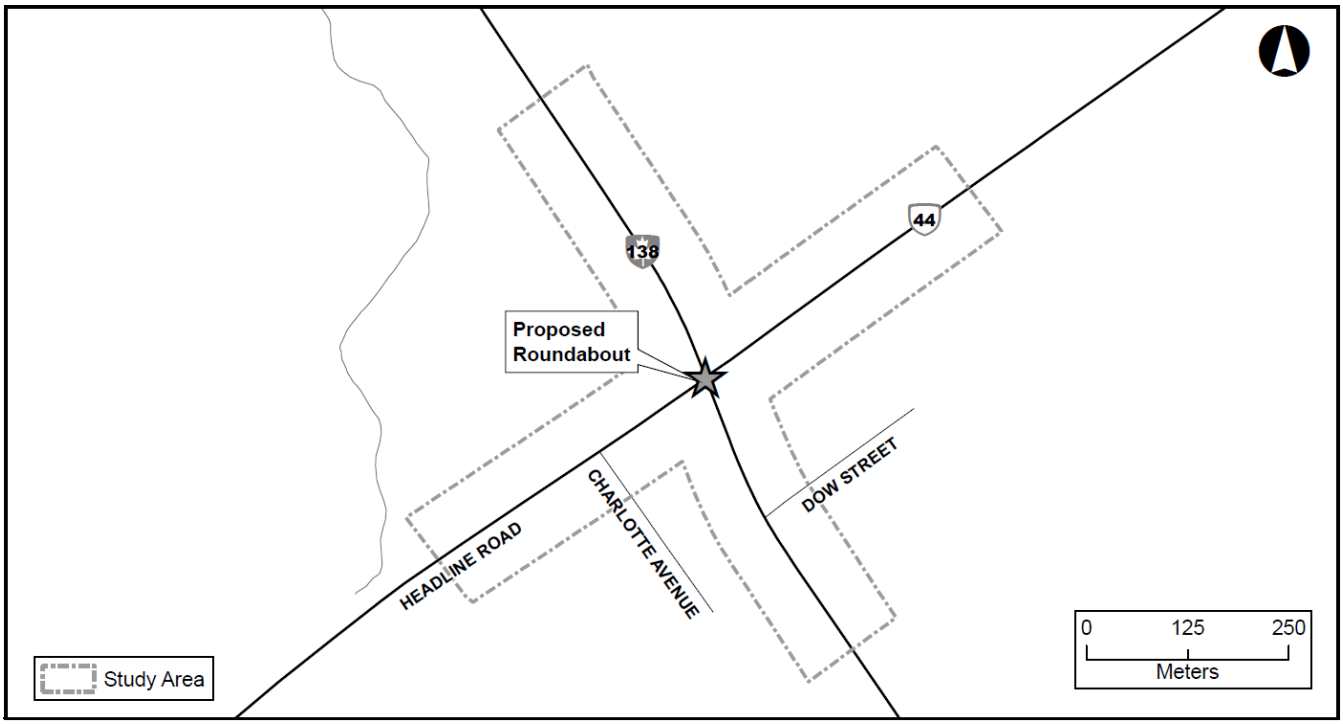
Tel: 613-539-3148
Email: Peter.A.Copping@Ontario.ca

Encl.

Cc: Dan Brandao, MTO Project Manager
Nathan Ellis, MTO Environmental Planner
<TBC>, MTO Regional Archaeologist
Brad Hewton, MH Project Manager
Andrew Ritchie, MH Senior Environmental Planner



Study Area Key Map
Highway 138 Intersection Improvements at Headline Road, Township of South Stormont
G.W.P. 4004-21-01 | W.P. 4043-21-01

Ministry of Transportation

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Ontario

December 6, 2021

Minister Jim McDonell
MPP Stormont-Dundas-South Glengarry
Ontario Progressive Conservative Party
120 Second Street West
Cornwall, ON K6J 1G5

Re: Detail Design and Class Environmental Assessment Study for Highway 138
Intersection Improvements at Headline Road
Township of South Stormont
G.W.P. 4004-21-00 | W.P. 4043-21-01

Dear Minister McDonell:

The purpose of this letter is to inform you that the Ministry of Transportation Ontario (MTO) is proceeding with the Detail Design and Class Environmental Assessment Study for intersection improvements at the Highway 138 and Headline Road (County Road 44) intersection. The project is located in the Township of South Stormont, within the United Counties of Stormont, Dundas and Glengarry, as shown in the Key Map below. Morrison Hershfield Limited (MH) has been retained by the Ministry to prepare the Detail Design and complete the Class EA Study.

This project involves the conversion of the Highway 138 / Headline Road intersection to a single-lane roundabout. The proposed roundabout is planned to calm traffic to reduced speeds and decrease the potential and severity of collisions. A roundabout will also allow for improved traffic operations, including shorter travel times and reduced vehicle queue lengths.

The proposed project involves improvements to an existing provincial transportation facility (Highway 138) and will cause a widening of the intersection's footprint beyond the existing highway platform. The proposed project may also require the acquisition of private property outside the existing Highway 138 right-of-way. As such, it is classified as, and is following, the approved planning process for a Group B Project in accordance with the Ministry's Class Environmental Assessment for Provincial Transportation Facilities (2000). Group B Projects are considered to be approved under the Ontario *Environmental Assessment Act* subject to compliance with the MTO Class EA process, and the application of mitigation measures where necessary.

You are invited to visit the Highway 138 Roundabout website (www.highway138roundabout.com) for this project. The website was developed as a method to provide opportunities for interested stakeholders to access project information, Study updates and available documents. The website currently provides details on the Study background, purpose and Class EA process.

As the project could affect or be of interest to the residents within your riding, we would like to keep you apprised of the work as it occurs. If you require additional information regarding this study, please feel free to contact the undersigned at 613-449-7916 or via email at Dan.Brandao@ontario.ca

During the Class EA Study, information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act R.S.O., 1990, c.F.31*. 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 the undersigned.

Yours truly,

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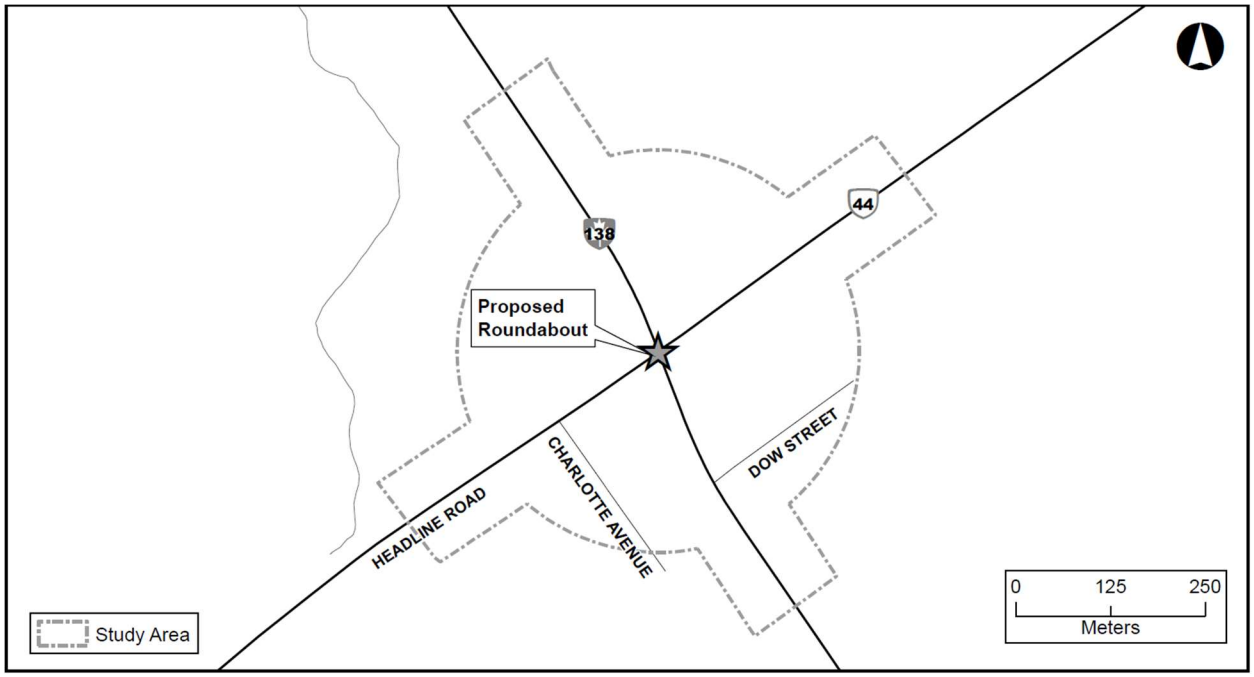
Kingston, ON K7L 5A3
Tel: 613-449-7916 | Toll Free: 1-800-267-0295 ext. 0 | E-Mail: dan.brandao@ontario.ca



Key Map – Highway 138 Intersection Improvements at Headline Road

cc: Nathan Ellis, MTO Environmental Planner
Brad Hewton, P. Eng., MH Project Manager
Andrew Ritchie, MH Senior Environmental Planner

MORRISON HERSHFIELD

December 20, 2021

Sent via email

Re: Notice of Study Commencement – Detail Design and Class Environmental Assessment Study for Highway 138 Intersection Improvements at Headline Road Township of South Stormont
G.W.P. 4004-21-00 | W.P. 4043-21-01

Dear Sir / Madam,

The Project: The Ministry of Transportation of Ontario (MTO) has retained Morrison Hershfield to prepare the Detail Design and complete a Class Environmental Assessment (EA) Study for intersection improvements at the Highway 138 and Headline Road (County Road 44) intersection. The project is located in the Township of South Stormont, within the United Counties of Stormont, Dundas and Glengarry, as shown in the Key Map below. The purpose of this letter is to inform you of the Class EA Study and to invite your input.

This project involves the conversion of the Highway 138 / Headline Road intersection to a single-lane roundabout. The proposed roundabout is planned to calm traffic to reduced speeds and decrease the potential and severity of collisions. A roundabout will also allow for improved traffic operations, including shorter travel times and reduced vehicle queue lengths.

The Process: This project has been classified as a Group B undertaking under the Class Environmental Assessment for Provincial Transportation Facilities (2000) with the opportunity for public input throughout. The Ministry completed a Transportation Environmental Study Report for the Preliminary Design and Class Environmental Assessment for the project (G.W.P. 4015-08-00) in June 2017. Upon completion of this current Class EA Study, a Design and Construction Report (DCR) will be prepared and made available for a minimum 30-day public comment period. At that time, a Notification of Submission will be published in local newspapers and a letter notification will be sent directly to you announcing the release and beginning of the 30-day public comment period for the DCR.

Project Website: You are invited to visit the Highway 138 Roundabout website for this Detail Design and Class EA Study. The website was developed as a method to provide opportunities for interested stakeholders to access project information, Study updates and available documents. The website currently provides details on the Study background, purpose and Class EA process. You can access the website at the following address:

http://www.highway138roundabout.ca

How to Get Involved: You are encouraged to participate in the Class EA Study and to provide your respective comments in writing to the Project Team We have attached a Contact Information Form to assist you. Please indicate whether you or your organization has an interest in the project and if you would like to provide any input at this time. A reply by January 28, 2022 is requested.

If you have any project related question or concerns, or wish to be added to the project mailing list, please contact:

Mr. Brad Hewton, P.Eng.
Consultant Project Manager
Morrison Hershfield Limited
200-2932 Baseline Road
Ottawa, ON K2H 1B1
Phone: 613-739-2910 ext. 1022292
Email: bhewton@morrisonhershfield.com

Mr. Dan Brandao, P.Eng.
Senior Project Engineer
Ministry of Transportation
1355 John Counter Boulevard, P.O. Box 4000
Kingston, ON K7L 5A3
Phone: 613-449-7916
Email: Dan.Brandao@ontario.ca

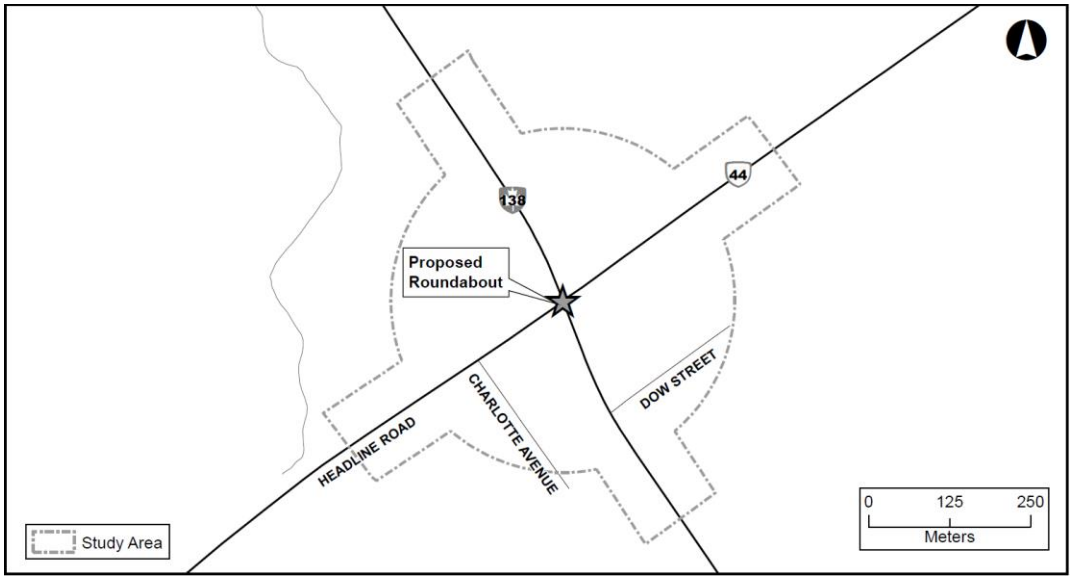
If you have any accessibility requirements in order to participate in this Class EA Study, please contact one of the Project Team members listed above.

Comments and information are being collected to assist the MTO in meeting the requirements of the Ontario *Environmental Assessment Act*. Information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act R.S.O., 1990, c.F.31*. With the exception of personal information, all comments will become part of the public record.

Des renseignements sont disponibles en français en composant le 613-739-2910, ext. 1022292, auprès de Brad Hewton.

Sincerely,
Morrison Hershfield Limited

Brad Hewton, P.Eng.
Consultant Project Manager



Key Map – Highway 138 Intersection Improvements at Headline Road

cc: Dan Brandao, MTO Project Manager
Nathan Ellis, MTO Environmental Planner
Andrew Ritchie, Morrison Hershfield Senior Environmental Planner

Notice of Study Commencement - Detail Design and Class Environmental Assessment Study for Highway 138 Intersection Improvements at Headline Road Township of South Stormont, United Counties of Stormont, Dundas and Glengarry G.W.P. 4004-21-00 | W.P. 4043-21-01

CONTACT INFORMATION FORM

PLEASE RETURN BY MAIL OR EMAIL BY JANUARY 28, 2022 TO:

Zach Hupman, MES
Environmental Planner
Morrison Hershfield
200-2932 Baseline Road
Ottawa, ON K2H 1B1
Phone: 613-739-2910 x1022287
Email: ZHupman@morrisonhershfield.com

1) Please indicate whether you have an interest in the project and if you would like to continue to receive project notifications?

Yes ☐ No ☐

If no, you will be removed from the Project Contact List and will receive no further notifications regarding this project.

2) If yes, please provide a contact person and their contact information (if different from original notice):

Name: _____

Mailing Address: _____

_____

Phone: _____

Fax: _____

Email: _____

3) In the space below, please provide any comments you may have regarding the study.

_____

_____

_____

_____

_____

_____

_____

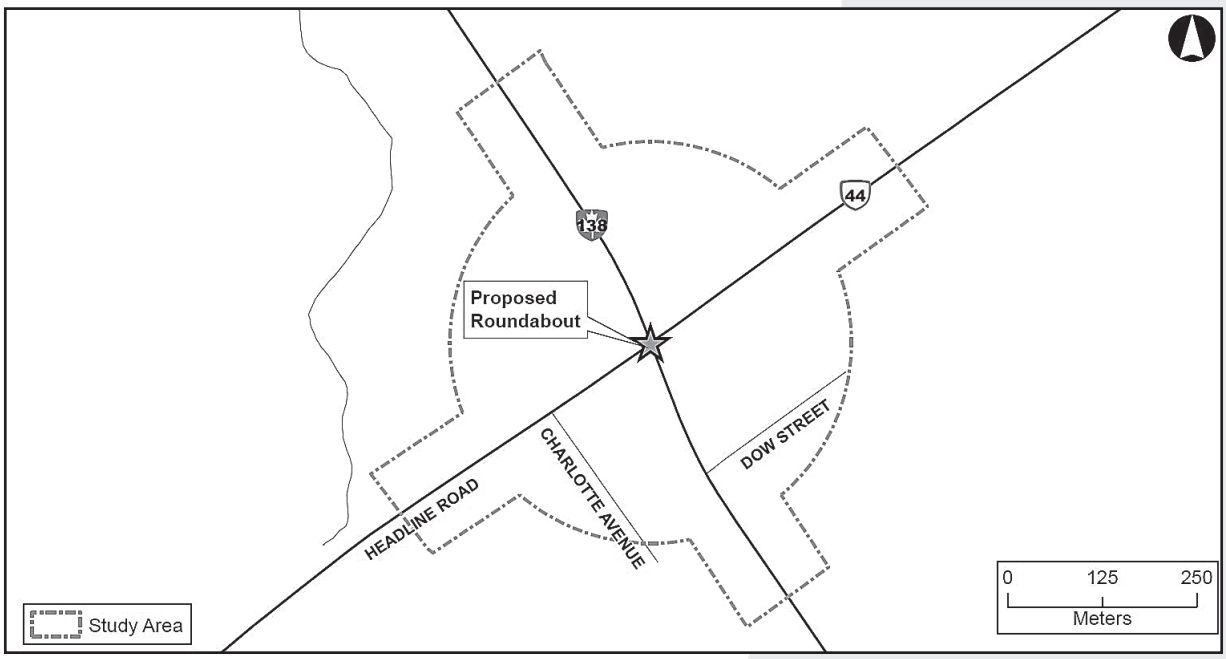
Notice of Online Public Information Centre

Highway 138 Intersection Improvements at Headline Road Detail Design and Class Environmental Assessment Study (G.W.P. 4004-21-00 | W.P. 4043-21-01)

THE PROJECT

Morrison Hershfield Limited has been retained by the Ministry of Transportation Ontario (MTO) to prepare the Detail Design and complete a Class Environmental Assessment (EA) Study for improvements at the Highway 138 and Headline Road (County Road 44) intersection. The project is located in the Township of South Stormont, within the United Counties of Stormont, Dundas and Glengarry.

This project will involve the conversion of the Highway 138 / Headline Road intersection to a single-lane roundabout. The proposed roundabout will calm traffic to reduced speeds and decrease the potential and severity of collisions. A roundabout will also allow for improved traffic operations, including shorter travel time and reduced vehicle queue lengths.



THE PROCESS

This project has been classified as a Group B undertaking under the *Class Environmental Assessment for Provincial Transportation Facilities (2000)* with the opportunity for public input throughout. The Ministry completed a Transportation Environmental Study Report for the Preliminary Design and Class Environmental Assessment for the above project (G.W.P. 4015-08-00) in June 2017.

A Notice of Study Commencement for this Detail Design and Class EA Study was published in December 2021. Since that time, the Ministry has advanced the Detail Design. Upon completion of this current Class EA Study, a Design and Construction Report (DCR) will be prepared and made available for a minimum 30-day public comment period. A Notification of Submission will be published in local newspapers at that time, announcing the release and beginning of the 30-day public comment period for the DCR.

PUBLIC CONSULTATION

The purpose of this Notice is to inform the general public that an online Public Information Centre (PIC) is being held through the project website at **www.highway138roundabout.ca** to present findings and provide the public with an opportunity to review and comment on the proposed Detail Design. The PIC materials will be posted and made available on the project website starting **September 12, 2023.**

COMMENTS

The Project Team welcomes your feedback and you are encouraged to review the PIC materials and provide any comments or questions to the Project Team via the project website by **September 26, 2023**. You may also contact either of the Project Team members listed below.

Mr. Brad Hewton, P.Eng.
Consultant Project Manager
Morrison Hershfield Limited
200-2932 Baseline Road
Ottawa, ON K2H 1B1
tel: 613-739-2910 ext. 1022292
e-mail: bhewton@morrisonhershfield.com

Mr. Dan Brandao, P.Eng.
Senior Project Engineer
Ministry of Transportation
1355 John Counter Boulevard, P.O. Box 4000
Kingston, ON K7L 5A3
tel: 613-449-7916
e-mail: Dan.Brandao@ontario.ca

Comments and information are being collected to assist the MTO in meeting the requirements of the Ontario *Environmental Assessment Act.* All information collected will be subject to the provisions and disclosure requirements of the Freedom of Information and Protection of Privacy Act R.S.O., 1990, c.F.31. with the exception of personal information, all comments will become part of the public record.

Des renseignements sont disponibles en français en composant le 613-739-2910, ext. 1022292, auprès de Brad Hewton.

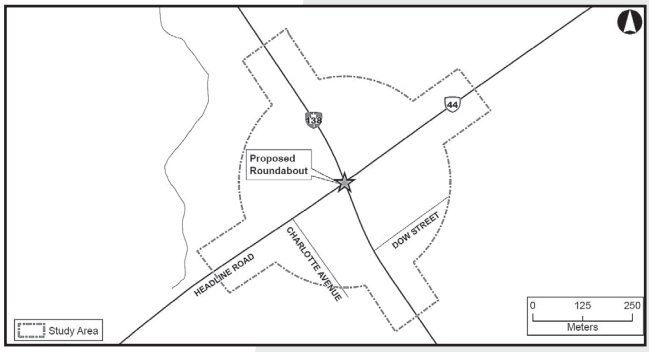
Ontario

Notice of Online Public Information Centre

Highway 138 Intersection Improvements at Headline Road Detail Design and Class Environmental Assessment Study (G.W.P. 4004-21-00 | W.P. 4043-21-01)

THE PROJECT

Morrison Hershfield Limited has been retained by the Ministry of Transportation Ontario (MTO) to prepare the Detail Design and complete a Class Environmental Assessment (EA) Study for improvements at the Highway 138 and Headline Road (County Road 44) intersection. The project is located in the Township of South Stormont, within the United Counties of Stormont, Dundas and Glengarry.



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THE PROCESS

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PUBLIC CONSULTATION

The purpose of this Notice is to inform the general public that an online Public Information Centre (PIC) is being held through the project website at **www.highway138roundabout.ca** to present findings and provide the public with an opportunity to review and comment on the proposed Detail Design. The PIC materials will be posted and made available on the project website starting **September 12, 2023.**

COMMENTS

The Project Team welcomes your feedback and you are encouraged to review the PIC materials and provide any comments or questions to the Project Team via the project website by **September 26, 2023**. You may also contact either of the Project Team members listed below.

Mr. Brad Hewton, P.Eng.
Consultant Project Manager
Morrison Hershfield Limited
200-2932 Baseline Road
Ottawa, ON K2H 1B1
tel: 613-739-2910 ext. 1022292
e-mail: bhewton@morrisonhershfield.com

Mr. Dan Brandao, P.Eng.
Senior Project Engineer
Ministry of Transportation
1355 John Counter Boulevard, P.O. Box 4000
Kingston, ON K7L 5A3
tel: 613-449-7916
e-mail: Dan.Brandao@ontario.ca

Comments and information are being collected to assist the MTO in meeting the requirements of the Ontario *Environmental Assessment Act.* All information collected will be subject to the provisions and disclosure requirements of the Freedom of Information and Protection of Privacy Act R.S.O., 1990, c.F.31. with the exception of personal information, all comments will become part of the public record.

Des renseignements sont disponibles en français en composant le 613-739-2910, ext. 1022292, auprès de Brad Hewton.

Ontario

Ministry of Transportation **Ministère des Transports**

Planning and Design Section
1355 John Counter Boulevard
Postal Bag 4000
Kingston, ON K7L 5A3
Tel.: (613) 540-5120

Section de la planification et de la conception
1355, boulevard John Counter
CP/Service de sacs 4000
Kingston, ON K7L 5A3
Tél.: (613) 540-5120

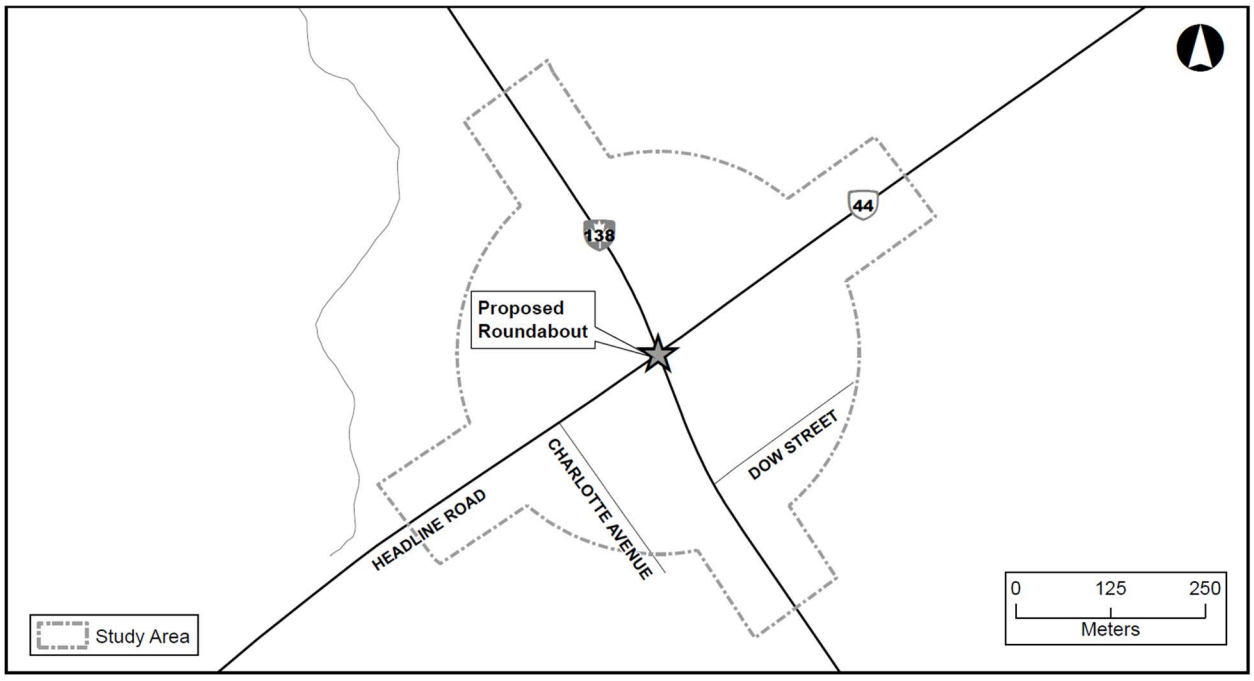
August 31, 2023

Minister Nolan Quinn
MPP, Stormont-Dundas-South Glengarry
Ontario Progressive Conservative Party
120 Second Street West
Cornwall, ON K6J 1G5

Re: Notice of Online Public Information Centre – Detail Design and Class Environmental Assessment Study for Highway 138 Intersection Improvements at Headline Road | Township of South Stormont
G.W.P. 4004-21-00 | W.P. 4043-21-01

Dear Minister Quinn:

The purpose of this letter is to inform you that the Ministry of Transportation (MTO) is proceeding with an online Public Information Centre (PIC) for the Detail Design and Class Environmental Assessment Study for improvements at the Highway 138 and Headline Road (County Road 44) intersection. The project is located in the Township of South Stormont, within the United Counties of Stormont, Dundas and Glengarry, as shown in the Key Map below.



Key Map – Highway 138 Intersection Improvements at Headline Road

Morrison Hershfield Limited (MH) has been retained by the Ministry to prepare the Detail Design and complete the Class EA Study. This project involves the conversion of the Highway 138 / Headline Road intersection to a single-lane roundabout.

The online PIC will take place on the project website www.highway138roundabout.ca to present findings and provide the public with an opportunity to review and comment on the proposed Detail Design. The PIC materials will be posted and made available on the project website starting **September 12, 2023**. Notices will be published in the Cornwall Express (French) on September 13th, the Cornwall Standard (English) on September 12th, and the Glengarry News (English) on September 12th to notify the public of the online PIC.

This project has been classified as a Group B undertaking under the *Class Environmental Assessment for Provincial Transportation Facilities (2000)* with the opportunity for public input throughout. The Ministry completed a Transportation Environmental Study Report for the Preliminary Design and Class Environmental Assessment for the above project (G.W.P. 4015-08-00) in June 2017.

Following completion of the Detail Design, a Design and Construction Report (DCR) will be placed on the Public Record for a minimum comment period of 30 calendar days to provide the opportunity for stakeholders to review and comment on the document. The DCR will document the Class EA process followed, including a description of the Recommended Plan, potential environmental effects, and the final mitigation plan. At that time, a Notification of Submission will be published in the Cornwall Express (French) and Cornwall Standard to explain the review process and identify how the DCR can be reviewed.

Should you require further information regarding this Class EA Study, please feel free to contact the undersigned. In addition, you may also visit the project website at www.highway138roundabout.ca.

During the Class EA Study, information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act R.S.O., 1990, c.F.31*. 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 the undersigned.

Yours truly,

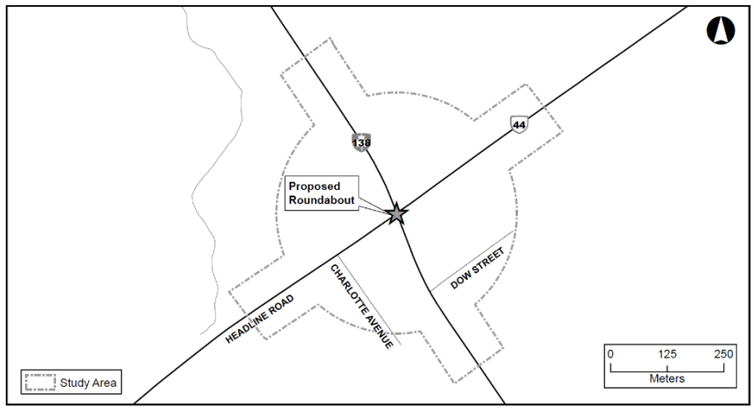
Dan Brandao, P.Eng. | Senior Project Engineer
Engineering Program Delivery East | Ministry of Transportation Ontario
1355 John Counter Boulevard, Postal Bag 4000
Kingston, ON K7L 5A3
Tel: 613-449-7916 | Toll Free: 1-800-267-0295 ext. 0 | E-Mail: dan.brandao@ontario.ca

cc: Nathan Ellis, MTO Environmental Planner
Brad Hewton, MH Project Manager
Christine Darson, MH Senior Environmental Planner

NOTICE OF ONLINE PUBLIC INFORMATION CENTRE
Highway 138 Intersection Improvements at Headline Road
Detail Design and Class Environmental Assessment Study
(G.W.P. 4004-21-00 | W.P. 4043-21-01)

THE PROJECT

Morrison Hershfield Limited has been retained by the Ministry of Transportation Ontario (MTO) to prepare the Detail Design and complete a Class Environmental Assessment (EA) Study for improvements at the Highway 138 and Headline Road (County Road 44) intersection. The project is located in the Township of South Stormont, within the United Counties of Stormont, Dundas and Glengarry.



Key Map

This project will involve the conversion of the Highway 138 / Headline Road intersection to a single-lane roundabout. The proposed roundabout will calm traffic to reduced speeds and decrease the potential and severity of collisions. A roundabout will also allow for improved traffic operations, including shorter travel time and reduced vehicle queue lengths.

THE PROCESS

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PUBLIC CONSULTATION

The purpose of this Notice is to inform the general public that an online Public Information Centre (PIC) is being held through the project website at **www.highway138roundabout.ca** to present findings and provide the public with an opportunity to review and comment on the proposed Detail Design. The PIC materials will be posted and made available on the project website starting **September 12, 2023**.

COMMENTS

The Project Team welcomes your feedback and you are encouraged to review the PIC materials and provide any comments or questions to the Project Team via the project website by **September 26, 2023**. You may also contact either of the Project Team members listed below.

Mr. Brad Hewton, P.Eng.
Consultant Project Manager
Morrison Hershfield Limited
200-2932 Baseline Road
Ottawa, ON K2H 1B1
Phone: 613-739-2910 ext. 1022292
Email: BHewton@morrisonhershfield.com

Mr. Dan Brandao, P.Eng.
Senior Project Engineer
Ministry of Transportation
1355 John Counter Boulevard, P.O. Box 4000
Kingston, ON K7L 5A3
Phone: 613-449-7916
Email: Dan.Brandao@ontario.ca

Comments and information are being collected to assist the MTO in meeting the requirements of the Ontario *Environmental Assessment Act*. All information collected will be subject to the provisions and disclosure requirements of the *Freedom of Information and Protection of Privacy Act R.S.O., 1990, c.F.31*. with the exception of personal information, all comments will become part of the public record.

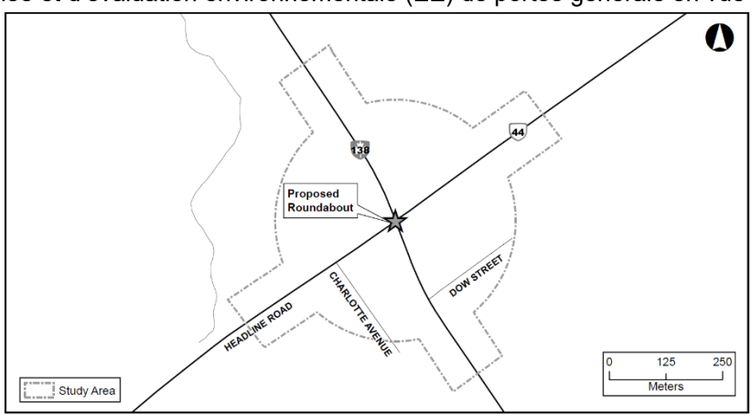
Des renseignements sont disponibles en français en composant le 613-739-2910, ext. 1022292, auprès de Brad Hewton.

Ontario

AVIS DE SÉANCE D'INFORMATION PUBLIQUE EN LIGNE
Apport d'améliorations à l'intersection de la route 138 et du chemin Headline
Étude de conception détaillée et d'évaluation environnementale de portée générale
(G.W.P. 4004-21-00 | W.P. 4043-21-01)

LE PROJET

Le ministère des Transports de l'Ontario (MTO) a retenu les services de Morrison Hershfield Limited afin de réaliser une étude de conception détaillée et d'évaluation environnementale (ÉE) de portée générale en vue de l'apport d'améliorations à l'intersection de l'autoroute 138 et du chemin Headline (route de comté 44). Le projet est situé dans le canton de South Stormont, au sein des comtés unis de Stormont, Dundas et Glengarry.



Ce projet prévoit la conversion de l'intersection de la route 138 et du chemin Headline en un rond-point à une voie. Le rond-point proposé permettra de réduire les vitesses, en plus de diminuer les risques de collision et la gravité des collisions qui surviennent. Un rond-point permettra également d'améliorer les opérations de circulation routière, notamment en réduisant la durée des trajets et la longueur des files de véhicules.

LE PROCESSUS

Ce projet a été classé comme projet du groupe B conformément à l'*évaluation environnementale de portée générale du MTO pour les installations provinciales de transport (2000)* et le public aura l'occasion de fournir des commentaires tout au long de l'étude. Le ministère a produit un rapport d'étude environnementale sur les transports (REET) en lien avec l'étude de conception préliminaire et d'ÉE de portée générale pour le projet susmentionné (G.W.P. 4015-08-00) en juin 2017.

Un avis de début d'étude de conception détaillée et d'ÉE de portée générale a été publié en décembre 2021. Depuis, le ministère a réalisé des progrès en ce qui touche la conception détaillée. À la fin de l'étude d'ÉE de portée générale, un rapport de conception et de construction (RCC) sera préparé et rendu accessible au public en vue d'une période de commentaires d'au moins 30 jours. Un avis de soumission sera publié dans les journaux locaux à ce moment-là, annonçant la publication du rapport et le début de la période de 30 jours de commentaires du public en lien avec le RCC.

CONSULTATION PUBLIQUE

Le présent avis vise à informer le grand public que l'on tiendra une séance d'information publique en ligne par l'entremise du site Web du projet, à l'adresse **www.highway138roundabout.ca**, pour présenter les constatations établies et permettre aux membres du public de consulter et de commenter la conception détaillée proposée. Les documents liés à la séance d'information publique seront publiés et rendus accessibles sur le site Web du projet à compter du **12 Septembre 2023**.

COMMENTAIRES

L'équipe de projet est heureuse de recevoir vos commentaires. Nous vous invitons à examiner les documents liés à la séance d'information publique et à faire part de vos commentaires ou de vos questions à l'équipe de projet par l'entremise du site Web du projet d'ici le **26 Septembre 2023**. Vous pouvez également prendre contact avec l'un des membres de l'équipe du projet ci-dessous.

M. Brad Hewton, ing.
Expert-conseil et gestionnaire de projet
Morrison Hershfield Limited
200-2932, route Baseline
Ottawa (Ontario) K2H 1B1
Téléphone : 613-739-2910, poste 1022292
Courriel : BHewton@morrisonhershfield.com

M. Dan Brandao, ing.
Ingénieur principal de projet
Ministère des Transports
1355, boulevard John Counter, CP 4000
Kingston (Ontario) K7L 5A3
Téléphone : 613-449-7916
Courriel : Dan.Brandao@ontario.ca

Nous recueillons des commentaires et des renseignements pour aider le MTO à respecter les exigences de la *Loi sur les évaluations environnementales* de l'Ontario. Tous les renseignements recueillis seront traités en vertu des dispositions et des exigences en matière de divulgation de la *Loi sur l'accès à l'information et la protection de la vie privée*, L.R.O. 1990, chap. F.31. Tous les commentaires, à l'exception des renseignements personnels, feront partie du dossier public.

On peut obtenir des renseignements en français auprès de Brad Hewton en composant le 613-739-2910, poste 1022292.

Ontario

Ministry of Transportation

East Operations Branch
1355 John Counter Boulevard
Postal Box 4000
Kingston, Ontario K7L 5A3
Tel.: 1-613-545-4600

Ministère des Transports

Direction des opérations de l'Est
1355, boulevard John Counter
Case postale 4000
Kingston, Ontario K7L 5A3
Tél.: 1-613-545-4600

Ontario

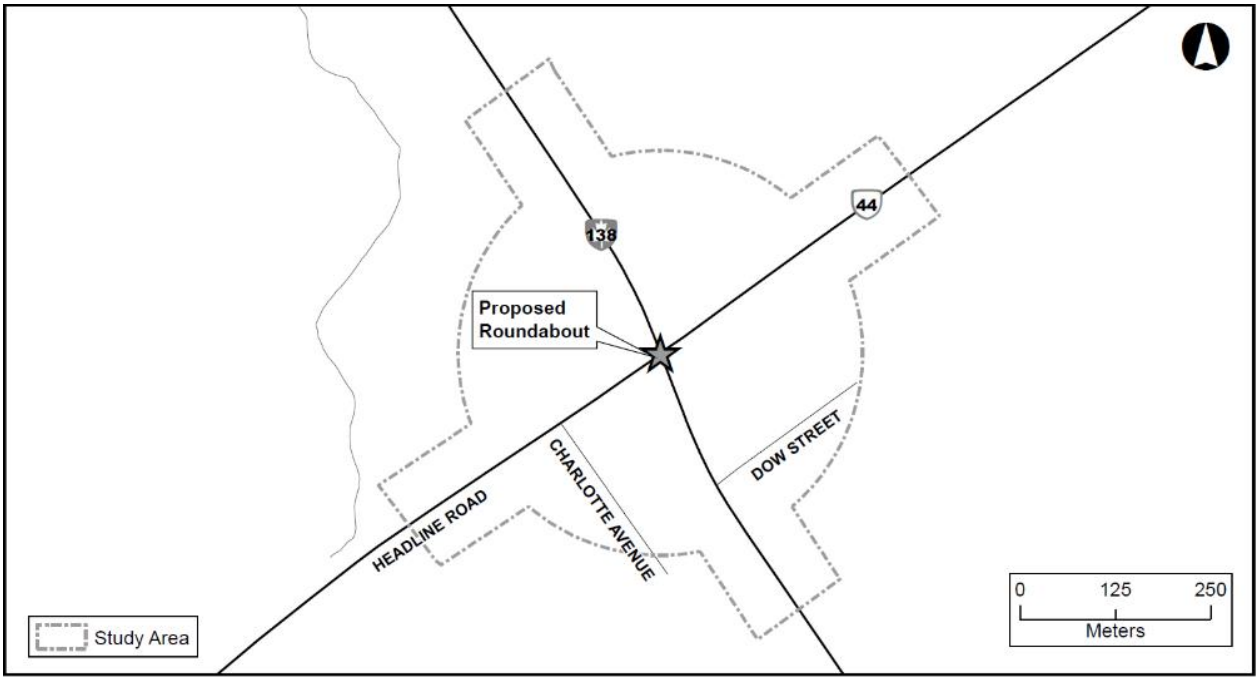
September 6, 2023

Métis Nation of Ontario
Consultation Unit
66 Slater Street, Suite 1100
Ottawa, ON K1P 5H1

Re: Notice of Online Public Information Centre – Detail Design and Class Environmental Assessment Study for Highway 138 Intersection Improvements at Headline Road | Township of South Stormont
G.W.P. 4004-21-00 | W.P. 4043-21-01

Dear Sir / Madam,

The Ontario Ministry of Transportation (MTO) has retained Morrison Hershfield Limited (MH) to prepare the Detail Design and complete the Class EA Study for improvements at the Highway 138 and Headline Road (County Road 44) intersection. The project is located in the Township of South Stormont, within the United Counties of Stormont, Dundas and Glengarry, as shown in the Key Map below, and involves the conversion of the Highway 138 / Headline Road intersection to a single-lane roundabout.



Key Map – Highway 138 Intersection Improvements at Headline Road

Ministry of Transportation

East Operations Branch
1355 John Counter Boulevard
Postal Box 4000
Kingston, Ontario K7L 5A3
Tel.: 1-613-545-4600

Ministère des Transports

Direction des opérations de l'Est
1355, boulevard John Counter
Case postale 4000
Kingston, Ontario K7L 5A3
Tél.: 1-613-545-4600

Ontario

The purpose of this letter is to inform you that the MTO is undertaking an online Public Information Centre (PIC) for the Detail Design and Class Environmental Assessment (EA) Study. The online PIC will take place on the project website at www.highway138roundabout.ca and will present findings and provide the public with an opportunity to review and comment on the proposed Detail Design. The PIC materials will be posted and made available on the project website starting **September 12, 2023**. We are requesting any comments or questions on the PIC materials be submitted to the Project Team via the project website or via email or phone by **September 26, 2023**.

This project has been classified as a Group B undertaking under the *Class Environmental Assessment for Provincial Transportation Facilities* (2000) with the opportunity for public input throughout. The Ministry completed a Transportation Environmental Study Report for the Preliminary Design and Class Environmental Assessment for the above project (G.W.P. 4015-08-00) in June 2017.

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Information collected during this project will be used in accordance with the *Freedom of Information and Protection of Privacy Act*. All information and comments, with the exception of personal information and other protected information, will become part of the public record. Please contact me if you have accessibility requirements in order to participate in this project.

Should you have any questions, comments or concerns on the planned activities, please do not hesitate to contact me by phone at **613-539-3148** or by email at **Peter.A.Copping@Ontario.ca**.

Sincerely,

Peter Copping

Peter Copping
Indigenous Liaison Specialist
Regional Services and Relationships, East Region Operations Branch
Ministry of Transportation

Ministry of Transportation

East Operations Branch
1355 John Counter Boulevard
Postal Box 4000
Kingston, Ontario K7L 5A3
Tel.: 1-613-545-4600

Ministère des Transports

Direction des opérations de l'Est
1355, boulevard John Counter
Case postale 4000
Kingston, Ontario K7L 5A3
Tél.: 1-613-545-4600

Ontario

1355 John Counter Boulevard, Kingston ON, K7L 5A3
Email: Peter.A.Copping@Ontario.ca
Phone: 613-539-3148

cc: Dan Brandao, MTO Senior Project Engineer
Nathan Ellis, MTO Environmental Planner
Brad Hewton, MH Project Manager
Christine Darson, MH Senior Environmental Planner

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Ontario

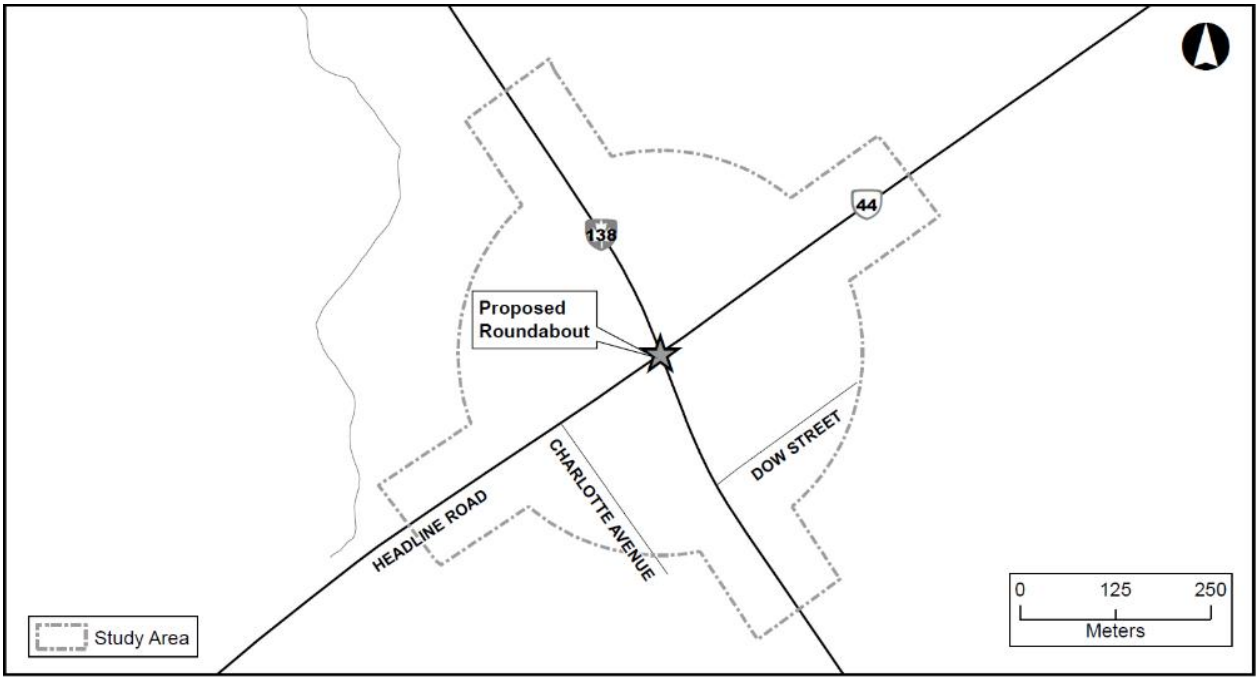
September 6, 2023

Grand Chief Abram Benedict
Mohwaks of Akwesasne
Cornwall Island Administration #3 Building
101 Tewesateni Road, Kawehno:ke
Akwesasne, ON K6H 5R7

Re: Notice of Online Public Information Centre – Detail Design and Class Environmental Assessment Study for Highway 138 Intersection Improvements at Headline Road | Township of South Stormont
G.W.P. 4004-21-00 | W.P. 4043-21-01

Dear Grand Chief Benedict,

The Ontario Ministry of Transportation (MTO) has retained Morrison Hershfield Limited (MH) to prepare the Detail Design and complete the Class EA Study for improvements at the Highway 138 and Headline Road (County Road 44) intersection. The project is located in the Township of South Stormont, within the United Counties of Stormont, Dundas and Glengarry, as shown in the Key Map below, and involves the conversion of the Highway 138 / Headline Road intersection to a single-lane roundabout.



Key Map – Highway 138 Intersection Improvements at Headline Road

Ministry of Transportation

East Operations Branch
1355 John Counter Boulevard
Postal Box 4000
Kingston, Ontario K7L 5A3
Tel.: 1-613-545-4600

Ministère des Transports

Direction des opérations de l'Est
1355, boulevard John Counter
Case postale 4000
Kingston, Ontario K7L 5A3
Tél.: 1-613-545-4600

Ontario

The purpose of this letter is to inform you that the MTO is undertaking an online Public Information Centre (PIC) for the Detail Design and Class Environmental Assessment (EA) Study. The online PIC will take place on the project website at www.highway138roundabout.ca and will present findings and provide the public with an opportunity to review and comment on the proposed Detail Design. The PIC materials will be posted and made available on the project website starting **September 12, 2023**. It would be greatly appreciated for any potential questions or comments on the PIC materials to be submitted to the Project Team via the project website or via email or phone by **September 26, 2023**.

This project has been classified as a Group B undertaking under the *Class Environmental Assessment for Provincial Transportation Facilities* (2000) with the opportunity for public input throughout. The Ministry completed a Transportation Environmental Study Report for the Preliminary Design and Class Environmental Assessment for the above project (G.W.P. 4015-08-00) in June 2017.

Following completion of the Detail Design, a Design and Construction Report (DCR) will be placed on the Public Record for a minimum comment period of 30 calendar days to provide the opportunity for stakeholders to review and comment on the document. The DCR will document the Class EA process followed, including a description of the Recommended Plan, potential environmental effects, and the final mitigation plan. At that time, a Notification of Submission will be published in local newspapers to explain the review process and identify how the DCR can be reviewed.

Information collected during this project will be used in accordance with the *Freedom of Information and Protection of Privacy Act*. All information and comments, with the exception of personal information and other protected information, will become part of the public record. Please contact me if you have accessibility requirements in order to participate in this project.

Should you have any questions, comments or concerns on the planned activities, please do not hesitate to contact me by phone at **613-539-3148** or by email at **Peter.A.Copping@Ontario.ca**.

Sincerely,

Peter Copping

Peter Copping
Indigenous Liaison Specialist

Ministry of Transportation

East Operations Branch
1355 John Counter Boulevard
Postal Box 4000
Kingston, Ontario K7L 5A3
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Regional Services and Relationships, East Region Operations Branch
Ministry of Transportation
1355 John Counter Boulevard, Kingston ON, K7L 5A3
Email: Peter.A.Copping@Ontario.ca
Phone: 613-539-3148

cc: Dan Brandao, MTO Senior Project Engineer
Nathan Ellis, MTO Environmental Planner
Brad Hewton, MH Project Manager
Christine Darson, MH Senior Environmental Planner

MORRISON HERSHFIELD

September 7, 2023

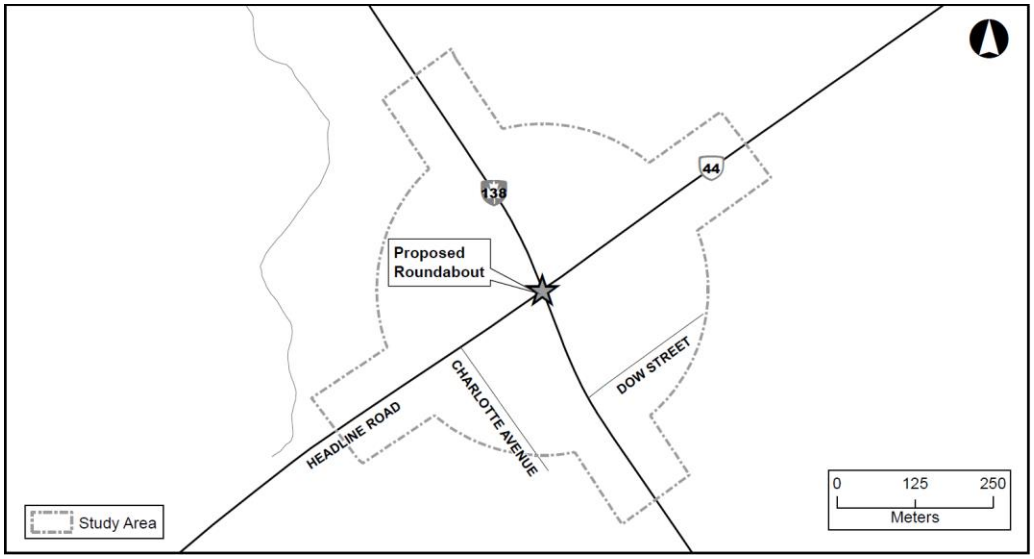
Public and Agency Notification Letter

<Contact_Name>
<Title>
<Agency>
<Address>
<City_PR_PC>

Dear <Contact_Name>,

Re: Notice of Online Public Information Centre – Detail Design and Class Environmental Assessment Study for Highway 138 Intersection Improvements at Headline Road Township of South Stormont
G.W.P. 4004-21-00 | W.P. 4043-21-01

The purpose of this letter is to inform you that the Ministry of Transportation (MTO) is proceeding with an online Public Information Centre (PIC) for the Detail Design and Class Environmental Assessment Study for improvements at the Highway 138 and Headline Road (County Road 44) intersection. The project is located in the Township of South Stormont, within the United Counties of Stormont, Dundas and Glengarry, as shown in the Key Map below.



Key Map – Highway 138 Intersection Improvements at Headline Road

Morrison Hershfield Limited (MH) has been retained by the Ministry to prepare the Detail Design and complete the Class EA Study. This project involves the conversion of the Highway 138 / Headline Road intersection to a single-lane roundabout.

The online PIC will take place on the project website at www.highway138roundabout.ca to present findings and provide the public with an opportunity to review and comment on the proposed Detail Design. The PIC materials will be posted and made available on the project website starting **September 12, 2023**.

This project has been classified as a Group B undertaking under the *Class Environmental Assessment for Provincial Transportation Facilities (2000)* with the opportunity for public input throughout. The Ministry completed a Transportation Environmental Study Report for the Preliminary Design and Class Environmental Assessment for the above project (G.W.P. 4015-08-00) in June 2017.

Following completion of the Detail Design, a Design and Construction Report (DCR) will be placed on the Public Record for a minimum comment period of 30 calendar days to provide the opportunity for stakeholders to review and comment on the document. The DCR will document the Class EA process followed, including a description of the Recommended Plan, potential environmental effects, and the final mitigation plan. At that time, a Notification of Submission will be published in local newspapers to explain the review process and identify how the DCR can be reviewed.

The Project Team welcomes your feedback, and you are encouraged to review the online PIC materials and provide any comments or questions to the Project Team via the project website or by email to the Project Team members listed below by **September 26, 2023**. Should you require further information regarding this study, please feel free to contact the undersigned at the address listed below or visit the project website at www.highway138roundabout.ca.

Brad Hewton, P.Eng.
Consultant Project Manager
Morrison Hershfield Limited
200-2932 Baseline Road
Ottawa, ON K2H 1B1
Telephone: 613-739-2910 ext. 1022292
E-mail: BHewton@morrisonhershfield.com

Dan Brandao, P.Eng.
Senior Project Engineer
Ministry of Transportation
1355 John Counter Blvd., P.O. 4000
Kingston, ON K7L 5A3
Telephone: 613-449-7916
E-mail: Dan.Brandao@ontario.ca

Comments and information are being collected to assist the MTO in meeting the requirements of the Ontario *Environmental Assessment Act*. All information collected will be subject to the provisions and disclosure requirements of the *Freedom of Information and Protection of Privacy Act R.S.O., 1990, c.F.31*. With the exception of personal information, all comments will become part of the public record.

Des renseignements sont disponibles en français en composant le 613-739-2910, ext. 1022292, auprès de Brad Hewton.

Sincerely,
Morrison Hershfield Limited

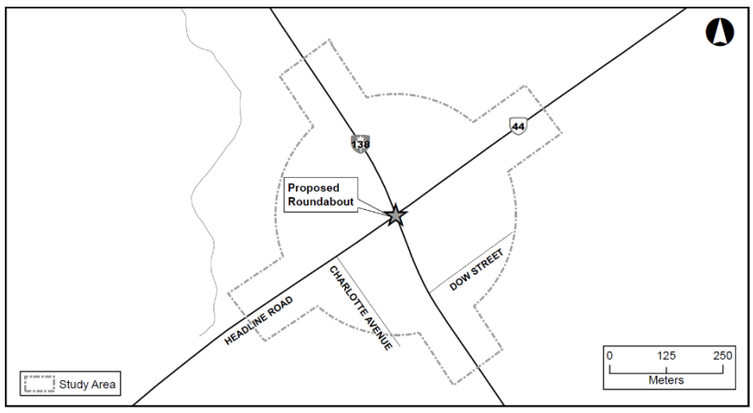
Brad Hewton, P.Eng.
Consultant Project Manager

cc: Dan Brandao, MTO Project Manager
Nathan Ellis, MTO Environmental Planner
Christine Darson, MH Senior Environmental Planner

NOTICE OF COMPLETION AND DESIGN AND CONSTRUCTION REPORT SUBMISSION
Highway 138 Intersection Improvements at Headline Road
Detail Design and Class Environmental Assessment Study
(G.W.P. 4004-21-00 | W.P. 4043-21-01)

THE PROJECT

Morrison Hershfield Limited has been retained by the Ministry of Transportation Ontario (MTO) to prepare the Detail Design and complete a Class Environmental Assessment (EA) Study for improvements at the Highway 138 and Headline Road (County Road 44) intersection. The project is located in the Township of South Stormont, within the United Counties of Stormont, Dundas and Glengarry.



Key Map

This project will involve the conversion of the Highway 138 / Headline Road intersection to a single-lane roundabout. The proposed roundabout will calm traffic to reduced speeds and decrease the potential and severity of collisions. A roundabout will also allow for improved traffic operations, including shorter travel time and reduced vehicle queue lengths.

THE PROCESS

This project has been classified as a Group B undertaking under the *Class Environmental Assessment for Provincial Transportation Facilities (2000)* with the opportunity for public input throughout. The Ministry completed a Transportation Environmental Study Report for the Preliminary Design and Class Environmental Assessment for the above project (G.W.P. 4015-08-00) in June 2017.

DESIGN AND CONSTRUCTION REPORT

MTO has completed the detail design process and a Design and Construction Report (DCR) has been prepared to document the Class EA process, a description of the Recommended Plan, potential environmental effects, and the final mitigation plan. The DCR is available for a comment period from **December 18, 2023 to January 26, 2024** to provide the opportunity for stakeholders to review and comment on the document.

The DCR can be reviewed online at **www.highway138roundabout.ca**

The DCR is not subject to a Part II Order (“bump-up”) request under the provisions of the MTO’s Class EA process. Upon completion of the DCR review period, the project will be considered to have met the requirements of the Class EA and can proceed to construction.

COMMENTS

We are interested in hearing any comments you may have about the Study. Your comments and information will assist the Project Team in meeting the Class EA requirements. All information will be collected 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 wish to comment on this Project, or require further information, please contact one of the following team members:

Mr. Brad Hewton, P.Eng.
Consultant Project Manager
Morrison Hershfield Limited
200-2932 Baseline Road
Ottawa, ON K2H 1B1
Phone: 613-739-2910 ext. 1022292
Email: BHewton@morrisonhershfield.com

Mr. Dan Brandao, P.Eng.
Senior Project Engineer
Ministry of Transportation
1355 John Counter Boulevard, P.O. Box 4000
Kingston, ON K7L 5A3
Phone: 613-449-7916
Email: Dan.Brandao@ontario.ca

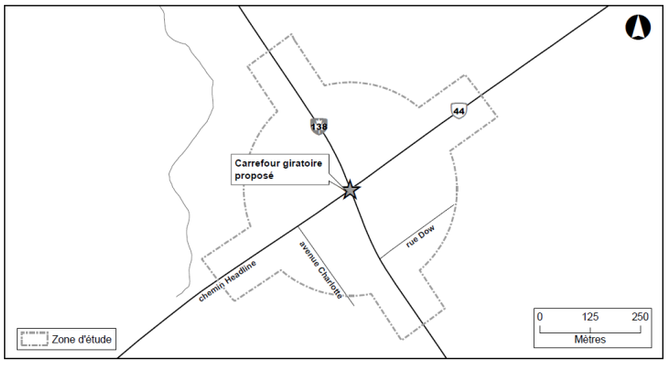
If you have any accessibility requirements in order to participate in this study, please contact one of the team members listed above.

Ontario

AVIS DE FIN D'ÉTUDE ET SOUMISSION DU RAPPORT DE CONCEPTION ET DE CONSTRUCTION
Améliorations de l'intersection de l'autoroute 138 au chemin Headline
Étude de conception détaillée et d'évaluation environnementale de portée générale
(G.W.P. 4004-21-00 | W.P. 4043-21-01)

LE PROJET

Le ministère des Transports de l'Ontario (MTO) a retenu les services de Morrison Hershfield Limited afin de préparer la conception détaillée et de réaliser l'étude d'évaluation environnementale de portée générale (ÉE) pour les améliorations de l'intersection de l'autoroute 138 et du chemin Headline (route de comté 44). Le projet est situé dans le canton de South Stormont, au sein des comtés unis de Stormont, Dundas et Glengarry.



Carte Clé

Ce projet prévoit la conversion de l'intersection de l'autoroute 138 et du chemin Headline en un carrefour giratoire à une voie. Le carrefour giratoire proposé permettra de réduire les vitesses et de diminuer les risques et la gravité des collisions sur la route. Un carrefour giratoire permettra également d'améliorer la circulation routière, notamment en réduisant la durée des trajets et les longueurs des files d'attente de véhicules.

LE PROCESSUS

Ce projet a été classé dans la catégorie de projets B en vertu de l'*Évaluation environnementale de portée générale pour les routes provinciales (2000)*. Le public aura la possibilité de fournir des commentaires tout au long de l'étude. Le ministère a réalisé un rapport d'étude environnementale sur les transports pour la conception préliminaire et l'évaluation environnementale de portée générale du projet susmentionné (G.W.P. 4015-08-00) en juin 2017.

RAPPORT DE CONCEPTION ET DE CONSTRUCTION

Le MTO a achevé l'étude de conception détaillée et un rapport de conception et de construction (RCC) a été préparé pour documenter le processus d'ÉE de portée générale, une description du plan recommandé, les effets environnementaux potentiels et le plan d'atténuation final. Le RCC est mis à la disposition du grand public pour une période de commentaires du **18 décembre 2023 au 26 janvier 2024** afin de permettre aux parties prenantes d'examiner et de commenter le rapport.

Le RCC peut être consulté en ligne à l'adresse **www.highway138roundabout.ca**

Le RCC n'est pas assujetti à une demande d'arrêté prévue à la partie II (« changement de catégorie ») en vertu des dispositions du processus d'ÉE de portée générale du MTO. À la fin de la période de consultation publique du RCC, le projet sera réputé avoir satisfait les exigences de l'ÉE de portée générale et la phase de construction pourra être mise en œuvre.

COMMENTAIRES

Nous souhaitons vous inviter à nous faire part des commentaires que vous pourriez avoir au sujet de l'étude. Votre avis et les renseignements que vous nous fournirez aideront l'équipe du projet à satisfaire aux exigences de l'ÉE de portée générale. Tous les renseignements sont recueillis conformément à la *Loi sur l'accès à l'information et la protection de la vie privée*. Tous les commentaires, à l'exception des renseignements personnels, feront partie du dossier public. Pour faire part de vos commentaires sur ce projet ou obtenir de plus amples informations, veuillez prendre contact avec l'un des membres de l'équipe indiqués ci-dessous:

Brad Hewton, ing.
Chargé de projet de firme-conseil
Morrison Hershfield Limited
200-2932, rue Baseline
Ottawa (Ontario) K2H 1B1
Tél : 613 739-2910 poste 1022292
Courriel : bhewton@morrisonhershfield.com

M. Dan Brandao, ing.
Ingénieur principal du projet
Ministère des Transports
1355, boulevard John Counter, CP 4000
Kingston (Ontario) K7L 5A3
Tél : 613 449-7916
Courriel : Dan.Brandao@ontario.ca

Si vous avez des exigences en matière d'accessibilité pour participer à cette étude, veuillez joindre l'un des membres de l'équipe susmentionnés.

Ontario

Ministry of Transportation

Planning and Design Section
1355 John Counter Boulevard
Postal Bag 4000
Kingston, ON K7L 5A3
Tel.: (613) 540-5120

Ministère des Transports

Section de la planification et de la conception
1355, boulevard John Counter
CP/Service de sacs 4000
Kingston, ON K7L 5A3
Tél.: (613) 540-5120

December 5, 2023

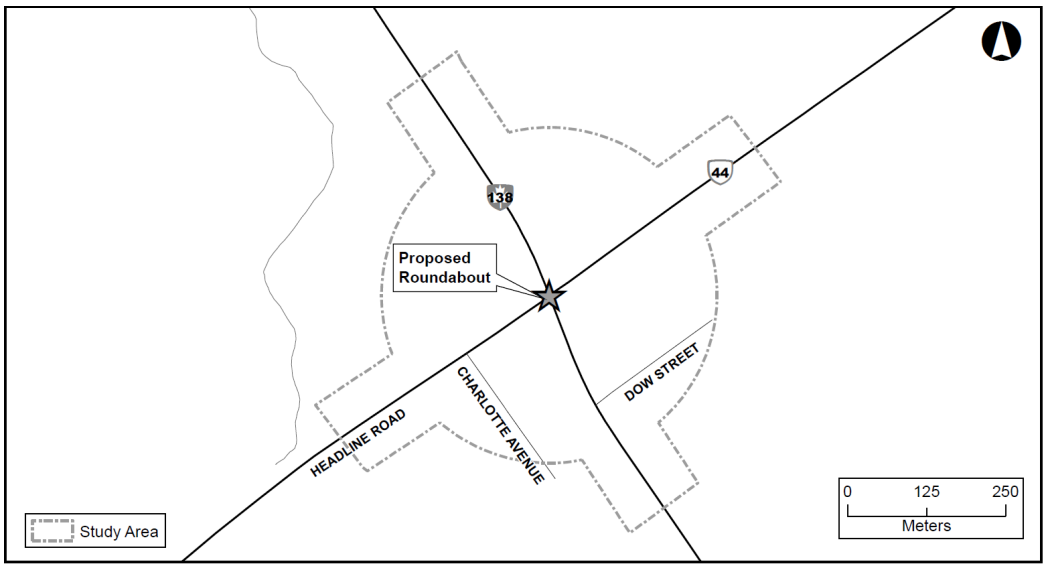
Mr. Nolan Quinn
MPP, Stormont-Dundas-South Glengarry
Ontario Progressive Conservative Party
120 Second Street West
Cornwall, ON K6J 1G5

Re: Notice of Design and Construction Report Submission – Detail Design and Class Environmental Assessment Study for Highway 138 Intersection Improvements at Headline Road | Township of South Stormont
G.W.P. 4004-21-00 | W.P. 4043-21-01

Dear Mr. Quinn:

The purpose of this letter is to inform you that the Ministry of Transportation (MTO) has completed its detail design for the construction of a single-lane roundabout at the intersection of Highway 138 and Headline Road (County Road 44) and is proceeding with placing a **Design and Construction Report (DCR)** on the Public Record for a minimum comment period of 30 calendar days to provide the opportunity for stakeholders to review and comment on the document. The DCR will document the Class EA process followed, including a description of the Recommended Plan, potential environmental effects, and the final mitigation plan.

