

MINISTRY OF TRANSPORTATION - NORTHWESTERN REGION

MCGUIRE ROAD CONSTRUCTION FROM RED ROCK ROAD #9 TO LANDFILL SITE ROAD

(HIGHWAY 11/17 FOUR-LANE EXPANSION PROJECT – FROM 800 M WEST OF COUGHLIN ROAD TO RED ROCK ROAD #9)

DESIGN AND CONSTRUCTION REPORT

G.W.P. 132-90-00



MAY 2019



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DETAIL DESIGN AND CLASS ENVIRONMENTAL ASSESSMENT
STUDY (GROUP 'B')

DESIGN AND CONSTRUCTION REPORT

MINISTRY OF TRANSPORTATION, NORTHWESTERN REGION

G.W.P. 132-90-00

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MAY 2019

THE PUBLIC RECORD

A copy of this document has been submitted to the following office of the Ministry of the Environment, Conservation and Parks to be placed on the Public Record:

Ministry of the Environment, Conservation and Parks

Thunder Bay District Office
435 James Street South, Suite 331
Thunder Bay, ON P7E 6S7

This Design and Construction Report is also available on the project website (<https://hwy11-17-coughlintoredrock9.com>), and at the following locations for public review during regular business hours:

Red Rock Public Library
Front Desk
42 Salls Street
Red Rock, ON P0T 2P0

Township of Dorion
170 Dorion Loop Road
Dorion, ON P0T 1K0

Dorion Public Library
Front Desk
170 Dorion Loop Road
Dorion, ON P0T 1K0

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GLOSSARY

AA	Archaeological Assessment
CEAA	<i>Canadian Environmental Assessment Act</i>
Class EA	<i>Class Environmental Assessment for Provincial Transportation Facilities</i> (1999, as amended 2000)
DCR	Design and Construction Report
EA	Environmental Assessment
ESA	<i>Endangered Species Act</i>
ESR	Environmental Study Report
EMS	Emergency Medical Service
G.W.P.	Group Work Project
LIO	Land Information Ontario
MNRF	Ministry of Natural Resources and Forestry
MECP	Ministry of Environment, Conservation and Parks
MTO	Ministry of Transportation
MTCS	Ministry of Tourism, Culture and Sport
NHIC	Natural Heritage Information Centre
NSA	Noise Sensitive Area
OASDB	Ontario Archaeological Sites Database
OPP	Ontario Provincial Police
OPSS	Ontario Provincial Standard Specifications
ROW	Right-of-Way
SAR	Species at Risk
SARA	<i>Species at Risk Act</i>

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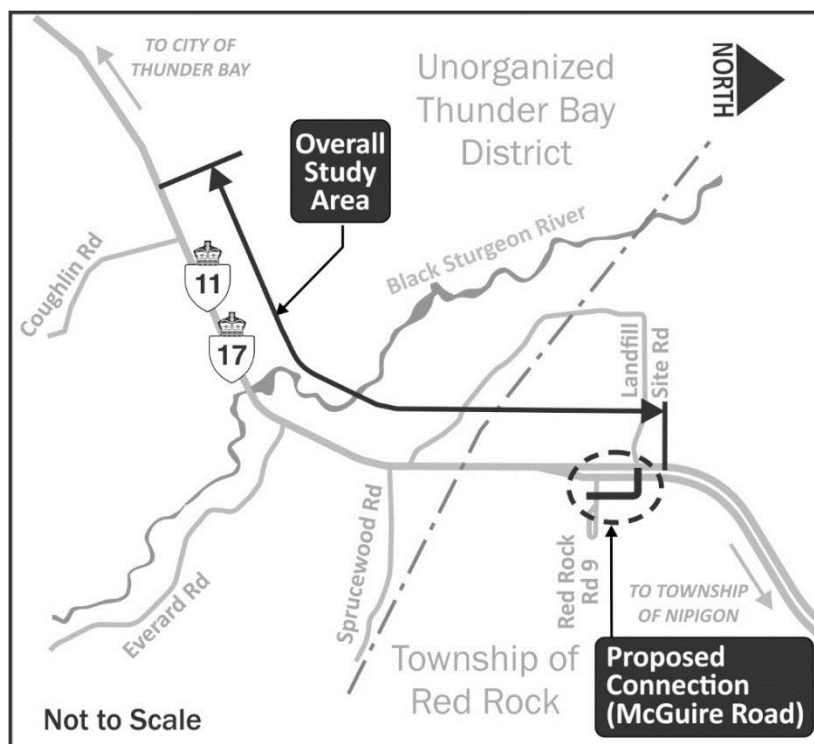
A ONTARIO GOVERNMENT NOTICE

1 PROJECT OVERVIEW

The Ontario Ministry of Transportation (MTO) retained WSP to undertake the Detail Design and Class Environmental Assessment (Class EA) Study for the four-lane expansion of Highway 11/17 from 800 m west of Coughlin Road to Red Rock Road #9, within the Townships of Lyon and Red Rock in the Unorganized District of Thunder Bay.

The four-laning work includes realignment of a portion of the existing highway from west of Red Rock Road #9 to provide a future connection (McGuire Road) between the proposed and existing Highway 11/17 alignments. MTO is advancing the Detail Design of a portion of McGuire Road for construction under the current four-laning contract from Red Rock Road #9 to Nipigon to accommodate full access to Highway 11/17. This portion of McGuire Road is shown in relation to the overall study area in **Exhibit 1-1**.

Exhibit 1-1: Location of McGuire Road



1.1 BACKGROUND

In 1996, the Ministry of Transportation (MTO) completed a Planning and Preliminary Design Study for the four-laning of Highway 11/17 from 8 km west of Ouimet easterly 36 km to the Red Rock Township West boundary. The 1996 Planning and Preliminary Design Study included the section from 800 m west of Coughlin Road to Red Rock Road #9, in the Townships of Lyon and Red Rock, within the Unorganized District of Thunder Bay. An Environmental Study Report (ESR) was filed in January 1997 and received environmental clearance. The study was identified as a Group "B" project and complied with the requirements of the Ministry's *Provincial Highway Class Environmental Assessment* (1992).

In April 2017, MTO retained WSP to undertake the Detail Design, and Class Environmental Assessment (EA) Study for the four-laning of Highway 11/17 from 800 m west of Coughlin Road to Red Rock Road #9. Since construction did not commence within five years of the 1997 ESR receiving approval, an Addendum to the original report was prepared as a component of the Detail Design Study to provide an update of the current environmental conditions within the study area to determine if there were any new conditions in the study corridor that might affect the proposed four-laning of Highway 11/17. The Addendum to the ESR for the entire four-laning study included the McGuire Road connection. The Addendum was filed in March 2018 and made available for a 30-day public and external agency review period as per the requirements identified under the MTO Class Environmental Assessment (Class EA) process. There were no bump-up requests received during the public review period and the proposed changes to the 1997 EA Approved Plan documented in the ESR Addendum were cleared to proceed in May 2018.

Until the EA process is completed for the proposed works within the overall Highway 11/17 four-laning project from Coughlin road to Red Rock Road #9 (G.W.P. 132-90-00), and to accommodate full access to Highway 11/17 in the interim, MTO has advanced the Detail Design of a portion of McGuire Road to allow for construction of McGuire Road as part of the on-going four-laning contract from Red Rock Road #9 to Nipigon. This Design and Construction Report has been prepared to document the Detail Design, environmental impacts and mitigation measures for this portion of the McGuire Road construction. The Detail Design for the remaining four-laning works will be completed, and presented at a Public Information Centre (PIC) at a later time. Following that PIC, the Detail Design for the remaining work will be documented in a separate Design and Construction Report (DCR), which will also be available for public review.

