

Appendix A

Consultation

Appendix A1

IESO Correspondence

January 31, 2019

Darlene Bradley
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Independent Electricity System Operator

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Dear Darlene:

Re: Establishing a switching station in the Leamington area to accommodate demand growth

The purpose of this letter is to request that Hydro One establish a new switching station at or near Leamington Junction to sectionalize and switch the four existing 230 kV circuits from Chatham to the Windsor area (C21J/C22J/C23Z/C24Z).

A number of system improvements have been identified as part of the ongoing Windsor-Essex Integrated Regional Resource Plan (“IRRP”) and bulk transmission planning study for the broader West of London area. Based on the forecast demand growth in the Kingsville-Leamington area, these planning activities identified the need for a new switching station at the Leamington Junction as an outcome of the initial study work and will form a basis for additional supply reinforcements to the area.

The switching station will increase the capability of the system to supply load in the Kingsville-Leamington area while contributing to improved performance of the bulk system. The nature and timing of the need, as well as the objectives and scope of the recommended solution, are described below in more detail.

Background and Project Objectives

The Kingsville-Leamington area encompasses two existing load supply stations, Kingsville TS and Leamington TS. Over 600 MW of load is forecast to materialize in the area by 2022, predominately in the area supplied by Leamington TS. The growth is driven by rapid expansion in the greenhouse sector and aggressive adoption of artificial crop lighting, primarily in the winter months, and is forecast to continue beyond 2022.

Both Kingsville TS and Leamington TS are forecast to reach their station capacity within the next year. An expansion to Leamington TS, which will double the station’s capacity, is currently under development by Hydro One and is expected to be in-service by the end of 2019.

The transmission system supplying Leamington TS is currently limited in its capability to serve the expanded station. In order to accommodate the expansion of Leamington TS and connection of two additional transmission customers, interim measures are required. The resulting system will have a lower level of reliability than what is typically provided. Beyond these connections

and interim measures, the existing system does not have the ability to accommodate the total amount of forecasted load.

The proposed switching station will improve reliability, and provide some additional local supply capability to connect an additional transformer station and continue supplying load in the Kingsville-Leamington area. Upstream transmission limitations are still anticipated but can potentially be mitigated by interim congestion management strategies.

Various alternatives were considered including non-wires options and other wires solutions. Due to the magnitude and the timing of the need, non-wires options alone are not sufficient. A generation option located at Leamington Junction was considered but was impractical due to the technical infeasibility and high anticipated cost. An option to build a new radial 230 kV line from Chatham SS to Leamington TS was also ruled out on the basis that the load meeting capability would be insufficient to meet the forecasted load growth and the solution would not provide the flexibility to supply future growth beyond the Leamington TS expansion.

In addition to improving load supply capability in the Kingsville-Leamington area, the proposed switching station will improve the performance of the bulk system by balancing the flow on the existing transmission circuits from Chatham, thus improving transfer capability. The switching station will also reduce exposure to outages by allowing the existing 230 kV circuits to be sectionalized and switched independently. Furthermore, it will allow for future transmission reinforcements to increase the transfer capability west of Chatham which will allow existing export capability to Michigan to be maintained while enabling additional load growth throughout the Windsor-Essex region.

Project Scope

The purpose of the proposed switching station is to improve the performance of Hydro One's facilities in the region. The switching station bisects Hydro One owned transmission circuits and will require a number of planned outages to Hydro One's existing assets. The switching station should ideally be constructed within Hydro One's existing right-of-way at or near the existing Leamington Junction to optimize utilization of existing infrastructure and minimize lead time. Based on the above considerations, the IESO recommends that Hydro One proceed with establishing the switching station including pursuing the required environmental and regulatory approvals.

The scope of the project will include re-termination of the four existing 230 kV circuits and installation of reactive facilities based on current system needs. Additionally, the station should be sized to accommodate future system reinforcement including space for future diameters and additional reactive facilities. The IESO will continue to work with Hydro One throughout the project development to finalize the layout of the switching station.

Given typical development timelines for similar projects, the IESO and Hydro One agree on a targeted in-service date of 2022 dependent on outcome of consultations as well as environmental and regulatory approvals. The IESO understands that consultations and a Class Environmental Assessment process will be required for this project. Additionally, depending on the siting of the switching station, a Leave to Construct may be required. The IESO will endeavour to provide support to Hydro One in these activities.

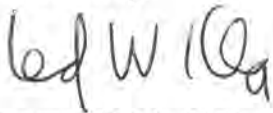
Future Work and Next Steps

The switching station is one of a number of improvements that will be required to support load growth in the Windsor-Essex area and forms the basis for future recommendations to meet mid- and long-term needs.

In parallel to the activities identified in this letter, the IRRP's Technical Working Group¹ will continue to develop the long-term plan for the Windsor-Essex region. This will include an investigation of non-wires alternatives to manage evolving capacity needs in the region, and may include specifying other long-term solution(s) required to reliably serve forecasted load growth. The IESO will also be proceeding with the bulk transmission planning study for the West of London area and identifying any additional solution(s) required for the broader area.

The IESO will continue to work with, and provide support to, Hydro One in the implementation of this project, including finalizing the layout of the switching station facility. We look forward to an ongoing exchange of information as Hydro One proceeds with the development of the project.

Yours truly,



Leonard Kula, P. Eng.

Vice President, Planning, Acquisition and Operations, and Chief Operating Officer

cc: Robert Reinmuller, Hydro One Networks Inc.

Terry Young, IESO

Jessica Savage, IESO

Bob Chow, IESO

IESO Records

¹ The IRRP Technical Working Group for the Windsor-Essex Region is led by the IESO and includes members from Hydro One Transmission, Hydro One Distribution, Essex Powerlines, Entegrus, E.L.K. Energy, and Enwin.

Appendix: System Maps

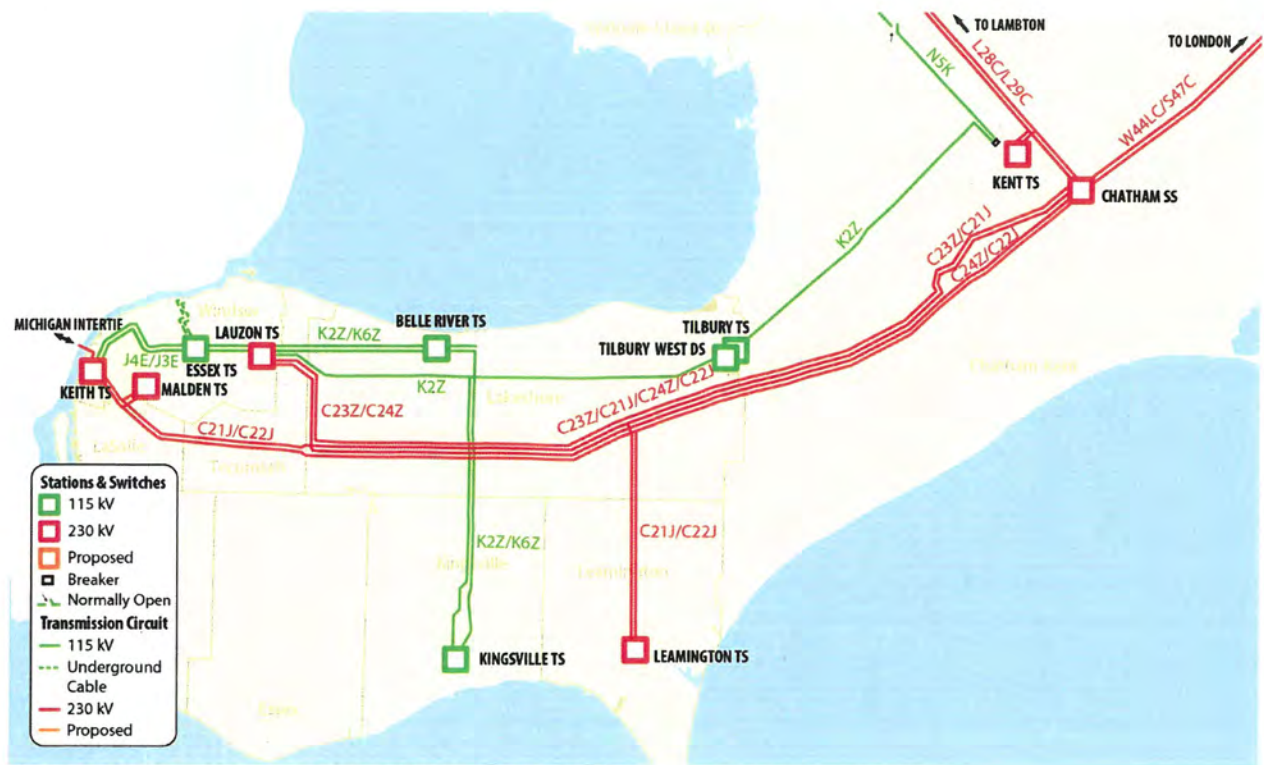


Figure 1: Geographical map of the Windsor-Essex Region

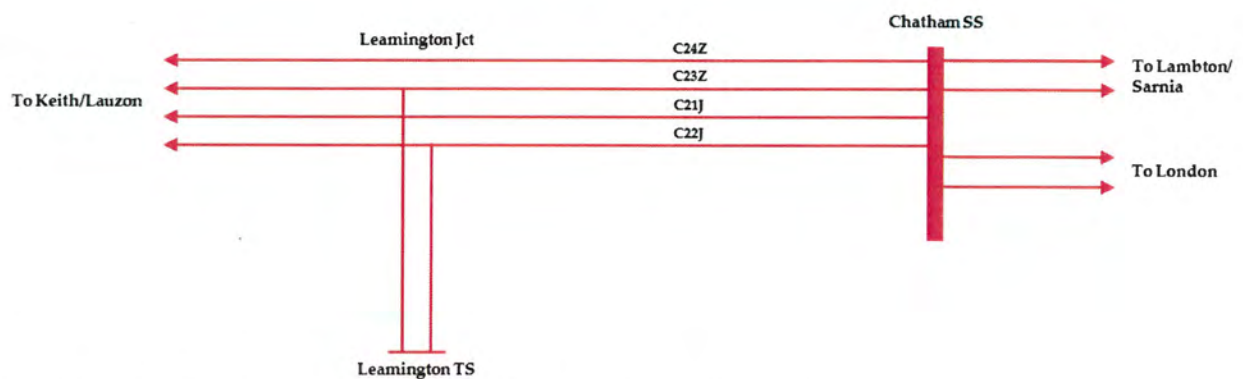


Figure 2: Single line diagram of existing facilities in the Leamington area

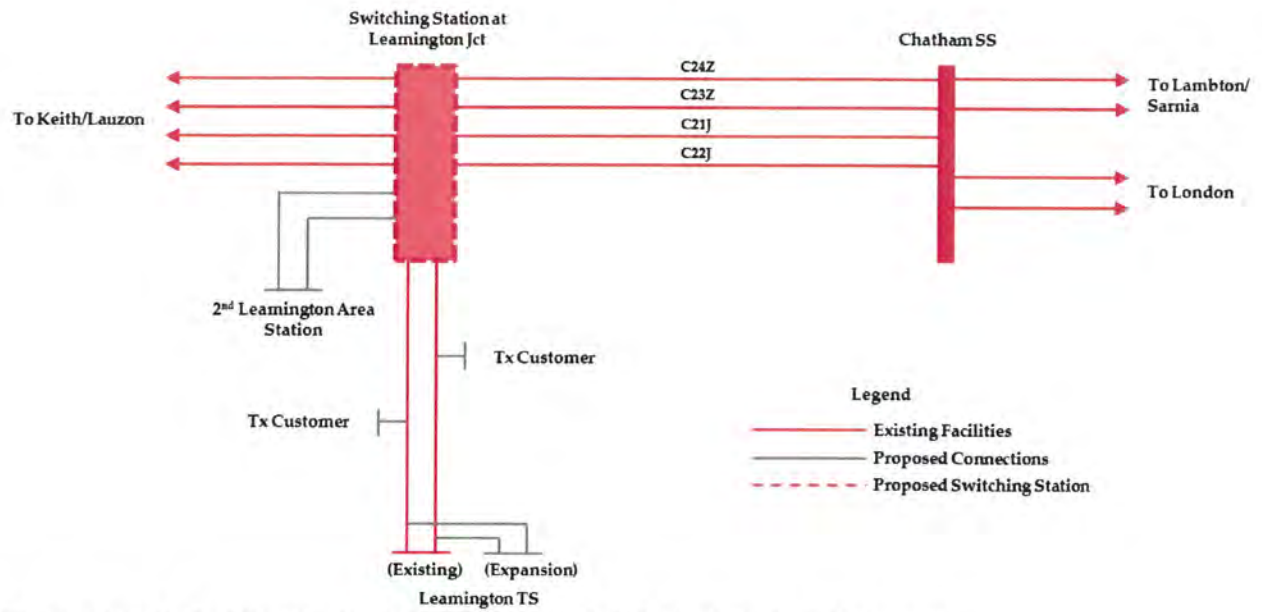


Figure 3: Single line diagram of existing and proposed facilities in the Leamington area

Appendix A2

Project Contact Lists

Lakeshore Transformer Stations Project - List of Main Contacts

Interest Groups

Organisation	First name	Last name	Position	Address	Email	Phone
Brookfield Renewable Energy Group	David	Hurd	Brookfield Renewable Energy Group (Senior Manager, Construction - North America)	41 Rue Victoria Gatineau QC J8X 2A1	dave.hurd@brookfieldrenewable.com	819-561-2722 ext. 2292
Brookfield Renewable Energy Group	Kevin	Healey	Brookfield Renewable Energy Group		Kevin.Healey@brookfieldrenewable.com	
Brookfield Renewable Energy Group	Shuwen	Sun	Brookfield Renewable Energy Group (Operations Manager)		Shuwen.Sun@evolugen.com	
Enbridge Gas Inc.	Vaibhav	Luthra	Enbridge Gas Inc. (Pipeline Engineer)		VLuthra@uniongas.com	
Union Gas Ltd.	Diane	Pisani	Union Gas Ltd. (Field Supervisor - Utility Services, Windsor-Essex South)	3840 Rhodes Drive, Windsor, Ontario, Canada, N8W	dpisani@uniongas.com	519-251-6820
Union Gas Ltd.	Sean	Collier	Union Gas Ltd.	Rhodes Drive, Windsor, Ontario, Canada	sacollier@uniongas.com	519-719-5080
Union Gas Ltd.	Brian	Chauvin	Union Gas Ltd. (Operations Manager, Windsor/Essex and Chatham Areas)		bgchauvin@uniongas.com	519-251-6806
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Union Gas Ltd.	Greg	Ward	Union Gas Ltd.		GCWard@uniongas.com	
Union Gas Ltd.	Daniel	Blata	Union Gas Ltd.		DMBlata@uniongas.com	
Union Gas Ltd.	Kyle	Billion	Union Gas Ltd.		Kyle.Billion@uniongas.com	
Union Gas Ltd.	Jim	Harradine	Union Gas Ltd.			
Infinity Farms Inc.	--	--	Infinity Farms Inc.	1136 West Belle River Road RR1 South Woodlee ON NOR 1V0		
Sandwich South Farms Ltd.	--	--	Sandwich South Farms Ltd.	4995 Concession Road 11 Tecumseh ON NOR 1K0		
Essex County Federation of Agriculture	Bonnie	Popov	Essex County Federation of Agriculture (President)	7100 Community Centre Street Comber ON M2J 4Y8	bonnieanne@rocketmail.com	519-776-5159

Municipal Governmental Representatives and Agencies

Organisation	First name	Last name	Position	Address	Email	Phone
County of Essex	Gary	McNamara	County of Essex (Warden)	360 Fairview Avenue West Essex ON N8M 1Y6	gmcmamara@tecumseh.ca	519-735-2184 ext. 115
Town of Lakeshore	Tom	Bain	Town of Lakeshore (Mayor)	419 Notre Dame Street Belle River ON N0R 1A0	tbain@lakeshore.ca	519-728-1975 ext. 298
County of Essex	Jane	Mustac	County of Essex (Director of Infrastructure)	360 Fairview Avenue West Essex ON N8M 1Y6	jmustac@countyofessex.ca	519-776-6441 ext. 1316
County of Essex	Mary	Birch	County of Essex (Director of Council and Community Services/Clerk)	360 Fairview Ave W Site 202 Essex ON N8M 1Y6	clerk@countyofessex.on.ca	519-776-6441
County of Essex	Robert	Maisonville	County of Essex (Chief Administrative Officer)	360 Fairview Ave W Suite 202 Essex ON N8M 1Y6	rmaisonville@countyofessex.on.ca	519-776-6441 ext. 1325
Essex-Windsor Emergency Medical Services (EWEMS)	Debbie	Strajnic	Essex-Windsor Emergency Medical Services (EWEMS) (Manager of Administration)	360 Fairview Avenue West Suite 115 Essex ON N8M 1Y3	dstrajnic@countyofessex.ca	519-776-6441 ext. 2212
Town of Lakeshore	Darlene	Mooney	Town of Lakeshore (Executive Assistant)	419 Notre Dame Street Belle River ON N0R 1A0	dmooney@lakeshore.ca	519-728-1975 ext. 272
Town of Lakeshore	Nelson	Cavacas	Town of Lakeshore (Director - Engineering & Infrastructure Services)	419 Notre Dame Street Lakeshore ON N0R 1A0	ncavacas@lakeshore.ca	519-728-2700 ext. 287
Town of Lakeshore	Truper	McBride	Town of Lakeshore (Chief Administrative Officer (CAO))	419 Notre Dame Street Lakeshore ON N0R 1A0	tmcbride@lakeshore.ca	
Town of Lakeshore	Kevin	Girard	Town of Lakeshore (Manager - Environmental Services)	419 Notre Dame Street Lakeshore ON N0R 1A0	kgirard@lakeshore.ca	519-728-1975 ext. 239
Town of Lakeshore	Kim	Darroch	Town of Lakeshore (Manager)	419 Notre Dame Street Lakeshore ON N0R 1A0	kdarroch@lakeshore.ca	519-728-1975 ext. 245
Town of Lakeshore	Tony	DiCiocco	Town of Lakeshore (Manager - Engineering)	419 Notre Dame Street Lakeshore ON N0R 1A0	tdiciocco@lakeshore.ca	519-728-1975 ext. 297
Town of Lakeshore	Brian	Laramie	Town of Lakeshore (Engineering Technologist)	419 Notre Dame Street Lakeshore ON N0R 1A0	blaramie@lakeshore.ca	519-728-1975 ext. 296
Town of Lakeshore	Andrew	Neely	Town of Lakeshore (Assistant Drainage Superintendent)	419 Notre Dame Street Lakeshore ON N0R 1A0	aneely@lakeshore.ca	519-728-1975 ext. 274
Town of Lakeshore	Albert	Dionne	Town of Lakeshore (Manager - Public Works)	419 Notre Dame Street Belle River ON N0R 1A0	adionne@lakeshore.ca	519-728-2700 ext. 291
Town of Lakeshore	Bonnie	Clark	Town of Lakeshore (Administrative Assistant)	419 Notre Dame Street Belle River ON N0R 1A0	bclark@lakeshore.ca	519-728-1975 ext. 222
Town of Lakeshore	Jill	Fiorito	Town of Lakeshore (Drainage Superintendent - Engineering & Infrastructure Services)	419 Notre Dame Street Lakeshore ON N0R 1A0	jfiorito@lakeshore.ca	519-728-1975 ext. 289

Provincial Government and Agency Representatives

Organisation	First name	Last name	Position	Address	Email	Phone
Essex Region Conservation Authority (ERCA)	Michael	Nelson	Essex Region Conservation Authority (ERCA) (Watershed Planner)	360 Fairview Avenue West, Suite 311 Essex ON N8M 1Y6	mnelson@erca.org	519-776-5209 ext. 347
Essex Region Conservation Authority (ERCA)	Tim	Byrne	Essex Region Conservation Authority (ERCA) (Director - Watershed Management Services)	360 Fairview Avenue West Essex ON N8M 1Y6	regs@erca.org	519-776-5209 ext. 350
Essex Region Conservation Authority (ERCA)	Cynthia	Casagrande	Essex Region Conservation Authority (ERCA) (Regulations Coordinator - Watershed Management Services)	360 Fairview Avenue West Suite 311 Essex ON N8M 1Y6	ccasagrande@erca.org	519-776-5209 ext. 349
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Ministry of Agriculture, Food and Rural Affairs (OMAFRA)	Drew	Crinklaw	Ministry of Agriculture, Food and Rural Affairs (OMAFRA) (Rural Planner, Southwestern Ontario)	667 Exeter Road London ON N6E 1L3	drew.crinklaw@ontario.ca	519-873-4085
Ministry of Energy, Northern Development and Mines (ENDM)	Shannon	McCabe	Ministry of Energy, Northern Development and Mines (ENDM) (Manager (A) - Indigenous Energy Policy, Energy Networks and Indigenous Policy Branch)	77 Grenville Street 6th Floor Toronto ON M5S 1B3	Shannon.McCabe@ontario.ca	416-314-2599
Ministry of Energy, Northern Development and Mines (ENDM)	Chloe	Lazakis	Ministry of Energy, Northern Development and Mines (ENDM) (Sr. Policy Advisor (A), Indigenous Energy Policy, Energy Networks and Indigenous Energy Policy Branch)	77 Grenville Street 6th Floor Toronto ON M7A 1B3	chloe.lazakis@ontario.ca	416-327-2116
Ministry of Heritage, Sport, Tourism and Cultural Industries (MHSTCI)	Rosi	Zirger	Ministry of Heritage, Sport, Tourism and Cultural Industries (MHSTCI) (Heritage Advisor)	401 Bay St Suite 1700 Toronto ON M7A 0A7	rosi.zirger@ontario.ca	416-314-7159
Ministry of Heritage, Sport, Tourism and Cultural Industries (MHSTCI)	Katherine	Kirzati	Ministry of Heritage, Sport, Tourism and Cultural Industries (MHSTCI) (Heritage Planner, Heritage Planning Unit)	401 Bay Street Toronto ON M5H 2Y4	katherine.kirzati@ontario.ca	416-314-7643
Ministry of Heritage, Sport, Tourism and Cultural Industries (MHSTCI)	Shari	Prowse	Ministry of Heritage, Sport, Tourism and Cultural Industries (MHSTCI) (Archaeology Review Officer) (I-04326)	900 Highbury Avenue North London ON N5V 1X1	shari.prowse@ontario.ca	519-675-6898

Organisation	First name	Last name	Position	Address	Email	Phone
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Ministry of Natural Resources and Forestry (MNRF)	Jason	Webb	Ministry of Natural Resources and Forestry (MNRF) (Management Biologist)	615 John Street North Aylmer ON N5H 2B6	jason.webb@ontario.ca	519-773-4744
Ministry of Natural Resources and Forestry (MNRF)	Karina	Cerniavskaja	Ministry of Natural Resources and Forestry (MNRF) (District Planner)	615 John Street North Aylmer ON N5H 2B6	karina.cerniavskaja@ontario.ca	519-773-4757
Ministry of the Environment, Conservation and Parks (MECP)	Annamaria	Cross	Ministry of the Environment, Conservation and Parks (MECP) (Manager - Environmental Assessment Services, Environmental Assessment and Permissions Branch)	135 1st floor, St. Clair Avenue West Toronto ON M4V 1P5	annamaria.cross@ontario.ca	416-314-7967
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Ministry of the Environment, Conservation and Parks (MECP)	Crystal	LaFrance	Ministry of the Environment, Conservation and Parks (MECP) (Supervisor - Air, Pesticides & Environmental Planning, Technical Support Section - Southwest Region)	733 Exeter Road London ON N6E 1L3	crystal.lafrance@ontario.ca	519-873-5055
Ministry of the Environment, Conservation and Parks (MECP)	Craig	Newton	Ministry of the Environment, Conservation and Parks (MECP) (Environmental Resource Planner & EA Coordinator - Air, Pesticides & Environmental Planning, Technical Support Section - Southwest Region)	733 Exeter Road London ON N6E 1L3	craig.newton@ontario.ca	519-873-5014
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Ministry of the Environment, Conservation and Parks (MECP)	SAR Ontario	Inbox	Ministry of the Environment, Conservation and Parks (MECP) (SAR Email Inbox)		SAROntario@ontario.ca	905-713-7341
Ministry of the Environment, Conservation and Parks (MECP)	Lee	Bradshaw	Ministry of the Environment, Conservation and Parks (MECP) (Senior Environmental Officer)	4510 Rhodes Drive unit 620 Windsor ON N8W 5K5	lee.bradshaw@ontario.ca	519-948-3526
Ministry of the Environment, Conservation and Parks (MECP)	Mark	Smith	Ministry of the Environment, Conservation and Parks (MECP) (Supervisor)	4510 Rhodes Drive 620 Windsor ON N8W 5K5	mark.smith@ontario.ca	519-383-6024

Organisation	First name	Last name	Position	Address	Email	Phone
Ministry of the Environment, Conservation and Parks (MECP)	Kimberly	Yu	Ministry of the Environment, Conservation and Parks (MECP) (Administrative Assistant, Environmental Assessment Services, Environmental Assessment and Permissions Branch)	135 Saint Clair Avenue West 1st Floor Toronto ON M4V 1P5	Kimberly.Yu@ontario.ca	416-314-7212
Ministry of the Environment, Conservation and Parks (MECP)	Peter	Rehbein	Ministry of the Environment, Conservation and Parks (MECP) (Air Quality Analyst, Technical Support Section, Southwest Region)	733 Exeter Road London ON N6E 1L3	peter.rehbein@ontario.ca	519-873-5012
Ministry of the Environment, Conservation and Parks (MECP)	Heather	Malcolmson	Ministry of the Environment, Conservation and Parks (MECP) (Director, Environmental Assessment and Permission)	135 Saint Clair Avenue West Toronto ON M4V 1P5	heather.malcolmson@ontario.ca	416-314-0934
Ontario Clean Water Agency	Dave	Jubenville	Ontario Clean Water Agency (Regional Hub Manager, Essex Regional Hub Office)	415 Front Road North Amherstburg ON N9V 2V5	djubenville@ocwa.com	519-736-5447
Ontario Clean Water Agency	Susan	Budden	Ontario Clean Water Agency (Business Development Manager, Essex Regional Hub Office)	276 Rourke Line Road Lakeshore ON N0R 1A0	sbudden@ocwa.com	
Infrastructure Ontario	Neil	D'souza		900 Bay Street, M1-34i Toronto ON M7A 1N3	neil.dsouza@ontario.ca	416-326-8956

Federal Government and Agency Representatives

Organisation	First name	Last name	Position	Address	Email	Phone
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Agriculture and Agri-Food Canada	Cathy	Bakes	Agriculture and Agri-Food Canada (Local Integrated Service Manager, Windsor-Essex Area)		cathy.bakes@canada.ca	
Agriculture and Agri-Food Canada	Terry	Attewell	Agriculture and Agri-Food Canada (Facility Manager (Essex County))	2585 Essex County Road 20 Essex ON N0R 1G0	terry.attewell@canada.ca	519-738-1314

First Nation and Metis Communities

Organisation	First name	Last name	Position	Address	Email	Phone
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Bkejwanong (Walpole Island First Nation)	Michael	Dashner	Bkejwanong (Walpole Island First Nation) (Director of Operations)	117 Tahgahoning, R.R. #3 Walpole Island ON N8A 4K9	michael.dashner@wifn.org	226-627-1491
Bkejwanong (Walpole Island First Nation)	Dean	Jacobs	Bkejwanong (Walpole Island First Nation) (Consultation Manager)	Tahgahoning Road, Ontario, Canada, N8A 4K9	dean.jacobs@wifn.org	519-627-1475 ext 104
Bkejwanong (Walpole Island First Nation)	Alicia	Blackeagle	Bkejwanong (Walpole Island First Nation) (Executive Assistant to the Chief)	117 Tahgahoning Road, Ontario, Canada, N8A 4K9	alicia.blackeagle@wifn.org	
Bkejwanong (Walpole Island First Nation)	Janet	Macbeth	Bkejwanong (Walpole Island First Nation) (Project Review Coordinator)	117 Tahgahoning Road Walpole Island ON N8A 4K9	janet.macbeth@wifn.org	519-627-1475 ext. 108
Caldwell First Nation	Ogichii (Mary Frances)	Da Kwe (Duckworth)	Caldwell First Nation (Chief)	14 Orange Street Leamington ON N8H 1P5	chief@caldwellfirstnation.ca	519-322-1766
Caldwell First Nation	Nikki	Orosz	Caldwell First Nation (Director - Operations)	14 Orange Street, Leamington, Ontario, Canada, N8H 1P5	nikki.orosz@caldwellfirstnation.ca	519-322-1766
Caldwell First Nation	Darryl	Van Oirschot	Caldwell First Nation (Special Projects)	14 Orange Street Leamington ON N8H 1P5	pssp@caldwellfirstnation.ca	519-322-1766
Caldwell First Nation	James	Peters	Caldwell First Nation (Councillor)	14 Orange Street Leamington ON N8H 1P5	councillor.peters@caldwellfirstnation.ca	519-322-1766

Organisation	First name	Last name	Position	Address	Email	Phone
Caldwell First Nation	Steve	Simpson Sr	Caldwell First Nation (Councillor)	14 Orange Street Leamington ON N8H 1P5	councillor.simpson@caldwellfirstnation.ca	519-322-1766
Caldwell First Nation	Stan	Scott	Caldwell First Nation (Councillor)	14 Orange Street Leamington ON N8H 1P5	councillor.scott@caldwellfirstnation.ca	519-322-1766
Caldwell First Nation	Robyn Van	Oirschot	Caldwell First Nation (Councillor)	14 Orange Street Leamington ON N8H 1P5	councillor.vanoirschot@caldwellfirstnation.ca	519-322-1766
Caldwell First Nation	Stan	Scott	Caldwell First Nation (Councillor)	14 Orange Street Leamington ON N8H 1P5	councillor.scott@caldwellfirstnation.ca	519-322-1766
Caldwell First Nation	Jenna	Smids	Caldwell First Nation	14 Orange Street Leamington ON N8H 1P5	etow@caldwellfirstnation.ca	
Caldwell First Nation	Melody	Watson	Caldwell First Nation	14 Orange Street Leamington ON N8H 1P5	melody.watson@caldwellfirstnation.ca	

Appendix A3

Community Information Centre Summaries



DILLON
CONSULTING

HYDRO ONE NETWORKS INC.

June 26, 2019

**Community Information Centre #1
Summary Report**

Lakeshore Transmission Stations Project

Table of Contents

1.0	Introduction	1
2.0	Community Information Centre #1 Overview	1
3.0	Overview of Feedback on the Project	3
4.0	Comments and Questions	3

Tables

Table 1: Hydro One's Advertisement Efforts	2
Table 2: Comments Received and Hydro One Responses	4

Appendices

A	Examples of CIC Advertisement
B	Material Presented June 26,2019

1.0 Introduction

Hydro One Networks Inc. (Hydro One) was issued a letter by the Independent Electricity System Operator (IESO) in January 2019. Based on the assessment completed by IESO on the electricity load forecast for Essex County, the IESO requested Hydro One to construct a new switching station (SS) to help meet the growing needs of the area. Furthermore, the IESO identified only one feasible location (i.e. within the adjacent lands to the Leamington Junction) for the SS given the existing transmission infrastructure. In addition to the IESO request, Hydro One also identified the need for additional transformers in order to supply more low-voltage electricity to homes and business in the area. As a result, a new 230 kV SS and a separate 230/27.6 kV transmission station (TS) (the 'Project') is proposed in the Town of Lakeshore, Essex County.

Growing electricity needs support the development of this Project in the Kingsville and Leamington area. Over 1000 MW of load is projected to materialize in the Kingsville-Leamington area by 2022 driven by the growth of the greenhouse sector. In order to service this demand the Lakeshore Transformer Station is planned to be in-service by 2022.

This Project is subject to a Class Environmental Assessment (EA) in accordance with the *Class Environmental Assessment for Minor Transmission Facilities* (Hydro One, 2016). In support of the Project and the Class EA process, a public consultation event was held in the summer of 2019 in the form of a Community Information Centre (CIC). The results of the CIC will help in gauging the concerns and interest of the community, which will ultimately aid in the selection of the transmission stations location in the study area. A second CIC is scheduled for fall 2019.

2.0 Community Information Centre #1 Overview

The purpose of this report is to summarize the results of the public consultation efforts of Hydro One for the Project as part of the Class EA. Hydro One held an open CIC at the Comber & District Community Centre, 6211 McAllister Street, on Wednesday June 26, 2019 from 17:00 to 20:00. The purpose of the CIC was to introduce the Project, and present interested parties with an opportunity to learn about and discuss the Project with project team members from Hydro One and Dillon Consulting Limited (Dillon). Representatives from the IESO were also present to provide support and share information about their regional planning process.

The CIC was advertised in the Notice of Commencement (NoC), a mechanism to reach stakeholders and neighbours within and adjacent to the Project Study Area. The Project contact list for the NoC included local councillors, Indigenous Communities, regulatory agencies, and stakeholders. The NoC and CIC were announced using several mediums such as newspapers, radio advertisements and flyers. Refer to **Table 1** for a breakdown of the various forms of advertisements and their associated published dates, and **Appendix A** for advertisements issued in support of the CIC.

Table 1: Hydro One's Advertisement Efforts

Notices	Date
Notice of Commencement letter mail-out	June 10,2019
Flyer delivery	June 11,2019

Newspapers	Date
Leamington Wheatley Kingsville Southpoint Sun	June 19,2019
Belle River Lakeshore News	June 20,2019
Tecumseh Shoreline Week	June 21,2019

Radio Station(s)	Date
CIDR-FM (Windsor Radio Station) 30 second ad which ran 4 times per day*	June 17, 2019 – June 23, 2019

A total of 4 people attended, and signed in, for the June 26 CIC. The attendees shared their thoughts and asked questions regarding the Project, of which a record of these questions are documented herein.

The CIC used a drop-in style format which permitted attendees to review material at their own pace. Material consisted of a series of presentation panels including project overview; highlights of the Class EA process; illustrations of the alternative locations; brief description of the evaluation criteria in support of the preferred alternative; next steps and a high level Project schedule (**Appendix B**). This format allowed attendees to view the Project material and ask questions and discuss their concerns with project team members.

The project team noted that in the near future, that they will be assessing the feasible alternatives against the draft evaluation criteria, in order to select a preferred alternative for the locations of the TS and associated equipment. Attendees were advised that information collected through desktop research and field studies will be used to support the evaluation process, as well as comments received from interested parties. Hydro One welcomed attendees to provide comments, feedback or information that they thought will be useful to the project team in support of the preferred alternative selection process.

3.0 Overview of Feedback on the Project

Overall feedback from the June 26 CIC ranged from individuals seeking general project information to offering letters of support.

Attendees generally inquired about the positive implications to the supply of electricity as a result of the project, as well as the number of people that would be positively impacted. Those who requested additional information were accommodated shortly after.

Hydro One staff informed the participants that following the selection of the preferred alternative for the TS, Hydro One plans on hosting a second CIC in the early-fall, where Hydro One would publicly present the preferred alternative, as well as provide some additional high-level information on the next stages of the Project. Following the second CIC, Hydro One will release the draft Environmental Study Report (ESR) for a 30-day public review period in Q4 of 2019. Hydro One informed participants that during that time, interested parties will have the opportunity to review and provide comment on the draft ESR.