The project is located in the Township of South Stormont, within the United Counties of Stormont, Dundas and Glengarry, as shown in the Key Map below.



Key Map – Highway 138 Intersection Improvements at Headline Road

Notices will be published in the Cornwall Express (French) on December 13th and the Cornwall Standard (English) on December 12th to notify the public that the DCR has been published for public review and comment.

This project has been classified as a Group B undertaking under the *Class Environmental Assessment for Provincial Transportation Facilities (2000)* with the opportunity for public input throughout. The Ministry completed a Transportation Environmental Study Report for the Preliminary Design and Class Environmental Assessment for the above project (G.W.P. 4015-08-00) in June 2017.

Should you require further information regarding this Class EA Study, please feel free to contact the undersigned. In addition, you may also visit the project website at www.highway138roundabout.ca.

During the Class EA Study, information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act R.S.O., 1990, c.F.31*. 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 the undersigned.

Yours truly,

Dan Brandao, P.Eng. | Senior Project Engineer
Engineering Program Delivery East | Ministry of Transportation Ontario
1355 John Counter Boulevard, Postal Bag 4000
Kingston, ON K7L 5A3
Tel: 613-449-7916 | Toll Free: 1-800-267-0295 ext. 0 | E-Mail: dan.brandao@ontario.ca

Enclosed: - Notice of Completion and Design and Construction Report Submission
- Avis de Fin D'étude Et Soumission Du Rapport De Conception Et De Construction

cc: Nathan Ellis, MTO Environmental Planner
Brad Hewton, MH Project Manager
Christine Darson, MH Senior Environmental Planner

Ministry of Transportation

Director's Office
East Operations Branch
347 Preston Street
Ottawa, Ontario K1S 3J4
Tel.: 613-748-5280

Ministère des Transports

Bureau du directeur
Direction des opérations de l'est
347 rue Preston
Ottawa (Ontario) K1S 3J4
Tél.: 613-748-5280

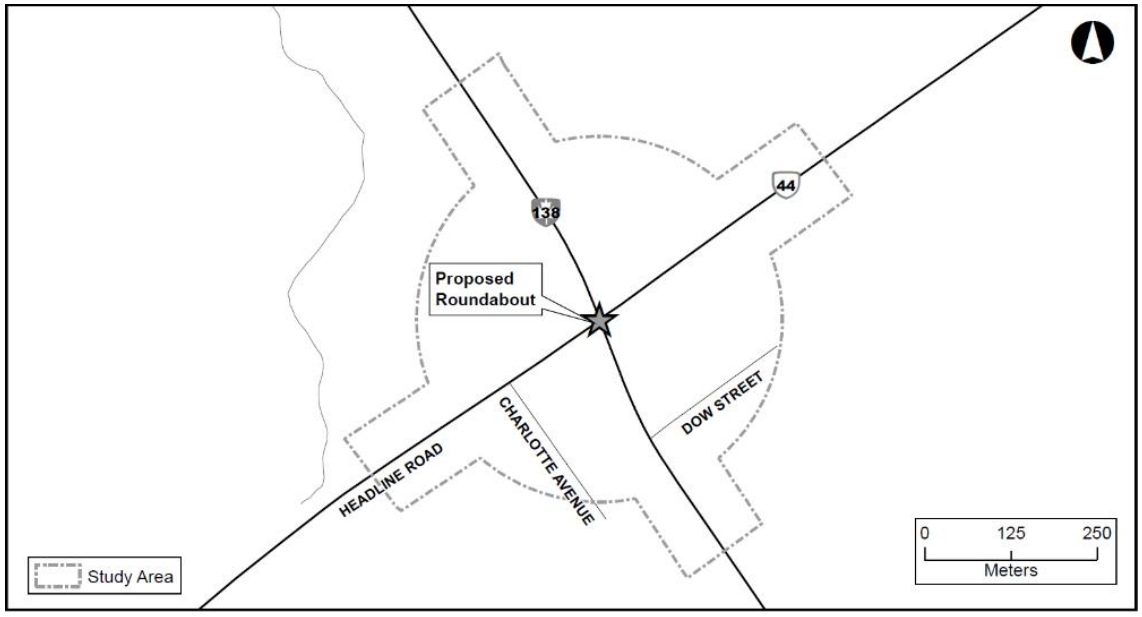
December 6, 2023

Métis Nation of Ontario
Consultation Unit
66 Slater Street, Suite 1100
Ottawa, ON K1P 5H1

Re: Notice of Completion and Design and Construction Report Submission – Detail Design and Class Environmental Assessment Study for Highway 138 Intersection Improvements at Headline Road | Township of South Stormont G.W.P. 4004-21-00 | W.P. 4043-21-01

Dear Sir/Madam,

The Ministry of Transportation Ontario (MTO) has retained Morrison Hershfield Limited (MH) to prepare the Detail Design and complete a Class Environmental Assessment (EA) Study for improvements at the Highway 138 and Headline Road (County Road 44) intersection. The project is located in the Township of South Stormont, within the United Counties of Stormont, Dundas and Glengarry, as shown in the Key Map below, and involves the conversion of the Highway 138 / Headline Road intersection to a single-lane roundabout.



Key Map – Highway 138 Intersection Improvements at Headline Road

The proposed roundabout will calm traffic to reduce speeds and decrease the potential and severity of collisions. A roundabout will also allow for improved traffic operations, including shorter travel time and reduced vehicle queue lengths.

The purpose of this letter is to inform you that the MTO has completed the detail design process and a Design and Construction Report (DCR) has been prepared to document the Class EA process, the Recommended Plan, the potential environmental effects, and the final mitigation plan. The DCR is available online at www.highway138roundabout.ca for a comment period from December 18, 2023 to January 26, 2024 to provide the opportunity for stakeholders to review and comment on the document.

A **Notice of Completion and Design and Construction Report Submission** will be published in the Cornwall Standard Freeholder (English) and the Cornwall Express (French) to explain the review process and identify how the DCR can be reviewed.

This project has been classified as a Group B undertaking under the *Class Environmental Assessment for Provincial Transportation Facilities* (2000) with the opportunity for public input throughout. The MTO completed a Transportation Environmental Study Report for the Preliminary Design and Class Environmental Assessment for the above project (G.W.P. 4015-08-00) in 2019.

The DCR is not subject to a Part II Order (“bump-up”) request under the provisions of the MTO’s Class EA process. Upon completion of the DCR review period, the project will be considered to have met the requirements of the Class EA and can proceed to construction.

We are interested in hearing any comments you may have about the Study. Your comments and information will assist the Project Team in meeting the Class EA requirements. All information will be collected 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.

Should you have any accessibility requirements in order to participate in this project or have any questions, comments or concerns on the planned activities, please do not hesitate to contact me.

Sincerely,

Louis Tay, P.Eng.
Director, East Operations
Ministry of Transportation
347 Preston Street Floor 4
Ottawa ON K1S 3J4
Email: louis.tay@ontario.ca
Phone: (613) 295-4553

Enclosed: Notice of Completion and Design and Construction Report Submission OGN

cc: Dan Brandao, MTO Senior Project Engineer
Nathan Ellis, MTO Environmental Planner
Aide Zarkovich, MTO Indigenous Liaison Specialist
Brad Hewton, MH Project Manager
Christine Darson, MH Senior Environmental Planner

Ministry of Transportation

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Tel.: 613-748-5280

Ministère des Transports

Bureau du directeur
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Tél.: 613-748-5280

December 6, 2023

Grand Chief Abram Benedict
Mohwaks of Akwesasne
Cornwall Island Administration #3 Building
101 Tewesateni Road, Kawehno:ke
Akwesasne, ON K6H 5R7

Re: Notice of Completion and Design and Construction Report Submission – Detail Design and Class Environmental Assessment Study for Highway 138 Intersection Improvements at Headline Road | Township of South Stormont G.W.P. 4004-21-00 | W.P. 4043-21-01

Dear Grand Chief Benedict,

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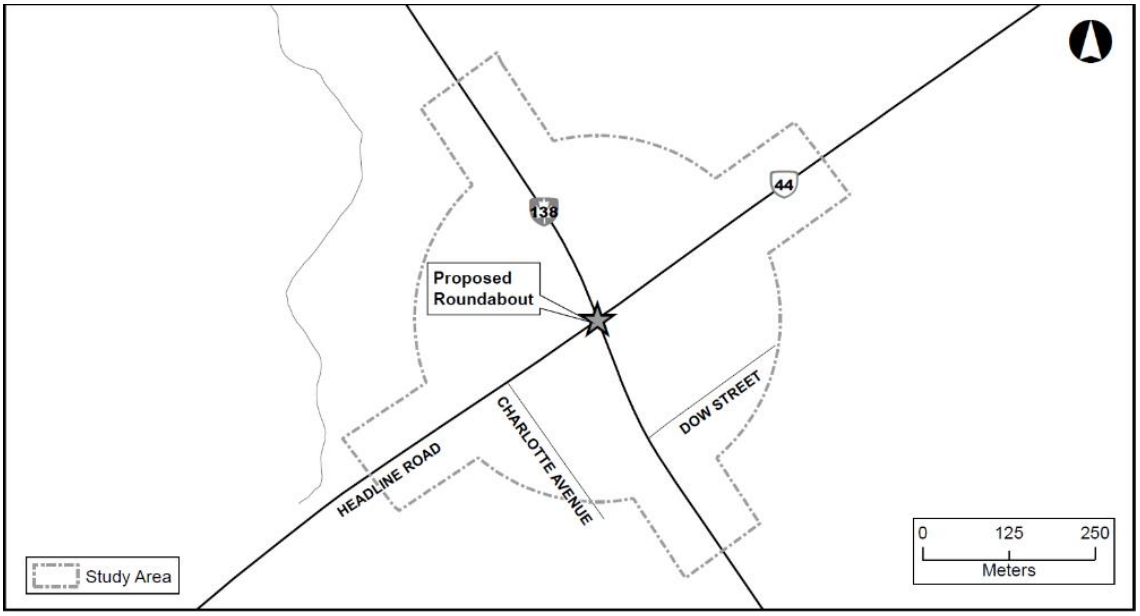

Key Map – Highway 138 Intersection Improvements at Headline Road

The proposed roundabout will calm traffic to reduce speeds and decrease the potential and severity of collisions. A roundabout will also allow for improved traffic operations, including shorter travel time and reduced vehicle queue lengths.

The purpose of this letter is to inform you that the MTO has completed the detail design process and a Design and Construction Report (DCR) has been prepared to document the Class EA process, the Recommended Plan, the potential environmental effects, and the final mitigation plan. The DCR is available online at www.highway138roundabout.ca for a comment period from December 18, 2023 to January 26, 2024 to provide the opportunity for stakeholders to review and comment on the document.

A **Notice of Completion and Design and Construction Report Submission** will be published in the Cornwall Standard Freeholder (English) and the Cornwall Express (French) to explain the review process and identify how the DCR can be reviewed.

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The DCR is not subject to a Part II Order (“bump-up”) request under the provisions of the MTO’s Class EA process. Upon completion of the DCR review period, the project will be considered to have met the requirements of the Class EA and can proceed to construction.

We are interested in hearing any comments you may have about the Study. Your comments and information will assist the Project Team in meeting the Class EA requirements. All information will be collected 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.

Should you have any accessibility requirements in order to participate in this project or have any questions, comments or concerns on the planned activities, please do not hesitate to contact me.

Sincerely,

Louis Tay, P.Eng.
Director, East Operations
Ministry of Transportation
347 Preston Street Floor 4
Ottawa ON K1S 3J4
Email: louis.tay@ontario.ca
Phone: (613) 295-4553

Enclosed: Notice of Completion and Design and Construction Report Submission OGN

cc: Dan Brandao, MTO Senior Project Engineer
Nathan Ellis, MTO Environmental Planner
Aide Zarkovich, MTO Indigenous Liaison Specialist
Brad Hewton, MH Project Manager
Christine Darson, MH Senior Environmental Planner

MORRISON HERSHFIELD

December 7, 2023

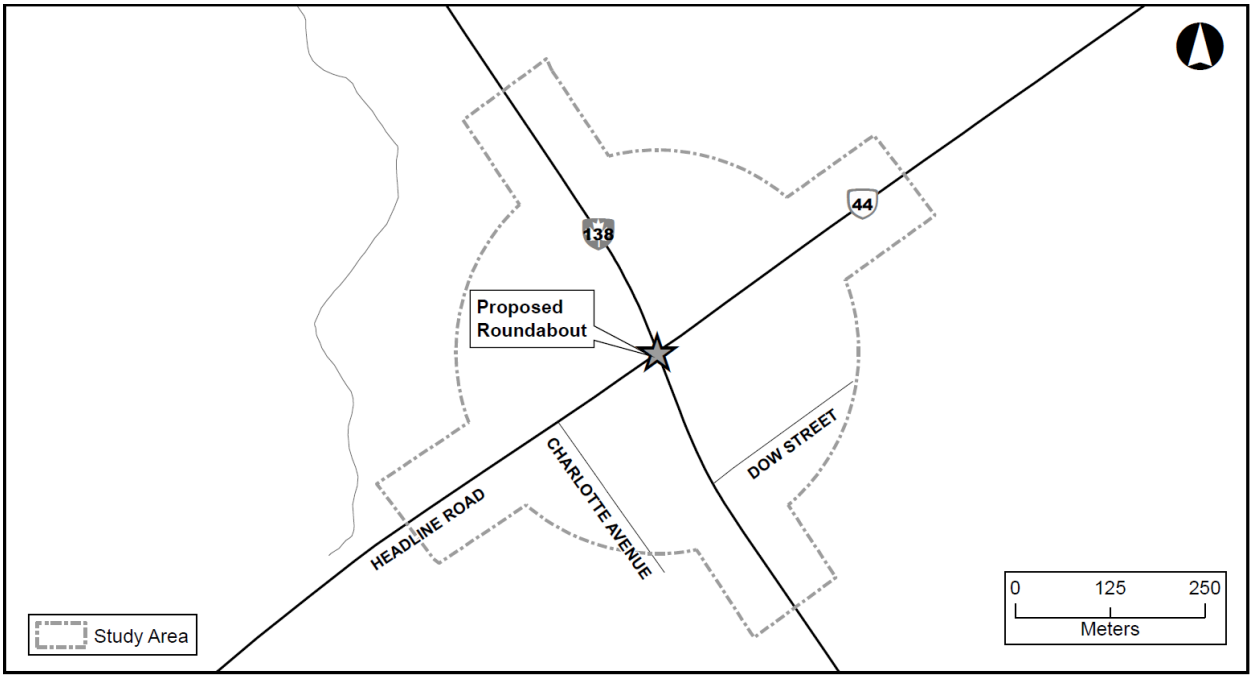
<<Contact_Name>>
<<Title>>
<<Agency>>
<<Address>>
<<City_PR_PC>>

Public and Agency Notification Letter

Re: Notice of Completion and Design, and Construction Report Submission: Detail Design and Class Environmental Assessment Study for Highway 138 Intersection Improvements at Headline Road, Township of South Stormount, GWP 4004-21-00, WP 4043-21-00

<<Greeting>>

The Ministry of Transportation Ontario (MTO) has retained Morrison Hershfield Limited (MH) to prepare the Detail Design and complete a Class Environmental Assessment (EA) Study for improvements at the Highway 138 and Headline Road (County Road 44) intersection. The project is located in the Township of South Stormont, within the United Counties of Stormont, Dundas and Glengarry, as shown in the Key Map below, and involves the conversion of the Highway 138/Headline Road intersection to a single-lane roundabout.



Key Map: Highway 138 Intersection Improvements at Headline Road

The proposed roundabout will calm traffic to reduce speeds and decrease the potential and severity of collisions. A roundabout will also allow for improved traffic operations, including shorter travel time and reduced vehicle queue lengths.

The purpose of this letter is to inform you that the detail design process has been completed and a Design and Construction Report (DCR) has been prepared to document the Class EA process, the Recommended Plan, the potential environmental effects, and the final mitigation plan. The DCR will be available online at www.highway138roundabout.ca for a comment period from December 18, 2023 to January 26, 2024 to provide the opportunity for stakeholders to review and comment on the document.

A **Notice of Completion and Design and Construction Report Submission** will be published in the Cornwall Standard Freeholder (English) and the Cornwall Express (French) to explain the review process and identify how the DCR can be reviewed.

This project has been classified as a Group B undertaking under the *Class Environmental Assessment for Provincial Transportation Facilities* (2000) with the opportunity for public input throughout. The MTO completed a Transportation Environmental Study Report for the Preliminary Design and Class Environmental Assessment for the above project (G.W.P. 4015-08-00) in 2019.

The DCR is not subject to a Part II Order ("bump-up") request under the provisions of the MTO's Class EA process. Upon completion of the DCR review period, the project will be considered to have met the requirements of the Class EA and can proceed to construction.

Should you have any accessibility requirements in order to participate in this project, have any questions, comments or concerns on the planned activities, please feel free to contact the undersigned at the information listed below or visit the project website at www.highway138roundabout.ca.

Brad Hewton, P.Eng.
Consultant Project Manager
Morrison Hershfield Limited
2932 Baseline Road, Suite 200
Ottawa, ON K2H 1B1
Tel.: (613) 739-2910, Ext. 1022292
Email: bhewton@morrisonhershfield.com

Dan Brandao, P.Eng.
Senior Project Engineer
Ministry of Transportation
1355 John Counter Blvd., P.O. Box 4000
Kingston, ON K7A 5A3
Tel.: (613) 449-7916
Email: dan.brandao@ontario.ca

Comments and information are being collected to assist the MTO in meeting the requirements of the Ontario *Environmental Assessment Act*. All information collected will be subject to the provisions and disclosure requirements of the *Freedom of Information and Protection of Privacy Act R.S.O., 1990, c.F.31*. With the exception of personal information, all comments will become part of the public record.

Des renseignements sont disponibles en français en composant le 613-739-2910, ext. 1022292, auprès de Brad Hewton.

Sincerely,

Brad Hewton, P.Eng.
Consultant Project Manager
Morrison Hershfield Limited

Enclosed: Notice of Completion and Design, and Construction Report Submission

cc: Dan Brandao, MTO Project Manager
Nathan Ellis, MTO Environmental Planner
Christine Darson, MH Senior Environmental Planner

MORRISON HERSHFIELD

Highway 138 Roundabout at Headline Road

Detail Design and Environmental Assessment Study

G.W.P. 4004-21-00 | W.P. 4043-21-01

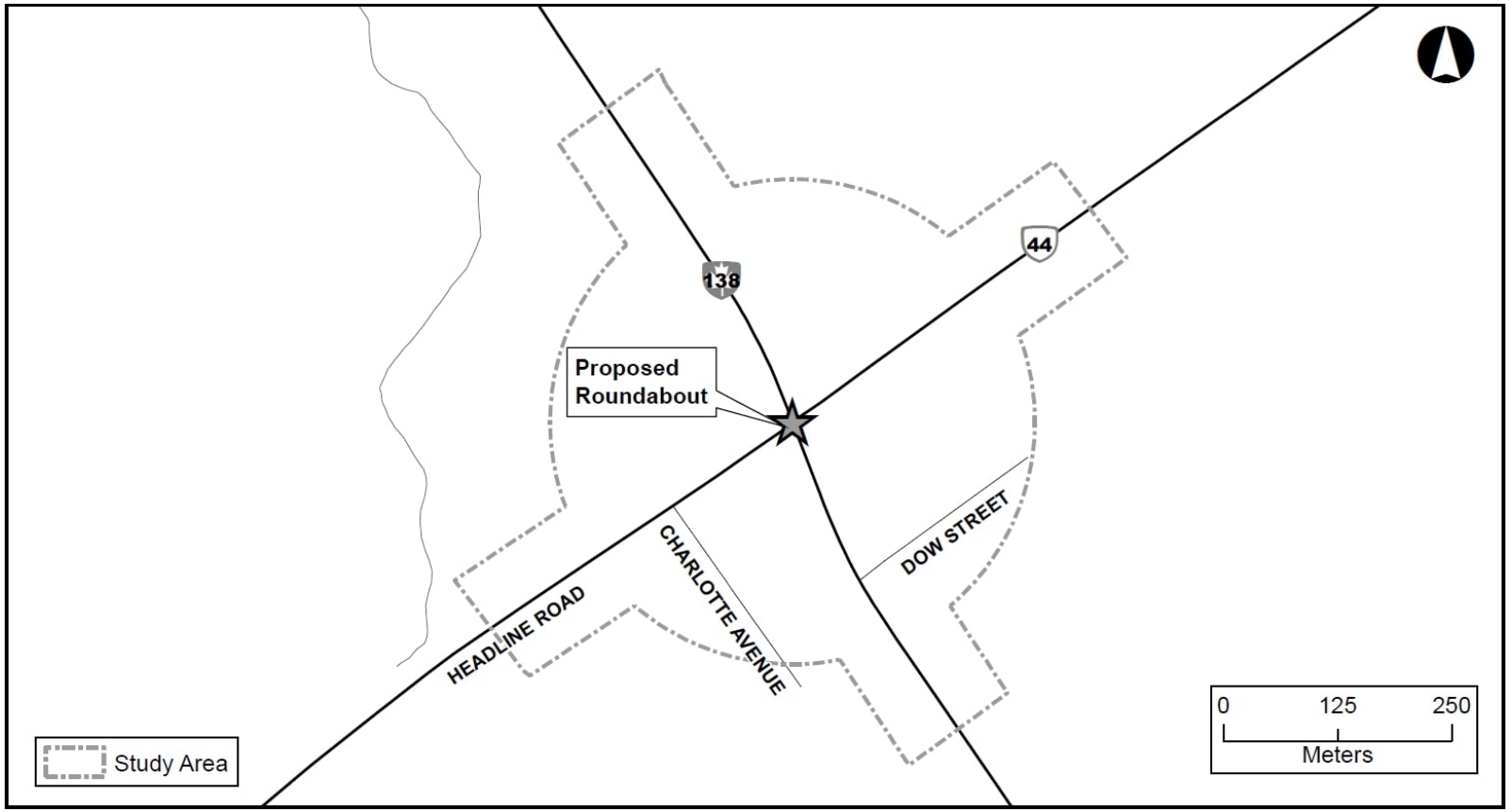
September 12, 2023

Welcome to the Online Public Information Centre

Highway 138 Intersection Improvements at Headline Road

Detail Design and Class Environmental Assessment Study

G.W.P. 4004-21-00



Ontario

MORRISON HERSHFIELD

September 12, 2023

Purpose of this Online Public Information Centre

The purpose of this Online Public Information Centre (PIC) is to introduce the Class Environmental Assessment (Class EA) Study and is to present and receive input on the Recommended Plan for the Highway 138 / Headline Road intersection improvements (i.e., roundabout). As part of this Online PIC, you will have a chance to review:

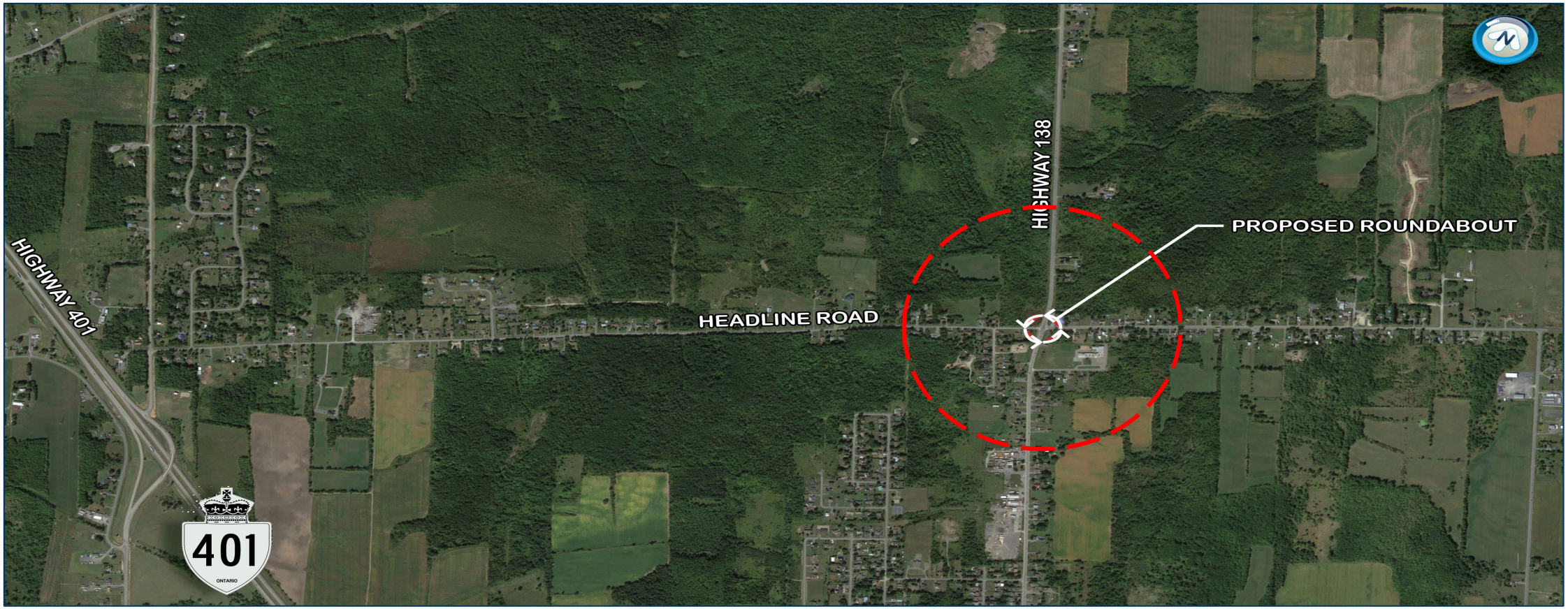
- An overview of the Project background and current Detail Design Study
- The steps in the Ontario Ministry of Transportation (MTO) Class EA process
- Existing natural, social, economic, cultural and technical conditions within the Study Area
- A description of the Recommended Plan, including proposed construction staging
- Anticipated (or predicted) project impacts and the prescribed mitigation measures to eliminate or reduce these impacts
- Next steps

Members of the Project Team are available to discuss any questions that you may have regarding this project, please email bhewton@morrisonhershfield.com (Consultant Project Manager).

If you require any assistance regarding the accessibility of these materials, please let us know by emailing the address above. We would be happy to assist you.

Highway 138 / Headline Rd Intersection Study Area

The Project is located in the Township of South Stormont, within the United Counties of Stormont, Dundas and Glengarry. We acknowledge that the Highway 138 at Headline Road Intersection Project Study Area is located on / in the traditional territory of the Haudenosaunee, Mohawk, and Huron-Wendat, which is covered by the Upper Canada Treaties.



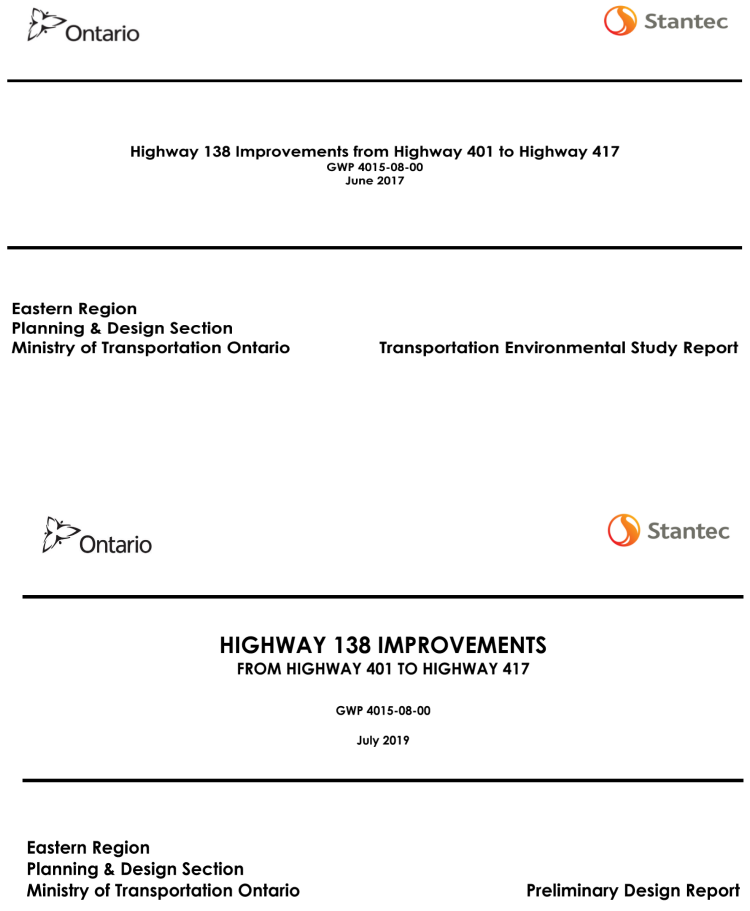
Project Background

Highway 138 Improvements from Highway 401 to Highway 417 (2017)

In 2017, the MTO completed the Preliminary Design and EA Study for operational and safety improvements for approximately 35 km of Highway 138 between Highway 401 and Highway 417 in the City of Cornwall, and the Townships of North Stormont and South Stormont (GWP 4015-08-00). The Study examined intersection improvements, turning lanes, passing lanes, drainage improvements, carpool parking, corridor access and entrance improvements, and snowdrift mitigation.

The Preliminary Design and EA Study was carried out in accordance with the approved environmental planning process for Group B Projects under the MTO *Class Environmental Assessment for Provincial Transportation Facilities (2000)* and was documented in a Transportation Environmental Study Report (TESR, dated June 2017). The TESR received environmental clearance in June 2017.

A subsequent Preliminary Design Report (PDR, dated July 2019) was prepared to further document the Study process for this Project, including existing conditions, deficiencies, alternatives considered and the details of the Recommended Plan. Based on the 2019 PDR, a **Roundabout is recommended at the Highway 138 / Headline Road intersection**.



Evaluation of Alternatives during Preliminary Design

Based on current traffic volumes and the existing operations, traffic control (i.e., traffic signals or a roundabout) is warranted at the Highway 138 / Headline Road intersection. Traffic control at this location will improve traffic operations and has the potential to minimize collisions.

Based on the evaluation of alternatives, a roundabout was selected as the recommended alternative as it:

- Has the potential to decrease the number and severity of collisions
- Provides traffic calming with reduced speeds
- Provides improved traffic operations, including shorter delay in travel time and vehicle queue lengths for the overall intersection
- Has the potential to act as a gateway feature in a key transition area

Although there is a perception that roundabouts can be difficult for trucks to navigate, the roundabout will be designed to accommodate all vehicles.

Project Overview

The MTO retained Morrison Hershfield Limited (MH) to complete the Detail Design for the recommended roundabout at Highway 138 and Headline Road in the Township of South Stormont.

Challenge: Highway 138 is experiencing increased traffic volumes, which causes safety concerns for drivers attempting to proceed through or turn onto Highway 138 from Headline Road.

Opportunity: The proposed roundabout is planned to calm traffic to reduced speeds and decrease the potential and severity of collisions while maintaining predominantly free flow operating conditions for all vehicles, including trucks and farm equipment. A roundabout will allow for improved traffic operations, including shorter travel times and reduced vehicle queue lengths.

Project Description

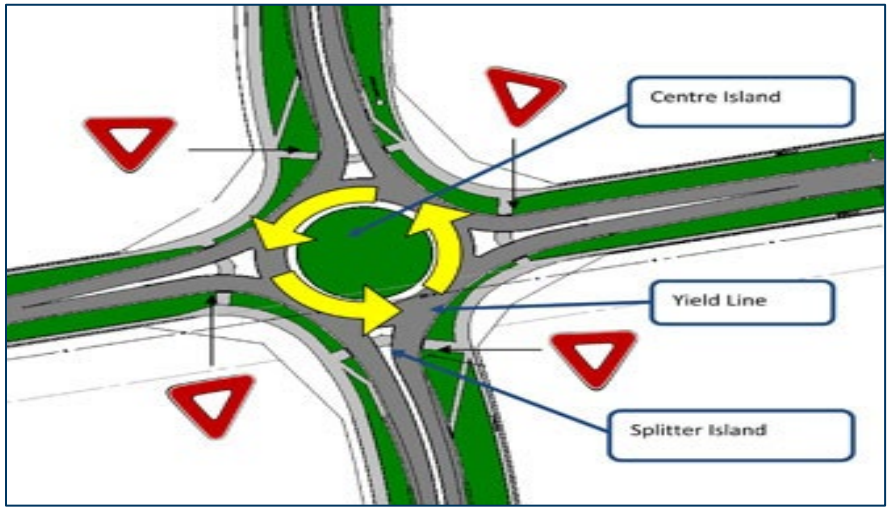
The scope of work includes conversion of the existing two-way stop control intersection of Highway 138 and Headline Road with a modern single-lane roundabout. The project will enhance operations and safety, and has been designed to include the following main components:

- Construction of a single-lane roundabout and approaches designed with a radius that will accommodate large vehicles
- Modifications to the intersection and roadway alignment (shift to the east) to improve sightlines to the intersection
- Installation of new concrete islands with curb and gutter on roundabout approaches and modification of entrance connections
- Drainage improvements including general grading and clean out of ditches, culvert flushing and cleanout, removal of vegetation, and culvert replacements and storm sewer replacement
- New illumination (lighting) at the roundabout and approaches
- Landscaping along the approaches and within the central island
- Utility relocations to facilitate the new roundabout footprint

What is a Roundabout?

Per the Transportation Association of Canada (TAC) Canadian Roundabout Design Guide (2017):

> *"a modern roundabout is a type of circular intersection in which vehicles travel counter-clockwise (in Canada) around a central island. Vehicles entering the roundabout must yield to circulating traffic. Roundabouts have specific geometric design and traffic control features to enhance safety and capacity of the intersection".*



Roundabouts are typically designed with a tighter curve around the island to encourage lower speeds and may have a sloped curb to allow more room for larger commercial vehicles. The following are some of the benefits of roundabouts over traditional intersections:

- Improved road safety due to lower vehicle speeds and the elimination of angle (side impact collision) crashes
- Speed management
- Increased capacity
- Fewer stops and reduced delays
- Less idling and air pollution
- Reduced construction and ongoing maintenance costs

There are several existing roundabouts within the United Countries of Counties of Stormont, Dundas and Glengarry.

The Class Environmental Assessment Process

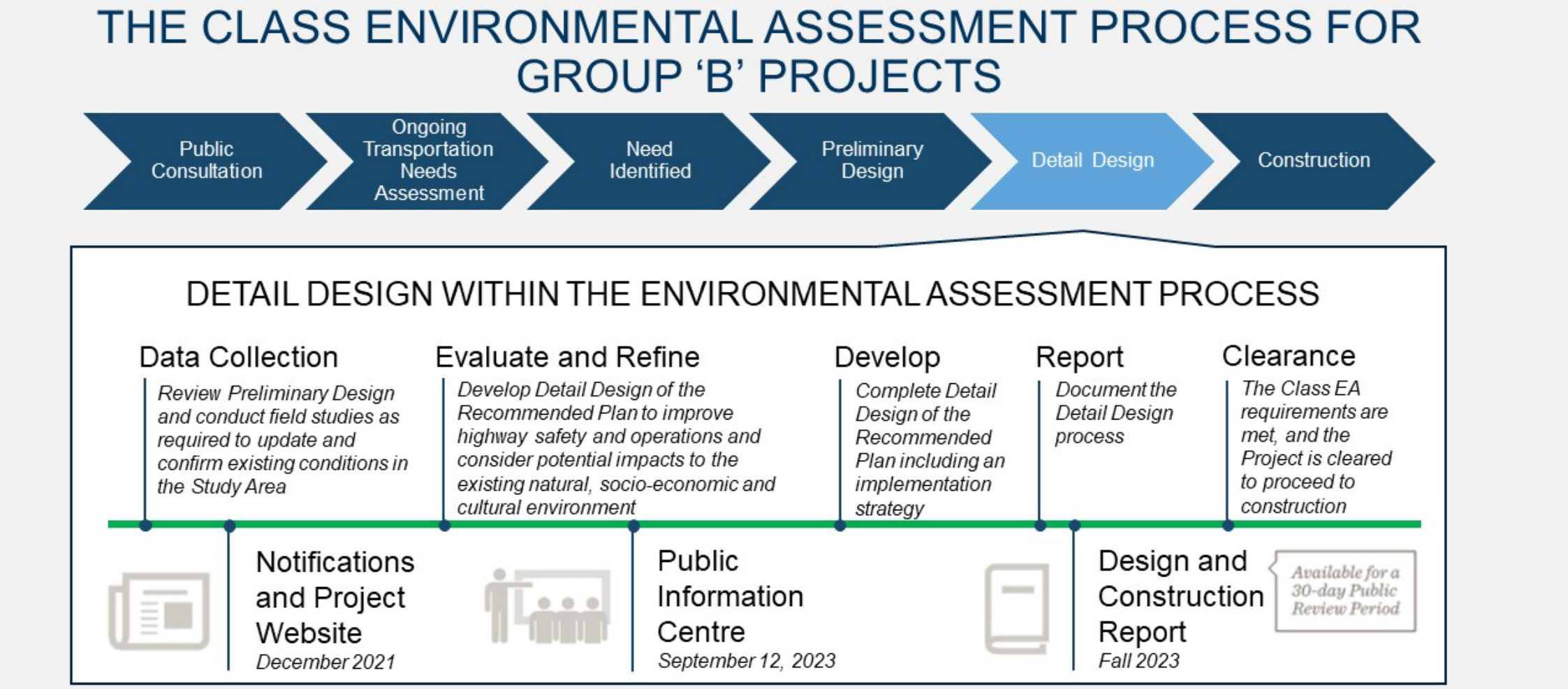
The MTO initiated this Detail Design and Class EA Study in October 2021. The Notice of Study Commencement was published in December 2021, at which time, the MTO established the project website (http://www.highway138roundabout.ca) to inform and receive feedback.

The purpose of this Class EA Study is to identify a Recommended Plan for the roundabout and prepare the Contract Documents to facilitate construction. Once completed, a Design and Construction Report (DCR) will be prepared. The DCR will include:

- A summary description of the project (i.e., proposed roundabout)
- An outline of the Class EA process followed
- A description of the Recommended Plan
- A summary of stakeholder and public consultation
- A detailed description of anticipated environmental effects and recommended mitigation measures to be incorporated into the Contract Documents.

To provide stakeholders with the opportunity to review and comment on the document, the DCR will be placed on the Public Record for a minimum comment period of 30 calendar days. Completion of the 30-day comment period is anticipated in Fall 2023, after which the project can proceed to construction.

Class Environmental Assessment Process



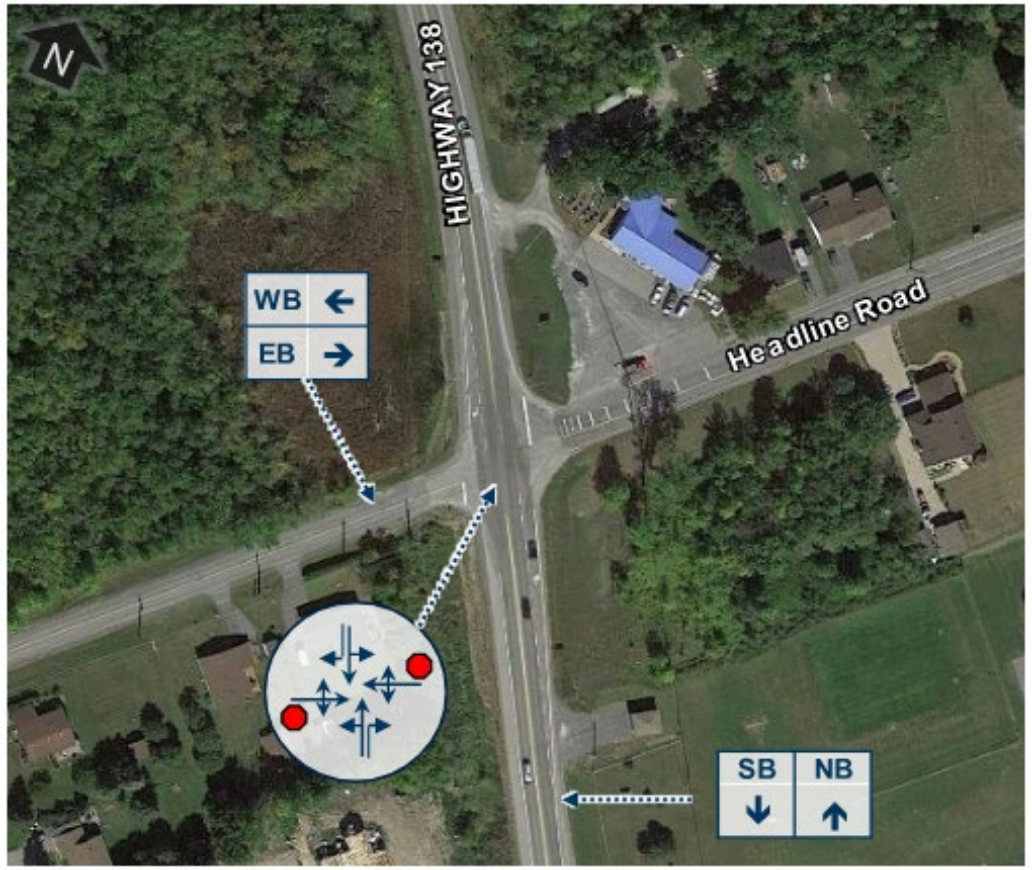
Existing Roadway Configuration

Highway 138

- Highway 138 is a provincial highway connecting Highway 417 in the north with Highway 401 in the south.
- Currently operates as a two-lane (one lane per direction) highway with a speed limit of 70 km/h. The regulatory posted speed limit increases to 80 km/hr., approximately 100 m north of the Highway 138 and Headline Road intersection.
- The traffic pattern in this section of Highway 138 is Intermediate Commuter where heavy vehicles make up approximately 8% of the total traffic mix.

Headline Road

- Headline Road is a two-lane (one lane per direction) suburban collector roadway with a speed limit of 50 km/h.
- Currently, Headline Road is stop controlled at Highway 138.
- Truck restriction is in effect on the Headline Road west leg. The proportion of heavy vehicles on Headline Road is approximately 9% of the total traffic mix.



Existing Highway 138 and Headline Road Lane Configurations

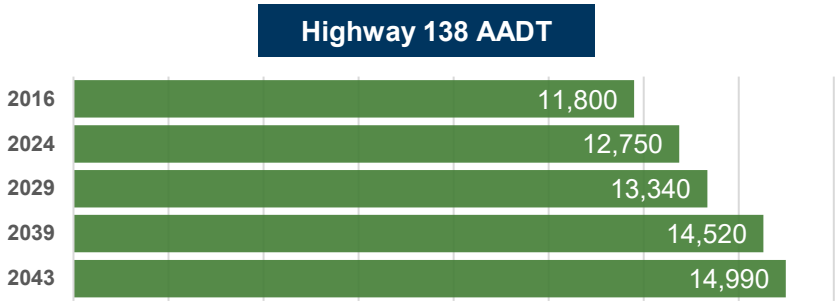
Existing Traffic Conditions

Highway 138

- 2016 Average Annual Daily Traffic (AADT) is 11,800 vehicles
- 2019 Peak hourly volume is 595 vehicles in the northbound direction during the afternoon peak hour (4:30 to 5:30 p.m.)
- Operates at Level of Service (LOS) D during peak periods

Headline Road

- 2019 Peak hourly volume is 205 vehicles in the westbound direction during the afternoon peak hour (4:30 to 5:30 p.m.)



Existing Highway 138 and Headline Road Traffic Volumes

Existing Intersection Conditions

Highway 138

- Highway 138 is a north-south undivided rural highway with a two-lane cross-section and a regulatory posted speed limit of 70 km/h. The regulatory posted speed limit increases to 80 km/h, approximately 100 m north of the intersection.

Headline Road

- Headline Road is classified as an undivided suburban collector road with a two-lane cross-section and a regulatory posted speed limit of 50 km/h on the east side, and 60 km/h on the west side. Currently, Headline Road is stop controlled at Highway 138. Truck restrictions are in effect on the Headline Road west leg, which prohibit any truck access.

Highway 138 at Headline Road Intersection

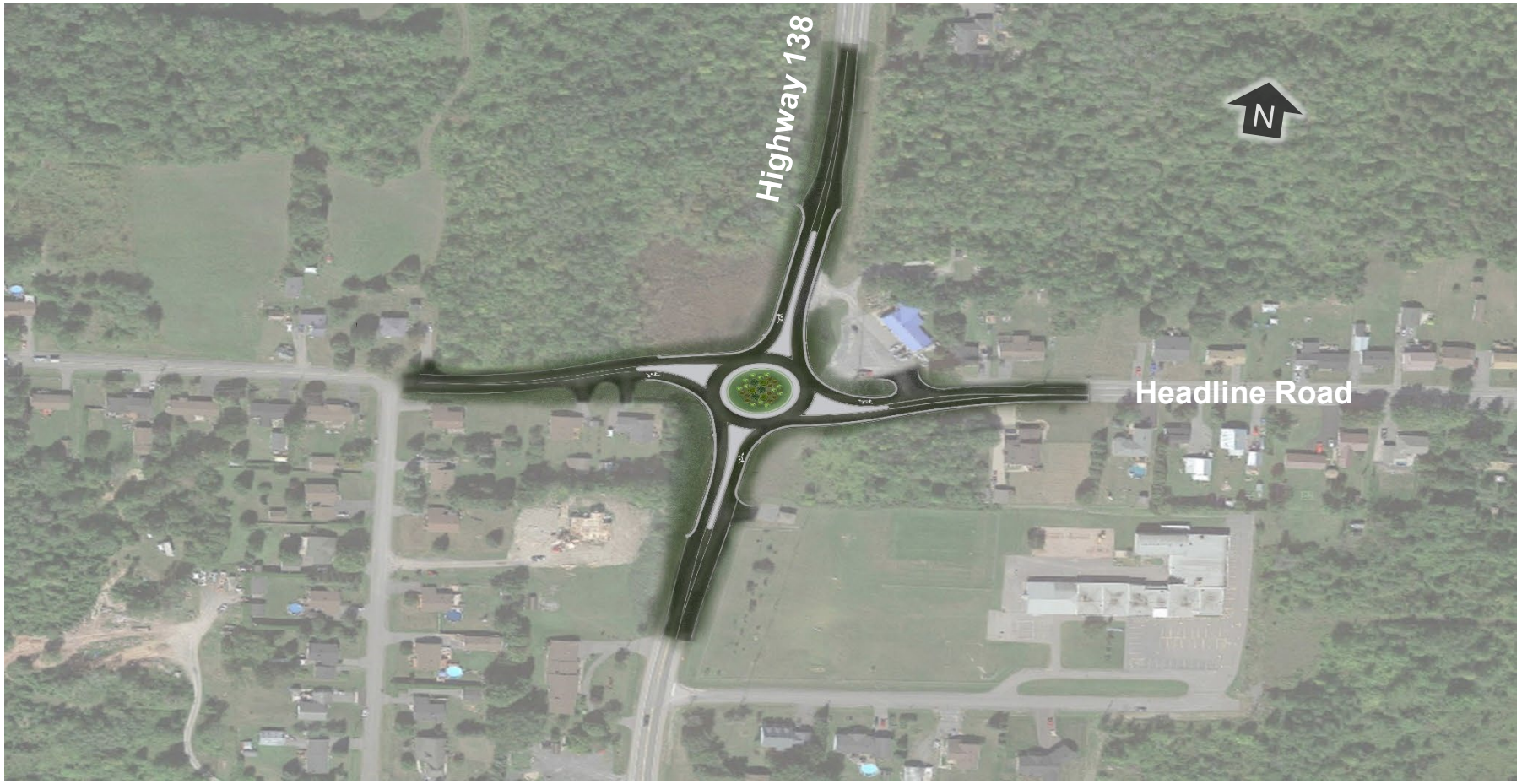
- The intersection currently operates under two-way stops for Headline Road, with dedicated right turn lanes on the north and south approaches.

Highway 138 and Headline Road Intersection

Current Configuration

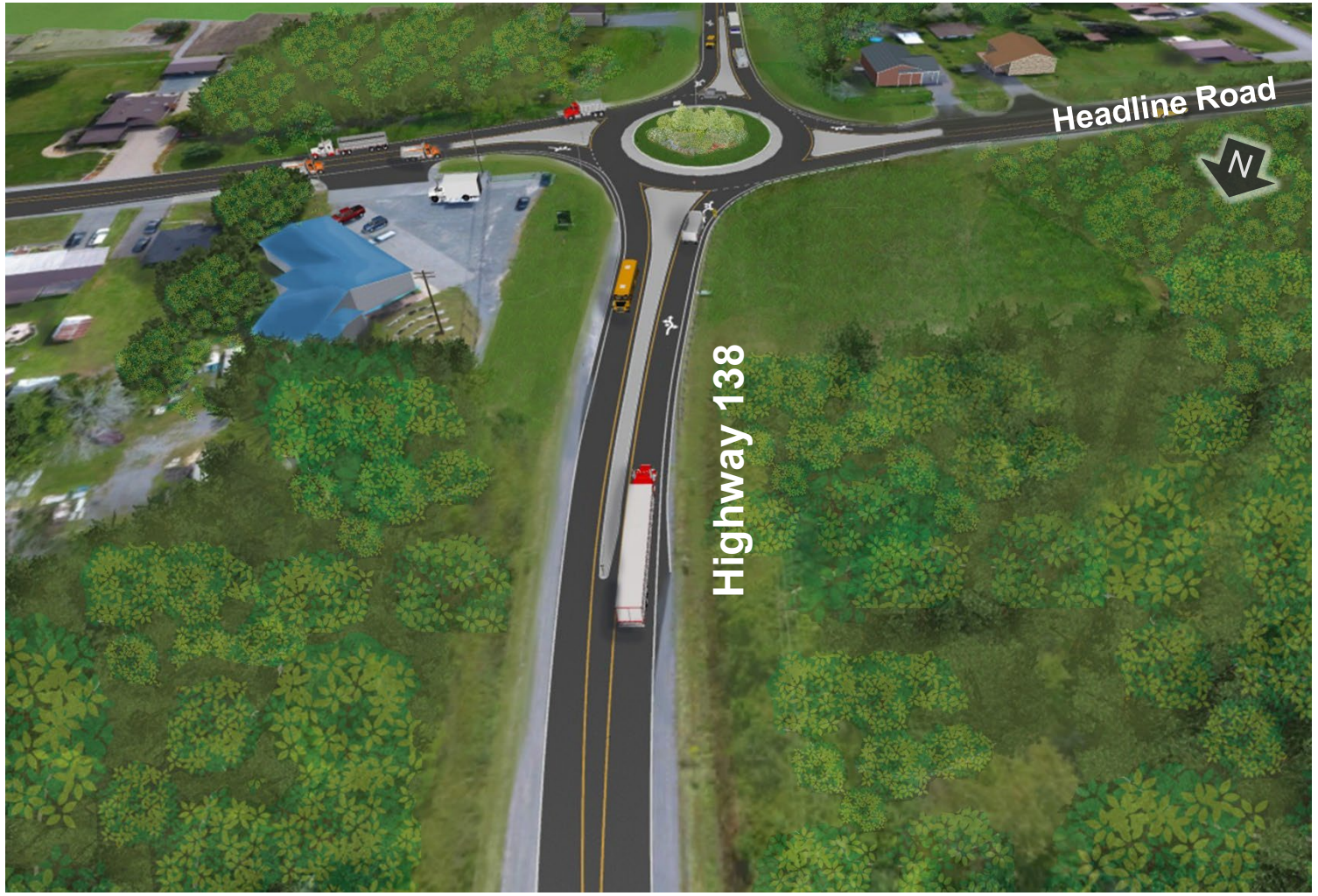
Highway 138 and Headline Road Intersection

Proposed Configuration



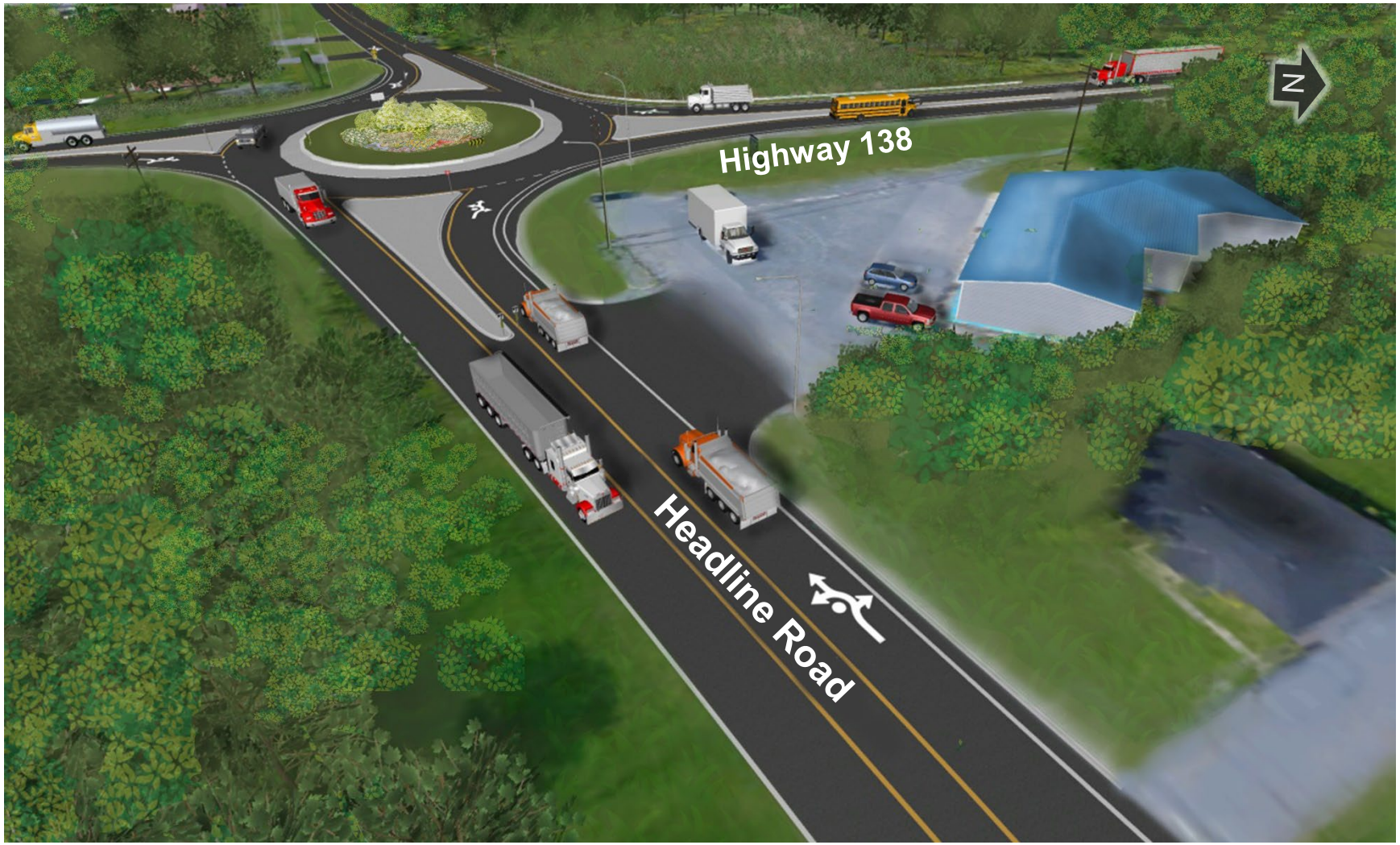
Highway 138 and Headline Road Intersection

Proposed Configuration



Highway 138 and Headline Road Intersection

Proposed Configuration



Historical Context

- The project study area is located within the traditional territory of the Mohawks of Akwesasne and is within the boundaries of the Upper Canada Treaties.
- The project study area is situated approximately 5.5 km northeast of the St. Lawrence River and contains tributaries of the Raisin and South Raisin River along with marshy areas and has discrete areas of elevated topography.
- This region of what is now known as Ontario has a lengthy history of human occupation and use, which can be traced back at least 10,000 years. With this general area likely being used by Indigenous Peoples to practice their traditional activities historically, as well as currently.

Environmental Protection and Management

Environmental factors were assessed during the Preliminary Design Study to determine existing conditions and identify mitigation measures to minimize and / or address potential impacts associated with the proposed works at the Highway 138 and Headline Road intersection. Additional field work was completed to update information, identify changes to statutory requirements, and refine the mitigation measures based on the Recommended Plan for the roundabout (see next slide).

Contract documentation will include general environmental management (e.g., prescribed construction Best Management Practices - BMPs) and specific provisions to protect the surrounding environment and mitigate any predicted construction-related impacts to:

- Traffic operations
- Private property
- Noise and air quality
- Ground and surface water resources
- Vegetation and wildlife habitat
- Erosion and sediment control
- Archaeological resources
- Management of excess material

Overview of Environmental Investigations

During this Detail Design and Class EA Study, various field investigations (or studies) were completed to collect primary environmental and engineering information to:

- Confirm, augment and document existing (baseline) natural, social, economic, cultural and technical conditions within the Study Area
- Confirm the anticipated (or predicted) project impacts
- Develop applicable environmental protection and mitigation measures to alleviate / minimize the predicted project impacts

Field investigations / studies completed within the Study Area included:

- Geotechnical Assessment
- Terrestrial Ecosystems Assessment
- Land Use Assessment
- Stage 1 Archaeology Assessment
- Drainage / Hydrology Assessment
- Phase 1 Environmental Site Assessments
- Desktop Hydrogeological Study

Environmental Impacts and Mitigation Measures

The proposed roundabout will cause minimal widening of the intersection's footprint beyond the existing roadbed. The anticipated environmental impacts and prescribed mitigation measures include but are not limited to:

Potential Environmental Impact	Prescribed Mitigation Measures
Natural Environment	
• Potential impacts to vegetation, species at risk (SAR), and wildlife habitat	• Construction to occur primarily within the existing right-of-way and construction footprint has been reduced to the extent practical with minimal impacts to vegetation and wildlife habitat • Minimize vegetation removal and protect those trees and shrubs to remain • Replace vegetation in accordance with Landscape Plan • No species at risk were observed within the Study Area • Standard erosion and sediment control measures to be incorporated into Contract Documents - including measures to prevent off-site transport of sediment • No impacts to fish or fish habitat
Socio-Economic Environment	
• Partial purchase of five (4) private properties (permanent) • Need to acquire / protect other properties for working / staging areas (either short or long term)	• Early communication / coordination with property owner(s) and tenants to minimize disruption associated with property purchases • Property agreements (both permanent and temporary) will be in place prior to construction • All entrances impacted by construction will be reconstructed
• Potential noise and air quality impacts from construction equipment and vehicles	• Abide by Township Noise and Nuisance By-law 2016-20 for day-to-day operations including night and weekend work • Implement best practices to reduce potential air quality / dust impacts - maintain equipment in good operating condition and restrict idling to the minimum necessary to perform the work

Environmental Impacts and Mitigation Measures

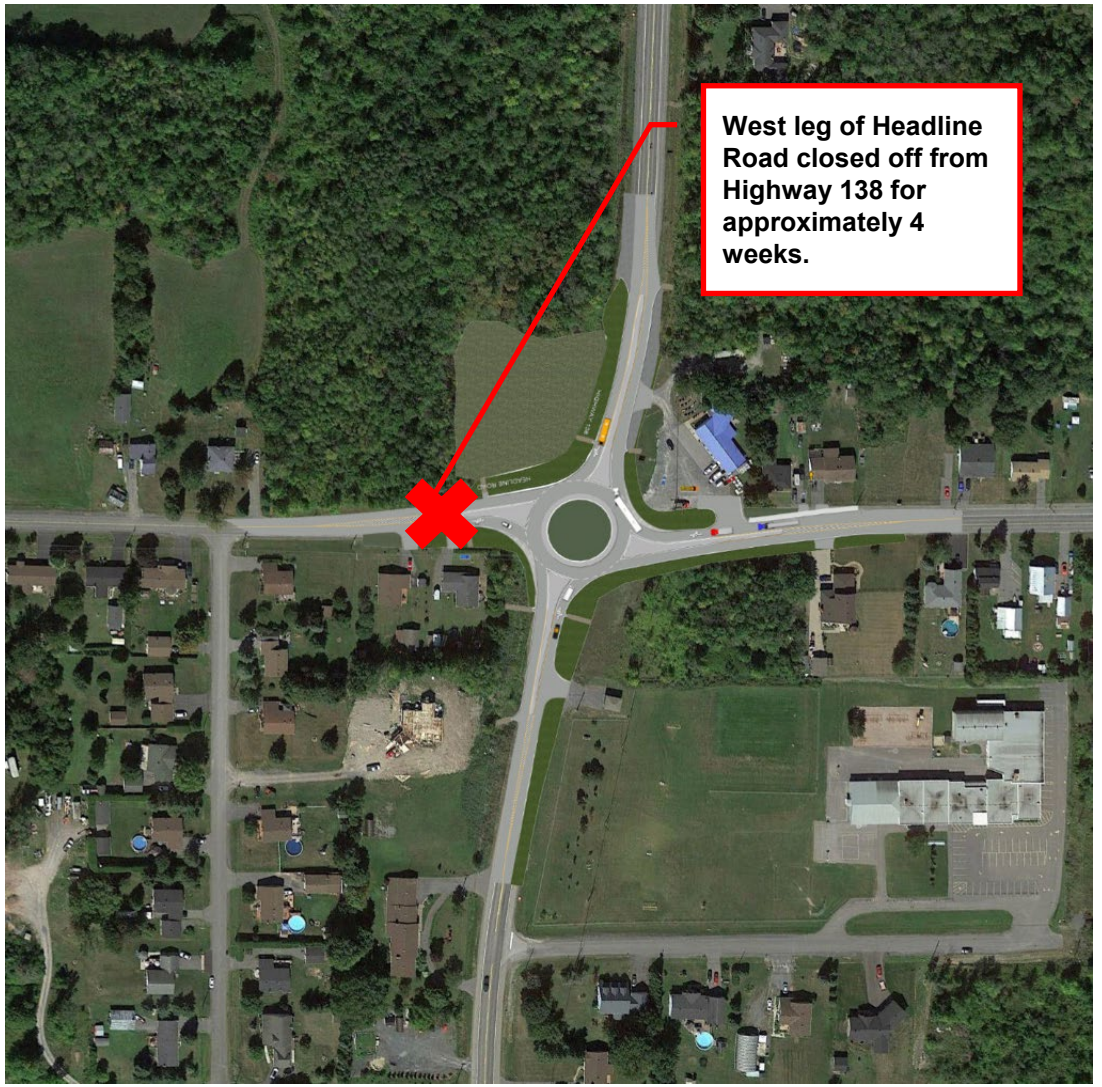
Potential Environmental Impact	Prescribed Mitigation Measures
Socio-economic Environment	
• Potential for traffic delays due to road / lane closures and reductions, and detours during construction	• Traffic delays have been minimized to the extent possible • Provide advance notice of construction start (including road signage) and minimize duration • Provide advance notification of construction start to local residents, emergency service providers (Fire, Police and Ambulance), Township and County, and school boards • A Traffic Management Plan will be developed and implemented to minimize traffic impacts • Ongoing communication will be maintained prior to and during construction • Lane closures will be controlled by flag persons when workers are present and restored to two lanes when workers are not present • Access to private properties will be maintained throughout construction • All traffic lanes will be opened to the public by the end of each day
Cultural Environment	
• Potential impacts to archaeological and cultural heritage resources	• The Archaeological Assessment undertaken found no potential to encounter archaeological remains due to intensive and extensive disturbances, and low and wet conditions • Based on review of Township Heritage Register, no registered properties affected
Technical Environment	
• Potential impacts to municipal infrastructure and utilities including relocation and temporary service outages	• Required relocations will be coordinated with the affected provider in advance of construction • Properties affected by any required temporary service outages will be notified in advance • Existing infrastructure/utilities to remain in place will be protected during construction

Construction Staging and Schedule

Pending the availability of funding, and selection of a preferred Contractor, the MTO is planning to commence construction in Spring 2024. The proposed works will entail:

- Single lane closures with flagging or short-term closures
- Short-term detours during construction of the approaches and roundabout
- Long-term closure of Headline road during one stage of construction for the splitter island and roadways realignments on Headline Road
  - Temporary detour of Headline Road west traffic will include Dundas Street (CR 18/36, and Power Dam Drive (CR33) Cornwall Centre Road
  - Highway 138 will remain open to through traffic
  - The detour is anticipated to be in place for approximately 4 weeks

Detour Route



Construction Staging and Schedule

As part of the project works, the Highway 138 section between Cornwall Centre Road to County Road 43 in Monkland will be rehabilitated. In general, the work will consist of the following:

- Pavement rehabilitation including reinstatement of existing fully paved shoulders
- Drainage improvements including culvert replacements
- Sidewalk reconstruction at County Road 18
- Clearing for intersection sightline improvements

This work will be combined with the Roundabout under one construction Contract.

Next Steps

Following this Online Public Information Centre, next steps will include:

- Reviewing and responding to comments received
- Refining the Detail Design and Mitigation Plan
- Preparing the Design and Construction Report (DCR) for public review
- Finalizing the Detail Design and preparing the Contract Package
- Submitting the Contract Documents for Tender
- Selecting the Preferred Contractor and starting construction.

Thank you for participating in the Online Public Information Centre.

We welcome your comments. Information is being collected in accordance with the *Freedom of Information and Protection of Privacy Act*. Except for personal information, all comments will become part of the public record.