1.2 SUMMARY DESCRIPTION OF THE UNDERTAKING

The Detail Design referenced in this report pertains to the portions of McGuire Road from Red Rock Road #9 to Landfill Site Road.

McGuire Road has been designed to accommodate the future expansion of Highway 11/17 in accordance with the Recommended Plans from the Detail Design and Class Environmental Assessment (EA) Study for the four-laning of Highway 11/17 from 800 m west of Coughlin Road to Red Rock Road #9 and the aforementioned 2019 ESR Addendum.

1.3 ENVIRONMENTAL ASSESSMENT ACT PROCESS

The MTO *Class Environmental Assessment for Provincial Transportation Facilities* (Class EA) was approved under the *Ontario Environmental Assessment Act* in the Fall of 1999 and amended in 2000. The Class EA defines the group of projects and activities, and the environmental assessment processes that MTO has committed to follow to plan, design, and implement these types of projects. Provided that this process is followed, projects and activities included under the Class EA do not require formal review and approval under the *Ontario Environmental Assessment Act*.

This Detail Design Study has followed the MTO Class EA process for Group 'B' projects, which generally includes re-alignments and improvements to existing highways and freeways, new interchanges or modifications to existing interchanges, new or modified water crossings or watercourse alterations, or new highway service facilities. Group 'B' projects are generally similar in nature, recur frequently, and have a generally predictable range of environmental effects for which standard mitigation can be used. The MTO Class EA process for Group 'B' projects is shown in **Exhibit 1-2**.

This DCR is not eligible for a Part II Order (i.e. "bump-up") under the provisions of the *Ontario Environmental Assessment Act*. However, there is an opportunity at any time during the MTO Class EA process for interested persons to provide comments and review outstanding issues. The DCR is available for a 30-day public and external agency review period from **May 7, 2019** to **June 5, 2019**. Any concerns raised by members of the public, interested groups, or technical and external agencies during this review period should be discussed with MTO or their consultants identified below.

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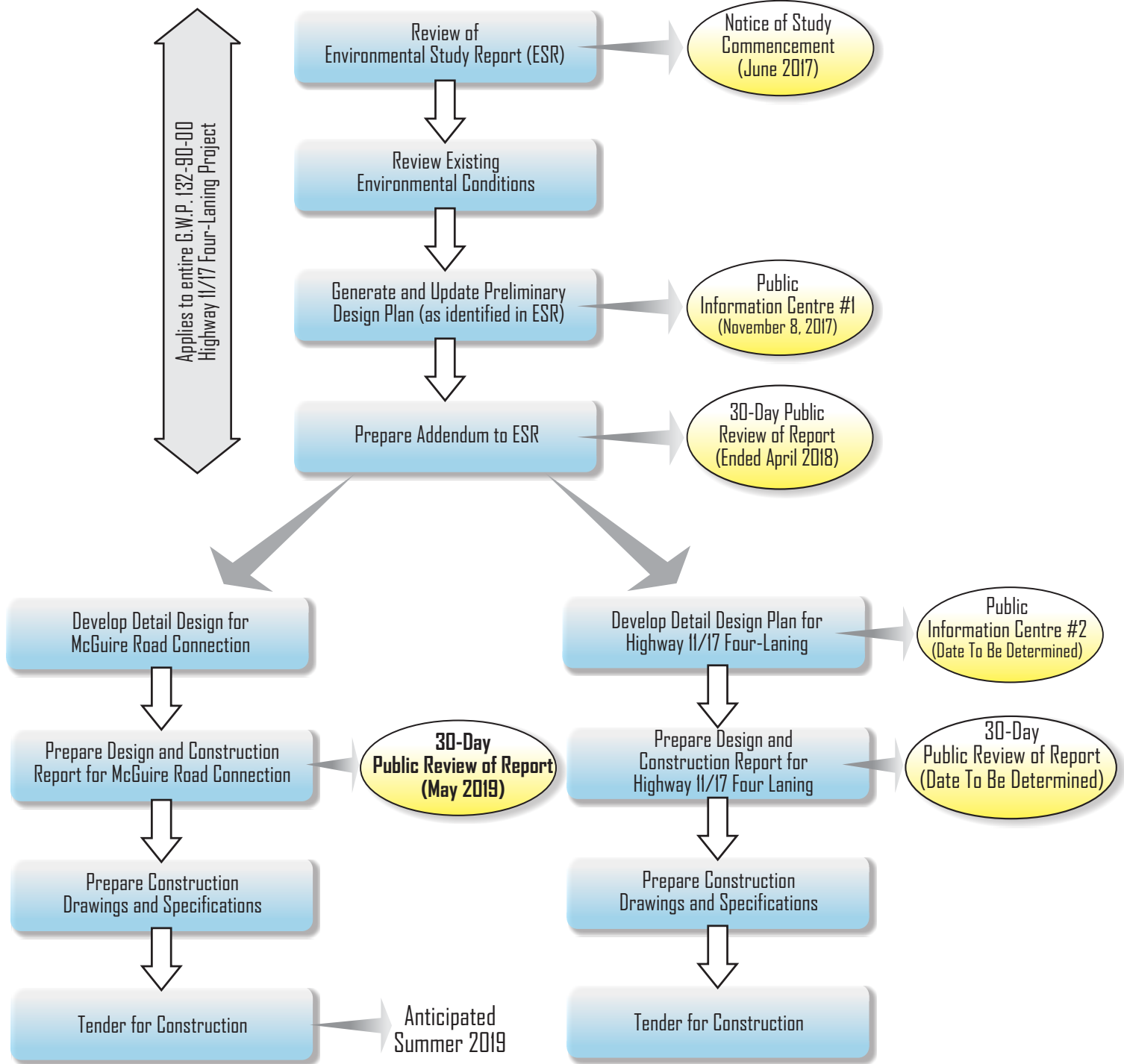
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This study addresses the Detail Design phase for the construction of McGuire Road as described in **Section 1.2**, and documents how the EA commitments outlined in the earlier ESR update are being addressed. Design features, refined environmental impacts, and mitigation measures are also described in this report. A copy of the Notice of DCR Filing is included in **Appendix A**.

KEY ACTIVITY

CONSULTATION MILESTONE

Applies to entire G.W.P. 132-90-00 Highway 11/17 Four-Laning Project



1.4 CANADIAN ENVIRONMENTAL ASSESSMENT ACT

Under the *Canadian Environmental Assessment Act, 2012 (CEAA, 2012)*, an environmental assessment is required for “designated projects.” A designated project is one that includes one or more physical activities that are set out in the regulations under *CEAA, 2012* or by order of the federal Minister of the Environment.

This Detail Design and Class EA Study was reviewed by the Project Team against the Regulations Designating Physical Activities, and it was determined that the study is not “designated” and therefore, will not require consideration of a federal environmental assessment.

Readers interested in obtaining additional information about *CEAA, 2012* are encouraged to refer to: www.ceaa.gc.ca.

1.5 PURPOSE OF THE DESIGN AND CONSTRUCTION REPORT

This Design and Construction Report (DCR) has been prepared to:

- ▶ Describe the design of McGuire Road between Landfill Site Road and Red Rock Road #9;
- ▶ Describe specific environmental effects associated with the project and proposed mitigation;
- ▶ Identify measures that have been incorporated into the design and contract drawings;
- ▶ Address any commitments to future work; and
- ▶ Summarize the consultation undertaken with external agencies, affected/adjacent property owners and interested members of the public during the study.