4.0 Comments and Questions

Throughout the CIC, the project team listened to questions and comments relating to project activities, and the project in general. These questions and comments were noted through both verbal discussions and submitted comment forms. Additional written submissions may be forthcoming, as attendees were provided the option to provide further feedback via email directly to Hydro One's Community Relations Department.

A list of comments and questions received is presented in the table below:

Table 2: Comments Received and Hydro One Responses

	Comment/Question	Response
Mr. Kevin Girard, Manager of Environmental Services		
1	<ul style="list-style-type: none"> Mr. Girard indicated that his group will be meeting with city staff and members of council to collectively review the Project and will provide consolidated comments. With summer vacations, he anticipated that this would likely be completed by mid-July and asked Hydro One to follow up. 	<ul style="list-style-type: none"> Hydro One followed up with Mr. Girard via email on July 16 and provided a recap of the conversation they had at the June 26 CIC as well as other project information to be shared with the City staff.
Tom Bain, Mayor of Lakeshore and Regional Councillor		
2	<ul style="list-style-type: none"> Mayor Bain inquired about the number of residents directly impacted. 	<ul style="list-style-type: none"> Hydro One acknowledged Mayor Bain's comment regarding the communities desires to maintain a small town feel. Hydro One replied to Mayor Bain and stated the impact to residents will be determined based on the preferred alternative."
Ms. Fantetti, Business Ombudsman for the Windsor-Essex Economic Development Corporation & Mr. Kevin Girard		
3	<ul style="list-style-type: none"> Ms. Fantetti wanted to get clarification on two projects – Lakeshore TS and the Chatham x Lakeshore TS line, the latter of which had been recently announced by the IESO. She said her office was getting questions about the line terminating at Leamington and she wanted to make sure she understood the different projects so that she can make the clarification to those that called. Ms. Fantetti took information provided by the IESO - backgrounds and directive letters for both projects. Ms. Fantetti also indicated that she would be willing to provide Hydro One a letter of support for the projects. 	<ul style="list-style-type: none"> Hydro One thanked Mr. Girard and Ms. Fantetti for their support and Hydro One and IESO provided clarification on the two projects and stated that the newly announced transmission line from Chatham would in fact terminate at the proposed Lakeshore TS.

Appendix A

Examples of CIC Advertisement

The Blessing of the Bikes



Pastor's Norman McKinnon, left, and Todd Trojek are pictured at the Blessing of the Bikes on Saturday June 9.



A Blessing of the Bikes took place on recently at the Northshore Community Church in Belle River on Saturday June 9.

A Blessing of the Bikes was held on Saturday June 9 at the Northshore Community Church in Belle River. Although a cloudy day, the rain pretty much stayed away from the celebration. Worshipers were treated prayer, service and testimonial from former bike pastor Bruce St. John and door prizes and BBQ.

"We had a tremendous turn out - better than last year," said McKinnon. "We were honoured to hear pastor Bruce's message of hope."

Donations were collected and funds raised went to buy a bicycle for MariJayne DeSilver, a four-year-old born with congenital heart defects.

She has endured three surgeries in her short life span. She will have to undergo three more surgeries over the next 20 years.

Unfortunately, she suffered a stroke after her third surgery and is now recovering.

"In times like this our community really comes together to support those who may need a bit of help," said McKinnon.



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NOTICE

June 2019

Class Environmental Assessment for Lakeshore Transformer Station

Hydro One Networks Inc. (Hydro One) is initiating a Class Environmental Assessment (Class EA) to construct a new transformer station (TS) in the Town of Lakeshore. The Lakeshore TS is needed to meet the growing electricity needs of southwestern Ontario. The new station will house switching facilities and four 230/27.6 kV transformers to increase the capability of the existing 230kV transmission system in Essex County. The Lakeshore TS project is subject to the "Class Environmental Assessment for Minor Transmission Facilities" (Hydro One, 2016), in accordance with the Ontario *Environmental Assessment Act*.

The Class EA study area will center around the existing Leamington Junction (JCT), an important connection point for the four 230 kV transmission circuits that supply the region. The study area will be bounded by Middle Road to the north, Rochester Townline Road to the east, South Middle Road to the south, and will extend west approximately 550 m from the Leamington JCT. A map of the Class EA study area is provided below. Temporary transmission line bypass structures may also be required during construction to avoid lengthy planned outages, it is currently anticipated that these bypass structures will also be located within the Class EA study area.

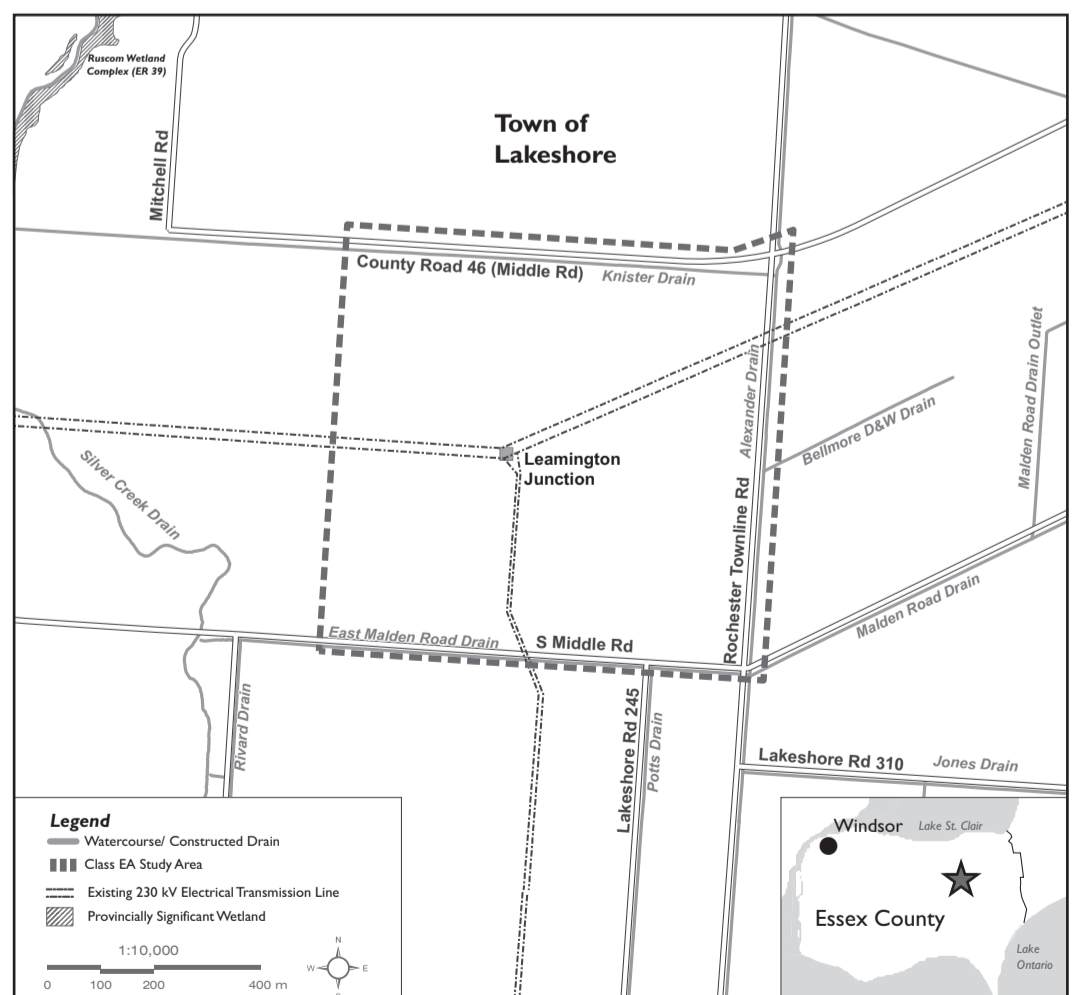
We invite you to join our upcoming Community Information Centre (CIC) to learn more about the proposed project and to speak directly with members of our project team.

Please join us on:
 Wednesday, June 26, 2019
 5:00 p.m. to 8:00 p.m.
 Comber & District Community Centre
 6211 McAllaster Street, Comber

We welcome your comments and feedback regarding this project. Should there be any update to the project information provided, we will ensure you are promptly informed. Contingent on the outcome of the Class EA process, construction could begin as early as mid-2020 and is expected to be completed by the end of 2023.

For more information
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Ani Bekmezian
 Community Relations
 T: 1-877-345-6799
 E: Community.Relations@HydroOne.com
www.HydroOne.com/Lakeshore



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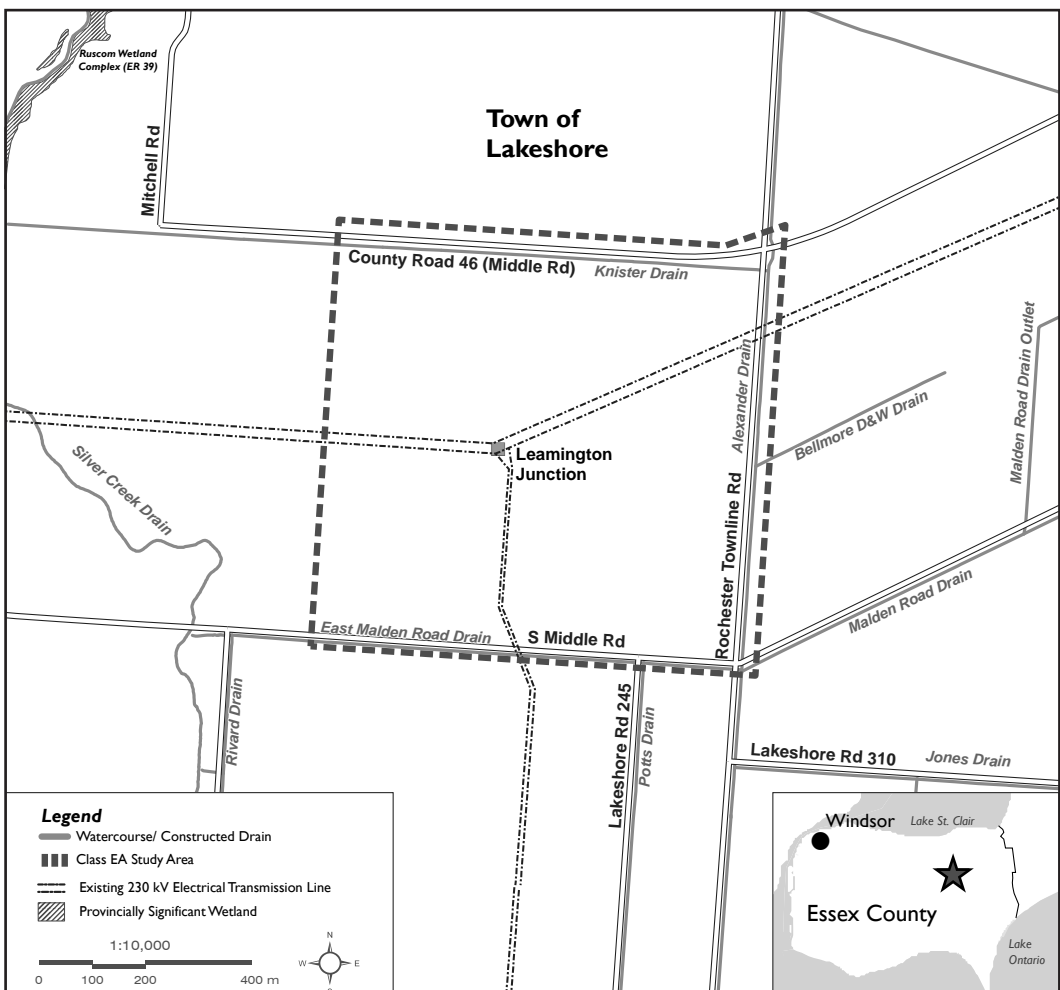
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Community Benefits Plan

Continued from page 6

The Workforce Development and Participation Strategy is geared toward engaging businesses and providing employment opportunities including workforce development, training and pre-apprenticeships/apprenticeships.

There are more than 80 workforce initiatives focusing on opportunities for Windsor and Detroit residents and businesses and Canadian Indigenous Peoples and their businesses.

Some highlights of the plan include:

- The implementation of a Regional Small Business Purchase Protocol to foster growth of small companies in the region
- Partnerships with local workforce development agencies to encourage applications from local applicants for jobs, training and skill development opportunities
- Support to pre-apprenticeship/apprenticeship programs and opportunities for Indigenous women, students and youth.

The Neighbourhood Infrastructure Strategy is a \$20 million (CDN) direct community investment on both sides of the border developed by public feedback and input.

Collectively, 29 initiatives are identified in the strategy for implementation in Windsor, Detroit and Walpole Island First Nation.

Some highlights of the plan include:

- Approximately \$8.1 million for aesthetics and landscaping
- Approximately \$3.5 million for community safety and connections
- Approximately \$2.2 million for community partnerships
- Approximately \$1.1 million for economic benefits.

WDBA and the State of Michigan will be directly involved in the delivery of the Community Benefits Plan and will provide stringent oversight to ensure the commitments outlined are achieved and reported on.

"The Gordie Howe International Bridge will positively impact the flow of traffic and goods, help businesses get their goods to market, and make it more efficient for travellers, commuters and shoppers to cross the border," said The Honourable François-Philippe Champagne, Minister of Infrastructure and Communities.

"In addition to the 2,500 direct jobs Bridging North America expects to be created by the project, the comprehensive Community Benefits Plan announced today will have wide-ranging positive social, economic and environmental impacts on Windsor-Essex and Detroit including targeted workforce development initiatives that will foster training, business opportunities, and local employment for workers including First Nations, youth and women."

"The Gordie Howe International Bridge is yet another historic example of what we can accomplish when we work together to find a solution that benefits everyone," said Michigan Governor Gretchen Whitmer.

"We all know that the people in our communities on each side of the border will be a strong anchor point for this project, which is why this announcement today to invest in these areas is so critical. This is a real opportunity to create thousands and thousands of jobs and strengthen our economic ties with our neighbors to drive growth in the surrounding communities for generations to come."

For more information, please visit
GordieHoweInternationalBridge.com

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Windsor-Essex Regional Chamber of Commerce partnering with WDBA and Bridging North America

The Windsor-Essex Regional Chamber of Commerce was invited to join the Windsor-Detroit Bridge Authority and Bridging North America as a delivery partner for the implementation of the Gordie Howe International Bridge community benefits plan.

The Chamber will partner in the following initiatives:

- Support the planning of and outreach for information sessions directed at vendors;
- Support the planning of and outreach for a vendor summit;
- Invite BNA to participate in relevant meetings and events with subcontractors and vendors to deliver information regarding how to participate on the project;
- Post and share information about procurement opportunities on the project.

"The Windsor-Essex Regional Chamber of Commerce is delighted to be a partner for the implementation of the Gordie Howe International Bridge community benefits plan," said WERCC president and CEO Rakesh Naidu.

"The plan will bring positive outcomes to our members and the region as a whole. We look forward to engaging with WDBA and Bridging North America to ensure that the project is successful and our members benefit from our participation."



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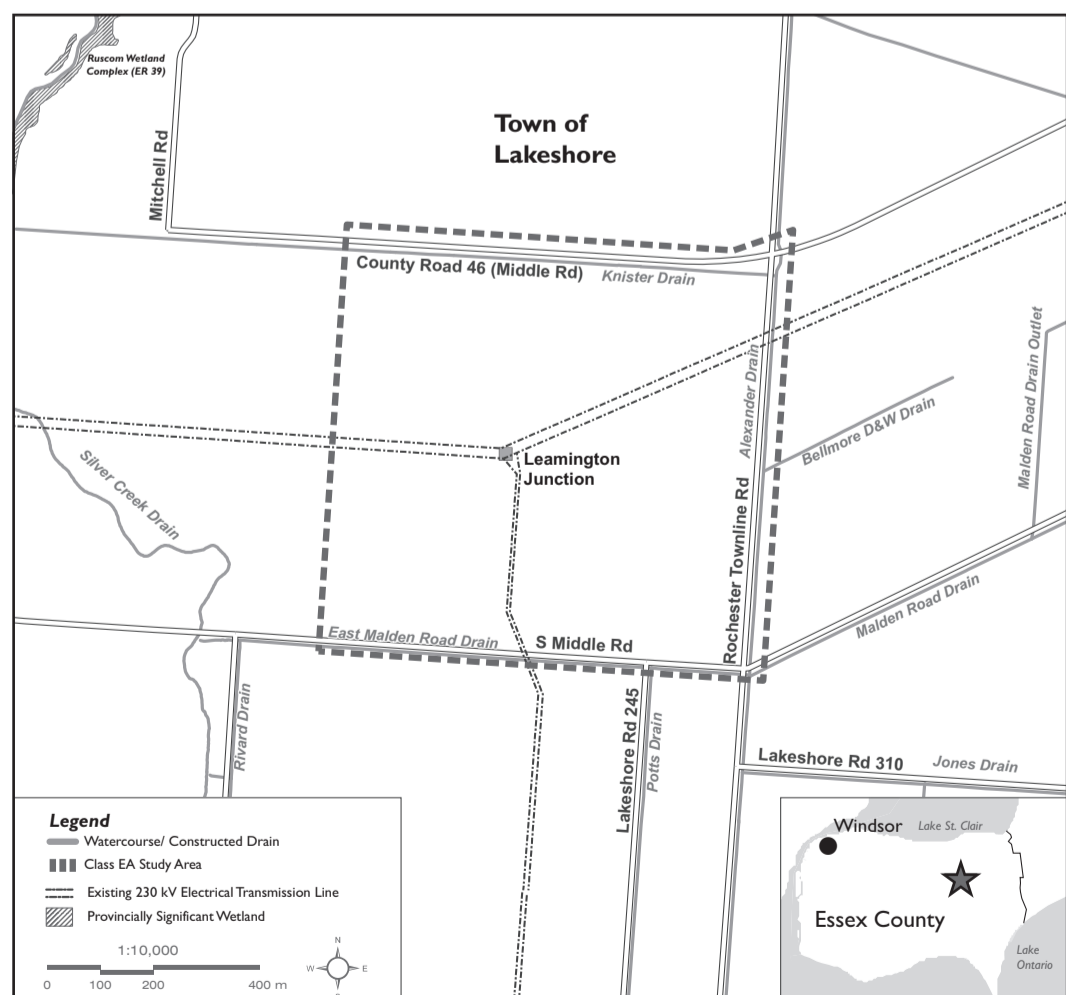
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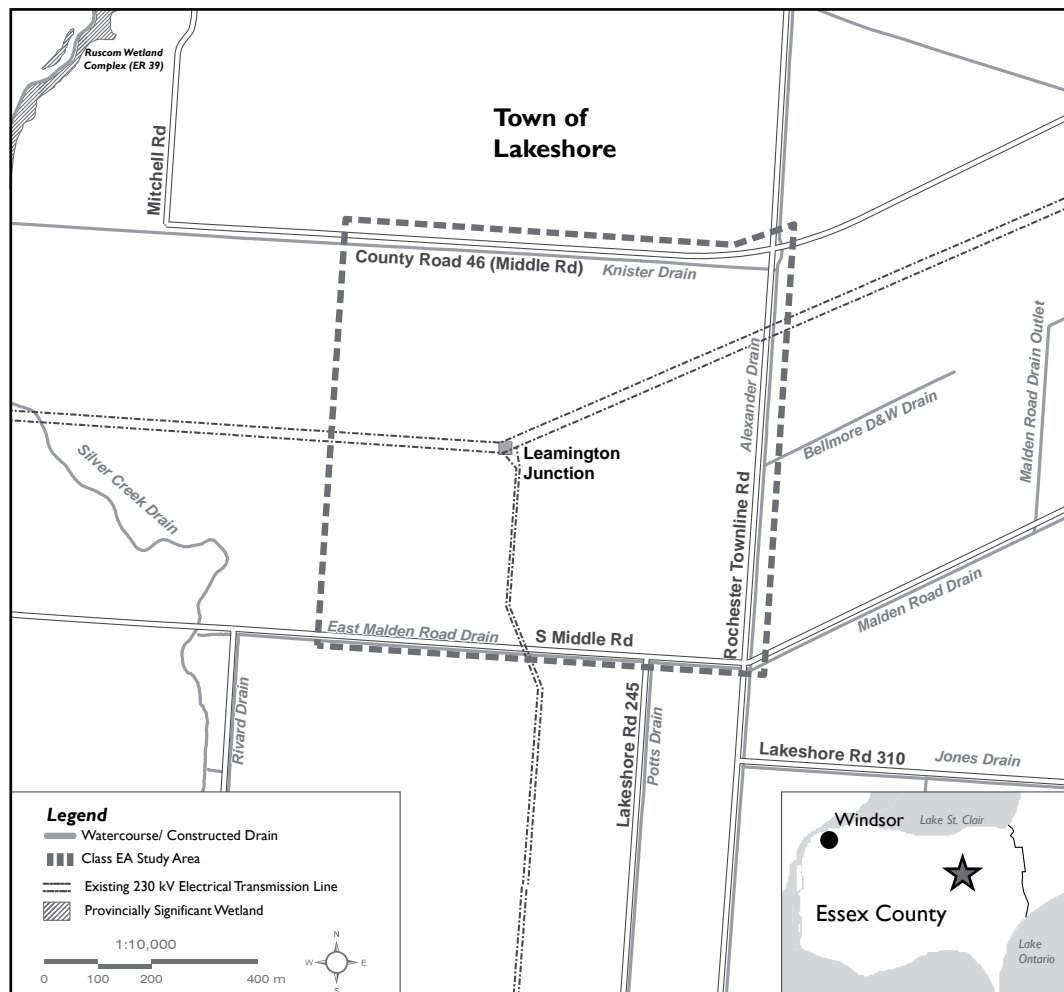
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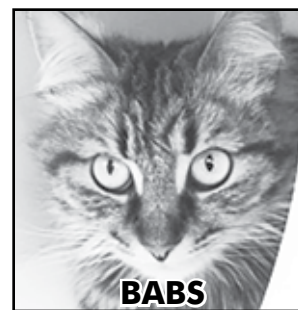
Tatomir enjoys second European Hockey Tournament

Ethan Tatomir returned to Italy this spring to play in his second European Hockey Tournament April 18-28. The first three days in Padova, Italy, involved orientation with coaches and players, touring the area and two-hour practices on Day 3 and 4. The first game on Day 5 was a 3-1 loss against URAL Russia. Day 6 saw two heartbreaking losses. The first game was a 3-2 shoot-out loss versus Latvia and the second game was a 4-3 loss to Dinimo Minsk with a last-second goal. Game 4 was a 5-1 loss to a strong Sweden Selects team. The fifth game of the tournament saw Ethan's ProHockey Kabanets '07 North America team lose 3-2 to ALPS Selects. On Day 8, they played the second Team North America and won 3-1. Eleven-year-old Ethan was one of two boys from Ontario on the ProHockey Kabanets '07 team. Ethan is a Grade 6 student at École St-Michel and is the son of Robert and Kattie Tatomir of Leamington.

Pets of the Week



JAGGER



BABS

3 year old Lab/ Sheppard mix - Jagger is such a sweet boy, with a great personality! He's one of those guys that just have the sweetest looking face, and a sweet heart to go along with it. Jagger unfortunately has some skin issues that he will need his human to help him with, but wants you to know that he is totally worth it regardless, and you'll see that once you meet this great boy!

1 year old - Babs likes to have a few minutes to check you out before she interacts with you. Once she decides you've made the grade, she enjoys your attention but is just as happy to explore or play. And can she play-her inner tiger is released in no time as soon as she sees a feather/wand toy or a toy mouse. And although not a lap cat, she does enjoy being near you and being pet. Her silky coat will need regular brushing.



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Radio Script

Client: Hydro One Ad Number: CIDR-FM (Windsor)

Date: May 17, 2019 **Version:** 1

Title: Community Information Centre

Duration: 30 seconds – announcer read

Hydro One is making important upgrades to its electricity infrastructure to meet the growing electricity needs of Essex County. On Wednesday, June 26 Hydro One will hold an information session about the proposed Lakeshore Transformer Station.

You're invited to a Hydro One Community Information Centre on June 26 at the Comber & District Community Centre in the Town of Lakeshore, at 7100 Community Centre. Doors open at 5 pm. Please visit hydroone.com for more information.

VANCOUVER
TORONTO
MONTREAL

Appendix B

Material Presented June 26,2019

WE
WELCOME
WE
WELCOME

LAKESHORE TRANSFORMER STATION

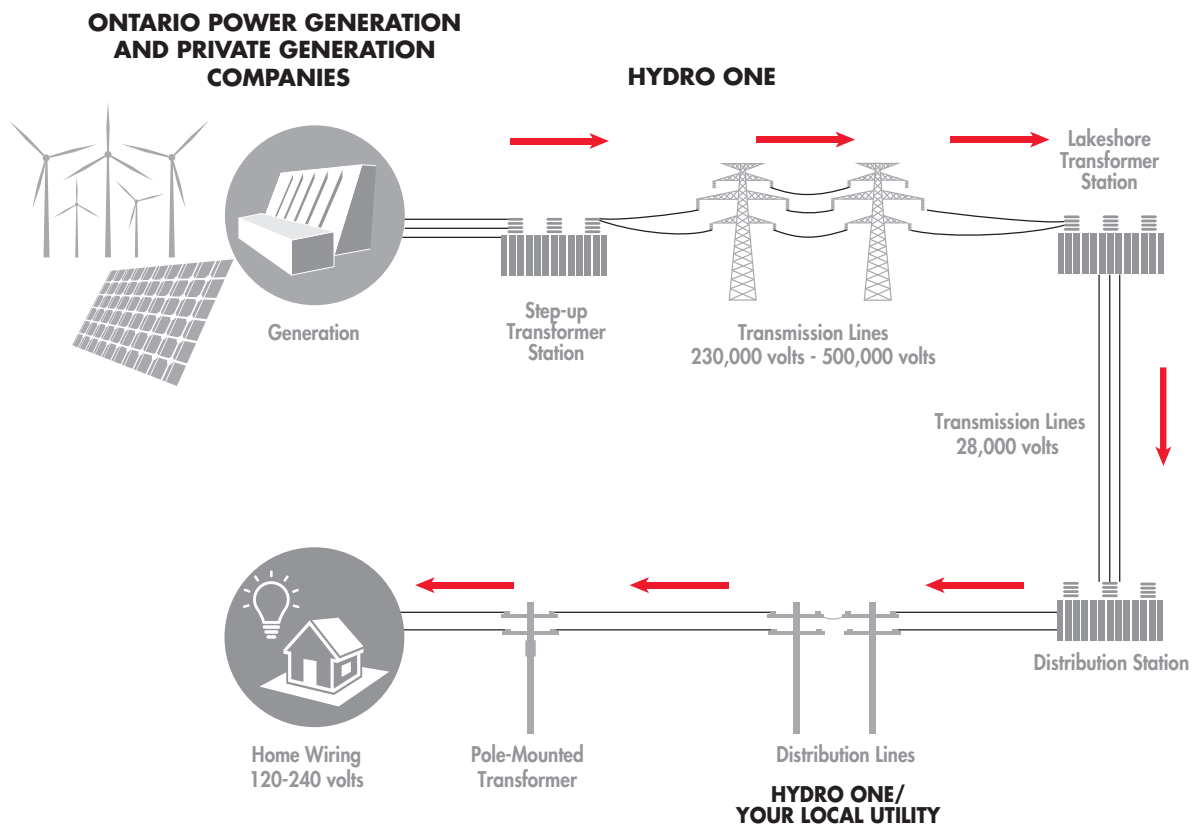
COMMUNITY INFORMATION CENTRE OVERVIEW

Meet our project team and learn more about:

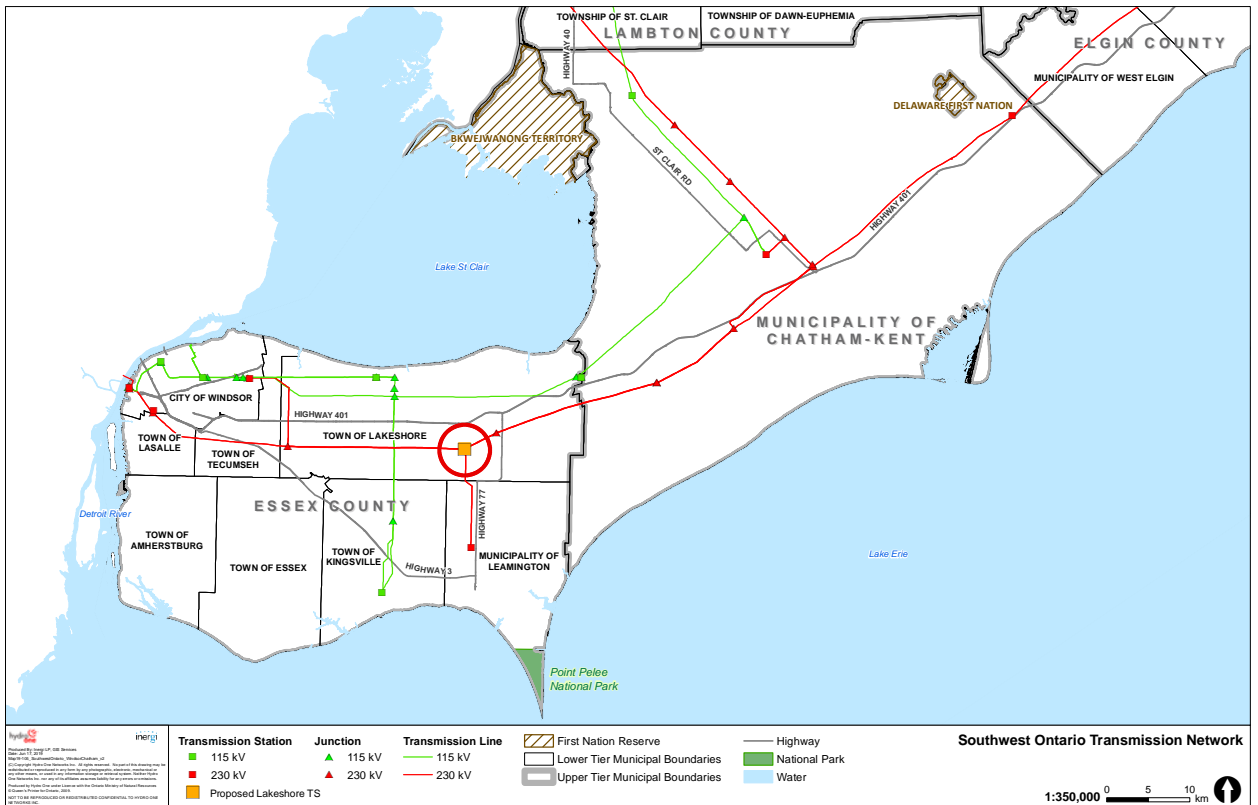
- Background and introduction to the electrical transmission system
- Project overview & description
- Description of the class environmental assessment process
- Project maps & preliminary evaluation criteria
- Next steps & anticipated project schedule

We're here to share information, listen to your comments or concerns, obtain your feedback and answer questions.

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KEY ORGANIZATIONS



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Develops plans to ensure electricity needs are met for the benefit of Ontario, both now and in the future.

**Ministry of Environment
Conservation and Parks**

Reviews the environmental assessment process to ensure potential environmental effects are considered before an infrastructure project begins.

PROJECT OVERVIEW

The IESO completed an assessment of the electrical load forecast for Essex County and requested Hydro One to construct a new switching station which will help meet the growing needs of the area.

The proposed Lakeshore Transformer Station will house switching facilities and four 230/27.6 kV transformers that will:

- Improve reliability of the transmission system in Essex County; and,
- Supply the distribution system which carries power to local homes and businesses.



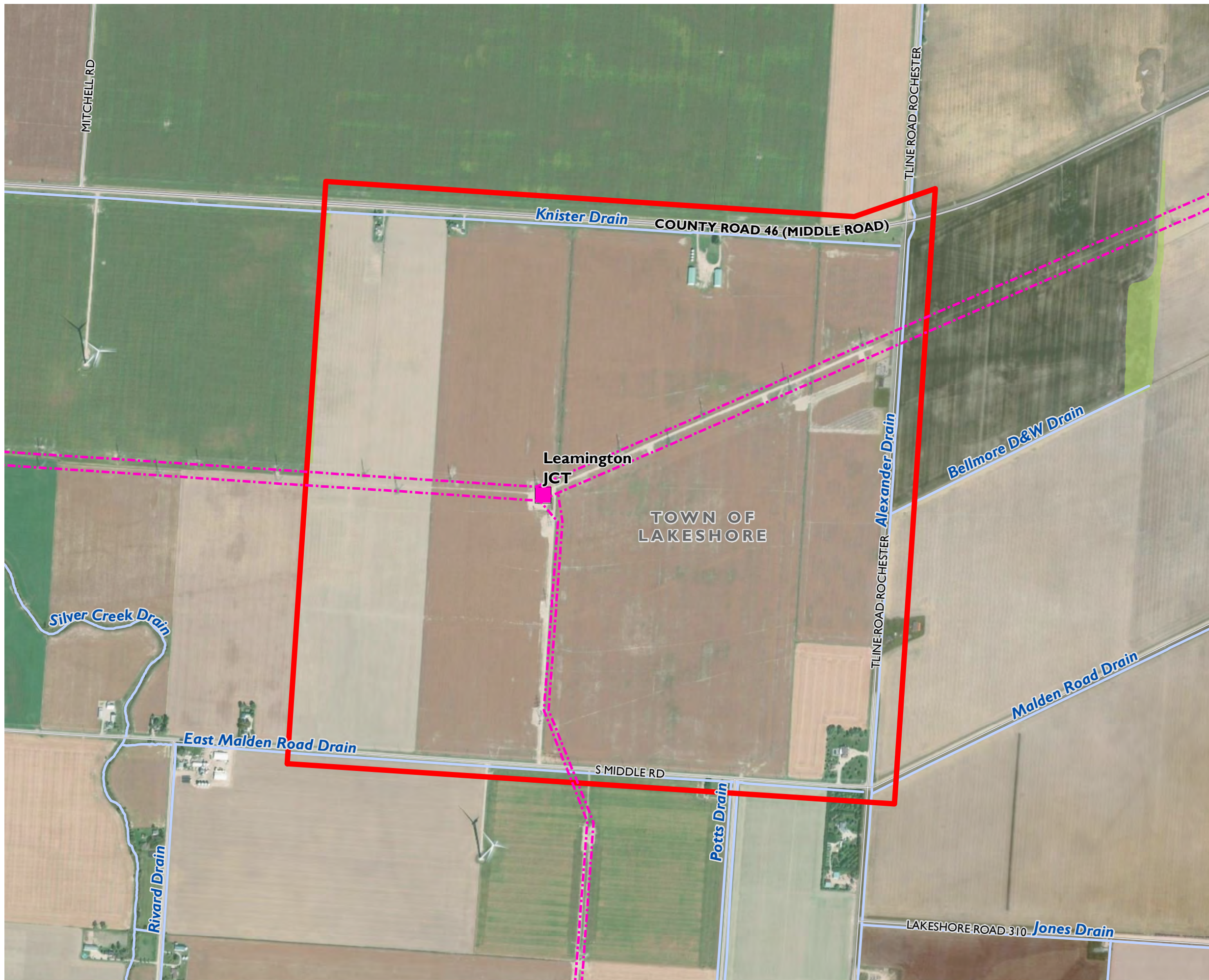
Example of typical switching facility

CLASS ENVIRONMENTAL ASSESSMENT

- The project is subject to the Class Environmental Assessment for Minor Transmission Facilities (Hydro One, 2016) process, in accordance with the *Ontario Environmental Assessment Act*.
- This process ensures that transmission projects that have a predictable range of effects are planned and carried out in an environmentally acceptable manner.
- The Class EA process includes:
 - Consultation with municipal, provincial and federal government officials; government agencies; First Nation and Métis communities; potentially affected and interested persons, affected businesses and interest groups.
 - Collection of environmental inventory data and description of the existing baseline conditions.
 - Identification and evaluation of alternative methods of undertaking the project.
 - Identification of potential environmental effects of the project and mitigation measures.