If you have accessibility requirements in order to participate in this project, or if you would like more information, please contact:

Mr. Brad Hewton, P.Eng., Consultant Project Manager
Morrison Hershfield
200-2932 Baseline Road
Ottawa, ON K2H 1B1
Phone: (613) 739-2910 ext. 1022292
Email: BHewton@morrisonhershfield.com

Mr. Dan Brandao, P.Eng., Sr. Project Engineer
Ministry of Transportation – Eastern Region
1355 John Counter Boulevard, P.O. 4000
Kingston, ON K7L 5A3
Phone: (613) 449-7916
Email: Dan.Brandao@ontario.ca

We encourage you to submit any questions or comments to the contacts listed above or under the "**Contacts**" section of the project website (**http://www.highway138roundabout.ca)** by September 26, 2023.

MORRISON HERSHFIELD

Carrefour giratoire de la route 138 à chemin Headline

Étude de conception détaillée et d'évaluation environnementale

G.W.P. 4004-21-00 | W.P. 4043-21-01

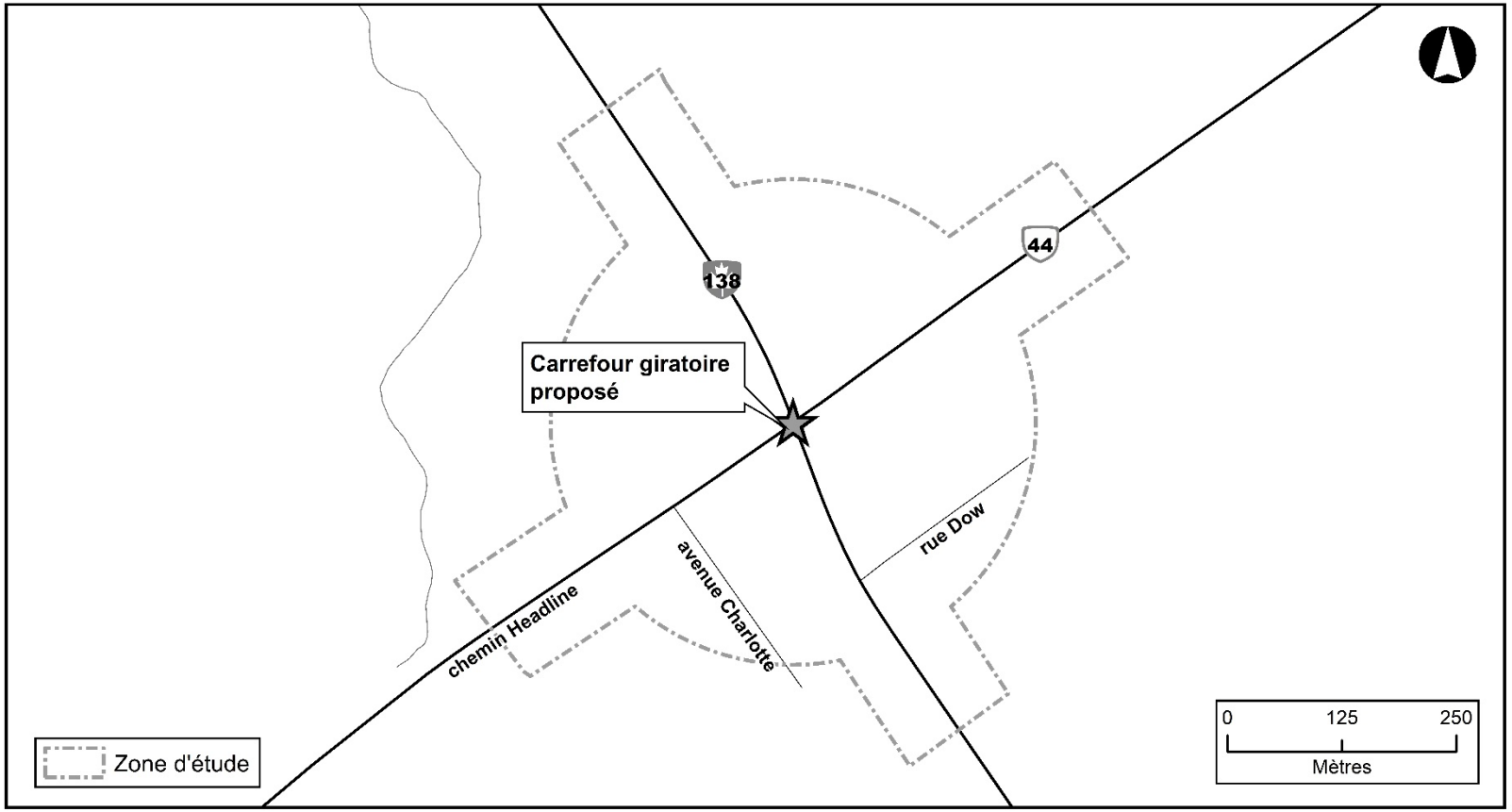
12 septembre 2023

Bienvenue à la séance d'information publique en ligne

Amélioration de l'intersection de la route 138 à chemin Headline

Étude de conception détaillée et d'évaluation environnementale de portée générale

G.W.P. 4004-21-00



Ontario

MORRISON HERSHFIELD

12 septembre 2023

Objectif de la séance d'information publique en ligne

L'objectif de la séance d'information publique (SIP) en ligne est de présenter l'étude d'évaluation environnementale de portée générale (EE de portée générale) et de donner aux parties intéressées une occasion d'examiner et de se prononcer sur le plan recommandé pour l'amélioration de l'intersection de la route 138 et du chemin Headline (c.-à-d. le carrefour giratoire). Dans le cadre de cette SIP en ligne, vous aurez l'occasion d'examiner :

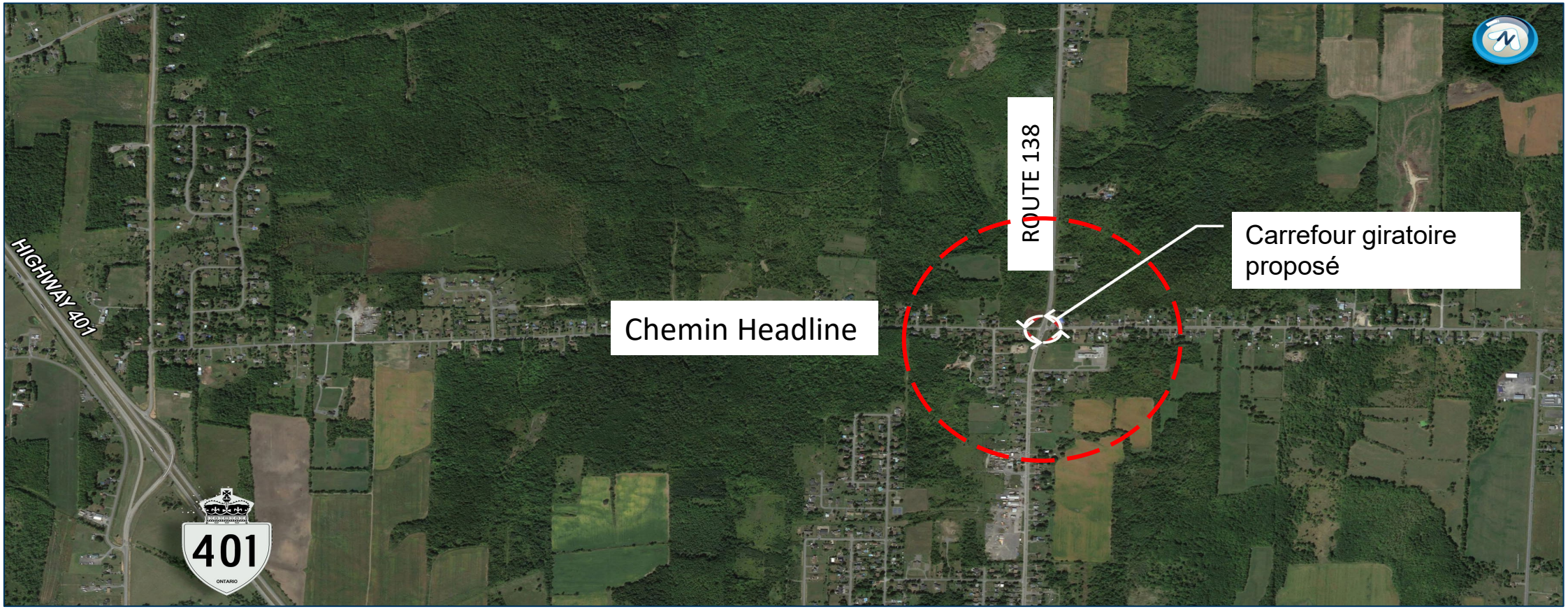
- une vue d'ensemble du contexte du projet et de l'étude de conception détaillée actuelle;
- les étapes du processus d'EE de portée générale du MTO;
- les conditions naturelles, sociales, économiques, culturelles et techniques actuelles en vigueur dans la zone d'étude;
- une description du plan recommandé, y compris les étapes de construction proposées;
- les répercussions prévues (ou prédites) du projet et les mesures d'atténuation prescrites pour les éliminer ou les réduire;
- les prochaines étapes.

Les membres de l'équipe de projet sont à votre disposition pour répondre à toute question concernant ce projet. Veuillez envoyer un courriel à bhewton@morrisonhershfield.com (consultant en gestion de projets).

Si vous avez besoin d'aide concernant l'accessibilité de ces documents, veuillez nous en faire part en envoyant un courriel à l'adresse ci-dessus. Nous serons ravis de vous aider.

Zone d’étude pour l’intersection de la route 138 et du chemin Headline

Le projet est situé dans le canton de South Stormont, dans les comtés unis de Stormont, Dundas et Glengarry. Nous reconnaissons que la zone d’étude du projet d’intersection de la route 138 et du chemin Headline est située sur/dans le territoire traditionnel des Haudenosaunee, des Mohawks et des Hurons-Wendats, qui est couvert par les traités du Haut-Canada.



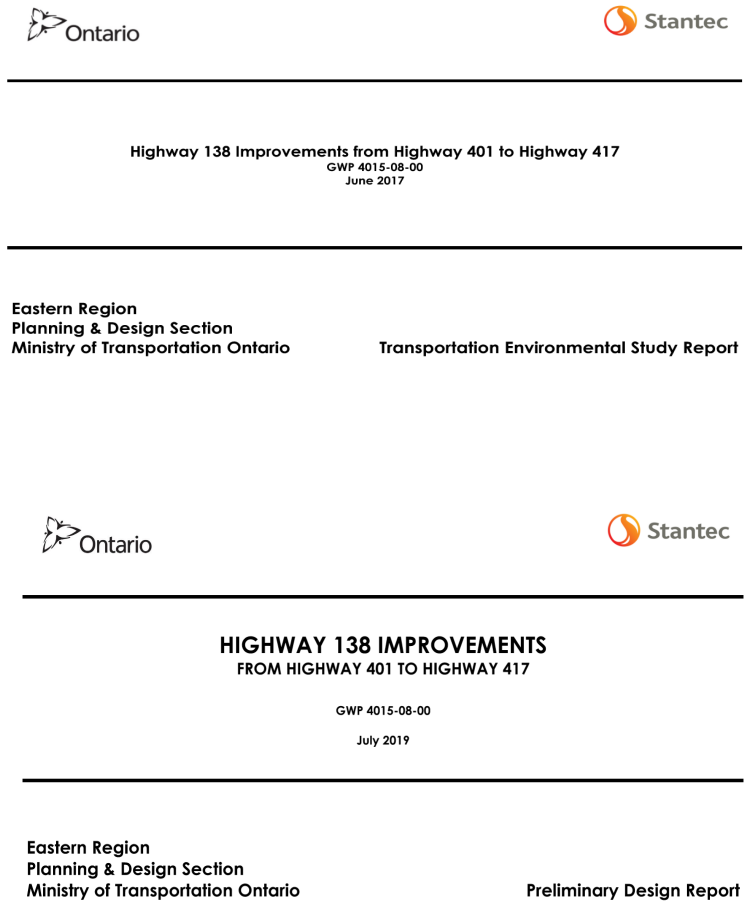
Contexte du projet

Amélioration de la route 138, de l'autoroute 401 à l'autoroute 417 (2017)

En 2017, le MTO a achevé l'étude de conception préliminaire et d'évaluation environnementale pour des améliorations opérationnelles et de sécurité sur un tronçon d'environ 35 km de la route 138 entre l'autoroute 401 et l'autoroute 417 dans la ville de Cornwall et les cantons de North Stormont et South Stormont (GWP 4015-08-00). L'étude a porté sur l'amélioration des intersections, les voies de virage, les voies de dépassement, l'amélioration du drainage, le stationnement pour le covoiturage, l'amélioration de l'accès et de l'entrée dans le corridor, et la réduction des congères.

L'étude de conception préliminaire et d'évaluation environnementale a été réalisée conformément au processus de planification environnementale approuvé pour les projets du groupe B en vertu de l'Évaluation environnementale de portée générale pour les routes provinciales (2000) du MTO et a été consignée dans un rapport d'étude environnementale sur les transports (REET, daté de juin 2017). Le REET a reçu une autorisation environnementale en juin 2017.

Un rapport de conception préliminaire (RCP, daté de juillet 2019) a ensuite été préparé pour documenter davantage le processus d'étude de ce projet, y compris les conditions actuelles, les lacunes, les solutions de rechange envisagées et les détails du plan recommandé. D'après le RCP de 2019, un **carrefour giratoire est recommandé à l'intersection de la route 138 et du chemin Headline.**



Évaluation des solutions de rechange pendant la conception préliminaire

Un contrôle de la circulation (c.-à-d. des feux de circulation ou un carrefour giratoire) est justifié à l'intersection de la route 138 et du chemin Headline, compte tenu des volumes de circulation actuels et des activités en cours. Le contrôle de la circulation à cet endroit améliorera les activités de circulation et a le potentiel de réduire au minimum les collisions.

Sur la base de l'évaluation des solutions de rechange, un carrefour giratoire a été sélectionné comme la solution de rechange recommandée, car il :

- a le potentiel de réduire le nombre et la gravité des collisions;
- permet de modérer la circulation en réduisant les vitesses;
- améliore la circulation, notamment en réduisant le temps de déplacement et la longueur des files d'attente pour l'ensemble de l'intersection;
- a le potentiel d'agir comme un élément d'entrée dans une zone de transition clé.

Bien qu'il existe une perception selon laquelle les camions ont plus de difficulté à se déplacer dans les ronds-points, celui-ci sera conçu pour accueillir tous les véhicules.

Survol du projet

Le ministère des Transports (MTO) a retenu les services de Morrison Hershfield Limited (MH) pour réaliser la conception détaillée du carrefour giratoire recommandé à l'intersection de la route 138 et du chemin Headline dans le canton de South Stormont.

Défi : La route 138 connaît une augmentation du trafic, ce qui pose des problèmes de sécurité aux conducteurs qui tentent de traverser la route 138 depuis le chemin Headline ou de tourner sur cette route.

Occasion : Le carrefour giratoire proposé devrait modérer la circulation en imposant une réduction de la vitesse et diminuer le potentiel et la gravité des collisions tout en maintenant une circulation fluide pour tous les véhicules, y compris les camions et les équipements agricoles. Un carrefour giratoire permettra d'améliorer la circulation, notamment en réduisant la durée des déplacements et la longueur des files d'attente.

Description du projet

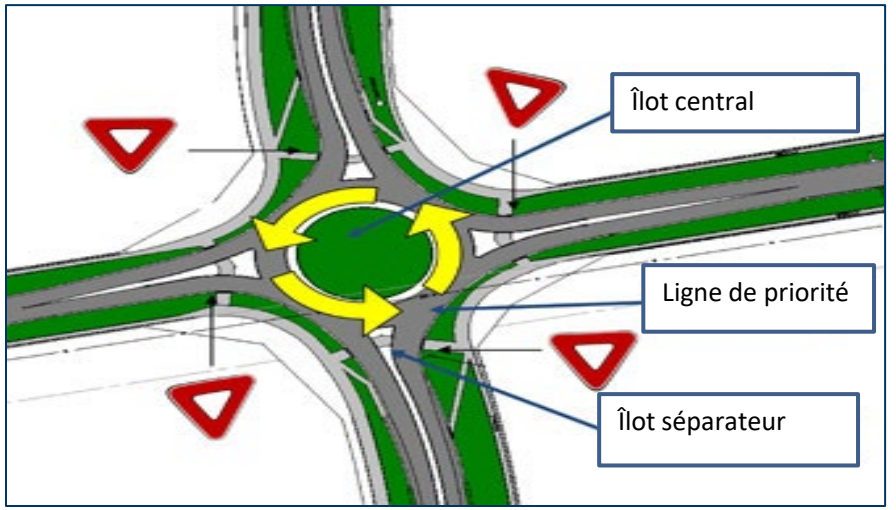
L’étendue des travaux comprend la conversion du contrôle d’arrêt bidirectionnel actuel de l’intersection de la route 138 et du chemin Headline avec un carrefour giratoire moderne à une voie. Le projet améliorera les opérations et la sécurité, et comprendra les principaux éléments suivants:

- Construction d’un carrefour giratoire à une voie et d’approches conçues avec un rayon permettant le passage de gros véhicules;
- Modification de l’alignement de l’intersection (déplacement vers l’est) pour améliorer les lignes de visibilité vers l’intersection;
- Installation de nouveaux îlots en béton avec bordure et caniveau aux abords du carrefour giratoire et modification des raccordements d’entrée;
- Amélioration du drainage, y compris le nivellement général et le nettoyage des fossés, le rinçage et le nettoyage des ponceaux, l’enlèvement de la végétation ainsi que le remplacement des ponceaux et des égouts pluviaux;
- Nouvel éclairage au carrefour giratoire et aux abords;
- Aménagement paysager le long des abords et dans l’îlot central;
- Déplacement des services publics pour faciliter l’aménagement du nouveau carrefour giratoire.

Qu’est-ce qu’un carrefour giratoire?

Selon le Guide canadien de conception des carrefours giratoires (2017) de l’Association des transports du Canada (ATC) :

> *« Un carrefour giratoiremoderne est un type d’intersection circulaire dans laquelleles véhicules circulent dans le sens antihoraire(au Canada) autour d’un îlot central. Les véhicules qui entrentdans le carrefour giratoiredoivent céder le passage aux véhicules qui y sont déjà engagés. Les carrefours giratoires adoptentune conception géométriqueet une signalisation distinctivespour améliorer la sécurité et la capacité de l’intersection. »*



Les ronds-points sont généralement conçus avec une courbe plus serrée autour de l’îlot pour inciter les véhicules à circuler moins vite et peuvent avoir une bordure inclinée pour laisser plus de place aux véhicules commerciaux plus grands. Voici quelques-uns des avantages des carrefours giratoires par rapport aux intersections traditionnelles :

- Amélioration de la sécurité routière grâce à la réduction de la vitesse des véhicules et à l’élimination des collisions à angle (collision latérale);
- Gestion de la vitesse;
- Augmentation de la capacité;
- Moins d’arrêts et moins de retards;
- Réduction de la marche au ralenti et de la pollution atmosphérique;
- Réduction des coûts de construction et d’entretien permanent.

Il existe plusieurs carrefours giratoires dans les comtés de Stormont, de Dundas et de Glengarry.

Processus d’évaluation environnementale de portée générale

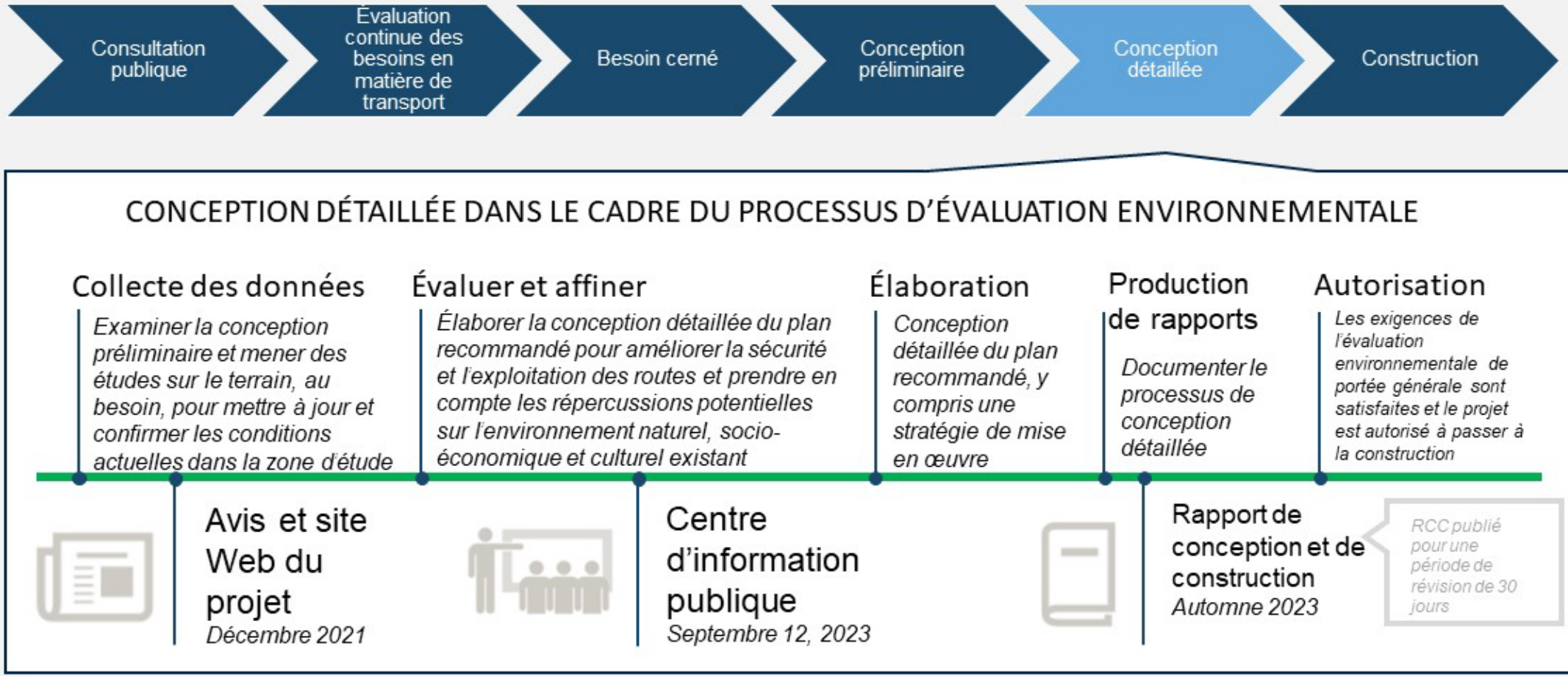
Le ministère des Transports a lancé cette étude de conception détaillée et d’évaluation environnementale de portée générale en octobre 2021. L’avis de début d’étude a été publié en décembre 2021, et le MTO a alors créé le site Web du projet (http://www.highway138roundabout.ca) pour renseigner le public et recevoir des commentaires.

L’objectif de cette EE de portée générale est d’élaborer un plan recommandé pour le carrefour giratoire et de préparer les documents contractuels pour faciliter la construction. Une fois cette étape terminée, un rapport de conception et de construction (RCC) sera préparé et comprendra :

- une description sommaire du projet (c’est-à-dire le carrefour giratoire proposé);
- un aperçu du processus d’EE de portée générale a suivi;
- une description du plan recommandé;
- un résumé de la consultation des parties prenantes et du public;
- une description détaillée des effets environnementaux prévus et des mesures d’atténuation recommandées à intégrer dans les documents contractuels.

Le RCC sera placé dans le dossier public pour une période minimale de commentaires de 30 jours civils afin de donner aux parties prenantes la possibilité d’examiner et de commenter le document. La fin de la période de commentaires de 30 jours est prévue en automne 2023, après quoi le projet pourra passer à la construction.

Processus d’évaluation environnementale de portée générale



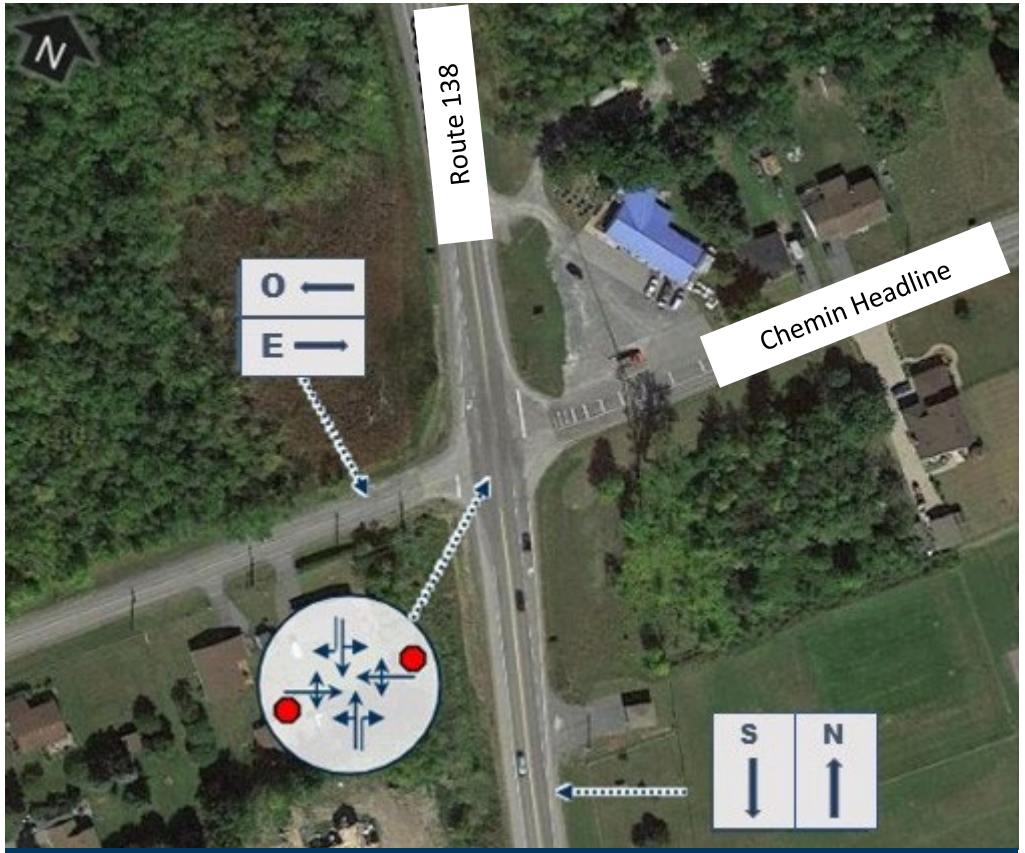
Configuration actuelle de la route

Route 138

- La route 138 est une route provinciale qui relie l'autoroute 417 au nord à l'autoroute 401 au sud.
- Elle est actuellement exploitée comme une route à deux voies (une voie par direction) avec une limite de vitesse de 70 km/h. La limite de vitesse réglementaire affichée passe à 80 km/h, à environ 100 m au nord de l'intersection de la route 138 et du chemin Headline.
- Le modèle de circulation dans ce tronçon de la route 138 est de type « navetteurs intermédiaires » où les véhicules lourds représentent environ 8 % de la circulation totale.

Chemin Headline

- Le chemin Headline est une route collectrice de banlieue à deux voies (une voie par direction) dont la vitesse est limitée à 50 km/h.
- Actuellement, le chemin Headline est contrôlé par un arrêt à la route 138.
- Une restriction pour les camions est en vigueur sur le tronçon ouest du chemin Headline. La proportion de véhicules lourds sur le chemin Headline est d'environ 9 % du trafic total.



Configurations actuelles des voies de la route 138 et du chemin Headline

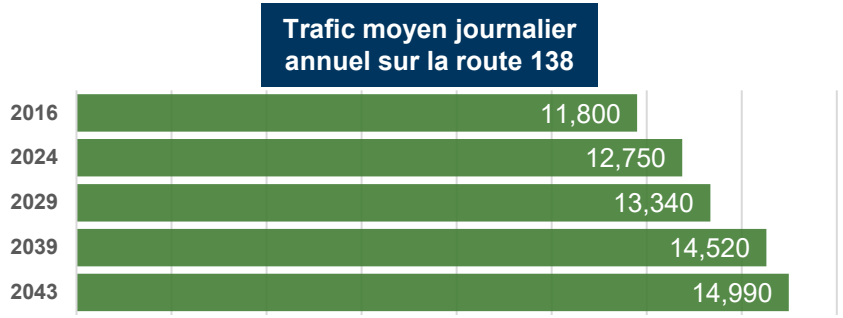
Conditions de circulation actuelles

Route 138

- Le trafic moyen journalier annuel (TMJA) de 2016 est de 11 800 véhicules.
- Le volume horaire de pointe de 2019 est de 595 véhicules en direction du nord à l'heure de pointe de l'après-midi (de 16 h 30 à 17 h 30).
- Elle fonctionne au niveau de service D pendant les périodes de pointe.

Chemin Headline

- Le volume horaire de pointe de 2019 est de 205 véhicules en direction de l'ouest à l'heure de pointe de l'après-midi (de 16 h 30 à 17 h 30).



Volume de trafic (véhicules par heure) de 8 à 9 heures, heure de pointe du matin (de 16 h 30 à 17 h 30, heure de pointe du soir)

Volumes de trafic actuels sur la route 138 et sur le chemin Headline

Conditions actuelles des intersections

Route 138

- La route 138 est un chemin rural nord-sud sans division, à deux voies et dont la limite de vitesse réglementaire affichée est de 70 km/h. La limite de vitesse réglementaire affichée passe à 80 km/h, à environ 100 m au nord de l'intersection.

Chemin Headline

- Le chemin Headline est classé comme une route collectrice de banlieue non divisée, avec une section transversale à deux voies et une limite de vitesse réglementaire affichée de 50 km/h du côté est et de 60 km/h du côté ouest. Actuellement, le chemin Headline est contrôlé par un arrêt à la route 138. Des restrictions pour les camions sont en vigueur sur le tronçon ouest du chemin Headline, ce qui interdit tout accès aux camions.

Route 138 à l'intersection du chemin Headline

- L'intersection fonctionne actuellement en double sens pour le chemin Headline, avec des voies réservées aux virages à droite sur les approches nord et sud.

Intersection de la route 138 et du chemin Headline

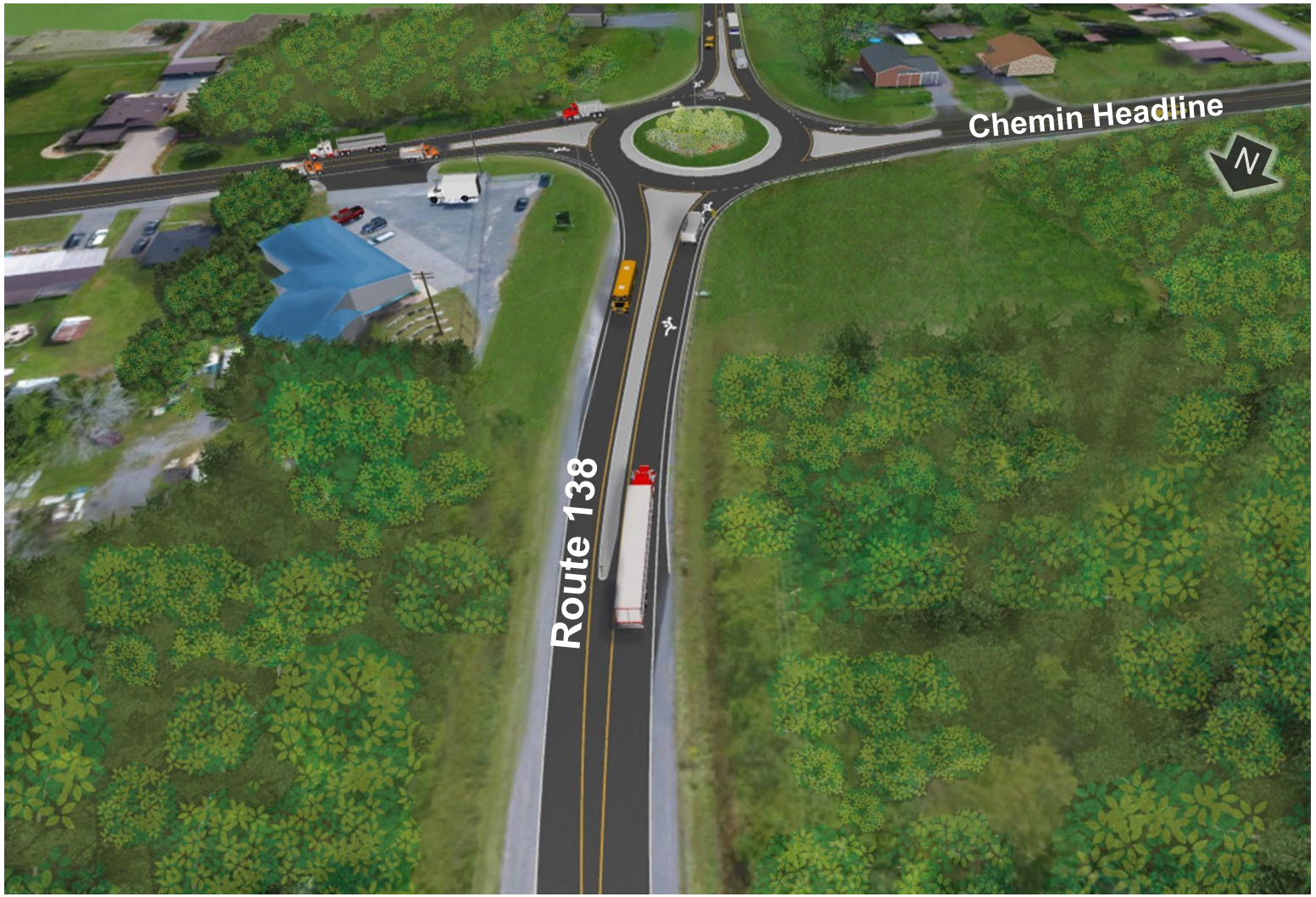
Configuration actuelle

Intersection de la route 138 et du chemin Headline

Configuration proposée

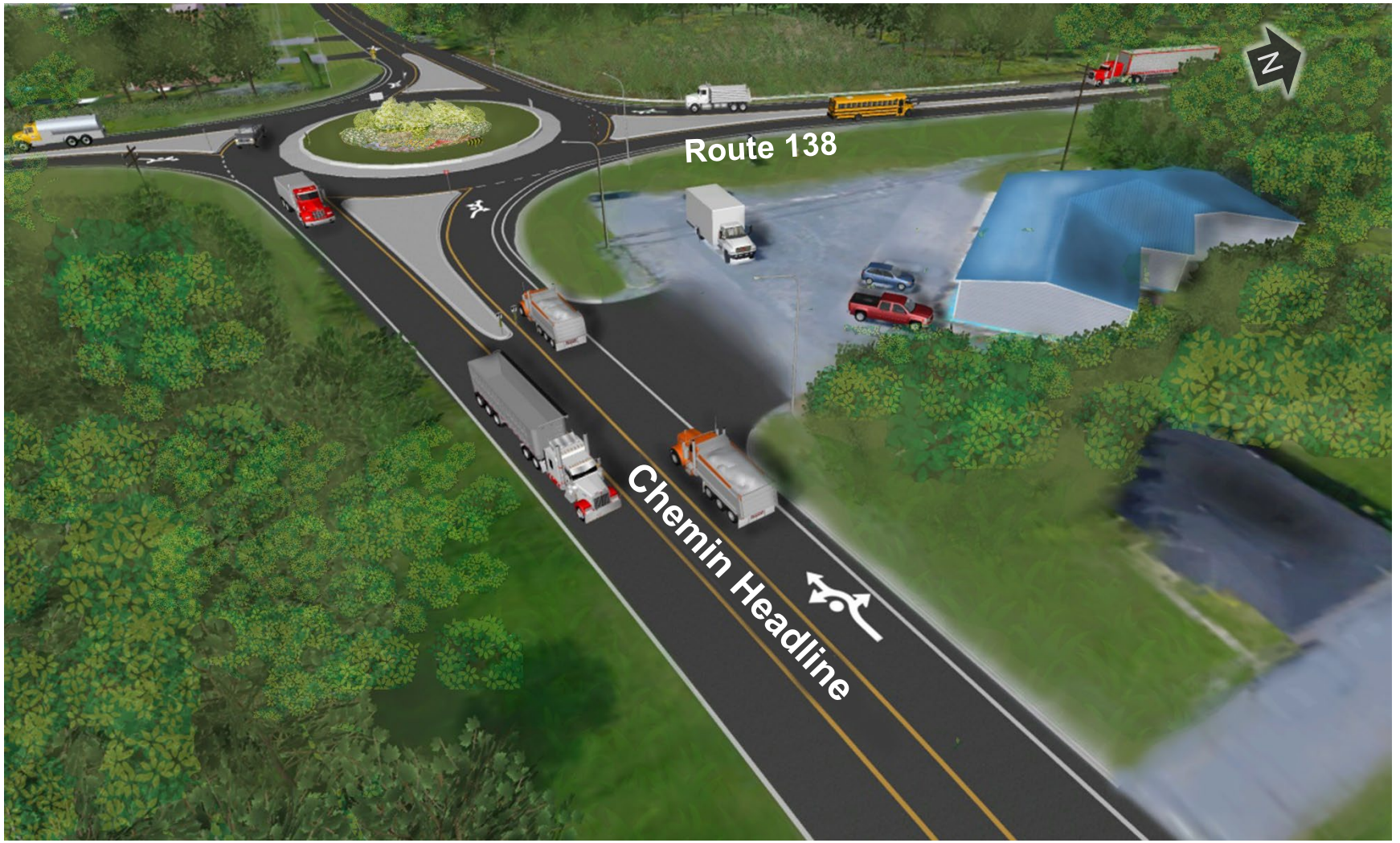
Intersection de la route 138 et du chemin Headline

Configuration proposée



Intersection de la route 138 et du chemin Headline

Configuration proposée



Contexte historique

- La zone d'étude du projet est située dans le territoire traditionnel des Mohawks d'Akwesasne et se trouve dans les limites des traités du Haut-Canada.
- La zone d'étude du projet est située à environ 5,5 km au nord-est du fleuve Saint-Laurent et contient des affluents de la rivière Raisin et de la rivière Raisin Sud ainsi que des zones marécageuses, et présente également des zones discrètes de topographie élevée.
- Cette région de ce que l'on appelle aujourd'hui l'Ontario a une longue histoire d'occupation et d'utilisation par l'homme, qui date de plus de 10 000 ans. Cette zone générale a été utilisée par les peuples autochtones pour pratiquer leurs activités traditionnelles dans le passé, et l'est encore aujourd'hui.

Protection et gestion de l’environnement

Les facteurs environnementaux ont été évalués au cours de l’étude de conception préliminaire afin de déterminer les conditions existantes ainsi que les mesures d’atténuation pour réduire au minimum et/ou traiter les impacts potentiels associés aux travaux proposés à l’intersection de la route 138 et du chemin Headline. Des travaux supplémentaires sur le terrain ont été effectués pour mettre à jour l’information, cibler les modifications apportées aux exigences réglementaires et affiner les mesures d’atténuation en fonction du plan recommandé pour le carrefour giratoire**(voir la diapositive suivante**).

Les documents contractuels comprendront une gestion générale de l’environnement (p. ex., les meilleures pratiques de gestion prescrites pour la construction) et des dispositions particulières visant à protéger le milieu environnant et à atténuer toute répercussion prévue sur la construction :

- Opérations de circulation
- Propriété privée
- Bruit et qualité de l’air
- Ressources en eau souterraine et de surface
- Végétation et habitat de la faune
- Contrôle de l’érosion et des sédiments
- Ressources archéologiques
- Gestion du matériel excédentaire

Survol des études sur l'environnement

Au cours de l'étude de conception détaillée et de l'EE de portée générale, diverses enquêtes (ou études) sur le terrain ont été réalisées afin de recueillir des renseignements environnementaux et techniques de base :

- Confirmer, améliorer et documenter les conditions naturelles, sociales, économiques, culturelles et techniques existantes (de référence) dans la zone d'étude;
- Confirmer les impacts anticipés (ou prédits) du projet;
- Élaborer des mesures applicables de protection et d'atténuation de l'environnement pour atténuer ou réduire au minimum les répercussions prévues du projet.

Les enquêtes de terrain et les études réalisées dans la zone d'étude sont les suivantes :

- Évaluation géotechnique
- Évaluation des écosystèmes terrestres
- Évaluation de l'utilisation des sols
- Évaluation archéologique de niveau 1
- Évaluation du drainage et de l'hydrologie
- Évaluations environnementales de site de phase 1
- Étude hydrogéologique sommaire

Impacts environnementaux et mesures d’atténuation

Le carrefour giratoire proposé n’entraînera qu’un élargissement minimal de l’empreinte de l’intersection au-delà de la plate-forme routière existante. Les impacts environnementaux prévus et les mesures d’atténuation prescrites comprennent, sans s’y limiter, les éléments suivants :

Répercussion potentielle sur l’environnement	Mesures d’atténuation prescrites
Environnement naturel	
• Impacts potentiels sur la végétation, les espèces en péril (EEP) et l’habitat faunique	• La construction se fera principalement à l’intérieur de l’emprise existante et l’empreinte de la construction a été réduite dans la mesure du possible avec des impacts minimaux sur la végétation et l’habitat faunique • Réduire au minimum l’élimination de la végétation et protéger les arbres et les arbustes qui doivent rester • Remplacer la végétation conformément au plan d’aménagement paysager • Aucune espèce en péril n’a été observée dans la zone d’étude • Mesures standard de contrôle de l’érosion et des sédiments à incorporer dans les documents contractuels — y compris les mesures visant à empêcher le transport hors site des sédiments • Aucun impact sur les poissons ou leur habitat
Environnement socio-économique	
• Achat partiel de quatre (4) propriétés privées (permanent) • Nécessité d’acquérir/de protéger d’autres propriétés pour les zones de travail/de rassemblement (à court ou à long terme)	• Communication et coordination précoces avec le(s) propriétaire(s) et les locataires afin de réduire au minimum les perturbations liées à l’achat de biens immobiliers • Les accords de propriété (tant permanents que temporaires) seront mis en place avant la construction • Toutes les entrées touchées par la construction seront reconstruites
• Répercussions potentielles sur le bruit et la qualité de l’air des équipements et des véhicules de construction	• Respecter le *Township Noise and Nuisance By-law 2016-20* pour les activités quotidiennes, y compris le travail de nuit et de fin de semaine • Mettre en œuvre les meilleures pratiques pour réduire les impacts potentiels sur la qualité de l’air et la poussière — maintenir l’équipement en bon état de fonctionnement et limiter la marche au ralenti au minimum nécessaire pour effectuer le travail

Répercussions environnementales et mesures d’atténuation

Incidence potentielle sur l’environnement	Mesures d’atténuation prescrites
Environnement socio-économique	
• Possibilité de ralentissement de la circulation en raison de la fermeture ou de la réduction de routes ou de voies, et de déviations pendant la construction	• Les retards dans la circulation ont été réduits au minimum dans la mesure du possible • Fournir un préavis (notamment par la signalisation routière) et en réduire la durée au minimum • Prévenir les résidents locaux, les fournisseurs de services d’urgence (pompiers, police et ambulance), le canton et le comté ainsi que les conseils scolaires • Un plan de gestion du trafic sera élaboré et mis en œuvre pour réduire au minimum les répercussions sur le trafic • Une communication permanente sera maintenue avant et pendant la construction • Les fermetures de voies seront contrôlées par des signaleurs lorsque des travailleurs seront présents et rétablies à deux voies lorsque les travailleurs ne seront pas présents • L’accès aux propriétés privées sera maintenu tout au long de la construction • Toutes les voies de circulation seront ouvertes au public à la fin de chaque journée
Environnement culturel	
• Répercussions potentielles sur les ressources archéologiques et le patrimoine culturel	• Selon l’évaluation archéologique, il n’y a aucun risque de rencontrer des vestiges archéologiques en raison des perturbations intensives et étendues, et des conditions basses et humides • Selon l’examen du registre du patrimoine du canton, aucune propriété enregistrée n’est touchée
Environnement technique	
• Répercussions potentielles sur les infrastructures et les services publics municipaux, y compris la relocalisation et les interruptions de service temporaires	• Les déplacements nécessaires seront coordonnés avec le fournisseur concerné avant la construction • Les propriétés touchées par les interruptions temporaires de service seront informées à l’avance • Les infrastructures et services publics existants qui resteront en place seront protégés pendant la construction

Étapes et calendrier de la construction

En attendant la disponibilité du financement et la sélection d'un entrepreneur privilégié, le Ministère prévoit de commencer la construction au printemps 2024. Les travaux proposés comprendront :

- des fermetures de voies uniques avec signalisation ou des fermetures à court terme;
- des détours à court terme lors de la construction des approches et du carrefour giratoire;
- une fermeture à long terme du chemin Headline pendant une étape de construction de l'îlot séparateur et des réalignements des routes sur le chemin Headline:
    - Le détour temporaire de la circulation sur le chemin Headline Ouest comprendra la rue Dundas (CR 18/36) et la promenade Power Dam (CR33) du chemin Cornwall Centre,
    - La route 138 demeurera ouverte à la circulation de transit,
    - Le détour devrait être en place pendant environ 4 semaines.

Détours


Route 18
Route 36
Chemin Headline
Nouveau carrefour giratoire à l'intersection
Promenade Power Dam
Centre-ville de Cornwall
Route 138
Chemin Cornwall Centre
Autoroute 401


Le tronçon ouest du chemin Headline a été fermé de la route 138 pendant environ 4 semaines.

Étapes et calendrier de la construction

Dans le cadre des travaux du projet, le tronçon de la route 138 entre le chemin Cornwall Centre et le chemin de comté 43 à Monkland sera réhabilité. En général, les travaux comprendront les éléments suivants :

- Réhabilitation de la chaussée, y compris la réhabilitation de l'accotement existant entièrement pavé;
- Amélioration du drainage, y compris le remplacement des ponceaux;
- Reconstruction du trottoir au chemin de comté 18;
- Dégagement pour améliorer la ligne de visibilité des intersections.

Ces travaux seront combinés avec le carrefour giratoire dans le cadre d'un seul contrat de construction.

Prochaines étapes

Après la tenue de la présente séance d'information publique en ligne, les prochaines étapes seront les suivantes :

- examiner les commentaires reçus et y répondre;
- affiner la conception détaillée et le plan d'atténuation;
- préparer le rapport de conception et de construction (RCC) pour l'examen public;
- achever la conception détaillée et préparer le dossier contractuel;
- présenter les documents contractuels pour l'appel d'offres;
- sélectionner l'entrepreneur privilégié et amorcer la construction.

Merci d'avoir participé à la séance d'information publique en ligne.

Vos commentaires sont les bienvenus. L'information est recueillie conformément à la *Loi sur l'accès à l'information et la protection de la vie privée*. Tous les commentaires, à l'exception des renseignements personnels, feront partie du dossier public.

Si vous avez des exigences en matière d'accessibilité afin de participer à ce projet ou si vous souhaitez obtenir de plus amples renseignements, veuillez contacter :

M. Brad Hewton, ing.
Expert-conseil et gestionnaire de projet
Morrison Hershfield
200-2932 Baseline Road
Ottawa(Ontario) K2H 1B1
Téléphone : 613 739-2910, poste 1022292
Courriel : BHewton@morrisonhershfield.com

M. Dan Brandao, ing.
Ingénieur principal de projet
Ministère des Transports
1355, John Counter Boulevard, C. P. 4000
Kingston(Ontario) K7L 5A3
Téléphone 613 449-7916
Courriel : Dan.Brandao@ontario.ca

Nous vous encourageons à soumettre toute question ou tout commentaire aux personnes-ressources indiquées ci-dessus ou dans la section « **Personnes ressources** » du site Web du projet (**http://www.highway138roundabout.ca**) avant le 26 septembre 2023.

APPENDIX B: **PROJECT CONTACT LIST**

Agency	Title	Contact_Name	Address	City_PR_PC	Email
PROVINCIAL AGENCIES					
Ontario Progressive Conservative Party	MPP, Stormont-Dundas-South Glengarry	Nolan Quinn	Constituency Office Time Square 120 Second St. West	Cornwall, ON K6J 1G5	Nolan.Quinn@pc.ola.org
Ministry of the Environment, Conservation and Parks	Cornwall Area Office				eanotification.eregion@ontario.ca
Ministry of the Environment, Conservation and Parks	Environmental Assessment Coordinator	Mr. Jon Orpana	1259 Gardiners Road, Unit 3	Kingston, ON K7P 3J6	jon.orpana@ontario.ca
Ministry of the Environment, Conservation and Parks	Supervisor	Mr. Michael Seguin	1st Floor, 113 Amelia Street	Cornwall, ON K6H 3P1	michael.seguin@ontario.ca
Ministry of the Environment, Conservation and Parks	Senior Environmental Officer	Ms. Lisa Chalmers	1st Floor, 113 Amelia Street	Cornwall, ON K6H 3P1	lisa.g.chalmers@ontario.ca
Ministry of Northern Development, Mines, Natural Resources and Forestry	District Manager (Acting)	Mr. John Almond	Unit 1, 10 Campus Drive	Kemptville, ON K0G 1J0	john.almond@ontario.ca
Ministry of Northern Development, Mines, Natural Resources and Forestry	District Business Coordinator	Ms. Kim Beach	Unit 1, 10 Campus Drive	Kemptville, ON K0G 1J0	kim.beach@ontario.ca
Ministry of Agriculture, Food and Rural Affairs	Policy Advisor (Land Use)	Mr. John O'Neill	P.O. Box 2004 Provincial Government Building 1st Floor, 59 Ministry Road	Kemptville, ON K0G 1J0	john.o'neill@ontario.ca
Ministry of Indigenous Affairs	Senior Policy Advisor, Indigenous Affairs	Ms. Karthi Gobinath	Suite 400, 160 Bloor Street East	Toronto, ON M7A 2E6	karthi.gobinath@ontario.ca
Ministry of Citizenship and Multiculturalism	Team Lead	Ms. Karla Barboza	400 University Ave	Toronto, ON M7A 1T7	karla.barboza@ontario.ca
Ministry of Citizenship and Multiculturalism	Heritage Planner	Mr. Joseph Harvey	400 University Ave	Toronto, ON M7A 1T7	joseph.harvey@ontario.ca
Ontario Provincial Police - Stormont, Dundas and Glengarry Detachment	Detachment Commander	Marc Hemmerick	P.O. Box 430 4 Mille Roches Road	Long Sault, ON K0C 1P0	OPP.Stormont.Dundas.Glengarry@opp.ca
REGIONAL AGENCIES					
United Counties of Stormont, Dundas and Glengarry	Director of Planning Services	Mr. Peter Young	26 Pitt Street	Cornwall, ON K6J 2P3	pyoung@sdgcounties.ca
United Counties of Stormont, Dundas and Glengarry	Director of Corporate Services/Clerk	Ms. Kimberley Casselman	26 Pitt Street	Cornwall, ON K6J 2P4	info@sdgcounties.ca

United Counties of Stormont, Dundas and Glengarry	Manager of Economic Development	Ms. Tara Kirkpatrick	26 Pitt Street	Cornwall, ON K6J 2P5	info@sdgcounties.ca
United Counties of Stormont, Dundas and Glengarry	Director of Transportation	Mr. Benjamin de Haan	26 Pitt Street	Cornwall, ON K6J 2P6	info@sdgcounties.ca
City of Cornwall	Transportation Engineer	Mr. Enrique Kamm	1225 Ontario Street, Box 877	Cornwall, ON K6H 5T9	ekamm@cornwall.ca
City of Cornwall	Division Manager, Planning	Ms. Mary Joyce-Smith	100 Water Street East, Box 877	Cornwall, ON K6H 5T9	msmith@cornwall.ca
City of Cornwall	Cornwall-Stormont, Dundas and Glengarry Paramedic Services' Chief	Mr. Bill Lister	360 Pitt Street	Cornwall, ON K6H 5T9	blister@cornwall.ca
City of Cornwall	Fire Chief	Mr. Jeff Weber	10 Fourth Street West, Box 877	Cornwall, ON K6H 5T9	jweber@cornwall.ca
City of Cornwall	General Manager, Infrastructure & Municipal Works	Mr. Bill de Wit	1225 Ontario Street, Box 877	Cornwall, ON K6H 5T9	bdewit@cornwall.ca
City of Cornwall	Supervisor, Roads	Mr. Kevin Duschene	1225 Ontario Street, Box 877	Cornwall, ON K6H 5T9	kduschene@cornwall.ca
City of Cornwall	Manager, Infrastructure Planning	Mr. Michael Fawthrop	1225 Ontario Street, Box 877	Cornwall, ON K6H 5T9	mfawthrop@cornwall.ca
City of Cornwall	Supervisor, Water Distribution and Wastewater Collection	Mr. Shawn O'Brien	1225 Ontario Street, Box 877	Cornwall, ON K6H 5T9	sobrien@cornwall.ca
Upper Canada District School Board	Director of Education	Mr. Ron Ferguson	225 Central Avenue West	Brockville, ON K6V 5X1	ron.ferguson@ucdsb.on.ca
Catholic District School Board of Eastern Ontario	Director of Education	Mr. John Cameron	2755 Highway 43	Kemptville, ON K0G 1J0	director@cdsbeo.on.ca
Conseil scolaire de district catholique de l'Est ontarien	Directeur de l'éducation et secrétaire-trésorier du Conseil	Mr. François Turpin	875, chemin de comté 17	L'Orignal, ON K0B 1K0	courriel@csdceo.org
Conseil des écoles publiques de l'Est de l'Ontario	Directeur de l'éducation et secrétaire-trésorier du Conseil	Ms. Ann Mahoney	2445 St. Laurent Blvd.	Ottawa, ON K1G 4J8	ann.mahoney@cepeo.on.ca

Consortium de transport scolaire de l'Est	Route Planner - Cornwall Area	Ms. Steffany Demers	665 Main Street	Casselman, ON K0A 1M0	s.demers@CTSE.ca p.lanthier@ctse.ca
Student Transportation of Eastern Ontario	Operations Manager	Mr. Marc Gosset	104 Commerce Drive, P.O. Box 1179	Prescott, Ontario K0E 1T0	Marc.Gosset@STEO.ca
Raisin Region Conservation Authority	Manager, Planning and Regulations	Ms. Kim MacDonald	18045 County Road 2 P.O. Box 429	Cornwall ON K6H 5T2	info@rrca.on.ca
LOCAL AGENCIES					
Township of South Stormont	Director of Public Works	Mr. Ross Gellately	2 Mille Roches Road PO Box 84	Long Sault, ON K0C 1P0	ross@southstormont.ca
Township of South Stormont	Director of Planning and Building	Mr. Karl Doyle	2 Mille Roches Road PO Box 84	Long Sault, ON K0C 1P0	karl@southstormont.ca
Township of South Stormont	Fire Chief	Mr. Gilles Crepeau	2 Mille Roches Road PO Box 84	Long Sault, ON K0C 1P0	gilles@southstormont.ca
Township of South Stormont	Chief Administrative Officer	Ms. Debi Lucas Switzer	2 Mille Roches Road PO Box 84	Long Sault, ON K0C 1P0	debi@southstormont.ca
Township of South Stormont	Economic Development / Communications Coordinator	Mr. Chris Hemond	2 Mille Roches Road PO Box 84	Long Sault, ON K0C 1P0	chris@southstormont.ca
Township of South Stormont	Drain Superintendent	Mr. Kris St. Thomas	2 Mille Roches Road PO Box 84	Long Sault, ON K0C 1P0	kris@southstormont.ca
Township of South Stormont	Director of Corporate Services/Clerk	Ms. Loriann Harbers	2 Mille Roches Road PO Box 84	Long Sault, ON K0C 1P0	loriann@southstormont.ca
FIRST NATIONS					
Mohawks of Akwesasne	Chief	Abram Benedict	CIA III 101 Tewesateni Rd., Kawehno:ke	Akwesasne, ON K6H 5R7	grand.chief@akwesasne.ca
Mohawks of Akwesasne	Consultation Coordinator	Abraham Francis	CIA III 101 Tewesateni Rd., Kawehno:ke	Akwesasne, ON K6H 5R7	abraham.francis@akwesasne.ca
Métis Nation of Ontario		Consultation Unit	Suite 1100 - 66 Slater Street	Ottawa, ON K1P 5H1	consultations@metisnation.org
UTILITIES					
Bell Canada	Manager - Right-of-Way	Mr. Michael Loucks	Floor 2, 140 Bayfield Street	Barrie, ON L4M 3B1	

Canadian National Railway	Manager, Public Works - Design and Construction		1 Administration Road	Concord, ON L4K 1B9	ER-Public-Works@cn.ca
Canadian Pacific Railway	Director, Project and Public Works	Mr. Tom Twigge-Molecey	Suite 700, 1290 Central Parkway	Mississauga, ON L5C 4R3	
Hydro One Networks Inc.	Director, Facilities and Real Estate	Mr. John Boldt	P.O. Box 5700	Markham, ON L3R 1C8	RE@HydroOne.com
BUSINESSES / INTEREST GROUPS					
Ontario Federation of Agriculture	General Manager	Ms. Cathy Lennon	200 Hanlon Creek Boulevard	Guelph, ON N1C 0A1	cathy.lennon@ofa.on.ca
Cornwall and Area Chamber of Commerce	President	Ms. Shannon LeBrun	113 Second Street East, Suite 100	Cornwall, ON K6J 1Y5	info@cornwallchamber.com
South Stormont Chamber of Commerce	President	Ms. Carol Delorme	25 Thorold Lane	Ingleside, ON K0C 1M0	farranfootwear@gmail.com
Upper Canada Snowmobile Region	President	Mr. Peter Asquini			info@ucsr.ca
Ontario Federation of Snowmobile Clubs	District 1 Administrator	Mr. John Boals	P.O. Box 1432	Morrisburg,ON K0C 1X0	info@district1ofsc.ca
Funeral Friends	Owner	Mr. Marc LeClair	5511 Highway 138	Cornwall, ON K0C 1P0	funeralfriends@trondata.net
École élémentaire catholique Sainte-Lucie	Direction adjointe	Mr. Ron Cheffer	17337 Dow Street	Long Sault, ON K0C 1P0	sainte-lucie@csdceo.org
St. Andrews Catholic Church		Sir / Madam	17298 County Road 18	St. Andrews, ON K0C 2A0	
Roxborough Bus Lines Ltd.	President	Mr. Nick McRae	16935 County Road 43	Avonmore, ON K0C 1C0	info@roxboroughbus.com
Cornwall Township Historical Society				St. Andrews, ON K0C 2A0	info@cornwalltwphistorical.ca
St. Andrews Parish	Reverend	Mr. Daniel Van Delst	17298 County Road 18	St. Andrews, ON K0C 2A0	dan@vandelst.ca
Megabus	Manager / Supervisor	Sir / Madam	Unit 101, 2015 Fisher Drive, P.O. Box 4017	Peterborough, ON K9J 7B1	customerservice@megabus.com
Cornwall Gravel Company Ltd.	General Manager	Mr. Fraser Ouderkirk	390 11th Street West	Cornwall, ON K6J 3B2	dispatch@cornwallgravel.ca
Kenny U Pull - Cornwall	Regional Manager	Mr. Darin O'Shaughnessy	17703 Headline Road	Long Sault, ON K0C 1P0	doshaughnessy@kennyupull.com

AIM Recycling Cornwall			17703 Headline Road	Long Sault, ON K0C 1P0	info@aim-recycling.com
General Truck Repair	President	Mr. Neil Morrison	17645 Headline Road	Long Sault, ON K0C 1P0	neil@generaltruckrepair.ca
R.C. Holdings	Business Owner	Mr. Trevor Macdonald	17631 Headline Road	Long Sault, ON K0C 1P0	safety@rcholdings.ca
Laurencrest Youth Services		Owner / Manager	510 Mercier Avenue	Cornwall, ON K6K 1K2	
Stephen Fitzgerald Motors		Owner / Manager	5770 Highway 138	Cornwall, ON K6K 1R8	
Irving 24 & Mainway Centre		Owner / Manager	3250 Brookdale Avenue	Cornwall, ON K6J 5R9	
City Limits Bar & Grill		Owner / Manager	17369 Cornwall Centre Road	Cornwall, ON K6H 5R6	
Mitchell's Variety Store		Owner / Manager	3034 Pitt Street	Cornwall, ON K6K 1A8	
Mamawoof & Friends & Ses Amis		Owner / Manager	5760 Highway 138	Cornwall, ON K6K 1S4	
Bob's Cycle Cornwall		Owner / Manager	5614 Highway 138	Cornwall, ON K6K 1S4	
Johnson's Antiques		Owner / Manager	5610 St. Andrews Road	Cornwall, ON K0C 1P0	
St. Andrews West Post Office		Owner / Manager	5185 Highway 138	Cornwall, ON K0C 1S0	
Quinn's Inn		Owner / Manager	17329 Kings Road	St. Andrews, ON K0C 2A0	
C & S Custom Fabrications & Repair		Owner / Manager	4 Carleton Street	Cornwall, ON K6H 4Y2	
Ryder Truck Maintenance Shop		Owner / Manager	5225 Highway 138	St. Andrews, ON K0C 2A0	
C & NS Custom		Owner / Manager	17304 Highway 138	St. Andrews, ON K0C 2A0	
Crawford Mobile Truck Repair		Owner / Manager	5185 Highway 138	St. Andrews, ON K0C 2A0	
K4 Dog Training Academy and Daycare		Owner / Manager	17326 Wheeler Road	St. Andrews, ON K0C 2A0	
Habitat for Humanity Seaway Valley		Owner / Manager	17335 Myers Road	St. Andrews, ON K0C 2A0	
Amell AMS Auto		Owner / Manager	17370 Amel and Renald George Road	St. Andrews, ON K0C 2A0	
Celtic Horses Studio		Owner / Manager	17449 McDonald Road	Avonmore, ON K0C 1C0	
Alliance Bridal / Glitz & Glamour Prom Shop		Owner / Manager	17285 McLean Road	Moose Creek, ON K0C 1W0	
GFL Environmental Inc. (Moose Creek)		Owner / Manager	17335 Allaire Road	Moose Creek, ON K0C 1W1	

Eco Tire Recovery		Owner / Manager	17354 Allaire Road	Moose Creek, ON K0C 1W2	
Robertson Lawn & Garden Equipment		Owner / Manager	17146 Speer Road	South Stormont, ON K0C 1P0	
MacEwan Gas Bar		Owner / Manager	5756 Highway 138	Cornwall, ON K6K 1R8	
Bolton's TV Sales and Services		Owner / Manager	5765 Highway 138	Cornwall, ON K6K 1R9	
Neo Vintage Furniture Inc.		Owner / Manager	17305 Cornwall Centre Road	Cornwall, ON K6K 1K5	
Cornwall Gravel Company Ltd.		Owner / Manager	390 Eleventh Street West	Cornwall, ON K6J 3B2	
Gregory V. Malyon		Owner / Manager	17885 South Branch Road	Cornwall, ON K6H 5R6	
Warren Paving & Materials Group Ltd.		Owner / Manager	6509 Airport Road	Mississauga, ON L4V 1S7	
A.L. Blair Construction Ltd.		Owner / Manager	7 Labrosse Street	Moose Creek, ON K0C 1W0	

APPENDIX C: **PROJECT CORRESPONDENCE**

Notice of Study Commencement - Detail Design and Class Environmental Assessment Study for Highway 138 Intersection Improvements at Headline Road Township of South Stormont, United Counties of Stormont, Dundas and Glengarry G.W.P. 4004-21-00 | W.P. 4043-21-01

CONTACT INFORMATION FORM

PLEASE RETURN BY FAX/MAIL/EMAIL BY JANUARY 28, 2022 TO:

Zach Hupman, MES
Environmental Planner
Morrison Hershfield
200-2932 Baseline Road
Ottawa, ON K2H 1B1
Phone: 613-739-2910 x1022287
Email: ZHupman@morrisonhershfield.com

1) Please indicate whether you have an interest in the project and if you would like to continue to receive project notifications?

Yes ☑ No ☐

If no, you will be removed from the Project Contact List and will receive no further notifications regarding this project.

2) If yes, please provide a contact person and their contact information (if different from original notice):

Name: [redacted]
Mailing Address:
Phone:
Fax:
Email:

3) In the space below, please provide any comments you may have regarding the study.

Notice of Study Commencement - Detail Design and Class Environmental Assessment Study for Highway 138 Intersection Improvements at Headline Road Township of South Stormont, United Counties of Stormont, Dundas and Glengarry G.W.P. 4004-21-00 | W.P. 4043-21-01

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Yes ☑ No ☐

If no, you will be removed from the Project Contact List and will receive no further notifications regarding this project.

2) If yes, please provide a contact person and their contact information (if different from original notice):

Name: [redacted]
Mailing Address:
Phone:
Fax:
Email:

3) In the space below, please provide any comments you may have regarding the study.

- I know the roundabout is coming but this all could have been done with huge yellow curbing and turn only signs in curbing to force any and all traffic trying to pass on the right hand side, in both directions, when those on #138 are trying to turn on to Headline or Cnt Rd #44. This is where and how "all" the accidents happen
- Reduce speed from St. Andrews West to Cornwall Centre Rd to 60 Km per hr.

Thanks

Notice of Study Commencement - Detail Design and Class Environmental Assessment Study for Highway 138 Intersection Improvements at Headline Road Township of South Stormont, United Counties of Stormont, Dundas and Glengarry G.W.P. 4004-21-00 | W.P. 4043-21-01

CONTACT INFORMATION FORM

PLEASE RETURN BY MAIL OR EMAIL BY JANUARY 28, 2022 TO:

Zach Hupman, MES
Environmental Planner
Morrison Hershfield
200-2932 Baseline Road
Ottawa, ON K2H 1B1
Phone: 613-739-2910 x1022287
Email: ZHupman@morrisonhershfield.com

1) Please indicate whether you have an interest in the project and if you would like to continue to receive project notifications?

Yes ☒ No ☐

If no, you will be removed from the Project Contact List and will receive no further notifications regarding this project.

2) If yes, please provide a contact person and their contact information (if different from original notice):

Name:

Mailing Address: Same as original Notice

Phone:

Fax:

Email:

3) In the space below, please provide any comments you may have regarding the study.

#1 Will We Receive Notice when Projects starts

#2 We have a business would like to know how our customers will access the business when the Project starts

#3 AM I going to have the same width of Entrance to my Business you Funeral FRIENDS

#4 How long do ~~is~~ Feel We will be affected by this project at this corner Headline + Hwy 138

#5 Is the project starting 2022 Spring?