Further details on the Class EA process for Group ‘B’ projects are contained in the *Class Environmental Assessment for Provincial Transportation Facilities (2000)*. Readers interested in these matters are encouraged to refer to that document.

Additional information is also available by contacting the key project team members involved in this project, as listed in **Section 1.3**.

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2 CONSULTATION / ENGAGEMENT

Consultation and engagement is an integral component of the Environmental Assessment (EA) process and provides an opportunity for communication between the community and the Project Team to identify potentially significant environmental issues early in the decision-making process and throughout the study.

The consultation and engagement completed for the McGuire Road construction was completed as part of the overall four-laning project. Given no specific comments related to the McGuire Road design were received from external agencies, Indigenous communities, stakeholders and members of the public to date, the consultation conducted for the main four-laning project was deemed sufficient for the McGuire Road construction to proceed ahead of the remainder of the undertaking. The Project Team has engaged, members of the public, property owners, federal and provincial government review agencies, Indigenous Communities, the Township of Red Rock, as well as other potentially interested stakeholders. Consultation and engagement will continue to occur for the main undertaking.

External agencies, including federal and provincial government review agencies, Ministry of Municipal Affairs and Housing, local Members of Parliament (MP), Members of Provincial Parliament (MPP), appropriate Indigenous Communities, adjacent property owners, and other potentially interested stakeholders were contacted at consultation milestones (e.g. study start-up, Public Information Centre (PIC) # 1, and the Addendum to the Environmental Study Report (ESR) Filing). In addition, a copy of the notices were also sent via Canada Post unaddressed mailing (i.e. bulk) to approximately 1235 property owners within the vicinity of the study area at all consultation milestones. Consultation for the construction of McGuire Road was included as part of the proposed works for the broader four-laning study and opportunities for input were provided throughout the study.

A project website (www.hwy11-17coughlintoredrock9.com) was launched to coincide with the notification of Study Commencement in June 2017, and has remained active with updates occurring throughout the course of the study.

2.1 EXTERNAL AGENCY CONSULTATION

The following federal and provincial government agencies, municipalities and school boards, stakeholder / interest groups, emergency services, and utilities were contacted at study commencement, PIC # 1, and Addendum to the ESR milestones:

Provincial Ministries

- ▶ Ministry of Indigenous Affairs
- ▶ Ministry of Agriculture, Food, and Rural Affairs
- ▶ Ministry of Tourism, Culture and Sport
- ▶ Infrastructure Ontario
- ▶ Ministry of Community Safety and Correctional Services
- ▶ Ministry of Municipal Affairs and Correctional Services
- ▶ Ministry of Natural Resources and Forestry
- ▶ Ministry of Northern Development and Mines
- ▶ Ministry of the Environment, Conservation and Parks

Railways

- ▶ CN Rail
- ▶ CP Rail

Municipalities, Emergency Services and Local Agencies

- ▶ Red Rock Township
- ▶ Lyon Local Roads Board
- ▶ Ontario Provincial Police
- ▶ Nipigon Fire Department
- ▶ Superior North EMS
- ▶ Ontario Trucking Association
- ▶ Ontario Federation of Snowmobile Clubs
- ▶ Thunder Bay Field Naturalists
- ▶ Thunder Bay District Fish & Game Association
- ▶ North Shore Steelhead Association

Utilities

- ▶ Hydro One Networks Inc

School Boards and Interest Groups

- ▶ Superior North Catholic District School Board
- ▶ Superior Greenstone District School Board
- ▶ Conseil Scolaire de District Catholique des Aurores Boréales
- ▶ Conseil Scolaire de District du Grand Nord
- ▶ East of Thunder Bay Transportation Consortium

2.2 PUBLIC INFORMATION CENTRE

A Public Information Centre (PIC) for the study was held on November 8, 2017 at the Red Rock Recreation and Community Centre from 4:00 p.m. to 8:00 p.m. where the full length of the proposed McGuire Road connection from the new highway alignment to the existing highway was presented as part of the overall Recommended Plan. Notification letters were distributed by direct mail or emailed to contacts on the study mailing list on October 27, 2017, including government agencies (federal and provincial), Indigenous communities, local municipalities (Township of Red Rock, Ministry of Municipal Affairs and Housing), emergency service providers, schoolboards, and other potentially interested stakeholder groups.

The PIC was attended by approximately 35 people and a total of 23 participants signed the registration sheet. The Project Team did not receive any specific comments prior to, during, or following the PIC on the recommended McGuire Road connection.

2.3 INDIGENOUS COMMUNITIES ENGAGEMENT

The following Indigenous communities were notified of the study commencement, the PIC, and filing of the Addendum to the 1997 ESR:

- ▶ Fort William First Nation
- ▶ Nishnawbe Aski Nation
- ▶ Anishinabek Nation / Union of Ontario Indians
- ▶ Red Rock Indian Band
- ▶ Pays Plat First Nation
- ▶ Animbiigoo Zaagi'gan Anishinaabek
- ▶ Métis Nation of Ontario
- ▶ Thunder Bay Métis Council
- ▶ Biinjitiwaabik Zaagin Anishinaabek (Rocky Bay)
- ▶ Bingwu Neyaashi Anishinaabek
- ▶ Pic Mover First Nation
- ▶ Ojibways of Pic River

No specific comments related to the McGuire Road construction were received from Indigenous Communities. MTO will continue to engage with Indigenous communities regarding the overall four-laning work as the study progresses.

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3 RECOMMENDED PLAN

3.1 MAJOR FEATURES OF THE PROPOSED WORK

The four-laning alignment identified in the 1997 EA Approved Plan was reviewed to ensure the proposed highway alignment meets current highway engineering standards and minimizes / avoids existing environmental constraints. The portion of McGuire Road that will be constructed under the current contract will be approximately 650 m in length. It will be comprised of two lanes, each 3.5 m in width with 1.0 m shoulders. The surface will be granular, but it will be ultimately paved when the remainder of McGuire Road is constructed under the main project. **Exhibit 3-1** depicts the realignment of the east end connection (i.e. the proposed McGuire Road) to the existing Highway 11/17 and removal of the east end median crossing (Exhibit 3-1). The median crossing at Landfill Site Road will accommodate any required turnarounds.

As noted in **Section 1.2**, MTO is advancing the Detail Design of this portion of McGuire Road to allow for its construction to be completed as part of the on-going four-laning contract from Red Rock Road #9 to Nipigon; this will accommodate full access to Highway 11/17 until the rest of the four-laning can be constructed.