CLASS ENVIRONMENTAL ASSESSMENT

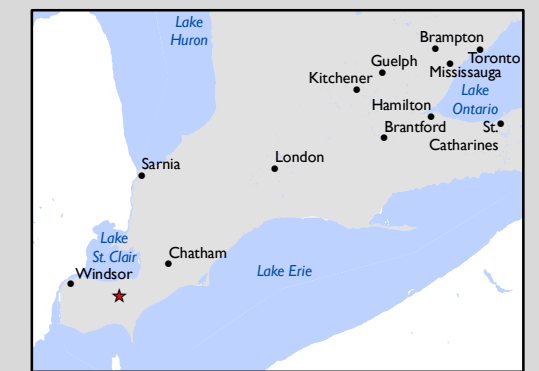
- As part of the Class EA process, a draft Environmental Study Report (ESR) will be made available for a 30-day public review and comment period. An ESR is an easy-to-follow record of the decision making process and generally includes
 - A description of the need for the project;
 - A description of the existing environment;
 - The preferred solution;
 - The rationale behind the selection of the preferred solution;
 - A description of the Indigenous and stakeholder consultation undertaken; and,
 - A description of the potential environmental effects of the preferred solution, and mitigation measures to address these effects.
- Hydro One will make best efforts to resolve concerns raised during the public consultation program and draft ESR review period, prior to filing the final ESR with the Ontario Ministry of the Environment, Conservation and Parks (MECP).
- If a concern cannot be resolved, the concerned party may submit a written request (“Part II Order Request”) to the MECP during the public review period to request for a higher level of assessment, known as an Individual Environmental Assessment.



**HYDRO ONE – LAKESHORE TS
CLASS ENVIRONMENTAL ASSESSMENT**

**PROJECT LOCATION AND
CLASS EA STUDY AREA**

-  Existing 230 kV Electrical Transmission Line
-  Junction
-  Class EA Study Area
-  Watercourse/Constructed Drain
-  Woodland



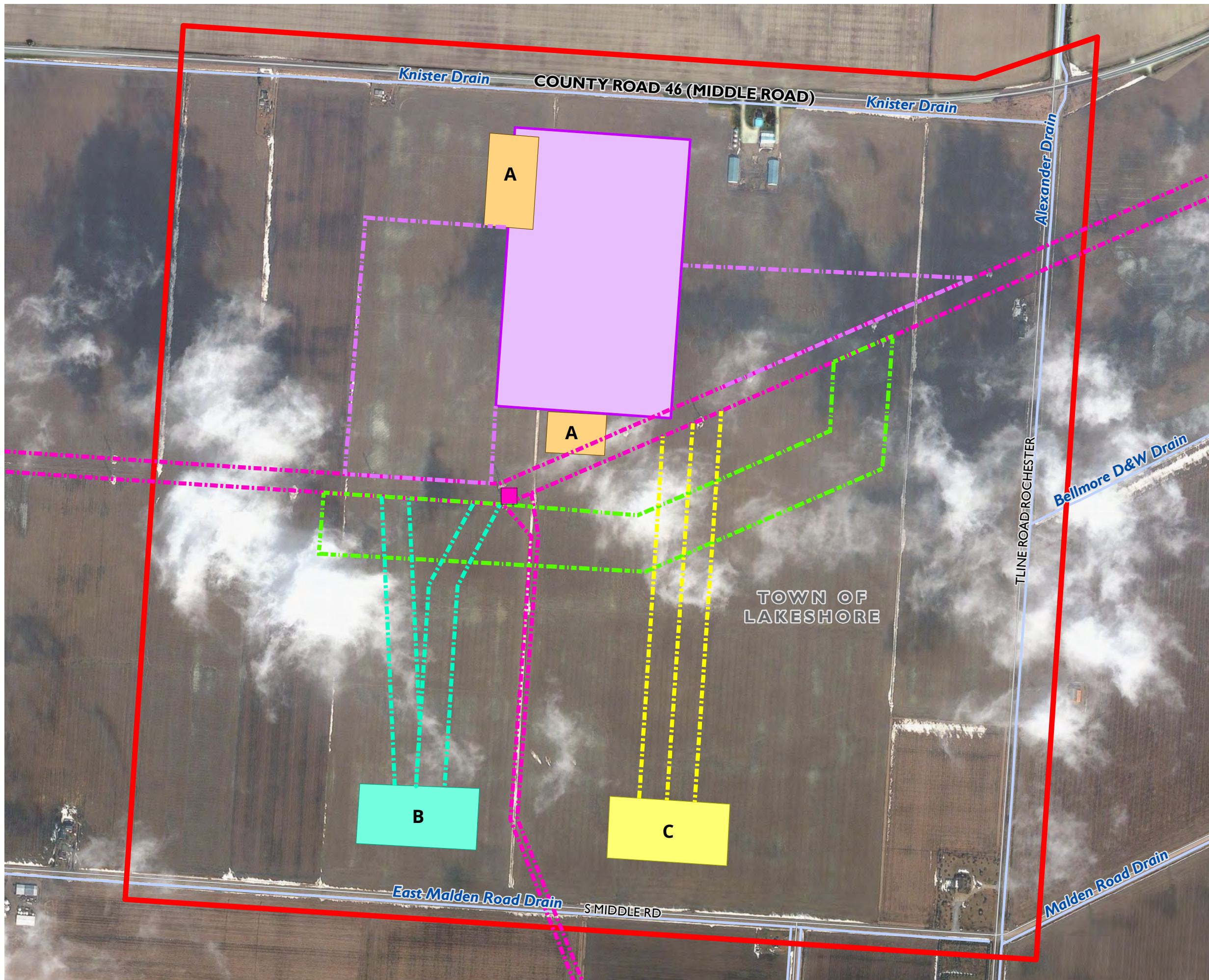
MAP CREATED BY: GM
 MAP CHECKED BY: JW
 MAP PROJECTION: NAD 1983 UTM Zone 17N



ALTERNATIVE STATION CONFIGURATIONS

Hydro One has only identified one technically feasible configuration for the 230 kV switchyard and associated equipment, which is to the north of the existing transmission corridor and Junction.

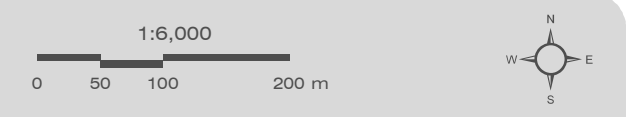
Within the Study Area, Hydro One has identified three possible configurations of the transformers and associated equipment, as shown on the table map. As part of the Class EA, we will be conducting an evaluation of these alternatives to select one preferred alternative.



HYDRO ONE – LAKESHORE T/S CLASS ENVIRONMENTAL ASSESSMENT

ALTERNATIVE STATION CONFIGURATIONS

- Junction
- Proposed Hydro One Temporary Bypass Transmission Corridor
- Proposed Transmission Line Tap Connection
- Alternative Transformer Site B Transmission Corridor
- Alternative Transformer Site C Transmission Corridor
- Existing 230 kV Electrical Transmission Line
- Alternative Transformer Site A – 2 Transformers each (4 total)
- Alternative Transformer Site B – 4 Transformers
- Alternative Transformer Site C – 4 Transformers
- Proposed Switching Station
- Class EA Study Area
- Watercourse/Constructed Drain



MAP CREATED BY: GM
 MAP CHECKED BY: JW
 MAP PROJECTION: NAD 1983 UTM Zone 17N



EVALUATION CRITERIA

CATEGORY	CRITERIA
Technical & Cost Considerations	<ul style="list-style-type: none"> • Ease of construction • Cost
Natural Environment Considerations	<ul style="list-style-type: none"> • Potential effect on vegetation communities • Potential effect on water bodies or aquatic habitat • Potential effect on terrestrial wildlife • Proximity to potential natural hazards (erosion, flooding) • Potential effect on species at risk/sensitive species
Socio-Economic Considerations	<ul style="list-style-type: none"> • Proximity to residences • Proximity to existing infrastructure • Potential effect on agricultural lands and resources • Potential effect on archaeological or built heritage resources • Potential effect to Indigenous interests (species of significance, cultural/traditional/ historical lands and resources)

NEXT STEPS

- Hydro One will continue to conduct environmental surveys and research within the study area, to inform the evaluation of alternatives and identification of potential environmental effects.
- Hydro One will continue to consult Indigenous communities, government agencies, municipal staff, elected officials, interest groups and the public to obtain feedback and answer questions about the project.
- The project team will consider all feedback received and evaluate the project alternatives.
- A preferred alternative will be presented at the Community Information Centre #2 in September 2019.
- Following the second Community Information Centre, Hydro One will release a Draft Environmental Study Report (ESR) for 30-day public review.
- If no Part II Order Requests are submitted during the 30-day review period, Hydro One will file the final ESR with the Ministry of the Environment, Conservation and Parks, concluding the Class EA

PROJECT SCHEDULE

ACTIVITY	TIMELINE
Notice of Commencement of the Class Environmental Assessment	Early June 2019
Community Information Centre #1 Introduction of proposed project and alternatives	June 2019
Community Information Centre #2 Presentation of preferred alternative	September 2019
Draft Environmental Study Report Review Period (30 days)	November 2019
File Final Environmental Study Report with Ministry of the Environment, Conservation and Parks (MECP)	January 2020
Detailed engineering and permitting	Early 2020
Anticipated start of construction	Mid-2020
Anticipated construction completion	Late 2023

THANK YOU FOR JOINING US TODAY!

Your input is important to us.

Please share your feedback with our team and complete a comment form before you go.

To provide comments or to be added to the project contact list, please contact the Community Relations team at:

1.877.345.6799

Community.Relations@HydroOne.com

For additional project information please visit:

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CONSULTING

HYDRO ONE NETWORKS INC.

October 1, 2019

Community Information Centre #2

Summary Report

Lakeshore Transmission Stations Project

Table of Contents

1.0	Introduction	1
2.0	Community Information Centre #2 Overview	1
3.0	Overview of Feedback on the Project	3
4.0	Comments and Questions	3

Tables

Table 1: Hydro One's Adverstivement Efforts	2
Table 2: Comments Received and Hydro One Responses	4

Appendices

A	Examples of CIC Advertisement
B	Material Presented October 1, 2019

1.0

Introduction

Hydro One Networks Inc. (Hydro One) was issued a letter by the Independent Electricity System Operator (IESO) in January 2019. Based on the assessment completed by IESO on the electricity load forecast for Essex County, the EISO requested Hydro One to construct a new switching station (SS) to help meet the growing needs of the area. Furthermore, the IESO identified only one feasible location (i.e. within the adjacent lands to the Leamington Junction) for the SS given the existing transmission infrastructure. In addition to the IESO request, Hydro One also identified the need for additional transformers in order to supply more low-voltage electricity to homes and business in the area. As a result, a new 230 kV SS and a separate 230/27.6 kV transmission station (TS) (the 'Project') is proposed in the Town of Lakeshore, Essex County.

Growing electricity needs support the development of this Project in the Kingsville and Leamington area. Over 1000 MW of load is projected to materialize in the Kingsville-Leamington area by 2022 driven by the growth of the greenhouse sector. In order to service this demand the Lakeshore Transformer Station is planned to be in-service by 2022.

This Project is subject to a Class Environmental Assessment (EA) in accordance with the Class Environmental Assessment for Minor Transmission Facilities (Hydro One, 2016). On June 26, 2019 Hydro One held a Community Information Centre (CIC) to provide the public with information on the Project. Since the June CIC, additional project information has been made available including the selection of the preferred alternative for the TS. On October 1, 2019 Hydro One held a second CIC to provide the general public and interested stakeholders with information regarding the preferred alternative for the TS.

2.0

Community Information Centre #2 Overview

The purpose of this report is to summarize the results of the public consultation efforts of Hydro One for the Project as part of the Class EA. Hydro One held a second CIC at the Comber & District Community Centre, 6211 McAllister Street, on Tuesday October 1, 2019 from 17:00 to 20:00 for the Project. The purpose of the CIC was to provide updates on the Project, specifically the preferred alternative for the TS, as well as present interested parties with an opportunity to learn about and discuss the Project with project team members. Project team members included representatives from Hydro One, IESO and Dillon Consulting Limited (Dillon).

The second CIC was advertised through varied means to reach stakeholders and neighbours within and adjacent to the Project Study Area. The Project contact list included the same stakeholders contacted in previous project events with the addition of interested residents and stakeholders who expressed their interest since original distribution of the NoC. The second CIC was announced using several mediums such as newspaper, radio advertisements and flyers. Refer to **Table 1** for a breakdown of the various forms of advertisements and their associated published dates, and **Appendix A** for advertisements issued in support of the CIC.

Table 1: Hydro One's Adverstivement Efforts

Notices	Date
Flyer delivery	September 13, 2019
Newspapers	Date
Leamington Wheatley Kingsville Southpoint Sun	September 11, 2019
Belle River Lakeshore News	September 12, 2019
Tecumseh Shoreline Week	September 13, 2019
Radio Station(s)	Date
CIDR-FM (Windsor Radio Station) 30 second ad which ran 4 times per day*	September 16 – September 29, 2019

A total of 3 people attended, and signed in, for the October 1 CIC. The attendees shared their thoughts and asked questions regarding the Project, of which a record of these questions are documented within this report.

The CIC used a drop-in style format which permitted attendees to review material at their own pace. Material consisted of a series of presentation panels including project overview; highlights of the Class EA process; illustrations of the preferred TS locations; description of the evaluation criteria in support of the preferred alternative; next steps and a high level Project Schedule (**Appendix B**). This format allowed attendees to view the Project material and ask questions and discuss their concerns with project team members at their own pace. Hydro One welcomed attendees to provide comments, feedback or information that they thought will be useful to the project team in support of the preferred alternative selection process.

3.0 Overview of Feedback on the Project

Overall feedback from the October 1, CIC ranged from individuals seeking updates on the project from what was presented at the initial CIC on June 26, 2019.

Attendees were generally curious about the projects schedule and what the site would look like once completed.

Hydro One staff informed the participants, and publically presented the selected preferred alternative for the TS, as well as provided some additional high-level information on the next stages of the Project. Hydro One informed attendees that Hydro One would release the draft Environmental Study Report (ESR) for a 30-day public review period in November of 2019, and that during that time, interested parties will have the opportunity to review and provide comment on the draft ESR.

4.0 Comments and Questions

Throughout the CIC, the project team listened to questions and comments relating to project activities, and the project in general. These questions and comments were noted through both verbal discussions and submitted comment forms. Additional written submissions may be forthcoming, as attendees were provided the option to provide further feedback via email directly to Hydro One's Community Relations Department.

A list of comments and questions received is presented in the table below:

Table 2: Comments Received and Hydro One Responses

	Comment/Question	Response
Mr. Tony DiCiocco, Town of Lakeshore – Environmental Planning Group		
1	<ul style="list-style-type: none"> Mr. DiCiocco commented on the potential landscaping of the site, and wanted to know what Hydro One could do to hide the stations visually from residences and passersby's. Mr. DiCiocco asked about possibly including the following in landscaping plans: <ul style="list-style-type: none"> Non-see-through fencing; Earthen berm; Trees; and Hedgerows/windbreaks along the edges of field or property boundaries. Mr. DiCiocco asked if Hydro One would need Site Plan approval. Mr. DiCiocco mentioned that Middle Road / County Road 46 was under the jurisdiction of Essex County (as opposed to the Town of Lakeshore) and that the County would need to provide any permits/approvals required for that particular road. 	<ul style="list-style-type: none"> Hydro One explained that they have employed a landscape architect who would develop some conceptual landscape plans for the site, and that Hydro One would do their best to screen views of the station while working within the limitations re: overhead facilities etc. Hydro One also explained that they would likely focus their efforts on the areas near adjacent residences, as that would be most effective in screening views. Hydro One replied that they would consider Mr. DiCiocco's points in support of the landscape plans to see what could feasibly incorporate at site. Hydro One explained that they are exempt from the Planning Act for any projects that go through an EA (as per Section 62), but we could still take the Town's feedback into consideration when developing landscape plans. Hydro One confirmed that they had notified the County through the Class EA for the Project, and that they would follow up with the Town to discuss further details prior to the commencement of construction.
Tom Bain, Mayor of Lakeshore and Regional Councillor		
2	<ul style="list-style-type: none"> Mayor Bain inquired about the construction schedule and stated that this was a long construction schedule; over 3 years of work at the site. 	<ul style="list-style-type: none"> Hydro One showed Mayor Bain the "Schedule" panel and stated that construction could begin as early as mid-2020 and was expected to be completed by the end of 2023. Hydro One further explained that the construction schedule was likely conservative on both ends, and included work on the SS, TS and line structures.
Private Land Owner		
3	<ul style="list-style-type: none"> This individual inquired if the power from the stations would be directed south. In addition, the individual also mentioned 	<ul style="list-style-type: none"> Hydro One confirmed that the majority of the current need for the distribution-voltage electricity from the TS was to the

Comment/Question	Response
<p>that they supported the project and asked about the construction schedule.</p>	<p>south of the study area; however, Hydro One also briefly explained the purpose of the SS. Hydro One indicated that both the SS and the TS would also benefit the provincial electricity grid in the entire Windsor-Essex area by increasing reliability of the 230 kV system in addition to providing additional distribution supply capacity.</p> <ul style="list-style-type: none"> Hydro One thanked the individual for their support of the project and showed the individual the “Schedule” panel and stated that construction could begin as early as mid-2020 and that it was expected to be complete by the end of 2023.

Appendix A

Examples of CIC Advertisement

COMMUNITY OPEN HOUSE

September 2019

Class Environmental Assessment for Lakeshore Transmission Stations Project

Hydro One is progressing through the Class Environmental Assessment (Class EA) in support of the Lakeshore Transmission Stations Project, in the Town of Lakeshore. The project is needed to meet the growing electricity needs of southwestern Ontario and increase the capacity of the existing 230kV transmission system in Essex County.

The project is subject to the “Class Environmental Assessment for Minor Transmission Facilities” (Hydro One, 2016), in accordance with the Ontario *Environmental Assessment Act*. On June 26, 2019, Hydro One held a Community Information Centre (CIC) to provide the public with information on the project, including the Class EA process, study area, and the various alternatives for the new transformer stations. Based on research and consultation conducted to date, the preferred alternative for the project has been selected, which consists of a high-voltage switching station (SS) and a separate transformer station (TS). The map below shows the preferred alternative for the project.

Please join us for our upcoming second CIC to learn more about the Project and to speak with members of our project team.

Please join us on:

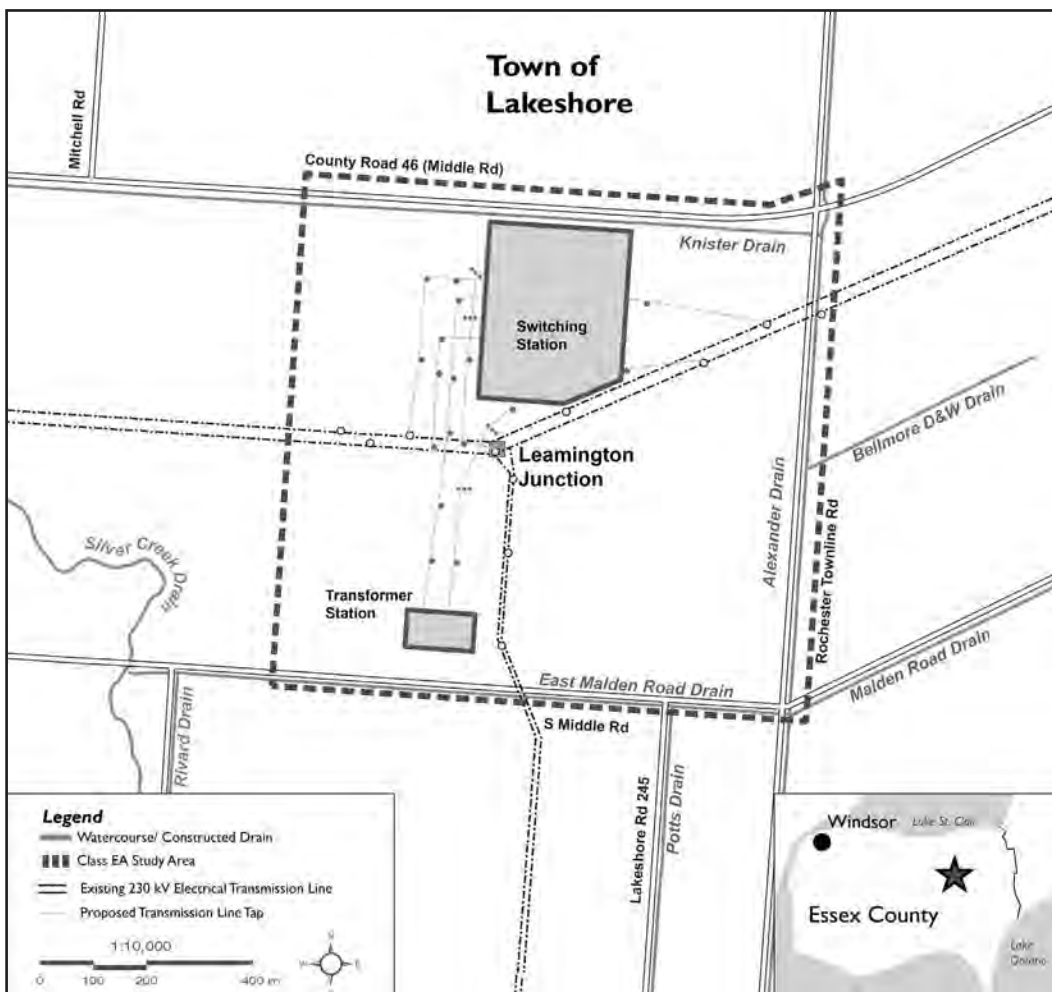
Tuesday, October 1, 2019
5:00 p.m. – 8:00 p.m.
Comber & District Community Centre
6211 McAllaster Street, Comber

We welcome your comments and feedback. Contingent on the outcome of the Class EA process, construction could begin as early as mid-2020 and is expected to be completed by the end of 2023.

For more information

If you have questions or would like any additional information about the project, please contact:

Ani Bekmezian
Community Relations
T: 1-877-345-6799
E: Community.Relations@HydroOne.com
www.HydroOne.com/Lakeshore



All personal information included in a submission – such as name, address, telephone number and property location – is collected, maintained and disclosed by the Ministry of the Environment, Conservation and Parks for the purpose of transparency and consultation. The information is collected under the authority of the *Environmental Assessment Act* or is collected and maintained for the purpose of creating a record that is available to the general public as described in s. 37 of the *Freedom of Information and Protection of Privacy Act*. Personal information you submit will become part of a public record that is available to the general public unless you request that your personal information remain confidential. For more information, please contact the Ministry of the Environment, Conservation and Parks’s Freedom of Information and Privacy Coordinator at 416-327-1434.



COMMUNITY OPEN HOUSE

Class Environmental Assessment for the Lakeshore Transmission Stations Project

Dear Resident,

September 2019

We are writing to inform you that Hydro One is progressing through the Class Environmental Assessment (Class EA) in support of the Lakeshore Transmission Stations Project, in the Town of Lakeshore. The project is needed to meet the growing electricity needs of southwestern Ontario and increase the capacity of the existing 230kV transmission system in Essex County.

The project is subject to the "Class Environmental Assessment for Minor Transmission Facilities" (Hydro One, 2016), in accordance with the Ontario *Environmental Assessment Act*. On June 26, 2019, Hydro One held a Community Information Centre (CIC) to provide the public with information on the project, including the Class EA process, study area, and the various alternatives for the new transformer stations. Based on research and consultation conducted to date, the preferred alternative for the project has been selected, which consists of a high-voltage switching station (SS) and a separate transformer station (TS). The map on the back shows the preferred alternative for the project.

Please join us for our upcoming second CIC to learn more about the Project and to speak with members of our project team. We look forward to seeing you at:

Comber & District Community Centre – 6211 McAllaster Street, Comber

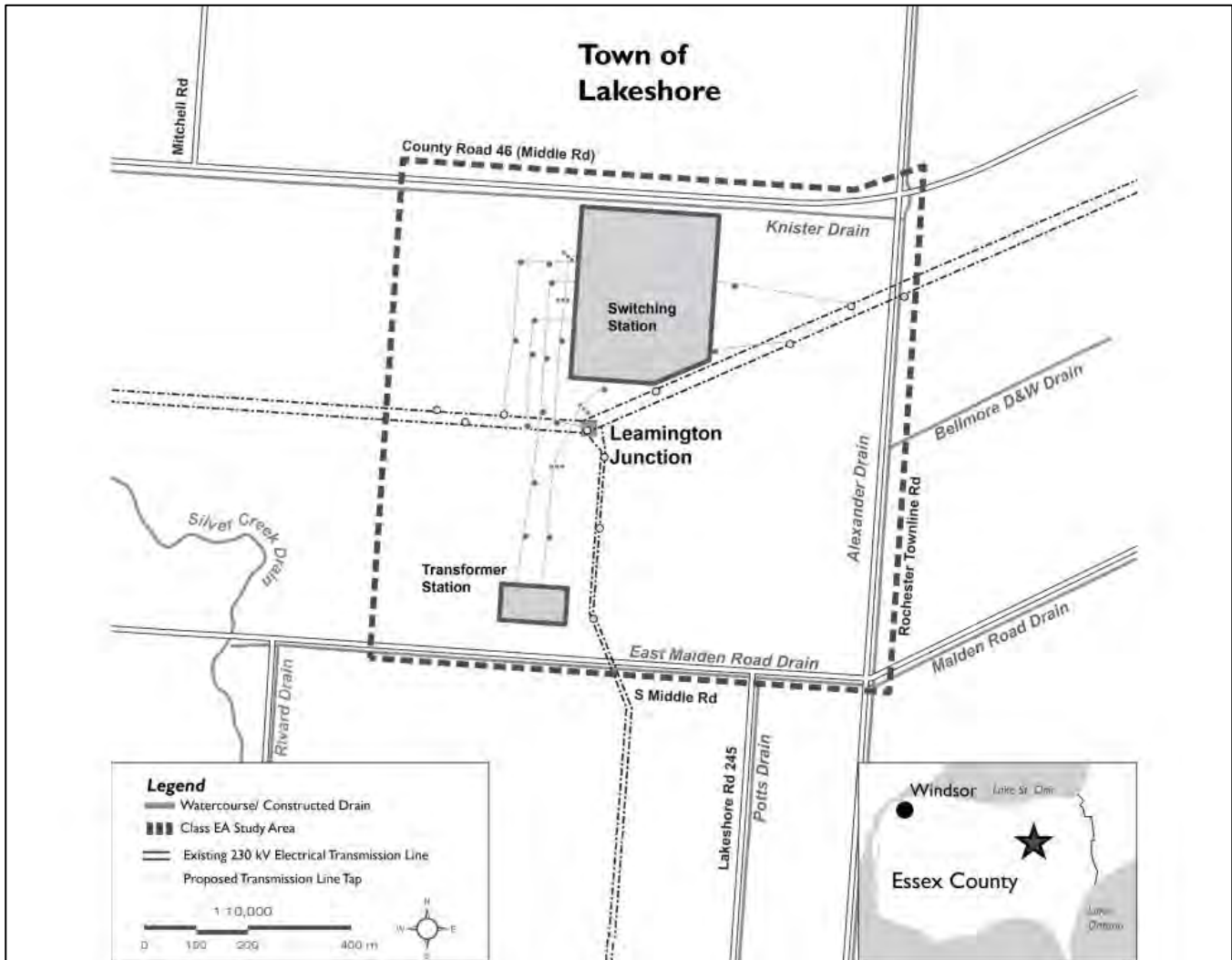
Tuesday October 1, 2019, 5:00 – 8:00 PM

We welcome your comments and feedback. Contingent on the outcome of the Class EA process, construction could begin as early as mid-2020 and is expected to be completed by the end of 2023.

If you have questions or would like any additional information about the project, please contact Hydro One Community Relations at Community.Relations@HydroOne.com, or (877) 345-6799. Project information will also be available online at www.HydroOne.com/Lakeshore.

Sincerely,

Ani Bekmezian
Community Relations
Hydro One Networks Inc.



Freedom of Information and Protection of Privacy Act

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Appendix B

Material Presented October 1, 2019

WE
WELCOME
WE
WELCOME
WE
WELCOME

**LAKESHORE
TRANSMISSION
STATIONS
PROJECT**

OCTOBER 1, 2019

COMMUNITY INFORMATION CENTRE OVERVIEW

Meet our project team and learn more about:

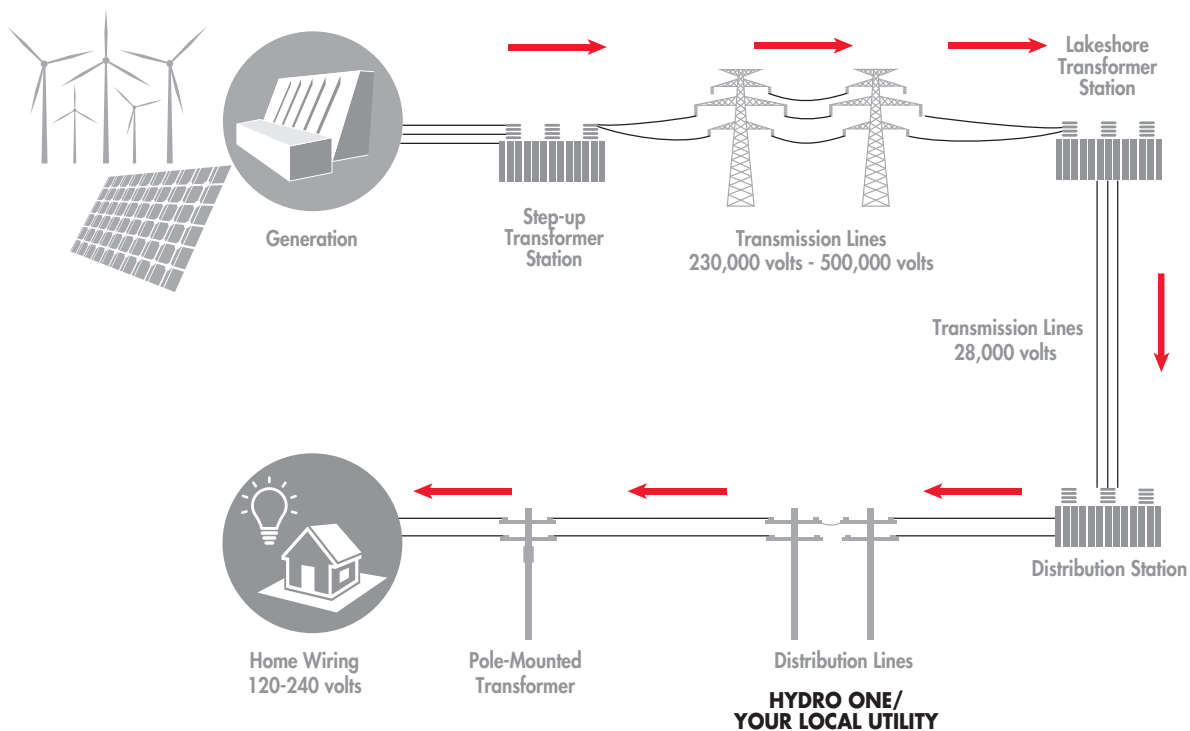
- Project update & description
- Description of the class environmental assessment process
- Selection of the preferred option for the transformer station
- Next steps & anticipated project schedule

We're here to share information, listen to your comments or concerns, obtain your feedback and answer questions.

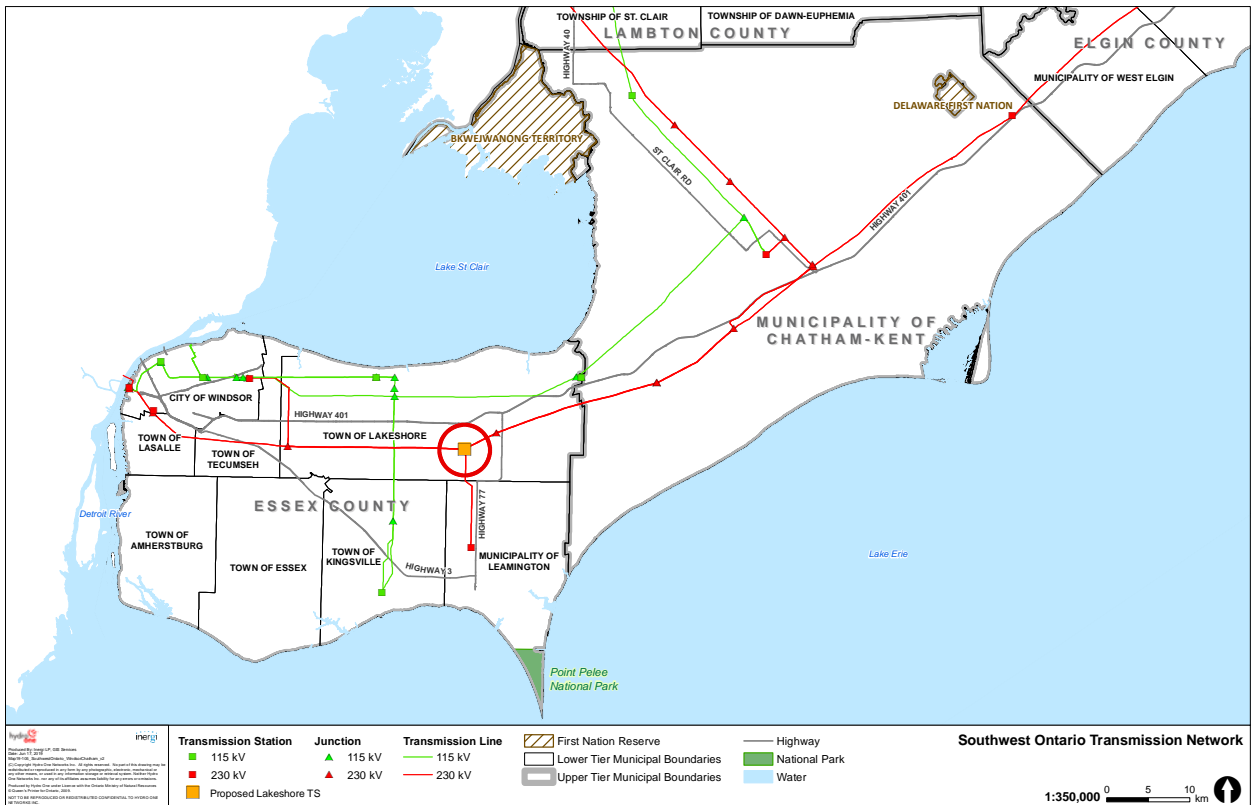
OUR ROLE IN DELIVERING POWER TO YOU

ONTARIO POWER GENERATION AND PRIVATE GENERATION COMPANIES

HYDRO ONE



TRANSMISSION NETWORK SOUTHWESTERN ONTARIO



KEY ORGANIZATIONS



Builds, owns, operates and maintains electricity transmission and distribution facilities across Ontario.