Notice of Study Commencement - Detail Design and Class Environmental Assessment Study for Highway 138 Intersection Improvements at Headline Road Township of South Stormont, United Counties of Stormont, Dundas and Glengarry G.W.P. 4004-21-00 | W.P. 4043-21-01

CONTACT INFORMATION FORM

PLEASE RETURN BY MAIL OR EMAIL BY JANUARY 28, 2022 TO:

Zach Hupman, MES
Environmental Planner
Morrison Hershfield
200-2932 Baseline Road
Ottawa, ON K2H 1B1
Phone: 613-739-2910 x1022287
Email: ZHupman@morrisonhershfield.com

1) Please indicate whether you have an interest in the project and if you would like to continue to receive project notifications?

Yes ☒ No ☐

If no, you will be removed from the Project Contact List and will receive no further notifications regarding this project.

2) If yes, please provide a contact person and their contact information (if different from original notice):

Name: [redacted]
Mailing Address: [redacted]
Phone: [redacted]
Fax: [redacted]
Email: [redacted]

3) In the space below, please provide any comments you may have regarding the study.

St Andrew Parish supports the project but wants to know if an how it impacts parish property adjoining the project area.

Ministry of Heritage, Sport, Tourism, and Culture Industries

Archaeology Program Unit
Programs and Services Branch
Heritage, Tourism and Culture Division
5th Floor, 400 University Ave.
Toronto ON M7A 2R9
Tel.: (416) 414-7787
Email: Jessica.Marr@ontario.ca

Ministère des Industries du patrimoine, du sport, du tourisme et de la culture

Unité des programme d'archéologie
Direction des programmes et des services
Division du patrimoine, du tourisme et de la culture
5e étage, 400 ave. University
Toronto ON M7A 2R9
Tél. : (416) 414-7787
Email: Jessica.Marr@ontario.ca

Ontario

Apr 20, 2022

Andrew Murray (P035)
A. M. Archaeological Associates
88 Marchmount Toronto ON M6G 2B1

RE: Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, "The Stage 1 Archaeological Assessment for the Highway 138 Roundabout, Township of Cornwall, United Counties of Stormont, Dundas and Glengarry (Part Lots 10 &11, Con. 4 and Part Lots 12 and 13, Con. 5, Geographic Township of Cornwall, United Counties of Stormont, Dundas and Glengarry)", Dated Apr 4, 2022, Filed with MHSTCI Toronto Office on N/A, MHSTCI Project Information Form Number P035-0362-2021, MHSTCI File Number 0015645

Dear Mr. Murray:

The above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18, has been entered into the Ontario Public Register of Archaeological Reports without technical review.[1]

Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Should you require further information, please do not hesitate to send your inquiry to Archaeology@Ontario.ca

cc. Archaeology Licensing Officer
Andrew Ritchie,Morrison Hershfield Limited
Dan Brandao,Ministry of Transportation

1*In no way will the ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.*

Christine Darson

Subject: FW: Comments - Highway 138 / Headline Road Roundabout - Public Information Centre

From: Benjamin De Haan <bdehaan@sdgcounties.ca>
Sent: Thursday, September 14, 2023 3:42 PM
To: Brandao, Dan (MTO) <Dan.Brandao@ontario.ca>; Brad Hewton <BHewton@morrisonhershfield.com>
Cc: Maureen Adams <madams@sdgcounties.ca>; mohammed@southstormont.ca
Subject: Comments - Highway 138 / Headline Road Roundabout - Public Information Centre

Good Afternoon Dan and Brad

Please find attached the County's comments with respect to the above noted PIC

Thanks and have a good day!

Benjamin de Haan P.Eng.
Director of Transportation Services

United Counties of Stormont, Dundas and Glengarry
26 Pitt Street Cornwall, ON K6J 3P2
P: (613) 932-1515 x 208
F: (613) 936-2913
E: bdehaan@sdgcounties.ca
W: www.sdgcounties.ca

Transportation Services
26 Pitt Street, Suite 223, Cornwall, Ontario K6J 3P2
Tel: 613-932-1515 • Fax: 613-936-2913 • Email info@sdgcounties.ca • www.sdgcounties.ca

September 14, 2023 **VIA EMAIL ONLY**

Mr. Dan Brandao, P.Eng
Sr. Project Engineer
Ministry of Transportation Ontario – Eastern Region
1355 John Counter Blvd. PO 4000
Kingston Ontario
K0C 1P0
Dan.Brandao@ontario.ca

Mr. Brad Hewton, P. Eng
Project Manager
Morrison Hershfield
200-2932 Baseline Rd.
Ottawa Ontario
K2H 1B1
BHewton@morrisonhershield.com

Re: Highway 138 Roundabout at Headline Road - Comments for Online Public Information Centre

The United Counties of SDG Department of Transportation Services has reviewed the materials and details provided as part of the online Public Information Centre (http://www.highway138roundabout.ca) . The County is very pleased to see this project move forward and is excited that the Ministry will finally complete these much-needed improvements which will undoubtedly improve the safety and functionality of this intersection.

Our comments on the project, and material provided are as follows:

1) The County does not object to the use of both SDG 18 and SDG 33 (Power Dam Drive) to accommodate the closure / detour of Headline Road west of Highway 138. It is strongly encouraged that signage be erected on Highway 138 north of County Road 18 and Brookdale Ave just south of Cornwall Centre Road to provide sufficient advance notification to drivers approaching the closure and detour.

2) The online material provides no indication if there will be pedestrian infrastructure that would facilitate a protected crossing of Highway 138. The County would strongly encourage the Ministry to consider a protected crossing for cyclists and pedestrians as part of the design. Note, access to the South Stormont recreational trail is located off of Headline Road, just west of Highway 138.

3) The County would appreciate further details on the landscaping plan for the roundabout and what the Ministry will be doing to ensure landscaping will be well-manicured and maintained. County staff would encourage some type of location recognition (e.g. “Welcome to SDG”) be incorporated as part of the landscaping design.

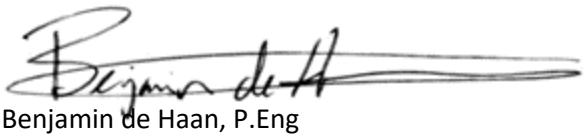
4) County also note that the Ministry intends to complete the paving of Highway 138 from the City of Cornwall to County Road 43 as part of this contract. Although the County supports paving this section of the Highway and implementing the minor intersection improvements at Highway 138/ County Road 18; the County, the City of Cornwall, Mohawks of Akwesasne and local OPP continue to advocate that the Ministry also complete the outstanding intersection improvements identified within the *Highway 138 Transportation Environmental Study Report* prepared by Stantec in June 2017. The intersections that were identified for improvements include: Valade Road, Archambault Road, Wheeler Road,

Meyers/ McPhail Road, Guidon / Cameron Road, Willy Allen Road, Amell & Ranald George Road, Campbell Road, Mcdonald Road and Rombough Road.

5) The County would appreciate the opportunity to comment on the detailed design prior to tendering as the work impacts County infrastructure.

Please feel free to contact me if you have any further questions.

Regards,



Benjamin de Haan, P.Eng
County Engineer

cc: Mohammed Alsharqawi, Director of Public Works, South Stormont (mohammed@southstormont.ca)
Maureen Adams, CAO, United Counties of SDG (madams@sdgcounties.ca)

R:\OFFICE\CoST Roads East\Delegation Briefs\Highway 138\Highway 138 Roundabout EA County Response.docx

Christine Darson

From: Brandao, Dan (MTO) <Dan.Brandao@ontario.ca>
Sent: Friday, October 20, 2023 9:33 AM
To: Benjamin De Haan
Cc: Maureen Adams; mohammed@southstormont.ca; Brad Hewton; Christine Darson; Ellis, Nathan (MTO); Vanderlaan, Frank (MTO); Sleeth, Michael (MTO); Houde, Justin (MTO); Berketo, Paula (MTO); Garlough, Chris (MTO)
Subject: RE: Comments - Highway 138 / Headline Road Roundabout - Public Information Centre
Attachments: Highway 138 Roundabout EA County Response_signed.pdf; 4004-21-00 Contract Drawings.pdf

Good day Benjamin,

I hope this e-mail finds you well.

Thank you for your interest in this study and your comments given on behalf of the United Counties of SDG Department of Transportation Services.

I will address your comments in the same order you sent them as follows:

1) Throughout the construction phase, signage will be strategically placed in highly visible locations to inform approaching vehicles of closures and detours. While the exact locations for the signage are yet to be finalized, we appreciate your comments regarding the United Counties of SDG preferred location and will advise once a decision has been reached.

2) The Ministry reviewed the need for sidewalks and pedestrian crossings at this intersection and due to the lack of pedestrian use it was determined that infrastructure was not required at this location. Cyclists counts also showed minimal use of the intersection and a dedicated cycling facility was not warranted. Cyclists will be able to safely navigate the roundabout in concert with motor vehicles. The geometry of the roundabout and its approaches have been designed to limit fastest paths to no greater than 40 km/h.

3) Please see Sheets 46-48 in the attached 90% contract drawings which show the landscaping plans for the intersection. Consideration was taken to use low maintenance trees and shrubs to minimize maintenance requirements. MTO will be responsible for maintaining the landscape. At this time there are no plans to include any type of location recognition as part of the landscape design as ownership and maintenance of such infrastructure will be the responsibility of MTO.

4) The Ministry appreciates the County of SDG's desire to have the remaining recommended improvements for Highway 138 constructed. The Ministry is actively taking steps to include the delivery of the remaining improvements in our 5-year plan.

5) Please find attached our 90% contract drawings which you can review and comment on. The largest impact to County infrastructure would be the watermain relocation drawings on Sheets 24 and 29-30. I ask that if you plan on providing comments, please do so by November 1, 2023.

The Ministry appreciates your continued engagement and will ensure to keep you updated on any developments related to the project. If you have any further comments or questions, please do not hesitate to contact me directly.

Kind Regards,

Dan Brandao, P.Eng. | Senior Project Engineer
Engineering Program Delivery East | Ministry of Transportation Ontario
1355 John Counter Boulevard, Postal Bag 4000
Kingston, ON K7L 5A3
Tel: 613-449-7916 | **Toll Free:** 1-800-267-0295 ext. 0 | **E-Mail:** dan.brandao@ontario.ca

---

From: Benjamin De Haan <bdehaan@sdgcounties.ca>
Sent: Thursday, September 14, 2023 3:42 PM
To: Brandao, Dan (MTO) <Dan.Brandao@ontario.ca>; Brad Hewton <BHewton@morrisonhershfield.com>
Cc: Maureen Adams <madams@sdgcounties.ca>; mohammed@southstormont.ca
Subject: Comments - Highway 138 / Headline Road Roundabout - Public Information Centre

Good Afternoon Dan and Brad

Please find attached the County's comments with respect to the above noted PIC

Thanks and have a good day!

Benjamin de Haan P.Eng.
Director of Transportation Services

United Counties of Stormont, Dundas and Glengarry
26 Pitt Street Cornwall, ON K6J 3P2
P: (613) 932-1515 x 208
F: (613) 936-2913
E: bdehaan@sdgcounties.ca
W: www.sdgcounties.ca

Christine Darson

From: Nick Crockford
Sent: Friday, September 15, 2023 7:57 AM
To: Christine Darson
Subject: FW: Highway 138 Roundabout - Comment Recieved[redacted]

From: No-Reply <noreply@morrisonhershfield.com>
Sent: Thursday, September 14, 2023 8:35 PM
To: Nick Crockford <NCrockford@morrisonhershfield.com>
Subject: Highway 138 Roundabout - Comment Recieved[redacted]

Name:[redacted]
Address[redacted]
City: Long-Sault
Province: ON
[redacted]
[redacted]
Mailing Preference: Email
Comments:
Hello, I am sending you a quick message to tell you how excited I am to have a roundabout put in place for this corner. More and more this corner has become increasingly dangerous. I often fear turning left from that corner when traffic gets heavy as drivers are continuously going around vehicles in turning lanes.Also if I have to turn left the large transports coming on to Headline have little room to make the turn, it often turns in to frustrating moments for them as they don't want to make the turn unless I go first, which I never do because of traffic trying to go around them. This project can't come soon enough for the safety of all drivers, passengers and residents of this area. It is much needed and long overdue. Thank You[redacted]

Christine Darson

From: Brad Hewton
Sent: Monday, October 23, 2023 1:10 PM
To: [redacted]
Cc: Christine Darson
Subject: RE: Highway 138 Roundabout - Comment Received from [redacted].

Good afternoon [redacted]

Construction is currently anticipated to commence in spring 2024, subject to final utility relocations and property approvals.

Thank you again for your interest in the project.
Brad

From: [redacted]
Sent: Monday, October 23, 2023 10:24 AM
To: Brad Hewton <BHewton@morrisonhershfield.com>
Subject: Re: Highway 138 Roundabout - Comment Received from Phil Legroulx.

Good morning,

Do you think the roundabout will be able to go ahead this spring?

Thank You,

[redacted]

On Oct 19, 2023, at 2:24 PM, Brad Hewton <BHewton@morrisonhershfield.com> wrote:

Hello Mr. [redacted]

Thank you for your interest in this project. We appreciate your comments regarding your experience with turning and traffic at the Highway 138 and Headline Road intersection.
Please feel free to reach out with any additional comments or questions regarding this project.

Sincerely,
Brad

_____
BRAD HEWTON, P.ENG
Manager, Transportation Design Services

bhewton@morrisonhershfield.com

200-2932 Baseline Road | Ottawa, ON K2H 1B1 Canada
Cell: 613 884 6083
morrisonhershfield.com

From: No-Reply <noreply@morrisonhershfield.com>
Sent: Thursday, September 14, 2023 8:35 PM
To: Nick Crockford <NCrockford@morrisonhershfield.com>
Subject: Highway 138 Roundabout - Comment Recieved from [redacted]

Name:[redacted]
Address[redacted]
City: Long-Sault
Province: ON
Postal Code[redacted]
Email[redacted]
Mailing Preference: Email
Comments:
Hello, I am sending you a quick message to tell you how excited I am to have a roundabout put in place for this corner. More and more this corner has become increasingly dangerous. I often fear turning left from that corner when traffic gets heavy as drivers are continuously going around vehicles in turning lanes.Also if I have to turn left the large transports coming on to Headline have little room to make the turn, it often turns in to frustrating moments for them as they don't want to make the turn unless I go first, which I never do because of traffic trying to go around them. This project can't come soon enough for the safety of all drivers, passengers and residents of this area. It is much needed and long overdue.
Thank You[redacted]

Christine Darson

From: Brad Hewton
Sent: Friday, September 15, 2023 9:25 AM
To: Christine Darson
Subject: FW: Notice of Online PIC - Highway 138 Intersection Improvements - GWP 4004-21-00

Follow Up Flag: Follow up
Flag Status: Flagged

From: Barboza, Karla (MCM) <Karla.Barboza@ontario.ca>
Sent: Friday, September 15, 2023 9:22 AM
To: Brad Hewton <BHewton@morrisonhershfield.com>; Brandao, Dan (MTO) <Dan.Brandao@ontario.ca>
Cc: Ellis, Nathan (MTO) <Nathan.Ellis@ontario.ca>; Harvey, Joseph (MCM) <Joseph.Harvey@ontario.ca>
Subject: Notice of Online PIC - Highway 138 Intersection Improvements - GWP 4004-21-00

Hi Brad and Dan,

Hope this email finds you well.

Thanks for sending the Notice of Online Public Information Centre for the above referenced project to the Ministry of Citizenship and Multiculturalism (MCM).

Please note that we had some changes in our office (name of ministry, staff and physical location):

- Please note that, as of October 17, 2022, the responsibility for administration of the *Ontario Heritage Act* and matters related to cultural heritage recently transferred from the Ministry of Tourism, Culture and Sport (MTCS) to the Ministry of Citizenship and Multiculturalism (MCM). Individual staff roles and contact information remain unchanged.
- We are now located at 400 University Ave (vs 401 Bay Street). However, we have been asking proponents to **send only electronic notices and documentation**.
- Could you please update your contact list to include:
  - Karla Barboza, Team Lead - Heritage | Heritage Planning Unit (Citizenship and Multiculturalism) | 416-660-1027 | Karla.Barboza@ontario.ca
  - Joseph Harvey, Heritage Planner | Heritage Planning Unit (Citizenship and Multiculturalism) | 613-242-3743 | Joseph.Harvey@ontario.ca

For future projects, please send the initial notice to me. You may also want to contact the Ministry of the Environment, Conservation and Parks for an updated Government Review Team List at 416-314-8001 or 1-800-461-6290.

I would appreciate if you can send us an electronic copy of the Notice of Online Public Information. The PIC boards also mention that an archaeological assessment was undertaken for this project and that there is no known or potential built heritage resources and cultural heritage landscapes within the study area. Could you please inform us the Project Information Form number of the archaeological assessment as well as the

completed screening checklist Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes with any supporting documentation for our review?

In the meantime, let us know if you have any questions.

Thanks in advance,
Karla

Karla Barboza, RPP, MCIP, CAHP
Team Lead, Heritage | Heritage Planning Unit | **Ministry of Citizenship and Multiculturalism** | 416-660-1027 | karla.barboza@ontario.ca

Clear Form Print Form

Ministry of Tourism, Culture and Sport

Programs & Services Branch
401 Bay Street, Suite 1700
Toronto ON M7A 0A7

Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes

A Checklist for the Non-Specialist

The **purpose of the checklist** is to determine:

- if a property(ies) or project area:
  - is a recognized heritage property
  - may be of cultural heritage value
- it includes all areas that may be impacted by project activities, including – but not limited to:
  - the main project area
  - temporary storage
  - staging and working areas
  - temporary roads and detours

Processes covered under this checklist, such as:

- Planning Act
- Environmental Assessment Act
- Aggregates Resources Act
- Ontario Heritage Act – Standards and Guidelines for Conservation of Provincial Heritage Properties

Cultural Heritage Evaluation Report (CHER)

If you are not sure how to answer one or more of the questions on the checklist, you may want to hire a qualified person(s) (see page 5 for definitions) to undertake a cultural heritage evaluation report (CHER).
The CHER will help you:

- identify, evaluate and protect cultural heritage resources on your property or project area
- reduce potential delays and risks to a project

Other checklists

Please use a separate checklist for your project, if:

- you are seeking a Renewable Energy Approval under Ontario Regulation 359/09 – separate checklist
- your Parent Class EA document has an approved screening criteria (as referenced in Question 1)

Please refer to the Instructions pages for more detailed information and when completing this form.

Project or Property Name

Project or Property Location (upper and lower or single tier municipality)

Proponent Name

Proponent Contact Information

Screening Questions

	Yes	No
1. Is there a pre-approved screening checklist, methodology or process in place?	☐	☐

If Yes, please follow the pre-approved screening checklist, methodology or process.

If No, continue to Question 2.

Part A: Screening for known (or recognized) Cultural Heritage Value

	Yes	No
2. Has the property (or project area) been evaluated before and found **not** to be of cultural heritage value?	☐	☐

If Yes, do **not** complete the rest of the checklist.

The proponent, property owner and/or approval authority will:

- summarize the previous evaluation and
- add this checklist to the project file, with the appropriate documents that demonstrate a cultural heritage evaluation was undertaken

The summary and appropriate documentation may be:

- submitted as part of a report requirement
- maintained by the property owner, proponent or approval authority

If No, continue to Question 3.

	Yes	No
3. Is the property (or project area):		
a. identified, designated or otherwise protected under the Ontario Heritage Act as being of cultural heritage value?	☐	☐
b. a National Historic Site (or part of)?	☐	☐
c. designated under the Heritage Railway Stations Protection Act?	☐	☐
d. designated under the Heritage Lighthouse Protection Act?	☐	☐
e. identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office (FHBRO)?	☐	☐
f. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?	☐	☐

If Yes to any of the above questions, you need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report, if a Statement of Cultural Heritage Value has not previously been prepared or the statement needs to be updated

If a Statement of Cultural Heritage Value has been prepared previously and if alterations or development are proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No, continue to Question 4.

Part B: Screening for Potential Cultural Heritage Value

	Yes	No
4. Does the property (or project area) contain a parcel of land that:		
a. is the subject of a municipal, provincial or federal commemorative or interpretive plaque?	☐	☐
b. has or is adjacent to a known burial site and/or cemetery?	☐	☐
c. is in a Canadian Heritage River watershed?	☐	☐
d. contains buildings or structures that are 40 or more years old?	☐	☐

Part C: Other Considerations

	Yes	No
5. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area):		
a. is considered a landmark in the local community or contains any structures or sites that are important in defining the character of the area?	☐	☐
b. has a special association with a community, person or historical event?	☐	☐
c. contains or is part of a cultural heritage landscape?	☐	☐

If Yes to one or more of the above questions (Part B and C), there is potential for cultural heritage resources on the property or within the project area.
You need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report (CHER)

If the property is determined to be of cultural heritage value and alterations or development is proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No to all of the above questions, there is low potential for built heritage or cultural heritage landscape on the property. The proponent, property owner and/or approval authority will:

- summarize the conclusion
- add this checklist with the appropriate documentation to the project file

The summary and appropriate documentation may be:

- submitted as part of a report requirement e.g. under the Environmental Assessment Act, Planning Act processes
- maintained by the property owner, proponent or approval authority

Instructions

Please have the following available, when requesting information related to the screening questions below:

- a clear map showing the location and boundary of the property or project area
    - large scale and small scale showing nearby township names for context purposes
- the municipal addresses of all properties within the project area
- the lot(s), concession(s), and parcel number(s) of all properties within a project area

For more information, see the Ministry of Tourism, Culture and Sport's Ontario Heritage Toolkit or Standards and Guidelines for Conservation of Provincial Heritage Properties.
In this context, the following definitions apply:

- **qualified person(s)** means individuals – professional engineers, architects, archaeologists, etc. – having relevant, recent experience in the conservation of cultural heritage resources.
- **proponent** means a person, agency, group or organization that carries out or proposes to carry out an undertaking or is the owner or person having charge, management or control of an undertaking.

1. Is there a pre-approved screening checklist, methodology or process in place?

An existing checklist, methodology or process may already be in place for identifying potential cultural heritage resources, including:

- one endorsed by a municipality
- an environmental assessment process e.g. screening checklist for municipal bridges
- one that is approved by the Ministry of Tourism, Culture and Sport (MTCS) under the Ontario government's Standards & Guidelines for Conservation of Provincial Heritage Properties [s.B.2.]

Part A: Screening for known (or recognized) Cultural Heritage Value

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2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?

Respond 'yes' to this question, if all of the following are true:
A property can be considered not to be of cultural heritage value if:

- a Cultural Heritage Evaluation Report (CHER) - or equivalent - has been prepared for the property with the advice of a qualified person and it has been determined not to be of cultural heritage value and/or
- the municipal heritage committee has evaluated the property for its cultural heritage value or interest and determined that the property is not of cultural heritage value or interest

A property may need to be re-evaluated, if:

- there is evidence that its heritage attributes may have changed
- new information is available
- the existing Statement of Cultural Heritage Value does not provide the information necessary to manage the property
- the evaluation took place after 2005 and did not use the criteria in Regulations 9/06 and 10/06

Note: Ontario government ministries and public bodies [prescribed under Regulation 157/10] may continue to use their existing evaluation processes, until the evaluation process required under section B.2 of the Standards & Guidelines for Conservation of Provincial Heritage Properties has been developed and approved by MTCS.

To determine if your property or project area has been evaluated, contact:

- the approval authority
- the proponent
- the Ministry of Tourism, Culture and Sport

3a. Is the property (or project area) identified, designated or otherwise protected under the Ontario Heritage Act as being of cultural heritage value e.g.:

i. designated under the Ontario Heritage Act

- individual designation (Part IV)
- part of a heritage conservation district (Part V)

Individual Designation – Part IV

A property that is designated:

- by a municipal by-law as being of cultural heritage value or interest [s.29 of the Ontario Heritage Act]
- by order of the Minister of Tourism, Culture and Sport as being of cultural heritage value or interest of provincial significance [s.34.5]. **Note**: To date, no properties have been designated by the Minister.

Heritage Conservation District – Part V

A property or project area that is located within an area designated by a municipal by-law as a heritage conservation district [s. 41 of the Ontario Heritage Act].
For more information on Parts IV and V, contact:

- municipal clerk
- Ontario Heritage Trust
- local land registry office (for a title search)

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ii. subject of an agreement, covenant or easement entered into under Parts II or IV of the Ontario Heritage Act

An agreement, covenant or easement is usually between the owner of a property and a conservation body or level of government. It is usually registered on title.
The primary purpose of the agreement is to:

- preserve, conserve, and maintain a cultural heritage resource
- prevent its destruction, demolition or loss

For more information, contact:

- Ontario Heritage Trust **-** for an agreement, covenant or easement [clause 10 (1) (c) of the Ontario Heritage Act]
- municipal clerk – for a property that is the subject of an easement or a covenant [s.37 of the Ontario Heritage Act]
- local land registry office (for a title search)

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iii. listed on a register of heritage properties maintained by the municipality

Municipal registers are the official lists - or record - of cultural heritage properties identified as being important to the community. Registers include:

- all properties that are designated under the Ontario Heritage Act (Part IV or V)
- properties that have not been formally designated, but have been identified as having cultural heritage value or interest to the community

For more information, contact:

- municipal clerk
- municipal heritage planning staff
- municipal heritage committee

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iv. subject to a notice of:

- intention to designate (under Part IV of the Ontario Heritage Act)
- a Heritage Conservation District study area bylaw (under Part V of the Ontario Heritage Act)

A property that is subject to a **notice of intention to designate** as a property of cultural heritage value or interest and the notice is in accordance with:

- section 29 of the Ontario Heritage Act
- section 34.6 of the Ontario Heritage Act. **Note**: To date, the only applicable property is Meldrum Bay Inn, Manitoulin Island. [s.34.6]

An area designated by a municipal by-law made under section 40.1 of the Ontario Heritage Act as a **heritage conservation district study area**.

For more information, contact:

- municipal clerk – for a property that is the subject of notice of intention [s. 29 and s. 40.1]
- Ontario Heritage Trust

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v. included in the Ministry of Tourism, Culture and Sport's list of provincial heritage properties

Provincial heritage properties are properties the Government of Ontario owns or controls that have cultural heritage value or interest.
The Ministry of Tourism, Culture and Sport (MTCS) maintains a list of all provincial heritage properties based on information provided by ministries and prescribed public bodies. As they are identified, MTCS adds properties to the list of provincial heritage properties.
For more information, contact the MTCS Registrar at registrar@ontario.ca.

3b. Is the property (or project area) a National Historic Site (or part of)?

National Historic Sites are properties or districts of national historic significance that are designated by the Federal Minister of the Environment, under the Canada National Parks Act, based on the advice of the Historic Sites and Monuments Board of Canada.
For more information, see the National Historic Sites website.

3c. Is the property (or project area) designated under the Heritage Railway Stations Protection Act?

The Heritage Railway Stations Protection Act protects heritage railway stations that are owned by a railway company under federal jurisdiction. Designated railway stations that pass from federal ownership may continue to have cultural heritage value.
For more information, see the Directory of Designated Heritage Railway Stations.

3d. Is the property (or project area) designated under the Heritage Lighthouse Protection Act?

The Heritage Lighthouse Protection Act helps preserve historically significant Canadian lighthouses. The Act sets up a public nomination process and includes heritage building conservation standards for lighthouses which are officially designated.
For more information, see the Heritage Lighthouses of Canada website.

3e. Is the property (or project area) identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office?

The role of the Federal Heritage Buildings Review Office (FHBRO) is to help the federal government protect the heritage buildings it owns. The policy applies to all federal government departments that administer real property, but not to federal Crown Corporations.
For more information, contact the Federal Heritage Buildings Review Office.
See a directory of all federal heritage designations.

3f. Is the property (or project area) located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?

A UNESCO World Heritage Site is a place listed by UNESCO as having outstanding universal value to humanity under the Convention Concerning the Protection of the World Cultural and Natural Heritage. In order to retain the status of a World Heritage Site, each site must maintain its character defining features.
Currently, the Rideau Canal is the only World Heritage Site in Ontario.
For more information, see Parks Canada – World Heritage Site website.

Part B: Screening for potential Cultural Heritage Value

4a. Does the property (or project area) contain a parcel of land that has a municipal, provincial or federal commemorative or interpretive plaque?

Heritage resources are often recognized with formal plaques or markers.
Plaques are prepared by:

- municipalities
- provincial ministries or agencies
- federal ministries or agencies
- local non-government or non-profit organizations

For more information, contact:

- municipal heritage committees or local heritage organizations – for information on the location of plaques in their community
- Ontario Historical Society's Heritage directory – for a list of historical societies and heritage organizations
- Ontario Heritage Trust – for a list of plaques commemorating Ontario's history
- Historic Sites and Monuments Board of Canada – for a list of plaques commemorating Canada's history

4b. Does the property (or project area) contain a parcel of land that has or is adjacent to a known burial site and/or cemetery?

For more information on known cemeteries and/or burial sites, see:

- Cemeteries Regulations, Ontario Ministry of Consumer Services – for a database of registered cemeteries
- Ontario Genealogical Society (OGS) – to locate records of Ontario cemeteries, both currently and no longer in existence; cairns, family plots and burial registers
- Canadian County Atlas Digital Project – to locate early cemeteries

In this context, adjacent means contiguous or as otherwise defined in a municipal official plan.

4c. Does the property (or project area) contain a parcel of land that is in a Canadian Heritage River watershed?

The Canadian Heritage River System is a national river conservation program that promotes, protects and enhances the best examples of Canada's river heritage.
Canadian Heritage Rivers must have, and maintain, outstanding natural, cultural and/or recreational values, and a high level of public support.
For more information, contact the Canadian Heritage River System.
If you have questions regarding the boundaries of a watershed, please contact:

- your conservation authority
- municipal staff

4d. Does the property (or project area) contain a parcel of land that contains buildings or structures that are 40 or more years old?

A 40 year 'rule of thumb' is typically used to indicate the potential of a site to be of cultural heritage value. The approximate age of buildings and/or structures may be estimated based on:

- history of the development of the area
- fire insurance maps
- architectural style
- building methods

Property owners may have information on the age of any buildings or structures on their property. The municipality, local land registry office or library may also have background information on the property.
Note: 40+ year old buildings or structure do not necessarily hold cultural heritage value or interest; their age simply indicates a higher potential.
A building or structure can include:

- residential structure
- farm building or outbuilding
- industrial, commercial, or institutional building
- remnant or ruin
- engineering work such as a bridge, canal, dams, etc.

For more information on researching the age of buildings or properties, see the Ontario Heritage Tool Kit Guide Heritage Property Evaluation.

Part C: Other Considerations

5a. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) is considered a landmark in the local community or contains any structures or sites that are important to defining the character of the area?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has potential landmarks or defining structures and sites, for instance:

- buildings or landscape features accessible to the public or readily noticeable and widely known
- complexes of buildings
- monuments
- ruins

5b. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) has a special association with a community, person or historical event?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has a special association with a community, person or event of historic interest, for instance:

- Aboriginal sacred site
- traditional-use area
- battlefield
- birthplace of an individual of importance to the community

5c. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) contains or is part of a cultural heritage landscape?

Landscapes (which may include a combination of archaeological resources, built heritage resources and landscape elements) may be of cultural heritage value or interest to a community.
For example, an Aboriginal trail, historic road or rail corridor may have been established as a key transportation or trade route and may have been important to the early settlement of an area. Parks, designed gardens or unique landforms such as waterfalls, rock faces, caverns, or mounds are areas that may have connections to a particular event, group or belief.

For more information on Questions 5.a., 5.b. and 5.c., contact:

- Elders in Aboriginal Communities or community researchers who may have information on potential cultural heritage resources. Please note that Aboriginal traditional knowledge may be considered sensitive.
- municipal heritage committees or local heritage organizations
- Ontario Historical Society's " Heritage Directory" - for a list of historical societies and heritage organizations in the province

An internet search may find helpful resources, including:

- historical maps
- historical walking tours
- municipal heritage management plans
- cultural heritage landscape studies
- municipal cultural plans

Information specific to trails may be obtained through Ontario Trails.

Christine Darson

From: Brad Hewton
Sent: Thursday, October 19, 2023 3:14 PM
To: Christine Darson
Subject: FW: Notice of Online PIC - Highway 138 Intersection Improvements - GWP 4004-21-00
Attachments: P035-0362-2021_31Mar2022_RE_St1_Hwy138Roundabout.pdf; ENTERED INTO REGISTER_ Archaeological Report for P035-0362-2021.pdf; Notice of Public Information Centre for Hwy 138 Improvements at Headline Road_K Barboza.pdf

---

From: Brad Hewton
Sent: Thursday, October 19, 2023 3:13 PM
To: 'Karla.Barboza@ontario.ca' <Karla.Barboza@ontario.ca>
Subject: FW: Notice of Online PIC - Highway 138 Intersection Improvements - GWP 4004-21-00

Hi Karla,

Thank you for your interest in this project. We have updated our contact list with your new information and added Joseph to our list.
As requested, please find attached an electronic version of the Notice of Public Information Centre.

Regarding your query about the archaeological assessment, the Project Information Form Number is P035-0362-2021, MHSTCI File Number 0015644. The Stage 1 Archaeological Assessment Report, along with the confirmation letter regarding its entry on the Public Register of Archaeological Reports have been included in this email.

Should you have any questions regarding the attached material or the project, please feel free to contact me directly. Thank you.

Sincerely,
Brad

BRAD HEWTON, P.ENG
Manager, Transportation Design Services
bhewton@morrisonhershfield.com

200-2932 Baseline Road | Ottawa, ON K2H 1B1 Canada
Cell: 613 884 6083
morrisonhershfield.com

From: Barboza, Karla (MCM) <Karla.Barboza@ontario.ca>
Sent: Friday, September 15, 2023 9:22 AM
To: Brad Hewton <BHewton@morrisonhershfield.com>; Brandao, Dan (MTO) <Dan.Brandao@ontario.ca>
Cc: Ellis, Nathan (MTO) <Nathan.Ellis@ontario.ca>; Harvey, Joseph (MCM) <Joseph.Harvey@ontario.ca>
Subject: Notice of Online PIC - Highway 138 Intersection Improvements - GWP 4004-21-00

Hi Brad and Dan,

Hope this email finds you well.

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- Please note that, as of October 17, 2022, the responsibility for administration of the *Ontario Heritage Act* and matters related to cultural heritage recently transferred from the Ministry of Tourism, Culture and Sport (MTCS) to the Ministry of Citizenship and Multiculturalism (MCM). Individual staff roles and contact information remain unchanged.
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  - Joseph Harvey, Heritage Planner | Heritage Planning Unit (Citizenship and Multiculturalism) | 613-242-3743 | Joseph.Harvey@ontario.ca

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I would appreciate if you can send us an electronic copy of the Notice of Online Public Information. The PIC boards also mention that an archaeological assessment was undertaken for this project and that there is no known or potential built heritage resources and cultural heritage landscapes within the study area. Could you please inform us the Project Information Form number of the archaeological assessment as well as the completed screening checklist Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes with any supporting documentation for our review?

In the meantime, let us know if you have any questions.

Thanks in advance,
Karla

Karla Barboza, RPP, MCIP, CAHP
Team Lead, Heritage | Heritage Planning Unit | **Ministry of Citizenship and Multiculturalism** | 416-660-1027 | karla.barboza@ontario.ca

Raisin Region Conservation Authority
18045 County Road 2, P.O. Box 429, Cornwall, ON K6H 5T2 Tel: 613-938-3611 Fax: 613-938-3221 **www.rrca.on.ca**

September 25, 2023

Brad Hewton, P.Eng.
Consultant Project Manager
Morrison Hershfield Limited
Suite 200, 2932 Baseline Road
Ottawa, ON K2H 1B1

Via Email: BHewton@morrisonhershfield.com
CC: debi@southstormont.ca

Re: Detail Design and Class EA for Highway 138 Intersection Improvements at Headline Road

Dear Mr. Hewton,

Thank you for the opportunity to review and provide comments on the Environmental Assessment for the Highway 138 Intersection Improvements at Headline Road. The RRCA has reviewed this file as per our delegated responsibility from the Province to represent provincial interests regarding natural hazards identified in Section 3.1 of the Provincial Policy Statement (PPS, 2020) and as a regulatory authority under Ontario Regulation 175/06 (RRCA's Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation). RRCA staff have also provided comments with respect to the *Clean Water Act*.

Location (Reference Map 1)

1. The subject site is located within the jurisdiction of the Raisin Region Conservation Authority (RRCA).
    - Any *Planning Act* applications including zoning amendments should be circulated to the RRCA for natural hazard review.
    - Any development within or adjacent to a natural hazard or within or adjacent to a wetland may be regulated by the RRCA and require a *Conservation Authorities Act* permit.

Natural Hazards (Reference Map 2)

1. There are no known watercourses within or adjacent to the subject site.

2. There is no known flooding hazard area on the subject site.
3. There are no areas of hazardous soils (i.e., organic muck) mapped within or adjacent to this site.

Wetlands (Reference Map 3)

1. There are mapped unevaluated wetlands adjacent to the subject site. These wetlands have not been designated as provincially significant wetlands.
    - These wetlands may be providing flood attenuation from rainfall events.
    - The RRCA does not presently regulate development within or adjacent to non-provincially significant wetlands.

Source Water Protection (Reference Map 4)

1. The project site is located within the Raisin-South Nation Source Protection Region.
2. The project site is located within the Raisin Region Source Protection Area.
3. The project site is not located near a municipal drinking water source.
4. There are no mapped *Significant Groundwater Recharge Area*s near or adjacent to the project site.
5. The project site is located over a groundwater aquifer, which has been evaluated through the Assessment Report. The vulnerability rating is assessed as “medium” and “high”.
    - There are no policies in the Source Protection Plan to prohibit development within this area.
    - The SDG Counties Official Plan has recommendations for development in these areas (SDG Counties Official Plan S. 4.3.3.7).

Conclusion

Based on the RRCA’s review of the Location, Natural Hazards, Wetlands, and Source Water Protection, the RRCA has no objection at this time. There are no features on or adjacent to the subject property that are regulated by the RRCA under Ontario Regulation 175/06 and therefore a permit from the RRCA is not required.

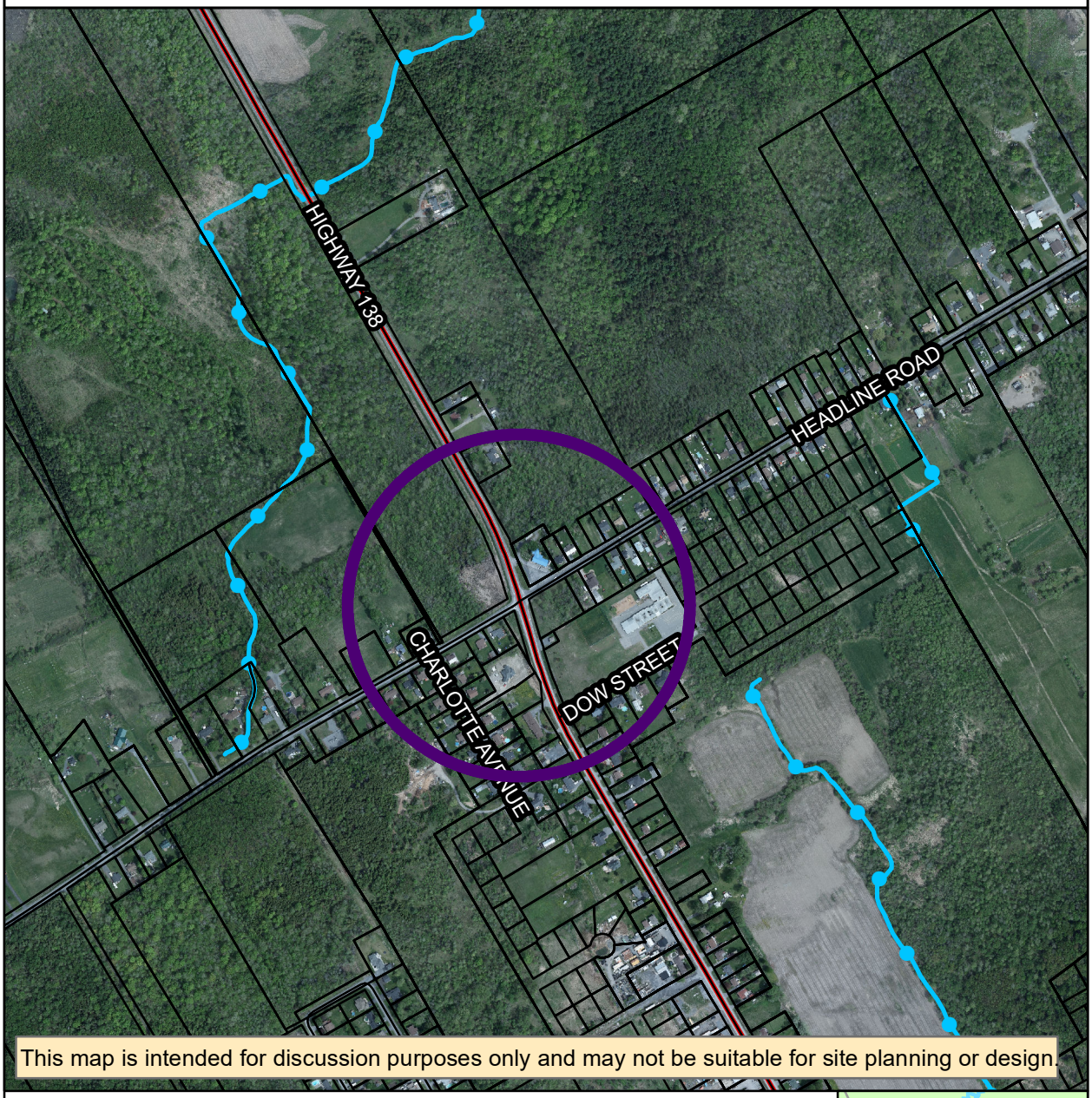
Sincerely,

Colin Herrewynen. RPP, MCIP
Watershed Planner

Attachments:

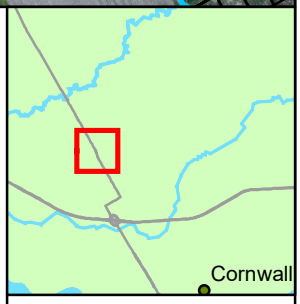
1. Map 1: Location
2. Map 2: Natural Hazards
3. Map 3: Wetlands
4. Map 4: Source Water Protection

Map 1: Location



Watercourse

Approximate Study Area



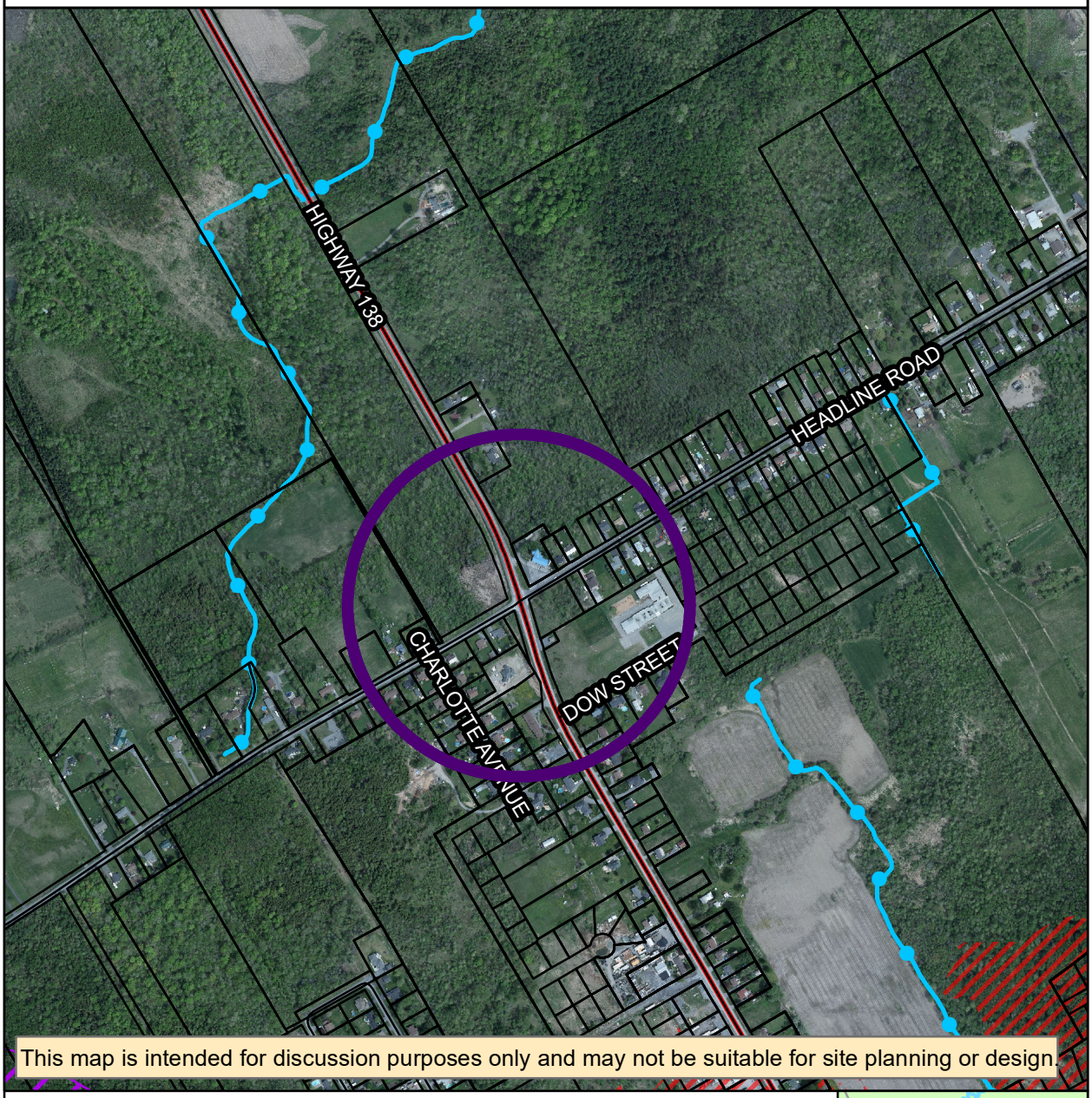
0 100 200 300 400

Meters

Note: The aerial imagery may not align with actual property boundaries due to minor mapping offset.

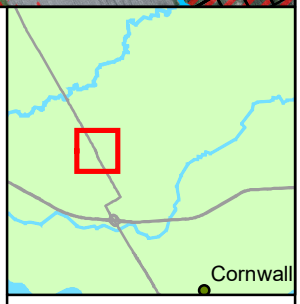
Raisin Region Conservation Authority

Map 2: Natural Hazards



Watercourse
Organic - Muck Soil
Floodplain

Approximate Study Area

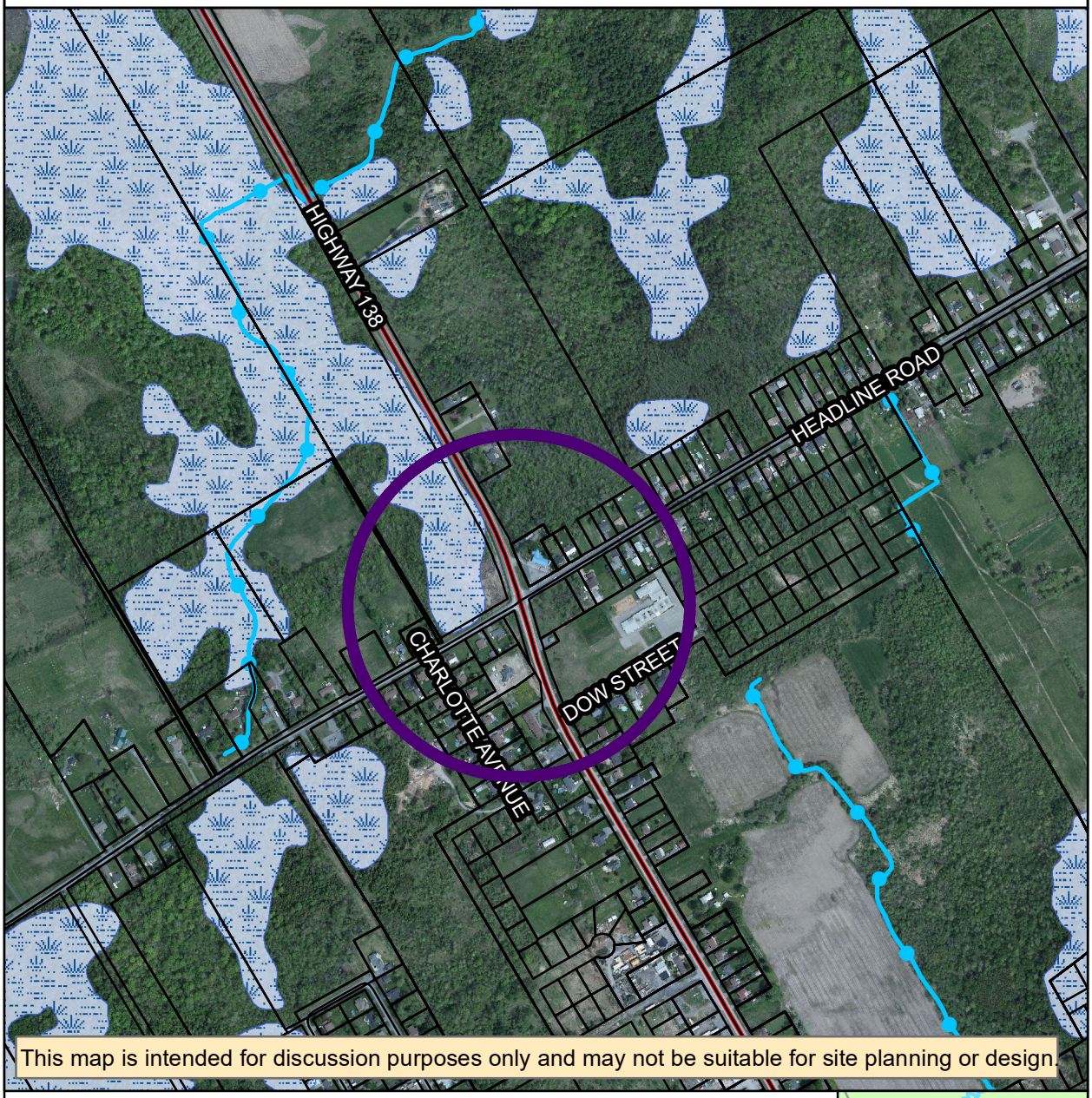


0 100 200 300 400
Meters

Note: The aerial imagery may not align with actual property boundaries due to minor mapping offset.

Raisin Region Conservation Authority

Map 3: Wetlands



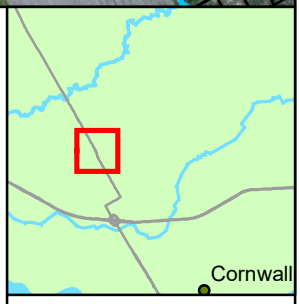
This map is intended for discussion purposes only and may not be suitable for site planning or design.

Watercourse

Unevaluated Wetlands

Provincially Significant

Approximate Study Area



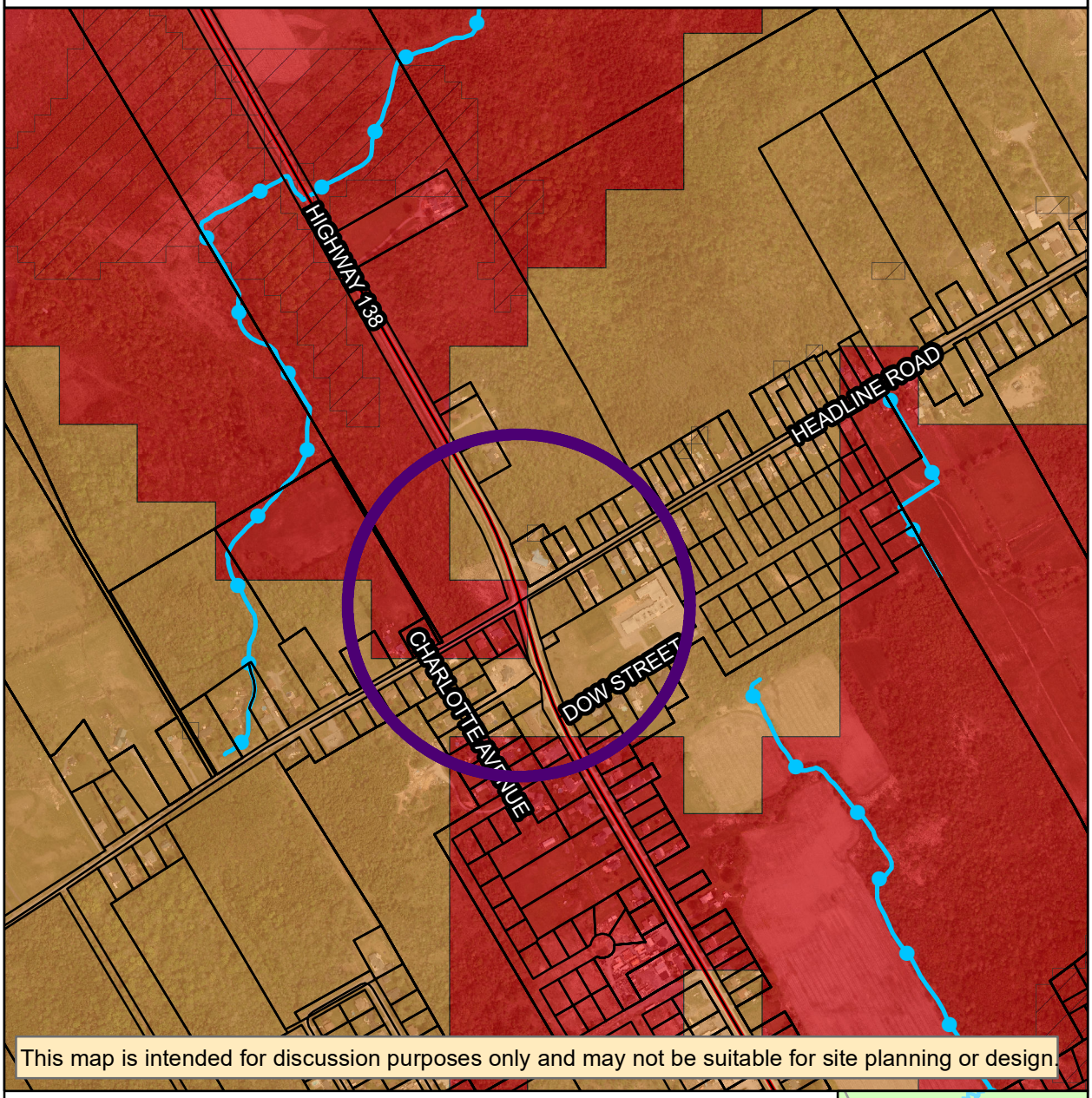
0 100 200 300 400

Meters

Note: The aerial imagery may not align with actual property boundaries due to minor mapping offset.

Raisin Region Conservation Authority

Map 4: Source Water Protection



Watercourse

SGRA

Aquifer Vulnerability

High

Medium

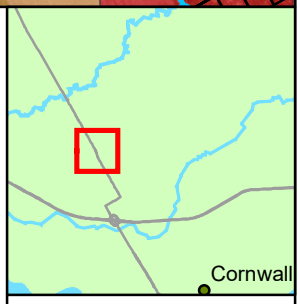
Low

Approximate Study Area

0 100 200 300 400

Meters

Note: The aerial imagery may not align with actual property boundaries due to minor mapping offset.



Raisin Region Conservation Authority

Christine Darson

From: Brad Hewton
Sent: Thursday, October 19, 2023 2:43 PM
To: Colin.Herrewynen@rrca.on.ca
Cc: Christine Darson
Subject: RE: Class EA for Highway 138 Intersection Improvements at Headline Road PIC Notice

Hello Colin,

Thank you for your comments on the Highway 138 and Headline Road Intersection improvements. We appreciate your comments, and interest in this project. The information you provided on behalf of the Raisin Region Conservation Authority is greatly appreciated and will be used to assist us in the assessment of impacts resulting from our design, and the Contract Documentation produced for this project.

Please don't hesitate to reach out should you have any further questions or comments.

Thank you.

Sincerely,
Brad

BRAD HEWTON, P.ENG
Manager, Transportation Design Services
bhewton@morrisonhershfield.com

200-2932 Baseline Road | Ottawa, ON K2H 1B1 Canada
Cell: 613 884 6083
morrisonhershfield.com

From: Colin Herrewynen <Colin.Herrewynen@rrca.on.ca>
Sent: Monday, September 25, 2023 4:29 PM
To: Brad Hewton <BHewton@morrisonhershfield.com>; Dan.Brando@ontario.ca
Cc: debi@southstormont.ca
Subject: Class EA for Highway 138 Intersection Improvements at Headline Road PIC Notice

Good Afternoon Brad and Dan,

The notice for the PIC for the Detail Design and Class EA for Highway 138 Intersection Improvements at Headline Road has been received.

Attached, please find comments from the RRCA as well as associated mapping Attachments.

Please review and let me know if you have any questions or concerns.

Best Regards,

Colin Herrewynen, RPP, MCIP.
Watershed Planner
Raisin Region Conservation Authority
613-938-3611 x 232 www.rrca.on.ca

Christine Darson

From: Nick Crockford
Sent: Tuesday, October 10, 2023 8:59 AM
To: Christine Darson
Subject: FW: Highway 138 roundabout inquisition
Attachments: ~WRD0005.jpg

From: [redacted]
Sent: Tuesday, October 10, 2023 8:53 AM
To: Brandao, Dan (MTO) <Dan.Brandao@ontario.ca>
Cc: Brad Hewton <BHewton@morrisonhershfield.com>; Nick Crockford <NCrockford@morrisonhershfield.com>; Ellis, Nathan (MTO) <Nathan.Ellis@ontario.ca>; Vanderlaan, Frank (MTO) <Frank.Vanderlaan@ontario.ca>; Neill, Tyler (MTO) <Tyler.Neill@ontario.ca>
Subject: Re: Highway 138 roundabout inquisition

> You don't often get email from ronald.a.cheffer@csdceo.org. Learn why this is important

Hello Mr Brandao,

Thank you for the quick response.

Here is a school schedule :

7:45 - 8:15 AM - Bus and car arrival at school (high traffic)
11:30 - 12:30 PM- Lunch period (Minimal traffic)
2: 10 - 2:40 PM - Bus and car arrival at school (high traffic)

I will send out a letter to my parents and the school transportation in the spring advising them of the possible traffic delay.

Thanks for the information!

[redacted]
Directeur
École élémentaire catholique Ste-Lucie

CSDCEO
17337, Rue Dow
Long Sault, (Ontario) K0C 1P0
Tél. : [redacted]

Téléc. : [redacted]
[redacted]
www.sainte-lucie.csdceo.ca

Le ven. 6 oct. 2023, à 10 h 10, Brandao, Dan (MTO) <Dan.Brandao@ontario.ca> a écrit :

> Bonjour[redacted],
>
> Thank you for reaching out.
>
> Construction is tentatively scheduled to begin spring 2024, usually once the snow clears. The Contractor could begin as early as April.
>
> At least two weeks before construction begins, the Contractor will be sending out letters to stakeholders indicating when they intended to start construction. We will make sure you are on that stakeholder list.
>
> Thank you for the offer to provide a detailed school schedule. Yes please, if you send it to me I can make sure it gets handed over to the Contractor for their situational awareness. I'm not certain that they'll be able to have any mitigation measures during the high traffic times, but they might be able to plan certain disruptive operations accordingly.
>
> Thank you and please let me know if you have any questions or concerns.
>
> Kind Regards,
>
> **Dan Brandao, P.Eng.** | Senior Project Engineer
> Engineering Program Delivery East | Ministry of Transportation Ontario
>
> **Tel:** 613-449-7916 | **Toll Free:** 1-800-267-0295 ext. 0 | **E-Mail:** dan.brandao@ontario.ca
>
> ---
>
> **From:**[redacted]>
> **Sent:** Thursday, October 05, 2023 12:29 PM
> **To:** Brandao, Dan (MTO) <Dan.Brandao@ontario.ca>

Cc: bhewton@morrisonhershfield.com; ncrockford@morrisonhershfield.com
Subject: Highway 138 roundabout inquisition

Hello Mr Brandao,

I am the principal of l'ÉÉC Sainte-Lucie on 17337 Dow st, Long Sault ON. Our school is one block away from the future site of the 138 roundabout. I think that it is a fantastic idea to have a roundabout as it will help the flow on the 138 in a safer manner.

Would it be possible to be advised when the construction will begin as I am sure that the traffic will impact our school day including our daycare provider. Needless to say, parents will be in a hurry at the beginning and at the end of the day. I would like to advise them so that they can take the necessary measures in their daily commute to and from school.

I can provide you with a detailed school schedule if needed indicating our traffic high times to facilitate our collaboration.

Thank you for your time. We look forward to hearing from you.

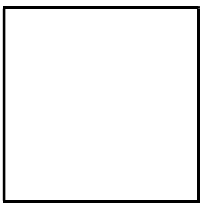
Kind regards,

CC - http://www.highway138roundabout.ca/contactUs.aspx

[redacted]

Directeur

École élémentaire catholique Ste-Lucie



CSDCEO

17337, Rue Dow

Long Sault, (Ontario) K0C 1P0

Tél. [redacted]

Téléc. :[redacted]

[redacted]

www.sainte-lucie.csdceo.ca

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APPENDIX D: **GENERAL ARRANGEMENT DRAWING**

90% SUBMISSION

CONTRACT DRAWINGS

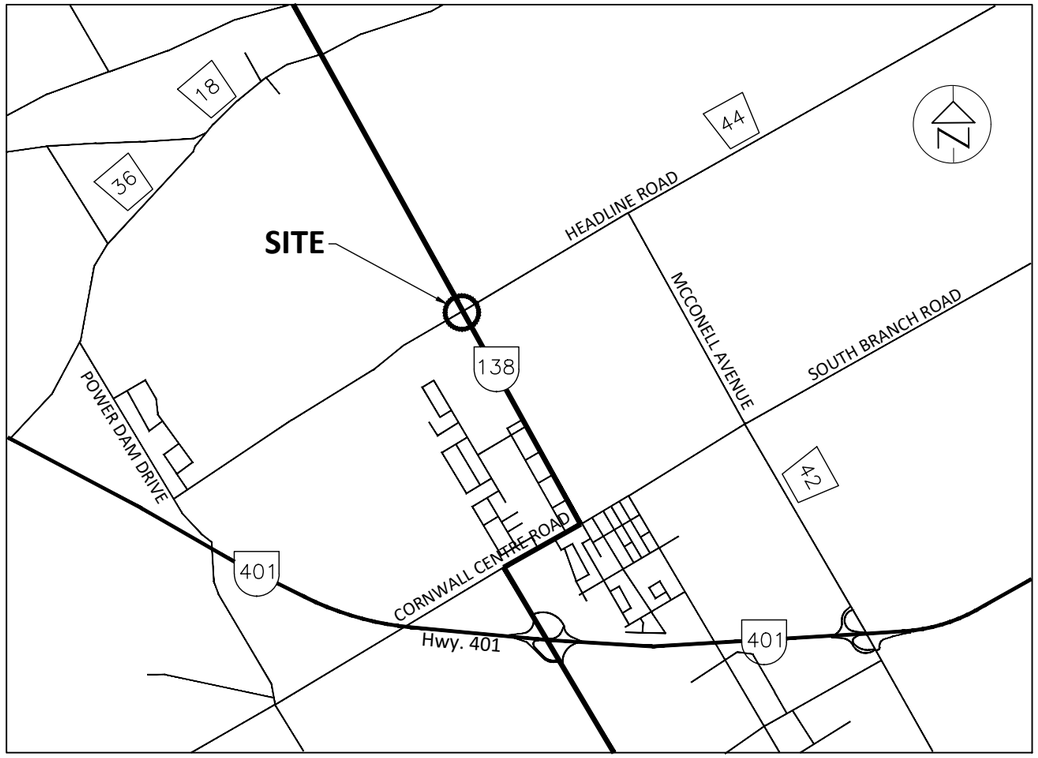
CONTRACT NO. 2023-XXXX

BOOK 1 OF 1

EASTERN REGION

Ministry of Transportation

Ontario



Key Plan
N.T.S.

GWP No 4004-21-00 Contract No 2023-XXXX

Work of GRADING, DRAINAGE, GRANULAR BASE, PAVING AND ELECTRICAL

Hwy No 138 REGION EASTERN

Location INTERSECTION OF HIGHWAY 138 AND HEADLINE ROAD (COUNTY ROAD 44)

Length 1.4 km.

Reference Plans

Date

P.Eng.
Manager, Engineering Program Delivery

Date

P.Eng.
Director, Design and Engineering

Ministry of Transportation

Ontario

INDEX

W.P. No. 4004-21-00

Contract No.