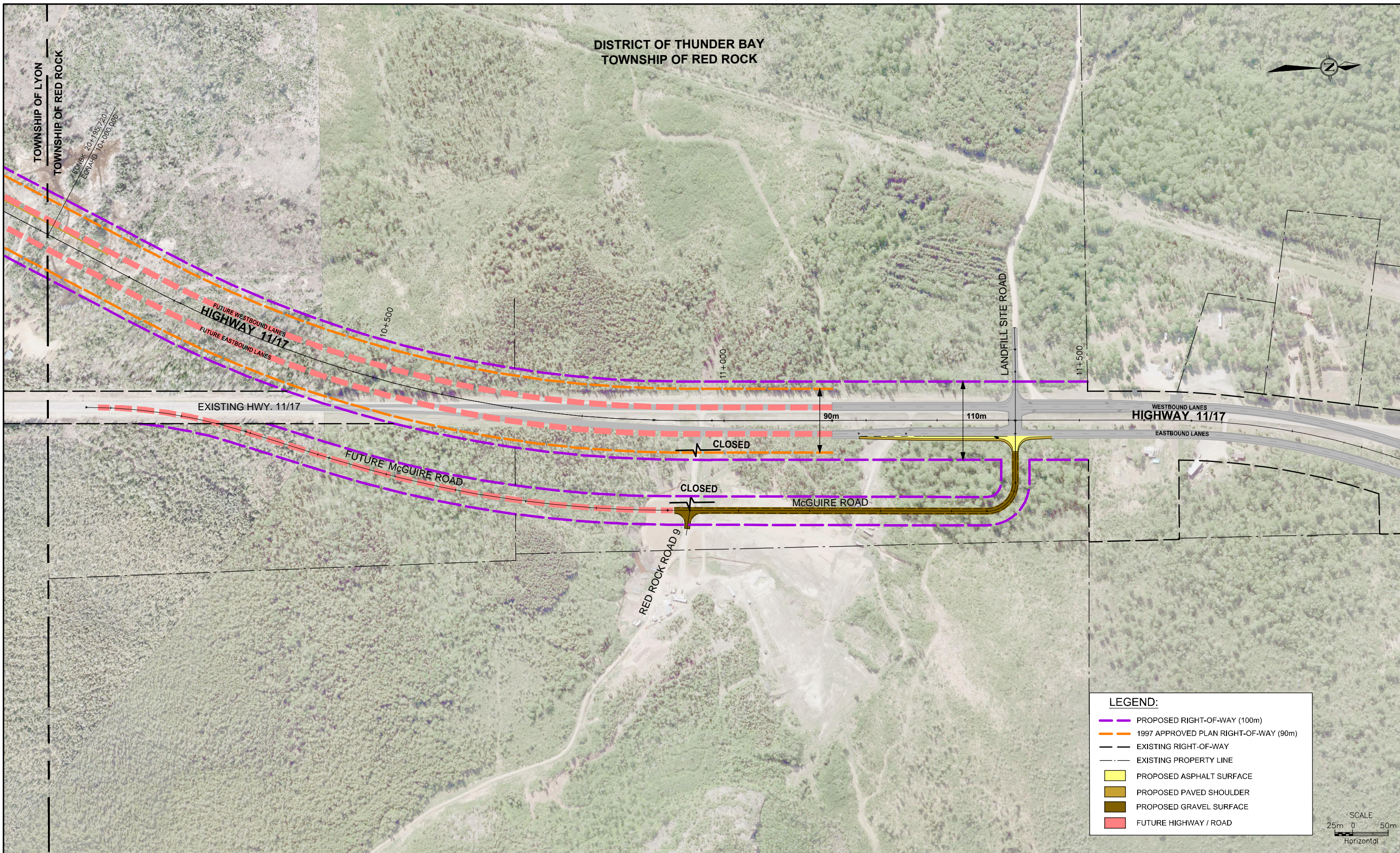
3.2 UTILITIES

There is one hydro pole that is in conflict with the McGuire Road alignment. Hydro One Distribution will relocate the pole prior to completion of the work. Electrical infrastructure supporting partial illumination at the Landfill Site Road intersection with Highway 11/17 will also require relocation as part of the construction contract.

3.3 PROPERTY REQUIREMENTS

The Ministry has followed the standard MTO property acquisition process. All necessary property has been acquired or will be acquired prior to construction.

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4 POTENTIAL ENVIRONMENTAL EFFECTS, MITIGATION MEASURES AND COMMITMENTS TO FURTHER WORK

This section outlines the direct and indirect environmental effects associated with the project, the mitigation measures that will be implemented to minimize effects and ensure compliance with legislated requirements, and any commitments to further work. Mapping depicting the existing environmental conditions is presented in **Exhibit 4-1**.

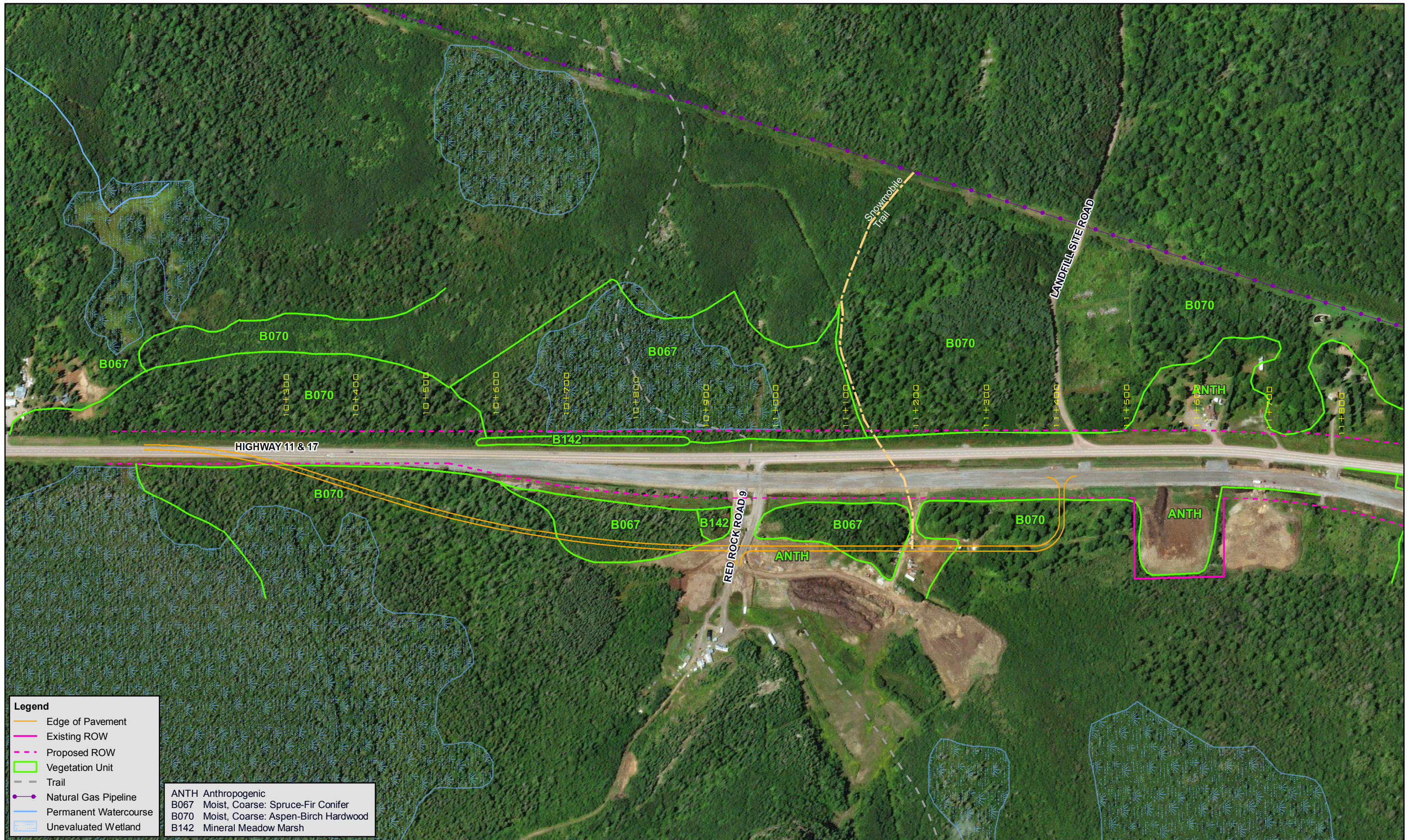
Mitigation measures were considered in planning decisions, design features, construction requirements, and construction constraints. The mitigation measures documented in this report have been developed with due consideration for the potential adverse effects of the proposed construction.