Develops plans to ensure electricity needs are met for the benefit of Ontario, both now and in the future.

**Ministry of Environment
Conservation and Parks**

Reviews the environmental assessment process to ensure potential environmental effects are considered before an infrastructure project begins.

PROJECT OVERVIEW

The IESO completed an assessment of the electrical load forecast for Essex County and requested Hydro One to construct a new switching station which will help meet the growing needs of the area.

Hydro One has also identified the need for additional transformers, in order to supply more low-voltage electricity to homes and businesses in the area.

The proposed Lakeshore Transmission Stations Project will involve a new 230 kV switching station and a separate 230/27.6 kV Transformer Station, which together will:

- Improve reliability of the transmission system in Essex County, and;
- Supply the distribution system which carries power to local homes and businesses.

CLASS ENVIRONMENTAL ASSESSMENT

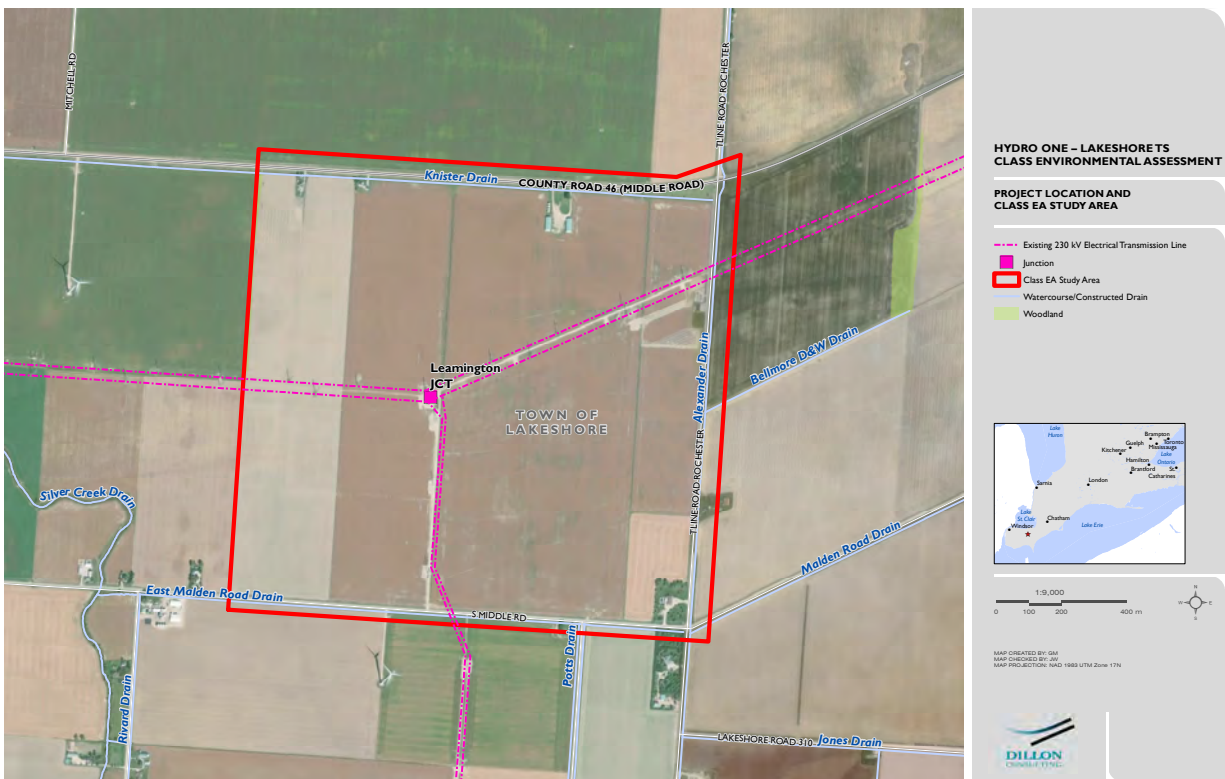
- The project is subject to the Class Environmental Assessment for Minor Transmission Facilities (Hydro One, 2016) process, in accordance with the *Ontario Environmental Assessment Act*.
- This process ensures that transmission projects that have a predictable range of effects are planned and carried out in an environmentally acceptable manner.
- The Class EA process includes:
 - Consultation with municipal, provincial and federal government officials; government agencies; First Nation and Métis communities; potentially affected and interested persons, affected businesses and interest groups.
 - Collection of environmental inventory data and description of the existing baseline conditions.
 - Identification and evaluation of alternative methods of undertaking the project.
 - Identification of potential environmental effects of the project and mitigation measures.

CLASS ENVIRONMENTAL ASSESSMENT

- As part of the Class EA process, a draft Environmental Study Report (ESR) will be made available for a 30-day public review and comment period. An ESR is an easy-to-follow record of the decision making process and generally includes:
 - A description of the need for the project;
 - A description of the existing environment;
 - The preferred solution;
 - The rationale behind the selection of the preferred solution;
 - A description of the Indigenous and stakeholder consultation undertaken; and,
 - A description of the potential environmental effects of the preferred solution and mitigation measures to address these effects.
- Hydro One will make best efforts to resolve concerns raised during public consultation and the draft ESR review period, prior to filing the final ESR with the Ontario Ministry of the Environment, Conservation and Parks (MECP).
- If a concern cannot be resolved, the concerned party may submit a written request ("Part II Order Request") to the MECP during the public review period to request a higher level of assessment, known as an Individual Environmental Assessment.

CLASS EA STUDY AREA

The proposed Lakeshore TS location is best suited to be near the existing Leamington Junction (JCT), where the existing 230kV circuits join.

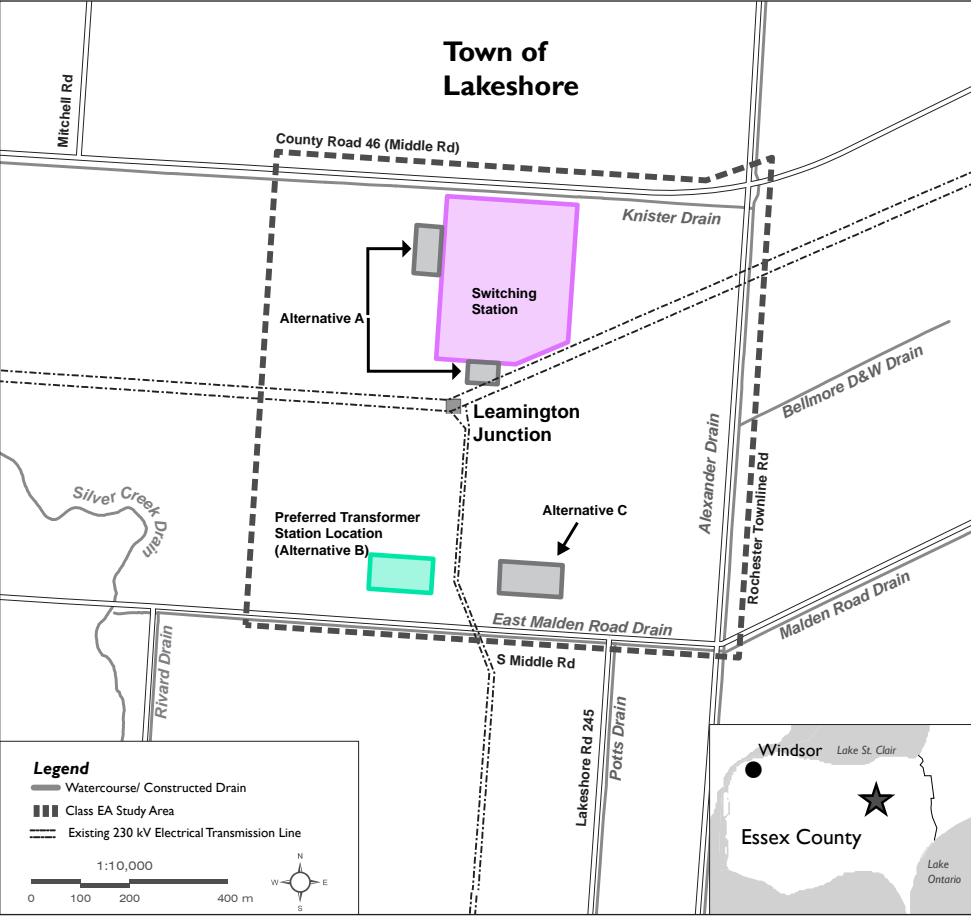


The study is bounded by Middle Road to the north, Rochester Townline Road to the east, South Middle Road to the south, and will extend west approximately 550 metres from the Leamington JCT.

STATION CONFIGURATIONS

Hydro One has identified one technically feasible configuration for the 230 kV switching station and assessed three feasible configurations for the locations of the transformer station.

Based on the research and consultation to date, the preferred location of the transformer station has been selected.

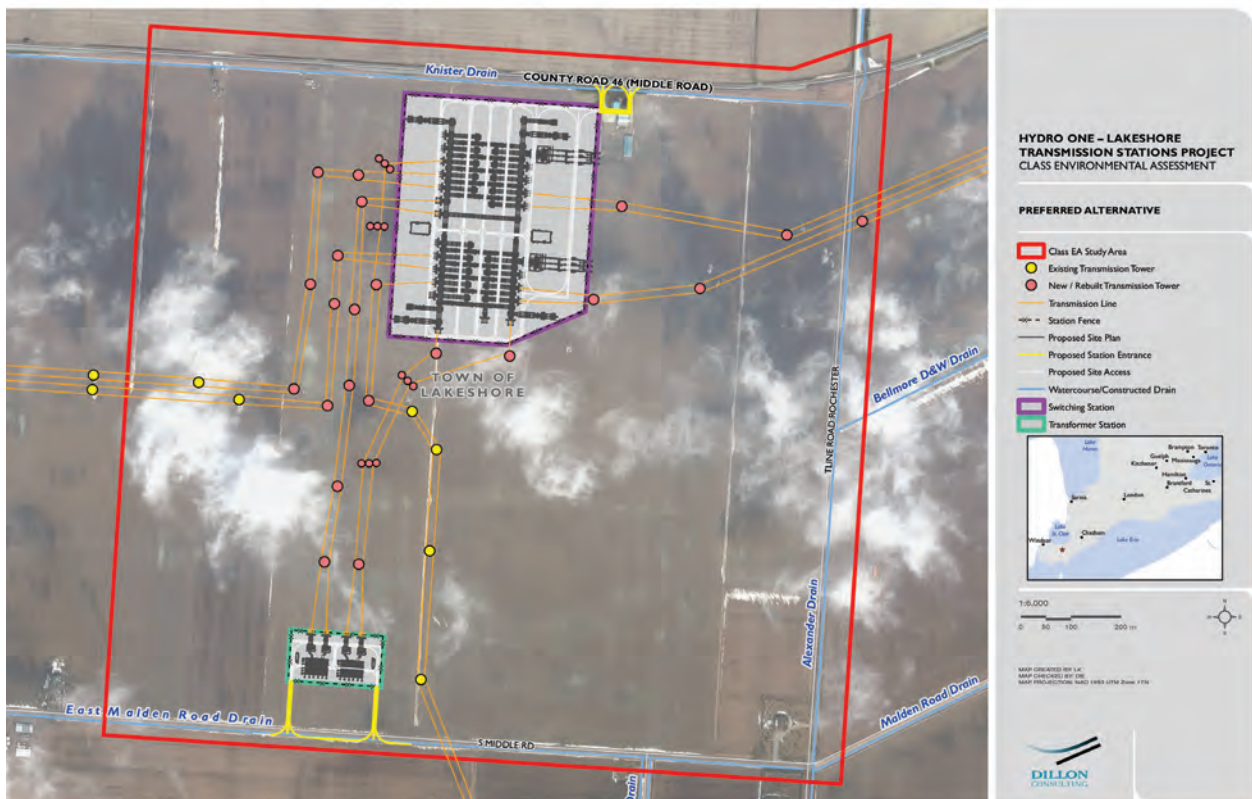


EVALUATION OF THE PREFERRED CONFIGURATION

CRITERIA	OPTION A	OPTION B	OPTION C
TECHNICAL & COST			
Constructability		Preferred	
Cost		Preferred	Preferred
NATURAL ENVIRONMENT			
Vegetation		No Preference	
Aquatic habitat/waterbodies		No Preference	
Terrestrial wildlife		No Preference	
Potential natural hazards		No Preference	
Species at risk or sensitive species		No Preference	
SOCIO ECONOMIC			
Distance from residences		Preferred	
Proximity to existing infrastructure	Preferred	Preferred	
Total project footprint/size, and effects to agricultural land	Preferred		
Archaeology & built heritage resources		No Preference	
Source water protection		No Preference	
Indigenous interests		No Preference	

Based on the outcome of the evaluation, Option B is the most preferred for the project.

PREFERRED CONFIGURATION



CONSTRUCTION ACTIVITIES

The construction phase for the project will involve the following activities:

- Site preparation such as vegetation removal, grading, temporary access and laydown area
- Construction of temporary 230 kV bypass line to ensure continued power
- Installation of station fences, entrances, concrete foundations and station drainage
- Installation of new transmission line structures and station electrical equipment
- Delivery and installation of new transformers
- Connection of transmission lines and station electrical equipment, testing and commissioning
- Site clean up and reclamation
- Hydro One will be installing additional distribution lines to carry power from the new stations to the customers in the vicinity. These distribution power lines are expected to be on the road allowance of South Middle Rd, County Rd 31, Lakeshore Rd 243, Lakeshore Rd 245, and Rochester Townline road. Hydro One will be contacting affected property owners and road authorities in advance of construction.

MINIMIZING CONSTRUCTION AND PROJECT EFFECTS

The following mitigation measures will be implemented to minimize potential construction and project effects:

- Dust, sediment and erosion controls, as required
- Hydro One will work in accordance with local bylaws with respect to noise and working hours, and if necessary obtain permit(s)
- Hydro One will minimize effects to existing agricultural resources to the extent feasible
- Landscaping and visual screening
- Hydro One does not anticipate power interruptions during construction of the switching and transformer stations.

TYPICAL CONSTRUCTION EQUIPMENT



Boom truck



Cable puller



TYPICAL HYDRO ONE SWITCHING STATION AND TRANSFORMER STATION



Transformer station



Switching station

NEXT STEPS

- Hydro One will complete environmental surveys within the study area to complete the identification of potential environmental effects.
- Hydro One will continue to consult Indigenous communities, government agencies, municipal staff, elected officials, interest groups and the public to obtain feedback and answer questions about the project.
- Hydro One will release a Draft Environmental Study Report (ESR) for a 30 day public review, anticipated for release later this fall.
- If no Part II Order Requests are submitted during the 30 day review period, Hydro One will file the final ESR with the Ministry of the Environment, Conservation and Parks, concluding the Class EA.

ANTICIPATED PROJECT SCHEDULE

ACTIVITY	TIMELINE
Notice of Commencement of the Class Environmental Assessment	Early June 2019
Community Information Centre #1 Introduction of proposed project and alternatives	June 26, 2019
Community Information Centre #2 Presentation of preferred alternative	October 1, 2019
Draft Environmental Study Report Review period (30 days)	November 2019
File final Environmental Study Report with Ministry of the Environment, Conservation and Parks (MECP)	January 2020
Detailed engineering and permitting	Early 2020
Anticipated start of construction	Mid 2020
Anticipated construction completion	Late 2023

THANK YOU FOR JOINING US TODAY

Your input is important to us.

Please share your feedback with our team and complete a comment form before you go.

To provide comments or to be added to the project contact list, please contact the Community Relations team at:

1.877.345.6799

Community.Relations@HydroOne.com

For additional project information please visit:

www.HydroOne.com/Lakeshore



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Appendix A4

Record of Consultation

Record of Consultation Interest Groups

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Essex County Federation of Agriculture	2019-06-10	Email	Outgoing	Bonnie Popov (Essex County Federation of Agriculture)	Paul Dalmazzi	Hydro One contacted Essex County Federation of Agriculture and shared information about the project, the NoC, and CIC.
Union Gas Ltd.	2019-06-10	Email	Outgoing	Sean Collier (Union Gas Ltd.)	Mehrgan Mazaheri Paul Dalmazzi	Hydro One emailed Union Gas and shared information regarding the project NoC and the CIC.
Brookfield Renewable Energy Group	2019-06-10	Email	Outgoing	David Hurd (Brookfield Renewable Energy Group)	Andrew Luis Mehrgan Mazaheri Paul Dalmazzi	Hydro One emailed Brookfield Renewable Energy Group and shared information regarding the CIC.
Essex County Federation of Agriculture	2019-07-10	Email	Outgoing	Bonnie Popov (Essex County Federation of Agriculture)	Paul Dalmazzi	Hydro one emailed Essex County Federation of Agriculture and shared project updates, events of the CIC held on June 26, 2019 and invited them to share any input regarding the location of the transmission stations by July 25, 2019.
Brookfield Renewable Energy Group	2019-07-10	Email	Outgoing	David Hurd (Brookfield Renewable Energy Group)	Andrew Luis Mehrgan Mazaheri Paul Dalmazzi	Hydro One emailed Chief Duckworth of Caldwell First Nations and shared project updates regarding the CIC held June 26, 2019, and that the project team is selecting preferred station locations. Hydro One invited them to send their feedback regarding the station locations by July 25, 2019.
Union Gas Ltd.	2019-07-10	Email	Outgoing	Sean Collier (Union Gas Ltd.)	Mehrgan Mazaheri Paul Dalmazzi	Hydro One emailed Union Gas and shared project updates regarding the CIC held June 26, 2019, the status of the project and noted that the project team is selecting preferred station locations. Hydro One invited Union Gas to send their feedback regarding the station locations by July 25, 2019.
Brookfield Renewable Energy Group	2019-07-10	Email	Incoming	David Hurd (Brookfield Renewable Energy Group) Kevin Healey (Brookfield Renewable Energy Group) Shuwen Sun (Brookfield Renewable Energy Group)	Andrew Luis Mehrgan Mazaheri Paul Dalmazzi	David Hurd of Brookfield Renewable Energy Group emailed Hydro One and requested that Kevin Healy and Shuwen Sun from Union Gas are copied to emails related to the project.
Union Gas Ltd.	2019-07-11	Email	Incoming	Brian Chauvin (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Sean Collier (Union Gas Ltd.)	Mehrgan Mazaheri Paul Dalmazzi	Union Gas replied to Hydro One and informed Hydro One of a change in roles and contacts.
Union Gas Ltd.	2019-07-11	Email	Outgoing	Brian Chauvin (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Sean Collier (Union Gas Ltd.)	Mehrgan Mazaheri Paul Dalmazzi	Hydro One emailed Union Gas and invited their feedback on the location of the transformers or discussion of the project.
Brookfield Renewable Energy Group	2019-07-11	Email	Outgoing	David Hurd (Brookfield Renewable Energy Group) Kevin Healey (Brookfield Renewable Energy Group) Shuwen Sun (Brookfield Renewable Energy Group)	Andrew Luis Mehrgan Mazaheri Paul Dalmazzi	Hydro One emailed Brookfield Renewable Energy Group and invited their feedback on the locations of the transformers.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Enbridge Gas Inc. Union Gas Ltd.	2019-07-16	Email	Incoming	Brian Chauvin (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Peter Fisher (Union Gas Ltd.)	Mehrgan Mazaheri Paul Dalmazzi	Union Gas representative Diane Pisani emailed Hydro One and provided feedback on high-pressure systems that are located in the study area.
Enbridge Gas Inc. Union Gas Ltd.	2019-07-19	Email	Outgoing	Brian Chauvin (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Peter Fisher (Union Gas Ltd.)	Mehrgan Mazaheri Paul Dalmazzi	Hydro One emailed Union Gas regarding 20" mains identified in the Hydro One east-west- corridor. Hydro One requested that Union Gas share a map detailing the location of the mains.
Enbridge Gas Inc. Union Gas Ltd.	2019-08-01	Email	Outgoing	Brian Chauvin (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Peter Fisher (Union Gas Ltd.)	Andrew Luis Mehrgan Mazaheri Paul Dalmazzi	Hydro One emailed Union Gas and requested maps that show the approximate location of identified mains in the study area.
Enbridge Gas Inc. Union Gas Ltd.	2019-08-01	Email	Incoming	Brian Chauvin (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Peter Fisher (Union Gas Ltd.)	Andrew Luis Mehrgan Mazaheri Paul Dalmazzi	Union Gas responded to Hydro One's request and obliged.
Enbridge Gas Inc. Union Gas Ltd.	2019-08-02	Email	Incoming	Brian Chauvin (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Peter Fisher (Union Gas Ltd.)	Andrew Luis Mehrgan Mazaheri Paul Dalmazzi	Union Gas replied to Hydro One's email and stated that they would confirm the details of Hydro One's survey.
Enbridge Gas Inc. Union Gas Ltd.	2019-08-02	Email	Incoming	Brian Chauvin (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Peter Fisher (Union Gas Ltd.)	Andrew Luis Mehrgan Mazaheri Paul Dalmazzi	Enbridge Gas emailed Hydro One and shared a drawing that illustrated their infrastructure in the project area.
Enbridge Gas Inc. Union Gas Ltd.	2019-08-02	Email	Outgoing	Brian Chauvin (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Peter Fisher (Union Gas Ltd.)	Andrew Luis Mehrgan Mazaheri Paul Dalmazzi	Hydro One emailed Union Gas to confirm the receipt of their email in which they shared sketches of Union Gas infrastructure in the study area.
Enbridge Gas Inc. Union Gas Ltd.	2019-08-07	Email	Incoming	Brian Chauvin (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Peter Fisher (Union Gas Ltd.)	Andrew Luis Mehrgan Mazaheri Paul Dalmazzi	Enbridge Gas emailed Hydro One and confirmed that the sketch sent by Hydro One accurately depicted their easements on the properties in question. Enbridge noted that a survey should be completed if Hydro One required a more detail assessment of the easement location.
Enbridge Gas Inc. Union Gas Ltd.	2019-08-07	Email	Outgoing	Brian Chauvin (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Peter Fisher (Union Gas Ltd.)	Andrew Luis Mehrgan Mazaheri Paul Dalmazzi	Hydro One responded to Enbridge Gas and stated that they would use the survey Enbridge provided as it accurately depicts their assets on the land.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Enbridge Gas Inc. Union Gas Ltd.	2019-08-26	Email	Incoming	Brian Chauvin (Union Gas Ltd.) Daniel Blata (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Greg Ward (Union Gas Ltd.) Jim Harradine (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Kyle Billion (Union Gas Ltd.) Peter Fisher (Union Gas Ltd.) Vaibhav Luthra (Enbridge Gas Inc.)	Mehrgan Mazaheri	Enbridge Gas emailed Hydro One regarding possible effects for some of the proposed TS locations in relation to existing pipelines. Enbridge noted that the need for another study is dependent on the location of the new transformer station
Enbridge Gas Inc. Union Gas Ltd.	2019-08-30	Email	Outgoing	Brian Chauvin (Union Gas Ltd.) Daniel Blata (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Greg Ward (Union Gas Ltd.) Jim Harradine (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Kyle Billion (Union Gas Ltd.) Peter Fisher (Union Gas Ltd.) Vaibhav Luthra (Enbridge Gas Inc.)	Mehrgan Mazaheri Paul Dalmazzi	Hydro One emailed Union Gas regarding the selection of alternatives, Hydro One requested that Union Gas provide clarification of their question.
Enbridge Gas Inc. Union Gas Ltd.	2019-09-04	Email	Incoming	Brian Chauvin (Union Gas Ltd.) Daniel Blata (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Greg Ward (Union Gas Ltd.) Jim Harradine (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Kyle Billion (Union Gas Ltd.) Peter Fisher (Union Gas Ltd.) Vaibhav Luthra (Enbridge Gas Inc.)	Mehrgan Mazaheri Paul Dalmazzi	Union Gas emailed Hydro One to clarify a previous error and stated that "Installing the TS at Location C will not likely have any significant change in influence on the EGS lines."
Enbridge Gas Inc. Union Gas Ltd.	2019-09-09	Email	Incoming	Brian Chauvin (Union Gas Ltd.) Daniel Blata (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Greg Ward (Union Gas Ltd.) Jim Harradine (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Kyle Billion (Union Gas Ltd.) Peter Fisher (Union Gas Ltd.) Vaibhav Luthra (Enbridge Gas Inc.)	Mehrgan Mazaheri Paul Dalmazzi	Union Gas emailed Hydro One and shared a document containing comments from their consultants Corrosion Services.
Essex County Federation of Agriculture	2019-09-11	Email	Outgoing	Bonnie Popov (Essex County Federation of Agriculture)	Paul Dalmazzi	Hydro One emailed the President of Essex County Federation of Agriculture to provide project updates and share an invitation to the projects second community information centre on October 1, 2019.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Enbridge Gas Inc. Union Gas Ltd.	2019-09-12	Email	Outgoing	Brian Chauvin (Union Gas Ltd.) Daniel Blata (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Greg Ward (Union Gas Ltd.) Hanna Ihab Jim Harradine (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Kieran Mackenzie Kyle Billion (Union Gas Ltd.) Okongwu Emeka Peter Fisher (Union Gas Ltd.) Vaibhav Luthra (Enbridge Gas Inc.)	Mehrgan Mazaheri Paul Dalmazzi	Hydro One emailed Union Gas and stated that they would like to have a conference call with Union Gas and Corrosion Services to better understand the AC Study.
Enbridge Gas Inc. Union Gas Ltd.	2019-09-16	Email	Incoming	Brian Chauvin (Union Gas Ltd.) Daniel Blata (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Greg Ward (Union Gas Ltd.) Hanna Ihab Jim Harradine (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Kieran Mackenzie Kyle Billion (Union Gas Ltd.) Okongwu Emeka Peter Fisher (Union Gas Ltd.) Vaibhav Luthra (Enbridge Gas Inc.)	Mehrgan Mazaheri Paul Dalmazzi	Union Gas staff proposed a time for a conf. call.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Enbridge Gas Inc. Union Gas Ltd.	2019-09-17	Phone	Outgoing	Brian Chauvin (Union Gas Ltd.) Daniel Blata Diane Pisani (Union Gas Ltd.) Greg Ward Jim Harradine Peter Fisher Vaibhav Luthra (Enbridge Gas Inc.)	Mehrgan Mazaheri Paul Dalmazzi	<p>Hydro One and Union Gas staff had a phone call to discuss Union Gas' comments on the alternative sites/preferred site with regard to the need for a potential AC Corrosion/mitigation study.</p> <p>Hydro One reiterated that Site B was the preferred alternative. Union Gas confirmed that site B is far enough from the pipelines that it would likely not require assessment or mitigation with regards to the Union Gas pipelines. Corrosion services confirmed that Alternative B was their preferred alternative site for the TS.</p> <p>UG staff indicated that if fault currents on the existing south bound transmission lines is to change, an AC study may be needed. Previous study for these lines has recommended mitigation; Union Gas stated that these lines may need to be reassessed due to change in loading on these lines (regardless of the preferred TS site).</p> <p>Mehrgan stated that the loading of these (north-south) lines is not expected to change. There may be increases in loading on the east-west 230 kV transmission lines, which could require additional assessment. The UG "panhandle" pipeline parallels the 230 kV corridor east-west for a significant distance (many km). Existing mitigation on this pipeline may need to be reinforced. Hydro One will work with Union Gas and Corrosion services going forward to conduct this study.</p>
Enbridge Gas Inc. Union Gas Ltd.	2019-09-17	Email	Outgoing	A - Brian Chauvin (Union Gas Ltd.) Daniel Blata (Union Gas Ltd.) Faisal Adnan Greg Ward (Union Gas Ltd.) Hanna Ihab Jim Harradine (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Kieran Mackenzie Kyle Billion (Union Gas Ltd.) Nan Du Okongwu Emeka Peter Fisher (Union Gas Ltd.) Scott Mclean Vaibhav Luthra (Enbridge Gas Inc.)	Mehrgan Mazaheri Paul Dalmazzi	<p>Hydro One sent Union Gas Ltd. an email to follow up on a conversation about Union Gas's comments on alternative sites. Hydro One reiterated that Alternative B was their preferred site. Hydro One noted that Union Gas will send Hydro One a list of required line info, so the AC Mitigation study can be started.</p>

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Essex County Federation of Agriculture	2019-10-30	Email	Outgoing	Bonnie Popov (Essex County Federation of Agriculture)	Paul Dalmazzi	Hydro One emailed the Essex Country Federation of Agriculture to provide project updates and share copies of the draft Notice of Completion, a figure illustrating the preferred alternative, and a newspaper ad with details of the 30-day review period for the draft Notice of Completion.
Brookfield Renewable Energy Group	2019-10-30	Email	Outgoing	David Hurd (Brookfield Renewable Energy Group) Kevin Healey (Brookfield Renewable Energy Group) Shuwen Sun (Brookfield Renewable Energy Group)	Mehrgan Mazaheri Paul Dalmazzi	Hydro One emailed Brookfield Renewable Energy to share project progress, a figure of the preferred alternative, the draft Notice of Completion and a newspaper ad describing the draft Notice of Completion and the draft ESR's 30-day review period.
Enbridge Gas Inc. Union Gas Ltd.	2019-10-30	Email	Outgoing	Brian Chauvin (Union Gas Ltd.) Diane Pisani (Union Gas Ltd.) Justin Cook (Enbridge Gas Inc.) Peter Fisher (Union Gas Ltd.)	Mehrgan Mazaheri Paul Dalmazzi	Hydro One emailed Union Gas to share details of the project's progress and a copy of the draft Notice of Completion, a figure of the preferred alternative, and the newspaper ad describing the draft Notice of Completion and the draft ESR's 30-day review period.
Union Gas Ltd.	2019-10-31	Email	Incoming	Brian Chauvin (Union Gas Ltd.)	Paul Dalmazzi	Union Gas acknowledged the receipt of Hydro One's email which shared information about the future review period of the draft ESR.
Essex County Federation of Agriculture	2019-11-13	Email	Outgoing	Bonnie Popov (Essex County Federation of Agriculture)	Paul Dalmazzi	Hydro One emailed Essex County to provide a reminder that the draft ESR was available for review until December 13, 2019.