Sheet No.	Description
	CONTRACT DRAWINGS (BOOK 1 OF 1)
	COVER
	INDEX
	KEY PLAN
1	DRAWINGS SHEET INDEX
2-3	ALIGNMENTS
6-7	STAGE 1
8-11	STAGE 2
12	DETOUR ROAD PROFILE
13-14	STAGE 3A
15-16	DETOUR ROUTE
17	STAGE 3B
18-19	STAGE 4
20-22	REMOVALS
21-23	NEW CONSTRUCTION
24	WATERMAIN RELOCATION
25-30	PROFILES
31	PAVEMENT ELEVATIONS
32-36	TYPICAL SECTIONS
37-38	DETAILS
39-44	PAVEMENT MARKING AND SIGNAGE
45	BOREHOLE DATA
46-48	LANDSCAPING
49-57	ELECTRICAL

Sheet No.	Description
	QUANTITY SHEETS (BOOK 1 OF 1)
1	BONDING, CELARING AND GRUBBING
2-3	GRADING
4	GRANULAR SEALING, TACK COAT
5	HOT MIX
6	GRANULAR A
7	CONCRETE
8	INTERLOCK, TRUCK APRON
9	SUBDRAIN
10	DRAINAGE STRUCTURES
11-12	SEWERS
13	CLEANOUT
14	PIPE CULVERTS
15	VALVES, HYDRANTS
16-18	REMOVALS
19	RIP RAP, ROCK PROTECTION, GEOGRID
20	SIGNAGE
21-23	PAVEMENT MARKINGS
24	TCB, ENERGY ATTENUATORS
25	WATER
26-28	LANDSCAPING
29-32	ELECTRICAL

LEGEND	
#	SHEET DRAWING NO. FOR REMOVALS
#	SHEET DRAWING NO. FOR NEW CONSTRUCTION
#	SHEET DRAWING NO. FOR PROFILE
#	SHEET DRAWING NO. FOR PAVEMENT MARKINGS AND SIGNS

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

DRAWING SHEET INDEX

SHEET 01

MORRISON HERSHFIELD

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09_CAD\07 Sheets\001_201979405_SHEET LAYOUT.dwg
CREATED: 2023-10-11
MODIFIED: 2023-10-11 12:24
MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

ALIGNMENT

SHEET 02

MORRISON HERSHFIELD

METRIC
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N.T.S

MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\002_201979405_ALIGN-DATA-NC.dwg
CREATED: 2023-10-02 MODIFIED: 2023-10-02 16:16

Project Name: Highway 138
Description:
Horizontal Alignment Name: Hwy 138
Description:
Style: PD-N-ALI-CL

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation
CONT CONTRACT
WP 4043-21-01
ALIGNMENT DATA
SHEET 03
MORRISON HERSHFIELD

	STATION	NORTHING	EASTING
Element: Linear			
POB ( )	12+960.890	4993494.8488	203973.8437
BC ( )	12+999.994	4993529.0027	203954.8000
Tangent Direction:	N 29^08'35.85" W		
Tangent Length:	39.104		
Element: Circular			
BC ( )	12+999.994	4993529.0027	203954.8000
PI ( )	13+076.292	4993595.6416	203917.6433
CC ( )		4993918.5990	204653.5236
EC ( )	13+152.130	4993668.1028	203893.7529
Radius:	800.000		
Delta:	10^53'45.30" Right		
Degree of Curvature(Arc):	7^09'43.10"		
Length:	152.136		
Tangent:	76.298		
Chord:	151.907		
Middle Ordinate:	3.614		
External:	3.630		
Tangent Direction:	N 29^08'35.85" W		
Radial Direction:	N 60^51'24.15" E		
Chord Direction:	N 23^41'43.21" W		
Radial Direction:	N 71^45'09.44" E		
Tangent Direction:	N 18^14'50.56" W		
Element: Linear			
EC ( )	13+152.130	4993668.1028	203893.7529
BC ( )	13+225.575	4993737.8541	203870.7559
Tangent Direction:	N 18^14'50.56" W		
Tangent Length:	73.445		
Element: Circular			
BC ( )	13+225.575	4993737.8541	203870.7559
PI ( )	13+240.493	4993752.0220	203866.0847
CC ( )		4993816.1342	204108.1842
EC ( )	13+255.375	4993766.6448	203863.1316
Radius:	250.000		
Delta:	6^49'47.33" Right		
Degree of Curvature(Arc):	22^55'05.92"		
Length:	29.801		
Tangent:	14.918		
Chord:	29.783		
Middle Ordinate:	0.444		
External:	0.445		
Tangent Direction:	N 18^14'50.56" W		
Radial Direction:	N 71^45'09.44" E		
Chord Direction:	N 14^49'56.89" W		
Radial Direction:	N 78^34'56.77" E		
Tangent Direction:	N 11^25'03.23" W		
Element: Linear			
EC ( )	13+255.375	4993766.6448	203863.1316
BC ( )	13+259.730	4993770.9133	203862.2695
Tangent Direction:	N 11^25'03.23" W		
Tangent Length:	4.355		
Element: Circular			
BC ( )	13+259.730	4993770.9133	203862.2695
PI ( )	13+278.061	4993788.8817	203858.6407
CC ( )		4993719.4443	203607.4148
EC ( )	13+296.332	4993806.1633	203852.5267
Radius:	260.000		
Delta:	8^03'57.18" Left		
Degree of Curvature(Arc):	22^02'12.62"		
Length:	36.602		
Tangent:	18.331		
Chord:	36.572		
Middle Ordinate:	0.644		
External:	0.645		
Tangent Direction:	N 11^25'03.23" W		
Radial Direction:	N 78^34'56.77" E		
Chord Direction:	N 15^27'01.81" W		
Radial Direction:	N 70^30'59.60" E		
Tangent Direction:	N 19^29'00.40" W		
Element: Linear			
EC ( )	13+296.332	4993806.1633	203852.5267
BC ( )	13+356.446	4993862.8348	203832.4766
Tangent Direction:	N 19^29'00.40" W		
Tangent Length:	60.114		
Element: Circular			
BC ( )	13+356.446	4993862.8348	203832.4766
PI ( )	13+407.356	4993910.8296	203815.4964
CC ( )		4993646.0374	203219.6970
EC ( )	13+458.058	4993955.5954	203791.2509
Radius:	650.000		
Delta:	8^57'24.74" Left		
Degree of Curvature(Arc):	8^48'53.05"		
Length:	101.613		
Tangent:	50.910		
Chord:	101.509		
Middle Ordinate:	1.985		
External:	1.991		
Tangent Direction:	N 19^29'00.40" W		
Radial Direction:	N 70^30'59.60" E		
Chord Direction:	N 23^57'42.78" W		
Radial Direction:	N 61^33'34.85" E		
Tangent Direction:	N 28^26'25.15" W		
Element: Linear			
EC ( )	13+458.058	4993955.5954	203791.2509
POE ( )	13+503.342	4993995.4142	203769.6847
Tangent Direction:	N 28^26'25.15" W		
Tangent Length:	45.284		

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation
CONT CONTRACT
WP 4043-21-01
ALIGNMENT DATA
SHEET 04
MORRISON HERSHFIELD

Project Name: Highway 138
Description:
Horizontal Alignment Name: Headline Road
Description:
Style: PD-N-ALI-CL

		STATION	NORTHING	EASTING
Element: Linear				
POB	( )	8+999.998	4993696.4135	203733.0438
BC	( )	9+022.599	4993707.3149	203752.8421
Tangent Direction:	N 61^09'42.50" E			
Tangent Length:	22.601			
Element: Circular				
BC	( )	9+022.599	4993707.3149	203752.8421
PI	( )	9+054.006	4993722.4638	203780.3543
CC	( )		4993882.5120	203656.3745
PRC	( )	9+084.905	4993745.3164	203801.8990
Radius:	200.000			
Delta:	17^50'57.26" Left			
Degree of Curvature(Arc):	28^38'52.40"			
Length:	62.306			
Tangent:	31.407			
Chord:	62.054			
Middle Ordinate:	2.421			
External:	2.451			
Tangent Direction:	N 61^09'42.50" E			
Radial Direction:	S 28^50'17.50" E			
Chord Direction:	N 52^14'13.88" E			
Radial Direction:	S 46^41'14.75" E			
Tangent Direction:	N 43^18'45.25" E			
Element: Circular				
PRC	( )	9+084.905	4993745.3164	203801.8990
PI	( )	9+110.112	4993763.6576	203819.1904
CC	( )		4993693.9847	203856.3469
EC	( )	9+133.532	4993767.7982	203844.0550
Radius:	74.830			
Delta:	37^13'58.63" Right			
Degree of Curvature(Arc):	76^34'04.78"			
Length:	48.627			
Tangent:	25.207			
Chord:	47.776			
Middle Ordinate:	3.915			
External:	4.132			
Tangent Direction:	N 43^18'45.25" E			
Radial Direction:	S 46^41'14.75" E			
Chord Direction:	N 61^55'44.56" E			
Radial Direction:	S 9^27'16.12" E			
Tangent Direction:	N 80^32'43.88" E			
Element: Linear				
EC	( )	9+133.532	4993767.7982	203844.0550
BC	( )	9+171.340	4993774.0086	203881.3494
Tangent Direction:	N 80^32'43.88" E			
Tangent Length:	37.808			
Element: Circular				
BC	( )	9+171.340	4993774.0086	203881.3494
PI	( )	9+191.469	4993777.3152	203901.2054
CC	( )		4993833.1936	203871.4936
PRC	( )	9+210.183	4993791.9278	203915.0497
Radius:	60.000			
Delta:	37^05'32.01" Left			
Degree of Curvature(Arc):	95^29'34.68"			
Length:	38.843			
Tangent:	20.129			
Chord:	38.168			
Middle Ordinate:	3.116			
External:	3.287			
Tangent Direction:	N 80^32'43.88" E			
Radial Direction:	S 9^27'16.12" E			
Chord Direction:	N 61^59'57.88" E			
Radial Direction:	S 46^32'48.12" E			
Tangent Direction:	N 43^27'11.88" E			
Element: Circular				
PRC	( )	9+210.183	4993791.9278	203915.0497
PI	( )	9+237.932	4993812.0717	203934.1343
CC	( )		4993654.3752	204060.2367
EC	( )	9+265.328	4993826.2589	203957.9821
Radius:	200.000			
Delta:	15^47'52.96" Right			
Degree of Curvature(Arc):	28^38'52.40"			
Length:	55.146			
Tangent:	27.749			
Chord:	54.971			
Middle Ordinate:	1.898			
External:	1.916			
Tangent Direction:	N 43^27'11.88" E			
Radial Direction:	S 46^32'48.12" E			
Chord Direction:	N 51^21'08.36" E			
Radial Direction:	S 30^44'55.16" E			
Tangent Direction:	N 59^15'04.84" E			
Element: Linear				
EC	( )	9+265.328	4993826.2589	203957.9821
POE	( )	9+349.044	4993869.0606	204029.9291
Tangent Direction:	N 59^15'04.84" E			
Tangent Length:	83.716			

FILE NAME: X:\Pro\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\004_201979405_ALIGN-DATA-TABLE.dwg
CREATED: 2023-10-02
MODIFIED: 2023-10-02 20:43
MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

Project Name: Highway 138
Description:
Horizontal Alignment Name: Stage 2 Detour
Description:
Style: PD-N-ALI-CL

METRIC
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Ontario Ministry of Transportation
CONT CONTRACT
WP 4043-21-01
ALIGNMENT DATA
SHEET 05
MORRISON HERSHFIELD

	STATION	NORTHING	EASTING
Element: Circular			
BC ( )	33+113.642	4993631.9546	203906.9396
PI ( )	33+138.204	4993655.2041	203899.0185
CC ( )		4993716.0724	204153.8374
EC ( )	33+162.621	4993679.5236	203895.5769
Radius:	260.834		
Delta:	10^45'32.26" Right		
Degree of Curvature(Arc):	21^57'59.00"		
Length:	48.979		
Tangent:	24.562		
Chord:	48.907		
Middle Ordinate:	1.149		
External:	1.154		
Tangent Direction:	N 18^48'50.11" W		
Radial Direction:	N 71^11'09.89" E		
Chord Direction:	N 13^26'03.98" W		
Radial Direction:	N 81^56'42.15" E		
Tangent Direction:	N 8^03'17.85" W		
Element: Linear			
EC ( )	33+162.621	4993679.5236	203895.5769
BC ( )	33+220.631	4993736.9610	203887.4484
Tangent Direction:	N 8^03'17.85" W		
Tangent Length:	58.010		
Element: Circular			
BC ( )	33+220.631	4993736.9610	203887.4484
PI ( )	33+303.169	4993818.6848	203875.8829
CC ( )		4993680.9118	203491.3947
EC ( )	33+383.422	4993889.1555	203832.9127
Radius:	400.000		
Delta:	23^19'05.41" Left		
Degree of Curvature(Arc):	14^19'26.20"		
Length:	162.792		
Tangent:	82.538		
Chord:	161.670		
Middle Ordinate:	8.253		
External:	8.427		
Tangent Direction:	N 8^03'17.85" W		
Radial Direction:	N 81^56'42.15" E		
Chord Direction:	N 19^42'50.56" W		
Radial Direction:	N 58^37'36.74" E		
Tangent Direction:	N 31^22'23.26" W		
Element: Linear			
EC ( )	33+383.422	4993889.1555	203832.9127
BC ( )	33+455.396	4993950.6064	203795.4425
Tangent Direction:	N 31^22'23.26" W		
Tangent Length:	71.974		
Element: Circular			
BC ( )	33+455.396	4993950.6064	203795.4425
PI ( )	33+480.995	4993972.4629	203782.1153
CC ( )		4994471.2157	204649.2376
EC ( )	33+506.583	4993994.9726	203769.9239
Radius:	1000.000		
Delta:	2^55'58.12" Right		
Degree of Curvature(Arc):	5^43'46.48"		
Length:	51.187		
Tangent:	25.599		
Chord:	51.182		
Middle Ordinate:	0.327		
External:	0.328		
Tangent Direction:	N 31^22'23.26" W		
Radial Direction:	N 58^37'36.74" E		
Chord Direction:	N 29^54'24.20" W		
Radial Direction:	N 61^33'34.85" E		
Tangent Direction:	N 28^26'25.15" W		

MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\005_201979405_ALIGN-DATA-TABLE.dwg
CREATED: 2023-10-02 MODIFIED: 2023-10-02 20:49

STAGING LEGEND

1	SOLID YELLOW,10cm
5	SOLID WHITE,10cm
14	SOLID WHITE,45cm
15	SOLID WHITE,60cm
] [	LIMITS OF MARKINGS

UNDER CONSTRUCTION

TEMPORARY ASPHALT SHOULDER

STAGE 1 – Highway 138 Roundabout	
TRAFFIC	CONSTRUCTION
• SINGLE LANE TRAFFIC IN EACH DIRECTION. • NORTHBOUND RIGHT TURN TAPER CLOSED. • ALL DRIVEWAYS TO BE MAINTAINED. • ALL EXISTING LANES TO BE USED.	• TEMPORARY PAVEMENT FOR DETOUR ROAD TO BE PLACED ALONG HWY 138. • WIDENING OF THE EAST END OF HEADLINE ROAD.

NOTES:

1. 333, 363, 393, Denotes Pavement Marking Spacing (ie., 3 m line, 3 m gap, 3 m line)
2. Use [1] to Denote PAVEMENT MARKING, TEMPORARY
3. ALL MARKINGS MUST CONFORM TO ONTARIO TRAFFIC MANUAL (OTM) BOOK 11

CONSTRUCTION INGRESS/EGRESS

TRAVELED LANE DIRECTION

TC-54

PROPERTY LIMIT

TEMPORARY CONCRETE BARRIER

NOTES:

A. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE CORRESPONDING 'REMOVALS', 'NEW CONSTRUCTION', AND 'TYPICALS' DRAWINGS.
B. THIS DRAWING DEPICTS THE CONFIGURATION OF HIGHWAY 138 AT HEADLINE ROAD DURING STAGED CONSTRUCTION. THIS DRAWING DOES NOT SHOW ALL TRAFFIC CONTROL DEVICES OR SIGNING THAT MAY BE REQUIRED. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR AND PROVIDE ALL APPROPRIATE SIGNING AND TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH OTM BOOK 7 UNLESS OTHERWISE NOTED.
C. FLARE TEMPORARY CONCRETE BARRIER IN ACCORDANCE WITH MTOD 911.232.
D. THE CONTRACTOR SHALL OBLITERATE ANY EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED TRAFFIC CONFIGURATION IN EACH STAGE. OBLITERATION IS NOT SHOWN ON THE DRAWINGS.
E. EROSION AND SEDIMENT CONTROL AS PER THE CONTRACT DOCUMENTS.

METRIC
ALL DIMENSIONS ARE IN METRES

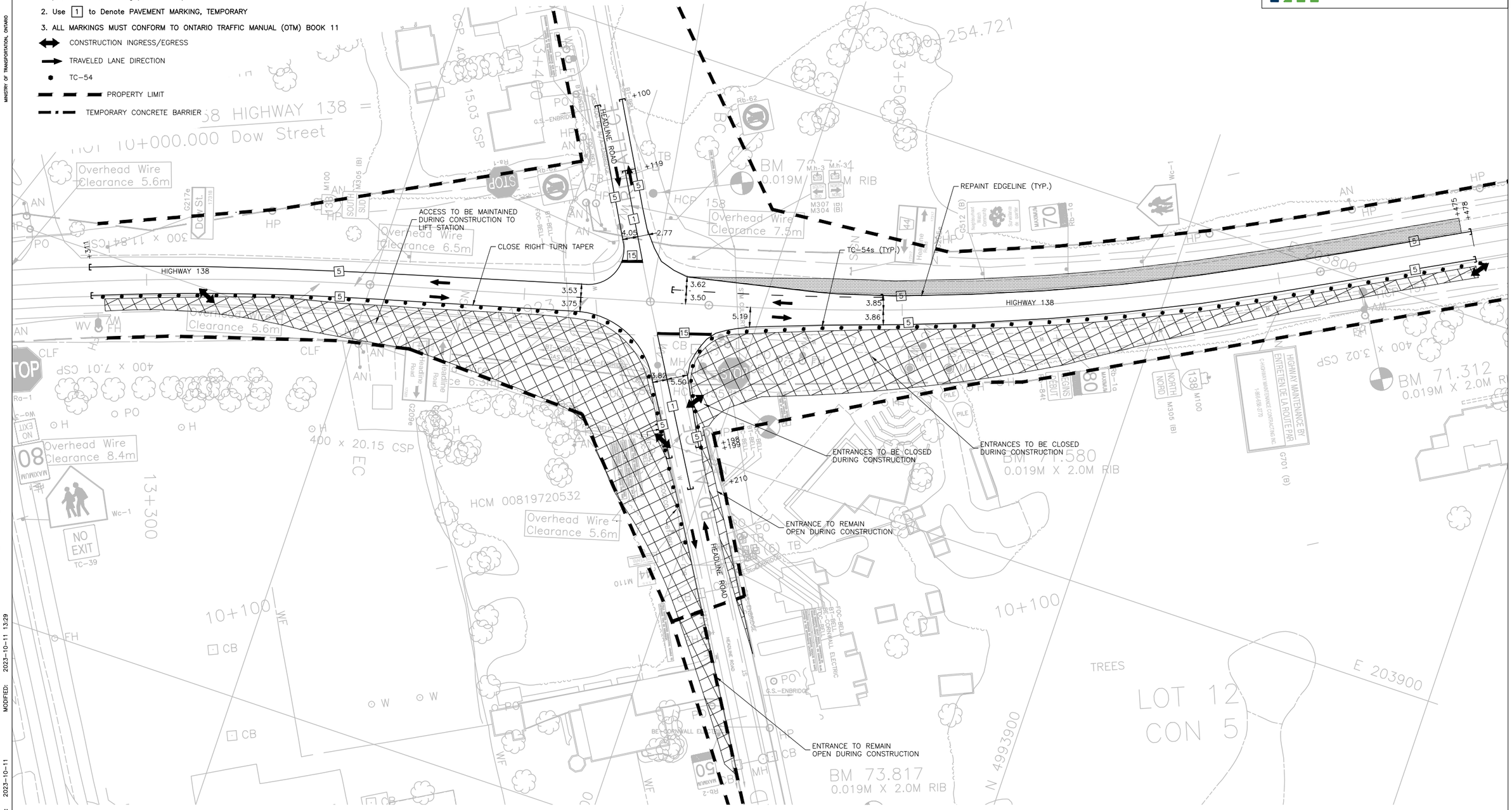
Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

STAGE 1
STA 13+100 TO STA 13+480

SHEET
06

MORRISON HERSHFIELD



SCALE
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FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\006_201979405_SEQ-Stage1.dwg
CREATED: 2023-10-11
MODIFIED: 2023-10-11 13:29
MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

NOTES:
A. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE CORRESPONDING 'REMOVALS' AND 'NEW CONSTRUCTION' DRAWINGS.
B. THIS DRAWING DEPICTS THE CONFIGURATION OF HIGHWAY 138 AT HEADLINE ROAD DURING STAGED CONSTRUCTION. THIS DRAWINGS DOES NOT SHOW ALL TRAFFIC CONTROLLED DEVICES OR SIGNING THAT MAY BE REQUIRED. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR AND PROVIDE ALL APPROPRIATE SIGNING AND TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH OTM BOOK 7 UNLESS OTHERWISE NOTED.

METRIC
ALL DIMENSIONS ARE IN METRES

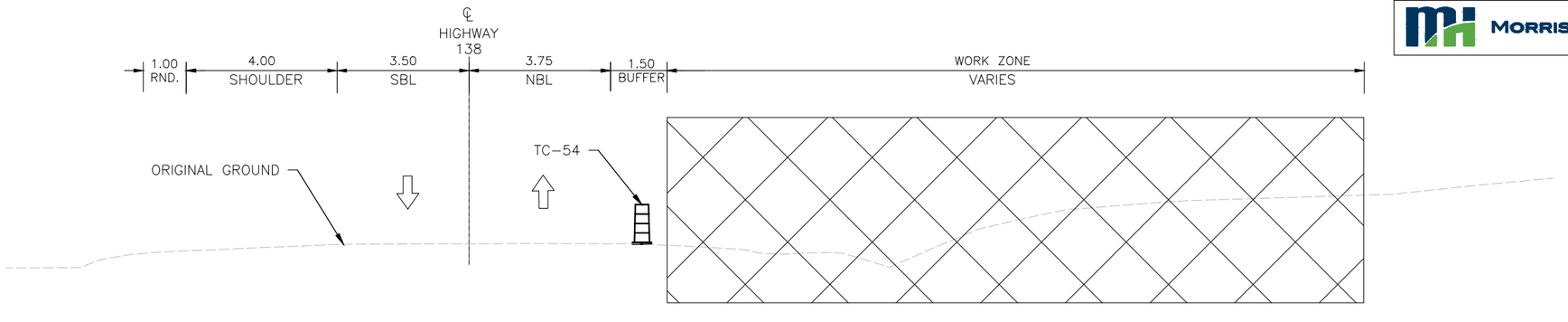
Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

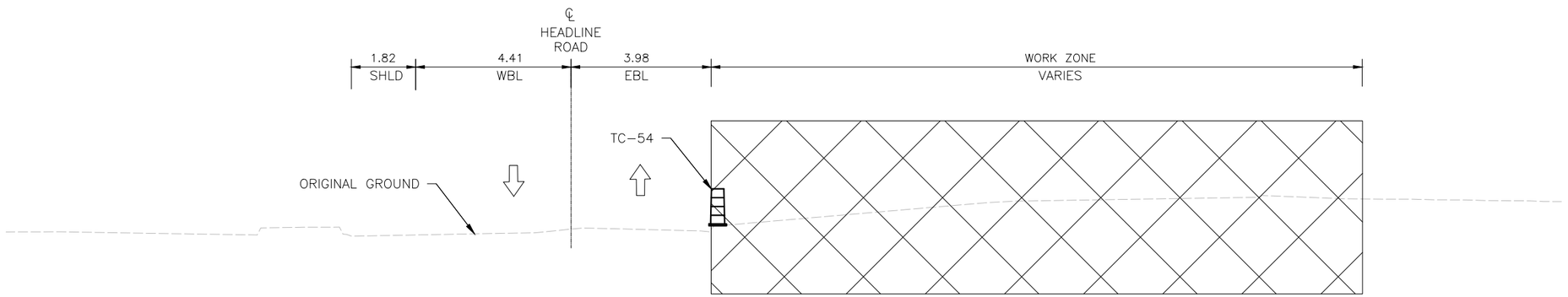
STAGE 1
TYPICAL SECTIONS

SHEET
07

MORRISON HERSHFIELD



HWY 138 – STAGE 1 – TEMPORARY DETOUR ROAD CONSTRUCTION



HEADLINE ROAD – STAGE 1 – TEMPORARY DETOUR ROAD AND EAST LEG CONSTRUCTION

N.T.S

MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09_CAD\07 Sheets\007_201979405_TYP-STG1.dwg
CREATED: 2023-09-29 MODIFIED: 2023-09-29 10:04

STAGING LEGEND

1	SOLID YELLOW,10cm
5	SOLID WHITE,10cm
14	SOLID WHITE,45cm
15	SOLID WHITE,60cm
] [	LIMITS OF MARKINGS

UNDER CONSTRUCTION

NOTES:

1. 333, 363, 393, Denotes Pavement Marking Spacing (ie., 3 m line, 3 m gap, 3 m line)
2. Use [1] to Denote PAVEMENT MARKING, TEMPORARY
3. ALL MARKINGS MUST CONFORM TO ONTARIO TRAFFIC MANUAL

CONSTRUCTION INGRESS/EGRESS

TRAVELED LANE DIRECTION

TC-54

PROPERTY LIMIT

TEMPORARY CONCRETE BARRIER

STAGE 2 – Highway 138 Roundabout	
TRAFFIC	CONSTRUCTION
• SINGLE LANE TRAFFIC IN EACH DIRECTION. • TWO-WAY STOP CONTROLLED MAINTAINED ON HEADLINE ROAD. • ALL DRIVEWAYS TO BE MAINTAINED. • ALL HIGHWAY 138 TRAFFIC DIRECTED TO DETOUR ROAD.	• WIDENING OF HIGHWAY 138 ALONG WEST SIDE TO COMPLETE FILL AND CURBWORKS FOR PROPOSED ROUNDABOUT • SPLITTER ISLANDS TO BE CONSTRUCTED IN THIS STAGE. EXCEPT EAST SPLITTER ISLAND. • WHERE FEASIBLE, ULTIMATE ROADWAY PAVEMENT TIE-INS TO EXISTING ROADWAY ALIGNMENTS TO BE COMPLETED IN THIS STAGE.

NOTES:

A. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE CORRESPONDING 'REMOVALS', 'NEW CONSTRUCTION', AND 'TYPICALS' DRAWINGS.
B. THIS DRAWING DEPICTS THE CONFIGURATION OF HIGHWAY 138 AT HEADLINE ROAD DURING STAGED CONSTRUCTION. THIS DRAWING DOES NOT SHOW ALL TRAFFIC CONTROL DEVICES OR SIGNING THAT MAY BE REQUIRED. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR AND PROVIDE ALL APPROPRIATE SIGNING AND TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH OTM BOOK 7 UNLESS OTHERWISE NOTED.
C. FLARE TEMPORARY CONCRETE BARRIER IN ACCORDANCE WITH MTOD 911.232.
D. THE CONTRACTOR SHALL OBLITERATE ANY EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED TRAFFIC CONFIGURATION IN EACH STAGE. OBLITERATION IS NOT SHOWN ON THE DRAWINGS.
E. EROSION AND SEDIMENT CONTROL AS PER THE CONTRACT DOCUMENTS

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation

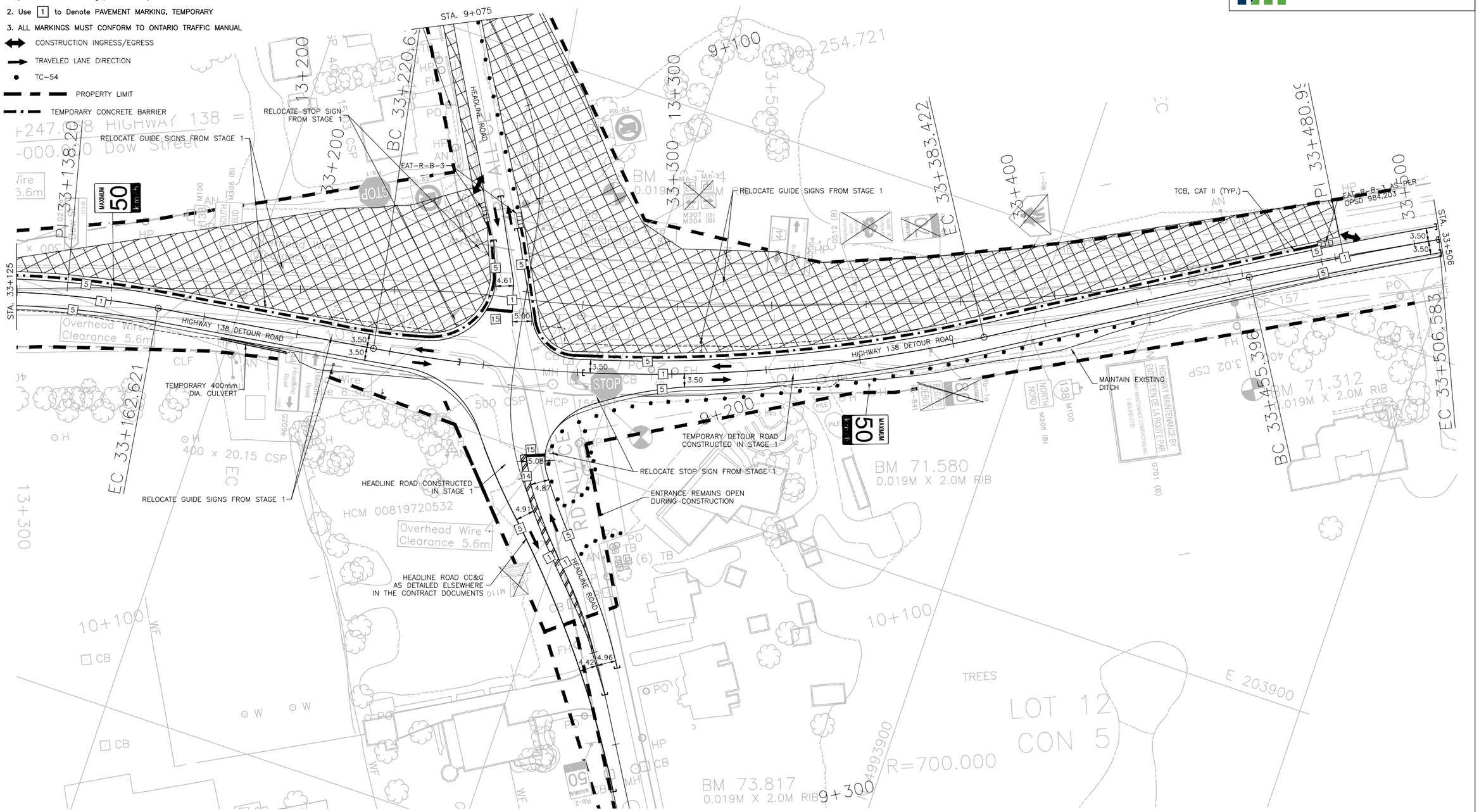
CONT CONTRACT
WP 4043-21-01

STAGE 2

STA 33+125 TO STA 33+506

SHEET 08

MORRISON HERSHFIELD



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CREATED: 2023-10-11
MODIFIED: 2023-10-11 13:32
MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

STAGING LEGEND

1	SOLID YELLOW,10cm
5	SOLID WHITE,10cm
14	SOLID WHITE,45cm
15	SOLID WHITE,60cm
] [	LIMITS OF MARKINGS

UNDER CONSTRUCTION

NOTES:
1. 333, 363, 393, Denotes Pavement Marking Spacing (ie., 3 m line, 3 m gap, 3 m line)
2. Use [1] to Denote PAVEMENT MARKING, TEMPORARY
3. ALL MARKINGS MUST CONFORM TO ONTARIO TRAFFIC MANUAL

CONSTRUCTION INGRESS/EGRESS

TRAVELED LANE DIRECTION

TC-54

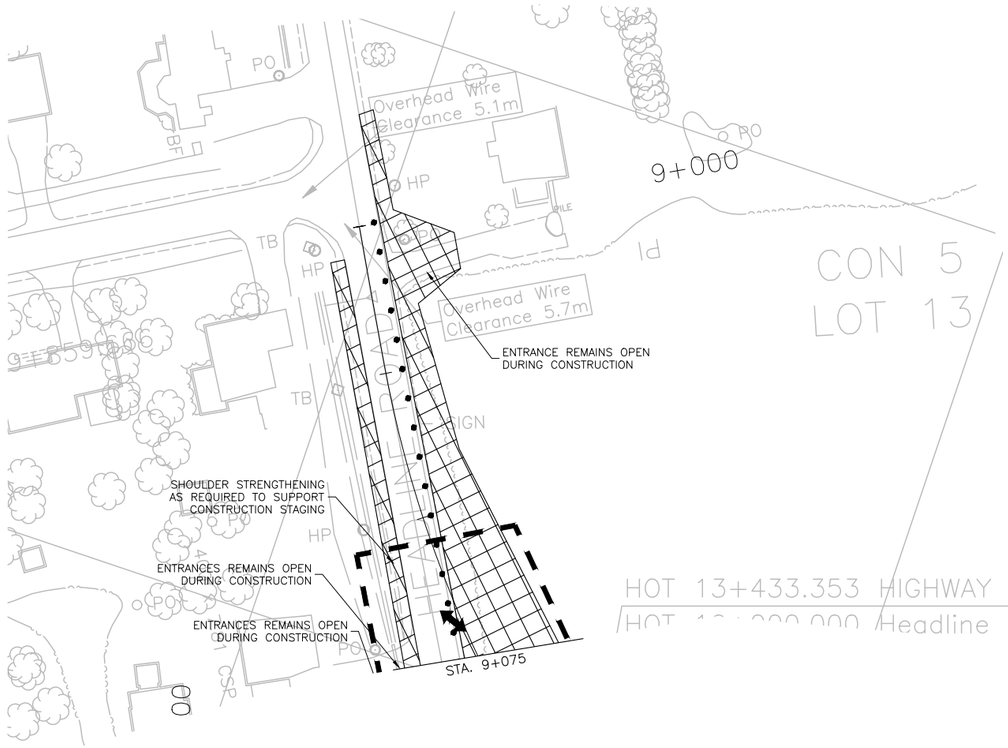
PROPERTY LIMIT

TEMPORARY CONCRETE BARRIER

STAGE 2 – Highway 138 Roundabout	
TRAFFIC	CONSTRUCTION
• SINGLE LANE TRAFFIC IN EACH DIRECTION. • TWO-WAY STOP CONTROLLED MAINTAINED ON HEADLINE ROAD. • ALL DRIVEWAYS TO BE MAINTAINED. • ALL HIGHWAY 138 TRAFFIC DIRECTED TO DETOUR ROAD.	• WIDENING OF HIGHWAY 138 ALONG WEST SIDE TO COMPLETE FILL AND CURBWORKS FOR PROPOSED ROUNDABOUT • SPLITTER ISLANDS TO BE CONSTRUCTED IN THIS STAGE. • WHERE FEASIBLE, ULTIMATE ROADWAY PAVEMENT TIE-INS TO EXISTING ROADWAY ALIGNMENTS TO BE COMPLETED IN THIS STAGE.

NOTES:
A. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE CORRESPONDING 'REMOVALS', 'NEW CONSTRUCTION', AND 'TYPICALS' DRAWINGS.
B. THIS DRAWING DEPICTS THE CONFIGURATION OF HIGHWAY 138 AT HEADLINE ROAD DURING STAGED CONSTRUCTION. THIS DRAWING DOES NOT SHOW ALL TRAFFIC CONTROL DEVICES OR SIGNING THAT MAY BE REQUIRED. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR AND PROVIDE ALL APPROPRIATE SIGNING AND TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH OTM BOOK 7 UNLESS OTHERWISE NOTED.
C. FLARE TEMPORARY CONCRETE BARRIER IN ACCORDANCE WITH MTOD 911.232.
D. THE CONTRACTOR SHALL OBLITERATE ANY EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED TRAFFIC CONFIGURATION IN EACH STAGE. OBLITERATION IS NOT SHOWN ON THE DRAWINGS.
E. EROSION AND SEDIMENT CONTROL AS PER THE CONTRACT DOCUMENTS

METRIC
ALL DIMENSIONS ARE IN METRES



SCALE
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Horizontal

Ontario Ministry of Transportation
CONT CONTRACT
WP 4043-21-01
STAGE 2
STA 9+000 TO STA 9+075
SHEET 09
MORRISON HERSHFIELD

MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09_CAD\07 Sheets\009_201979405_SEQ-Stage2.dwg
CREATED: 2023-10-11 MODIFIED: 2023-10-11 13:33

STAGING LEGEND

1	SOLID YELLOW,10cm
5	SOLID WHITE,10cm
14	SOLID WHITE,45cm
15	SOLID WHITE,60cm
] [	LIMITS OF MARKINGS

NOTES:
1. 333, 363, 393, Denotes Pavement Marking Spacing (ie., 3 m line, 3 m gap, 3 m line)
2. Use [1] to Denote PAVEMENT MARKING, TEMPORARY
3. ALL MARKINGS MUST CONFORM TO ONTARIO TRAFFIC MANUAL

CONSTRUCTION INGRESS/EGRESS

TRAVELED LANE DIRECTION

TC-54

PROPERTY LIMIT

TEMPORARY CONCRETE BARRIER

UNDER CONSTRUCTION

STAGE 2 – Highway 138 Roundabout	
TRAFFIC	CONSTRUCTION
• SINGLE LANE TRAFFIC IN EACH DIRECTION. • TWO-WAY STOP CONTROLLED MAINTAINED ON HEADLINE ROAD. • ALL DRIVEWAYS TO BE MAINTAINED. • ALL HIGHWAY 138 TRAFFIC DIRECTED TO DETOUR ROAD.	• WIDENING OF HIGHWAY 138 ALONG WEST SIDE TO COMPLETE FILL AND CURBWORKS FOR PROPOSED ROUNDABOUT • SPLITTER ISLANDS TO BE CONSTRUCTED IN THIS STAGE. EXCEPT EAST SPLITTER ISLAND. • WHERE FEASIBLE, ULTIMATE ROADWAY PAVEMENT TIE-INS TO EXISTING ROADWAY ALIGNMENTS TO BE COMPLETED IN THIS STAGE.

NOTES:
A. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE CORRESPONDING 'REMOVALS', 'NEW CONSTRUCTION', AND 'TYPICALS' DRAWINGS.
B. THIS DRAWING DEPICTS THE CONFIGURATION OF HIGHWAY 138 AT HEADLINE ROAD DURING STAGED CONSTRUCTION. THIS DRAWING DOES NOT SHOW ALL TRAFFIC CONTROL DEVICES OR SIGNING THAT MAY BE REQUIRED. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR AND PROVIDE ALL APPROPRIATE SIGNING AND TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH OTM BOOK 7 UNLESS OTHERWISE NOTED.
C. FLARE TEMPORARY CONCRETE BARRIER IN ACCORDANCE WITH MTOD 911.232.
D. THE CONTRACTOR SHALL OBLITERATE ANY EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED TRAFFIC CONFIGURATION IN EACH STAGE. OBLITERATION IS NOT SHOWN ON THE DRAWINGS.
E. EROSION AND SEDIMENT CONTROL AS PER THE CONTRACT DOCUMENTS

METRIC
ALL DIMENSIONS ARE IN METRES

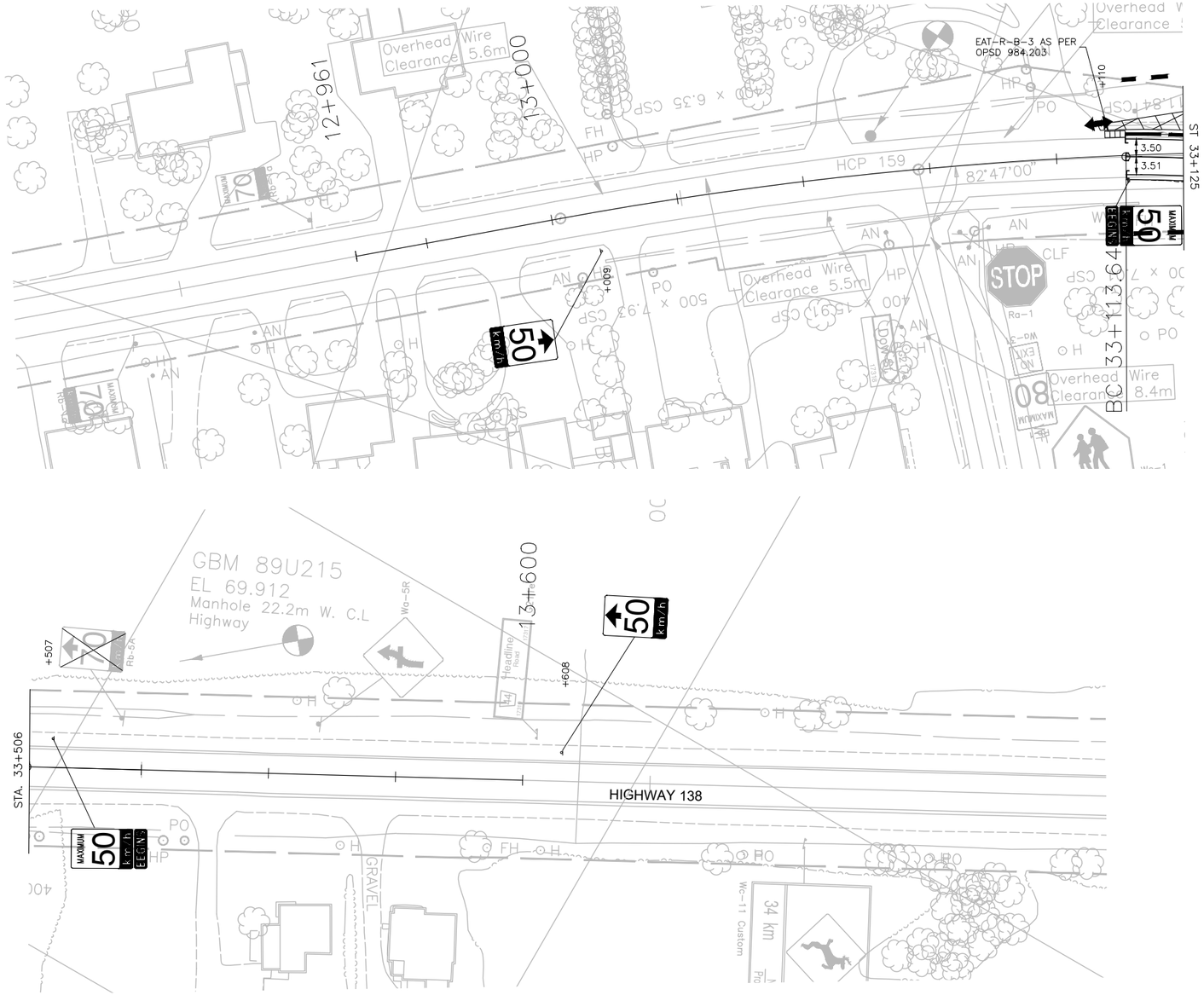
Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

STAGE 2
STA 33+125 TO STA 33+

SHEET
10

MORRISON HERSHFIELD



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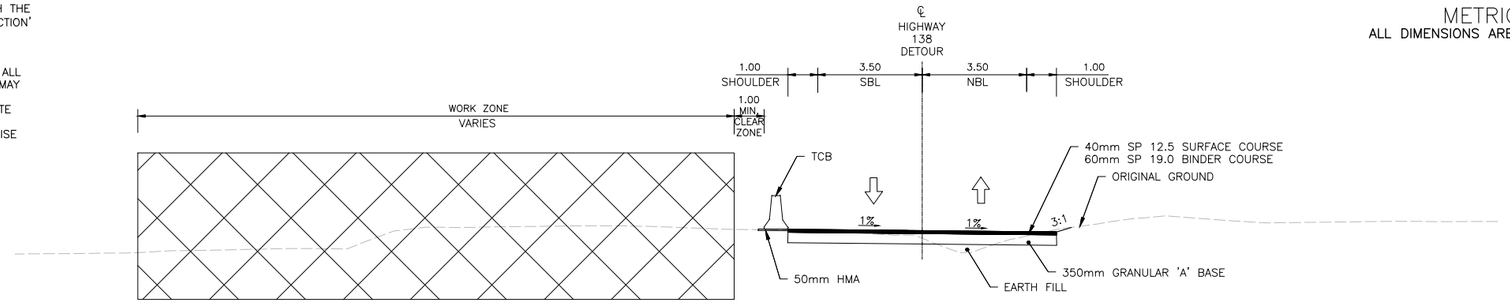
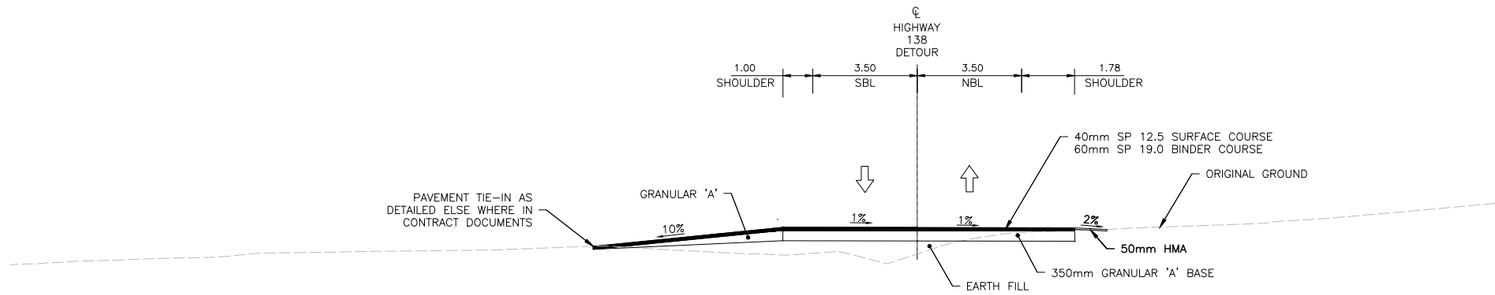
MODIFIED: 2023-10-11 13:35
MINISTRY OF TRANSPORTATION, ONTARIO 2016-10 ANSI-D

NOTES:
A. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE CORRESPONDING 'REMOVALS' AND 'NEW CONSTRUCTION' DRAWINGS.
B. THIS DRAWING DEPICTS THE CONFIGURATION OF HIGHWAY 138 AT HEADLINE ROAD DURING STAGED CONSTRUCTION. THIS DRAWINGS DOES NOT SHOW ALL TRAFFIC CONTROLLED DEVICES OR SIGNING THAT MAY BE REQUIRED. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR AND PROVIDE ALL APPROPRIATE SIGNING AND TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH OTM BOOK 7 UNLESS OTHERWISE NOTED.

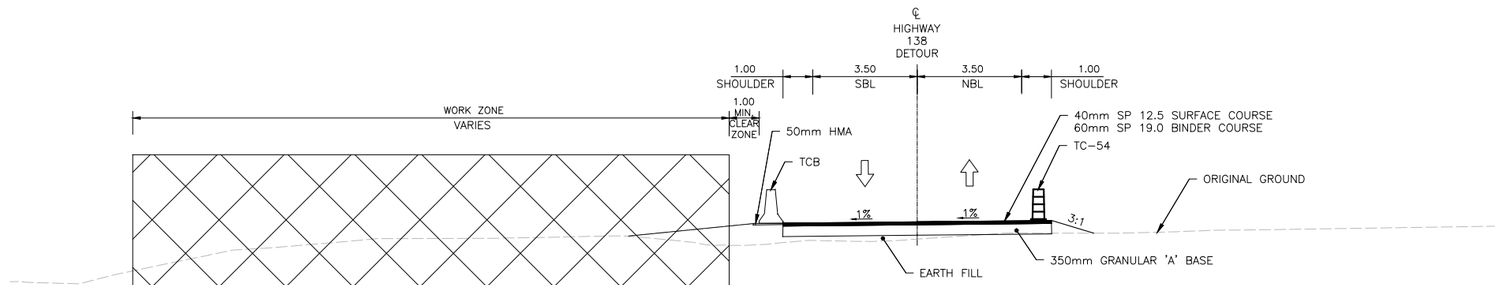
METRIC
ALL DIMENSIONS ARE IN METRES



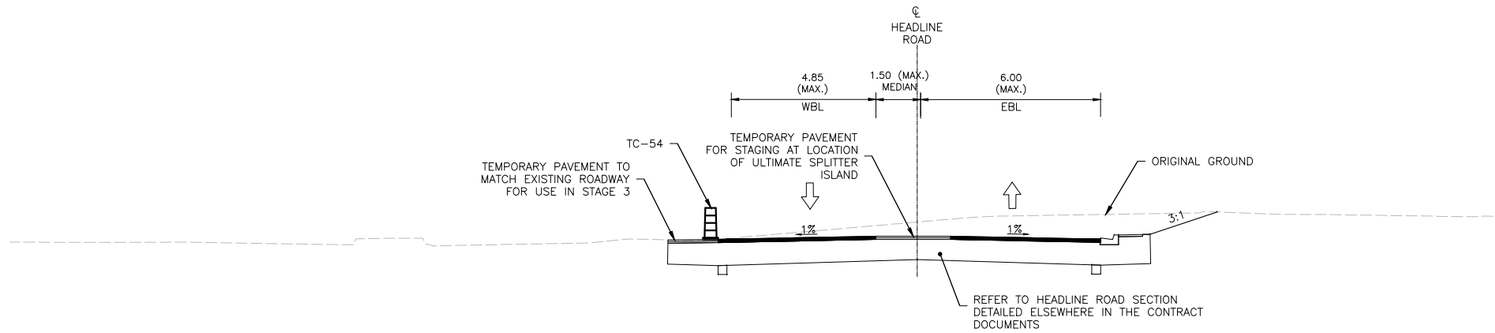
HWY 138 DETOUR – STAGE 2 – SOUTH OF HEADLINE ROAD



HWY 138 DETOUR – STAGE 2 – INTERSECTION OF HEADLINE ROAD



HWY 138 DETOUR – STAGE 2 – NORTH OF HEADLINE ROAD



HEADLINE ROAD – STAGE 2 – TEMPORARY DETOUR ROAD ALIGNMENT

N.T.S

Ontario Ministry of Transportation
CONT CONTRACT
WP 4043-21-01
STAGE 2
TYPICAL SECTIONS
SHEET
11
MORRISON HERSHFIELD

MINISTRY OF TRANSPORTATION, ONTARIO 2016-10 ANSI-D
FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09_CAD\07 Sheets\011_201979405_TYP-ST02.dwg
CREATED: 2023-09-29 MODIFIED: 2023-09-29 10:13

METRIC
ALL DIMENSIONS ARE IN METRES

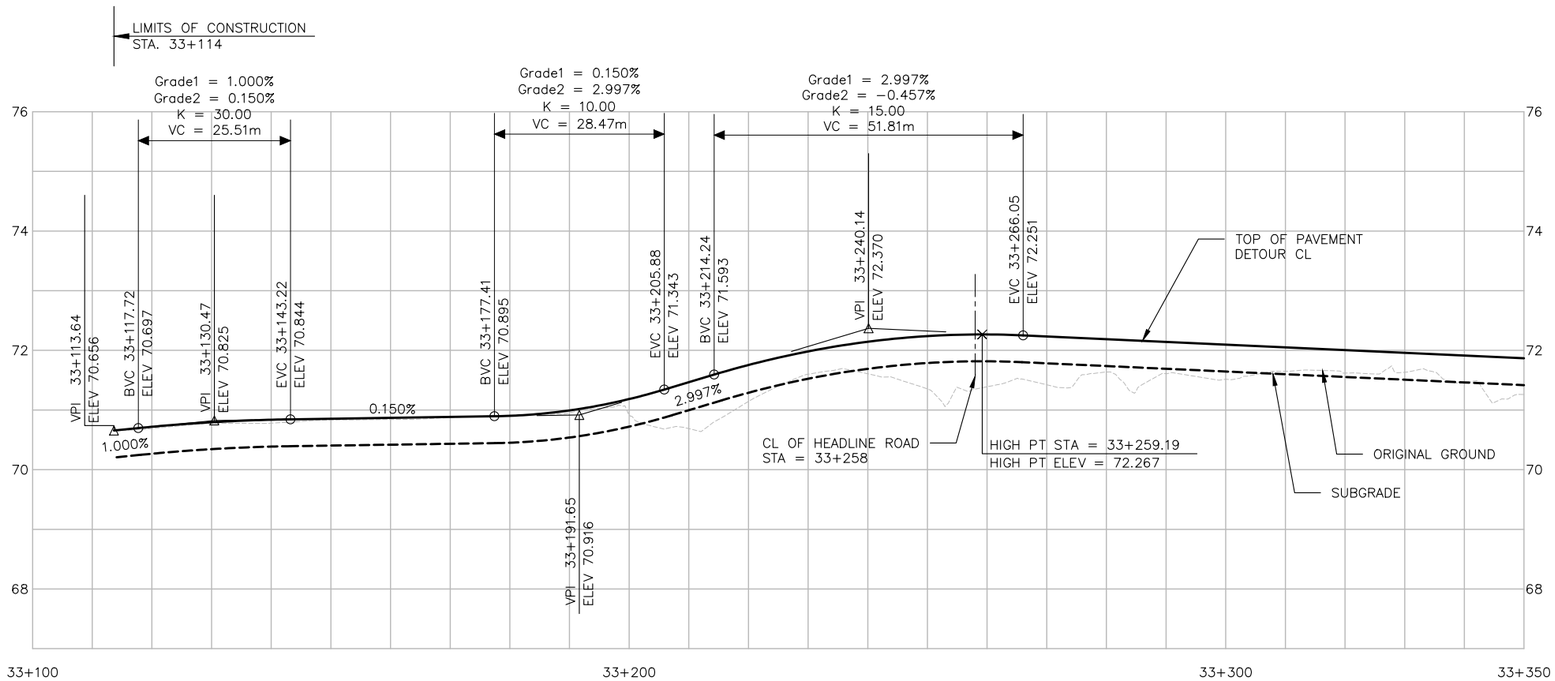
Ontario Ministry of Transportation

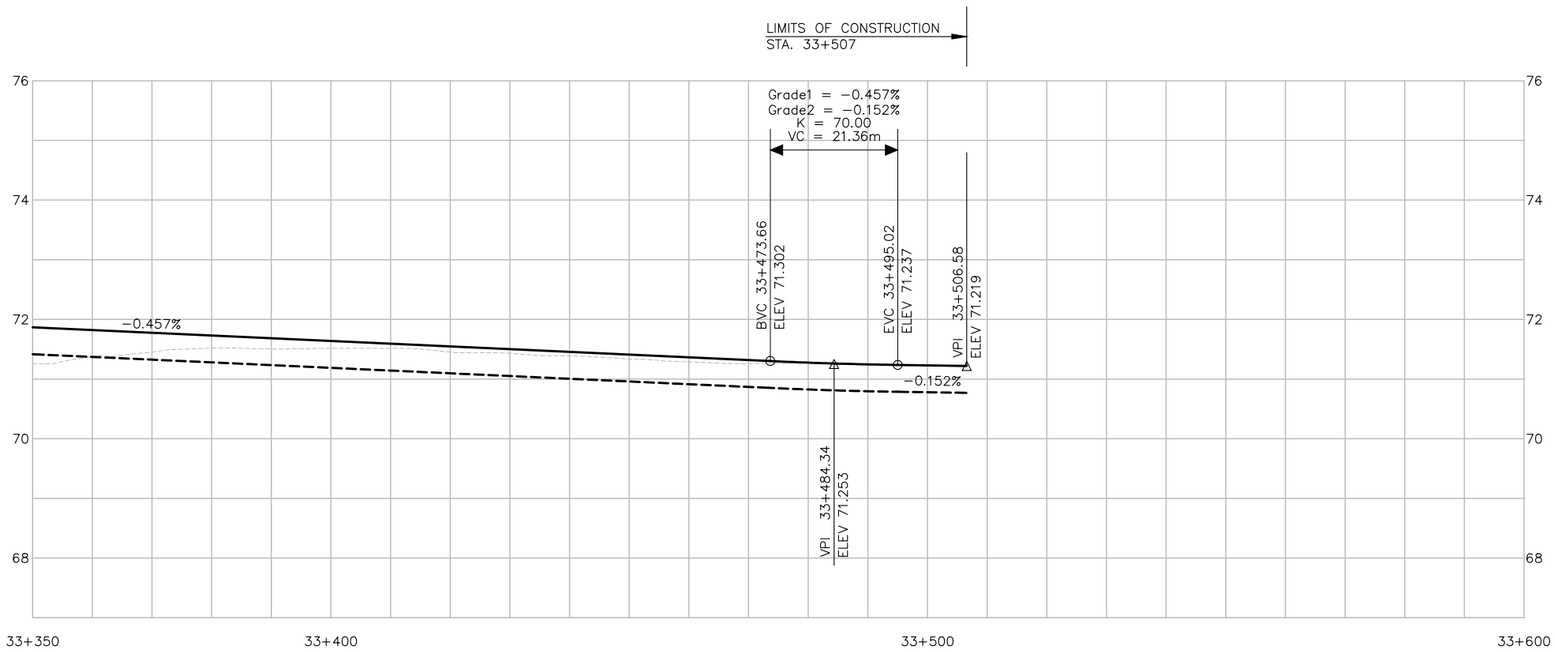
CONT CONTRACT
WP 4043-21-01

HIGHWAY 138 TEMPORARY DETOUR ROAD STAGE 2

SHEET 12

MORRISON HERSHFIELD





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CREATED: 2023-09-29 MODIFIED: 2023-09-29 10:13

MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

STAGING LEGEND

1	SOLID YELLOW,10cm
5	SOLID WHITE,10cm
14	SOLID WHITE,45cm
15	SOLID WHITE,60cm
] [	LIMITS OF MARKINGS

UNDER CONSTRUCTION

NOTES:

1. 333, 363, 393, Denotes Pavement Marking Spacing (ie., 3 m line, 3 m gap, 3 m line)
2. Use [1] to Denote PAVEMENT MARKING, TEMPORARY
3. ALL MARKINGS MUST CONFORM TO ONTARIO TRAFFIC MANUAL

CONSTRUCTION INGRESS/EGRESS

TRAVELED LANE DIRECTION

TC-54

PROPERTY LIMIT

TEMPORARY CONCRETE BARRIER

STAGE 3a – Highway 138 Roundabout	
TRAFFIC	CONSTRUCTION
• DETOUR ROAD IN OPERATION. • ALL DRIVEWAYS TO BE MAINTAINED. • WESTBOUND THROUGH MOVEMENT CLOSED. • ACCESS TO HEADLINE ROAD WEST AS PER DETOUR ROUTE. • SPEED REDUCTION SIGNAGE AS PER STAGE 2	• COMPLETE WORK ON HEADLINE ROAD WEST AND PAVEMENT TIE–INS TO EXISTING IF NOT COMPLETED IN STAGE 2. • COMPLETE ROUNDABOUT TRUCK APRON AND CIRCULATORY ROADWAY.

NOTES:

A. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE CORRESPONDING 'REMOVALS', 'NEW CONSTRUCTION', AND 'TYPICALS' DRAWINGS.
B. THIS DRAWING DEPICTS THE CONFIGURATION OF HIGHWAY 138 AT HEADLINE ROAD DURING STAGED CONSTRUCTION. THIS DRAWING DOES NOT SHOW ALL TRAFFIC CONTROL DEVICES OR SIGNING THAT MAY BE REQUIRED. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR AND PROVIDE ALL APPROPRIATE SIGNING AND TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH OTM BOOK 7 UNLESS OTHERWISE NOTED.
C. FLARE TEMPORARY CONCRETE BARRIER IN ACCORDANCE WITH MTOD 911.232.
D. THE CONTRACTOR SHALL OBLITERATE ANY EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED TRAFFIC CONFIGURATION IN EACH STAGE. OBLITERATION IS NOT SHOWN ON THE DRAWINGS.
E. EROSION AND SEDIMENT CONTROL AS PER THE CONTRACT DOCUMENTS

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation

CONT CONTRACT
WP 4043–21–01

STAGE 3a
STA 9+080 TO STA 9+300

SHEET 13

MORRISON HERSHFIELD

STA. 9+080
UNI–DIRECTIONAL TRAFFIC CONTROLLED VIA TRAFFIC CONTROL PERSONS FOR EMERGENCY VEHICLES ONLY
SHORT DURATION CLOSURES OF DRIVEWAYS SHALL BE COORDINATED WITH PROPERTY OWNER IN ADVANCE OF CLOSURE
CLOSURE OF HEADLINE ROAD REQUIRED TO COMPLETE GRADING AND PAVING OF CIRCULATORY ROADWAY
REMOVE STOP SIGN FROM STAGE 2
EAT–R–B–3 AS PER OPSD 984.203
MAINTAIN GUIDE SIGNS FROM STAGE 2
HIGHWAY 138
HIGHWAY 138 DETOUR ROAD
MAINTAIN GUIDE SIGNS FROM STAGE 2
MAINTAIN STOP SIGN FROM STAGE 2
HEADLINE ROAD CONSTRUCTED IN PREVIOUS STAGE
HEADLINE ROAD CC&G AS DETAILED ELSEWHERE IN THE CONTRACT DOCUMENTS
ENTRANCE REMAINS OPEN DURING CONSTRUCTION
TEMPORARY DETOUR ROAD AS DETAILED ELSEWHERE IN THE CONTRACT DOCUMENTS
CONSTRUCTION ACCESS VIA ULTIMATE HIGHWAY 138 ALIGNMENT (TYP.)
TCB, CAT II
HEADLINE ROAD
MAXIMUM 50 km/h
STOP
Overhead Wire Clearance 5.6m
Overhead Wire Clearance 6.5m
Overhead Wire Clearance 7.5m
Overhead Wire Clearance 8.4m
HCM 00819720532
BM 70.7 0.019M RIB
BM 71.312 0.019M X 2.0M RIB
BM 71.580 2.0M RIB
BM 73.817 0.019M X 2.0M RIB
LOT 12 CON 5
TREES
R=700.000
E 203900
N 4993800
N 4993900
E 204000
13+200
13+300
13+400
13+600
9+100
9+200
9+300
10+100

SCALE
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FILE NAME: X:\Proj\2020\201979405–MTO–Highway 138 Roundabout\09_CAD\07 Sheets\013_201979405_SEQ–Stage3a.dwg
CREATED: 2023–10–11
MODIFIED: 2023–10–11 13:36

MINISTRY OF TRANSPORTATION, ONTARIO ANSI–D 2016–10

STAGING LEGEND

1	SOLID YELLOW,10cm
5	SOLID WHITE,10cm
14	SOLID WHITE,45cm
15	SOLID WHITE,60cm
] [	LIMITS OF MARKINGS

UNDER CONSTRUCTION

NOTES:

1. 333, 363, 393, Denotes Pavement Marking Spacing (ie., 3 m line, 3 m gap, 3 m line)
2. Use [1] to Denote PAVEMENT MARKING, TEMPORARY
3. ALL MARKINGS MUST CONFORM TO ONTARIO TRAFFIC MANUAL

CONSTRUCTION INGRESS/EGRESS

TRAVELED LANE DIRECTION

TC-54

PROPERTY LIMIT

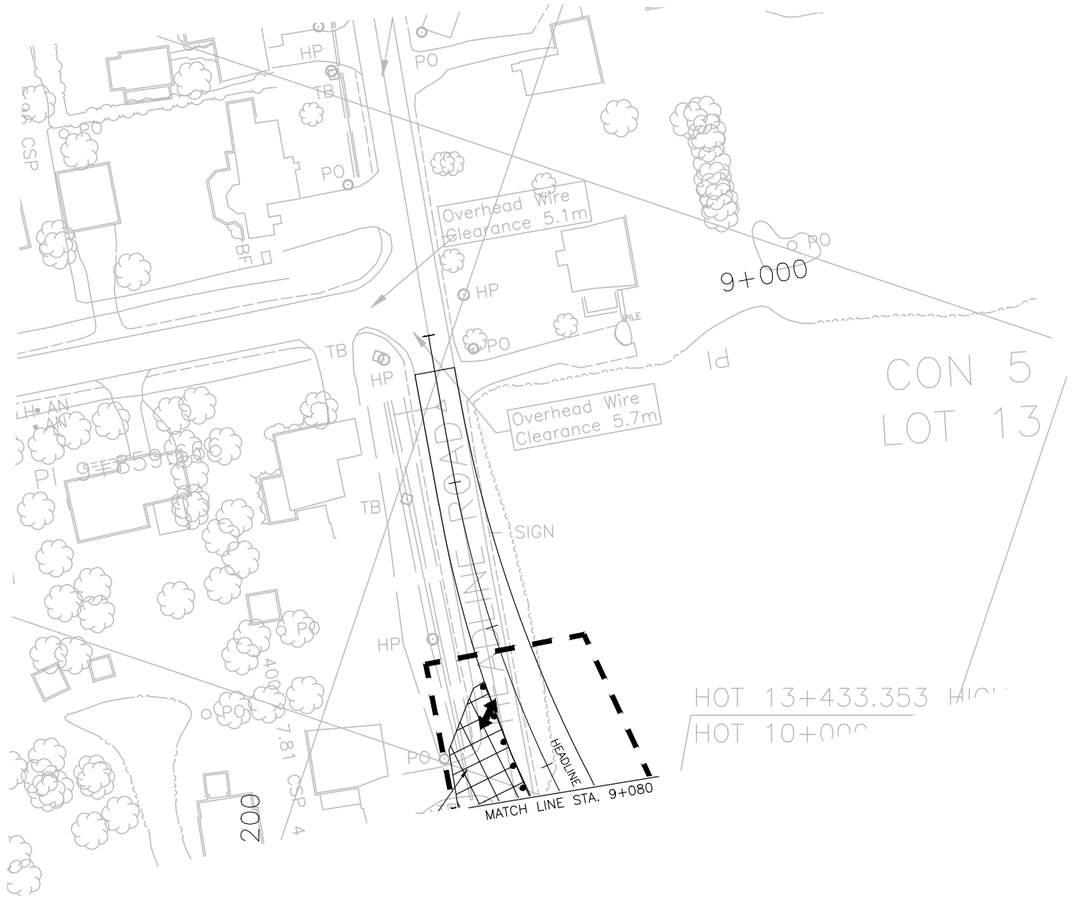
TEMPORARY CONCRETE BARRIER

STAGE 3a – Highway 138 Roundabout	
TRAFFIC	CONSTRUCTION
• DETOUR ROAD IN OPERATION. • ALL DRIVEWAYS TO BE MAINTAINED. • WESTBOUND THROUGH MOVEMENT CLOSED. • ACCESS TO HEADLINE ROAD WEST TO BE CONTROLLED BY TRAFFIC CONTROL PERSONS VIA ULTIMATE HIGHWAY 138 ALIGNMENT.	• COMPLETE WORK ON HEADLINE ROAD WEST AND PAVEMENT TIE-INS TO EXISTING IF NOT COMPLETED IN STAGE 2. • COMPLETE ROUNDABOUT TRUCK APRON AND CIRCULATORY ROADWAY.