The key to ensuring effective environmental quality control and risk management during the project is the development and proactive implementation of an approach that:

- ▶ Identifies the environmental sensitivities;
- ▶ Presents environmental protection measures in a way that can be translated into contractual requirements and for which compliance can be verified; and
- ▶ Includes a monitoring program that verifies that the environmental protection measures are being implemented and are effective.

It is important to ensure that the Contract Administrator and Contractor are made aware of, and are prepared to deal with, all environmental issues that may arise during construction. Environmental controls will be included in the contract documents to address specific environmental and operational concerns.

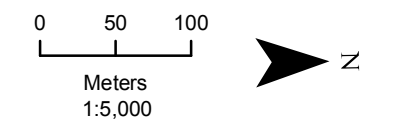
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Legend

- Edge of Pavement
- Existing ROW
- - - Proposed ROW
- Vegetation Unit
- - - Trail
- Natural Gas Pipeline
- Permanent Watercourse
- [] Unevaluated Wetland

ANTH	Anthropogenic
B067	Moist, Coarse: Spruce-Fir Conifer
B070	Moist, Coarse: Aspen-Birch Hardwood
B142	Mineral Meadow Marsh



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4.1 NATURAL ENVIRONMENT

At the outset of the Highway 11/17 Four-laning between Highway 582 and Red Rock Road #9 project, that includes the new McGuire Road, all available information and data along and in the vicinity of the project limits were collected. This process included contacting and consulting Nipigon District Ministry of Natural Resources and Forestry (MNR) staff directly to identify and discuss any information regarding potentially sensitive features (e.g., species, including species at risk [SAR], specialized habitats or other functions) in the vicinity of the project area. The MNR Natural Heritage Information Centre (NHIC) and Land Information Ontario (LIO) databases were also queried to uncover any documented information on designated and significant natural features, habitats and species of conservation concern in the general vicinity of the project. In addition, aerial photographs and mapping sources, were compiled and reviewed.

With the new McGuire Road construction overlapping the four-laning project to the east, the Terrestrial Ecosystems Impact Assessment Report (MMM Group, 2014) for the four-laning of Highway 11/17 between Red Rock and Nipigon was reviewed. This report documents site conditions in the vicinity of the new McGuire Road and environmentally sensitive areas, species at risk or significant features were found. Field investigations were completed by WSP from September 25 to 27, 2017 and between June 12 and 13, 2018 on lands to the west of McGuire Road, however, field investigations were not completed at the proposed McGuire Road area because of on-going construction in 2017 and 2018 and the area was inaccessible. An additional terrestrial field investigation will be completed by WSP at the proposed McGuire Road area in Spring / Summer 2019 to document updated existing conditions in support of the impact assessment, and recommend mitigation measures.

The available information from the previous study (MMM Group, 2014), along with observation from the edge of the highway right-of-way (ROW) collected during WSP's 2018 field investigations, were used to describe conditions in the location of the new McGuire Road. Field investigation within the project area were completed in 2010 by MMM Group in a previous and included:

- ▶ Recording all direct wildlife observations and wildlife signs (including browse, track/trails, animal scat, bird nesting activity, tree cavities, burrows, excavated holes and vocalizations) and identifying potential wildlife usage and habitat functions associated with vegetation communities;
- ▶ Classifying / generally mapping vegetation communities using the Ecological Land Classification for Ontario –Boreal Region (ELC; Banton et al. 2009);
- ▶ Evaluating the sensitivity and significance of vegetation and vegetation communities and habitats using MNR's NHIC Biodiversity Explorer and SAR websites; and
- ▶ Noting general vegetation characteristics including age, general habitat features, drainage conditions, and any anthropogenic disturbance.

4.1.1 VEGETATION

As noted in the section above, the description of the vegetation communities in this section of the report were based on the information collected as part of a previous study, and additional field investigations will be carried out by WSP in Spring / Summer 2019 to verify and update the existing conditions described below. It is anticipated that the landscape will have changed due to the on-going construction work in the vicinity of the proposed McGuire Road construction.

The vegetation located along the south side of Hwy 11/17 to approximately 850 metres to the east consists of two vegetation communities: Aspen-Birch Hardwood (B070) and Spruce-Fir Conifer (B067), which includes Mineral Meadow Marsh (B142). These vegetation communities are bordered by residential development to the east, a clearing to the south and divided by an access road. There is a dug drainage ditch that runs through the west portion of this unit. Both communities show signs of modified or disturbance in the past. Cattail Marsh has formed along the drainage ditch and in areas where it appears drainage has been modified as a result of the highway.

The Aspen-Birch Hardwood (B070) vegetation community is comprised mostly of White Birch (*Betula papyrifera*) with Trembling Aspen (*Populus tremuloides*) with dense Mountain Maple (*Acer spicatum*) and Beaked Hazel (*Corylus cornuta*) dominating understory with a few Fire Cherry (*Prunus pensylvanica*), Northern Bush Honeysuckle (*Diervilla lonicera*), Mountain Fly-honeysuckle (*Lonicera canadensis*), regenerating Trembling Aspen and Balsam Fir. Groundcover species are consistent with upland communities in the general area and include: Bunchberry (*Cornus canadensis*), Large-leaved Wood-aster (*Euryvia macrophylla*), Wild Sarsaparilla (*Aralia nudicaulis*), Northern Starflower (*Trientalis borealis*), Canadian Mayflower (*Maianthemum canadense*), Common Strawberry (*Fragaria virginiana*), Ground Pine (*Lycopodium dendroideum*), Bracken Fern (*Pteridium aquilinum*), Rose Twisted-stalk (*Streptopus lanceolatus*) and Dwarf Raspberry (*Rubus pubescens*).

The Spruce-Fir Conifer (B067) vegetation community is comprised mostly of Balsam Fir (*Abies balsamea*), White Spruce (*Picea glauca*), White Birch and Trembling Aspen with a relatively sparse understory layer of dense Mountain Maple and Beaked Hazel. Regenerating consist mostly of Trembling Aspen and Balsam Fir. Groundcover species are consistent with upland communities in the general area and include: Bunchberry, Large-leaved Aster, Wild Sarsaparilla, Naked Bishop's-cap (*Mitella nuda*), Northern Star Flower, Canadian Mayflower, Common Strawberry, Ground Pine, Oak Fern (*Gymnocarpium dryopteris*) Northern Beech Fern (*Phegopteris connectilis*), Bracken Fern, Rose Twisted-stalk and Dwarf Raspberry. Portions of this community have been cleared with burn piles present at time of site investigations.

Mitigation Measures

Employing the mitigation measures outlined below are anticipated to minimize impacts to vegetation, and associated habitat features within the vicinity of the proposed McGuire Road to the extent possible, as well as protect adjacent vegetation/habitat features during and following construction. Recommended mitigation measures to minimize effects to the local vegetation communities and their associated habitat functions include:

- ▶ Temporary erosion and sediment control measures shall be installed prior to construction, and maintained throughout construction.