Record of Consultation with Municipal Governmental Representatives and Agencies

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
County of Essex Town of Lakeshore	2019-05-21	Meeting	Outgoing	Nelson Cavacas (Town of Lakeshore) Tom Bain (County of Essex, Town of Lakeshore) Truper McBride (Town of Lakeshore)	Ani Bekmezian	<p>Representatives from Hydro One's Community Relations, External Relations and Environmental Services departments met with Mayor Tom Bain, incoming CAO Truper McBride, and Director of Engineering & Infrastructure Services Nelson Cavacas on May 21 to brief the Lakeshore Mayor and staff on the upcoming Lakeshore TS project.</p> <p>Hydro One staff presented the need for the project, and described the scope of the project and the study area for the upcoming Class EA. Hydro One staff also presented an approximate schedule for the Class EA, including tentative details for upcoming Public Notifications and Community Information Centres. Hydro One staff asked about any local interest groups/federations/associations that may want to be notified of the project (in addition to the typical agency and public notifications that Hydro One would be undertaking). Town staff suggested that agricultural interest groups may be interested, Hydro One staff confirmed that the Ontario Federation of Agriculture (OFA) would be notified of the project.</p> <p>The Lakeshore Mayor and Staff understood and were generally supportive of the need for the project, and provided some feedback regarding potential locations for Community information Centres close to the study area, and some other feedback on communication methods (local newspapers, potential to post/link to project materials from the Town's website, etc).</p> <p>Mayor Bain also confirmed that he was a Council Member for the County of Essex.</p> <p>Town staff raised some general questions, including:</p> <ul style="list-style-type: none"> - Whether Hydro One would need to acquire property to construct the station - Whether the station would improve electricity supply to the Patillo Business/Industrial Park - Whether there would be opportunities to landscape the station, or otherwise include tree plantings on the station property to contribute to overall canopy cover in the town. <p>Hydro One responded as follows:</p> <ul style="list-style-type: none"> - Property would need to be acquired to construct the station. - The new Lakeshore TS would be a regional piece of infrastructure, and would ultimately service the entire Essex County area. However Hydro One staff would take the question re: Patillo Business Park back to see if they could provide more detail.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
						<p>- Hydro One staff stated that in addition to the station footprint itself, there would be additional line tap work within the Study Area which would be required to connect the Lakeshore TS to the existing 230 kV transmission lines. Trees are not compatible with overhead transmission lines or in close proximity to stations. However Hydro One staff did state that there would likely be opportunities to conduct landscaping around the station perimeter, further from the electrical equipment, and that this could potentially include tree plantings in appropriate locations. Hydro One staff also mentioned that they would consider compatible native plantings/seedings (e.g., shrub species or pollinator meadow seed) in areas beneath transmission lines.</p>
County of Essex Town of Lakeshore	2019-05-21	Meeting	Outgoing	Nelson Cavacas (Town of Lakeshore) Tom Bain (County of Essex, Town of Lakeshore) Truper McBride (Town of Lakeshore)	Paul Dalmazzi	<p>Representatives from Hydro One's Community Relations, External Relations and Environmental Services departments met with Mayor Tom Bain, incoming CAO Truper McBride, and Director of Engineering & infrastructure Services Nelson Cavacas on May 21 to brief the Lakeshore Mayor and staff on the upcoming Lakeshore TS project.</p> <p>Hydro One staff presented the need for the project, and described the scope of the project and the study area for the upcoming Class EA. Hydro One staff also presented an approximate schedule for the Class EA, including tentative details for upcoming Public Notifications and Community Information Centres. Hydro One staff asked about any local interest groups/federations/associations that may want to be notified of the project (in addition to the typical agency and public notifications that Hydro One would be undertaking). Town staff suggested that agricultural interest groups may be interested, Hydro One staff confirmed that the Ontario Federation of Agriculture (OFA) would be notified of the project.</p> <p>The Lakeshore Mayor and Staff understood and were generally supportive of the need for the project, and provided some feedback regarding potential locations for Community information Centres close to the study area, and some other feedback on communication methods (local newspapers, potential to post/link to project materials from the Town's website, etc).</p> <p>Mayor Bain also confirmed that he was a Council Member for the County of Essex.</p> <p>Town staff raised some general questions, including:</p> <ul style="list-style-type: none"> - Whether Hydro One would need to acquire property to construct the station - Whether the station would improve electricity supply to the Patillo Business/Industrial Park

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
						<p>- Whether there would be opportunities to landscape the station, or otherwise include tree plantings on the station property to contribute to overall canopy cover in the town.</p> <p>Hydro One responded as follows:</p> <ul style="list-style-type: none"> - Property would need to be acquired to construct the station. - The new Lakeshore TS would be a regional piece of infrastructure, and would ultimately service the entire Essex County area. However Hydro One staff would take the question re: Patillo Business Park back to see if they could provide more detail. - Hydro One staff stated that in addition to the station footprint itself, there would be additional line tap work within the Study Area which would be required to connect the Lakeshore TS to the existing 230 kV transmission lines. Trees are not compatible with overhead transmission lines or in close proximity to stations. However Hydro One staff did state that there would likely be opportunities to conduct landscaping around the station perimeter, further from the electrical equipment, and that this could potentially include tree plantings in appropriate locations. Hydro One staff also mentioned that they would consider compatible native plantings/seedings (e.g., shrub species or pollinator meadow seed) in areas beneath transmission lines.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
County of Essex Town of Lakeshore	2019-05-21	Meeting	Outgoing	Nelson Cavacas (Town of Lakeshore) Tom Bain (County of Essex, Town of Lakeshore) Truper McBride (Town of Lakeshore)	Olivier Vander Zaag	<p>Representatives from Hydro One's Community Relations, External Relations and Environmental Services departments met with Mayor Tom Bain, incoming CAO Truper McBride, and Director of Engineering & Infrastructure Services Nelson Cavacas on May 21 to brief the Lakeshore Mayor and staff on the upcoming Lakeshore TS project.</p> <p>Hydro One staff presented the need for the project, and described the scope of the project and the study area for the upcoming Class EA. Hydro One staff also presented an approximate schedule for the Class EA, including tentative details for upcoming Public Notifications and Community Information Centres. Hydro One staff asked about any local interest groups/federations/associations that may want to be notified of the project (in addition to the typical agency and public notifications that Hydro One would be undertaking). Town staff suggested that agricultural interest groups may be interested, Hydro One staff confirmed that the Ontario Federation of Agriculture (OFA) would be notified of the project.</p> <p>The Lakeshore Mayor and Staff understood and were generally supportive of the need for the project, and provided some feedback regarding potential locations for Community information Centres close to the study area, and some other feedback on communication methods (local newspapers, potential to post/link to project materials from the Town's website, etc).</p> <p>Mayor Bain also confirmed that he was a Council Member for the County of Essex.</p> <p>Town staff raised some general questions, including:</p> <ul style="list-style-type: none"> - Whether Hydro One would need to acquire property to construct the station - Whether the station would improve electricity supply to the Patillo Business/Industrial Park - Whether there would be opportunities to landscape the station, or otherwise include tree plantings on the station property to contribute to overall canopy cover in the town. <p>Hydro One responded as follows:</p> <ul style="list-style-type: none"> - Property would need to be acquired to construct the station. - The new Lakeshore TS would be a regional piece of infrastructure, and would ultimately service the entire Essex County area. However Hydro One staff would take the question re: Patillo Business Park back to see if they could provide more detail. - Hydro One staff stated that in addition to the station footprint itself, there would be additional line tap work within the Study Area

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
						which would be required to connect the Lakeshore TS to the existing 230 kV transmission lines. Trees are not compatible with overhead transmission lines or in close proximity to stations. However Hydro One staff did state that there would likely be opportunities to conduct landscaping around the station perimeter, further from the electrical equipment, and that this could potentially include tree plantings in appropriate locations. Hydro One staff also mentioned that they would consider compatible native plantings/seedings (e.g., shrub species or pollinator meadow seed) in areas beneath transmission lines.
Town of Lakeshore	2019-06-10	Email	Outgoing	Nelson Cavacas (Town of Lakeshore) Truper McBride (Town of Lakeshore)	Paul Dalmazzi	Hydro One emailed Town of Lakeshore and shared information regarding the project and the CIC.
Town of Lakeshore	2019-06-10	Email	Outgoing	Nelson Cavacas (Town of Lakeshore) Truper McBride (Town of Lakeshore)	Ani Bekmezian	Hydro One emailed Town of Lakeshore and shared information regarding the project and the CIC.
Essex-Windsor Emergency Medical Services (EWEMS)	2019-06-10	Email	Outgoing	Debbie Strajnic (Essex-Windsor Emergency Medical Services (EWEMS))	Paul Dalmazzi	Hydro One emailed Essex Emergency Medical Services and shared information about the project, the NoC, and CIC.
Town of Lakeshore	2019-06-10	Email	Incoming	Nelson Cavacas (Town of Lakeshore)	Paul Dalmazzi	Town of Lakeshore (Nelson Cavacas) thanked Hydro One in confirmation of receipt of Hydro One's June 10, 2019 email.
Town of Lakeshore	2019-06-11	Email	Outgoing	Darlene Mooney (Town of Lakeshore) Tom Bain (Town of Lakeshore) Truper McBride (Town of Lakeshore)	Ani Bekmezian	Hydro One emailed Mayor Bain of the Town of Lakeshore and shared information regarding the project and the Notice of Commencement.
County of Essex Town of Lakeshore	2019-06-11	Email	Outgoing	Gary McNamara (County of Essex) Mary Birch Robert Maisonville (County of Essex) Tom Bain (Town of Lakeshore)	Ani Bekmezian	Hydro One emailed Essex County Warden, Gary McNamara and shared information about the project and an invitation to the CIC scheduled June 26, 2019.
Essex-Windsor Emergency Medical Services (EWEMS)	2019-07-10	Email	Outgoing	Debbie Strajnic (Essex-Windsor Emergency Medical Services (EWEMS))	Paul Dalmazzi	Hydro One emailed the County of Essex to provide a project update and informed them that the Hydro One will be evaluating alternative locations for the transformer station. Hydro One asked that they provide feedback by July 25.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Town of Lakeshore	2019-07-16	Email	Outgoing	Kevin Girard (Town of Lakeshore)	Ani Bekmezian	Hydro One emailed Kevin Girard with the Town of Lakeshore and provided a follow up to the June 26, 2019, CIC. Hydro One informed Kevin that the project team is in the process of assessing feasible alternatives against the evaluation criteria to select a preferred alternative. Hydro One requested that he provide feedback regarding the site locations by July 25, 2019.
Town of Lakeshore	2019-08-13	Phone	Incoming	Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	Hydro One received a phone call from Jill Fiorito (Drainage Superintendent for the Town of Lakeshore), following up on an email sent earlier in the day regarding the Municipal Drain design reports. Jill confirmed that one of her technologists would send the requested drain design reports within the coming days.
Town of Lakeshore	2019-08-13	Email	Outgoing	Kevin Girard (Town of Lakeshore) Nelson Cavacas (Town of Lakeshore)	Paul Dalmazzi	Hydro One emailed the Town of Lakeshore requesting information about the Knister, Alexander, and East Malden Drain.
Town of Lakeshore	2019-08-13	Email	Outgoing	Kevin Girard (Town of Lakeshore) Nelson Cavacas (Town of Lakeshore)	Mehrgan Mazaheri	Hydro One emailed the Town of Lakeshore requesting information about the Knister, Alexander, and East Malden Drain.
Town of Lakeshore	2019-08-13	Email	Outgoing	Kevin Girard (Town of Lakeshore) Nelson Cavacas (Town of Lakeshore)	Ani Bekmezian	Hydro One emailed the Town of Lakeshore requesting information about the Knister, Alexander, and East Malden Drain.
Town of Lakeshore	2019-08-13	Email	Incoming	Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore) Kevin Girard (Town of Lakeshore) Nelson Cavacas (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Mehrgan Mazaheri	The Town of Lakeshore replied to Hydro One's email and referred them to contacts that would assist in gaining more information about the drain designs.
Town of Lakeshore	2019-08-13	Email	Incoming	Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore) Kevin Girard (Town of Lakeshore) Nelson Cavacas (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Ani Bekmezian	The Town of Lakeshore replied to Hydro One's email and referred them to contacts that would assist in gaining more information about the drain designs.
Town of Lakeshore	2019-08-13	Email	Incoming	Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore) Kevin Girard (Town of Lakeshore) Nelson Cavacas (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Paul Dalmazzi	The Town of Lakeshore replied to Hydro One's email and referred them to contacts that would assist in gaining more information about the drain designs.
Town of Lakeshore	2019-08-13	Email	Outgoing	Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore) Kevin Girard (Town of Lakeshore) Nelson Cavacas (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Ani Bekmezian	Hydro One emailed the Town of Lakeshore and requested reports for the Knister, Alexander and East Malden drain. Hydro One also shared information about the plans for drainage at the site and requested that the Town make them aware of any applicable restrictions.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Town of Lakeshore	2019-08-13	Email	Outgoing	Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore) Kevin Girard (Town of Lakeshore) Nelson Cavacas (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Paul Dalmazzi	Hydro One emailed the Town of Lakeshore and requested reports for the Knister, Alexander and East Malden drain. Hydro One also shared information about the plans for drainage at the site and requested that the Town make them aware of any applicable restrictions.
Town of Lakeshore	2019-08-13	Email	Outgoing	Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore) Kevin Girard (Town of Lakeshore) Nelson Cavacas (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Mehrgan Mazaheri	Hydro One emailed the Town of Lakeshore and requested reports for the Knister, Alexander and East Malden drain. Hydro One also shared information about the plans for drainage at the site and requested that the Town make them aware of any applicable restrictions.
Town of Lakeshore	2019-08-13	Email	Incoming	Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore) Kevin Girard (Town of Lakeshore) Nelson Cavacas (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Ani Bekmezian	The Town of Lakeshore replied to Hydro One stating that they would supply the reports Hydro One asked for and requested that Hydro One call the Town.
Town of Lakeshore	2019-08-13	Email	Incoming	Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore) Kevin Girard (Town of Lakeshore) Nelson Cavacas (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Paul Dalmazzi	The Town of Lakeshore replied to Hydro One stating that they would supply the reports Hydro One asked for and requested that Hydro One call the Town.
Town of Lakeshore	2019-08-13	Email	Incoming	Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore) Kevin Girard (Town of Lakeshore) Nelson Cavacas (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Mehrgan Mazaheri	The Town of Lakeshore replied to Hydro One stating that they would supply the reports Hydro One asked for and requested that Hydro One call the Town.
Town of Lakeshore	2019-08-14	Email	Outgoing	Andrew Neely (Town of Lakeshore) Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	The Town of Lakeshore replied to Hydro One's request and shared copies of the drainage reports.
Town of Lakeshore	2019-08-14	Email	Outgoing	Andrew Neely (Town of Lakeshore) Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	Hydro One replied to the Town of Lakeshore to acknowledge receiving the drainage reports.
Town of Lakeshore	2019-08-19	Email	Outgoing	Andrew Neely (Town of Lakeshore) Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	Hydro One emailed the Town of Lakeshore to request access to surveys of the tile drainage installations on private properties, that discharge into the municipal drains.
Town of Lakeshore	2019-08-20	Email	Incoming	Andrew Neely (Town of Lakeshore) Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	The Town of Lakeshore responded to Hydro One's request for tile drainage reports.
Town of Lakeshore	2019-08-20	Email	Outgoing	Andrew Neely (Town of Lakeshore) Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	Hydro One corresponded with the Town of Lakeshore regarding a request from Hydro One for drainage reports.
Town of Lakeshore	2019-08-26	Email	Outgoing	Andrew Neely (Town of Lakeshore) Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	Hydro One emailed the Town of Lakeshore and requested information about the Alexander Drain and Silver Creek drain in the vicinity of our study area. Hydro One also requested a combined map showing the catchment area boundaries of the various drains within the study area's vicinity.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Town of Lakeshore	2019-08-26	Email	Incoming	Andrew Neely (Town of Lakeshore) Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	The Town of Lakeshore emailed Hydro One and shared copies of the 1967 Armstrong report on Alexander drain & the 1969 Setterington report on Silver Creek. The Town noted that further information can be found online.
Town of Lakeshore	2019-08-26	Email	Outgoing	Andrew Neely (Town of Lakeshore) Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	Hydro One responded to the Town of Lakeshores email stating that the two should set up a meeting or call with the town to discuss plans for the Station drainage and the property as a whole, and provide the Town of Lakeshore with a chance to comment and give feedback, before Hydro One finalizes their plans and applies for an ECA.
Town of Lakeshore	2019-08-26	Email	Incoming	Andrew Neely (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Paul Dalmazzi	Jill from the Town of Lakeshore emailed Hydro One regarding setting up a meeting she asked that Hydro One invite Tony DiCiocco and Brian Laramie.
Town of Lakeshore	2019-08-26	Email	Outgoing	Andrew Neely (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Paul Dalmazzi	Hydro One replied to Jill from the Town of Lakeshore and suggested to plan a phone call or meeting to discuss the drainage plans for the site.
Essex-Windsor Emergency Medical Services (EWEMS)	2019-09-11	Email	Outgoing	Debbie Strajnic (Essex-Windsor Emergency Medical Services (EWEMS))	Paul Dalmazzi	Hydro One emailed Essex-Windsor Emergency Medical Services to provide project updates and share an invitation to the second community information centre on October 1, 2019.
Town of Lakeshore	2019-09-12	Email	Outgoing	Kevin Girard (Town of Lakeshore) Nelson Cavacas (Town of Lakeshore) Truper McBride (Town of Lakeshore)	Ani Bekmezian	Hydro One emailed Town of Lakeshores Environmental Service Manager, Director of Engineering and Infrastructure, and Chief Administrative officer to share project updates and an invitation to the projects second community information centre.
Town of Lakeshore	2019-09-12	Email	Outgoing	Kevin Girard (Town of Lakeshore) Nelson Cavacas (Town of Lakeshore) Truper McBride (Town of Lakeshore)	Paul Dalmazzi	Hydro One emailed Town of Lakeshores Environmental Service Manager, Director of Engineering and Infrastructure, and Chief Administrative officer to share project updates and an invitation to the projects second community information centre.
Town of Lakeshore	2019-09-12	Email	Outgoing	Andrew Neely (Town of Lakeshore) Jill Fiorito (Town of Lakeshore) Kevin Girard (Town of Lakeshore) Nelson Cavacas (Town of Lakeshore)	Paul Dalmazzi	Hydro One emailed the Town of Lakeshore to share project updates and an invitation to the projects second community information centre on October 1, 2019. Hydro One noted that they would be interested in discussing their questions regarding their plans for drainage systems.
Town of Lakeshore	2019-09-12	Email	Outgoing	Andrew Neely (Town of Lakeshore) Jill Fiorito (Town of Lakeshore) Kevin Girard (Town of Lakeshore) Nelson Cavacas (Town of Lakeshore)	Mehrgan Mazaheri	Hydro One emailed the Town of Lakeshore to share project updates and an invitation to the projects second community information centre on October 1, 2019. Hydro One noted that they would be interested in discussing their questions regarding their plans for drainage systems.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Town of Lakeshore	2019-09-12	Email	Outgoing	Andrew Neely (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	Hydro One forwarded an email chain to Brian Laramie at the Town of Lakeshore regarding project updates and the invitation to the second community information centre scheduled for October 1, 2019.
Town of Lakeshore	2019-09-12	Email	Incoming	Albert Dionne (Town of Lakeshore) Andrew Neely (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	Andrew Neely, Town of Lakeshore, emailed Hydro One and stated if Hydro One intends to use the existing access bridges for the residential/agricultural property and does not intend on adding or changing the culverts there would no need for engineers reports for new bridges.
Town of Lakeshore	2019-09-12	Email	Outgoing	Darlene Mooney (Town of Lakeshore) Tom Bain (Town of Lakeshore) Truper McBride (Town of Lakeshore)	Ani Bekmezian	Hydro One emailed Mayor Bain, Town of Lakeshore, to share project updates and an invitation to the projects second community information centre.
County of Essex Town of Lakeshore	2019-09-12	Email	Outgoing	Gary McNamara (County of Essex) Mary Birch (County of Essex) Robert Maisonville (County of Essex) Tom Bain (Town of Lakeshore)	Ani Bekmezian	Hydro One emailed Mr. McNamara, County Warden of Essex and shared project updates and invited them to the projects second community information centre October 1, 2019.
Town of Lakeshore	2019-09-13	Email	Outgoing	Albert Dionne (Town of Lakeshore) Andrew Neely (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	Hydro One emailed the Town of Lakeshore and requested information regarding the need for a Section 78 Engineering report. Hydro One explained their preference to use existing access points to avoid the need for Section 78 review. Hydro One noted that their engineers would be interested in having further conversation with the Town staff to ensure that they are in agreement before applying for the ECA.
Town of Lakeshore	2019-09-13	Email	Outgoing	Albert Dionne (Town of Lakeshore) Andrew Neely (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore)	Mehrgan Mazaheri	Hydro One emailed the Town of Lakeshore and requested information regarding the need for a Section 78 Engineering report. Hydro One explained their preference to use existing access points to avoid the need for Section 78 review. Hydro One noted that their engineers would be interested in having further conversation with the Town staff to ensure that they are in agreement before applying for the ECA.
Town of Lakeshore	2019-09-13	Email	Incoming	Albert Dionne (Town of Lakeshore) Andrew Neely (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	The Town of Lakeshore emailed Hydro One and stated that they will put Hydro One in contact with Brian who would be able to provide insight on Hydro One's drainage query.
Town of Lakeshore	2019-09-13	Email	Incoming	Albert Dionne (Town of Lakeshore) Andrew Neely (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore)	Mehrgan Mazaheri	The Town of Lakeshore emailed Hydro One and stated that they will put Hydro One in contact with Brian who would be able to provide insight on Hydro One's drainage query.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Town of Lakeshore	2019-09-16	Email	Incoming	Albert Dionne (Town of Lakeshore) Andrew Neely (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	The Town of Lakeshore emailed Hydro One and stated that as long as Hydro One plans to use the existing bridges that drainage there wouldn't be a need for engineer reports for new bridges.
Essex Region Conservation Authority (ERCA) Town of Lakeshore	2019-10-10	Email	Incoming	Andrew Neely (Town of Lakeshore) Cynthia Casagrande (Essex Region Conservation Authority (ERCA)) Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	The ERCA emailed Hydro One and acknowledged the receipt of the notices shared with them. ERCA noted in their email that the Knister Drain falls under the ERCA's jurisdiction and permits would be required prior to undertaking works.
Town of Lakeshore	2019-10-11	Phone	Incoming	Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	Jill Fiorito (Drainage Superintendent - Town of Lakeshore) called Hydro One and left a voicemail, seeking clarity on Hydro One's access plans for the Lakeshore TS after seeing the email reply from Cynthia Casagrande (ERCA)
Town of Lakeshore	2019-10-11	Phone	Outgoing	Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	Hydro One phoned Jill Fiorito (Drainage Superintendent - Town of Lakeshore) in response to the voicemail that Jill had left. Hydro One clarified that the Hydro One project team did not currently anticipate the need for any new crossings and that if it became apparent that this entrance could not be used, that Hydro One would seek a new entrance from Rochester Townline Rd. to the east avoiding the drain. Hydro One also stated that the entrance to the Transformer station would come from South Middle Rd, and would also cross a roadside ditch but not a Municipal drain. Hydro One stated also that they would reply to Cynthia Casagrande's (ERCA) email and would clarify this with her as well, and would CC the Town on the reply.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Essex Region Conservation Authority (ERCA) Town of Lakeshore	2019-10-11	Email	Outgoing	Andrew Neely (Town of Lakeshore) Cynthia Casagrande (Essex Region Conservation Authority (ERCA)) Jill Fiorito (Town of Lakeshore) Michael Nelson (Essex Region Conservation Authority (ERCA), Essex Region Conservation Authority (ERCA))	Paul Dalmazzi	<p>Hydro One replied to the ERCA thanked them for their email and noted that the Project would not likely involve new crossings or alterations to the municipal drains. Hydro One also shared information regarding the draft EA review period.</p> <p>Hydro One also stated their position that due to the rights and powers granted to Hydro One under the Electricity Act, as well as a reference to those rights and powers in the Conservation Authorities Act, Hydro One continues to be exempt from Section 28 permits under the Conservation Authorities Act. Hydro One also stated that they value the input and advice that they receive from Conservation Authorities such as ERCA and will be happy to share and discuss our detailed work plans, including site-specific environmental mitigation measures, for review and comment once that information is available.</p>
Essex Region Conservation Authority (ERCA) Town of Lakeshore	2019-10-11	Email	Outgoing	Andrew Neely (Town of Lakeshore) Cynthia Casagrande (Essex Region Conservation Authority (ERCA)) Jill Fiorito (Town of Lakeshore) Michael Nelson (Essex Region Conservation Authority (ERCA), Essex Region Conservation Authority (ERCA))	Mehrgan Mazaheri	<p>Hydro One replied to the ERCA thanked them for their email and noted that the Project would not likely involve new crossings or alterations to the municipal drains. Hydro One also shared information regarding the draft EA review period.</p> <p>Hydro One also stated their position that due to the rights and powers granted to Hydro One under the Electricity Act, as well as a reference to those rights and powers in the Conservation Authorities Act, Hydro One continues to be exempt from Section 28 permits under the Conservation Authorities Act. Hydro One also stated that they value the input and advice that they receive from Conservation Authorities such as ERCA and will be happy to share and discuss our detailed work plans, including site-specific environmental mitigation measures, for review and comment once that information is available.</p>
Town of Lakeshore	2019-10-16	Email	Outgoing	Albert Dionne (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Mingchun Wang	Hydro One emailed the Town of Lakeshore and requested further information or requirements that the Town may have for new permanent driveway entrances (including culverts across roadside ditches) that may be needed for the Project.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Town of Lakeshore	2019-10-16	Email	Outgoing	Albert Dionne (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Paul Dalmazzi	Hydro One emailed the Town of Lakeshore and requested further information or requirements that the Town may have for new permanent driveway entrances (including culverts across roadside ditches) that may be needed for the Project.
Town of Lakeshore	2019-10-16	Email	Outgoing	Albert Dionne (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Mehrgan Mazaheri	Hydro One emailed the Town of Lakeshore and requested further information or requirements that the Town may have for new permanent driveway entrances (including culverts across roadside ditches) that may be needed for the Project.
Town of Lakeshore	2019-10-17	Email	Incoming	Albert Dionne (Town of Lakeshore) Bonnie Clark (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Mingchun Wang Tony DiCiocco (Town of Lakeshore)	Mehrgan Mazaheri	The Town of Lakeshore responded to Hydro One's questions regarding culvert crossings and municipal water mains and shared a detailed explanation of what will be required to attain any necessary permits.
Town of Lakeshore	2019-10-17	Email	Incoming	Albert Dionne (Town of Lakeshore) Bonnie Clark (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Mingchun Wang Tony DiCiocco (Town of Lakeshore)	Paul Dalmazzi	The Town of Lakeshore responded to Hydro One's questions regarding culvert crossings and municipal water mains and shared a detailed explanation of what will be required to attain any necessary permits.
Town of Lakeshore	2019-10-17	Email	Incoming	Albert Dionne (Town of Lakeshore) Bonnie Clark (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Mingchun Wang Tony DiCiocco (Town of Lakeshore)	Paul Dalmazzi	The Town of Lakeshore shared water-main record drawings.
Town of Lakeshore	2019-10-17	Email	Incoming	Albert Dionne (Town of Lakeshore) Bonnie Clark (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Mingchun Wang Tony DiCiocco (Town of Lakeshore)	Mehrgan Mazaheri	The Town of Lakeshore shared water-main record drawings.
Town of Lakeshore	2019-10-17	Email	Outgoing	Albert Dionne (Town of Lakeshore) Bonnie Clark (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Mingchun Wang	Hydro One replied to the Town of Lakeshore and thanked them for their insight with regards to their questions and the shared water main sketches.
Town of Lakeshore	2019-10-17	Email	Outgoing	Albert Dionne (Town of Lakeshore) Bonnie Clark (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Paul Dalmazzi	Hydro One replied to the Town of Lakeshore and thanked them for their insight with regards to their questions and the shared water main sketches.
Town of Lakeshore	2019-10-17	Email	Outgoing	Albert Dionne (Town of Lakeshore) Bonnie Clark (Town of Lakeshore) Brian Laramie (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore)	Mehrgan Mazaheri	Hydro One replied to the Town of Lakeshore and thanked them for their insight with regards to their questions and the shared water main sketches.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Town of Lakeshore	2019-10-30	Email	Outgoing	Nelson Cavacas (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore) Truper McBride (Town of Lakeshore)	Ani Bekmezian	Hydro One emailed the Town of Lakeshore staff to provide project updates and share copies of the draft Notice of Completion, a figure illustrating the preferred alternative, and a newspaper ad with details of the 30-day review period for the draft Notice of Completion.
Town of Lakeshore	2019-10-30	Email	Outgoing	Nelson Cavacas (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore) Truper McBride (Town of Lakeshore)	Paul Dalmazzi	Hydro One emailed the Town of Lakeshore staff to provide project updates and share copies of the draft Notice of Completion, a figure illustrating the preferred alternative, and a newspaper ad with details of the 30-day review period for the draft Notice of Completion.
Town of Lakeshore	2019-10-30	Email	Outgoing	Darlene Mooney (Town of Lakeshore) Tom Bain (Town of Lakeshore) Truper McBride (Town of Lakeshore)	Ani Bekmezian	Hydro One emailed the Mayor of the Town of Lakeshore, Tom Bain, to share a letter containing information about the project's progress, the draft Notice of Completion, and the newspaper ad describing the draft ESR's 30-day review period.
County of Essex Town of Lakeshore Town of Tecumseh	2019-10-30	Email	Outgoing	Gary McNamara (Town of Tecumseh) Mary Birch (County of Essex) Robert Maisonville (County of Essex) Tom Bain (Town of Lakeshore)	Ani Bekmezian	Hydro One emailed the Warden of the County of Essex, to share a letter containing details of the project's progress a copy of the draft Notice of Completion, and the draft Notice's newspaper ad.
Town of Lakeshore	2019-10-30	Email	Incoming	Nelson Cavacas (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore) Truper McBride (Town of Lakeshore)	Ani Bekmezian	The Town of Lakeshore emailed Hydro One and stated that they would review the information shared with them to determine if there are any concerns to the Township.
Town of Lakeshore	2019-10-30	Email	Incoming	Nelson Cavacas (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore) Truper McBride (Town of Lakeshore)	Paul Dalmazzi	The Town of Lakeshore emailed Hydro One and stated that they would review the information shared with them to determine if there are any concerns to the Township.
Town of Lakeshore	2019-11-13	Email	Outgoing	Nelson Cavacas (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore) Truper McBride (Town of Lakeshore)	Paul Dalmazzi	Hydro One emailed the Town of Lakeshore to provide a reminder that the draft ESR was available for review until December 13, 2019.
Town of Lakeshore	2019-11-13	Email	Outgoing	Nelson Cavacas (Town of Lakeshore) Tony DiCiocco (Town of Lakeshore) Truper McBride (Town of Lakeshore)	Ani Bekmezian	Hydro One emailed the Town of Lakeshore to provide a reminder that the draft ESR was available for review until December 13, 2019.
Essex-Windsor Emergency Medical Services (EWEMS)	2019-11-13	Email	Outgoing	Debbie Strajnic (Essex-Windsor Emergency Medical Services (EWEMS))	Paul Dalmazzi	Hydro One emailed the Town of Lakeshore and provided a reminder that the draft ESR was available for review until December 13, 2019.
Essex-Windsor Emergency Medical Services (EWEMS)	2019-11-13	Email	Incoming	Debbie Strajnic (Essex-Windsor Emergency Medical Services (EWEMS))	Paul Dalmazzi	The County of Essex emailed Hydro One and informed that the draft ESR was received and forwarded to the Deputy Chief of Planning & Physical Resources for review.