NOTES:

A. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE CORRESPONDING 'REMOVALS', 'NEW CONSTRUCTION', AND 'TYPICALS' DRAWINGS.
B. THIS DRAWING DEPICTS THE CONFIGURATION OF HIGHWAY 138 AT HEADLINE ROAD DURING STAGED CONSTRUCTION. THIS DRAWING DOES NOT SHOW ALL TRAFFIC CONTROL DEVICES OR SIGNING THAT MAY BE REQUIRED. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR AND PROVIDE ALL APPROPRIATE SIGNING AND TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH OTM BOOK 7 UNLESS OTHERWISE NOTED.
C. FLARE TEMPORARY CONCRETE BARRIER IN ACCORDANCE WITH MTOD 911.232.
D. THE CONTRACTOR SHALL OBLITERATE ANY EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED TRAFFIC CONFIGURATION IN EACH STAGE. OBLITERATION IS NOT SHOWN ON THE DRAWINGS.
E. EROSION AND SEDIMENT CONTROL AS PER THE CONTRACT DOCUMENTS

METRIC
ALL DIMENSIONS ARE IN METRES



Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

STAGE 3a

STA 9+000 TO STA 9+080

SHEET 14

MORRISON HERSHFIELD

SCALE
5m 0 10m
Horizontal

2016-10 ANSI-D MINISTRY OF TRANSPORTATION, ONTARIO

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\014_201979405_SEQ-Stage3a.dwg
CREATED: 2023-10-11 MODIFIED: 2023-10-11 13:38

METRIC
ALL DIMENSIONS ARE IN METRES

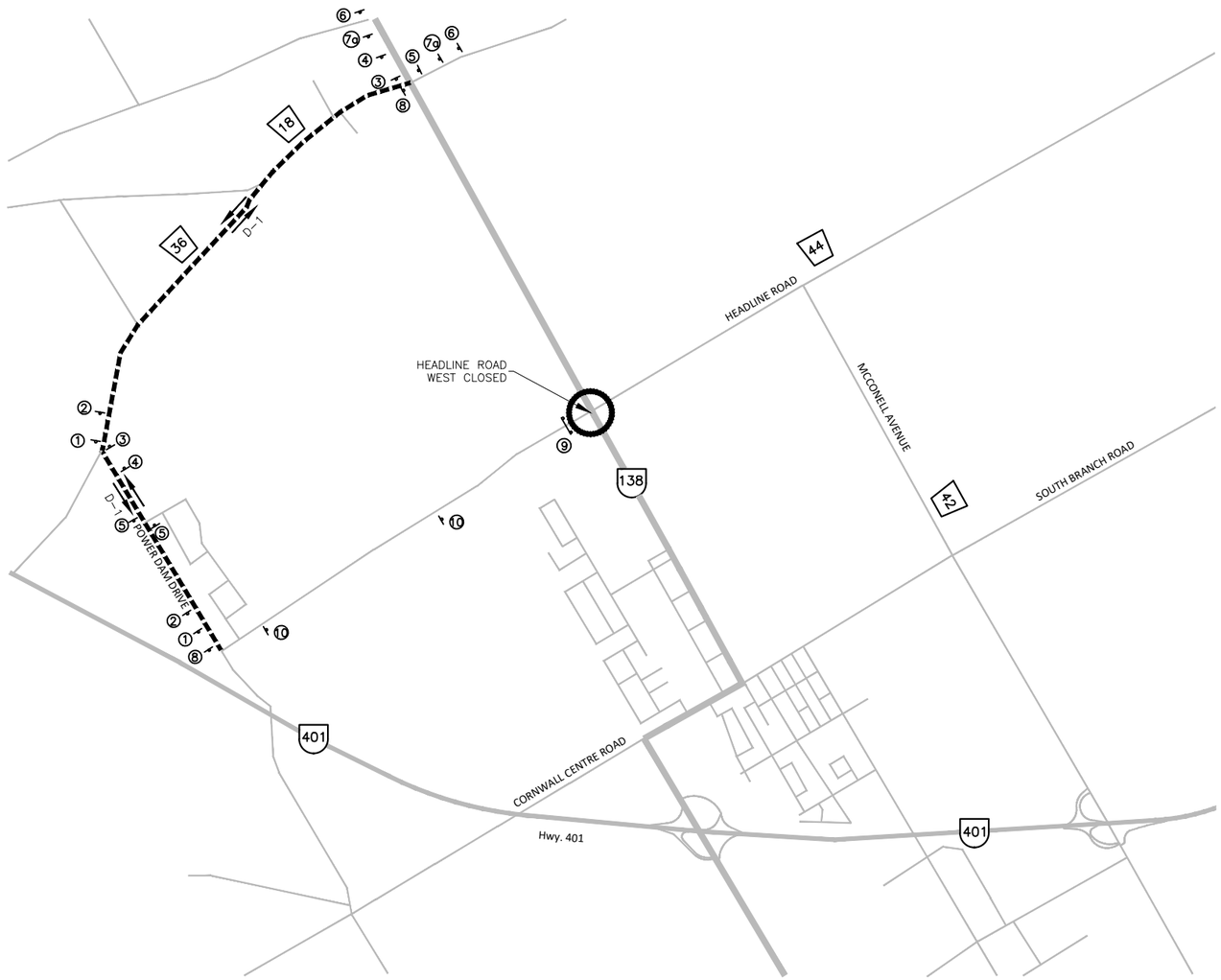
Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

STAGE 3a
DETOUR ROUTE – D1

SHEET
15

MORRISON HERSHFIELD



NOTES:
A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF DETOUR SIGNAGE IN ACCORDANCE WITH ONTARIO TRAFFIC MANUAL BOOK 7 CONDITIONS.
B. ALL DETOUR SIGNAGE TO BE BILINGUAL.
C. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUPPLY, INSTALLATION AND MAINTENANCE OF ALL TEMPORARY SIGNAGE AND ADDITIONAL SIGNAGE REQUIRED BY OTM BOOK 7.
D. THE DRAWING IS SCHEMATIC ONLY. SIGN PLACEMENT AND SPACING BETWEEN SIGNS SHALL BE IN ACCORDANCE WITH THE DIMENSIONS SPECIFIED IN OTM BOOK 7.
E. SIGNS (9) AND (10) ARE TO REMAIN FOR BOTH D-1 AND D-2 ROUTES.
F. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER DETOUR SHEETS WITHIN THE CONTRACT DOCUMENTS.

DETOUR ROUTE DETAILS:
- DETOUR 1 IS FROM HIGHWAY 138 NORTH TO HEADLINE ROAD WEST
- DETOUR 2 IS FROM HEADLINE ROAD EAST TO HEADLINE ROAD WEST
- WHERE DETOUR ROUTE IS LABELED D2, CHANGE TC-10 SIGNS TO READ "D-2"

① DETOUR D-1 — TC-10BL
② DETOUR D-1 — TC-10AL
③ DETOUR D-1 — TC-10BR
④ DETOUR D-1 — TC-10AR
⑤ DETOUR D-1 — TC-10C
⑥ DETOUR — TC-5
⑦a TC-67: CONSTRUCTION / HEADLINE WEST CLOSED/FERMÉE AT/ À HIGHWAY 138 / FOLLOW/SUIVRE (detour D-1) — TC-10
⑧ DETOUR D-1 ENDS — TC-10D
⑨ ROAD CLOSED — TC-46 / TC-53A
⑩ NO EXIT / SANS ISSUE — TC-7L
ROAD CLOSED/ROUTE BARRÉE — TC-7tA
LOCAL TRAFFIC ONLY/TRAFIC LOCAL UNIQUEMENT — TC-7tB

N.T.S

FILE NAME: X:\Proj\2020\20197940S-MTO-Highway 138 Roundabout\09_CAD\07 Sheets\015_20197940S_SEQ-Stage3a Detour Route.dwg
CREATED: 2023-10-02 MODIFIED: 2023-10-02 18:12
MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

METRIC
ALL DIMENSIONS ARE IN METRES

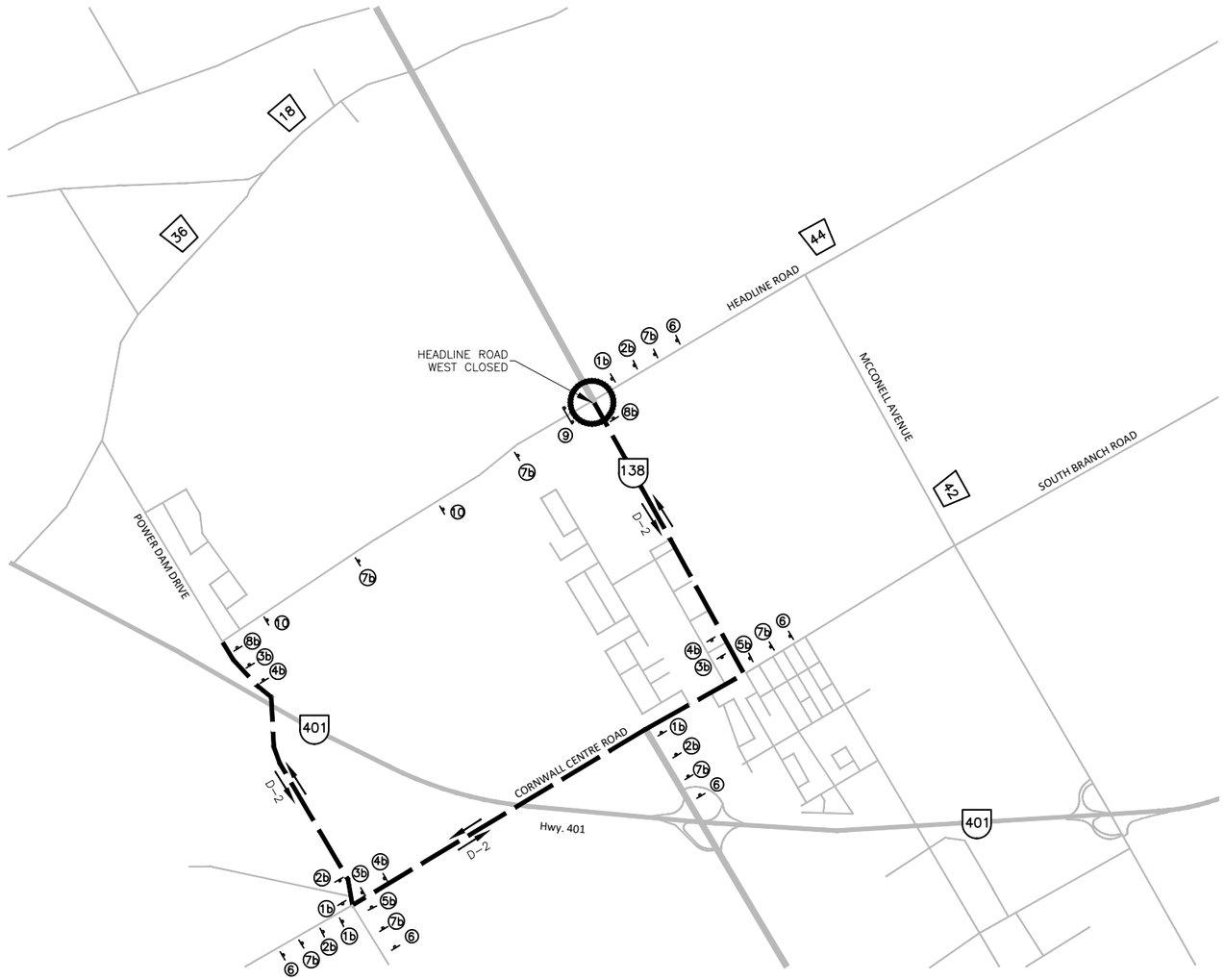
Ontario Ministry of Transportation

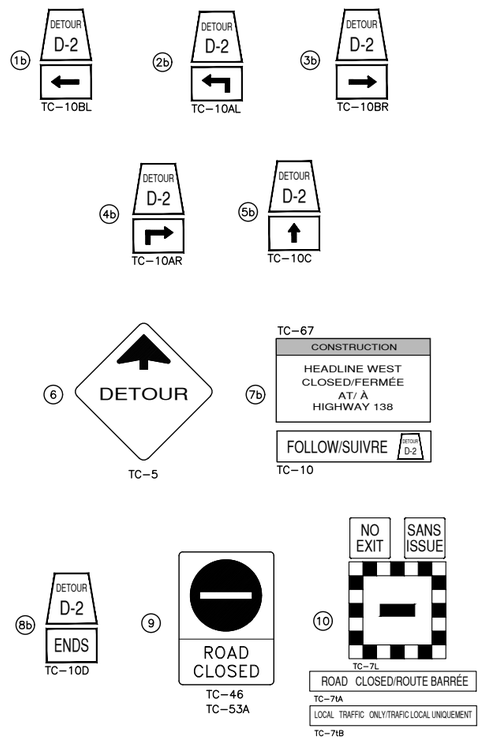
CONT CONTRACT
WP 4043-21-01

STAGE 3a
DETOUR ROUTE – D2

SHEET
16

MORRISON HERSHFIELD





NOTES:
A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF DETOUR SIGNAGE IN ACCORDANCE WITH ONTARIO TRAFFIC MANUAL BOOK 7 CONDITIONS.
B. ALL DETOUR SIGNAGE TO BE BILINGUAL.
C. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUPPLY, INSTALLATION AND MAINTENANCE OF ALL TEMPORARY SIGNAGE AND ADDITIONAL SIGNAGE REQUIRED BY OTM BOOK 7.
D. THE DRAWING IS SCHEMATIC ONLY. SIGN PLACEMENT AND SPACING BETWEEN SIGNS SHALL BE IN ACCORDANCE WITH THE DIMENSIONS SPECIFIED IN OTM BOOK 7.
E. SIGNS (9) AND (10) ARE TO REMAIN FOR BOTH D-1 AND D-2 ROUTES.
F. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER DETOUR SHEETS WITHIN THE CONTRACT DOCUMENTS.

DETOUR ROUTE DETAILS:
– DETOUR 1 IS FROM HIGHWAY 138 NORTH TO HEADLINE ROAD WEST
– DETOUR 2 IS FROM HEADLINE ROAD EAST TO HEADLINE ROAD WEST
– WHERE DETOUR ROUTE IS LABELED D2, CHANGE TC-10 SIGNS TO READ "D-2"

N.T.S

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\016_201979405_SEC-Stage3a Detour Route.dwg
CREATED: 2023-10-02 MODIFIED: 2023-10-02 18:11
MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

STAGING LEGEND

1	SOLID YELLOW,10cm
5	SOLID WHITE,10cm
14	SOLID WHITE,45cm
15	SOLID WHITE,60cm
] [	LIMITS OF MARKINGS

UNDER CONSTRUCTION

NOTES:

1. 333, 363, 393, Denotes Pavement Marking Spacing (ie., 3 m line, 3 m gap, 3 m line)
2. Use [1] to Denote PAVEMENT MARKING, TEMPORARY
3. ALL MARKINGS MUST CONFORM TO ONTARIO TRAFFIC MANUAL

CONSTRUCTION INGRESS/EGRESS

TRAVELED LANE DIRECTION

TC-54

PROPERTY LIMIT

TEMPORARY CONCRETE BARRIER

STAGE 3c – Highway 138 Roundabout	
TRAFFIC	CONSTRUCTION
• DETOUR ROAD CLOSED. • ALL TRAFFIC USING CIRCULATORY ROADWAY. • ALL DRIVEWAYS TO BE MAINTAINED. • SHORT TERM LANE CLOSURES FOR HEADLINE ROAD EAST REQUIRED TO COMPLETE SPLITTER ISLAND. • ULTIMATE SIGNAGE COMPLETED IN THIS STAGE. • SPEED REDUCTION SIGNAGE AS PER STAGE 2	• COMPLETE HEADLINE ROAD EAST SPLITTER ISLAND.

NOTES:

A. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE CORRESPONDING 'REMOVALS', 'NEW CONSTRUCTION', AND 'TYPICALS' DRAWINGS.
B. THIS DRAWING DEPICTS THE CONFIGURATION OF HIGHWAY 138 AT HEADLINE ROAD DURING STAGED CONSTRUCTION. THIS DRAWING DOES NOT SHOW ALL TRAFFIC CONTROL DEVICES OR SIGNING THAT MAY BE REQUIRED. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR AND PROVIDE ALL APPROPRIATE SIGNING AND TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH OTM BOOK 7 UNLESS OTHERWISE NOTED.
C. FLARE TEMPORARY CONCRETE BARRIER IN ACCORDANCE WITH MTOD 911.232.
D. THE CONTRACTOR SHALL OBLITERATE ANY EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED TRAFFIC CONFIGURATION IN EACH STAGE. OBLITERATION IS NOT SHOWN ON THE DRAWINGS.
E. EROSION AND SEDIMENT CONTROL AS PER THE CONTRACT DOCUMENTS

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

STAGE 3b

STA 9+080 TO STA 9+300

SHEET 17

MORRISON HERSHFIELD

HEADLINE ROAD CONSTRUCTED IN PREVIOUS STAGE

ENTRANCE REMAINS OPEN DURING CONSTRUCTION

HEADLINE ROAD

HIGHWAY 138

HIGHWAY 138 DETOUR ROAD CLOSED

BM 70.744
0.019M X 2.0M RIB

BM 71.312
0.019M X 2.0M RIB

BM 71.580
0.019M X 2.0M RIB

BM 73.817
0.019M X 2.0M RIB

HCM 00819720532

HCP 157

HCP 158

LOT 12
CON 5

TREES

R=700.000

74°24'24"

13+200

13+300

13+400

9+100

9+200

9+300

E 203900

N 4993900

SCALE
5m 0 10m
Horizontal

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CREATED: 2023-10-11
MODIFIED: 2023-10-11 13:39

MINISTRY OF TRANSPORTATION, ONTARIO 2016-10 ANSI-D

STAGING LEGEND

1	SOLID YELLOW,10cm
5	SOLID WHITE,10cm
14	SOLID WHITE,45cm
15	SOLID WHITE,60cm
] [	LIMITS OF MARKINGS

UNDER CONSTRUCTION

NOTES:
1. 333, 363, 393, Denotes Pavement Marking Spacing (ie., 3 m line, 3 m gap, 3 m line)
2. Use [1] to Denote PAVEMENT MARKING, TEMPORARY
3. ALL MARKINGS MUST CONFORM TO ONTARIO TRAFFIC MANUAL

CONSTRUCTION INGRESS/EGRESS
TRAVELED LANE DIRECTION
TC-54
PROPERTY LIMIT
TEMPORARY CONCRETE BARRIER

STAGE 4 – Highway 138 Roundabout	
TRAFFIC	CONSTRUCTION
• ROUNDABOUT IN OPERATION. • MINOR INTERRUPTIONS TO DRIVEWAYS EXPECTED TO COMPLETE FINAL GRADING. • DETOUR ROAD CLOSED.	• FINAL PAVEMENT TO BE PLACED. • FINAL PAVEMENT MARKINGS TO BE PLACED. • PERMANENT PAVEMENT MARKINGS COMPLETED. • REMAINING DRIVEWAYS TO BE TIED IN AND SIDEWALKS. • DETOUR ROAD AND TEMPORARY WIDENINGS TO BE REMOVED. • COMPLETE LANDSCAPING AND PRIVATE PROPERTY REINSTATEMENTS ON HEADLINE ROAD.

NOTES:
A. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE CORRESPONDING 'REMOVALS', 'NEW CONSTRUCTION', AND 'TYPICALS' DRAWINGS.
B. THIS DRAWING DEPICTS THE CONFIGURATION OF HIGHWAY 138 AT HEADLINE ROAD DURING STAGED CONSTRUCTION. THIS DRAWING DOES NOT SHOW ALL TRAFFIC CONTROL DEVICES OR SIGNING THAT MAY BE REQUIRED. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR AND PROVIDE ALL APPROPRIATE SIGNING AND TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH OTM BOOK 7 UNLESS OTHERWISE NOTED.
C. FLARE TEMPORARY CONCRETE BARRIER IN ACCORDANCE WITH MTOD 911.232.
D. THE CONTRACTOR SHALL OBLITERATE ANY EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED TRAFFIC CONFIGURATION IN EACH STAGE. OBLITERATION IS NOT SHOWN ON THE DRAWINGS.
E. EROSION AND SEDIMENT CONTROL AS PER THE CONTRACT DOCUMENTS

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

STAGE 4
STA 9+080 TO STA 9+300

SHEET 18

MORRISON HERSHFIELD

STA. 9+080
HEADLINE ROAD
13+200
13+300
9+100
10+200
10+100
HIGHWAY 138
HOC 13+247.058 HIGHWAY 138 =
HOT 10+000.000 Dow Street
Overhead Wire Clearance 5.6m
Overhead Wire Clearance 6.5m
Overhead Wire Clearance 7.5m
Overhead Wire Clearance 8.4m
BM 70.744
0.019M X 2.0M RIB
BM 71.312
0.019M X 2.0M RIB
BM 71.580
0.019M X 2.0M RIB
ACCESS DURING CONSTRUCTION SHALL BE MAINTAINED AT ALL TIMES
REINSTATEMENT OF PRIVATE PROPERTY SHALL BE AS DETAILED ELSEWHERE IN THE CONTRACT DOCUMENTS
SHORT DURATION CLOSURES OF DRIVEWAYS SHALL BE COORDINATED WITH PROPERTY OWNER IN ADVANCE OF CLOSURE
HCM 00819720532
TREES
LOT 12
CON 5
R=700.000
74°24'24"
5.94
4.33
E 203800
E 203900
N 4993900
300 x 11.84 CSP
400 x 7.01 CSP
400 x 3.02 CSP
15.03 CSP

SCALE
5m 0 10m
Horizontal

FILE NAME: X:\Proj\2020\2019794O5-MTO-Highway 138 Roundabout\09_CAD\07 Sheets\018_2019794O5_SEQ-Stage4.dwg
CREATED: 2023-10-11
MODIFIED: 2023-10-11 13:40

MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

STAGING LEGEND

1	SOLID YELLOW,10cm
5	SOLID WHITE,10cm
14	SOLID WHITE,45cm
15	SOLID WHITE,60cm
] [	LIMITS OF MARKINGS

NOTES:
1. 333, 363, 393, Denotes Pavement Marking Spacing (ie., 3 m line, 3 m gap, 3 m line)
2. Use [1] to Denote PAVEMENT MARKING, TEMPORARY
3. ALL MARKINGS MUST CONFORM TO ONTARIO TRAFFIC MANUAL

CONSTRUCTION INGRESS/EGRESS

TRAVELED LANE DIRECTION

TC-54

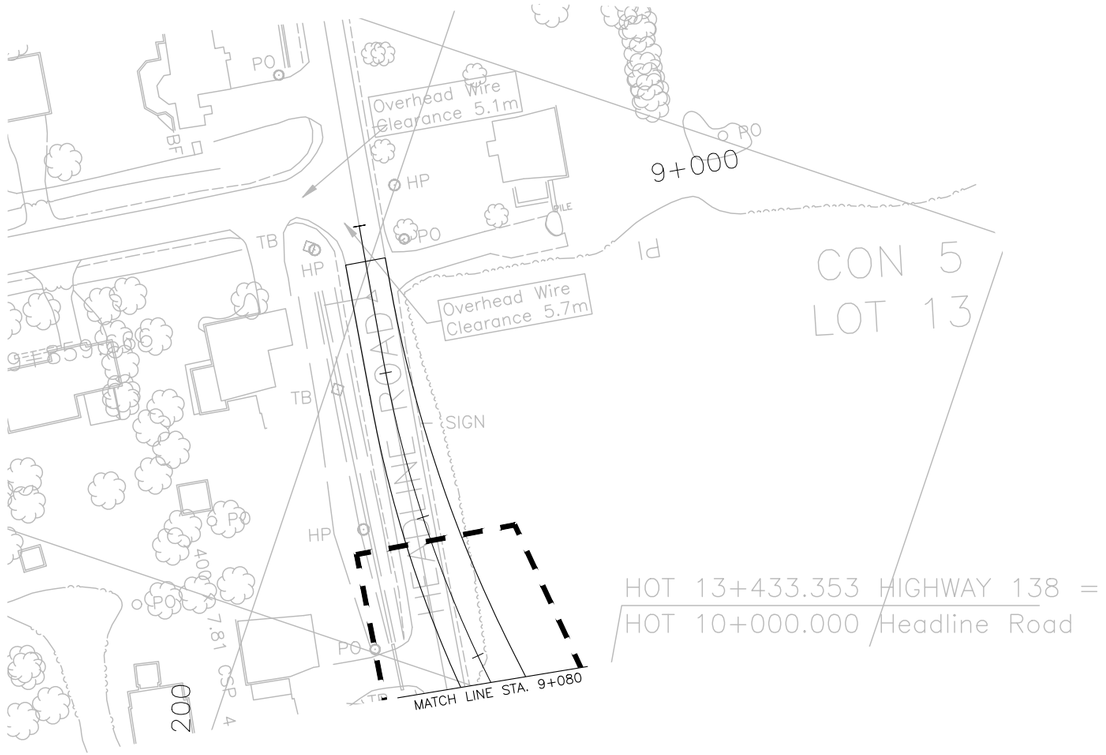
PROPERTY LIMIT

TEMPORARY CONCRETE BARRIER

STAGE 4 – Highway 138 Roundabout	
TRAFFIC	CONSTRUCTION
• ROUNDABOUT IN OPERATION. • MINOR INTERRUPTIONS TO DRIVEWAYS EXPECTED TO COMPLETE FINAL GRADING. • DETOUR ROAD CLOSED.	• FINAL PAVEMENT TO BE PLACED. • PERMANENT PAVEMENT MARKINGS COMPLETED. • REMAINING DRIVEWAYS TO BE TIED IN AND SIDEWALKS. • DETOUR ROAD AND TEMPORARY WIDENINGS TO BE REMOVED. • COMPLETE LANDSCAPING AND PRIVATE PROPERTY REINSTATEMENTS ON HEADLINE ROAD.

NOTES:
A. THIS DRAWING TO BE READ IN CONJUNCTION WITH THE CORRESPONDING 'REMOVALS', 'NEW CONSTRUCTION', AND 'TYPICALS' DRAWINGS.
B. THIS DRAWING DEPICTS THE CONFIGURATION OF HIGHWAY 138 AT HEADLINE ROAD DURING STAGED CONSTRUCTION. THIS DRAWING DOES NOT SHOW ALL TRAFFIC CONTROL DEVICES OR SIGNING THAT MAY BE REQUIRED. THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR AND PROVIDE ALL APPROPRIATE SIGNING AND TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH OTM BOOK 7 UNLESS OTHERWISE NOTED.
C. FLARE TEMPORARY CONCRETE BARRIER IN ACCORDANCE WITH MTOD 911.232.
D. THE CONTRACTOR SHALL OBLITERATE ANY EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED TRAFFIC CONFIGURATION IN EACH STAGE. OBLITERATION IS NOT SHOWN ON THE DRAWINGS.
E. EROSION AND SEDIMENT CONTROL AS PER THE CONTRACT DOCUMENTS

METRIC
ALL DIMENSIONS ARE IN METRES



SCALE
5m 0 10m
Horizontal

Ontario Ministry of Transportation
CONT CONTRACT
WP 4043-21-01
STAGE 4
STA 9+000 TO STA 9+080
SHEET 19

MORRISON HERSHFIELD

MINISTRY OF TRANSPORTATION, ONTARIO 2016-10 ANSI-D

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CREATED: 2023-10-11 MODIFIED: 2023-10-11 13:41

SUPPLEMENTARY LEGEND:

- REMOVAL OF ASPHALT PAVEMENT FULL DEPTH (INCLUDING ASPHALT SIDEWALK)
- REMOVAL OF ASPHALT PAVEMENT PARTIAL DEPTH
- REMOVAL OF CONCRETE PAVEMENT FULL DEPTH
- CLEARING AND GRUBBING
- CLEARING AND GRUBBING (INDIVIDUAL TREES/BUSHES)

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

REMOVALS
STA 13+098 TO STA 13+431

SHEET 20

MORRISON HERSHFIELD

NOTES:
A. REFER TO STAGING DRAWINGS AND QUANTITY SHEETS FOR WATER VALVE ADJUSTMENTS

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\020_201979405_REM.dwg
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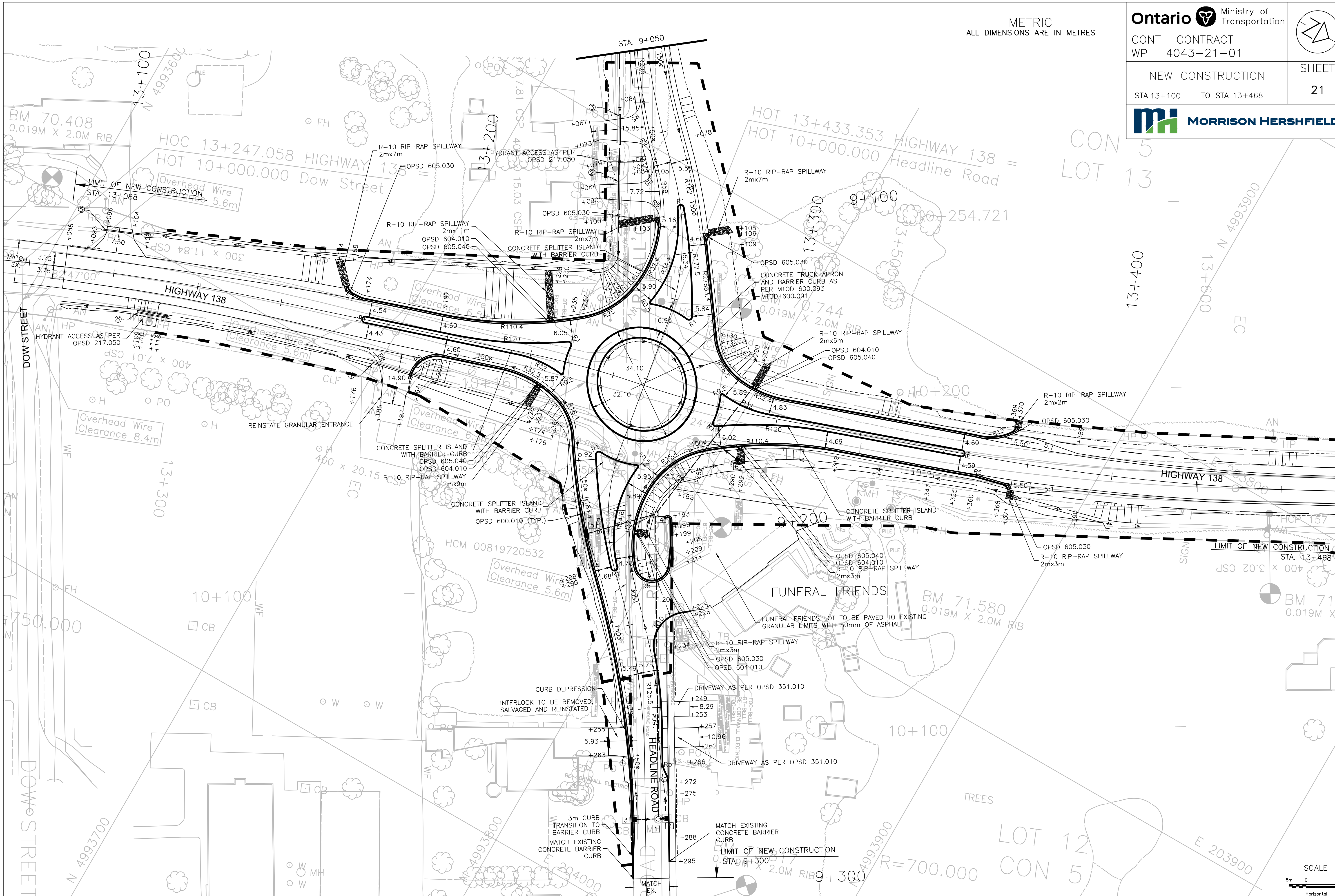
MODIFIED: 2023-10-11 13:43
MINISTRY OF TRANSPORTATION, ONTARIO
ANSI-D 2016-10



MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

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CREATED: 2023-10-11 MODIFIED: 2023-10-11 13:44

SUPPLEMENTARY LEGEND:

- REMOVAL OF ASPHALT PAVEMENT FULL DEPTH (INCLUDING ASPHALT SIDEWALK
- REMOVAL OF ASPHALT PAVEMENT PARTIAL DEPTH
- REMOVAL OF CONCRETE PAVEMENT FULL DEPTH
- CLEARING AND GRUBBING
- CLEARING AND GRUBBING (INDIVIDUAL TREES/BUSHES)

METRIC
ALL DIMENSIONS ARE IN METRES

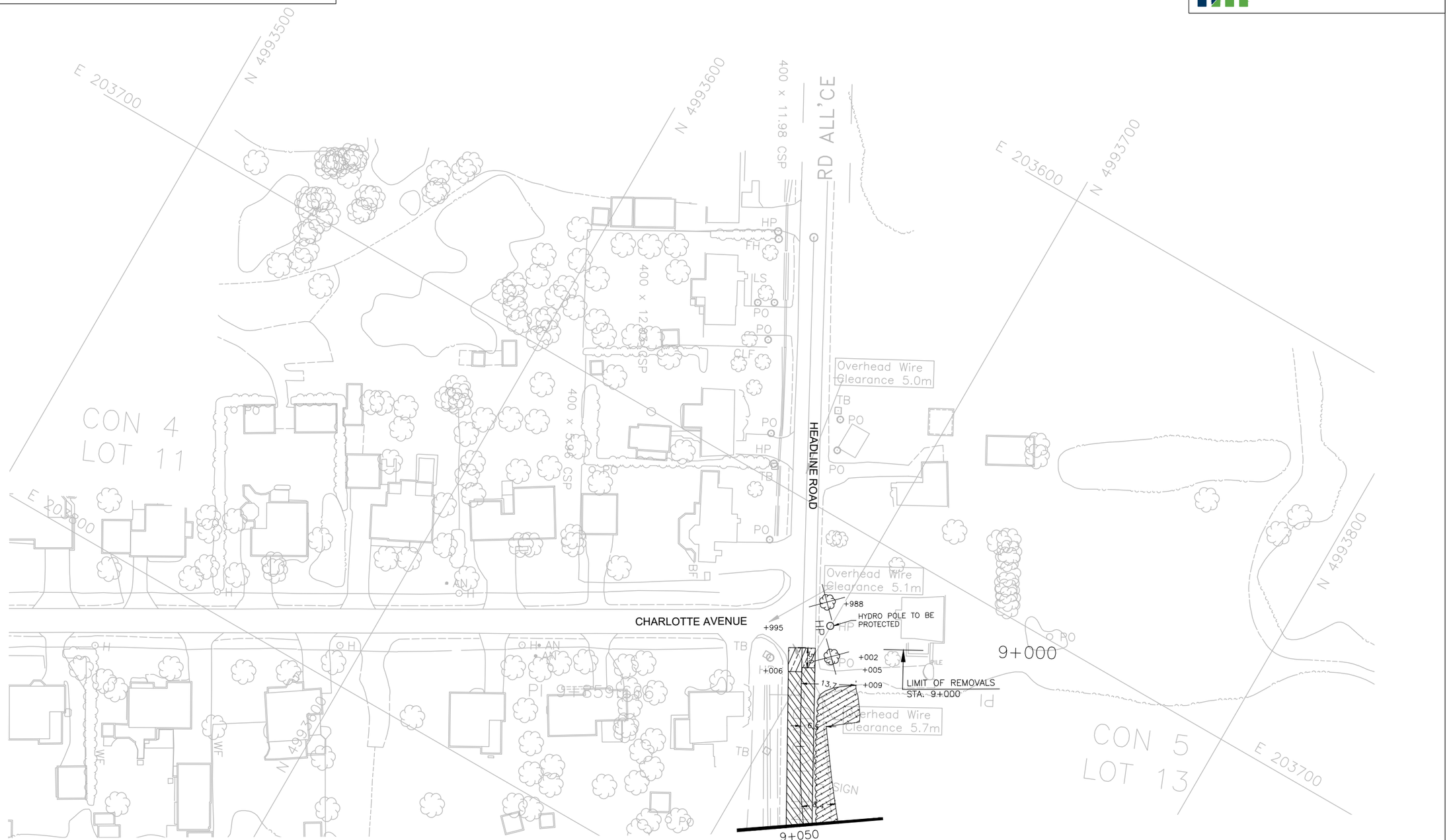
Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

REMOVALS
STA 8+972 TO STA 9+050

SHEET 22

MORRISON HERSHFIELD



SCALE
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Horizontal

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CREATED: 2023-10-11
MODIFIED: 2023-10-11 13:45

MINISTRY OF TRANSPORTATION, ONTARIO
MNS-D 2016-10

METRIC
ALL DIMENSIONS ARE IN METRES

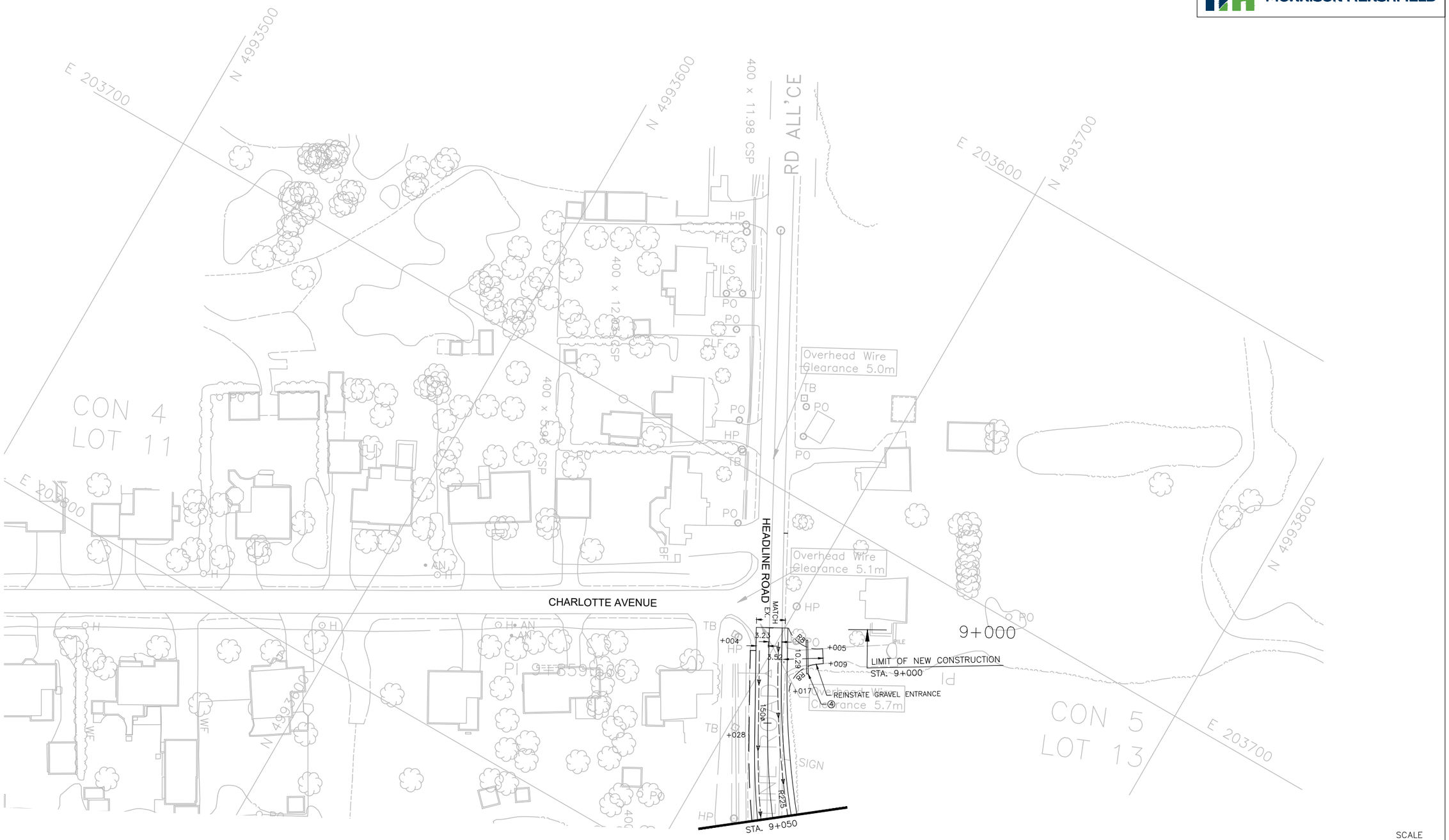
Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

NEW CONSTRUCTION
STA 8+975 TO STA 9+050

SHEET
23

MORRISON HERSHFIELD



SCALE
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MINISTRY OF TRANSPORTATION, ONTARIO AMS-D 2016-10

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CREATED: 2023-10-11 MODIFIED: 2023-10-11 13:46

GENERAL NOTES:

1. COORDINATES ARE IN MTM ZONE 9 (78°- 75° WEST LONGITUDE) NAD-83 (ORIGINAL)
2. THE POSITION OF POLE LINES, CONDUITS, GAS MAINS, WATER MAINS, SEWERS AND OTHER UNDERGROUND AND ABOVE GROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWING, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM THEMSELVES OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING AND PROTECTION ANY EXISTING UTILITIES, AS REQUIRED, IN ACCORDANCE WITH THE UTILITY OWNERS' REQUIREMENTS. CONTRACTOR IS REQUIRED TO OBTAIN LOCATES IN ADVANCE OF EXCAVATION WORK, AND FORWARD COPIES OF THE LOCATES TO THE CONSULTANT AND THE OWNER PRIOR TO EXCAVATION. HAND EXCAVATION IS REQUIRED PER UTILITY OWNER'S REQUIREMENTS. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITY ELEVATIONS AT CONNECTION AND CROSSING LOCATIONS PRIOR TO CONSTRUCTION AND ADVISE THE CONTRACT ADMINISTRATOR OF ANY DISCREPANCIES.
3. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF EXISTING WORK AND ALL DETAILS ON SITE AND REPORT ANY DISCREPANCIES TO CONTRACT ADMINISTRATOR BEFORE PROCEEDING WITH WORK.
5. ALL WORKS SHALL BE IN ACCORDANCE WITH THE MINISTRY OF ENVIRONMENT GUIDELINES, STANDARDS, PROCEDURES, AND SPECIFICATIONS FOR DRINKING-WATER SYSTEMS.
6. ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) & STANDARD SPECIFICATIONS (OPSS) SHALL APPLY TO THE CONTRACT.
7. INSTALL CATHODIC PROTECTION ON ALL EXPOSED WATERMAIN (EX. AND PROP.) AS PER OPSD 1109.010 AND 1109.011.
8. INSTALL BUTTERFLY VALVES FOR 400mm DIAMETER WATERMAIN. INSTALL GATE VALVES FOR ALL WATERMAIN UNDER 400mm DIAMETER. PROVIDE VALVE RESTRAINT PER DETAIL '1'.
9. INSTALL HYDRANTS PER OPSD 1105.010.
10. FOR ALL VALVES TO BE ABANDONED, ENSURE VALVES ARE FULLY OPEN AND LEAVE VALVES IN-PLACE WITH BACKFILL PER OPSS 510.
11. ADJUST ALL IRON WORKS PER OPSD 704.010 TO INTERIM AND FINAL CONDITIONS AS REQUIRED.

WATERMAIN ISOLATIONS:

12. PROVIDE MINIMUM TWO (2) WEEKS NOTICE FOR SCHEDULING ANY SHUTDOWNS.
13. ALL WATER INFRASTRUCTURE IS OWNED BY TOWNSHIP OF SOUTH STORMONT. ALL VALVES SHALL BE OPERATED BY TOWNSHIP OF SOUTH STORMONT.
14. ALL WOK ON LIVE WATERMAINS SHALL BE COMPLETED BY CONTRACTOR UNDER SUPERVISION OF TOWNSHIP OF SOUTH STORMONT WATER SYSTEM OPERATORS.
15. MAXIMUM SHUTDOWN DURATION IS EIGHT (8) HOURS. MAXIMUM OF TWO (2) SHUTDOWNS PER WEEK.

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

WATERMAIN RELOCATION

STA 13+100 TO STA 13+400

SHEET 24

MORRISON HERSHFIELD

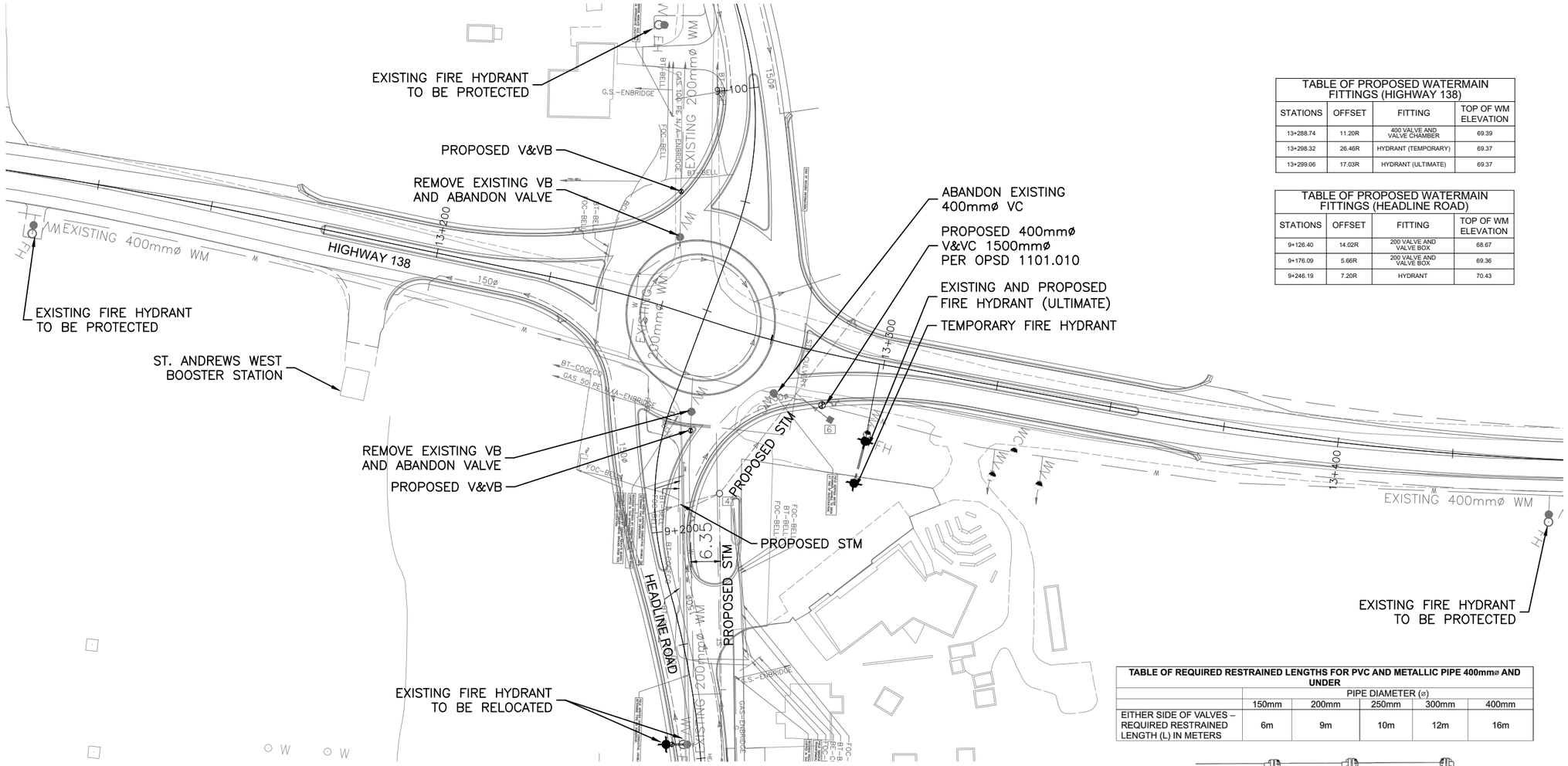


TABLE OF PROPOSED WATERMAIN FITTINGS (HIGHWAY 138)

STATIONS	OFFSET	FITTING	TOP OF WM ELEVATION
13+288.74	11.20R	400 VALVE AND VALVE CHAMBER	69.39
13+298.32	26.46R	HYDRANT (TEMPORARY)	69.37
13+299.06	17.03R	HYDRANT (ULTIMATE)	69.37

TABLE OF PROPOSED WATERMAIN FITTINGS (HEADLINE ROAD)

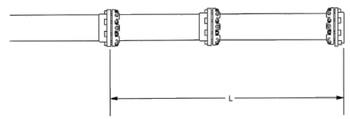
STATIONS	OFFSET	FITTING	TOP OF WM ELEVATION
9+126.40	14.02R	200 VALVE AND VALVE BOX	68.67
9+176.09	5.66R	200 VALVE AND VALVE BOX	69.36
9+246.19	7.20R	HYDRANT	70.43

SYMBOLS

UTILITIES	EXISTING	PROPOSED	REMOVALS ADJUST	REMOVALS REMOVE
WATERMAIN				
PLAN WATERMAIN				
PROFILE WATERMAIN	EX 200mmØ WM			
VALVE & VALVE BOX				
VALVE & VALVE CHAMBER				
HYDRANT				

TABLE OF REQUIRED RESTRAINED LENGTHS FOR PVC AND METALLIC PIPE 400mmø AND UNDER

	PIPE DIAMETER (ø)				
	150mm	200mm	250mm	300mm	400mm
EITHER SIDE OF VALVES – REQUIRED RESTRAINED LENGTH (L) IN METERS	6m	9m	10m	12m	16m



DEAD ENDS, CAPS PLUGS AND ISOLATION VALVES

NOTES:

1. ANY JOINT THAT FALLS WITHIN THE RECOMMENDED LENGTH (L) SHALL BE RESTRAINED.
2. TO REDUCE THE NUMBER OF RESTRAINERS REQUIRED THE USE OF FULL PIPE LENGTHS IS RECOMMENDED IN THESE AREAS.

DETAIL '1' - REQUIRED RESTRAINED LENGTHS
N.T.S.

SCALE
10m 0 20m
Horizontal

MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10
FILE NAME: X:\Proj\2020\2019794O5-MTO-Highway 138 Roundabout\09_CAD\07 Sheets\024_2019794O5_Watermain Relocation.dwg
CREATED: 2023-10-02
MODIFIED: 2023-10-02 17:11

METRIC
ALL DIMENSIONS ARE IN METRES

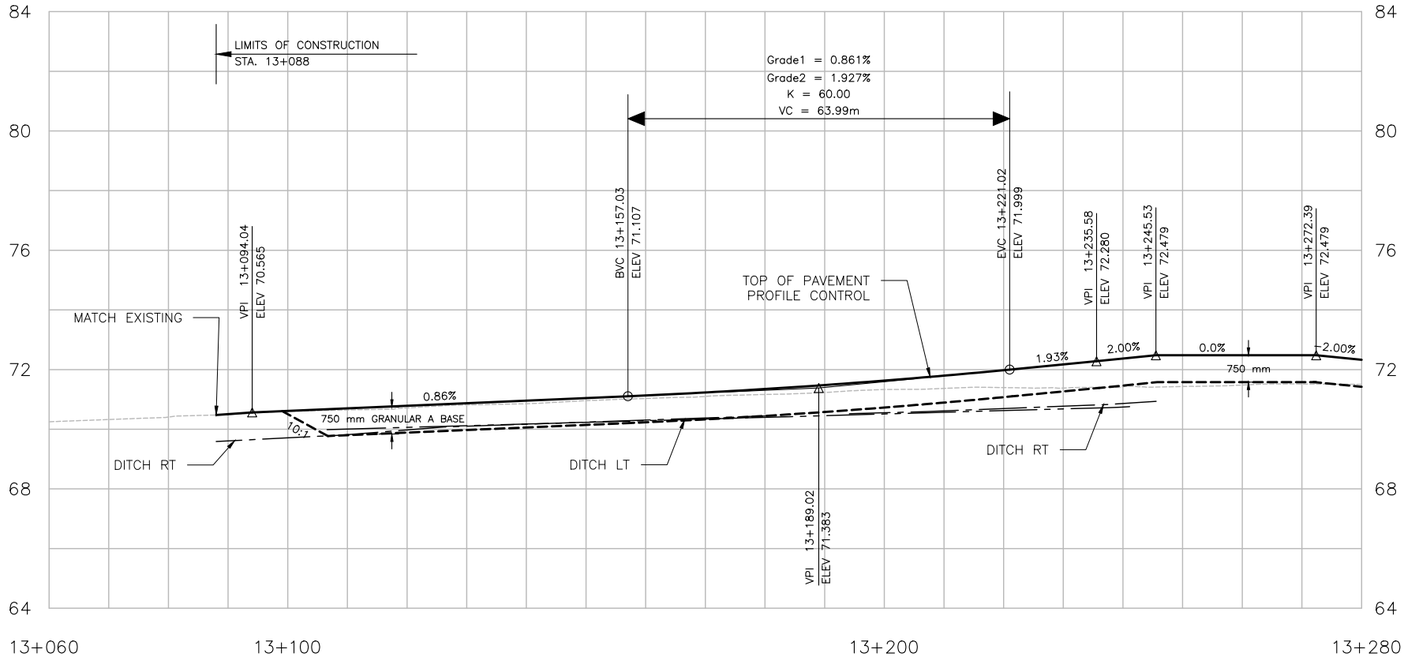
Ontario Ministry of Transportation

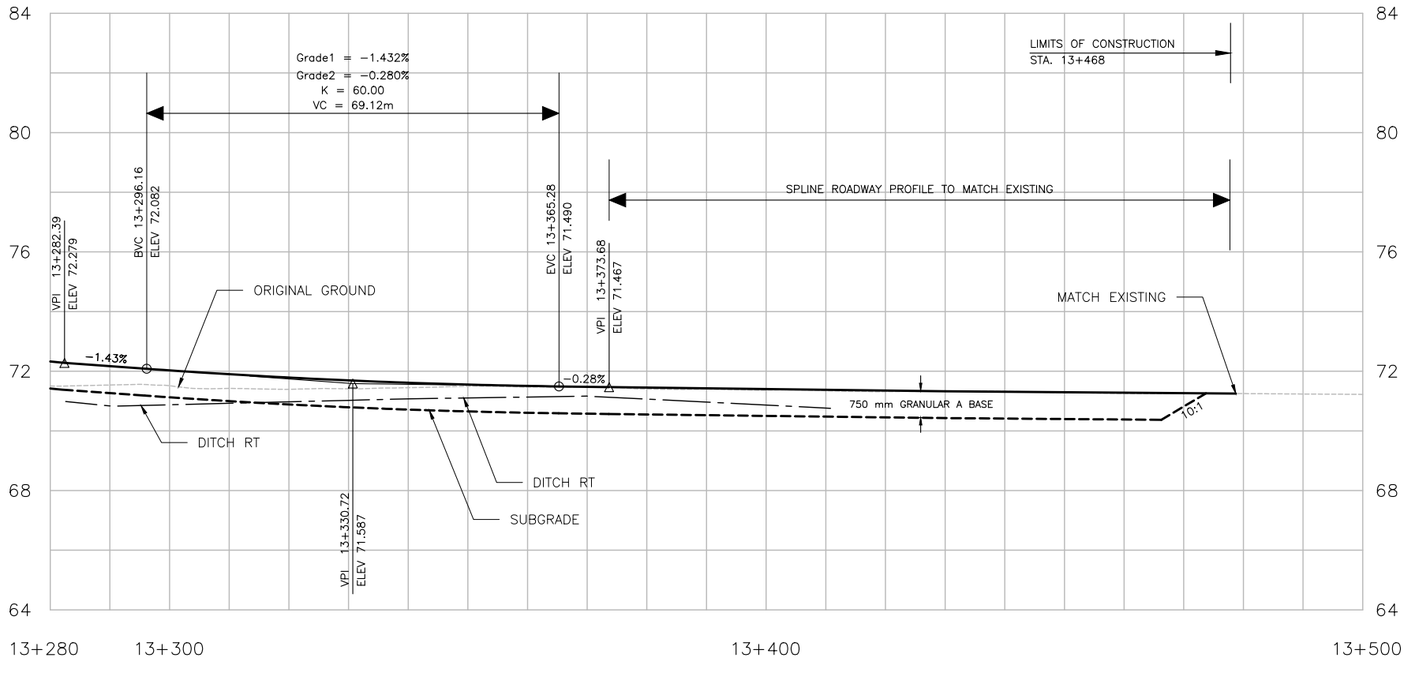
CONT CONTRACT
WP 4043-21-01

PROFILE
HIGHWAY 138
STA 13+060 TO STA 13+500

SHEET
25

MORRISON HERSHFIELD





SCALE
5m 0 10m
Horizontal
0.5 0 1.0
Vertical

FILE NAME: X:\Proj\2020\20197940S-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\025_20197940S_Profile 1 - Hwy 138.dwg
CREATED: 2023-10-12
MODIFIED: 2023-10-12 10:26

MINISTRY OF TRANSPORTATION, ONTARIO 2016-10
MSS-D

METRIC
ALL DIMENSIONS ARE IN METRES

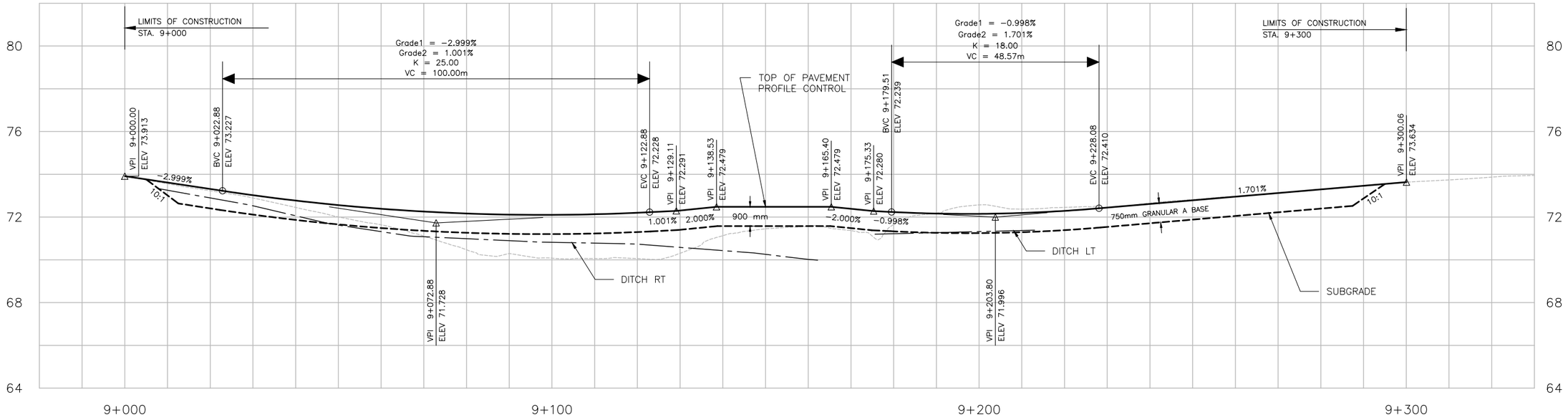
Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

PROFILE
HEADLINE ROAD
STA 9+000 TO STA 9+300

SHEET
26

MORRISON HERSHFIELD



SCALE
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Horizontal
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Vertical

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CREATED: 2023-10-12 MODIFIED: 2023-10-12 10:26

MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation

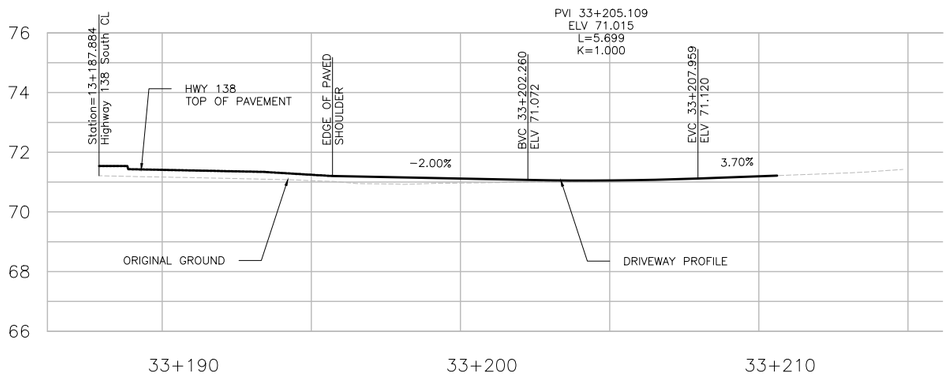
CONT CONTRACT
WP 4043-21-01

PROFILES
DRIVEWAYS
STA TO STA

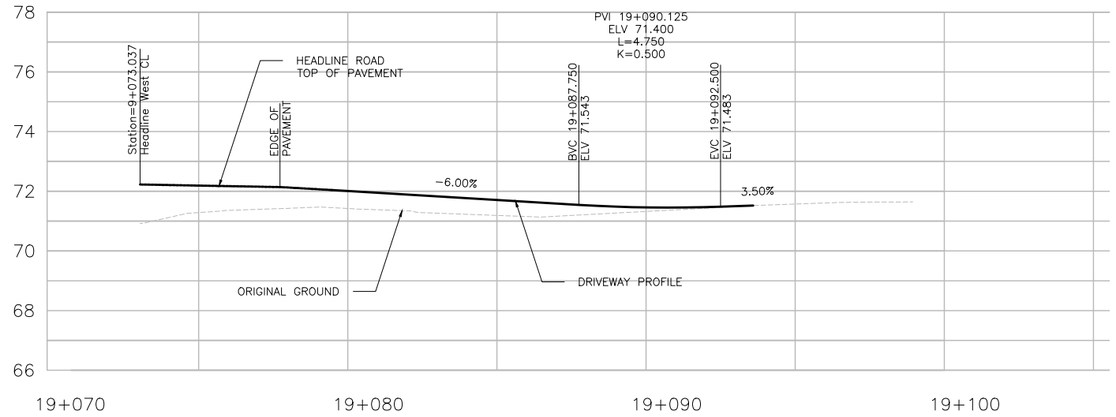
SHEET
27

MORRISON HERSHFIELD

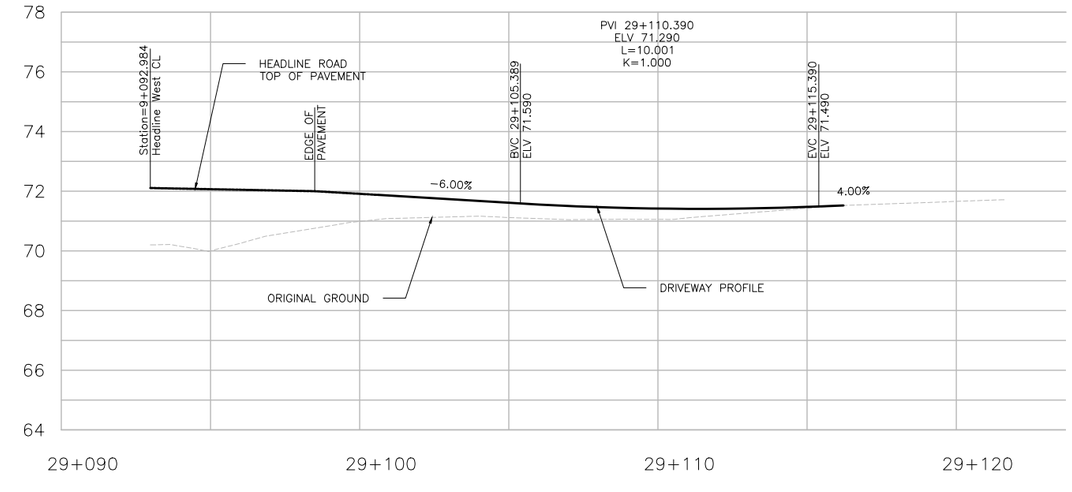
Entrance #1 – 13+187.884 RT



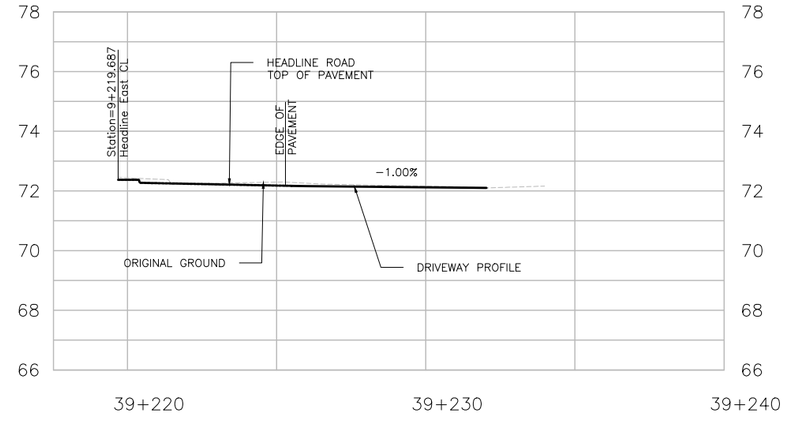
Entrance #2 – 9+073.037 RT



Entrance #3 – 9+092.984 RT



Entrance #4 – 9+219.687 LT



SCALE
1m 0 2m
Horizontal
1m 0 2m
Vertical

FILE NAME: X:\Proj\2020\2019794O5-MTO-Highway 138 Roundabout\09_CAD\07 Sheets\027_2019794O5_Profile 3 - Drwy.dwg
CREATED: 2023-10-02 MODIFIED: 2023-10-02 16:56

MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09_CAD\07 Sheets\028_201979405_Profile 4 - Drwy.dwg
CREATED: 2023-10-02 MODIFIED: 2023-10-02 16:55
MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation

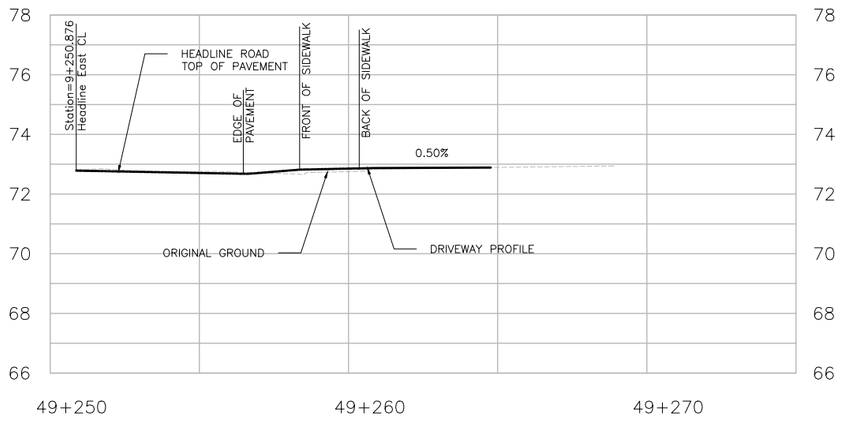
CONT CONTRACT
WP 4043-21-01

PROFILES
DRIVEWAYS
STA TO STA

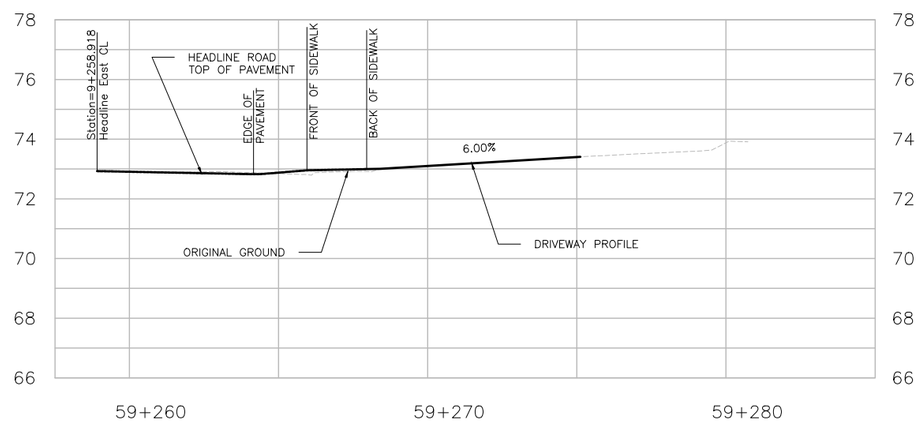
SHEET
28

MORRISON HERSHFIELD

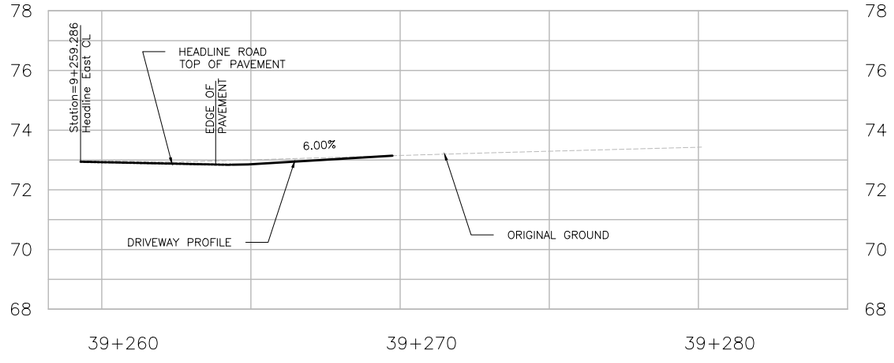
Entrance #5 – 9+250.876 LT



Entrance #6 – 9+258.918 LT



Entrance #7 – 9+259.286 RT



SCALE
1m 0 2m
Horizontal
1m 0 2m
Vertical

METRIC
ALL DIMENSIONS ARE IN METRES

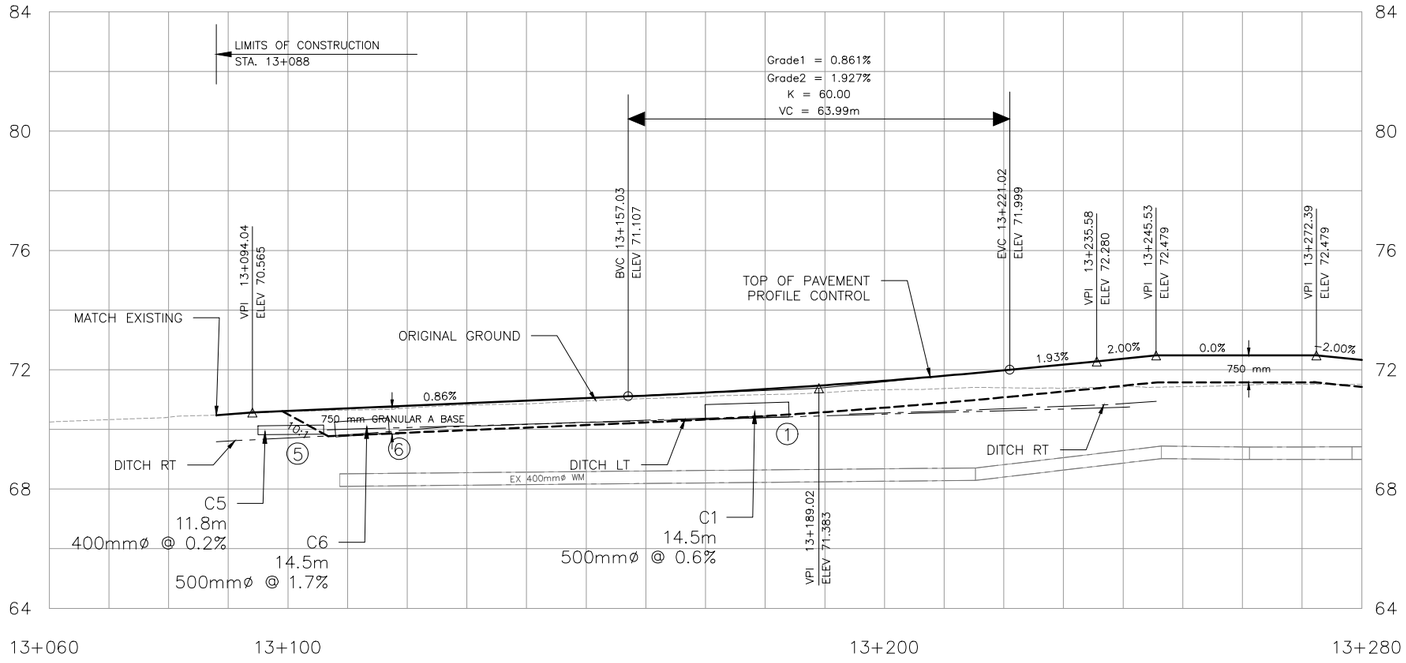
Ontario Ministry of Transportation

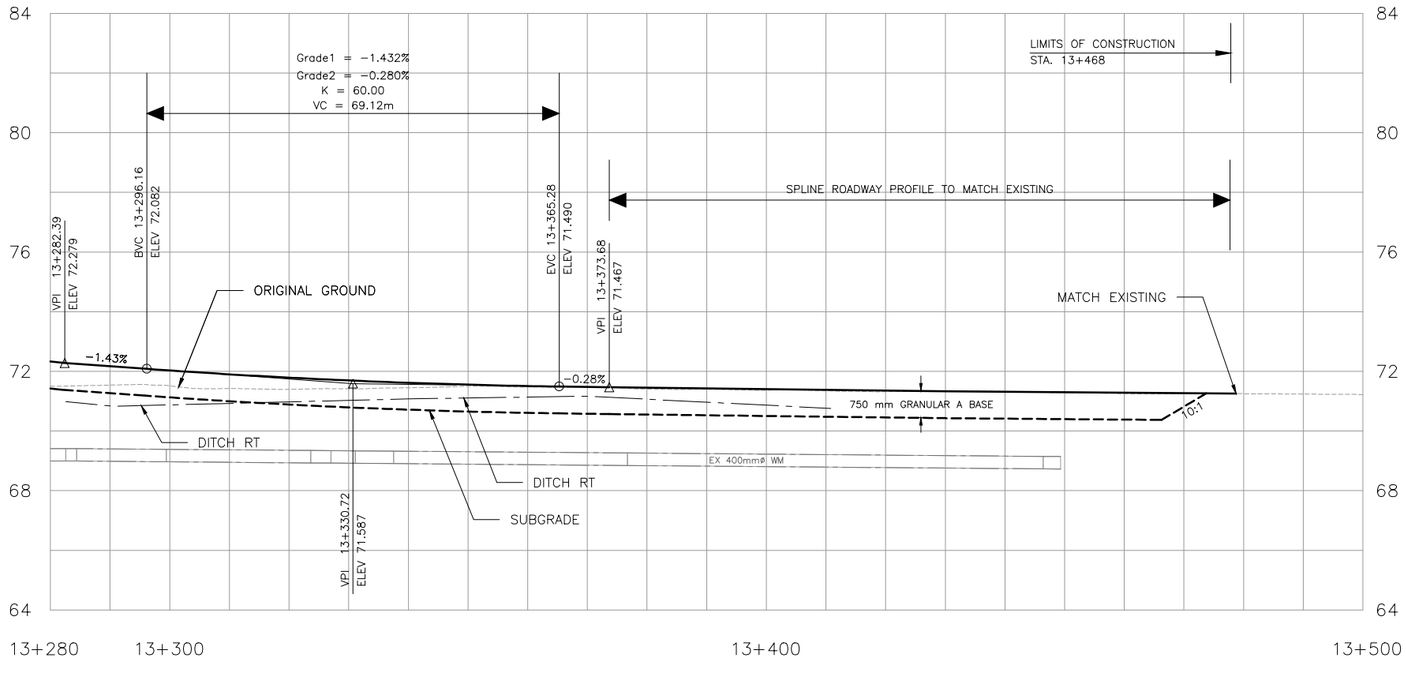
CONT CONTRACT
WP 4043-21-01

HIGHWAY 138
WATERMAIN PROFILE
STA 13+100 TO STA 13+400

SHEET 29

MORRISON HERSHFIELD





SCALE
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MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

FILE NAME: X:\Proj\2020\20197940S-MTO-Highway 138 Roundabout\108 CAD\07 Sheets\029_201979405_Profile 6 - Watermain 138.dwg
CREATED: 2023-10-12 MODIFIED: 2023-10-12 12:37

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation

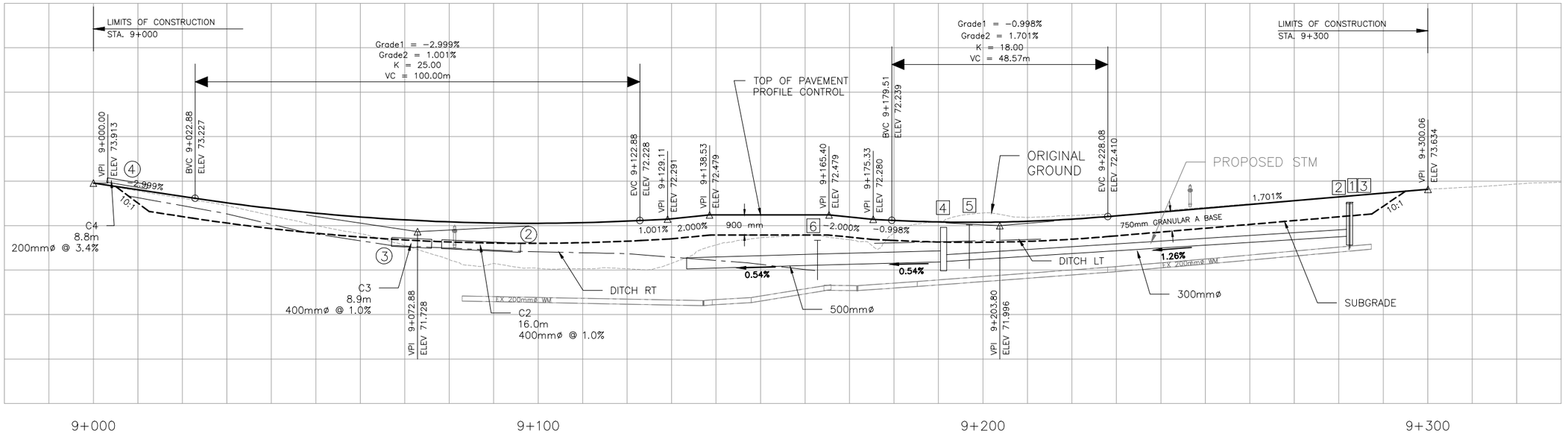
CONT CONTRACT
WP 4043-21-01

HEADLINE ROAD WATERMAIN PROFILE

STA 9+000 TO STA 9+300

SHEET 30

MORRISON HERSHFIELD



SCALE
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0.5 0 1.0 Vertical

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09_CAD\07 Sheets\030_201979405_Profile 7 - Watermain Headline.dwg
CREATED: 2023-10-12
MODIFIED: 2023-10-12 12:37

MINISTRY OF TRANSPORTATION, ONTARIO AMS-D 2016-10

METRIC
ALL DIMENSIONS ARE IN METRES

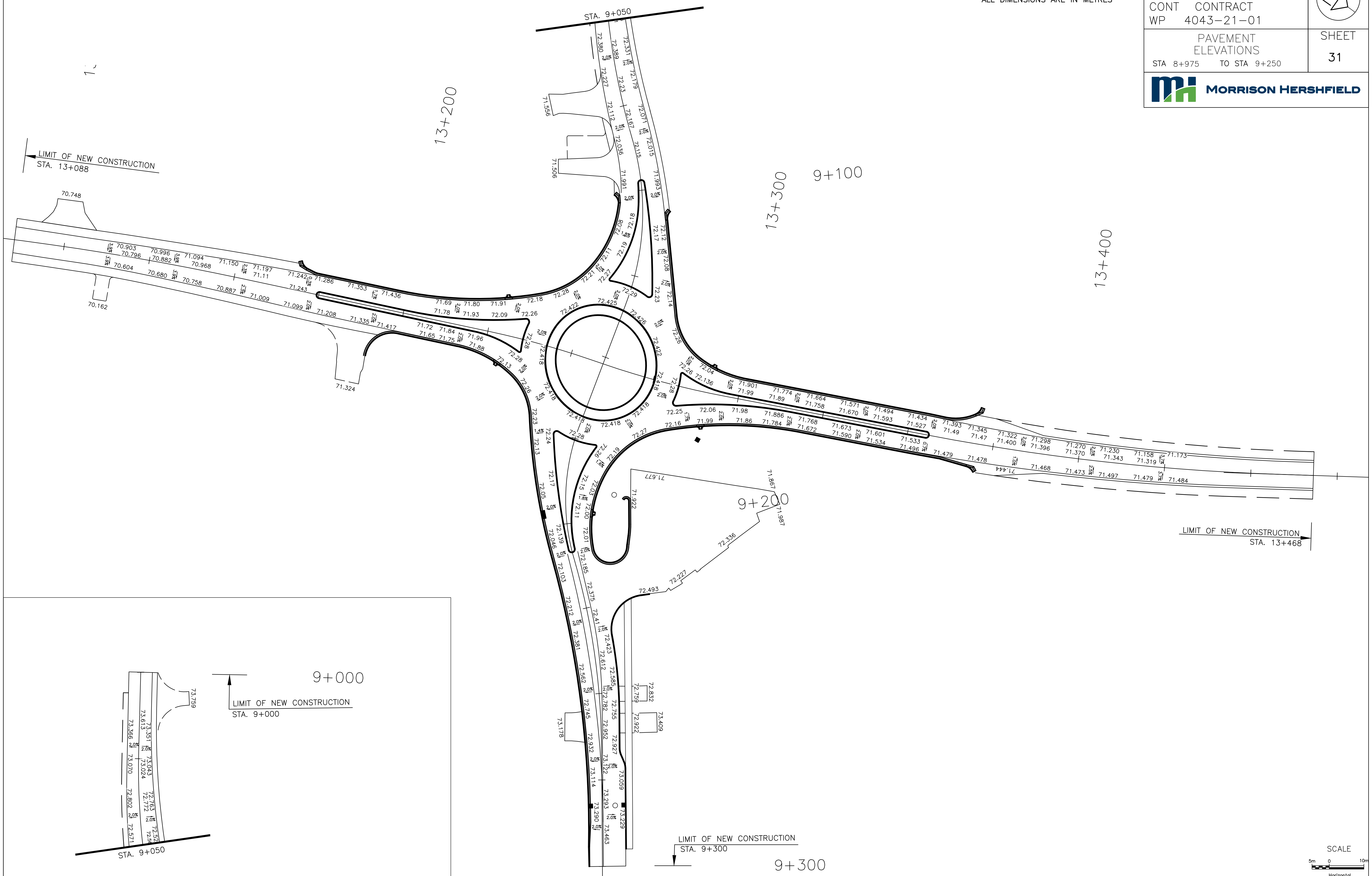
Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

PAVEMENT ELEVATIONS
STA 8+975 TO STA 9+250

SHEET 31

MORRISON HERSHFIELD



MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\031_201979405_Pavement Elevations.dwg
CREATED: 2023-10-11 MODIFIED: 2023-10-11 13:38

SUPERELEVATION TABLE													
Pavt	+6	+5	+4	+3	+2	+1	0	−1	−2	−3	−4	−5	−6
Sh	−2	−2	−2	−3	−3	−3	−4	−5	−6	−6	−6	−6	−6

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation

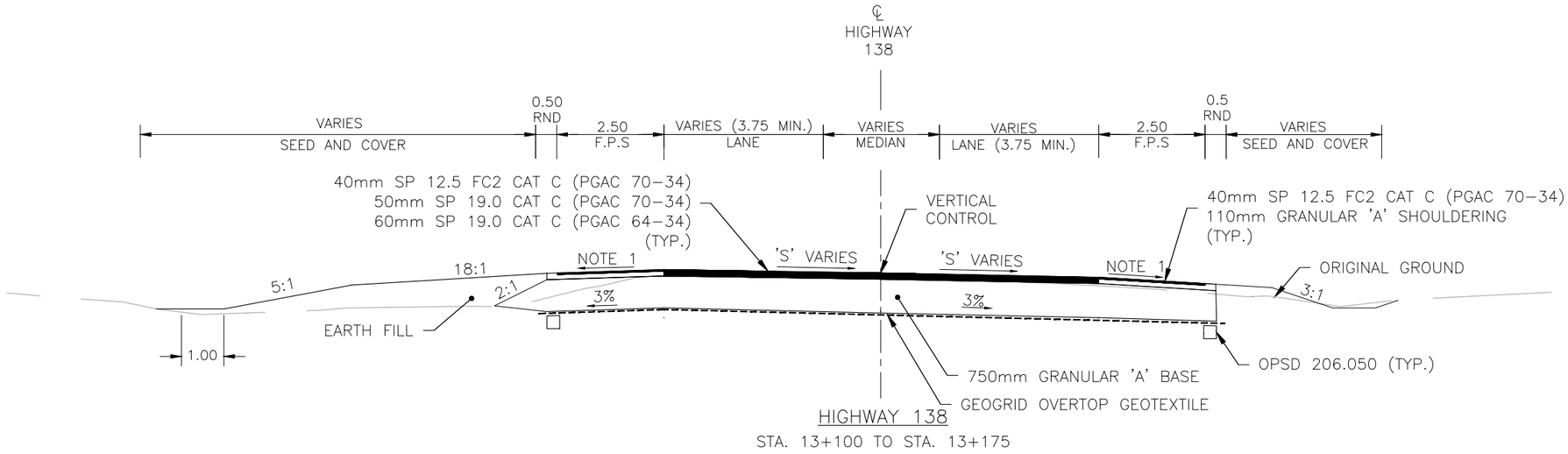
CONT CONTRACT
WP 4043-21-01

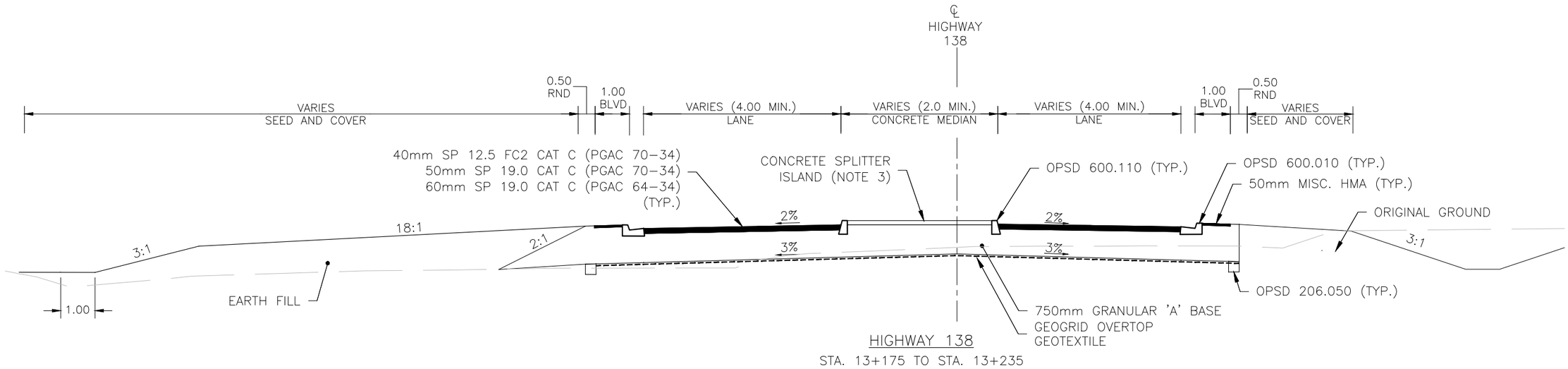
TYPICAL SECTIONS
HIGHWAY 138

SHEET
32

MORRISON HERSHFIELD

NOTES:
1. REFER TO SUPERELEVATION TABLE FOR APPLICABLE SHOULDER CROSSFALL.
2. SUPERELEVATION RATE DETAILED ELSEWHERE IN THE CONTRACT DOCUMENTS.
3. CONCRETE SPLITTER ISLAND SHALL BE CONSTRUCTED AS PER OPSD 504.010 CONCRETE SURFACE.





N.T.S

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\032_201979405_TYP 01 - HWY 138.dwg
CREATED: 2023-10-02 MODIFIED: 2023-10-02 18:21
MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

SUPERELEVATION TABLE													
Pavt	+6	+5	+4	+3	+2	+1	0	−1	−2	−3	−4	−5	−6
Sh	−2	−2	−2	−3	−3	−3	−4	−5	−6	−6	−6	−6	−6

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation

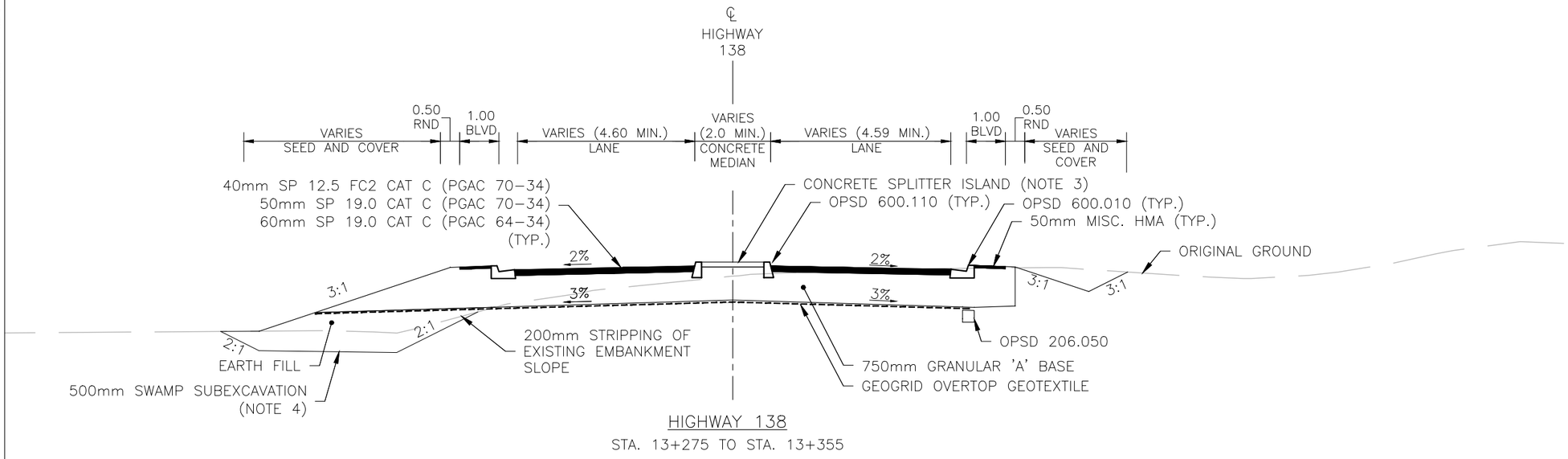
CONT CONTRACT
WP 4043-21-01

TYPICAL SECTIONS
HIGHWAY 138

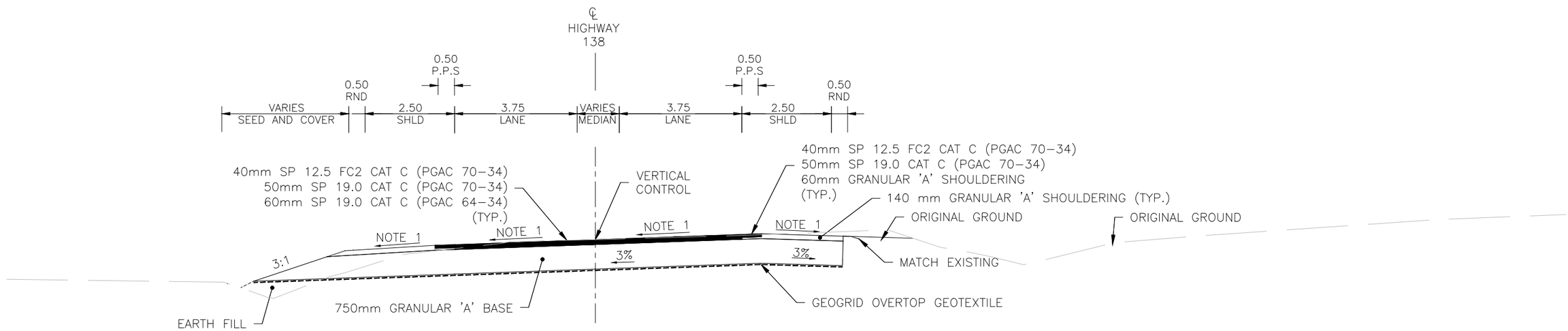
SHEET
33

MORRISON HERSHFIELD

NOTES:
1. REFER TO SUPERELEVATION TABLE FOR APPLICABLE SHOULDER CROSSFALL.
2. SUPERELEVATION RATE DETAILED ELSEWHERE IN THE CONTRACT DOCUMENTS.
3. CONCRETE SPLITTER ISLAND SHALL BE CONSTRUCTED AS PER OPSD 504.010 CONCRETE SURFACE.
4. LIMITS OF SWAMP EXCAVATION SHALL BE AS PER OPSD 203.010.



HIGHWAY 138
STA. 13+275 TO STA. 13+355



HIGHWAY 138
STA. 13+355 TO STA. 13+450

N.T.S

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09_CAD\07 Sheets\033_201979405_TYP 02 - HWY 138.dwg
CREATED: 2023-10-02
MODIFIED: 2023-10-02 16:51
MINISTRY OF TRANSPORTATION, ONTARIO 2016-10 ANSI-D

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation

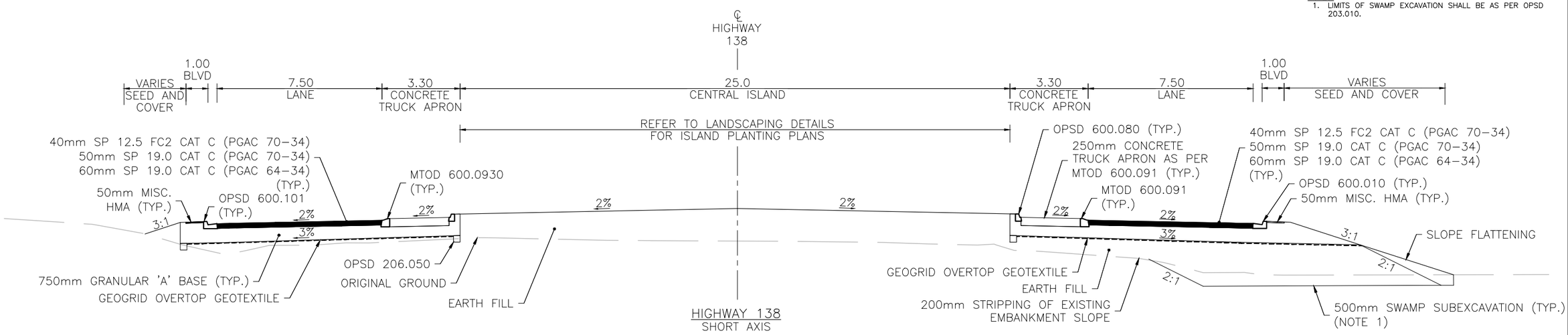
CONT CONTRACT
WP 4043-21-01

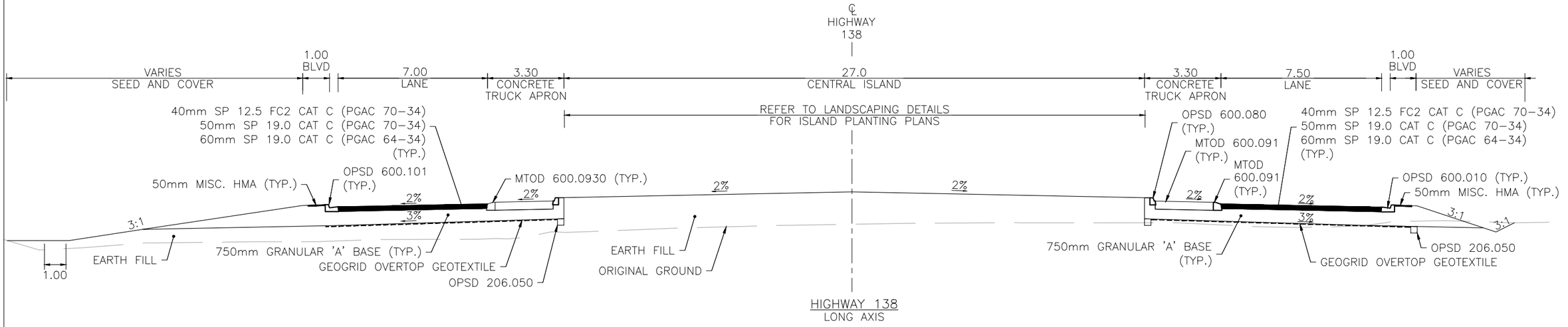
TYPICAL SECTIONS CENTER ISLAND

SHEET 34

MORRISON HERSHFIELD

NOTES:
1. LIMITS OF SWAMP EXCAVATION SHALL BE AS PER OPSD 203.010.





N.T.S

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CREATED: 2023-10-11
MODIFIED: 2023-10-11 12:16
MINISTRY OF TRANSPORTATION, ONTARIO AMS-D 2016-10

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation

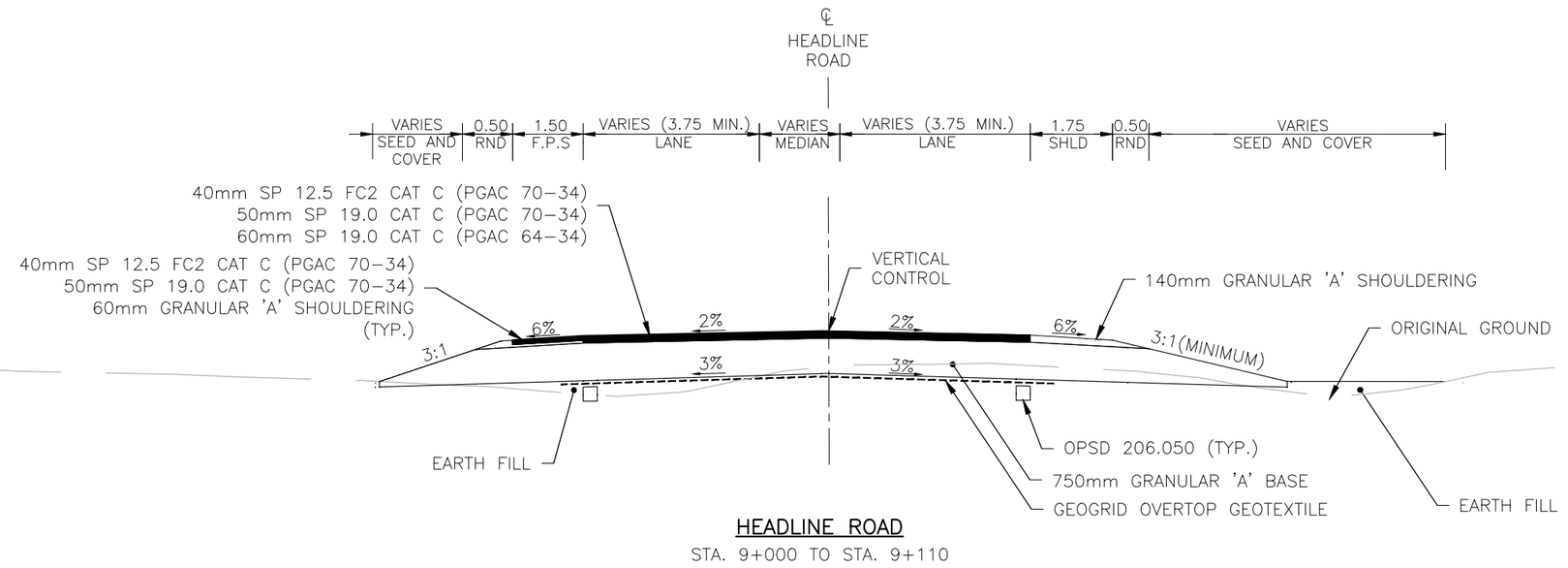
CONT CONTRACT
WP 4043-21-01

TYPICAL SECTIONS
HEADLINE ROAD

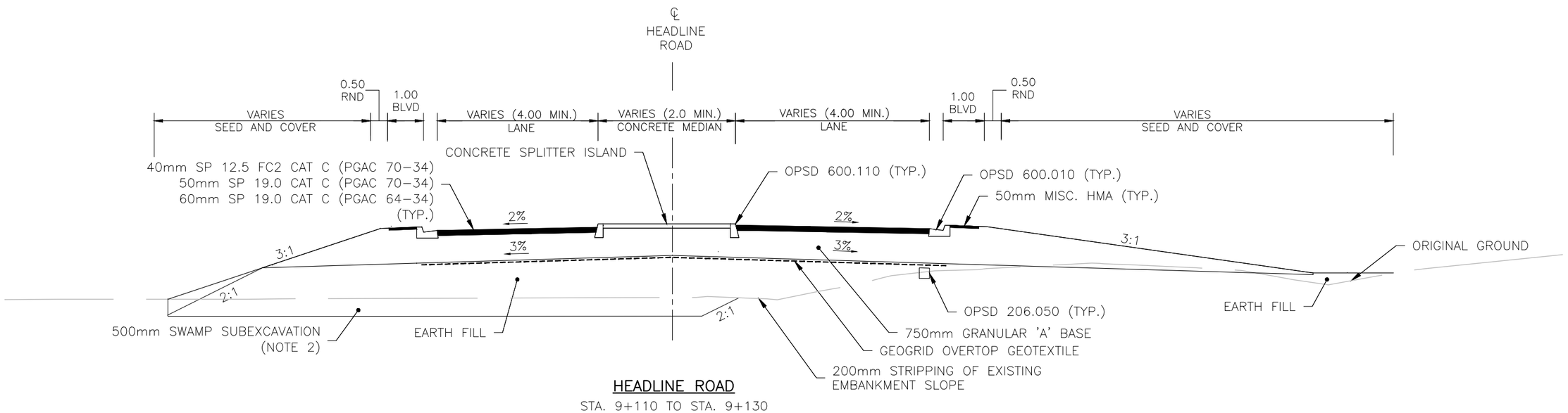
SHEET
35

MORRISON HERSHFIELD

NOTES:
1. CONCRETE SPLITTER ISLAND SHALL BE CONSTRUCTED AS PER OPSD 504.010 CONCRETE SURFACE.
2. LIMITS OF SWAMP EXCAVATION SHALL BE AS PER OPSD 203.010.



HEADLINE ROAD
STA. 9+000 TO STA. 9+110



HEADLINE ROAD
STA. 9+110 TO STA. 9+130

N.T.S

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation

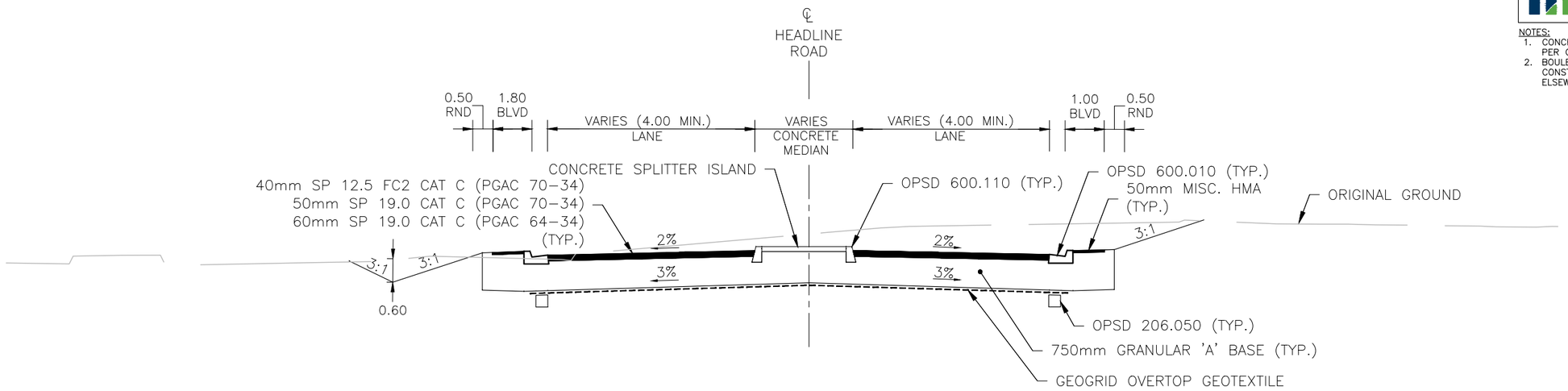
CONT CONTRACT
WP 4043-21-01

TYPICAL SECTIONS
HEADLINE ROAD

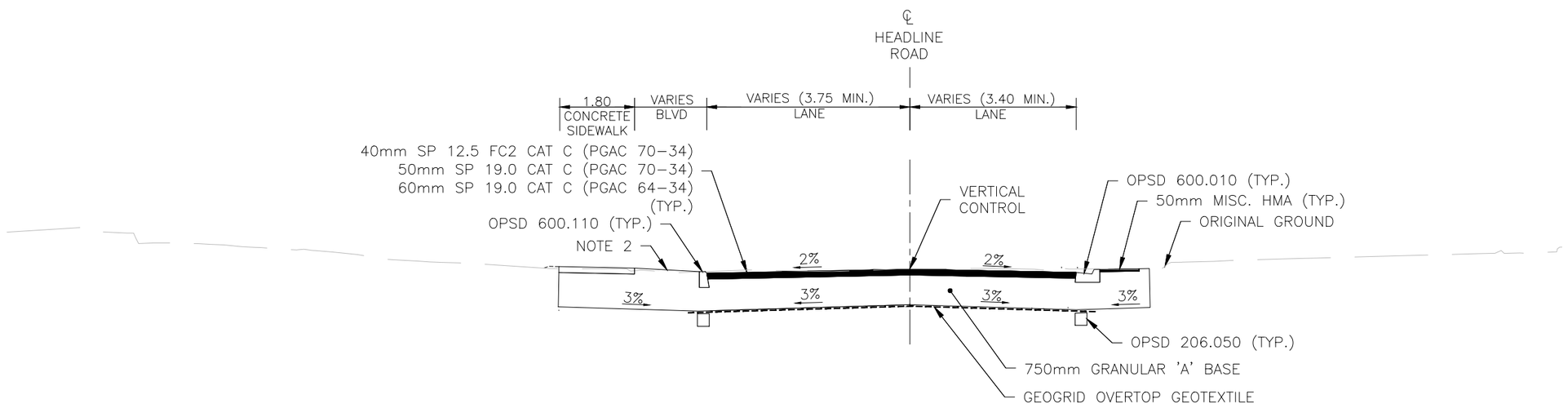
SHEET
36

MORRISON HERSHFIELD

NOTES:
1. CONCRETE SPLITTER ISLAND SHALL BE CONSTRUCTED AS PER OPSD 504.010 CONCRETE SURFACE.
2. BOULEVARDS AT RESIDENTIAL DRIVEWAYS SHALL BE CONSTRUCTED AS PER OPSD 351.010 OR AS DETAILED ELSEWHERE IN THE CONTRACT DOCUMENTS.



HEADLINE ROAD
STA. 9+175 TO STA. 9+208



HEADLINE ROAD
STA. 9+208 TO STA. 9+300

N.T.S

MINISTRY OF TRANSPORTATION, ONTARIO AMS-D 2016-10

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\036_201979405_TYP 05 - HEADLINE.dwg
CREATED: 2023-10-02 MODIFIED: 2023-10-02 17:58

METRIC
ALL DIMENSIONS ARE IN METRES

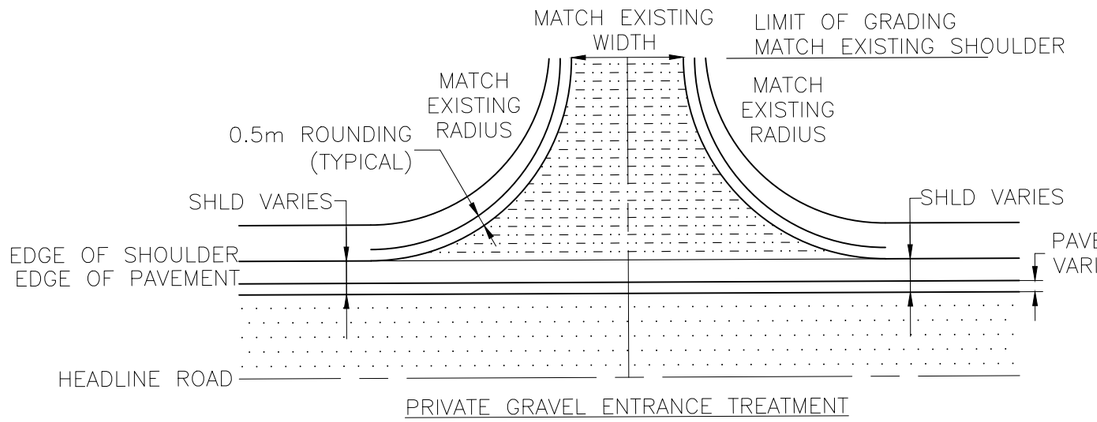
Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

DETAILS

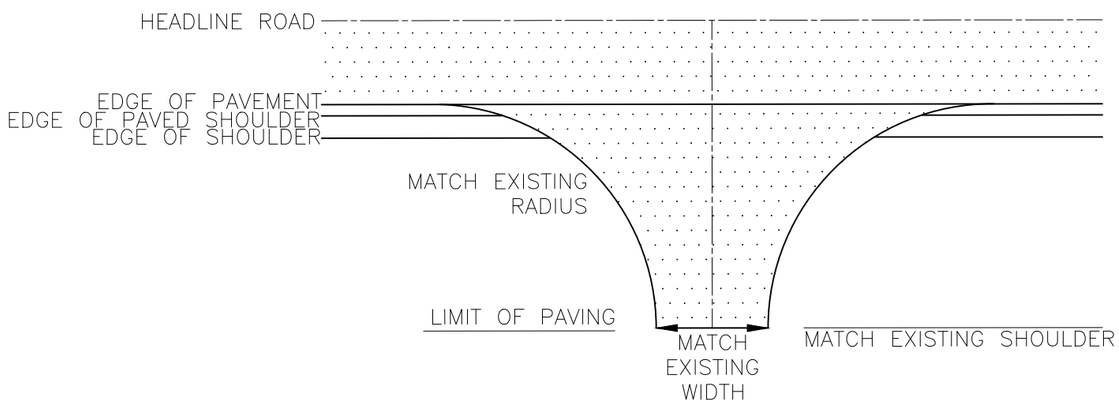
SHEET 37

MORRISON HERSHFIELD



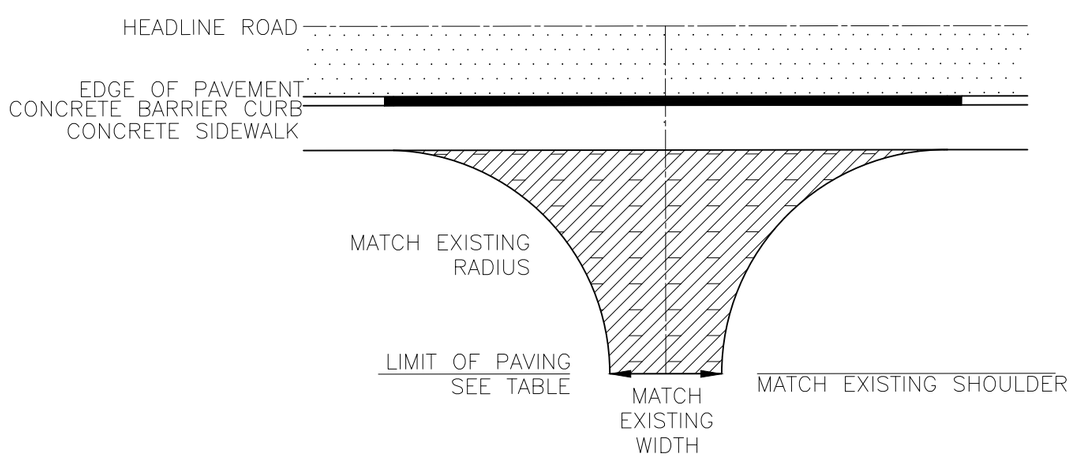
PRIVATE GRAVEL ENTRANCE TREATMENT

GRAVEL ENTRANCES		
ROAD	STATION	LOC
HIGHWAY 138	13+192	RT



EXISTING PAVED SIDE ROAD AND ENTRANCE TREATMENT

PAVED ENTRANCES		
ROAD	STATION	LOC
HEADLINE ROAD	9+073	RT
HEADLINE ROAD	9+092	RT



EXISTING PAVED SIDE ROAD AND ENTRANCE TREATMENT

PAVED ENTRANCES		
ROAD	STATION	LOC
HEADLINE ROAD	9+251	LT
HEADLINE ROAD	9+255*	RT
HEADLINE ROAD	9+258	LT

*DRIVEWAY DOES NOT HAVE SIDEWALK

N.T.S.

MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\037_201979405_DETAILS.dwg
CREATED: 2023-09-29 MODIFIED: 2023-09-29 10:39

METRIC
ALL DIMENSIONS ARE IN METRES

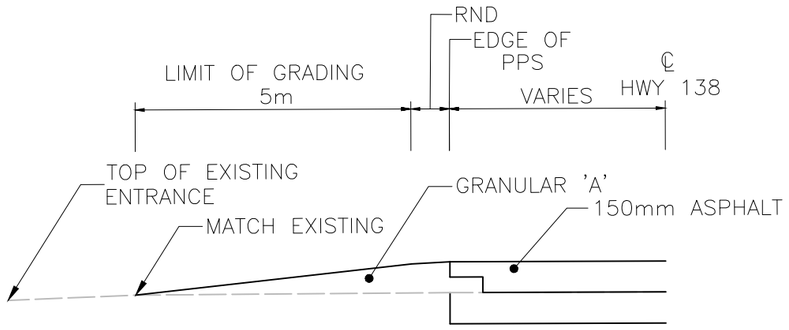
Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

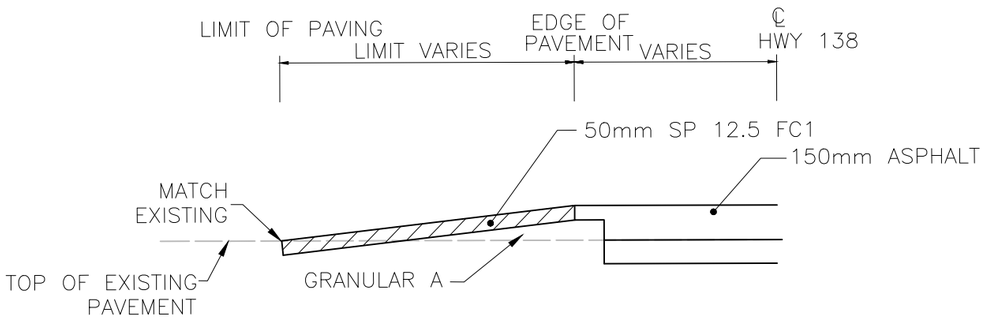
DETAILS

SHEET 38

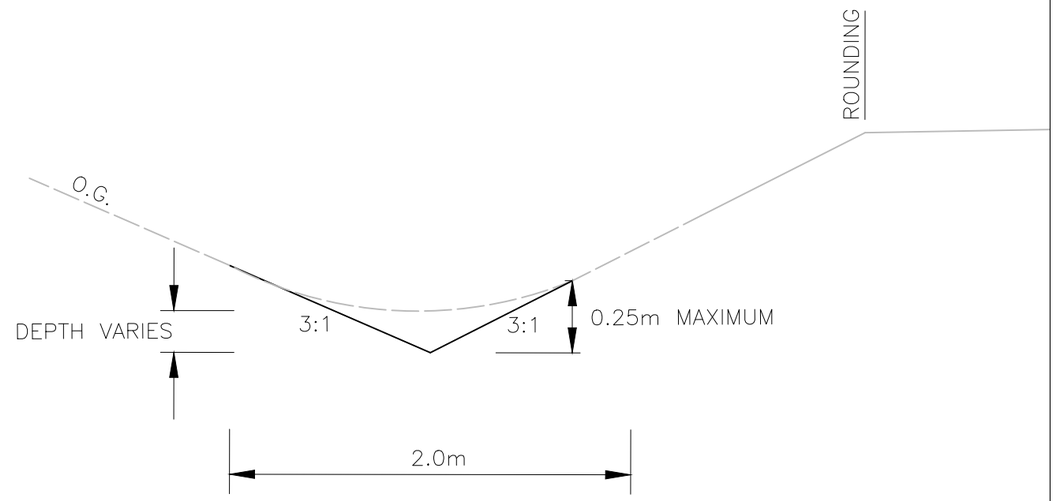
MORRISON HERSHFIELD



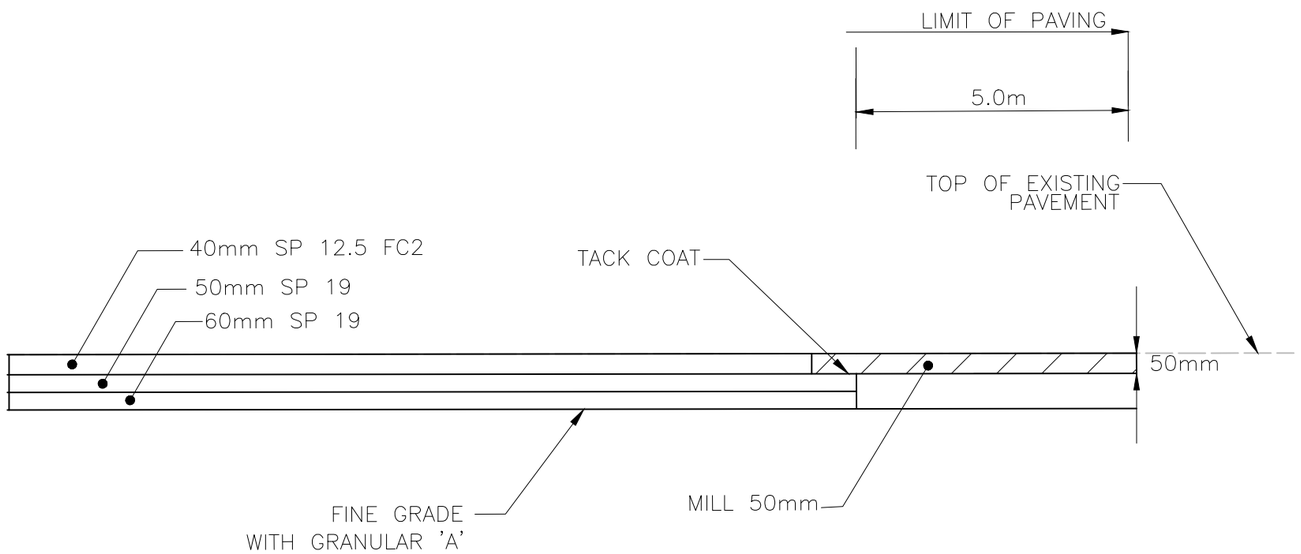
LATERAL TRANSITION TO EXISTING GRANULAR ENTRANCES



LATERAL TRANSITION TO EXISTING PAVEMENT AT ENTRANCES



EARTH DITCH CLEANOUT



LONGITUDINAL PAVEMENT TIE IN

N.T.S.

MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\038_201979405_DETAILS 2.dwg
CREATED: 2023-10-11 MODIFIED: 2023-10-11 12:12

METRIC
ALL DIMENSIONS ARE IN METRES

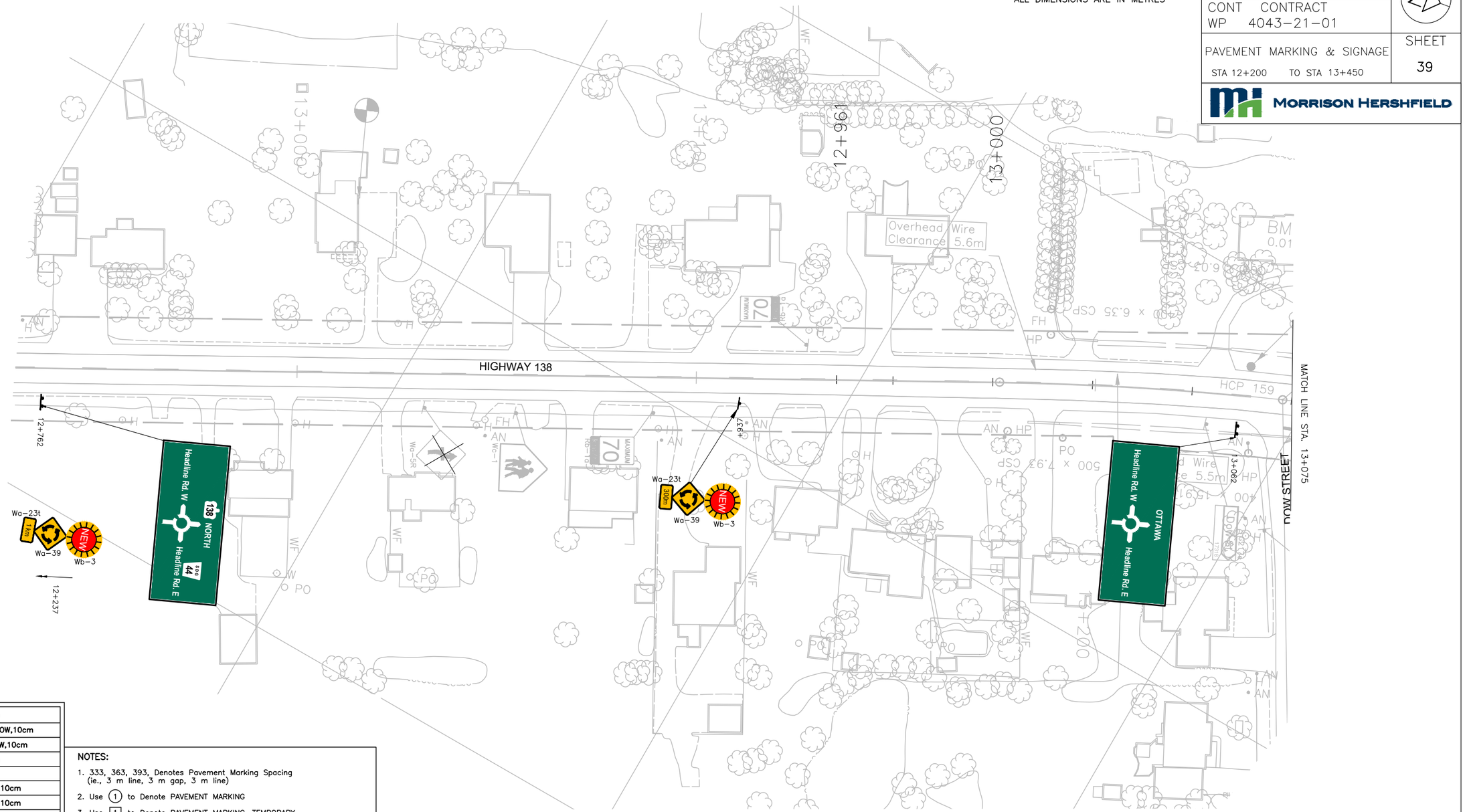
Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

PAVEMENT MARKING & SIGNAGE
STA 12+200 TO STA 13+450

SHEET 39

MORRISON HERSHFIELD



1	SOLID YELLOW,10cm
2	SOLID DOUBLE YELLOW,10cm
3	363 BROKEN YELLOW,10cm
4	SOLID YELLOW,20cm
5	SOLID WHITE,10cm
6	333 BROKEN WHITE,10cm
7	363 BROKEN WHITE,10cm
8	393 BROKEN WHITE,10cm
9	SOLID WHITE,20cm
10	111 BROKEN WHITE,20cm
11	333 BROKEN WHITE,20cm
12	333 BROKEN WHITE,30cm
13	SOLID WHITE,30cm
14	SOLID WHITE,45cm
15	SOLID WHITE,60cm
16	SOLID YELLOW,15cm
17	SOLID YELLOW,45cm
18	SOLID WHITE,15cm
19	0.6-0.6-0.6 BROKEN WHITE,20cm
20	SYMBOLS
] [	LIMITS OF MARKINGS

NOTES:

1. 333, 363, 393, Denotes Pavement Marking Spacing (ie., 3 m line, 3 m gap, 3 m line)
2. Use (1) to Denote PAVEMENT MARKING
3. Use [1] to Denote PAVEMENT MARKING, TEMPORARY
4. Use ⚠1 to Denote PAVEMENT MARKING, TEMPORARY-REMOVABLE
5. Use ⬡1 to Denote PAVEMENT MARKING, DURABLE
6. ALL MARKINGS MUST CONFORM TO ONTARIO TRAFFIC MANUAL
7. MINIMUM 75mm SPACE BETWEEN MARKINGS AND EDGE OF PAVEMENT
8. SIGNS IN CENTRAL ISLAND TO BE PERPENDICULAR TO TRAFFIC LINE OF SIGHT FROM APPROXIMATELY 50m UPSTREAM OF YIELD LINE
9. BOULEVARD YIELD SIGNS TO BE ORIENTED PERPENDICULAR TO CURB
10. SPLITTER ISLAND YIELD SIGNS TO BE ORIENTED PERPENDICULAR TO SIGHT FROM APPROXIMATELY 50m UPSTREAM OF YIELD LINE
11. ROUNDABOUT EXIT SIGNS TO BE ORIENTED FACING BULLNOSE OF UPSTREAM SPLITTER ISLAND
12. SIGNS IN CENTRAL ISLAND TO BE LOCATED 3.0m FROM CURB
13. SIGNS IN SPLITTER ISLAND TO BE LOCATED MIN. 0.3m FROM CURB

SCALE
5m 0 10m
Horizontal

NOTES:
1. CONCRETE SPLITTER ISLAND SHALL BE CONSTRUCTION AS PER OPSD 504.010 CONCRETE SURFACE

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\039_201979405_PMKS 01.dwg
CREATED: 2023-10-11
MODIFIED: 2023-10-11 13:53

METRIC
ALL DIMENSIONS ARE IN METRES

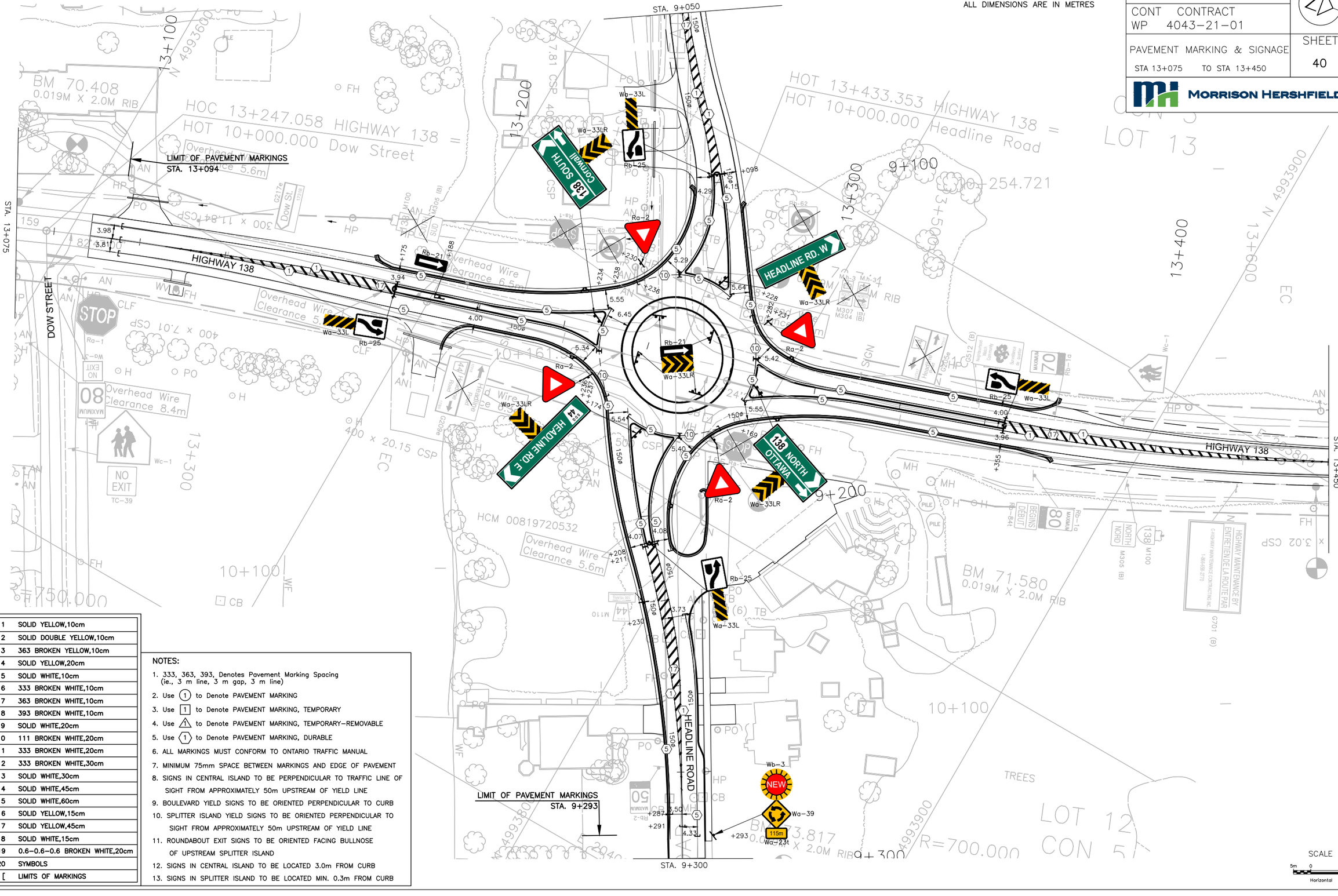
Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

PAVEMENT MARKING & SIGNAGE
STA 13+075 TO STA 13+450

SHEET 40

MORRISON HERSHFIELD



1	SOLID YELLOW,10cm
2	SOLID DOUBLE YELLOW,10cm
3	363 BROKEN YELLOW,10cm
4	SOLID YELLOW,20cm
5	SOLID WHITE,10cm
6	333 BROKEN WHITE,10cm
7	363 BROKEN WHITE,10cm
8	393 BROKEN WHITE,10cm
9	SOLID WHITE,20cm
10	111 BROKEN WHITE,20cm
11	333 BROKEN WHITE,20cm
12	333 BROKEN WHITE,30cm
13	SOLID WHITE,30cm
14	SOLID WHITE,45cm
15	SOLID WHITE,60cm
16	SOLID YELLOW,15cm
17	SOLID YELLOW,45cm
18	SOLID WHITE,15cm
19	0.6-0.6-0.6 BROKEN WHITE,20cm
20	SYMBOLS
] [	LIMITS OF MARKINGS

NOTES:

1. 333, 363, 393, Denotes Pavement Marking Spacing (ie., 3 m line, 3 m gap, 3 m line)
2. Use (1) to Denote PAVEMENT MARKING
3. Use [1] to Denote PAVEMENT MARKING, TEMPORARY
4. Use ⚠ to Denote PAVEMENT MARKING, TEMPORARY-REMOVABLE
5. Use ⬡1⬡ to Denote PAVEMENT MARKING, DURABLE
6. ALL MARKINGS MUST CONFORM TO ONTARIO TRAFFIC MANUAL
7. MINIMUM 75mm SPACE BETWEEN MARKINGS AND EDGE OF PAVEMENT
8. SIGNS IN CENTRAL ISLAND TO BE PERPENDICULAR TO TRAFFIC LINE OF SIGHT FROM APPROXIMATELY 50m UPSTREAM OF YIELD LINE
9. BOULEVARD YIELD SIGNS TO BE ORIENTED PERPENDICULAR TO CURB
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13. SIGNS IN SPLITTER ISLAND TO BE LOCATED MIN. 0.3m FROM CURB