- ▶ Sediment and erosion control structures shall be routinely inspected, including after storms, and repaired as required.
- ▶ Exposed surfaces will be re-stabilized as soon as possible using gravel sheeting due to high erosion potential and areas not requiring gravel sheeting will be re-vegetated.
- ▶ Vegetation removal and protection measures shall be completed in accordance with MTO's standard practices for tree clearing and protection. Since the balance of the vegetation along the right-of-way (ROW) is upland forest that is common to the area and already culturally influenced, protective fencing has not been specifically recommended. Equipment, materials and other construction activities will not be permitted in the retention zones.
- ▶ Felled trees to be removed into the highway ROW (and away from watercourses) to avoid disturbance to vegetation outside the ROW (or to aquatic habitats).
- ▶ Tree grubbing will be restricted to the required activity zone.
- ▶ Unnecessary traffic, dumping, and storage of materials over tree roots will be avoided.

4.1.2 WILDLIFE AND WILDLIFE HABITAT

Although no wildlife was observed in the location of the new McGuire Road during field investigations conducted as part of the previous study, nor during updated field surveys conducted immediately west of the McGuire Road study limits, habitats within the general area and in the location of the McGuire Road connection appear to provide suitable conditions for a range of mammals that are typical of northern forests, forest edges and wetlands.

Based on existing documentation and field investigations completed immediately to the west of the proposed McGuire Road, it is presumed that common wildlife that have potential to be present include: White-tailed Deer (*Odocoileus virginianus*), Chipmunk (*Tamias striatus*), Red Squirrel (*Tamiasciurus hudsonicus*), Snowshoe Hare (*Lepus americanus*), Red Fox (*Vulpes vulpes*), Moose (*Alces Alces*), Wolf (*Canis lupus*) and Bear (*Ursus americanus*). This assumption will be updated when updated field investigations are completed in Spring / Summer 2019 to verify and update the existing conditions described below for this assignment.

Although wildlife in the area have already adapted to the presence an existing highway close by, the construction of the new McGuire Road connection is expected to have some additional indirect impacts on wildlife. Potential disturbances and noise may tend to displace wildlife temporarily during the construction period.

The mitigation measures recommended in **Section 4.1.1** to minimize effects to vegetation and protect adjacent vegetation areas will also protect wildlife and the associated wildlife habitat functions. However, it is also necessary to ensure the protection of breeding birds, as well as wildlife generally that may nest or otherwise use areas where construction is proposed. Specifically, nesting migratory birds are protected under the *Migratory Birds Convention Act (MBCA, 1994)*. No work is permitted to proceed that would result in the destruction of active nests (nests with eggs or young birds), or the wounding or killing of birds, of species protected under the *MBCA* and / or Regulations under that Act.

Mitigation Measures

To protect nesting migratory birds, in accordance with the *MBCA*, the following mitigation measures are recommended:

- ▶ The Contractor shall not destroy active nests (nests with eggs or young birds) of protected migratory birds, including SAR protected under the provincial *Endangered Species Act* (ESA 2007).
- ▶ Should there be requirements for the Contractor to clear vegetation during the breeding bird season (approximately May 1st to August 15th), there will be contractual obligations in place to ensure that a qualified individual is present prior to clearing to ensure that no nests are being destroyed.
- ▶ If a nesting migratory bird (or SAR protected under ESA 2007) is identified within or adjacent to the construction site and the construction activities are such that continuing construction in that area would result in a contravention of the Migratory Birds Convention Act, or ESA (2007), the Contractor will cease all activities that could harm the bird and will notify the Contractor Administrator immediately.

For the protection of wildlife in general, the following mitigation measures are recommended:

- ▶ In the event an animal is encountered during construction and does not move from the construction zone, the Contract Administrator will be notified.

Employing the mitigation measures outlined above are anticipated to minimize impacts to wildlife and wildlife habitat.

4.1.3 SPECIES OF CONSERVATION CONCERN

The term “species of conservation concern” (SCC) is used herein to describe species that are “designated” by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and/or listed under the *Species at Risk Act* (SARA); species that are “designated” by the Committee on the Status of Species at Risk in Ontario (COSSARO) as threatened or endangered and regulated under Ontario's *Endangered Species Act* (ESA); and provincially rare species (S-rank of S1 to S3).

NO SCC were identified in the proximity of the new McGuire Road connection in MNR's NHIC online database or through MNR consultation or noted during field investigation completed during the four-laning section to the east (2010). However, based on range mapping and regional lists there is potential for a number of SCC to be in the general area. These include: Appalachian Fir-moss (*Huperzia appressa*), Franklin's Phacelia (*Phacelia franklini*), A Moss (*Rhizomnium gracile*), Large Marble (*Euchloe ausonides*), Taiga Alpine (*Erebia mancinus*), Macoun's Arctic (*Oeneis macounii*), Peregrine Falcon (*Falco peregrinus ssp anatum/tundius*), American White Pelican (*Pelecanus erythrorhynchos*), Barn Swallow (*Hirundo rustica*), Bald Eagle (*Haliaeetus leucocephalus*), Canada Warbler (*Cardellina canadensis*), Olive-sided Flycatcher (*Contopus cooperi*), Common Highhawk (*Chordeiles minor*), Woodland Caribou (*Rangifer tarandus caribou*) and Eastern Cougar (*Puma concolor cougar*).

Based on general habitat descriptions from the previous study, presence of these species within the vicinity of the new McGuire Road is unlikely. This assumption will be verified during updated field investigations that will be completed in Spring / Summer 2019.

Mitigation Measures

The general mitigation measures identified in **Sections 4.1.1** and **4.1.2** will be implemented to minimize potential effects to any species of conservation concern that may be present within the study area.

4.1.4 FISH AND FISH HABITAT

There are two highway drainage features located within the area of the proposed McGuire Road connection. These two drainage features underwent field investigations and impact assessment in a previous study. Both drainage features were identified in the field as not supporting fish use (directly or indirectly) within the highway right-of-way as they do not outlet to any watercourse supporting fish.

As part of the current study, WSP contacted the Ministry of Natural Resources and Forestry (MNR) for updated fisheries information for the study area. MNR's response indicated there are no additional fisheries information available for these two features, and provided updated fish sampling records for the remainder of the fisheries culverts in the study area. Based on the recent correspondence with MNR, and aerial photographs of the study area, WSP anticipates that the potential use of these drainage features by fish has not changed given there are no evident connection of the features to a receiving watercourse downstream that supports fish use. As such, there are no concerns for impacts to fish and fish habitat within the vicinity of the proposed McGuire Road connection. This assumption will be verified during the field investigations that will be completed in Spring / Summer 2019. If any areas within the study area are identified as fish habitat, aquatic field investigations will be conducted following standard practices, and DFO's Fisheries Protocol.

Mitigation Measures

As these drainage features are not anticipated to support fish within the location of the proposed McGuire Road, and are not connected by surface water features to downstream watercourses supporting fish, there are no specific mitigation measures anticipated to be required at these drainage features to protect fish and fish habitat.

4.1.5 EROSION AND SEDIMENT CONTROL

Without the implementation of appropriate mitigation measures, creation of erosion and generation of sediment during excavation and grading activities associated with the construction of the realignment may occur. The requirement for comprehensive erosion and sediment control best practices to be developed and implemented by the Contractor throughout construction is in accordance with MTO's standard practices. The construction access, work areas and associated requirements for removal of riparian vegetation will be minimized to the extent required for the construction activities, and these areas then delineated in the field using the properly installed protective silt fencing.