Record of Consultation with Provincial Governmental Representatives

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Ministry of Energy, Northern Development and Mines (ENDM)	2019-03-19	Email	Outgoing	Shannon McCabe (Ministry of Energy, Northern Development and Mines (ENDM))	Daniel Charbonneau John Chadwick Paul Dalmazzi Sara Jane Souliere	Hydro One sent a letter and project map to the Crown, describing the Lakeshore SS project and sought direction regarding the legal duty to consult and confirmation of the list of First Nation communities that Hydro One had identified as being potentially interested in the project.
Ministry of Energy, Northern Development and Mines (ENDM)	2019-04-16	Letter	Incoming	Chloe Lazakis (Ministry of Energy, Northern Development and Mines (ENDM)) Shannon McCabe (Ministry of Energy, Northern Development and Mines (ENDM))	Paul Dalmazzi	Ministry of Energy Northern Development and Mines responded to Hydro One's letter dated March 19, 2019 in a letter dated April 16, 2019 and stated that the Ministry had reviewed the information provided and has determined that the project may have the potential to affect First Nations and/or Métis communities who hold or claim Aboriginal or treaty rights. The Ministry provided instructions on Hydro One's consultation with Caldwell First Nation and Walpole Island First Nation.
Ministry of Energy, Northern Development and Mines (ENDM)	2019-04-16	Email	Outgoing	Chloe Lazakis (Ministry of Energy, Northern Development and Mines (ENDM)) Shannon McCabe (Ministry of Energy, Northern Development and Mines (ENDM))	Erika Dawson Paul Dalmazzi Sara Jane Souliere	Hydro One thanked the Ministry of Energy Northern Development and Mine's for providing their response and confirmed that Hydro One would copy Chloe when the identified communities were notified of the project and Ministry of Energy Northern Development and Mine's delegation of procedural aspects of consultation to Hydro One.
Ministry of Energy, Northern Development and Mines (ENDM)	2019-05-10	Email	Outgoing	Chloe Lazakis (Ministry of Energy, Northern Development and Mines (ENDM)) Shannon McCabe (Ministry of Energy, Northern Development and Mines (ENDM))	Daniel Charbonneau John Chadwick Paul Dalmazzi Sara Jane Souliere	Hydro One emailed ENDM and shared a letter with regard to the Haudenosaunee Confederacy Chiefs Council/Haudenosaunee Development Council's assertion of Nanfan treaty rights within the area of the Lakeshore SS project.
Ministry of Energy, Northern Development and Mines (ENDM)	2019-05-10	Email	Outgoing	Chloe Lazakis (Ministry of Energy, Northern Development and Mines (ENDM)) Shannon McCabe (Ministry of Energy, Northern Development and Mines (ENDM))	Daniel Charbonneau John Chadwick Paul Dalmazzi Sara Jane Souliere	Hydro One responded to the Ministry and stated that they have not received anything in writing to ENDM's question regarding HCCC/HDI assertions.
Caldwell First Nation Ministry of Energy, Northern Development and Mines (ENDM)	2019-05-10	Email	Outgoing	Chloe Lazakis (Ministry of Energy, Northern Development and Mines (ENDM)) Darryl Van Oirschot (Caldwell First Nation) Nikki Orosz (Caldwell First Nation)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed a copy of the Notice of Commencement and Study Area map for the Lakeshore TS Class EA to Nikki Orosz (Director of Operations) at the Caldwell First Nation. Hydro One stated that the Crown (ENDM) had delegated the procedural aspects of the Duty to Consult to Hydro One, and provided a contact at the Ministry of Energy Northern Development and Mines if representatives of Caldwell First Nation wished to contact them directly.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Bkejwanong (Walpole Island First Nation) Ministry of Energy, Northern Development and Mines (ENDM)	2019-05-10	Email	Outgoing	Chloe Lazakis (Ministry of Energy, Northern Development and Mines (ENDM)) Daniel Miskokomon (Bkejwanong (Walpole Island First Nation)) Michael Dashner (Bkejwanong (Walpole Island First Nation))	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed a copy of the Notice of Commencement and Study Area map for the Lakeshore TS Class EA to Chief Miskokomon of the Walpole Island First Nation. Hydro One stated that the Crown (ENDM) had delegated the procedural aspects of the Duty to Consult to Hydro One, and provided a contact at the Ministry of Energy Northern Development and Mines, if representatives of Walpole Island First Nation wished to contact them directly.
Ministry of the Environment, Conservation and Parks (MECP)	2019-06-10	Email	Outgoing	Annamaria Cross (Ministry of the Environment, Conservation and Parks (MECP)) Crystal LaFrance (Ministry of the Environment, Conservation and Parks (MECP)) Heather Malcolmson (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	Hydro One emailed representatives of the MECP and shared information regarding the project, the NoC, and CIC.
Ministry of the Environment, Conservation and Parks (MECP)	2019-06-10	Email	Outgoing	Crystal LaFrance (Ministry of the Environment, Conservation and Parks (MECP)) Heather Malcolmson (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	Hydro One emailed MECP and shared information regarding the project, NoC and CIC.
Ministry of Natural Resources and Forestry (MNRF)	2019-06-10	Email	Outgoing	Karina Cerniavskaja (Ministry of Natural Resources and Forestry (MNRF))	Paul Dalmazzi	Hydro One emailed MNRF and shared information about the project, NoC, and CIC.
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	2019-06-10	Email	Outgoing	Katherine Kirzati (Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI))	Paul Dalmazzi	Hydro One emailed the Ministry of Heritage, Sport, Tourism, and Culture Industries and shared information about the project, NoC, and CIC.
Ministry of Agriculture, Food and Rural Affairs (OMAFRA)	2019-06-10	Email	Outgoing	Drew Crinklaw (Ministry of Agriculture, Food and Rural Affairs (OMAFRA))	Paul Dalmazzi	Hydro One emailed the Ministry of Agriculture Food and Rural Affairs and shared information regarding the project, NoC, and CIC.
Infrastructure Ontario (IO)	2019-06-10	Email	Outgoing	Neil D'souza (Infrastructure Ontario (IO))	Paul Dalmazzi	Hydro One emailed IO (Neil D'souza) and shared information about the CIC.
Ontario Clean Water Agency	2019-06-10	Email	Outgoing	Dave Jubenville (Ontario Clean Water Agency)	Paul Dalmazzi	Hydro One emailed the Ontario Clean Water Agency and shared information regarding the project and the CIC.
Essex Region Conservation Authority (ERCA)	2019-06-10	Email	Outgoing	Cynthia Casagrande (Essex Region Conservation Authority (ERCA)) Michael Nelson (Essex Region Conservation Authority (ERCA))	Paul Dalmazzi	Hydro One contacted the ERCA and shared information regarding the project, NoC, and CIC.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	2019-06-24	Phone	Incoming	Rosi Zirger (Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI))	Paul Dalmazzi	Rosi Zirger (Heritage Advisor - MHSTCI) called Hydro One to discuss the Lakeshore TS Class EA, after receiving the Notice of Commencement. Hydro One answered some basic questions about the study area and project scope, and stated they would provide Rosi with a copy of the panel boards from the upcoming Community Information Centre planned for Wednesday June 26. Hydro One also noted that they do not anticipate disturbance of any built resources.
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	2019-06-24	Email	Outgoing	Rosi Zirger (Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI))	Paul Dalmazzi	Hydro One emailed Ministry of Heritage, Sport, Tourism and Culture Industries and sent a copy of the panels being used at the Community Information Centre planned for the Lakeshore TS project on Wed. June 26, PIF No.'s for two previous Archaeological Assessments which had study areas overlapping with the Lakeshore TS Class EA Study area, and noted that they do not anticipate any effects to Built Heritage Resources on the Lakeshore TS project, Hydro One would work through the Ministry's Heritage Screening Checklist. Hydro One asked the Ministry to provide the latest version of the checklist.
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	2019-07-02	Email	Incoming	Rosi Zirger (Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI))	Paul Dalmazzi	MTCS emailed Hydro One regarding the planned Stage 1-2 archaeological assessment and requested that Hydro One keep MTCS updated and provide them with the PIF number once it is issued.
Ministry of the Environment, Conservation and Parks (MECP)	2019-07-09	Email	Outgoing	Crystal LaFrance (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	Hydro One emailed MECP and provided a project update. Hydro One informed the MECP that the project team would be assessing the feasible alternatives and requested that the MECP provide comments regarding the alternative transformer location stations by July 25, 2019.
Ministry of Natural Resources and Forestry (MNRF)	2019-07-09	Email	Outgoing	Karina Cerniavskaja (Ministry of Natural Resources and Forestry (MNRF))	Paul Dalmazzi	Hydro One emailed the MNRF to provide a project update and informed them that the Hydro One will be evaluating alternative locations for the transformer station. Hydro One asked that they provide feedback by July 25, 2019.
Ministry of the Environment, Conservation and Parks (MECP)	2019-07-09	Email	Outgoing	Crystal LaFrance (Ministry of the Environment, Conservation and Parks (MECP)) Peter Rehbein (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	Hydro One emailed MECP and provided a copy of the NoC and panels containing the information that would be presented at the CIC held on June 26, 2019.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Ministry of Agriculture, Food and Rural Affairs (OMAFRA)	2019-07-09	Email	Outgoing	Drew Crinklaw (Ministry of Agriculture, Food and Rural Affairs (OMAFRA))	Paul Dalmazzi	Hydro One e-mailed the Ministry of Agriculture Food and Rural Affairs and provided project updates, information about the CIC held on June 26, 2019, and invited their feedback regarding transmission station locations by July 25, 2019.
Ontario Clean Water Agency	2019-07-10	Email	Outgoing	Dave Jubenville (Ontario Clean Water Agency)	Paul Dalmazzi	Hydro One emailed the Ontario Clean Water Agency to follow up on the NoC. Hydro One provided project updates, information on the CIC held June 26, 2019, and invited their feedback for the selection of locations for the transformer stations.
Essex Region Conservation Authority (ERCA)	2019-07-10	Email	Outgoing	Cynthia Casagrande (Essex Region Conservation Authority (ERCA)) Michael Nelson (Essex Region Conservation Authority (ERCA))	Paul Dalmazzi	Hydro One e-mailed the ERCA and provided project updates, information about the CIC held on June 26, 2019, and invited their feedback for locations for the transformer stations by July 25, 2019.
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	2019-07-10	Email	Outgoing	Rosi Zirger (Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)), Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI))	Paul Dalmazzi	Hydro One emailed MTCS and provided updates about the project, events of the CIC held June 26, 2019, and invited them to share any comments regarding the location of the stations by July 25, 2019.
Infrastructure Ontario (IO)	2019-07-10	Email	Outgoing	Neil D'souza (Infrastructure Ontario (IO))	Paul Dalmazzi	Hydro One emailed IO and shared project updates and the events of the CIC held June 26, 2019. Hydro One stated informed the IO that the project team is in the process of selecting preferred station locations. Hydro One invited them to send their feedback regarding the station locations by July 25, 2019 and noted that a second CIC is being planned for early fall.
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	2019-07-10	Email	Incoming	Rosi Zirger (Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)), Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI))	Paul Dalmazzi	MTCS responded to Hydro One's email regarding project updates and asked whether or not an archaeological assessment had started.
Ministry of the Environment, Conservation and Parks (MECP)	2019-07-11	Email	Incoming	Peter Rehbein (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	The MECP emailed Hydro One to notify Hydro One that the project updates would be shared with their EA coordinators for review.
Ministry of the Environment, Conservation and Parks (MECP)	2019-07-11	Email	Outgoing	Crystal LaFrance (Ministry of the Environment, Conservation and Parks (MECP)) Peter Rehbein (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	Hydro One responded to the MECP and noted that Hydro One would keep the MECP SW Region updated as the project progresses.
Ministry of Natural Resources and Forestry (MNRF)	2019-07-11	Email	Incoming	Karina Cerniavskaja (Ministry of Natural Resources and Forestry (MNRF))	Paul Dalmazzi	The MNRF emailed Hydro One and stated that they did not have any comments to provide on the project and that they would be interested in viewing the draft Environmental Assessment Report when it is available.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Ministry of Natural Resources and Forestry (MNRF)	2019-07-11	Email	Outgoing	Karina Cerniavskaja (Ministry of Natural Resources and Forestry (MNRF))	Paul Dalmazzi	Hydro One responded to the MNRF and stated that Hydro One would keep them updated on the project and invited their feedback.
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	2019-07-12	Email	Outgoing	Rosi Zirger (Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)), Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI))	Paul Dalmazzi	Hydro One responded to MTCS by email and informed them that the project team is in the process of engaging an Archaeological Consultant to conduct archeological assessments.
Ministry of the Environment, Conservation and Parks (MECP)	2019-07-16	Email	Outgoing	Craig Newton (Ministry of the Environment, Conservation and Parks (MECP)) Crystal LaFrance (Ministry of the Environment, Conservation and Parks (MECP)) Peter Rehbein (Ministry of the Environment, Conservation and Parks (MECP))	Daniel Bourassa (Dillon) Mehrgan Mazaheri Paul Dalmazzi	Hydro One responded to MECP and noted that they are aware that parts of the study area are mapped as Intake Protection Zones (IPZ)-3. Hydro One informed the MECP that they would apply for an Environmental Compliance Approval for Industrial Sewage works following the Class EA.
Essex Region Conservation Authority (ERCA)	2019-07-19	Email	Outgoing	Cynthia Casagrande (Essex Region Conservation Authority (ERCA)) Michael Nelson (Essex Region Conservation Authority (ERCA))	Daniel Bourassa (Dillon) Paul Dalmazzi	Hydro One emailed ERCA and requested that they share any input regarding the SPP or any other aspect regarding the project. Hydro One noted that they are aware of portions in the study area mapped as ERCA Regulated Areas and would be in contact with ERCA throughout the Class EA process.
Essex Region Conservation Authority (ERCA)	2019-07-31	Phone	Outgoing	Michael Nelson (Essex Region Conservation Authority (ERCA))	Paul Dalmazzi	Hydro One called Mike Nelson (ERCA Watershed Planner) on Wednesday, July 31 to follow up on the Lakeshore TS Class EA. Hydro One left a voicemail briefly describing the project and asking for Mike to email or call him back if he had any comments, questions or feedback or wanted to discuss the project in general.
Infrastructure Ontario (IO)	2019-07-31	Email	Outgoing	Lisa Myslicki (Infrastructure Ontario (IO))	Paul Dalmazzi	Hydro One emailed Lisa Myslicki at Infrastructure Ontario to share information regarding the project that was previously shared with an inactive contact Neil D'Souza.
Infrastructure Ontario (IO)	2019-08-07	Email	Incoming	Vanessa Wu (Infrastructure Ontario (IO))	Paul Dalmazzi	IO emailed Hydro One and stated that there is no Ministry of Infrastructure property within the project's study area. IO requested not to be contacted regarding this project.
Infrastructure Ontario (IO)	2019-08-07	Email	Outgoing	Vanessa Wu (Infrastructure Ontario (IO))	Paul Dalmazzi	Hydro One emailed IO and stated that would have Lisa removed from the contact list at their request.
Ministry of Natural Resources and Forestry (MNRF)	2019-09-11	Email	Outgoing	Karina Cerniavskaja (Ministry of Natural Resources and Forestry (MNRF))	Paul Dalmazzi	Hydro One emailed the District Planner at the Ministry of Natural Resources and Forestry to provide project updates and share an invitation to the second community information centre on October 1, 2019.
Ministry of Agriculture, Food and Rural Affairs (OMAFRA)	2019-09-11	Email	Outgoing	Drew Crinklaw (Ministry of Agriculture, Food and Rural Affairs (OMAFRA))	Paul Dalmazzi	Hydro One emailed Ministry of Agriculture, Food and Rural Affairs to provide project updates and share an invitation for the projects second Community Information Centre.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Essex Region Conservation Authority (ERCA)	2019-09-11	Email	Outgoing	Cynthia Casagrande (Essex Region Conservation Authority (ERCA)) Michael Nelson (Essex Region Conservation Authority (ERCA), Essex Region Conservation Authority (ERCA))	Paul Dalmazzi	Hydro One emailed Essex Region Conservation Authority to share project updates and an invitation to the projects second community information centre on October 1, 2019.
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	2019-09-11	Email	Outgoing	Rosi Zirger (Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI))	Paul Dalmazzi	Hydro One emailed the Ministry of Tourism, Culture and Sport (MTCS) to provide project updates and share an invitation to the projects second community information centre on October 1, 2019. Hydro One informed MTCS that the results of stage one archeology report all feasible site alternatives are within areas of archeological potential. Hydro One noted Archaeological Potential was not a differentiating factor between the three alternative TS sites and they are tentatively planning to conduct a Stage 2 survey in the fall and would submit a report for that study when it has been completed.
Ministry of the Environment, Conservation and Parks (MECP)	2019-09-11	Email	Outgoing	Craig Newton (Ministry of the Environment, Conservation and Parks (MECP)) Crystal LaFrance (Ministry of the Environment, Conservation and Parks (MECP)) Peter Rehbein (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	Hydro One emailed the Environmental Resource Planner, Supervisor of Air and Pesticides Planning, and Air Quality Analyst at the Ministry of the Environment, Conservation and Parks to provide project updates and share an invitation to the second community information centre on October 1, 2019.
Ministry of the Environment, Conservation and Parks (MECP)	2019-09-11	Email	Incoming	Craig Newton (Ministry of the Environment, Conservation and Parks (MECP)) Crystal LaFrance (Ministry of the Environment, Conservation and Parks (MECP)) Peter Rehbein (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	Hydro One emailed the Ministry of Environment Conservation and Parks to provide project updates and share an invitation to the second community information centre on October 1,2019.
Ontario Clean Water Agency	2019-09-11	Email	Outgoing	Dave Jubenville (Ontario Clean Water Agency)	Paul Dalmazzi	Hydro One emailed Ontario Clean Water Agency to share project updates and share an invitation to the second community information centre on October 1, 2019.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Ministry of Natural Resources and Forestry (MNRF)	2019-09-12	Email	Incoming	Karina Cerniavskaja (Ministry of Natural Resources and Forestry (MNRF))	Paul Dalmazzi	<p>The Ministry of Natural Resources and Forestry (MNRF) emailed Hydro One and acknowledged their email regarding project updates and the invitation to the second CIC. MNRF stated that Aylmer District staff will be interested in reviewing the ESR.</p> <p>The MNRF also noted that the Ministry of Environment, Conservation and Parks (MECP) has assumed responsibility for the Endangered Species Act (ESA), including species at risk (SAR) in Ontario, and instructed that when available, Hydro One should circulate the ESR to the MECP at SAROntario@ontario.ca for their review.</p>
Essex Region Conservation Authority (ERCA) Town of Lakeshore	2019-10-10	Email	Incoming	Andrew Neely (Town of Lakeshore) Cynthia Casagrande (Essex Region Conservation Authority (ERCA)) Jill Fiorito (Town of Lakeshore)	Paul Dalmazzi	The ERCA emailed Hydro One and acknowledged the receipt of the notices shared with them. ERCA noted in their email that the Knister Drain falls under the ERCA's jurisdiction and permits would be required prior to undertaking works.
Essex Region Conservation Authority (ERCA) Town of Lakeshore	2019-10-11	Email	Outgoing	Andrew Neely (Town of Lakeshore) Cynthia Casagrande (Essex Region Conservation Authority (ERCA)) Jill Fiorito (Town of Lakeshore) Michael Nelson (Essex Region Conservation Authority (ERCA), Essex Region Conservation Authority (ERCA))	Mehrgan Mazaheri Paul Dalmazzi	<p>Hydro One replied to the ERCA thanked them for their email and noted that the Project would not likely involve new crossings or alterations to the municipal drains. Hydro One also shared information regarding the draft EA review period.</p> <p>Hydro One also stated their position that due to the rights and powers granted to Hydro One under the Electricity Act, as well as a reference to those rights and powers in the Conservation Authorities Act, Hydro One continues to be exempt from Section 28 permits under the Conservation Authorities Act. Hydro One also stated that they value the input and advice that they receive from Conservation Authorities such as ERCA and will be happy to share and discuss our detailed work plans, including site-specific environmental mitigation measures, for review and comment once that information is available.</p>
Ministry of the Environment, Conservation and Parks (MECP)	2019-10-24	Email	Outgoing	SAR Ontario Inbox (Ministry of the Environment, Conservation and Parks (MECP))	Daniel Bourassa (Dillon) Jessica Wright (Dillon) Paul Dalmazzi	Hydro One emailed the SAR inbox to share information regarding the ecological studies for the ESR a figure of the ecological land classification, the preferred alternative, and the project location.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Ministry of the Environment, Conservation and Parks (MECP)	2019-10-30	Email	Outgoing	Annamaria Cross (Ministry of the Environment, Conservation and Parks (MECP)) Craig Newton (Ministry of the Environment, Conservation and Parks (MECP)) Crystal LaFrance (Ministry of the Environment, Conservation and Parks (MECP)) Heather Malcolmson (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	Hydro One emailed the MECP to provide project updates and share copies of the draft Notice of Completion, a figure illustrating the preferred alternative, and a newspaper ad with details of the 30-day review period for the draft Notice of Completion.
Ministry of the Environment, Conservation and Parks (MECP)	2019-10-30	Email	Outgoing	SAR Ontario Inbox (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	Hydro One emailed MECP (SAR inbox) to provide information about the field studies conducted for the Lakeshore Transformer Station project. Hydro One noted that as a result of their studies there are no anticipated impacts on wildlife or municipal drains and shared copies of the ecological land classification, project location, preferred alternative and draft Notice of Completion.
Ministry of Natural Resources and Forestry (MNRF)	2019-10-30	Email	Outgoing	Karina Cerniavskaja (Ministry of Natural Resources and Forestry (MNRF), Ministry of Natural Resources and Forestry (MNRF))	Paul Dalmazzi	Hydro One emailed the MNRF to provide project updates and share copies of the draft Notice of Completion, a figure illustrating the preferred alternative, and a newspaper ad with details of the 30-day review period for the draft Notice of Completion.
Ministry of Agriculture, Food and Rural Affairs (OMAFRA)	2019-10-30	Email	Outgoing	Drew Crinklaw (Ministry of Agriculture, Food and Rural Affairs (OMAFRA))	Paul Dalmazzi	Hydro One emailed the Ministry of Agriculture Food and Rural Affairs to provide project updates and share copies of the draft Notice of Completion, a figure illustrating the preferred alternative, and a newspaper ad with details of the 30-day review period for the draft Notice of Completion.
Ontario Clean Water Agency	2019-10-30	Email	Outgoing	Dave Jubenville (Ontario Clean Water Agency) Susan Budden (Ontario Clean Water Agency)	Paul Dalmazzi	Hydro One emailed Ontario Clean Water Agency to provide project updates and share copies of the draft Notice of Completion, a figure illustrating the preferred alternative, and a newspaper ad with details of the 30-day review period for the draft Notice of Completion.
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	2019-10-30	Email	Outgoing	Katherine Kirzati (Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)) Rosi Zirger (Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), Ministry of Heritage, Sport,	Paul Dalmazzi	Hydro One emailed MTCS to share details of the project's progress, a figure of the preferred alternative, the draft Notice of Completion and the newspaper ad describing the 30-day review period.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
				Tourism and Culture Industries (MHSTCI))		
Essex Region Conservation Authority (ERCA)	2019-10-30	Email	Outgoing	Cynthia Casagrande (Essex Region Conservation Authority (ERCA))	Paul Dalmazzi	Hydro One provided a Notice of Completion of the Class EA for the Lakeshore TS project, and provided information on the upcoming Draft ESR Review period.
Ministry of the Environment, Conservation and Parks (MECP)	2019-10-30	Email	Incoming	Annamaria Cross Craig Newton (Ministry of the Environment, Conservation and Parks (MECP)) Crystal LaFrance (Ministry of the Environment, Conservation and Parks (MECP)) Heather Malcolmson (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	Hydro One emailed MECP to share details about the project's progress and a copy of the draft Notice of Completion.
Ministry of the Environment, Conservation and Parks (MECP)	2019-11-13	Email	Outgoing	Craig Newton (Ministry of the Environment, Conservation and Parks (MECP)) Crystal LaFrance (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	Hydro One emailed the Ministry of Environment Conservation and Parks to provide a reminder that the draft ESR was available for review until December 13, 2019.
Ministry of the Environment, Conservation and Parks (MECP)	2019-11-13	Email	Incoming	Craig Newton (Ministry of the Environment, Conservation and Parks (MECP)) Crystal LaFrance (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	Hydro One emailed the Ministry of Environment Conservation and Parks to provide a reminder that the draft ESR was available for review until December 13, 2019
Ministry of the Environment, Conservation and Parks (MECP)	2019-11-13	Email	Outgoing	SAR Ontario Inbox (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	Hydro One emailed the Ministry of Environment Conservation and Parks to provide a reminder that the draft ESR was available for review until December 13, 2019.
Ministry of Natural Resources and Forestry (MNRF)	2019-11-13	Email	Outgoing	Karina Cerniavskaja (Ministry of Natural Resources and Forestry (MNRF), Ministry of Natural Resources and Forestry (MNRF))	Paul Dalmazzi	Hydro One emailed the Ministry of Natural Resources and Forestry to provide a reminder that the draft ESR was available for review until December 13, 2019.
Ministry of Agriculture, Food and Rural Affairs (OMAFRA)	2019-11-13	Email	Outgoing	Drew Crinklaw (Ministry of Agriculture, Food and Rural Affairs (OMAFRA))	Paul Dalmazzi	Hydro One emailed the Ministry of Agriculture, Food and Rural Affairs to provide a reminder that the draft ESR was available for review until December 13, 2019.
Ontario Clean Water Agency	2019-11-13	Email	Outgoing	Dave Jubenville (Ontario Clean Water Agency) Susan Budden (Ontario Clean Water Agency)	Paul Dalmazzi	Hydro One emailed the Ontario Clean Water Agency to provide a reminder that the draft ESR was available for review until December 13, 2019.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Ministry of Natural Resources and Forestry (MNRF)	2019-11-13	Email	Incoming	Karina Cerniavskaja (Ministry of Natural Resources and Forestry (MNRF)), Ministry of Natural Resources and Forestry (MNRF))	Paul Dalmazzi	Hydro one received an email from the Ministry of Natural Resources and Forestry which stated that they have received the draft ESR and would provide their comments after their review.
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	2019-11-13	Email	Outgoing	Katherine Kirzati (Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)), Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)) Rosi Zirger (Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)), Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI))	Paul Dalmazzi	Hydro One emailed the Ministry of Heritage, Sport, Tourism, and Culture Industries to provide a reminder that the draft ESR was available for review until December 13, 2019.
Essex Region Conservation Authority (ERCA)	2019-11-13	Email	Outgoing	Cynthia Casagrande (Essex Region Conservation Authority (ERCA)) Michael Nelson (Essex Region Conservation Authority (ERCA), Essex Region Conservation Authority (ERCA))	Paul Dalmazzi	Hydro One emailed ERCA on November 13, 2019, to provide a reminder that the draft ESR was available for review and provided contact information to the Hydro One project team for their comments or concerns.
Ministry of Natural Resources and Forestry (MNRF)	2019-11-21	Email	Incoming	Karina Cerniavskaja (Ministry of Natural Resources and Forestry (MNRF)), Ministry of Natural Resources and Forestry (MNRF))	Paul Dalmazzi	Karina emailed Paul and stated that the MNRF have reviewed the draft ESR, and do not have any comments at this time.
Ministry of Natural Resources and Forestry (MNRF)	2019-11-21	Email	Outgoing	Karina Cerniavskaja (Ministry of Natural Resources and Forestry (MNRF)), Ministry of Natural Resources and Forestry (MNRF))	Paul Dalmazzi	Paul thanked Karina and her team for reviewing the draft ESR, and let Karina know that the MNRF could contact him if any questions or comments about the project arose in the future.
Ministry of the Environment, Conservation and Parks (MECP)	2019-11-26	Email	Incoming	Craig Newton (Ministry of the Environment, Conservation and Parks (MECP)) Crystal LaFrance (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	MECP Southwest region staff emailed to acknowledge receipt of the Lakeshore TS draft ESR. The MECP confirmed that they had reviewed the draft ESR, and as a result of their review, had no comments.
Ministry of the Environment, Conservation and Parks (MECP)	2019-11-26	Email	Outgoing	Craig Newton (Ministry of the Environment, Conservation and Parks (MECP)) Crystal LaFrance (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	Paul thanked the MECP southwest Region staff for reviewing the draft ESR. Paul stated that if the MECP Southwest Region had any questions or comments about the project going forward, that they could contact him at any time.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	2019-12-02	Phone	Incoming	Rosi Zirger (Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI))	Paul Dalmazzi	Rosi Zirger (MHSTCI) called Paul Dalmazzi (Hydro One) on December 2, 2019 to discuss the Lakeshore TS Draft ESR. Rosi explained her initial comments on the draft ESR, including a request that a standalone Stage 1 Archaeological Assessment report be completed (rather than the background review memo appended to the draft ESR, and a later Stage 1/2 report prior to construction) and a request for some additional clarification regarding the Built Heritage Checklist appended to the draft ESR. Rosi stated that she would provide formal written comments shortly; Paul thanked Rosi and stated that he would review and respond to the written comments once they arrived.
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	2019-12-03	Email	Incoming	Rosi Zirger (Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI))	Paul Dalmazzi	Hydro One received an email from the Ministry of Heritage, Sport, Tourism and Culture Industries which stated that they have reviewed the draft ESR. Attached to the email the Ministry provided comments for Hydro One to address, revise, and incorporate for the final version.
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	2019-12-03	Email	Outgoing	Rosi Zirger (Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI))	Paul Dalmazzi	Hydro One replied to the Ministry of Heritage, Sport, Tourism, and Culture Industries.
Essex Region Conservation Authority (ERCA)	2019-12-10	Email	Incoming	Michael Nelson (Essex Region Conservation Authority (ERCA), Essex Region Conservation Authority (ERCA)) Planning -	Paul Dalmazzi	ERCA emailed Hydro One regarding the Notice of Completion with an attached letter which stated that they have no substantial concerns with the ESR but will look further into the possibility of Hydro One requiring a permit under Section 28 of the Conservation Authorities Act.
Ministry of the Environment, Conservation and Parks (MECP)	2019-12-12	Email	Incoming	SAR Ontario Inbox (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	MECP (SARs Branch) emailed Hydro One after their review of the Draft ESR and confirmed that the Project Team's conclusion regarding project not impacting species at risk is reasonable and valid.
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	2019-12-13	Email	Outgoing	Rosi Zirger (Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI))	Paul Dalmazzi	Hydro One responded to the Ministry and stated that they would make the necessary revisions to the ESR.
Essex Region Conservation Authority (ERCA)	2019-12-13	Email	Outgoing	Michael Nelson (Essex Region Conservation Authority (ERCA), Essex Region Conservation Authority (ERCA))	Paul Dalmazzi	Hydro One replied to ERCA's email regarding their comments to the ESR and Section 28 permits. Hydro One stated that their current position was based on the rights and powers granted to Hydro One under the Electricity Act, as well as a reference to those rights and powers in the Conservation Authorities Act, Hydro One continues to be exempt from Section 28 permits under the CA Act.

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Ministry of the Environment, Conservation and Parks (MECP)	2019-12-13	Email	Outgoing	SAR Ontario Inbox (Ministry of the Environment, Conservation and Parks (MECP))	Paul Dalmazzi	Hydro One replied to MECP (SAR branch) to notify them their comments were received and that if any new information regarding SARs and the project study area Hydro One would contact MECP to discuss.
Essex Region Conservation Authority (ERCA)	2019-12-17	Email	Incoming	Michael Nelson (Essex Region Conservation Authority (ERCA), Essex Region Conservation Authority (ERCA))	Paul Dalmazzi	ERCA emailed Hydro One and stated that they are working towards a definitive answer with regards to the project and the potential for Hydro One to require a permit under Section 28. ERCA also expressed that the experiences between both organizations have been pleasant and they will continue to work together with Hydro One for the remainder of the project.
Essex Region Conservation Authority (ERCA)	2019-12-17	Email	Outgoing	Michael Nelson (Essex Region Conservation Authority (ERCA), Essex Region Conservation Authority (ERCA))	Brittany Sadkowski Paul Dalmazzi	Hydro One emailed ERCA and committed to working with ERCA on providing more clarity regarding the potential to yield to Section 28 requirements.

Record of Consultation with Federal Governmental Representatives and Agencies

Organisation	Date	Type of communication	Origin	Stakeholders (organisation name)	Staff members	Summary
Agriculture and Agri-Food Canada	2019-06-10	Email	Outgoing	Richard Cottingham (Agriculture and Agri-Food Canada)	Paul Dalmazzi	Hydro One emailed Agriculture and Food Canada and shared information regarding the CIC.
Agriculture and Agri-Food Canada	2019-07-10	Email	Outgoing	Richard Cottingham (Agriculture and Agri-Food Canada)	Paul Dalmazzi	Hydro One emailed the AAFC and provided project updates, information about the CIC held on June 26, 2019, and invited them to provide feedback regarding the transformer stations by July 25, 2019.
Agriculture and Agri-Food Canada	2019-07-11	Email	Incoming	Cathy Bakes (Agriculture and Agri-Food Canada) Richard Cottingham (Agriculture and Agri-Food Canada)	Paul Dalmazzi	AAFC's Rick Cottingham emailed Hydro One and requested that they are replaced as the main contact with Cathy Bakes.
Agriculture and Agri-Food Canada	2019-07-11	Email	Outgoing	Cathy Bakes (Agriculture and Agri-Food Canada) Richard Cottingham (Agriculture and Agri-Food Canada)	Paul Dalmazzi	Hydro One emailed the AAFC encouraged that feedback regarding the project is shared with Hydro One in either their capacity as an expert or community members. Hydro One also shared a copy of the NoC and provided an update on the project.
Agriculture and Agri-Food Canada	2019-09-11	Email	Outgoing	Richard Cottingham (Agriculture and Agri-Food Canada)	Paul Dalmazzi	Hydro One emailed Agriculture and Agri-Food Canada to provide project updates and share an invitation for the projects second Community Information Centre.
Agriculture and Agri-Food Canada	2019-09-18	Email	Outgoing	Cathy Bakes (Agriculture and Agri-Food Canada) Terry Attewell (Agriculture and Agri-Food Canada)	Ani Bekmezian Max Stafford Mehrgan Mazaheri Paul Dalmazzi	Hydro One emails Agriculture and Agri-Food Canada in response to their question and stated that the AAFC facilities in question are outside of the study area. Project effects will likely be limited to temporary increased traffic due to construction activities in 2020-2023.
Agriculture and Agri-Food Canada	2019-09-19	Email	Incoming	Cathy Bakes (Agriculture and Agri-Food Canada) Terry Attewell (Agriculture and Agri-Food Canada)	Ani Bekmezian Max Stafford Mehrgan Mazaheri Paul Dalmazzi	Agriculture and Agri-Food Canada emailed Hydro One and thanked them for answering their question regarding AAFC facilities probability of being affected by the project.
Agriculture and Agri-Food Canada	2019-09-19	Email	Outgoing	Cathy Bakes (Agriculture and Agri-Food Canada) Terry Attewell (Agriculture and Agri-Food Canada)	Ani Bekmezian Max Stafford Mehrgan Mazaheri Paul Dalmazzi	Hydro One emailed Agriculture and Agri-Food Canada (AAFC) in response to their question regarding AAFC facilities. Hydro One invited them to keep in contact if they had any further questions.
Department of Fisheries and Oceans Canada	2019-10-24	Email	Outgoing		Daniel Bourassa (Dillon) Jessica Wright (Dillon) Paul Dalmazzi	Hydro One emailed the Department of Fisheries to share information regarding the project and its a low likelihood of impacting SAR such as the Mapleleaf Mussel, the Kinster Drain, and other aquatic habitats.
Agriculture and Agri-Food Canada	2019-10-30	Email	Outgoing	Cathy Bakes (Agriculture and Agri-Food Canada) Terry Attewell (Agriculture and Agri-Food Canada)	Paul Dalmazzi	Hydro One emailed Agri-Food Canada to share details about project progress, the draft ESR review period, a newspaper ad for the Notice of Completion, and a figure illustrating the preferred alternative.

Record of Consultation with Caldwell First Nation

Date	Type of communication	Origin	First Nation Staff / Representative	Staff members	Summary
2019-12-13	Email	Outgoing	Nikki Orosz - Caldwell First Nation (Director - Operations)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Caldwell First Nation on November 14, 2019 and provided a reminder of the ESR review period and informed the community about the likelihood of the Stage 2 Archeological Assessment being conducted in 2020, rather than 2019 due to poor weather and environmental conditions.
2019-11-14	Email	Outgoing	Nikki Orosz - Caldwell First Nation (Director - Operations)	Barbara Slim (Wood Group) Kristy O'Neal - Wood Group (Senior Archaeologist) Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Caldwell First Nation to provide updates regarding the potential timing for the pedestrian survey and that their retained archeological consultant Wood PLC, would contact the community and coordinate with their Archeological Staff for the Stage 2 Archeological Assessment.
2019-11-13	Email	Outgoing	Nikki Orosz - Caldwell First Nation (Director - Operations)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Caldwell First Nation to provide a reminder that the draft ESR was available for review until December 13, 2019, and noted that they would also provide a hard-copy for Chief Duckworth.
2019-10-30	Email	Outgoing	Nikki Orosz - Caldwell First Nation (Director - Operations) Ogichii (Mary Frances) Da Kwe (Duckworth) - Caldwell First Nation (Chief)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Caldwell First Nation and shared minutes of the meeting held on October 28, 2019, in addition, Hydro One also shared the draft Notice of Completion.
2019-10-28	Meeting	Incoming	Nikki Orosz - Caldwell First Nation (Director - Operations) Ogichii (Mary Frances) Da Kwe (Duckworth) - Caldwell First Nation (Chief) Robyn Van Oirschot - Caldwell First Nation (Councillor) Stan Scott - Caldwell First Nation (Councillor) Steve Simpson - Caldwell First Nation (Councillor)	Kieran Mackenzie Mehrgan Mazaheri Paul Dalmazzi Sara Jane Souliere	<p>The Hydro One Lakeshore TS project team met with Chief Mary Duckworth, Councilors Stan Scott, Steve Simpson and Robyn van Oirshot, and Caldwell First Nation Director of Operations Nikki Orosz at the Caldwell First Nation Administrative Building on October 28. Chief Duckworth welcomed the Hydro One staff and thanked them for coming to Leamington to meet and advised on ways to meet the definition of "consultation".</p> <p>Hydro One provided project updates and confirmed that they would work with Caldwell FN to have their archaeological staff present during the Stage 2 survey work for the Lakeshore TS. Chief Duckworth also requested a hard copy of the draft ESR be sent to the Caldwell FN administrative office, and Hydro One confirmed that a copy would be sent when the document was released for review.</p>

Date	Type of communication	Origin	First Nation Staff / Representative	Staff members	Summary
2019-10-24	Email	Outgoing	Darryl Van Oirschot - Caldwell First Nation (Special Projects) Nikki Orosz - Caldwell First Nation (Director - Operations) Ogichii (Mary Frances) Da Kwe (Duckworth) - Caldwell First Nation (Chief)	Mehrgan Mazaheri Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Chief Duckworth of Caldwell First Nation, to provide project updates, share copies of a memo from their Archeology consultant, and the draft Notice of Completion for the draft ESR.
2019-10-11	Email	Incoming	Darryl Van Oirschot - Caldwell First Nation (Special Projects) Nikki Orosz - Caldwell First Nation (Director - Operations) Ogichii (Mary Frances) Da Kwe (Duckworth) - Caldwell First Nation (Chief)	Paul Dalmazzi Sara Jane Souliere	Caldwell First Nation emailed Hydro One to discuss the logistics of a meeting scheduled for October 28, 2019.
2019-10-10	Email	Outgoing	Darryl Van Oirschot - Caldwell First Nation (Special Projects) Nikki Orosz - Caldwell First Nation (Director - Operations) Ogichii (Mary Frances) Da Kwe (Duckworth) - Caldwell First Nation (Chief)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Caldwell First Nation and confirmed that they would meet on October 28, 2019.
2019-10-10	Email	Incoming	Darryl Van Oirschot - Caldwell First Nation (Special Projects) Nikki Orosz - Caldwell First Nation (Director - Operations) Ogichii (Mary Frances) Da Kwe (Duckworth) - Caldwell First Nation (Chief)	Paul Dalmazzi Sara Jane Souliere	Chief Duckworth of Caldwell First Nation, emailed Hydro One and stated that they would be available for the suggested time and requested that Hydro One share meeting materials ahead of the meeting.
2019-10-10	Email	Outgoing	Darryl Van Oirschot - Caldwell First Nation (Special Projects) Nikki Orosz - Caldwell First Nation (Director - Operations) Ogichii (Mary Frances) Da Kwe (Duckworth) - Caldwell First Nation (Chief)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Chief Duckworth of Caldwell First Nation to arrange a meeting on October 28, 2019.

Date	Type of communication	Origin	First Nation Staff / Representative	Staff members	Summary
2019-10-08	Email	Outgoing	Darryl Van Oirschot - Caldwell First Nation (Special Projects) Nikki Orosz - Caldwell First Nation (Director - Operations) Ogichii (Mary Frances) Da Kwe (Duckworth) - Caldwell First Nation (Chief)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Caldwell First Nation and shared with them that Hydro One plans to release the draft ESR in November. Hydro One also offered to meet with Caldwell First Nation to provide an opportunity for the community and it's leadership to provide their input.
2019-09-23	Email	Outgoing	Darryl Van Oirschot - Caldwell First Nation (Special Projects) James Peters - Caldwell First Nation (Councillor) Nikki Orosz - Caldwell First Nation (Director - Operations) Ogichii (Mary Frances) Da Kwe (Duckworth) - Caldwell First Nation (Chief) Robyn Van Oirschot - Caldwell First Nation (Councillor) Stan Scott - Caldwell First Nation (Councillor) Steve Simpson - Caldwell First Nation (Councillor)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Chief Duckworth and requested further dates to meet. Hydro One also noted that after the second CIC Hydro One would release the draft Environmental Study Report for a 30-day review period and would inform Chief Duckworth when it has been released.
2019-09-23	Email	Incoming	Darryl Van Oirschot - Caldwell First Nation (Special Projects) James Peters - Caldwell First Nation (Councillor) Nikki Orosz - Caldwell First Nation (Director - Operations) Ogichii (Mary Frances) Da Kwe (Duckworth) - Caldwell First Nation (Chief) Robyn Van Oirschot - Caldwell First Nation (Councillor) Stan Scott - Caldwell First Nation (Councillor) Steve Simpson - Caldwell First Nation (Councillor)	Paul Dalmazzi Sara Jane Souliere	Chief Duckworth of Caldwell First Nation (CFN) emailed Hydro One and stated that CFN was planning sessions on the dates Hydro One mentioned but could not accommodate.