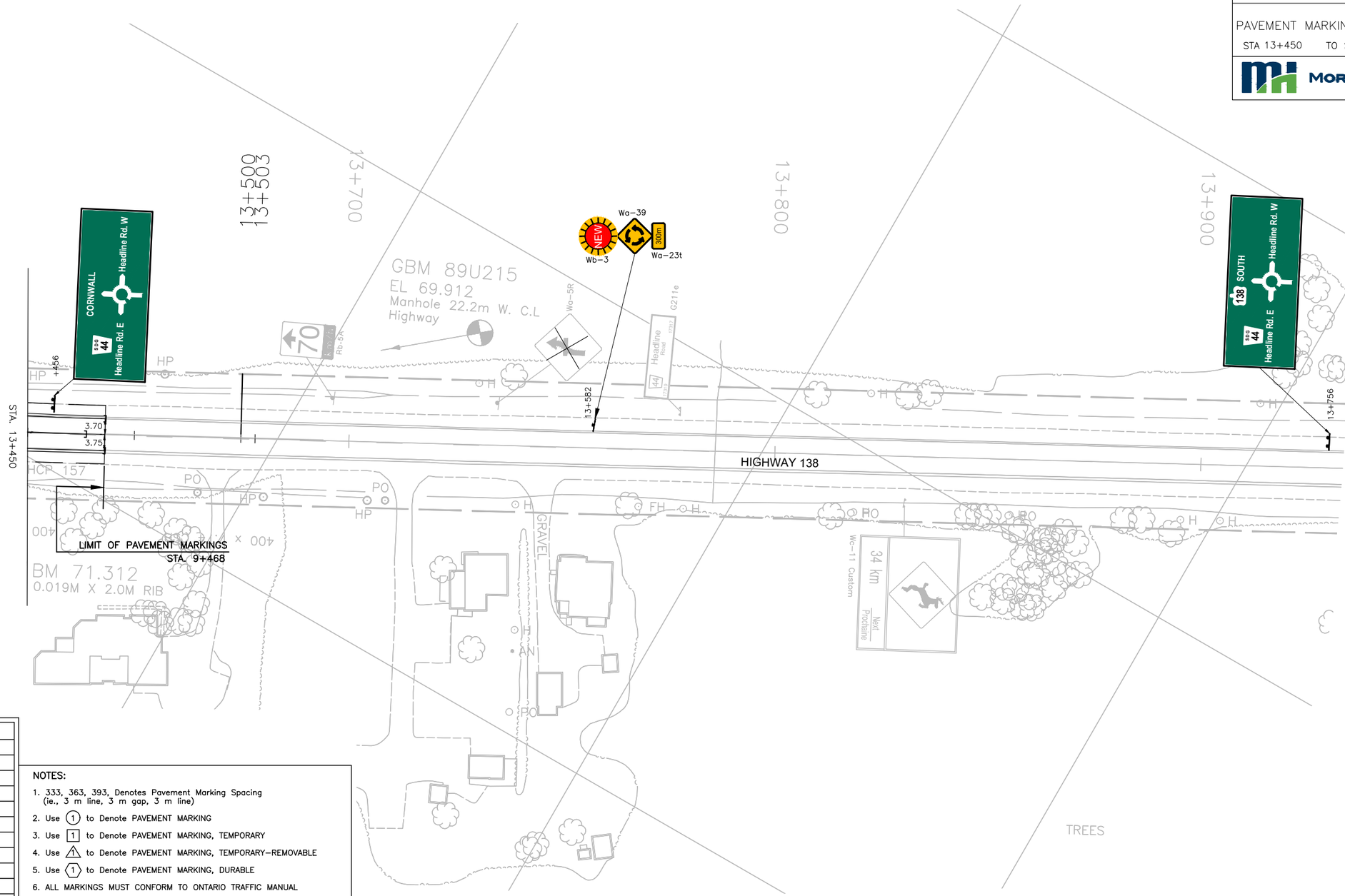
SCALE
5m 0 10m
Horizontal

MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

FILE NAME: X:\Proj\2020\20197940S-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\040_20197940S_PMKS 02.dwg
CREATED: 2023-10-11 MODIFIED: 2023-10-11 13:46

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation	
CONT CONTRACT WP 4043-21-01	
PAVEMENT MARKING & SIGNAGE STA 13+450 TO STA 13+800	SHEET 41
MORRISON HERSHFIELD	



1	SOLID YELLOW,10cm
2	SOLID DOUBLE YELLOW,10cm
3	363 BROKEN YELLOW,10cm
4	SOLID YELLOW,20cm
5	SOLID WHITE,10cm
6	333 BROKEN WHITE,10cm
7	363 BROKEN WHITE,10cm
8	393 BROKEN WHITE,10cm
9	SOLID WHITE,20cm
10	111 BROKEN WHITE,20cm
11	333 BROKEN WHITE,20cm
12	333 BROKEN WHITE,30cm
13	SOLID WHITE,30cm
14	SOLID WHITE,45cm
15	SOLID WHITE,60cm
16	SOLID YELLOW,15cm
17	SOLID YELLOW,45cm
18	SOLID WHITE,15cm
19	0.6-0.6-0.6 BROKEN WHITE,20cm
20	SYMBOLS
] [	LIMITS OF MARKINGS

NOTES:

1. 333, 363, 393, Denotes Pavement Marking Spacing (ie., 3 m line, 3 m gap, 3 m line)
2. Use (1) to Denote PAVEMENT MARKING
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12. SIGNS IN CENTRAL ISLAND TO BE LOCATED 3.0m FROM CURB
13. SIGNS IN SPLITTER ISLAND TO BE LOCATED MIN. 0.3m FROM CURB

SCALE
5m 0 10m
Horizontal

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\041_201979405_PMKS 03.dwg
CREATED: 2023-10-11
MODIFIED: 2023-10-11 13:54
MINISTRY OF TRANSPORTATION, ONTARIO 2016-10

METRIC
ALL DIMENSIONS ARE IN METRES

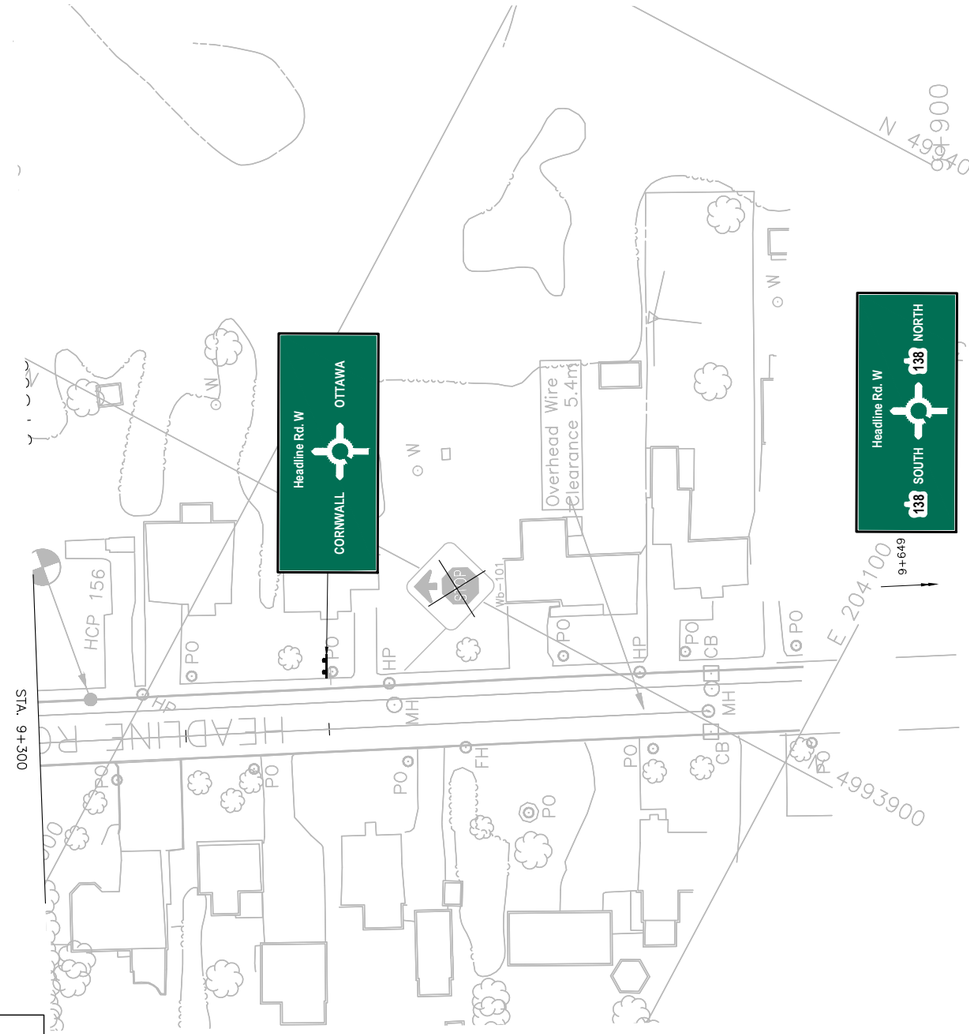
Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

PAVEMENT MARKING & SIGNAGE
STA 9+300 TO STA 9+700

SHEET
42

MORRISON HERSHFIELD



1	SOLID YELLOW,10cm
2	SOLID DOUBLE YELLOW,10cm
3	363 BROKEN YELLOW,10cm
4	SOLID YELLOW,20cm
5	SOLID WHITE,10cm
6	333 BROKEN WHITE,10cm
7	363 BROKEN WHITE,10cm
8	393 BROKEN WHITE,10cm
9	SOLID WHITE,20cm
10	111 BROKEN WHITE,20cm
11	333 BROKEN WHITE,20cm
12	333 BROKEN WHITE,30cm
13	SOLID WHITE,30cm
14	SOLID WHITE,45cm
15	SOLID WHITE,60cm
16	SOLID YELLOW,15cm
17	SOLID YELLOW,45cm
18	SOLID WHITE,15cm
19	0.6-0.6-0.6 BROKEN WHITE,20cm
20	SYMBOLS
] [	LIMITS OF MARKINGS

NOTES:

1. 333, 363, 393, Denotes Pavement Marking Spacing (ie., 3 m line, 3 m gap, 3 m line)
2. Use (1) to Denote PAVEMENT MARKING
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13. SIGNS IN SPLITTER ISLAND TO BE LOCATED MIN. 0.3m FROM CURB

SCALE
5m 0 10m
Horizontal

MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\042_201979405_PMKS 04.dwg
CREATED: 2023-10-10
MODIFIED: 2023-10-10 15:15

METRIC
ALL DIMENSIONS ARE IN METRES

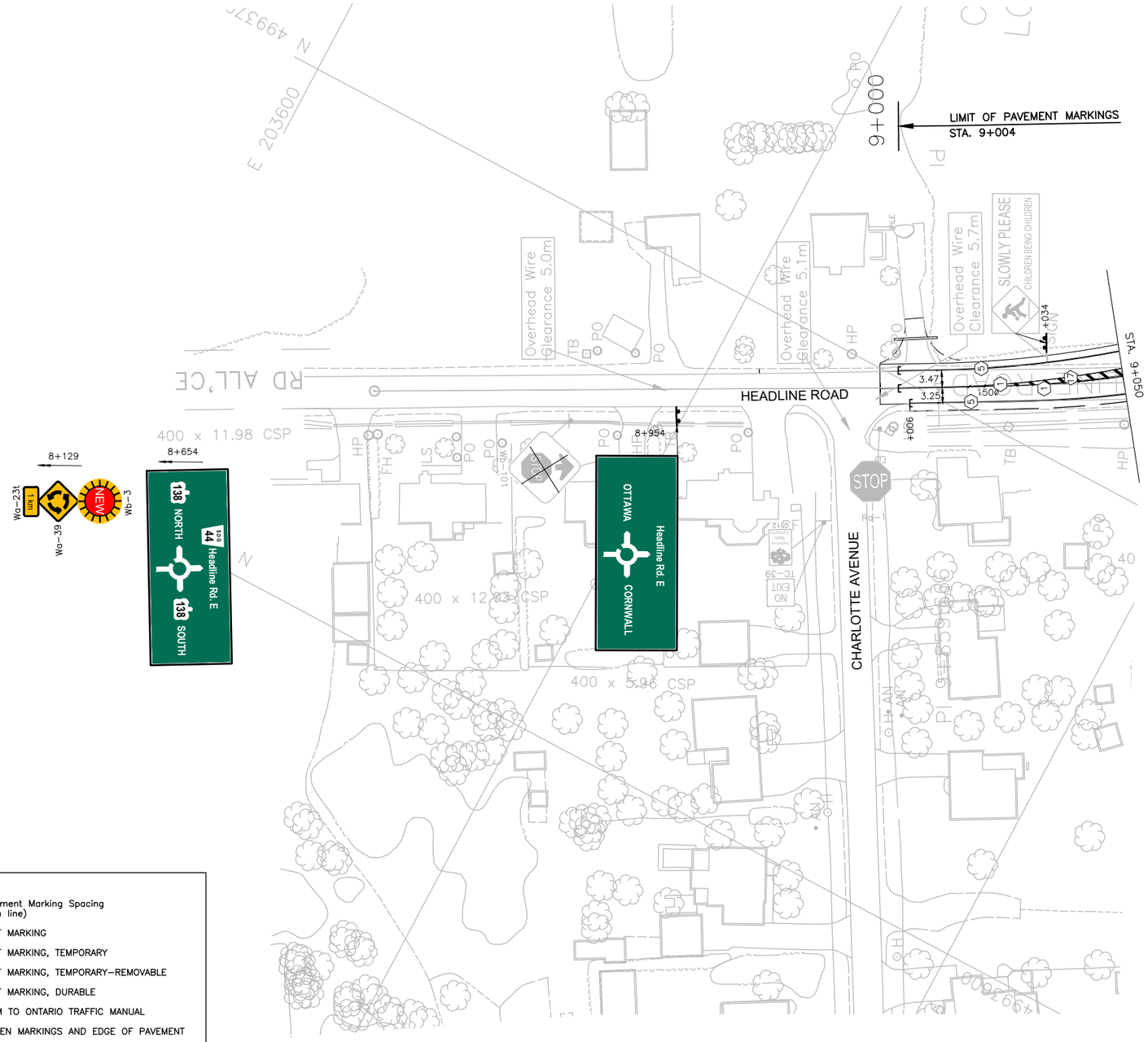
Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

PAVEMENT MARKING & SIGNAGE
STA 8+600 TO STA 9+050

SHEET
43

MORRISON HERSHFIELD



1	SOLID YELLOW,10cm
2	SOLID DOUBLE YELLOW,10cm
3	363 BROKEN YELLOW,10cm
4	SOLID YELLOW,20cm
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6	333 BROKEN WHITE,10cm
7	363 BROKEN WHITE,10cm
8	393 BROKEN WHITE,10cm
9	SOLID WHITE,20cm
10	111 BROKEN WHITE,20cm
11	333 BROKEN WHITE,20cm
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13	SOLID WHITE,30cm
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15	SOLID WHITE,60cm
16	SOLID YELLOW,15cm
17	SOLID YELLOW,45cm
18	SOLID WHITE,15cm
19	0.6-0.6-0.6 BROKEN WHITE,20cm
20	SYMBOLS
] [	LIMITS OF MARKINGS

NOTES:

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SCALE
5m 0 10m
Horizontal

MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10
FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\043_201979405_PMKS 05.dwg
CREATED: 2023-10-11 MODIFIED: 2023-10-11 13:58

Station	Offset	Sign Number	Symbol/ Message Description	Size BxH (cm)	Support Type (# posts)	Sign Supplied By	Action	Comments
EXISTING SIGNAGE								
HIGHWAY 138								
12+857	8.33 Rt.	Wa-5R	Reverse Curve	60x60	Rib-Bak Post (1)		Remove	Add intersection to curve
13+208	12.8 Rt.	G209e	Road ID - Street Name & Route Number, Emergency #s (TURN-OFF)	75x	Wooden Posts (2)		Remove	Right Arrow
N/A (same as above)	N/A (same as above)	G205e	Road ID - Street Name, Arrow & Emergency #s (TURN-OFF)	75x	N/A (same as above)		Remove	Left Arrow
13+560	10 Lt.	Wa-5R	Reverse Curve	60x60	Rib-Bak Post (1)		Remove	Add intersection to curve
13+312	6.5 Lt.	G205e	Road ID - Street Name, Arrow & Emergency #s (TURN-OFF)	75x	Wooden Post (2)		Remove	Right Arrow
N/A (same as above)	N/A (same as above)	G209e	Road ID - Street Name & Route Number, Emergency #s (TURN-OFF)	75x	N/A (same as above)		Remove	Left Arrow, remove Street Name.
13+270	9.3 Lt.	M115	Combo Marker - Crown/Arrow/Card. Dir (x2)	90x90	Wooden Post (1)		Remove	138, South, Left Arrow, 138, North, Right Arrow
13+196	5.7 Lt.	M100 M302	Crown Highway Marker, Direction Tab (S)		Wooden Post (1)		Remove	
HEADLINE RD								
9+363	9 Lt.	Wb-1	Stop Sign Ahead (Large)	90x90	Rib-Bak Post (1)		Remove	
9+224	5.9 Rt.	M110	Marker - County Road	45x45	Rib-Bak Post (1)		Relocate	S.D.G. 44
N/A (same as above)	N/A (same as above)	GXXX	"Since 1916 100 YEARS SDG County Road System" Tab		N/A same as above		Relocate	
9+172	16.9 Lt.	Ra-101/1101	Stop Sign	75x75	Wooden Post (1)		Remove	
9+142	12.1 Rt.	Ra-101/1101	Stop Sign	75x75	Wooden Post (1)		Remove	
9+139	14.9 Rt.	Rb-62	No Heavy Trucks	60x60	Rib-Bak Post (1)		Remove	
9+133	1.8 Lt.	Rb-62	No Heavy Trucks	60x60	Wooden Post (1)		Remove	
9+035	8.6 Lt.	WXXX	"Slowly Please Children being Children" with Playground ahead printed on sign		Rib-Bak Post (1)		Relocate	
8+936	6.4 Rt.	Wb-1	Stop Sign Ahead (Large)	90x90	Rib-Bak Post (1)		Remove	
NEW SIGNAGE								
HIGWAY 138								
13+756	6.1 Lt.	GXXX	Roundabout Advance Road ID	120x240 TBC	140x184 Wooden Post (2)		New	Support Type: OPSD 0985.2200
13+582	5.5 Lt.	Wa-39	Roundabout Ahead	90x90	140x184 Wooden Post (1)		New	Support Type: OPSD0985.1100. Meets requirements for long term signs, not with addition of NEW sign
N/A same as above	N/A same as above	Wa-23t	300m Distance Tab	45x90	N/A same as above		New	
N/A same as above	N/A same as above	Wb-3	New	90x90	N/A same as above		New	
13+456	6.7 Lt	GXXX	Roundabout Advance Destination	120x240 TBC	140x184 Wooden Post (2)		New	Support Type: OPSD 0985.2200
13+355	CL	Wa-33L	Object Marker Sign (Left)	30x90	Rib-Bak Post (1)		New	Support Type: Upper Post 4.46kg/g OPSD 0987.1100
N/A same as above	N/A same as above	Rb-25	Keep Right	60x90	N/A same as above		New	
13+318	CL	Rb-21	Right Arrow	60x180	140x184 Wooden Post (2)		New	Support Type: OPSD 0985.2200
13+284	3.3 Rt.	Wa-33L	Object Marker Sign (Both)	30x90	Rib-Bak Post (1)		New	Support Type: Upper Post 4.46kg/g OPSD 0987.1100
N/A same as above	N/A same as above	G304	Destination Sign Right Arrow	30x90	N/A same as above		New	138 North
13+282	16.8 Lt.	Ra-2	Yield	90.0000	Rib-Bak Post (1)		New	Support Type: Upper Post 4.46kg/g OPSD 0987.1100
13+267	8.9 Rt.	Rb-21	Right Arrow	60x180	140x184 Wooden Post (2)		New	Support Type: OPSD 0985.2200
N/A same as above	N/A same as above	Wa-33LR	Object Marker Sign (Both)	60x180	N/A same as above		New	
13+267	8.2 Lt.	Rb-21	Right Arrow	60x180	140x184 Wooden Post (2)		New	Support Type: OPSD 0985.2200
N/A same as above	N/A same as above	Wa-33LR	Object Marker Sign (Both)	60x180	N/A same as above		New	
13+250	9.4 Lt.	Rb-21	Right Arrow	60x180	140x184 Wooden Post (2)		New	Support Type: OPSD 0985.2200
N/A same as above	N/A same as above	Wa-33LR	Object Marker Sign (Both)	60x180	N/A same as above		New	
BK = Breakaway					REM = Removal			
NBK = Non-Breakaway					REL = Relocate			

Station	Offset	Sign Number	Symbol/ Message Description	Size BxH (cm)	Support Type (# posts)	Sign Supplied By	Action	Comments
NEW SIGNAGE								
13+248	4.3 Rt.	Rb-21	Right Arrow	60x180	140x184 Wooden Post (2)		New	Support Type: OPSD 0985.2200
		Wa-33LR	Object Marker Sign (Both)	60x180	N/A same as above		New	
13+234	3.9 Lt.	Wa-33LR	Object Marker Sign (Both)	45x90	140x140 Wooden Post (1)		New	Support Type: OPSD 0985.1100
		GXXX	Roundabout Fingerboard	30x90	N/A same as above		New	HWY 138 SOUTH Rigth Arrow
		G304	Destination Sign Right Arrow	30x90	N/A same as above		New	Cornwall
13+235	13.5 Rt.	Ra-2	Yield	90.0000	Rib-Bak Post (1)		New	Support Type: Upper Post 4.46kg/g OPSD 0987.1101
13+175	CL	Rb-25	Keep Right	60x90	Rib-Bak Post (1)		New	Support Type: Upper Post 4.46kg/g OPSD 0987.1100
		Wa-33L	Object Marker Sign (Left)	30x90	N/A same as above		New	
13+062	8.7 Rt.	Gxxx	Roundabout Ahead Advance Destination	120x240 TBC	140x184 Wooden Post (2)		New	Support Type: OPSD 0985.2200
12+937	6.2 Rt.	Wa-39	Roundabout Ahead	90x90	140x184 Wooden Post (1)		New	Support Type: OPSD0985.1100. Meets requirements for long term signs, not with addition of NEW sign
		Wa-23t	300m Distance Tab	45x90	N/A same as above		New	
		Wb-3	New	90x90	N/A same as above		New	
12+762	8.4 Rt.	GXXX	Roundabout Advance Road ID	120x240 TBC	140x184 Wooden Post (2)		New	Support Type: OPSD 0985.2200
12+237	6 Rt.	Wa-39	Roundabout Ahead	90x90	140x184 Wooden Post (1)		New	Support Type: OPSD0985.1100. Meets requirements for long term signs, not with addition of NEW sign
		Wa-23t	1km Distance Tab	45x90	N/A same as above		New	
		Wb-3	New	90x90	N/A same as above		New	
HEADLINE ROAD								
9+649	Lt.	GXXX	Roundabout Advance Road ID	120x240 TBC	140x184 Wooden Post (2)		New	Support Type: OPSD 0985.2200
9+349	Lt.	GXXX	Roundabout Ahead Advance Destination	120x240 TBC	140x184 Wooden Post (2)		New	Support Type: OPSD 0985.2200
9+293	9.6 Lt.	Wa-39	Roundabout Ahead	90x90	140x184 Wooden Post (1)		New	Support Type: OPSD0985.1100. Meets requirements for long term signs, not with addition of NEW sign
		Wa-23t	115m Distance Tab	45x90	N/A same as above		New	
		Wb-3	New	90x90	N/A same as above		New	
9+238	CL	Wa-33L	Object Marker Sign (Left)	30x90	Rib-Bak Post (1)		New	Support Type: Upper Post 4.46kg/g OPSD 0987.1100
		Rb-25	Keep Right	60x90	N/A same as above		New	
9+220	CL	Rb-21	Keep Right	60x90	N/A same as above		New	
9+177	3.9 Rt.	GXXX	Headline Rd E Right Arrow	30x90	Rib-Bak Post (1)		New	Headline Rd. E Right Arrow with SDG Marker, Support Type: Upper Post 4.46kg/g OPSD 0987.110
9+171	17.9 Lt.	Ra-2	Yield	90.0000	Rib-Bak Post (1)		New	Support Type: Upper Post 4.46kg/g OPSD 0987.1100
		Wa-33LR	Object Marker Sign (Both)	45x90	N/A same as above		New	
9+130	20 Rt.	Ra-2	Yield	90.0000	Rib-Bak Post (1)		New	Support Type: Upper Post 4.46kg/g OPSD 0987.1100
9+128	4.4 Lt.	Wa-33LR	Object Marker Sign (Both)	45x90	140x140 Wooden Post (1)		New	Support Type: OPSD 0985.1100
		GXXX	Headline Rd W Right Arrow	30x90	N/A same as above		New	
9+098	CL	Ra-25	Keep Right	60x90	Rib-Bak Post (1)		New	Support Type: Upper Post 4.46kg/g OPSD 0987.1100
		Wa-33L	Object Marker Sign (Left)	30x90	N/A same as above		New	
8+954	5.6 Rt.	GXXX	Roundabout Ahead Advance Destination	120x240 TBC	140x184 Wooden Post (2)		New	Support Type: OPSD 0985.2200
8+654	Rt.	GXXX	Roundabout Advance Road ID	120x240 TBC	140x184 Wooden Post (2)		New	Support Type: OPSD 0985.2200
8+129	Rt.	Wa-39	Roundabout Ahead	90x90	140x184 Wooden Post (1)		New	Support Type: OPSD0985.1100. Meets the requirements for long term signs, not wit addtion of NEW sign
		Wa-23t	1km Distance Tab	45x90	N/A same as above		New	
		Wb-3	New	90x90	N/A same as above		New	

Ontario Ministry of Transportation

CONT CONTRACT
WP 4043-21-01

SIGNAGE TABLE

SHEET 44

MORRISON HERSHFIELD

MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10

FILE NAME: x:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\044_201979405_Signage Table.dwg
CREATED: 2023-09-29
MODIFIED: 2023-09-29 10:46

Highway 138
Station 13+275 to 13+580,
Referenced to Nearest E/P or C/L

13+275 1.20 Lt of Rt E/P D-0 PA
0 - 130 Asph
130- 340 Br Cr Gran
340- 1.50 Br Gr Sa So Si Occ Cob, Moist @ 1.20, Fr Wat @ 1.10, Comp to Dense*
* Sample Depth = 900 - 1.20
Passing 150 mm = 100 %
26.5 mm = 100 %
4.75 mm = 69 %
1.18 mm = 44 %
300 um = 23 %
75 um = 12 %
w = 5 %
Unaccep Gran B, Type I
(12% passing 75 um)

13+300 4.80 Rt of Rt E/P D-500 HA
0 - 050 Tps, Fr Wat @ 0
050- 150 Dk Br Gr Sa So Si Tr Cl, Wet, L
150- 1.40 Br Si Sa So Gr Tr Cl Occ Cob, Wet, L to Comp
- 1.40 NFP (Poss BR)

13+325 1.80 Lt of Lt E/P D-0 PA
0 - 080 Asph
080- 190 Br Cr Gran
190- 1.15 Br Sa & Gr Tr Si Occ Cob, Moist, Comp to Dense
1.15- 1.50 Dk Br Cl Si So Sa So Gr, Moist, Stiff

13+325 4.40 Lt of Lt E/P D-400 HA
0 - 050 Tps
050- 300 Dk Br Sa & Gr So Si Tr Cl Tr Org M, Moist, Comp
300- 1.50 Dk Br Cl Si So Sa So Gr Tr Org M, Moist, Stiff

13+325 1.40 Rt of Lt E/P D-0 PA
0 - 110 Asph
110- 200 Br Cr Gran
200- 1.20 Br Sa & Gr Tr Si Occ Cob, Moist to Wet, Comp
1.20- 1.50 Dk Br Si Sa So Gr Occ Cob, Moist to Wet, Comp

13+335 0.20 Lt of Rt E/P D-0 PA
0 - 100 Asph
100- 300 Br Cr Gran
300- 1.50 Br Sa & Gr Tr Si Occ Cob, Moist, Comp to Dense

13+335 2.30 Lt of Rt E/P D-0 PA
0 - 150 Asph
150- 350 Br Cr Gran*
350- 1.50 Br Sa & Gr Tr Si Occ Cob, Moist, Comp to Dense
* Sample Depth = 150 - 350
Passing 26.5 mm = 100 %
19.0 mm = 90 %
13.2 mm = 78 %
9.5 mm = 68 %
4.75 mm = 55 %
1.18 mm = 36 %
300 um = 17 %
75 um = 8 %
w = 3 %
Accep Gran A

13+335 6.50 Rt of Rt E/P D-050 PA
0 - 450 Br Cr Gran
450- 1.50 Br Si Sa W Gr Occ Cob, Moist, Comp

13+355 1.90 Lt of Lt E/P D-0 PA
0 - 090 Asph
090- 260 Br Cr Gran
260- 670 Br Sa & Gr Tr Si Occ Cob, Moist, Comp
670- 1.50 Dk Br Cl Si So Gr So Sa, Moist, Stiff

13+355 5.20 Lt of Lt E/P D-340 HA
0 - 050 Tps
050- 600 Br Si Sa So Gr Tr Cl Occ Cob, Moist, Comp
600- 1.50 Dk Br Cl Si So Gr So Sa, Moist, Stiff

13+355 4.50 Rt of Rt E/P D-700 HA
0 - 050 Tps
050- 1.50 Br Si Sa So Gr Tr Cl, Moist, Fr Wat @ 1.00, L to Comp

13+375 4.60 Rt of Rt E/P D-600 HA
0 - 060 Tps
060- 1.50 Br Si Sa So Gr Tr Cl Occ Cob, Moist, Fr Wat @ 1.10, L to Comp

13+385 2.30 Lt of Lt E/P D-0 PA
0 - 130 Asph
130- 200 Br Cr Gran*
200- 950 Br Sa & Gr Tr Si Occ Cob, Moist, Comp
950 - 1.50 Dk Br Cl Si So Gr So Sa Tr Org M, Moist, Stiff
* Sample Depth = 130 - 200
Passing 26.5 mm = 100 %
19.0 mm = 84 %
13.2 mm = 70 %
9.5 mm = 63 %
4.75 mm = 48 %
1.18 mm = 30 %
300 um = 17 %
75 um = 9 %
w = 4 %
Accep Gran A

13+385 11.00 Lt of Lt E/P D-450 HA
0 - 200 Tps
200- 900 Br Si Sa So Gr Tr Cl, Moist, Comp
900- 1.50 Br Cl Si So Sa So Gr, Moist, Stiff

13+385 1.60 Rt of Lt E/P D-0 PA
0 - 120 Asph
120- 220 Br Cr Gran
220- 1.05 Br Sa & Gr Tr Si, Moist, Comp to Dense*
1.05- 1.50 Dk Br Si Cl W Sa Tr Gr Tr Org M, Wet, Stiff**
* Sample Depth = 500 - 800
Passing 150 mm = 100 %
26.5 mm = 87 %
4.75 mm = 51 %
1.18 mm = 35 %
300 um = 15 %
75 um = 7 %
w = 3 %
Accep Gran B, Type I
**Sample Depth = 1.10 - 1.40
Passing 4.75 mm = 92 %
2.00 mm = 80 %
425 um = 71 %
75 um = 54 %
5 um = 36 %
2 um = 31 %
w = 31 %
WL = 38 % WP = 19 % IP = 19 %
Classification = Cl
Frost Susc. = LSFH
'K' Factor = 0.20
Organic Content = 5%

13+390 1.60 Lt of Rt E/P D-0 PA
0 - 100 Asph
100- 340 Br Cr Gran
340- 580 Br Sa & Gr Tr Si Tr Cl Occ Cob, Moist, Comp
580- 1.00 Br Si Cl So Sa W Gr Occ Cob, Moist, Stiff
- 1.00 NFP (Poss BR)

13+390 0.20 Rt of Rt E/P D-0 PA
0 - 090 Asph
090- 330 Br Cr Gran
330- 900 Br Sa & Gr Tr Si Tr Cl Occ Cob, Moist, Comp to Dense
- 900 NFP (Poss BR)

13+400 9.00 Rt of Rt E/P D+700 HA
0 - 050 Tps
050- 500 Br Sa So Si So Gr Tr Cl, Moist, Comp*
500- 1.50 Br Si Sa So Gr Tr Cl Occ Cob, Moist, Comp
* Sample Depth = 200 - 500
Passing 4.75 mm = 91 %
2.00 mm = 78 %
425 um = 59 %
75 um = 25 %
5 um = 5 %
2 um = 4 %
w = 9 %
Classification = SM
Frost Susc. = LSFH
'K' Factor = 0.10

13+420 1.80 Lt of Lt E/P D-0 PA
0 - 150 Br Cr Gran, Moist, Comp to Dense
150- 1.10 Br Sa & Gr Tr Si
1.10- 1.50 Dk Br Sa Si So Gr Tr Cl Tr Org M, Moist, Comp

13+420 9.50 Lt of Lt E/P D-650 HA
0 - 250 Tps
250- 1.50 Br Sa Si So Gr Tr Cl Tr Org M, Moist, Comp

13+420 2.00 Rt of Lt E/P D-030 PA
0 - 145 Asph
145- 340 Br Cr Gran
340- 1.10 Br Sa & Gr Tr Si, Moist, Comp to Dense
1.10- 1.50 Dk Br Sa Si So Gr Tr Cl Tr Org M, Moist, Comp

13+430 20.00 Lt of Lt E/P D-1.20 HA
0 - 050 Ice
050- 200 Wat
200- 350 Blk Org, Wet, V L
350- 1.50 Blk Sa & Gr Tr Si Tr Org M, Wet, L to Comp*
* Sample Depth = 1.10 - 1.40
w = 15 %

13+430 11.00 Rt of Rt E/P D-200 HA
0 - 200 Tps
200- 1.50 Dk Br Si Sa W Gr Tr Cl Occ Cob, Moist, Comp

13+440 2.30 Lt of Rt E/P D-0 PA
0 - 130 Asph
130- 360 Br Cr Gran*
360- 1.50 Br Sa & Gr Tr Si Occ Cob Occ Blds, Moist, Dense
* Sample Depth = 130 - 360
Passing 26.5 mm = 100 %
19.0 mm = 100 %
13.2 mm = 89 %
9.5 mm = 78 %
4.75 mm = 62 %
1.18 mm = 40 %
300 um = 21 %
75 um = 11 %
w = 2 %
Unaccep Gran A
(most sieve sizes too fine)
Unaccep Gran B, Type I
(11% passing 75 um)

13+450 2.40 Lt of Lt E/P D-050 PA
0 - 210 Br Cr Gran
210- 1.10 Br Sa & Gr Tr Si
1.10- 1.50 Dk Br Sa Si So Gr Tr Cl Tr Org M, Moist, Comp

13+450 6.00 Lt of Lt E/P D-700 HA
0 - 200 Tps
200- 1.50 Br Si Sa So Gr Tr Cl Occ Cob, Moist, Comp

13+465 6.50 Rt of Rt E/P D-100 HA
0 - 150 Tps
150- 1.50 Dk Br Si Sa W Gr Tr Cl Occ Cob, Moist, Comp

13+475 1.60 Lt of Rt E/P D-0 PA
0 - 130 Asph
130- 340 Br Cr Gran
340- 1.50 Br Sa & Gr Tr Si Occ Cob, Moist, Comp to Dense

13+475 2.10 Lt of Lt E/P D-050 PA
0 - 200 Br Cr Gran*
200- 1.10 Br Sa & Gr Tr Si, Moist, Comp
1.10- 1.50 Dk Br Sa W Si So Gr So Cl Tr Org M, Wet, Comp**
* Sample Depth = 0 - 200
Passing 26.5 mm = 100 %
19.0 mm = 95 %
13.2 mm = 84 %
9.5 mm = 74 %
4.75 mm = 61 %
1.18 mm = 40 %
300 um = 19 %
75 um = 10 %
w = 6 %
Unaccep Gran A
(most sieve sizes too fine)
Unaccep Gran B, Type I
(10% passing 75 um)
**Sample Depth = 1.20 - 1.50
Passing 4.75 mm = 87 %
2.00 mm = 80 %
425 um = 69 %
75 um = 47 %
5 um = 24 %
2 um = 19 %
w = 24 %
Classification = SM
Frost Susc. = LSFH
'K' Factor = 0.15
Organic Content = 3%

13+475 5.70 Lt of Lt E/P D-450 HA
0 - 250 Tps
250- 1.50 Br Sa Si So Gr Tr Cl Occ Cob, Moist, Comp

13+475 2.60 Rt of Rt E/P D-020 PA
0 - 040 Shld Treatment
040- 350 Br Cr Gran
350- 1.50 Br Sa W Gr W Si Tr Cl Occ Cob, Moist, Comp*
* Sample Depth = 800 - 1.10
Passing 150 mm = 100 %
26.5 mm = 100 %
4.75 mm = 75 %
1.18 mm = 62 %
300 um = 47 %
75 um = 25 %
w = 10 %
Unaccep Gran B, Type I
(25% passing 75 um)
Accep SSM

13+490 4.50 Rt of Rt E/P D-300 HA
0 - 050 Tps
050- 1.50 Br Si Sa So Gr Tr Cl Occ Cob, Moist, Comp

13+545 5.00 Rt of Rt E/P D-400 HA
0 - 250 Tps
250- 1.00 Br Si Sa So Gr Tr Cl Occ Cob, Moist, Comp
- 1.00 NFP (Poss BR)

13+550 2.40 Lt of Lt E/P D-050 PA
0 - 180 Br Cr Gran
180- 1.40 Br Sa & Gr So Si
- 1.40 NFP (Poss BR)

13+550 2.00 Rt of Rt E/P D-020 PA
0 - 150 Br Cr Gran*
150- 1.40 Br Sa & Gr Tr Si Occ Cob, Moist, Comp to Dense
- 1.40 NFP (Poss BR)
* Sample Depth = 0 - 150
Passing 26.5 mm = 100 %
19.0 mm = 100 %
13.2 mm = 88 %
9.5 mm = 78 %
4.75 mm = 63 %
1.18 mm = 40 %
300 um = 22 %
75 um = 11 %
w = 4 %
Unaccep Gran A
(most sieve sizes too fine)
Unaccep Gran B, Type I
(11% passing 75 um)

13+580 1.90 Lt of Rt E/P D-0 PA
0 - 130 Asph
130- 370 Br Cr Gran
370- 830 Br Sa & Gr Tr Si Occ Cob, Moist, Comp to Dense
830- 1.50 Dk Br Si Sa So Gr Tr Cl Tr Org M, Moist, Comp

Headline Road
Station 9+175 to 9+470, Referenced to Nearest E/P or C/L

9+175 1.20 Rt C/L D-0 PA
0 - 050 Asph
050- 160 Br Cr Gran
160- 950 Br Sa & Gr Tr Si Occ Cob, Moist, Dense
950- 1.50 Br Si Sa W Gr Tr Cl Occ Cob, Moist, Comp to Dense

9+225 1.60 Lt C/L D-0 PA
0 - 050 Asph
050- 150 Br Cr Gran
150- 970 Br Sa & Gr Tr Si Occ Cob, Moist, Comp to Dense
970- 1.50 Br Si Sa So Gr Tr Cl Occ Cob, Moist, Comp

9+225 4.90 Lt of Lt E/P D-550 HA
0 - 050 Tps
050- 1.50 Br Si Sa Tr Cl Tr Gr Occ Cob, Moist, Comp

9+275 2.60 Lt C/L D-0 PA
0 - 050 Asph
050- 150 Br Cr Gran*
150- 970 Br Sa & Gr Tr Si Occ Cob, Moist, Comp to Dense
970- 1.50 Dk Br Si Sa So Gr Tr Cl Occ Cob Tr Org M, Moist, Comp
* Sample Depth = 050 - 150
Passing 26.5 mm = 100 %
19.0 mm = 100 %
13.2 mm = 92 %
9.5 mm = 77 %
4.75 mm = 52 %
1.18 mm = 23 %
300 um = 12 %
75 um = 7 %
w = 2 %
Unaccep Gran A
(92% passing 13.2 mm, 77% passing 9.5 mm)
Accep Gran B, Type I

9+275 2.60 Lt of Lt E/P D-460 HA
0 - 200 Tps
200- 1.50 Br Si Sa So Gr Tr Cl, Moist, Comp

9+275 4.10 Lt C/L D-0 PA
0 - 150 Br Cr Gran
150- 850 Br Sa & Gr Tr Si Occ Cob, Moist, Comp
850- 1.50 Dk Br Si Sa So Gr Tr Cl Occ Cob Tr Org M, Moist, Comp

9+300 3.20 Lt of Lt E/P D-580 HA
0 - 250 Tps
250- 1.50 Br Si Sa So Gr Tr Cl, Moist, Comp

9+300 2.00 Rt C/L D-0 PA
0 - 050 Asph
050- 150 Br Cr Gran*
150- 970 Br Sa & Gr Tr Si Occ Cob, Moist, Fr Wat @ 900, Comp to Dense
970- 2.10 Dk Br Si Sa So Gr Tr Cl Tr Org M, Moist, Comp
2.10- 3.00 Gry Cl Si So Sa So Gr, Moist, Loose
* Sample Depth = 050 - 150
Passing 26.5 mm = 100 %
19.0 mm = 98 %
13.2 mm = 92 %
9.5 mm = 76 %
4.75 mm = 50 %
1.18 mm = 21 %
300 um = 10 %
75 um = 5 %
w = 2 %
Unaccep Gran A
(92% passing 13.2 mm, 76% passing 9.5 mm)
Accep Gran B, Type I

9+325 2.00 Lt C/L D-0 PA
0 - 050 Asph
050- 150 Br Cr Gran
150- 1.05 Br Sa & Gr Tr Si Occ Cob, Moist, Comp to Dense*
1.05- 1.50 Dk Br Sa Gr So Si Tr Cl Occ Cob Tr Org M, Wet, Comp**
* Sample Depth = 300 - 600
Passing 150 mm = 100 %
26.5 mm = 100 %
4.75 mm = 51 %
1.18 mm = 32 %
300 um = 18 %
75 um = 10 %
w = 4 %
Unaccep Gran B, Type I
(10% passing 75 um)
Accep SSM
**Sample Depth = 1.10 - 1.40
Passing 4.75 mm = 56 %
2.00 mm = 51 %
425 um = 39 %
75 um = 24 %
5 um = 8 %
2 um = 6 %
w = 16 %
Classification = GP
Frost Susc. = LSFH
'K' Factor = 0.10
Organic Content = 2%

9+360 6.00 Rt C/L D-0 PA
0 - 170 Asph
170- 290 Br Cr Gran
290- 750 Br Sa & Gr Tr Si Occ Cob, Moist, Comp to Dense
750- 1.40 Br Si Sa So Gr Tr Cl Occ Cob, Moist, Comp

9+370 5.00 Lt C/L D-0 PA
0 - 110 Asph
110- 210 Br Cr Gran
210- 780 Br Sa & Gr Tr Si Occ Cob, Moist, Comp to Dense
780- 1.50 Dk Br Si Sa So Gr Tr Cl Occ Cob Tr Org M, Moist, Comp

9+400 4.80 Lt C/L D-0 PA
0 - 120 Asph
120- 290 Br Cr Gran*
290- 1.50 Br Sa & Gr Tr Si Occ Cob, Moist, Comp to Dense
* Sample Depth = 120 - 290
Passing 26.5 mm = 100 %
19.0 mm = 100 %
13.2 mm = 92 %
9.5 mm = 80 %
4.75 mm = 61 %
1.18 mm = 36 %
300 um = 23 %
75 um = 15 %
w = 3 %
Unaccep Gran A
(some sieve sizes too fine)
Unaccep Gran B, Type I
(15% passing 75 um)

9+400 10.00 Rt C/L D+100 HA
0 - 080 Tps
080- 1.50 Dk Br Sa Si So Gr Tr Cl Occ Cob Tr Org M, Moist, Comp

9+440 6.10 Rt C/L D+100 HA
0 - 050 Tps
050- 1.50 Br Gr Sa Tr Si Occ Cob, Moist, Comp

9+445 1.00 Rt C/L D-0 PA
0 - 115 Asph
115- 380 Br Cr Gran*
380- 1.50 Br Sa & Gr Tr Si Occ Cob, Moist, Comp
* Sample Depth = 115 - 380
Passing 26.5 mm = 100 %
19.0 mm = 94 %
13.2 mm = 83 %
9.5 mm = 72 %
4.75 mm = 55 %
1.18 mm = 30 %
300 um = 17 %
75 um = 11 %
w = 2 %
Unaccep Gran A
(11% passing 75 um)
Unaccep Gran B, Type I
(11% passing 75 um)

9+470 1.00 Lt C/L D-0 PA
0 - 120 Asph
120- 250 Br Cr Gran
250- 960 Br Sa & Gr Tr Si Occ Cob, Moist, Comp to Dense
960- 1.50 Dk Br Si Sa So Gr Tr Cl Tr Org M, Moist, Comp

FILE NAME: X:\Pro\\2020\\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\045_201979405_Borehole Data.dwg
CREATED: 2023-10-03
MODIFIED: 2023-10-03 11:41
MINISTRY OF TRANSPORTATION, ONTARIO
ANSI-D 2016-10

MINISTRY OF TRANSPORTATION, ONTARIO

ROUNDABOUT – PLANT SCHEDULE

TREE PLANTING SCHEDULE

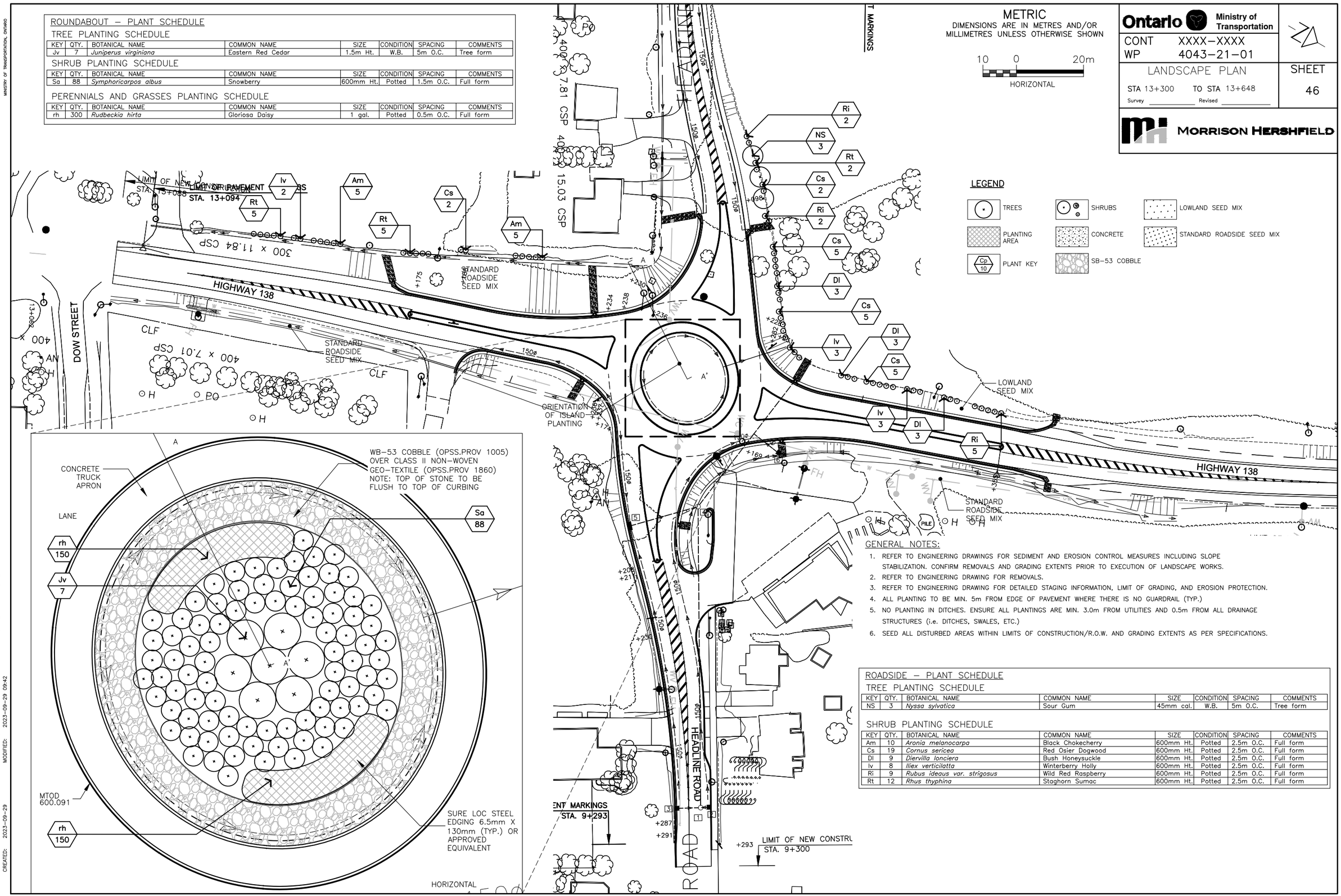
KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING	COMMENTS
Jv	7	*Juniperus virginiana*	Eastern Red Cedar	1.5m Ht.	W.B.	5m O.C.	Tree form

SHRUB PLANTING SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING	COMMENTS
Sa	88	*Symphoricarpos albus*	Snowberry	600mm Ht.	Potted	1.5m O.C.	Full form

PERENNIALS AND GRASSES PLANTING SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING	COMMENTS
rh	300	*Rudbeckia hirta*	Gloriosa Daisy	1 gal.	Potted	0.5m O.C.	Full form



METRIC

DIMENSIONS ARE IN METRES AND/OR MILLIMETRES UNLESS OTHERWISE SHOWN

10 0 20m

HORIZONTAL

Ontario Ministry of Transportation

CONT XXXX–XXXX

WP 4043–21–01

LANDSCAPE PLAN

STA 13+300 TO STA 13+648

Survey _____ Revised _____

SHEET 46

MORRISON HERSHFIELD

LEGEND

- TREES
- SHRUBS
- LOWLAND SEED MIX
- PLANTING AREA
- CONCRETE
- STANDARD ROADSIDE SEED MIX
- PLANT KEY (Cp 10)
- SB–53 COBBLE

GENERAL NOTES:

1. REFER TO ENGINEERING DRAWINGS FOR SEDIMENT AND EROSION CONTROL MEASURES INCLUDING SLOPE STABILIZATION. CONFIRM REMOVALS AND GRADING EXTENTS PRIOR TO EXECUTION OF LANDSCAPE WORKS.
2. REFER TO ENGINEERING DRAWING FOR REMOVALS.
3. REFER TO ENGINEERING DRAWING FOR DETAILED STAGING INFORMATION, LIMIT OF GRADING, AND EROSION PROTECTION.
4. ALL PLANTING TO BE MIN. 5m FROM EDGE OF PAVEMENT WHERE THERE IS NO GUARDRAIL (TYP.)
5. NO PLANTING IN DITCHES. ENSURE ALL PLANTINGS ARE MIN. 3.0m FROM UTILITIES AND 0.5m FROM ALL DRAINAGE STRUCTURES (i.e. DITCHES, SWALES, ETC.)
6. SEED ALL DISTURBED AREAS WITHIN LIMITS OF CONSTRUCTION/R.O.W. AND GRADING EXTENTS AS PER SPECIFICATIONS.

ROADSIDE – PLANT SCHEDULE

TREE PLANTING SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING	COMMENTS
NS	3	*Nyssa sylvatica*	Sour Gum	45mm cal.	W.B.	5m O.C.	Tree form

SHRUB PLANTING SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING	COMMENTS
Am	10	*Aronia melanocarpa*	Black Chokecherry	600mm Ht.	Potted	2.5m O.C.	Full form
Cs	19	*Cornus sericea*	Red Osier Dogwood	600mm Ht.	Potted	2.5m O.C.	Full form
Dl	9	*Diervilla lonciera*	Bush Honeysuckle	600mm Ht.	Potted	2.5m O.C.	Full form
Iv	8	*Iliex verticilatta*	Winterberry Holly	600mm Ht.	Potted	2.5m O.C.	Full form
Ri	9	*Rubus ideaus var. strigosus*	Wild Red Raspberry	600mm Ht.	Potted	2.5m O.C.	Full form
Rt	12	*Rhus thyphina*	Staghorn Sumac	600mm Ht.	Potted	2.5m O.C.	Full form

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CREATED: 2023-09-29 MODIFIED: 2023-09-29 09:42

LANDSCAPE CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO DIGGING.
2. ALL VEGETATION / TREES WITHIN THE CONSTRUCTION LIMIT TO BE REMOVED PRIOR TO PLANTING OPERATIONS AS NOTED ON REMOVAL DRAWINGS IN ACCORDANCE WITH OPSS.PROV 201.
3. PLANT MATERIALS SPECIFIED FOR THIS PROJECT ARE TO CONFORM TO THE CANADIAN NURSERY TRADES ASSOCIATION (C.N.T.A.), SPECIFICATIONS FOR SIZE, SPECIES, AND CONDITIONS AS INDICATED ON THE DRAWINGS. ANY PLANT MATERIALS THAT DO NOT CONFORM IN THE OPINION OF THE CONTRACT ADMINISTRATOR WILL BE REMOVED FROM THE PROJECT AND REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.
4. ALL PLANT MATERIALS FOR THIS SITE SHOULD BE LOCALLY GROWN IN EASTERN ONTARIO NURSERIES FROM NATIVE SEED PROPAGULES THAT ORIGINATED FROM EASTERN ONTARIO POPULATIONS.
5. PLANT MATERIAL COLLECTED FROM NON-NURSERY SOURCE WILL NOT BE ACCEPTED.
6. THE CONTRACTOR SHALL FOLLOW THE SPACING AND OFFSETS FROM FIXED OBJECTS AND ADHERE TO THE DESIGN INTENT WHEN LAYING OUT PLANT MATERIALS.
7. ALL PLANT MATERIALS TO BE STAKED OUT AND APPROVED BY THE CONTRACT ADMINISTRATOR PRIOR TO PLANTING.
8. FIELD ADJUSTMENTS OF PLANT LOCATIONS DUE TO CONFLICTS WITH SITE CONDITIONS, OR MATERIAL SUBSTITUTIONS REQUIRE PRIOR APPROVAL OF THE CONTRACT ADMINISTRATOR.
9. ALL TREE PLANTING TO BE A MINIMUM OF 10m FROM EDGE OF PAVEMENT.
10. TOPSOIL TO BE MIXED WITH COMPOST AS PER SECTION 7.02 OF SPECIAL PROVISION NO. LAND001. TOPSOIL SHALL BE TESTED 15 BUSINESS DAYS BEFORE PLACEMENT FOR THE PHYSICAL REQUIREMENTS LISTED IN SPECIAL PROVISION NO. LAND001 AND APPROVED BY THE CONTRACT ADMINISTRATOR PRIOR TO WORK COMMENCEMENT.
11. ALL TREES AND SHRUBS TO BE PLANTED IN TREE AND SHRUB CONTINUOUS SOIL TRENCHES, NOT INDIVIDUAL PITS. MINIMUM TOPSOIL DEPTH AT EACH SHRUB IS 255mm OVER A MINIMUM 4m^2 AREA. MINIMUM TOPSOIL DEPTH AT EACH TREE IS 600mm OVER A MINIMUM 10m^2 AREA (PER TREE).
12. IMMEDIATELY AFTER PLANTING, INITIAL WATERING AND TREE GUARD INSTALLATION, MULCH SHALL BE APPLIED IN A UNIFORM CONTINUOUS BLANKET OF 100 mm MINIMUM DEPTH TO THE SURFACE AREA SURROUNDING EACH INDIVIDUAL PLANT.
13. FOR ALL TREES THE BARK CHIP SURFACE AREA SHALL EXTEND OVER THE ACTUAL PLANTING PIT AND THE EARTH BERM AND SHALL INCLUDE A 200 MM RADIUS BEYOND THE CIRCUMFERENCE OF THE PLANTING PIT. MULCH IS TO COME NO CLOSER THAN 100 MM TO TRUNK OF TREE.
14. FOR ALL SHRUBS THE COMPLETE SURFACE AREA OF EACH SHRUB BED, INCLUDING THE ENTIRE SURFACE AREA WITHIN THE PERIMETER OF THE SHRUB GROUPING, SHALL BE COVERED WITH MULCH. MULCH SHALL EXTEND A MINIMUM OF 500MM FROM THE CENTRE OF THE OUTSIDE ROW OF SHRUBS.
15. THE CONTRACTOR SHALL WATER PLANTS IMMEDIATELY UPON INSTALLATION.
16. MAINTENANCE SHALL INCLUDE WATERING AND FERTILIZING, CONTROL OF WEEDS AND GRASSES IN ALL MULCHED AREAS, APPLICATION OF RODENT PROTECTION AND PESTICIDES AS REQUIRED. REPAIRS TO STAKES, ARBOR TIES, TREE GUARDS, AND THE WRAPPING AND UNWRAPPING OF ALL CONIFEROUS TREES AND SHRUBS FOR WINTER PROTECTION. REFERE TO SPECIFICATIONS FOR COMPLETE MAINTENANCE REQUIREMENTS.

SEEDING NOTES

1. ALL SPECIFIED SEED MIXES ON THE DRAWINGS TO BE IN ACCORDANCE WITH THEIR CORRESPONDING SPECIES COMPOSITION VALUES AND SEED AND FERTILIZER APPLICATION RATES AS PER OPSS 804.
2. SEEDED AREAS ON SLOPES LESS THAN 3:1 TO BE APPLIED WITH HYDRAULIC MULCH APPLICATION. APPLY BONDED FIBRE MATRIX (BFM) APPLICATION ON SLOPES GREATER THAN 3:1 FOR ALL SEEDED AREAS.

SEED MIX INFORMATION

STANDARD ROADSIDE MIX:

Common Name	Scientific Name	Percent of Mix
Creeping Red Fescue	Festuca rubra	52
Kentucky Bluegrass	Poa pratensis	10
Perennial Ryegrass	Lolium perrenne	35
White Clover	Trifolium repens	3

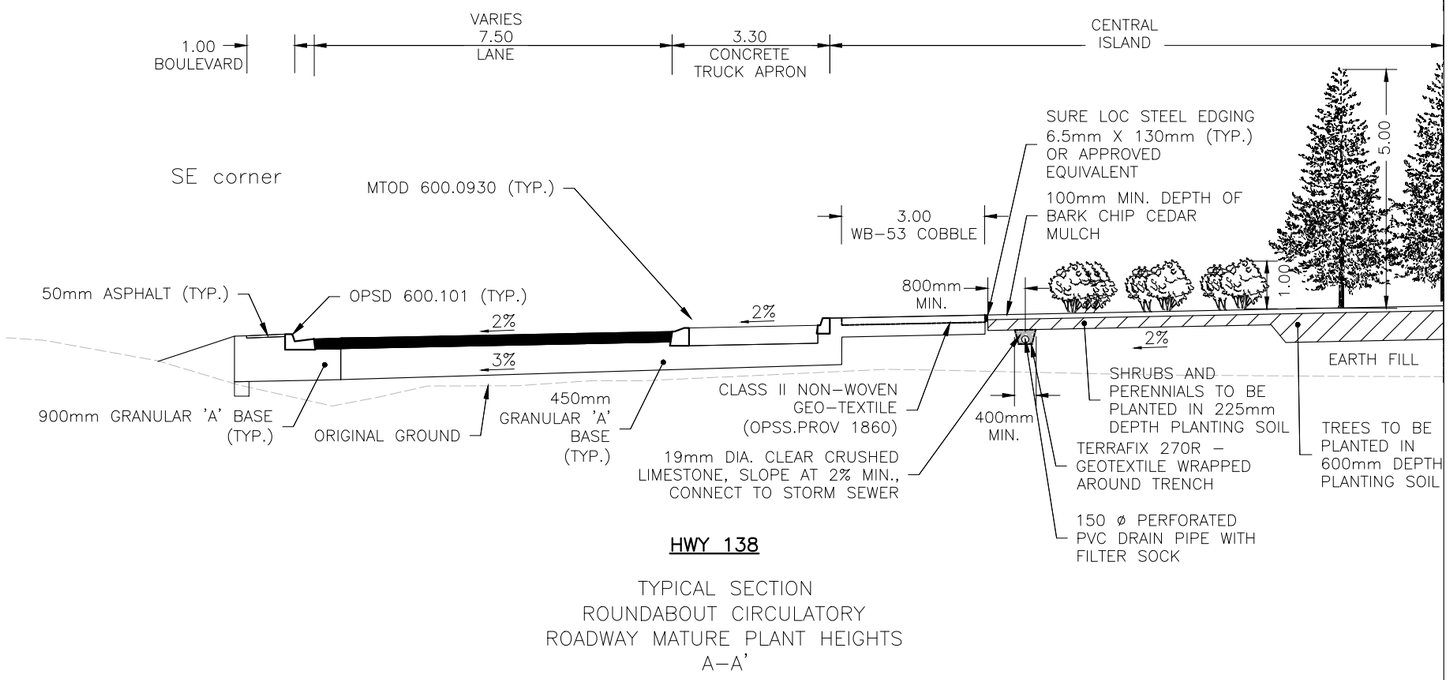
LOWLAND MIX:

Common Name	Scientific Name	Percent of Mix
Creeping Red Fescue	Festuca rubra	35
Brome Grass	Bromus nerres	25
Kentucky Bluegrass	Poa pratensis	10
Birdsfoot Trefoil	Lotus corniculatus	5
Perennial Ryegrass	Lolium perrenne	20
White Clover	Trifolium repens	5

METRIC
ALL DIMENSIONS ARE IN METRES

Ontario Ministry of Transportation
CONT CONTRACT
WP 4043-21-01
LANDSCAPE PLAN
STA TO STA
SHEET 47

MORRISON HERSHFIELD



HWY 138

TYPICAL SECTION
ROUNDABOUT CIRCULATORY
ROADWAY MATURE PLANT HEIGHTS
A-A'

MINISTRY OF TRANSPORTATION, ONTARIO ANSI-D 2016-10
FILE NAME: X:\Proj\2020\201979405-MTO-Highway 138 Roundabout\09. CAD\07 Sheets\047_201979405_LA_02.dwg
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METRIC
ALL DIMENSIONS ARE IN METRES

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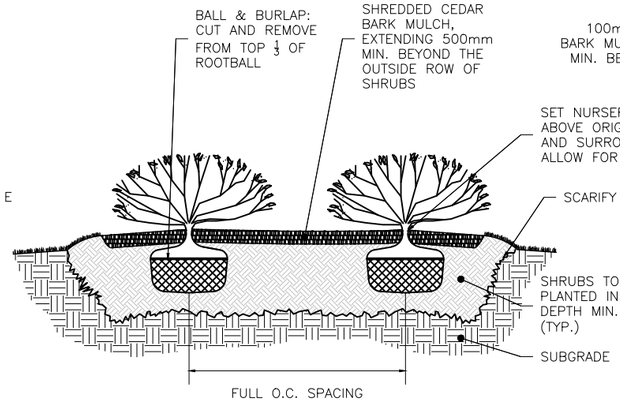
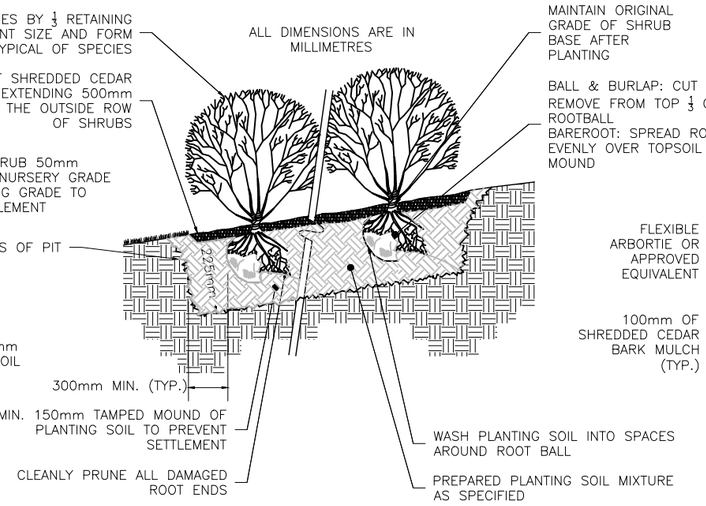
WP 4043-21-01
LANDSCAPE PLAN
STA TO STA
SHEET 48
MORRISON HERSHFIELD



2 SHRUB PLANTING
READ THIS DETAIL TOGETHER WITH PLANTING NOTES N.T.S.

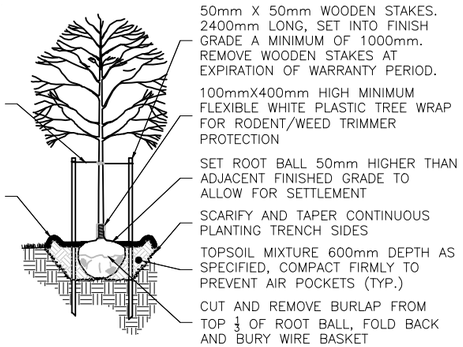


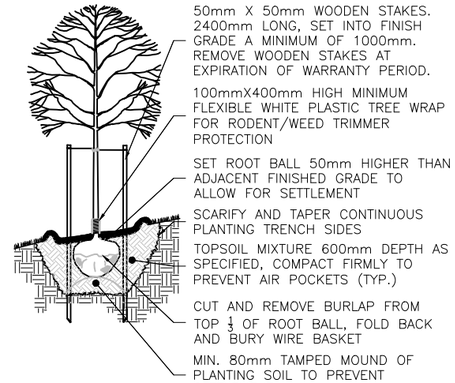
3 SLOPED SHRUB PLANTING
READ THIS DETAIL TOGETHER WITH PLANTING NOTES N.T.S.

NOTE:
TREE STAKES, GUYS, AND ARBORTIES TO BE REMOVED AS SPECIFIED, OR UPON THE WARRANTY OF THE EXPIRATION PERIOD.

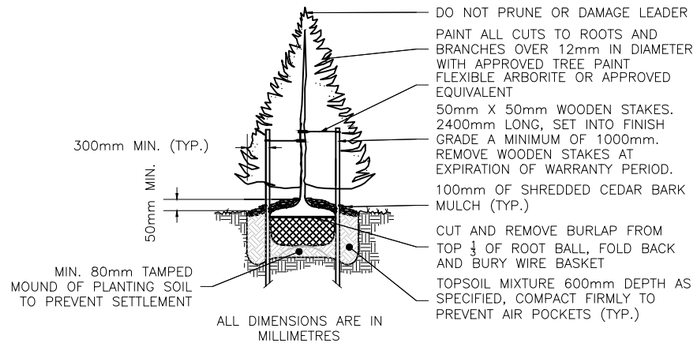
NOTE:
PRUNE ONLY DEAD OR BROKEN BRANCHES. TREAT ALL CUTS OVER 15mm DIA. WITH APPROVED TREE PAINT. DO NOT CUT LEADER

NOTE:
IF PLANTED IN FULL LEAF, THE TREE IS TO BE SPRAYED WITH APPROVED ANTI-DESSICANT UNLESS PLANTED WITHIN 48 HOURS OF DIGGING





4 DECIDUOUS TREE PLANTING
READ THIS DETAIL TOGETHER WITH PLANTING SPECIFICATIONSN.T.S.



5 CONIFEROUS TREE PLANTING
READ THIS DETAIL TOGETHER WITH PLANTING NOTES N.T.S.

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CREATED: 2023-09-29 MODIFIED: 2023-09-29 09:42