Relevant mitigation measures to control erosion and sedimentation are outlined below and later in **Exhibit 4-2**:

- ▶ Install temporary erosion and sediment control measures (i.e. straw bale flow checks, erosion control blankets, etc.) prior to construction, and maintain them throughout construction in accordance with the Ministry's standard practice.
- ▶ Limit vegetation removal to only what is required for construction.
- ▶ Re-stabilize and re-vegetate exposed surfaces as soon as possible following construction.
- ▶ Ensure sediment control measures remain in place until groundcover plantings (i.e. seeded areas) have become established.

4.1.6 DRAINAGE AND SURFACE WATER

During construction, there is the potential for adverse effects to surface water quality and/or quantity because of sedimentation, surface water runoff and/or spills, and as a result of various construction activities. Refer to **Section 4.1.3** for details regarding sediment and erosion control, which will also address surface water quality.

4.1.7 GROUNDWATER

Impacts to groundwater quality/quantity are not anticipated as a result of the construction of McGuire Road.

Spill prevention and spill management requirements are included in the contract to minimize the likelihood of any adverse effects to groundwater during construction.

4.2 SOCIO-ECONOMIC ENVIRONMENT

4.2.1 NOISE AND AIR QUALITY

A noise assessment of the proposed improvements (for Highway 11/17 four-laning, from 800 m west of Coughlin Road to Red Rock Road #9) was undertaken to determine the potential noise impacts and any requirements for noise mitigation based on criteria outlined in the MTO *Environmental Guide for Noise* (MTO Noise Guide). The MTO Noise Guide defines a Noise Sensitive Area (NSA) as a noise sensitive land use (urban or rural) with an Outdoor Living Area (OLA) associated with the land use, including:

- ▶ Private homes such as single family residences;
- ▶ Townhouses;
- ▶ Multiple unit buildings, such as, apartments with outdoor living areas for use by all occupants; and
- ▶ Hospitals, nursing homes where there are outdoor living areas for the patients.

The noise assessment identified one NSA located east of the proposed McGuire Road connection. Based on the noise modelling completed for the NSA, a reduction in noise level is predicted for the NSA within the vicinity of the McGuire Road connection given that future traffic will be located further away with the four-laning. Thus, the review of noise mitigation is not warranted based on MTO noise criteria.

During construction, there is the potential for increased noise levels resulting from construction equipment and machinery. The noise restrictions to minimize noise and air quality disturbance resulting from construction activities that are being implemented by the Contractor on the current four-laning contract from Red Rock Road #9 to Nipigon will also apply to the construction of this portion of McGuire Road, including:

- ▶ The Contractor will be required to maintain equipment in an operating condition that prevents unnecessary noise, and keep idling of construction equipment to a minimum and to maintain good working order to reduce noise from construction activities.
- ▶ Any required hoe ramming, drilling and blasting activities will be restricted to the hours of 7:00 am to 7:00 pm.
- ▶ If complaints regarding construction noise arise, they will be investigated according to the provisions of the MTO *Environmental Guide for Noise*. The Guide requires that any initial complaint from the public requires verification by MTO that the general noise control measures agreed to be in effect. If not, MTO will warn the contractor of any problems, and enforce its contract.
- ▶ The Contractor will be required to control dust from his operations such that dust from construction work does not affect traffic, enter surface water, or escape beyond the ROW to cause a nuisance to residents, businesses or utilities.

4.3 CULTURAL ENVIRONMENT

4.3.1 ARCHAEOLOGY

A Stage 1 archaeological assessment carried out during the detail design for the overall highway four-laning study determined that areas within the proposed McGuire Road connection required further Stage 2 archaeological assessment. The Stage 1 Archaeological Assessment Report was submitted to the Ministry of Tourism, Culture and Sport, and was entered into the register.

A Stage 2 archaeological assessment will be completed in Spring / Summer 2019 for the areas within the proposed McGuire Road connection that were recommended for further review in the Stage 1 Archaeological Assessment Report. All pertinent areas will be cleared of archaeological potential prior to start of construction.

Should previously undocumented archeological resources be discovered, they may be a new archeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. In the event of the discovery of archaeological remains or if deeply buried archaeological remains are encountered during construction, the Ministry of Tourism, Culture and Sport must be contacted immediately, and work in the area shall stop. Any person discovering human remains must immediately notify the police or coroner and the Registrar of Cemeteries, Ministry of Government Services.

4.4 SUMMARY OF ENVIRONMENTAL EFFECTS, PROPOSED MITIGATION, AND COMMITMENTS TO FURTHER WORK

Exhibit 4-2 summarizes the identified environmental concerns and proposed mitigation measures, based on the identified environmental sensitivities and the Detail Design plan.

Exhibit 4-2: Summary of Environmental Effects, Proposed Mitigation, and Commitments to Further Work

Legend	
MNRF: Ministry of Natural Resources and Forestry	EMS: Emergency Medical Services & Fire Dept.
MECP: Ministry of Environment, Conservation and Parks	RES: Local residents
MTCS: Ministry of Tourism, Culture and Sport	OPP: Ontario Provincial Police
MTO: Ministry of Transportation	IC: Indigenous Communities

Issue #	Concern / Potential Effect	Relevant Agency	Mitigating Measure
Natural Environment			
1.0 Vegetation			
1.1	The local vegetation communities and their associated habitat function may be affected.	MTO MNRF	<ul style="list-style-type: none"> An additional field investigations will be carried out by WSP in Spring / Summer 2019 to verify and update the existing terrestrial conditions. Install temporary erosion and sediment control measures prior to construction, and maintain throughout construction. Routinely inspect sediment and erosion control structures, including after storms, and repair as required. Exposed surfaces will be re-stabilized as soon as possible using gravel sheeting where there is high erosion potential areas not requiring gravel sheeting will be re-vegetated. Conduct vegetation removal and protection measures in accordance with MTO’s standard construction practices for tree clearing and protection. Given that the balance of the upland vegetation along the ROW is upland forest that is common to the area and already culturally influenced, erection of protective fencing has not been specifically recommended. Equipment, materials and other construction activities will not be permitted in the retention zones.

Issue #	Concern / Potential Effect	Relevant Agency	Mitigating Measure
			<ul style="list-style-type: none"> Felled trees to be removed into the highway ROW (and away from watercourse) to avoid disturbance to vegetation outside the ROW (or to aquatic habitats). Restrict tree grubbing to the required activity zone. Avoid unnecessary traffic; dumping and storage of materials over tree roots.
2.0 Wildlife and Wildlife Habitat			
2.1	Wildlife entering the work zone during the construction period may be directly impacted.	MTO MNR	<ul style="list-style-type: none"> An additional field investigations will be carried out by WSP in Spring / Summer 2019 to verify and update the existing terrestrial conditions. Should there be requirements for the Contractor to clear vegetation during the breeding bird season (approximately May 1st to August 15th), there will be contractual obligations in place to ensure that a qualified individual is present prior to clearing to ensure that no nests are being destroyed. The Contractor shall not destroy active nests (nests with eggs or young birds) of protected migratory birds, including SAR protected under the provincial <i>Endangered Species Act</i> (ESA 2007). If a nesting migratory bird (or SAR protected under ESA 2007) is identified within or adjacent to the construction site and the construction activities are such that continuing construction in that area would result in a contravention of the Migratory Birds Convention Act, or ESA (2007), the Contractor will cease all activities that could harm the bird and will notify the Contractor Administrator immediately. If an animal encountered during construction does not move from the construction zone, the Contract Administrator will be notified.