Date	Type of communication	Origin	First Nation Staff / Representative	Staff members	Summary
2019-09-23	Email	Outgoing	Darryl Van Oirschot - Caldwell First Nation (Special Projects) Nikki Orosz - Caldwell First Nation (Director - Operations) Ogichii (Mary Frances) Da Kwe (Duckworth) - Caldwell First Nation (Chief)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Chief Duckworth of Caldwell First Nation to follow up and see whether they had identified any potential dates for the Hydro One team to meet with Chief and Council to discuss the Lakeshore Transmission Stations project.
2019-09-16	Email	Outgoing	Jenna Smids - Caldwell First Nation Melody Watson - Caldwell First Nation Nikki Orosz - Caldwell First Nation (Director - Operations)	Barbara Slim (Wood Group) Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Caldwell First Nation regarding their inquiry about archeology studies and assured that they will keep Caldwell First Nation updated with their progress.
2019-09-15	Email	Incoming	Jenna Smids - Caldwell First Nation Melody Watson - Caldwell First Nation Nikki Orosz - Caldwell First Nation (Director - Operations)	Paul Dalmazzi	Hydro One received an email from Caldwell First Nation (CFN) stating that they would like to stay updated on matters regarding archeological studies and that the Chief and Council may request to meet with Hydro One. CFN stated that they would notify Hydro One of when they would like to meet.
2019-09-12	Email	Outgoing	Darryl Van Oirschot - Caldwell First Nation (Special Projects) James Peters - Caldwell First Nation (Councillor) Nikki Orosz - Caldwell First Nation (Director - Operations) Ogichii (Mary Frances) Da Kwe (Duckworth) - Caldwell First Nation (Chief) Robyn Van Oirschot - Caldwell First Nation (Councillor) Stan Scott - Caldwell First Nation (Councillor) Steve Simpson - Caldwell First Nation (Councillor)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Chief Duckworth and stated that if Hydro One encounters any archaeological artifacts during the course of the Project, they would inform the Director of Operations at the Caldwell First Nation. Hydro One also requested the Chief's availability to meet on October 1, 2019, regarding the project.

Date	Type of communication	Origin	First Nation Staff / Representative	Staff members	Summary
2019-09-11	Email	Incoming	Darryl Van Oirschot - Caldwell First Nation (Special Projects) James Peters - Caldwell First Nation (Councillor) Nikki Orosz - Caldwell First Nation (Director - Operations) Ogichii (Mary Frances) Da Kwe (Duckworth) - Caldwell First Nation (Chief) Robyn Van Oirschot - Caldwell First Nation (Councillor) Stan Scott - Caldwell First Nation (Councillor) Steve Simpson - Caldwell First Nation (Councillor)	Paul Dalmazzi Sara Jane Souliere	Chief Duckworth of Caldwell First Nation emailed Hydro One and stated that they would provide Hydro One with their consultation and that Caldwell First Nation accepts Hydro One's invitation to meet and discuss the project. Chief Duckworth asked that if artifacts are identified that Hydro One notify the Director of Operations at Caldwell First Nation.
2019-09-11	Email	Outgoing	Darryl Van Oirschot - Caldwell First Nation (Special Projects) Nikki Orosz - Caldwell First Nation (Director - Operations) Ogichii (Mary Frances) Da Kwe (Duckworth) - Caldwell First Nation (Chief)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Chief Duckworth of Caldwell First Nation (CFN) to provide project updates and share an invitation to the second community information centre on October 1, 2019. Hydro One also noted in the emailed that they were tentatively planning to conduct a Stage 2 Archaeological Assessment and would keep CFN updated. Hydro One also suggested that representatives from CFN were welcomed to observe the survey work.
2019-08-01	Phone	Outgoing	Caldwell First Nation Ogichii (Mary Frances) Da Kwe (Duckworth) - Caldwell First Nation (Chief)	Paul Dalmazzi	Hydro One called the Caldwell First Nation Band Office on the morning of August 1, 2019 to follow up regarding the Lakeshore TS project and Class EA and left a voicemail message. Hydro One briefly described the project and stated that EA notices and emails had previously been sent to Nikki Orosz and Chief Duckworth.
2019-07-12	Email	Outgoing	Ogichii (Mary Frances) Da Kwe (Duckworth) - Caldwell First Nation (Chief)	Sara Jane Souliere	Hydro One emailed Chief Duckworth of Caldwell First Nations and shared project updates regarding the CIC held June 26, 2019, the status of the archeology assessment and that the project team is selecting preferred station locations. Hydro One invited them to send their feedback regarding the station locations by July 25, 2019.
2019-06-10	Email	Outgoing	Darryl Van Oirschot - Caldwell First Nation (Special Projects) Nikki Orosz - Caldwell First	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Caldwell First Nation (Nikki Orosz) and shared information regarding the CIC.

Date	Type of communication	Origin	First Nation Staff / Representative	Staff members	Summary
			Nation (Director - Operations)		
2019-05-14	Letter	Outgoing	Darryl Van Oirschot - Caldwell First Nation (Special Projects) Nikki Orosz - Caldwell First Nation (Director - Operations)	Paul Dalmazzi	A hard copy of the Notice of Commencement letter and Class EA Study Area map were mailed to the Caldwell FN, Hard copies were sent to Nikki Orosz (Director of Operations) and Darryl Van Oirschot, Special Projects, via Canada Post Registered Mail.
2019-05-10	Email	Outgoing	Chloe Lazakis - Ministry of Energy, Northern Development and Mines (ENDM) (Sr. Policy Advisor (A), Indigenous Energy Policy, Energy Networks and Indigenous Energy Policy Branch) Darryl Van Oirschot - Caldwell First Nation (Special Projects) Nikki Orosz - Caldwell First Nation (Director - Operations)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed a copy of the Notice of Commencement and Study Area map for the Lakeshore TS Class EA to Nikki Orosz (Director of Operations) at the Caldwell First Nation. Hydro One stated that the Crown (ENDM) had delegated the procedural aspects of the Duty to Consult to Hydro One, and provided a contact at the Ministry of Energy Northern Development and Mines if representatives of Caldwell First Nation wished to contact them directly.

Record of Consultation with Bkejwanong (Walpole Island First Nation)

Date/time	Type of communication	Origin	First Nation Staff / Representative	Staff members	Summary
2019-12-13 10:00	Email	Outgoing	Daniel Miskokomon - Bkejwanong (Walpole Island First Nation) (Chief) Janet Macbeth - Bkejwanong (Walpole Island First Nation) (Project Review Coordinator)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Walpole Island First Nation on November 14, 2019, and provided a reminder of the ESR review period and informed the community about the likelihood of the Stage 2 Archeological Assessment being conducted in 2020, rather than 2019, due to poor weather and environmental conditions.
2019-11-14 16:56	Email	Outgoing	Janet Macbeth - Bkejwanong (Walpole Island First Nation) (Project Review Coordinator)	Barbara Slim (Wood Group) Kristy O'Neal - Wood Group (Senior Archaeologist) Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Walpole Island First Nation to provide updates regarding the Stage 2 Archeological Assessment and Pedestrian Survey.
2019-11-13 14:42	Email	Outgoing	Dean Jacobs - Bkejwanong (Walpole Island First Nation) (Consultation Manager) Janet Macbeth - Bkejwanong (Walpole Island First Nation) (Project Review Coordinator)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Walpole Island First Nation to provide a reminder that the draft ESR was available for review until December 13, 2019, and noted that they would also provide a hard-copy.
2019-10-30 13:55	Email	Outgoing	Dean Jacobs - Bkejwanong (Walpole Island First Nation) (Consultation Manager) Janet Macbeth - Bkejwanong (Walpole Island First Nation) (Project Review Coordinator)	Mehrgan Mazaheri Paul Dalmazzi Sara Jane Souliere	Hydro One sent an email to Walpole Island First Nation and shared the minutes of a meeting held on October 28, 2019 and a copy of the draft Notice of Completion.
2019-10-30 13:49	Email	Outgoing	Daniel Miskokomon - Bkejwanong (Walpole Island First Nation) (Chief) Dean Jacobs - Bkejwanong (Walpole Island First Nation) (Consultation Manager) Janet Macbeth - Bkejwanong (Walpole Island First Nation) (Project Review Coordinator) Michael Dashner - Bkejwanong (Walpole Island First Nation) (Director of Operations)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Chief Miskokomon of Bkejwanong (Walpole Island First Nation) to share project updates regarding Hydro One's completion of the Draft Environmental Assessment. Hydro One shared a copy of the Notification Letter and the draft Notice of Completion.

Date/time	Type of communication	Origin	First Nation Staff / Representative	Staff members	Summary
2019-10-28 15:30	Meeting	Incoming	Dean Jacobs - Bkejwanong (Walpole Island First Nation) (Consultation Manager) Janet Macbeth - Bkejwanong (Walpole Island First Nation) (Project Review Coordinator)	Kieran Mackenzie Mehrgan Mazaheri Paul Dalmazzi Sara Jane Souliere	<p>The Hydro One Lakeshore TS project team met with Dean Jacobs and Janet Macbeth at the Walpole Island Heritage Centre. Dean and Janet welcomed the Hydro One staff and thanked them for coming to Walpole Island to discuss the project. Dean shared some history about the Walpole Island First Nation including their status as an unceded territory.</p> <p>Walpole Island FN requested their own archaeological staff be present during any stage 2 archaeological work for the Lakeshore TS, Hydro One confirmed that they would accommodate their request.</p> <p>Hydro One stated that she would follow up to provide Dean and Janet with further information regarding their Indigenous procurement policies and practices.</p>
2019-10-24 13:25	Email	Outgoing	Alicia Blackeagle - Bkejwanong (Walpole Island First Nation) (Executive Assistant to the Chief) Dean Jacobs - Bkejwanong (Walpole Island First Nation) (Consultation Manager) Janet Macbeth - Bkejwanong (Walpole Island First Nation) (Project Review Coordinator)	Mehrgan Mazaheri Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Bkejwanong (Walpole Island First Nation) and shared the Archeology Stage 1 Report, panels presented at the CIC's, the draft Notice of Completion. Hydro One also noted with regards to the archeology studies, prior to construction they will coordinate a Stage 2 survey of the applicable portions of the study area. Once the Stage 2 survey has been completed, a combination Stage 1/2 report will be submitted to the MTCS.
2019-10-10 14:29	Email	Outgoing	Alicia Blackeagle - Bkejwanong (Walpole Island First Nation) (Executive Assistant to the Chief) Janet Macbeth - Bkejwanong (Walpole Island First Nation) (Project Review Coordinator)	Paul Dalmazzi Sara Jane Souliere	Hydro One replied to Walpole Island First Nations email regarding their availability to meet.
2019-10-10 13:46	Email	Incoming	Alicia Blackeagle - Bkejwanong (Walpole Island First Nation) (Executive Assistant to the Chief) Janet Macbeth - Bkejwanong (Walpole Island First Nation) (Project Review Coordinator)	Paul Dalmazzi Sara Jane Souliere	Walpole Island First Nation emailed Hydro One and stated that they would be available to meet on October 28, 2019.
2019-10-10 13:05	Email	Outgoing	Alicia Blackeagle - Bkejwanong (Walpole Island First Nation) (Executive Assistant to the Chief) Janet Macbeth - Bkejwanong (Walpole Island First Nation) (Project Review Coordinator)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Walpole Island First Nations to confirm their availability to meet on October 28, 2019.

Date/time	Type of communication	Origin	First Nation Staff / Representative	Staff members	Summary
2019-10-08 18:10	Email	Outgoing	Alicia Blackeagle - Bkejwanong (Walpole Island First Nation) (Executive Assistant to the Chief) Dean Jacobs - Bkejwanong (Walpole Island First Nation) (Consultation Manager)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Walpole Island First Nation to provide updates and offered to meet with representatives as Hydro One is aware of Chief Miskokomon's interest in the project. Hydro One also mentioned that they would be planning a Stage 2 Archeological Assessment and asked if the Walpole Island First Nation community would be interested in the upcoming survey.
2019-10-04 15:27	Phone	Outgoing	Alicia Blackeagle - Bkejwanong (Walpole Island First Nation) (Executive Assistant to the Chief)	Sara Jane Souliere	Sara Jane Souliere spoke with Alicia Blackeagle, in response to Alicia's previous email requesting a meeting. Sara Jane and Alicia discussed the respective schedules and agreed that a meeting on Oct 7th/8th while Chief Miskokomon was in Toronto would likely not work. Alicia suggested that Hydro One reach out to Dean Jacobs to arrange for a meeting regarding the project, and asked that herself and Councilor Ron Soney be kept in the loop.
2019-10-04 08:25	Email	Outgoing	Alicia Blackeagle - Bkejwanong (Walpole Island First Nation) (Executive Assistant to the Chief)	Paul Dalmazzi Sara Jane Souliere	Hydro One provided their availability to meet with Walpole First Nations on October 7, 2019.
2019-10-02 09:00	Email	Incoming	Alicia Blackeagle - Bkejwanong (Walpole Island First Nation) (Executive Assistant to the Chief)	Paul Dalmazzi	Walpole Island First Nation replied to Hydro One and asked if it would be possible to arrange a meeting with the Lakeshore TS project team, Hydro One CEO Mark Poweska and Hydro One VP of Indigenous Relations Derek Chum on either October 7 or 8, as Chief Miskokomon would be in Toronto at this time.
2019-09-11 11:05	Email	Outgoing	Daniel Miskokomon - Bkejwanong (Walpole Island First Nation) (Chief) Michael Dashner - Bkejwanong (Walpole Island First Nation) (Director of Operations)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Chief Miskokomon of Bkejwanong (Walpole Island First Nation) to provide project updates and share an invitation to the second community information centre on October 1, 2019. Hydro One also noted that they are tentatively planning a Stage 2 Archeological Assessment and offered to have representatives of Walpole First Nation observe the survey.
2019-08-01	Phone	Outgoing	Michael Dashner - Bkejwanong (Walpole Island First Nation) (Director of Operations)	Paul Dalmazzi	Hydro One called the Walpole Island First Nation's Band Office (redirected to the office of Michael Dashner) to follow up regarding the Lakeshore TS project and Class EA. Hydro One briefly described the project, and stated that EA notices and emails had previously been sent to Chief Miskokomon and Mr. Dashner, but that he had not received any formal comments or questions from the Walpole Island First Nation so he was calling to follow up to see if Mr. Dashner was interested in discussing the project in more detail.

Date/time	Type of communication	Origin	First Nation Staff / Representative	Staff members	Summary
2019-07-12 12:00	Email	Outgoing	Daniel Miskokomon - Bkejwanong (Walpole Island First Nation) (Chief) Michael Dashner - Bkejwanong (Walpole Island First Nation) (Director of Operations)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Chief Misokokomon of Walpole Island First Nation and shared project updates. Hydro One recounted some of the events of the CIC and informed that the project team is evaluating preferred transformer locations. Hydro One requested that any feedback regarding the location could be sent to them by July 25, 2019.
2019-06-10 16:15	Email	Outgoing	Daniel Miskokomon - Bkejwanong (Walpole Island First Nation) (Chief) Michael Dashner - Bkejwanong (Walpole Island First Nation) (Director of Operations)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed Chief Miskokomon of Walpole Island First Nation to share information regarding the CIC.
2019-05-14	Letter	Outgoing	Daniel Miskokomon - Bkejwanong (Walpole Island First Nation) (Chief) Michael Dashner - Bkejwanong (Walpole Island First Nation) (Director of Operations)	Paul Dalmazzi	A hard copy of the Notice of Commencement letter and Class EA Study Area map were mailed to the Walpole Island FN, Hard copies were sent to Chief Dan Miskokomon and Michael Dashner 9Director of Operations) via Canada Post Registered Mail.
2019-05-10 17:36	Email	Outgoing	Chloe Lazakis - Ministry of Energy, Northern Development and Mines (ENDM) (Sr. Policy Advisor (A), Indigenous Energy Policy, Energy Networks and Indigenous Energy Policy Branch) Daniel Miskokomon - Bkejwanong (Walpole Island First Nation) (Chief) Michael Dashner - Bkejwanong (Walpole Island First Nation) (Director of Operations)	Paul Dalmazzi Sara Jane Souliere	Hydro One emailed a copy of the Notice of Commencement and Study Area map for the Lakeshore TS Class EA to Chief Miskokomon of the Walpole Island First Nation. Hydro One stated that the Crown (ENDM) had delegated the procedural aspects of the Duty to Consult to Hydro One, and provided a contact at the Ministry of Energy Northern Development and Mines, if representatives of Walpole Island First Nation wished to contact them directly.

Appendix B

Environmental Features in the Study Area – Baseline Data

Appendix B1

Stage 1 Archaeological Background Review

Stage 1 Preliminary Background Study

Lakeshore Transformer Station Class Environmental Assessment
Lots 15, 16 and 17, Concession Middle Road South Side, Geographic
Township of Rochester, Essex County, Now in the Town of Lakeshore,
Ontario

Project # SCL191337

Archaeological Consulting License # P066 (O'Neal)
P.I.F. # P066-0323-2019 (Stage 1 and Stage 2)
Associated with P.I.F. # P064-184-2008 (Stage 1)

Prepared for:

Hydro One Networks Inc.

483 Bay Street, North Tower, 12th Floor, Toronto, Ontario M5G 2P5

31-Jul-19

TABLE OF CONTENTS

Section	Page
1.0 PROJECT CONTEXT	1
1.1 Development Context	1
2.0 STAGE 1 BACKGROUND STUDY.....	2
2.1 Archaeological Context.....	2
2.1.1 Registered Archaeological Sites.....	2
2.1.2 History of Archaeological Investigations.....	2
2.1.3 Environmental Context.....	4
2.2 Historical Context.....	5
2.2.1 A Cultural History for Southern Ontario	5
2.2.2 Review of Historical Records.....	9
2.2.3 Historic Plaques.....	11
2.3 Stage 1 Analysis.....	11
2.4 Stage 1 Conclusions.....	11
3.0 RECOMMENDATIONS.....	13
4.0 ADVICE ON COMPLIANCE WITH LEGISLATION	15
5.0 BIBLIOGRAPHY.....	17

LIST OF TABLES

Table 1: Simplified Cultural Chronology of Southern and Eastern Ontario	8
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LIST OF APPENDICES

APPENDIX A: FIGURES

Figure 1	Location of Study Area
Figure 2	Aerial Photograph Showing Location of the Study Area
Figure 3	Topographic Map Showing Location of the Study Area
Figure 4	Development Plan
Figure 5	Aerial Photograph Showing Previous Archaeological Investigations within 50 m of the Study Area
Figure 6	Study Area on 1877 H.R. Page & Co.'s Map of the County of Essex
Figure 7	Study Area on 1881 Illustrated Atlas Map of Essex County
Figure 8	Stage 1 Results

1.0 Project Context

1.1 Development Context

Wood Environment & Infrastructure (“Wood”) was retained Hydro One Networks Inc. (the “Client”) to prepare a Stage 1 background study memo in support of the construction of a new switching station and new power transformation facilities that will house four new 230 kV transformers at the Lakeshore Transformer Station. The study area is located on Lots 15, 16 and 17, Concession Middle Road South Side, in the Geographic Township of Rochester, Essex County, now in the Town of Lakeshore, Ontario (the “study area”).

This assessment will be completed as part of a Class Environmental Assessment. The electrical load growth in the County of Essex has exceeded expectations in recent years, largely due to the expansion of the greenhouse industry in the area. An immediate need for a new switching station in the area has been identified by the Independent Electricity System Operator (IESO) and formally communicated to Hydro One. This station will increase the capability of the system to supply load in the Lakeshore-Kingsville-Leamington areas while contributing to improved performance of the bulk system. The IESO has also indicated that the station should be sized to accommodate future system reinforcement, including space for future expansion and additional equipment.

This Stage 1 memo was carried out in accordance with the Ontario Ministry of Tourism, Culture and Sport’s (“MTCS”) *Standards and Guidelines for Consultant Archaeologists* (2011), under an Ontario Professional Licence to Conduct Archaeological Fieldwork (P066) held by Kristy O’Neal, Senior Archaeologist at Wood. The project information was acknowledged by the MTCS on 18 July 2019 with the approval of PIF number P066-0323-2019 (Stage 1 and Stage 2). This summary presents a review of previous fieldwork, as well as the results of the preliminary Stage 1 background study and makes pertinent recommendations for the Stage 2 property assessment.



2.0 Stage 1 Background Study

As part of the Stage 1 archaeological assessment, Wood searched MTCS's PastPort system to determine if archaeological sites have been registered within 1 km of the property (Section 2.1.1), and if previous archaeological assessments have been carried out within a 50-m radius (Section 2.1.2). Secondly, the principal determinants of archaeological potential—proximity to water, fairly level topography, good drainage, favourable soils, and proximity to important resources and historical transportation routes and settlements—were examined to evaluate the property's overall archaeological potential (Sections 2.1, 2.1.3, 2.2, and 2.2.1). Thirdly, the specific potential for historic period archaeological resources was assessed through an examination of available historical maps and other archival sources (Section 2.2).

2.1 Archaeological Context

2.1.1 Registered Archaeological Sites

Wood conducted the requisite Stage 1 background research. First, the Wood searched the Ontario Archaeological Sites Database in PastPort to ascertain if previously registered archaeological sites have been identified in close proximity to the study area.

In Ontario, information concerning archaeology sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MTCS. This database contains archaeological registered sites within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on longitude and latitude. A Borden block is approximately 13 km east to west, and approximately 18.5 km north to south. Each Borden block is referred to by a four-letter designation and sites located within the block are numbered sequentially as they are found. The subject property is located within the *AbHp* Borden Block. On the basis of a search of the OASD through PastPort on 18 July 2019, there are no registered archaeological sites within the current study area or within a 1-km radius. The absence of registered sites may not necessarily be an accurate indication of a lack cultural occupation, but rather it may reflect the lack of systematic archaeological surveys in this area.

2.1.2 History of Archaeological Investigations

Wood completed a search for reports directly on PastPort on 22 July 2019. Based on this search (by address, lot and concession), three previous assessments have been conducted within 50 m of the study area (MTCS 2019) (Appendix A: Figure 5):

- *Stage 1 Archaeological Assessment, Hydro One, Supply to Essex-Leamington Study Area, Essex County, Ontario*. Prepared by Timmins Martelle Heritage Consultants Inc. ("TMHC"), dated March 2008. Reference No. 2007-079. P.I.F. # P064-184-2008 (TMHC 2008).

Timmins Martelle Heritage Consultants Inc. conducted a Stage 1 assessment for a Class Environmental Assessment for Hydro One. The study area was 7.25 km by 19 km and included parts of the former Geographic Townships of Mersea, Gosfield, Rochester and Tilbury West. Hydro One proposed building a new transmission line and transformer station, and this Stage 1 study was completed to aid in evaluating route alternatives to avoid archaeological sites. The Stage 1 assessment included the entirety of the current study area (TMHC 2008: Figure 1). As a result of TMHC's Stage 1 assessment, a Stage 2 archaeological assessment was recommended for all areas that exhibited archaeological potential (TMHC 2008: Figure 8). Specifically pertaining to the current study area, lands within 100 m of Middle Road and Rochester Townline Road were determined to exhibit high archaeological potential, while the balance was deemed to have indeterminate archaeological potential. The Stage 1 report recommended the entire study area for Stage 2 survey, with a more detailed review once the selected corridor was determined (TMHC 2008: 18). The Stage 2 report recommended a review of existing conditions in the corridor, including confirmation of potential and photo documentation of any areas where low potential existed (TMHC 2008: 20).

- *Stage 2 Archaeological Assessment of the Supply to Essex County Transmission Reinforcement Project (SECTR) Archaeological Study Corridor, Historic Townships of Mersea and Rochester, Essex County, Ontario.* Prepared by Wood (formerly Amec Foster Wheeler), dated 25 November 2016. P.I.F. # P219-0009-2016 (Wood 2016).

Following TMHC's Stage 1 study, Wood conducted a Stage 2 assessment in support of the Supply to Essex County Transmission Reinforcement Project. The study area, which encompassed a 13-km long by 40-m wide corridor, is located in parts of the Geographic Townships of Mersea and Rochester. Fieldwork strategies for this project were based on recommendations made in TMHC's Stage 1 report (TMCH 2008). Agricultural land was subjected to pedestrian survey and non-ploughable lands were assessed by means of test-pit survey. The northern portion of the corridor is located within the current study area, and this 40-m wide corridor was assessed by means of pedestrian survey (Appendix A: Figure 5).

Five locations containing archaeological resources were identified during this assessment, including four Aboriginal findspots and one Euro-Canadian site. The four findspots were isolated components and were not recommended for further assessment. The Euro-Canadian site was determined to have cultural heritage value or interest and was recommended for Stage 3 site-specific assessment. This site was registered in the OASD as Site AbHp-13 (Wood 2016: 25). None of the four archaeological locations are situated within 1 km of the current study area.

- *Revised Stage 1 Archaeological Assessment: SP Belle River Wind LP, Belle River Wind Project, Various Lots and Concessions, Geographic Townships of Maidstone, Rochester and Tilbury West, Essex County, Ontario.* Prepared by Golder Associates Ltd. ("Golder"), dated 19

November 2014. P.I.F. #s P311-0277-2014, P311-0291-2014, P311-0298-2014, P311-0300-2014 (Golder 2014).

Golder Associates Ltd. conducted a Stage 1 assessment for the proposed Belle River Wind Project. The study area, which encompassed approximately 18,600 ha, is located in the Town of Lakeshore, in parts of the Geographic Townships of Maidstone, Rochester and Tilbury West. Up to 65 new wind turbine locations were proposed and the Belle River Wind project area included the entirety of the current study area (Golder 2014: 28). As a result of Golder's Stage 1 assessment, a Stage 2 archaeological assessment was recommended for all areas to be impacted by the proposed wind turbine project, including turbine sites, access roads, transmission lines, collection systems and transformer stations (Golder 2014: 20). Specifically pertaining to the current study area, lands within 100 m of Middle Road and surrounding the historic structures along Middle Road were determined to exhibit high archaeological potential. All remaining lands were determined to exhibit moderate archaeological potential (Golder 2014: Map 10). The entirety of the current study area was recommended for Stage 2 assessment (Golder 2014: Map 11; Appendix A: Figure 5).

2.1.3 Environmental Context

The study area is situated within the St. Clair Clay Plains physiographic region of Ontario (Chapman and Putnam 1984: 113). This region consists of an extensive clay plain that covers approximately 5,879 km² at an elevation of 175 to 214 m above sea level (Chapman and Putnam 1984: 147). The St. Clair Clay Plains have little topographic relief and cover much of Essex, Kent and Lambton counties. These areas were inundated by glacial Lakes Whittlesey and Warren and are essentially till plains with shallow deposits of lacustrine clay. The study area is located within the Essex Clay Plain sub-region and consists of a till plain overlying a low swell in the bedrock (Chapman and Putnam 1984: 149).

The dominant type of soil in the study area is Brookston clay, a dark clay with few stones (Richards *et al.* 1989). Brookston clay is characterized by almost level topography with poor natural drainage. Because of the level topography, drainage within the St. Clair Clay Plain is poor, with most surface water draining into Lake St. Clair (Chapman and Putnam 1984: 149). The land is predominantly used for cash crops and dairy farming, and is largely made up of agricultural fields, with few woodlots (Richards *et al.* 1989).

It is crucial to consider the proximity of water sources in any evaluation of archaeological potential because the availability of water is arguably the single most important determinant of human land use, past and present. The *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011) lists proximity to water as one of the prime indicators of potential for the presence of archaeological sites. Distance from potable water has been one of the most commonly used variables for predictive modeling of site location. Water, both potable and non-potable, also

facilitated the transportation of people and goods and served to focus animal and vegetable resources. According to the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011), lands within 300 m of an extant or formerly mapped river or creek have potential for the presence of early Aboriginal and Euro-Canadian archaeological sites. The nearest natural water source is Ruscom River, which at its closest is 620 m west of the study area. However, historically, a tributary of Ruscom River was located just north of the study area (Belden 1881: 18). As well as being a primary water source, the Ruscom River is known to have been an early transportation route, with an early Aboriginal trail following the path of the river (Lajeunesse 1960: xxxix).

There are a number of human-manufactured drains surrounding the study area, including drains along the three roadways that border the study area to the north, east, and west. Four additional drains are located in agricultural fields to the east and south. Evidently, these deep drains were once small waterways that were ditched and straightened as a way to improve the poor natural drainage of the area (Richards *et al.* 1989).

Features indicating past water sources, such as glacial lake shorelines, relict river or stream channels, or shorelines of drained lakes and marshes, or cobble beaches, also indicate archaeological potential. There are no such indicators within the study area, although there are glacial beaches approximately 10 km to the south (Department of Mines and Northern Affairs 1972). These beaches to the south were once the shoreline of glacial Lake Grassmere, which was part of the Lake Erie basin approximately 12,000 years ago (Leverett and Taylor 1915).

In summary, a review of the archaeological context seemingly does not support a conclusion of overall archaeological potential and the need for a Stage 2 assessment: there are no natural water sources within 300 m and there are no previously registered archaeological sites within a 1-km radius. However, a tributary of Ruscom River was historically located just north of the study area, and the numerous human-made drains in the area are thought to represent small waterways that were ditched and straightened. Moreover, the study area is comprised of non-marshy soil that was suitable for human habitation. And the St. Clair Clay Plain, as seen throughout other parts of Essex, Kent and Lambton counties, has very subtle rises on an otherwise flat landscape, where small archaeological sites could be present. Therefore, it is determined that the study area exhibits potential for the presence of archaeological sites.

2.2 Historical Context

2.2.1 A Cultural History for Southern Ontario

The majority of interpretations of pre-contact Aboriginal adaptations in Ontario derive from the analysis and interpretation of stone tools. Stone tools are made from specific types of rocks that fracture in ways that can be controlled, so that they are easily shaped into useful forms. These rocks include chert, chalcedony, quartzite, petrified wood, and volcanic glass, known as obsidian.

Most stone tools found in southern Ontario are formed from types of chert that outcrop in local limestone formations, such as: Onondaga and Haldimand cherts, found near the north shore of Lake Erie; Kettle Point chert, which outcrops near Lake Huron; and Collingwood chert, which outcrops along the Niagara Escarpment near Georgian Bay.

Stone tools used as spear tips and arrowheads are the most commonly studied tool type. These are referred to as projectile points. As projectile point technology changed over time, styles and shapes of points changed also. Studying these changing point types has resulted in the development of a chronological framework for pre-contact times prior to 3,000 years ago, when First Nations groups began to make clay pottery. Later periods are defined both by point types and pottery characteristics. Radiocarbon dating of archaeological sites can only be done when organic materials are collected from those sites, so the dating of most sites is done by comparing the artifacts from dated sites to those from undated sites. The following is an overview of the pre-contact history of southern Ontario as understood by archaeologists.

The cultural history of southern Ontario began approximately 11,000 years ago when the glaciers had melted and the land was re-exposed. The land was quickly settled by bands of hunters and gatherers who are thought to have been large game hunters. These people used large spear points that are distinctively shaped with long central grooves, called "flutes". Archaeologists have defined a number of point types that date to this time, including Gainey, Barnes, Crowfield, and Hi-Lo types. This period is referred to as the Paleo-Indian Period and it is thought to have lasted until approximately 9,000 years ago.

After 9,500 years ago, there was a long period when the climate was variable and the bare lands left by the glaciers were becoming re-forested, resulting in patchier, more diverse ecozones. During this time, which lasted until 3,000 years ago, people were adapting to diverse environmental settings. There appears to have been more reliance on local stone for making tools and more variable tool manufacturing technologies. The adoption of a spear-throwing board, known as an atlatl, was an important innovation, resulting in the ability to throw smaller darts with more force. Projectile points from this period, called the Archaic Period, are commonly side or corner-notched and are smaller than those of the preceding period. The Archaic adaptation is generally thought to have centred on localized resources, often forest resources, and groups of people are thought to have been less mobile, an adaptation that continued to develop until the arrival of Europeans.

In southern Ontario, the Archaic Period is divided into the Early, Middle and Late Archaic. Early point types include serrated Nettling and Bifurcate Base points. Middle types include Brewerton Corner Notched and Otter Creek, and Late types include Lamoka, Genesee, Crawford Knoll, and Innes. Most of these are named after sites where they were first identified.



The Archaic Period is followed by the Woodland Period. The major technological change in the Early Woodland Period is the introduction of pottery. During this time, people are thought to have developed more community organization and the manufacture of clay pottery is thought to indicate less residential mobility. Burial sites dating to this time often display evidence of ceremonial activities. Projectile points made at this time include much smaller types, probably used as arrow tips. Point types include Meadowood and Kramer and early ceramics were crudely-made vessels with conoidal (pointed) bases. The Early Woodland Period transitioned into the Middle Woodland Period approximately 2,400 years ago.

During the Middle Woodland Period in southern Ontario community and kin identity became more deeply entrenched, and more sedentary communities developed. Point types made at this time include Saugeen, Vanport, and Snyders. Ceramic vessels were conoidal in shape, but were decorated with stamped designs in the soft clay. The Middle Woodland Period transitioned into the Late Woodland Period A.D. 500–900 with the earliest direct evidence for agriculture.

The Late Woodland Period saw the development of recognizable Iroquoian and Algonkian cultures in southern Ontario, characterized by the intensification of agriculture and the increased utilization of corn. Greater sedentism led to increasing settlement populations and greater complexity of settlement organization. Sites dating to this time are often found on terraces overlooking the floodplains of large rivers. Iroquoian villages tended to be small, palisaded compounds with longhouses occupied by families. As the Late Woodland Period progressed, more intercommunity communication and integration became necessary to maintain the sedentary agricultural way of life. Later Iroquoian villages were larger and more heavily palisaded and longhouses were larger also.

When European explorers and missionaries arrived in southern Ontario in the early seventeenth century, they described the local Iroquoian social organization as being under the direction of elected chiefs. Tribal confederacies and allegiances resulted in intertribal warfare, which was only made worse by the European presence. Three Ontario Iroquoian confederacies, the Huron, Petun, and Neutral, were driven from their traditional territories before the middle of the seventeenth century.

Archaeologists tend to describe a period of transition from Late Woodland to Historic times as “proto-historic”. The dating of this period is variable and may be different from site to site within a region as it describes a time when local First Nations were acquiring European trade goods indirectly through other Aboriginal middlemen rather than directly from European traders. This period was generally very short and is often difficult to differentiate archaeologically from later historic times, when trade goods were widely available, but it usually is identified by evidence of an intact traditional cultural adaptation with occasional European items used in traditional ways.



Table 1: Simplified Cultural Chronology of Southern and Eastern Ontario

Period	Complexes/Cultures, Some Diagnostic Artifacts
Early Paleo-Indian (9000–8500 B.C.)	Small nomadic hunter-gatherer bands. Early Paleo-Indian (EPI) rarely found in Eastern Ontario. Gainey, Barnes, Crowfield fluted points.
Late Paleo-Indian (8500–7500 B.C.)	Small nomadic hunter-gatherer bands. Hi-Lo, Holcombe points, Lanceolate Bifaces.
Early Archaic (7500–6000/4500 B.C.)	Small nomadic hunter-gatherer bands. Nettling, Stanley/Neville points.
Middle Archaic (6000/4500–2500 B.C.)	Transition to territorial settlements. Seasonal round of subsistence introduced. Thebes (6000–5000 B.C.), Otter Creek points (4500–3000 B.C.). Brewerton Complex (3000–2500 B.C.) . Brewerton points. Laurentian Complex (6000 B.C.–2500 B.C.) (Eastern Ontario)
Late Archaic (2500–1000 B.C.)	More numerous territorial hunter-gatherer bands, increasing use of exotic materials and artistic items for grave offerings, regional trade networks. Narrowpoint Complex (2500–1850 B.C.) . Lamoka points. Broadpoint Complex (1850–1650 B.C.) . Adder Orchard, Genesee points. Smallpoint Complex (1650–1000 B.C.) . Crawford Knoll, Innes points. Terminal Archaic (1100–1000 B.C.) Glacial Kame Complex . Hind points.
Early Woodland (1000–400 B.C.)	Pottery introduced. Meadowood Notched points, Meadowood Cache Blades, Kramer, Adena points. Meadowood Complex (1000–400 B.C.) . Middlesex Complex (650–400 B.C.) . Introduction of true cemeteries.
Middle Woodland (400 B.C.–A.D. 500/900)	Saugeen, Snyders, Vanport, Port Maitland points. Point Peninsula Complex (Southcentral and Eastern Ontario) Saugeen Complex (southeast of Lake Huron and the Bruce Peninsula, London area, and possibly as far east as the Grand River) Couture Complex (Lake St. Clair and the western end of Lake Erie). Burial ceremonialism.
Transitional Woodland (A.D. 500–900)	Agriculture introduced. Levanna, Jacks Reef points. Princess Point Complex (Eastern end of Lake Erie and the western end of Lake Ontario). Rivière au Vase Phase of the Younger / Western Basin Tradition (Lake St. Clair and western end of Lake Erie) Sandbanks Complex (Kingston area).
Late Woodland (A.D. 900–1650)	Tribal differentiation. Transition to settled village life. Dewaele, Glen Meyer Tanged, Triangular Nanticoke, Notched Nanticoke, Triangular Daniels/Madison points. Ontario Iroquoian and St. Lawrence Iroquoian Traditions (Southcentral and Eastern Ontario, respectively). Algonkian Western Basin Tradition (Lake St. Clair and the western end of Lake Erie).
Early Post-Contact (A.D. 1650–1763)	Iroquoian, Algonkian migrations and resettlement. French exploration and colonization
Late Post-Contact (A.D. 1763–1867)	Iroquoian, Algonkian migrations and resettlement. British and other European immigration increases.