Issue #	Concern / Potential Effect	Relevant Agency	Mitigating Measure
3.0 Fish and Fish Habitat			
3.1	Potential for impacts to fish and fish habitat if present within the study area.		<ul style="list-style-type: none"> This assumption will be verified during the field investigations that will be completed in Spring / Summer 2019. If any areas within the study area are identified as fish habitat, aquatic field investigations will be conducted following standard practices, and DFO's Fisheries Protocol.
4.0 Drainage and Surface Water			
4.1	Potential impacts resulting from construction activities to drainage and surface water	MTO MECP	<ul style="list-style-type: none"> The erosion and sediment control general mitigation measures will also address surface water quality.
5.0 Groundwater			
5.1	Potential impacts resulting from construction activities to groundwater	MTO MECP	<ul style="list-style-type: none"> Spill prevention and spill management requirements are included in the contract to minimize the likelihood of any adverse effects to groundwater during construction.
Socio-Economic Environment			
6.0 Management of Waste / Debris and Excess Materials			
6.1	Stockpiled/excess materials and construction waste have the potential to contaminate the surrounding environment if not properly managed.	MTO MECP MNR	<ul style="list-style-type: none"> Excess Material Management will be completed in accordance with MTO's standard practices. All excess materials may be reused or recycled. Inside the right-of-way, materials such as asphalt, concrete, swamp material, wood, earth and rock may be reused as a construction material or managed as fill. Materials also may be temporarily stockpiled in preparation for these uses.

Issue #	Concern / Potential Effect	Relevant Agency	Mitigating Measure
	Discharges from the proposed works are not anticipated.		<ul style="list-style-type: none"> Management of excess materials outside the right-of-way, stockpiling and wood management depends on local circumstances, in agreement with property owners and responsible authorities.
7.0 Noise and Air Quality			
7.1	Noise impacts as a result of the preferred plan will be limited to construction related noise.	RES/BUS MTO MECP	<ul style="list-style-type: none"> Equipment will be maintained in an operating condition that prevents unnecessary noise. The Contractor will be required to keep idling of construction equipment to a minimum and to maintain equipment in good working order to reduce noise from construction activities. Any required hoe ramming, drilling and blasting activities will be restricted to the hours of 7:00 am to 7:00 pm. If complaints regarding construction noise arise from construction, they will be investigated according to the provisions of the MTO Noise Guide. Short-term effects to air quality include dust created by construction activities. The Contractor will be required to take steps to control dust resulting from the Contractor's operations or by public traffic such that construction work does not affect traffic, enter surface water, or escape beyond the ROW to cause a nuisance to residents, businesses or utilities.
Cultural Environment			
8.0 Archaeology			
8.1	Potential for archaeological resources.	MTO MTCS IC	<ul style="list-style-type: none"> A Stage 2 Archaeological Assessment will be completed in Spring / Summer 2019, and all areas will be cleared of archaeological potential prior to the start of construction.

Issue #	Concern / Potential Effect	Relevant Agency	Mitigating Measure
			<ul style="list-style-type: none"> Should previously undocumented archeological resources be discovered, they may be a new archeological site and therefore subject to Section 48(1) of the <i>Ontario Heritage Act</i>. In the event that human remains are encountered during construction, the police or coroner, registrar of Cemeteries at the Ministry of Consumer Services, and the Ministry of Tourism, Culture and Sport must be contacted immediately.
Transportation			
9.0 Construction Staging			
9.1	Potential impact to local traffic during construction.	MTO Municipalities RES	<ul style="list-style-type: none"> Construction will be staged to minimize traffic delays to residents, businesses, and motorists, to the greatest extent possible.

5 MONITORING

The Contract Administrator will ensure that the environmental protection measures outlined in this DCR are carried out. If the impacts of construction are different than anticipated, or if the method of construction is such that there are greater than anticipated impacts, the Contractor's methods of operation will be changed or modified to reduce those impacts. During construction, the on-site Contract Administrator ensures that implementation of mitigating measures and key design features are consistent with the contract and external commitments. In addition, the effectiveness of the environmental mitigating measures is assessed by the Contract Administrator to ensure that:

- ▶ Individual mitigating measures are providing the expected control and/or protection;
- ▶ Composite control and/or protection provided by the mitigating measures is adequate;
- ▶ Mitigation measures are maintained and any necessary repairs are completed quickly; and
- ▶ Additional mitigating measures are provided, as required, for any unanticipated environmental problems that may develop during construction.

On-site contract administration staff will ensure that the environmental measures outlined in the contract documents are carried out. Post-construction monitoring will be carried out as required. In the event that problems are encountered, the MTO Environmental Section and appropriate provincial ministries and/or agencies will be contacted to provide additional input and recommendation.

APPENDIX

A

ONTARIO GOVERNMENT
NOTICE

NOTICE OF FILING OF DESIGN AND CONSTRUCTION REPORT

McGuire Road Construction from Red Rock Road #9 to Landfill Site Road Highway 11/17 Four-Laning from 800 m West of Coughlin Road to Red Rock Road #9 Detail Design and Class Environmental Assessment Study

THE STUDY

The Ontario **Ministry of Transportation (MTO)** has retained **WSP** to undertake the Detail Design and Class Environmental Assessment (Class EA) Study for the four-lane expansion of Highway 11/17 from 800 m west of Coughlin Road to Red Rock Road #9. The four-laning work includes realignment of a portion of the existing highway to provide a connection, to be named McGuire Road, between the new and existing Highway 11/17 alignments. To accommodate full access to Highway 11/17 in the interim, MTO has advanced the Detail Design of a portion of McGuire Road; this will allow for construction as part of the on-going four-laning contract from Red Rock Road #9 to Nipigon. This portion of McGuire Road is shown in the key plan.

THE PROCESS

The Detail Design Study has followed the Ministry's *Class Environmental Assessment for Provincial Transportation Facilities* (2000) process for a Group 'B' project. In March 2018, an Environmental Study Report Addendum was filed for the entire four-laning study, including the McGuire Road connection, and received environmental approval to proceed. A Design and Construction Report (DCR) has now been prepared to document the detail design, environmental impacts and mitigation measures for this portion of the McGuire Road alignment. The DCR is available for a 30-day public and external agency review period from **May 7th, 2019** to **June 5th, 2019** on the project website at www.hwy11-17-coughlintoredrock9.com and at the following locations during regular business hours:

Red Rock Public Library

Front Desk
42 Salls Street
Red Rock, ON P0T 2P0

Township of Dorion

170 Dorion Loop Road
Dorion, ON P0T 1K0

Dorion Public Library

Front Desk
170 Dorion Loop Road
Dorion, ON P0T 1K0

Ministry of the Environment, Conservation and Parks

Thunder Bay District Office
435 James Street South, Suite 331
Thunder Bay, ON P7E 6S7

The DCR is not eligible for a Part II Order (i.e. "bump-up") under the provisions of the *Ontario Environmental Assessment Act*. However, there is an opportunity at any time during the MTO Class EA process for interested persons to provide comments and review outstanding issues. Any concerns raised by members of the public, interested groups, or technical and external agencies during the review period should be discussed with MTO or their consultants identified below, as all comments received during the review period will be considered by the MTO.

The Detail Design for the remaining four-laning works will be presented at a Public Information Centre (PIC) at a later time. Following that PIC, the Detail Design will also be documented in a separate Design and Construction Report (DCR), which will be available for public review.

COMMENTS

Interested persons are encouraged to review this document and provide comments by **June 5th, 2019**. 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*. With the exception of personal information, all comments will become part of the public record. For further information, please contact:

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