Archaeologically, the years since the arrival of Europeans are referred to as the Historic Period. In southern Ontario, significant Historic sites are those that have an affiliation with an important



historic event, figure, or family, but can also be anything dating to the original European settlement of a region. Often, these sites date to before A.D. 1830.

2.2.2 Review of Historical Records

Historically, the study area was located within the Township of Rochester, Essex County. As early as the 1670s, two Sulpician priests, François Dollier de Casson and René de Bréhant de Galinée, and later the adventurer René-Robert Cavelier, Sieur de LaSalle, made their way up the Detroit River to Lake St. Clair to document the region that is now Essex County (Morrison 1954: 3).

Father Hennepin's 1679 description of the area indicates why it was so appealing to early settlers and provides a great deal of information on the environment at the end of the seventeenth century:

The country on both sides of this beautiful strait is adorned with fine open plains, and you can see numbers of stags, does, deer, bears, by no means fierce and good to eat, turkey hens, and all kinds of game, swans in abundance...the rest of the strait is covered with forests, fruit trees like walnuts, plum and apple trees, wild vines loaded with grapes, of which we made some little wine. (Lajeunesse 1960: 10).

The first European settlement in Essex County took place in the early 1700's when Sieur De Lamothe Cadillac built Fort Pontchartrain on what is now Detroit. The fort originally started out as a fur trading centre but was converted into a military post (Lajeunesse 1960: xxxiii). Aboriginal groups from the surrounding area were invited to move to the vicinity of the fort to partake in the fur trade. The result was an Aboriginal population of around 6,000 surrounding the fort, and the different affiliations of these groups resulted in conflict until 1712, when the Sauk mounted a siege and many of the Aboriginal groups left the area. In 1748, a Jesuit mission to the Huron was established on the south shore of the Detroit River, in what is now the Windsor area (ECTA 1947). After that, French agriculturalists quickly settled in the area (Mika & Mika 1977).

In 1796, plots of land in Essex County were given to fur traders from Detroit who wished to remain under British Rule. At the close of American Revolution, and again following the War of 1812, United Empire Loyalists began seeking land and settling in the area (ETCA 1947). The inland areas of what is now Essex County were not settled until the nineteenth century, as the land was poorly drained. However, by 1824, Essex had a population of 4,274, which quickly grew upon completion of the Erie Canal and Talbot Road a few years later (Carter 1984).

Rochester Township was first incorporated in 1850 (Carter 1984). The Township was laid out in 1792 and was named after Rochester, an ancient Roman town in Kent, England. Development of the township was somewhat slower than neighboring regions due to inadequate drainage for farmlands (Mika & Mika 1984). The lots along Belle River and Ruscom River were first surveyed in 1799 (Clarke 2002: 67). The first Euro-Canadian settlers who took up residence in what is now



Belle River were primarily French hunters and trappers who also cleared and cultivated the land in the late 1790s (Belden 1881: 11). The remainder of the township was surveyed in 1824 (Clarke 2002: 67, 73). Settlers began occupying the interior of the township, starting with early settlement along Middle Road in the 1830s and 1840s. The Simon brothers, some of the earliest settlers along Middle Road, took up residence as farmers and fruit growers in the centre of the township and formed what became known as the German Settlement (Belden 1881: 11, 38). In the early days of the township, farming was a mainstay of the economy, but the construction of the Great Western Railway in 1852 gave rise to a number of smaller industries (Mika & Mika 1984). By 1852, Rochester Township had a population of 788 (Carter 1984).

The nearest historical community to the study area was the settlement of Ruscom Station to the west on Middle Road. A post office was established there in 1883, with John D. Matthews as the first postmaster. The community had a population of 100 in 1892 (Carter 1984: 1023).

Historical records and mapping were examined for evidence of early Euro-Canadian use of the study area. Historically, the study area was located on Part of Lots 15 to 17, Concession Middle Road South Side, in the Geographic Township of Rochester.

The 1877 *Map of the County of Essex* (H.R. Page & Co. 1877: Appendix A: Figure 6) was examined in an effort to determine the potential for historic archaeological evidence within the study area. At that time, several landowners were identified. The west half of Lot 15 was owned by Edward Whatley, and there is a farmstead illustrated on the north edge of the lot along Middle Road. The east half of Lot 15 was owned by H. Ludlum, with no structures illustrated on this portion of the lot. The north half of Lot 16 was owned by Mrs. Ryder, and there is a farmstead illustrated on the north edge of the lot, along Middle Road. The south half was owned by Alex Cameron, with no structures depicted. Alex Cameron is also listed as the owner of the south half of Lot 17. The north half of Lot 17 was owned by J. Drummond, with no structures illustrated on this portion of the lot. The Canada Southern Railway is shown 1.2 km north of the study area. Historical roadways are located to the north (County Road 46/Middle Road), south (S. Middle Road) and east (Rochester Townline Road). In addition, there is a roadway dividing Lot 15.

Census records from 1861 to 1881 were searched to provide additional information about the landowners listed on the 1877 map. None of them were present.

In addition, the 1881 *Illustrated Historical Atlas of the County of Essex* (H. Belden & Co. 1881: 18; Appendix A; Figure 7) was examined. No owners are listed for any of the lots within the study area. A school is shown on the northwest corner of Lot 14, approximately 550 m to the west. The Canada Southern Railway ran 1.2 km to the north, with the nearest station in Comber, 5 km northeast of the study area. The Canada Southern Railway, which connected Windsor and Niagara, was not constructed until the 1870s (Andreae 1972). Historical roadways are located to the north

(County Road 46/Middle Road), south (S. Middle Road) and east (Rochester Townline Road); however, the roadway formerly transecting Lot 15 is not illustrated on the 1881 map.

The absence of structures or identified landowners on the historical mapping does not necessarily mean that one or more structures were not present at that time, earlier, or later. Not all features of interest were mapped systematically on the Ontario series of historical maps and atlases, given that they were financed by subscription. Subscribers were given preference with regard to the level of detail provided on the maps and those who chose not to pay the subscriber's fee often did not appear in the final product.

In summary, a review of the historical context supports a conclusion of overall archaeological potential and the need for a Stage 2 assessment since the study area is located adjacent to historical transportation routes, including Middle Road, South Middle Road, and Rochester Townline Road, as illustrated in the 1877 and 1881 maps consulted. Moreover, there are farmstead structures illustrated within the study area on the 1877 map. As per the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011), any areas within 100 m of historical transportation routes and 300 m of early Euro-Canadian settlement warrant the need for a Stage 2 property assessment.

2.2.3 Historic Plaques

There are no historic plaques located near the study area (Brown 2019).

2.3 Stage 1 Analysis

The study area encompasses approximately 200 ha and is made up largely of agricultural fields. The study area's boundaries include Middle Road to the north, Rochester Townline Road to the east, and South Middle Road to the south. There is a hydro transmission corridor with towers transecting the study area. In addition, there are five areas with greenspaces and structures, including homes, farm buildings, and commercial buildings.

Archaeological potential has been removed within approximately 8.6 ha of the study area. Visible evidence of disturbance includes driveways, parking lots, structures, and existing roadways and deep drains running along the roadways.

The remainder of the study area has archaeological potential and warrants Stage 2 assessment. Areas with archaeological potential consist of 1.8 ha of unploughable residential urban lawns, and 189.6 ha of open agricultural fields.

2.4 Stage 1 Conclusions

The Stage 1 background study has indicated that all undisturbed and previously unassessed portions of the subject property have potential for the recovery of archaeological resources. At first glance, the current lack of water sources within 300 m and the present lack of registered

archaeological sites in the vicinity would seem to suggest low archaeological potential; however, a tributary of Ruscom River was historically located just north of the study area, and the numerous human-made drains in the area are thought to represent small waterways that were ditched and straightened. Moreover, the study area is comprised of non-marshy soil that was suitable for human habitation. And the St. Clair Clay Plain, as seen throughout other parts of Essex, Kent and Lambton counties, has very subtle rises on an otherwise flat landscape, where small archaeological sites could be present. The lack of previously registered archaeological sites in the vicinity likely reflects a lack of systematic survey in the area rather than the absence of Indigenous and historic Euro-Canadian presence.

In like manner, a review of the historical context supports a conclusion of overall archaeological potential and the need for a Stage 2 assessment. The 1877 and 1881 mapping consulted demonstrates that the study area not only contains multiple historical structures but is adjacent to three historical transportation routes.

TMHC's 2008 Stage 1 assessment agreed that the current study area warrants Stage 2 assessment. TMHC (2008: 20) recommended a review of existing conditions in the corridor, including confirmation of potential and photo documentation of any perceived low potential areas. Golder's Stage 1 assessment also agreed that the current study warrants Stage 2 assessment, adding that lands within 100 m of Middle Road and Rochester Townline Road exhibit high archaeological potential, while the remainder have indeterminate or moderate potential (Golder 2014: Map 11)

A Stage 2 assessment was completed by Wood (2016) on a 40-m wide corridor within the current study area and no archaeological resources were observed. Unassessed lands that will be impacted by the present development proposal should be subjected to Stage 2 assessment prior to development-related disturbance. It is Wood's understanding that the construction of the new power transformation facilities will not impact the entirety of the Stage 1 study area. Areas to be impacted include only lands to be used for the construction of a new switching station and new 230 kV transformers at the Lakeshore Transformer Station. These impacts are only expected to take place within the agricultural fields (Appendix A: Figure 4). These open fields should be subjected to pedestrian survey at 5-m intervals prior to any development-related disturbance. Should any unploughable urban residential lawns be required for the proposed undertaking, they should be subjected to test-pit survey at 5-m intervals prior to development-related disturbance.

3.0 Recommendations

In light of the above results, the following recommendations are made, subject to the conditions below and the advice on compliance with legislation provided in Section 4:

1. Prior to development-related disturbance, previously unassessed agricultural fields required for the proposed undertaking must be subjected to pedestrian survey at 5-m intervals. These fields must first be freshly ploughed by means of mouldboard ploughing (and disk harrowing if necessary) to provide for ground surface visibility of at least 80%. They must also be allowed to weather through one heavy, or several light rainfalls to improve surface visibility further. If an artifact is encountered, the routine 5-m transects should be decreased to 1-m over a minimum 20-m radius around the find until the full extent of related artifacts has been identified or the find is confirmed to be isolated. For locations with multiple artifacts, all formal artifact types and diagnostic categories must be recovered, leaving other artifacts *in-situ* so that the area can easily be relocated on the ground if further assessment is required. The exact locations of archaeological resources should be plotted by GPS. In addition, UTM coordinates must be acquired for at least two fixed landmarks in the vicinity. Recovered resources must be processed, analyzed and catalogued by provenience in the laboratory.
2. Prior to development disturbance, any unploughable urban residential lawns required for the proposed undertaking should be subjected to test-pit survey at 5-m. Test-pit surveys involve the hand digging of test pits (approximately 30 cm in diameter), through the A Horizon (topsoil) and 5 cm into the B Horizon (subsoil) at 5-m intervals. Excavated soils are screened for artifacts through 6-mm aperture mesh and the walls of each test pit are examined for cultural soil horizons. All artifact-bearing ("positive") test pits are flagged and plotted by GPS. In addition, UTM coordinates are acquired for at least two fixed landmarks in the vicinity. The pattern and intensity of test-pit placement may be altered due to changes in archaeological potential in different parts of a study area and/or the presence of disturbed soils. Any such areas of disturbance are evaluated and photo-documented. If archaeological resources of cultural heritage value or interest are encountered, they are recovered for processing, analysis and cataloguing by provenience in the laboratory. In the case of an isolated "positive" test pit, eight additional test pits must be excavated at a 2-m radius around the isolated "positive" test pit and a 1-m test unit must be excavated directly over the isolated "positive" test pit. Once screened for artifacts, all test pits and test units are backfilled, and any sod caps are replaced and tamped down by foot.

The above recommendations are subject to Ministry of Tourism, Culture and Sport approval, and it is an offence to alter any of the Study Area without Ministry of Tourism, Culture, and Sport concurrence.

No grading or other activities that may result in the destruction or disturbance of the Study Area is permitted until notice of Ministry of Tourism, Culture, and Sport approval has been received.



4.0 Advice on Compliance with Legislation

- a) This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part IV of the *Ontario Heritage Act, R.S.O. 1990, c 0.18*. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.
- b) It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such a time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
- c) Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. 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 Section 48 (1) of the *Ontario Heritage Act*.
- d) The *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33* requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.
- e) Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological license.

5.0 Closure

We trust that the information presented in this background study meets your current requirements. Should you have any questions, or concerns, please do not hesitate to contact the undersigned.

Respectfully Submitted,

**Wood Environment & Infrastructure Solutions,
a Division of Wood Canada Limited**

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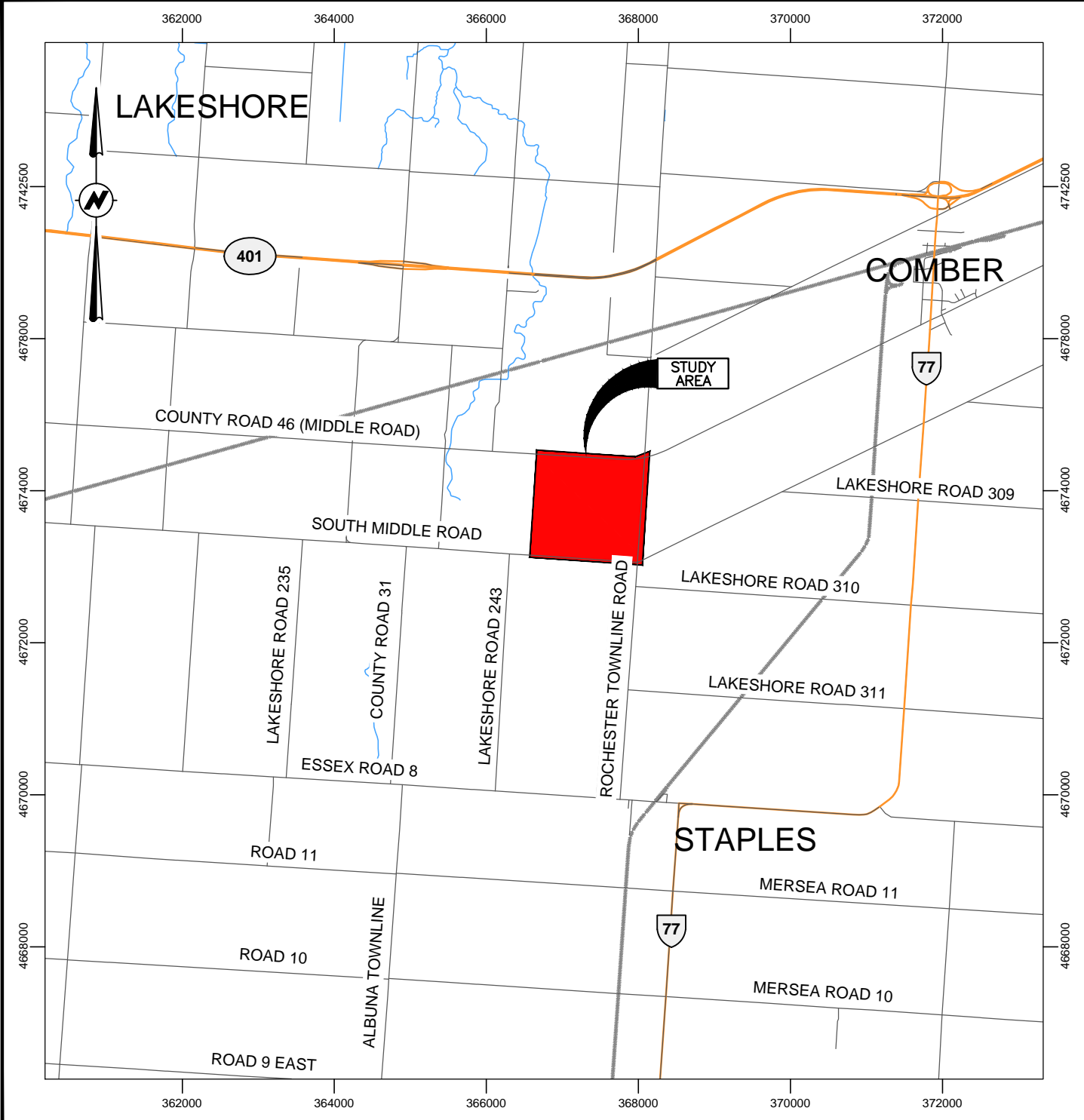


Appendix A

Figures



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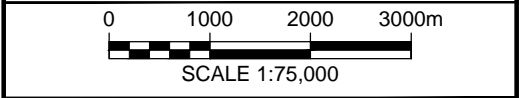


PROJECT:
 STAGE 1 PRELIMINARY BACKGROUND STUDY
 LAKESHORE TRANSFORMER STATION CLASS ENVIRONMENTAL
 ASSESSMENT
 LOTS 15, 16 & 17, CONCESSION MIDDLE ROAD SOUTH SIDE,
 GEOGRAPHIC TOWNSHIP OF ROCHESTER, ESSEX COUNTY, ONTARIO

TITLE:
 LOCATION OF STUDY AREA

LEGEND:
 ■ STUDY AREA

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE
 WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS
 REPORT No. SCL191337.
 ALL LOCATIONS ARE APPROXIMATE.
 REFERENCES:
 CANMAP STREETFILES V2008.4.



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DWN BY: LMK	CHK'D BY: KO	DATE: JULY 29, 2019
DATUM: NAD83	PROJECTION: UTM Zone 17	PROJECT No: SCL191337
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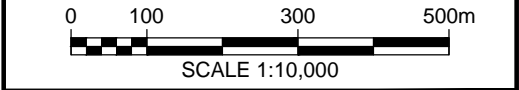


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 ASSESSMENT
 LOTS 15, 16 & 17, CONCESSION MIDDLE ROAD SOUTH SIDE,
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TITLE:
 AERIAL PHOTOGRAPH SHOWING
 LOCATION OF STUDY AREA

LEGEND:
 STUDY AREA

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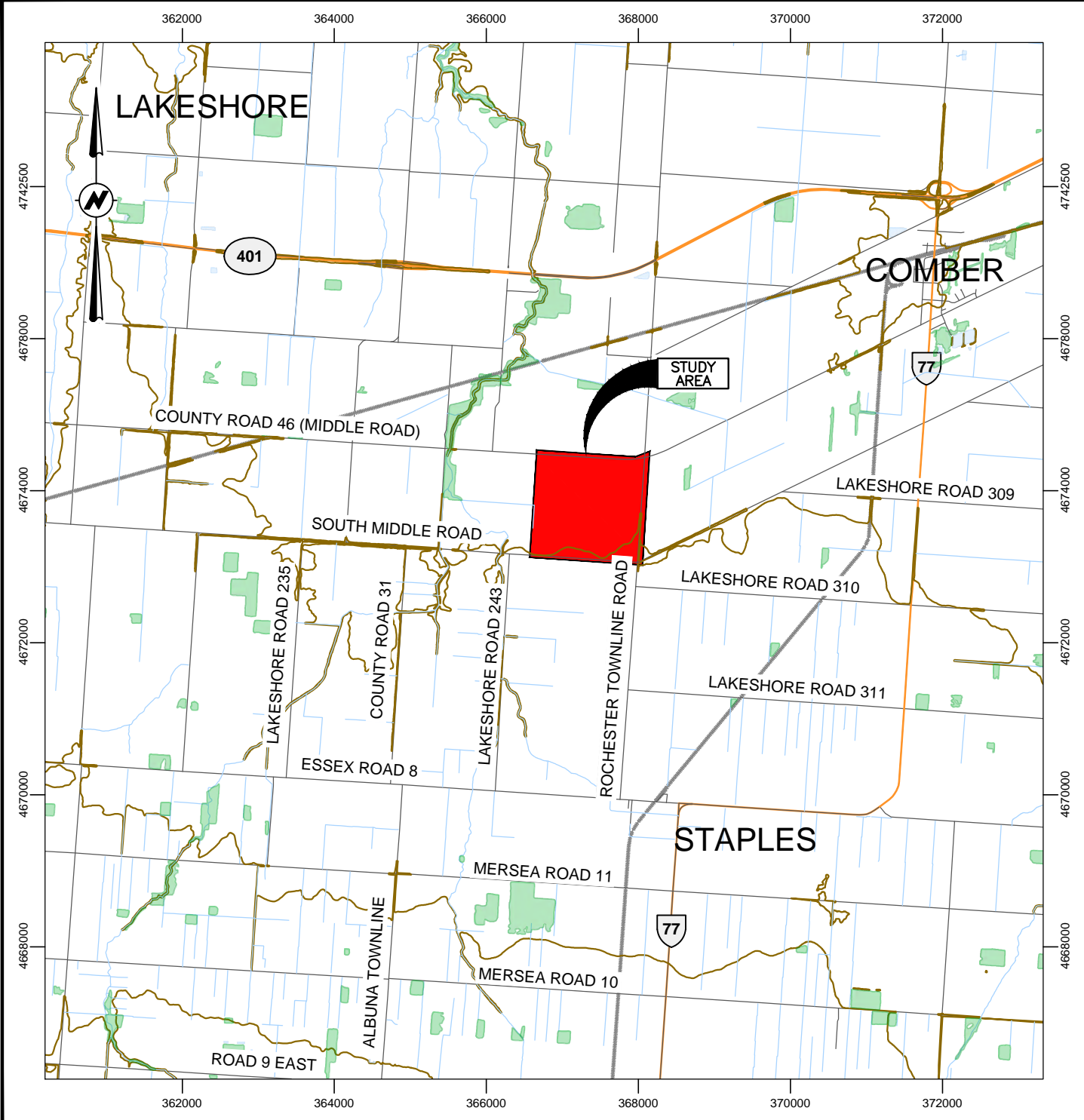
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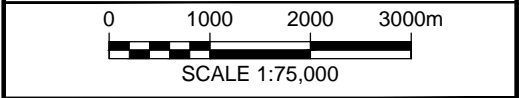


PROJECT:
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 LAKESHORE TRANSFORMER STATION CLASS ENVIRONMENTAL
 ASSESSMENT
 LOTS 15, 16 & 17, CONCESSION MIDDLE ROAD SOUTH SIDE,
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TITLE:
 TOPOGRAPHIC MAP SHOWING THE LOCATION OF
 STUDY AREA

LEGEND:
■ STUDY AREA

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REFERENCES:
 ONTARIO BASIC MAPPING (OBM).



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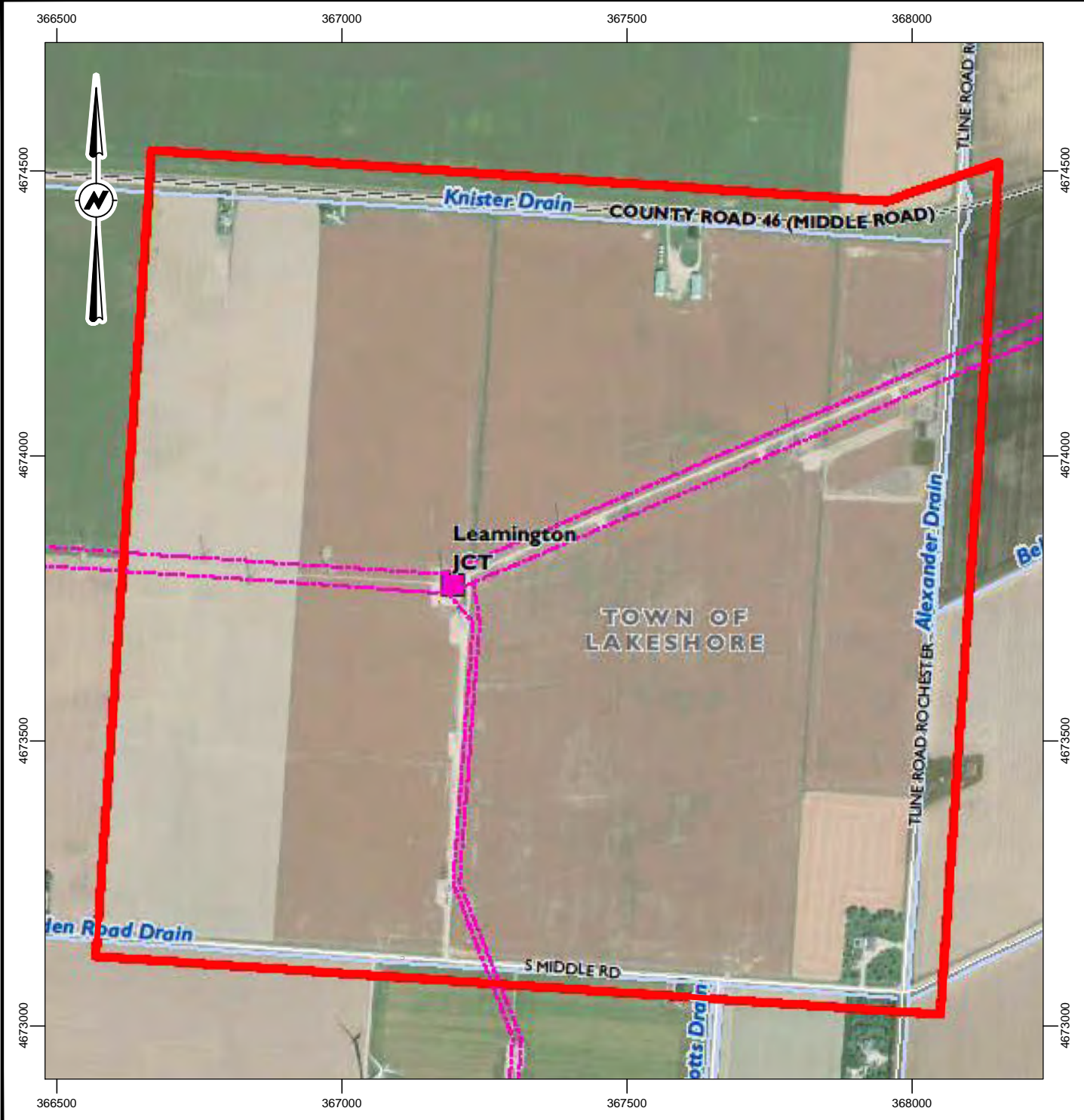
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DATUM: NAD83	PROJECTION: UTM Zone 17	PROJECT No: SCL191337
REV No: 0		FIGURE No: 3

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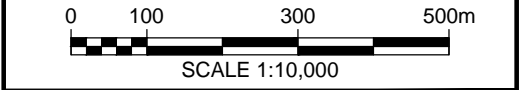


PROJECT:
 STAGE 1 PRELIMINARY BACKGROUND STUDY
 LAKESHORE TRANSFORMER STATION CLASS ENVIRONMENTAL
 ASSESSMENT
 LOTS 15, 16 & 17, CONCESSION MIDDLE ROAD SOUTH SIDE,
 GEOGRAPHIC TOWNSHIP OF ROCHESTER, ESSEX COUNTY, ONTARIO

TITLE:
 DEVELOPMENT PLAN

LEGEND:
 STUDY AREA

NOTES:
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 REFERENCES:
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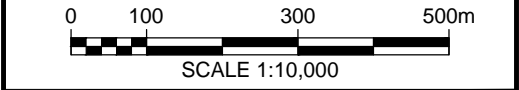
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 LAKESHORE TRANSFORMER STATION CLASS ENVIRONMENTAL
 ASSESSMENT
 LOTS 15, 16 & 17, CONCESSION MIDDLE ROAD SOUTH SIDE,
 GEOGRAPHIC TOWNSHIP OF ROCHESTER, ESSEX COUNTY, ONTARIO

TITLE:
 AERIAL PHOTOGRAPH SHOWING PREVIOUS
 ARCHAEOLOGICAL INVESTIGATIONS WITHIN 50m OF
 THE STUDY AREA

- LEGEND:**
- STUDY AREA (CURRENT INVESTIGATION)
 - P064-184-2008 STAGE 1 AA
(PREVIOUS TMHC INVESTIGATION, 2008)
STAGE 2 RECOMMENDED
 - P311-0277-2014 STAGE 1 AA
(PREVIOUS GOLDER INVESTIGATION, 2014)
STAGE 2 RECOMMENDED
 - P219-0009-2016 STAGE 2 AA
(PREVIOUS WOOD INVESTIGATION, 2016)
STAGE 2 PEDESTRIAN SURVEY AT 5m INTERVALS
NO FURTHER FIELD WORK REQUIRED

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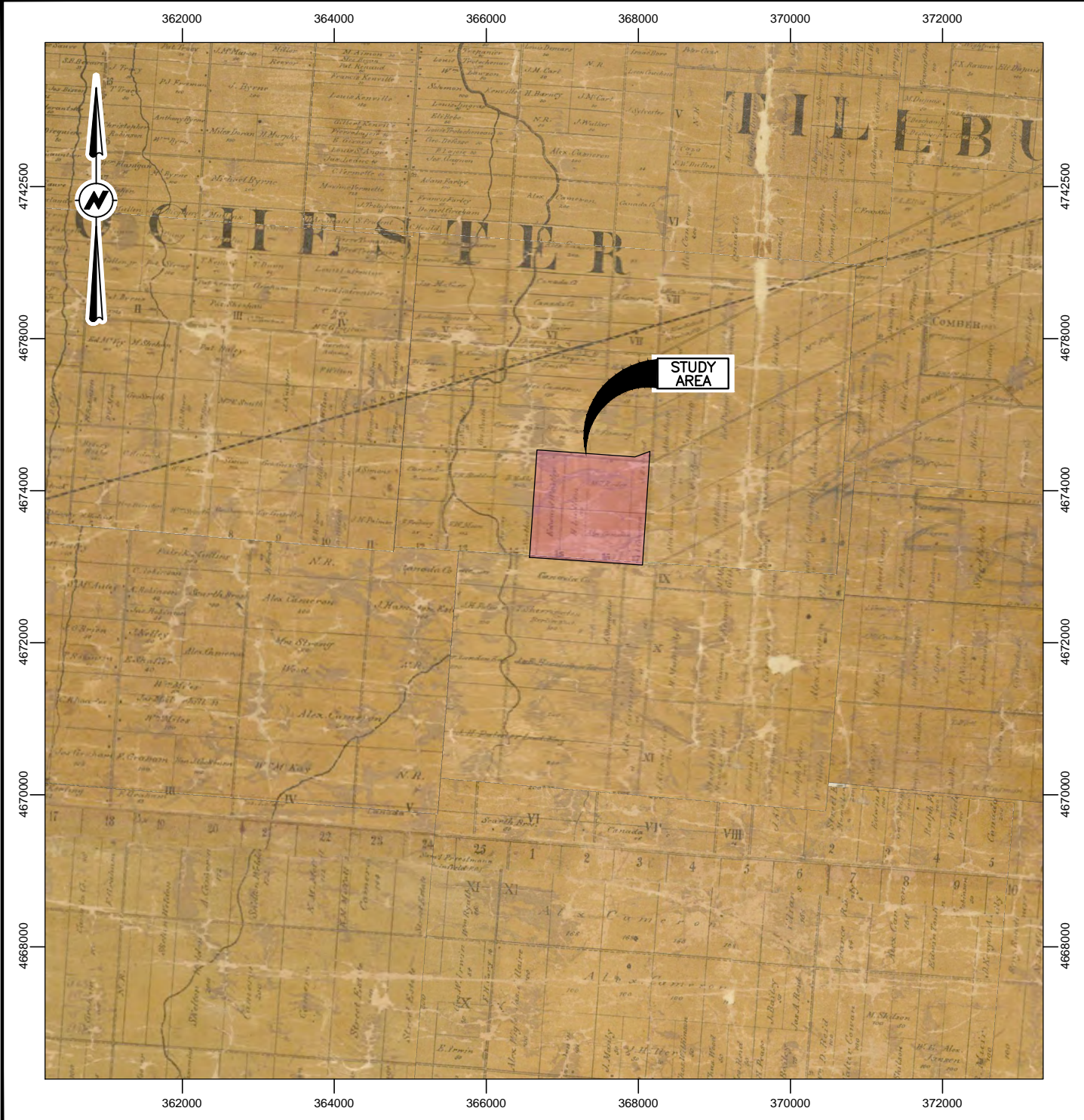
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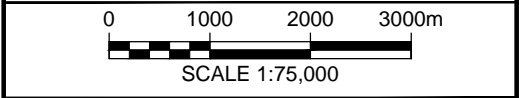


PROJECT:
 STAGE 1 PRELIMINARY BACKGROUND STUDY
 LAKESHORE TRANSFORMER STATION CLASS ENVIRONMENTAL
 ASSESSMENT
 LOTS 15, 16 & 17, CONCESSION MIDDLE ROAD SOUTH SIDE,
 GEOGRAPHIC TOWNSHIP OF ROCHESTER, ESSEX COUNTY, ONTARIO

TITLE:
 STUDY AREA ON 1877 H.R. PAGE & CO.'S MAP OF THE
 COUNTY OF ESSEX

LEGEND:
 STUDY AREA

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 REFERENCES:
 TREMAINE ESSEX COUNTY MAP (1877).



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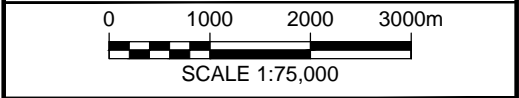


PROJECT:
STAGE 1 PRELIMINARY BACKGROUND STUDY
LAKESHORE TRANSFORMER STATION CLASS ENVIRONMENTAL
ASSESSMENT
LOTS 15, 16 & 17, CONCESSION MIDDLE ROAD SOUTH SIDE,
GEOGRAPHIC TOWNSHIP OF ROCHESTER, ESSEX COUNTY, ONTARIO

TITLE:
STUDY AREA ON 1881 ILLUSTRATED ATLAS MAP OF ESSEX
COUNTY

LEGEND:
 STUDY AREA

NOTES:
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REPORT No. SCL191337.
ALL LOCATIONS ARE APPROXIMATE.
REFERENCES:
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BELDEN & Co., 1880-1881.



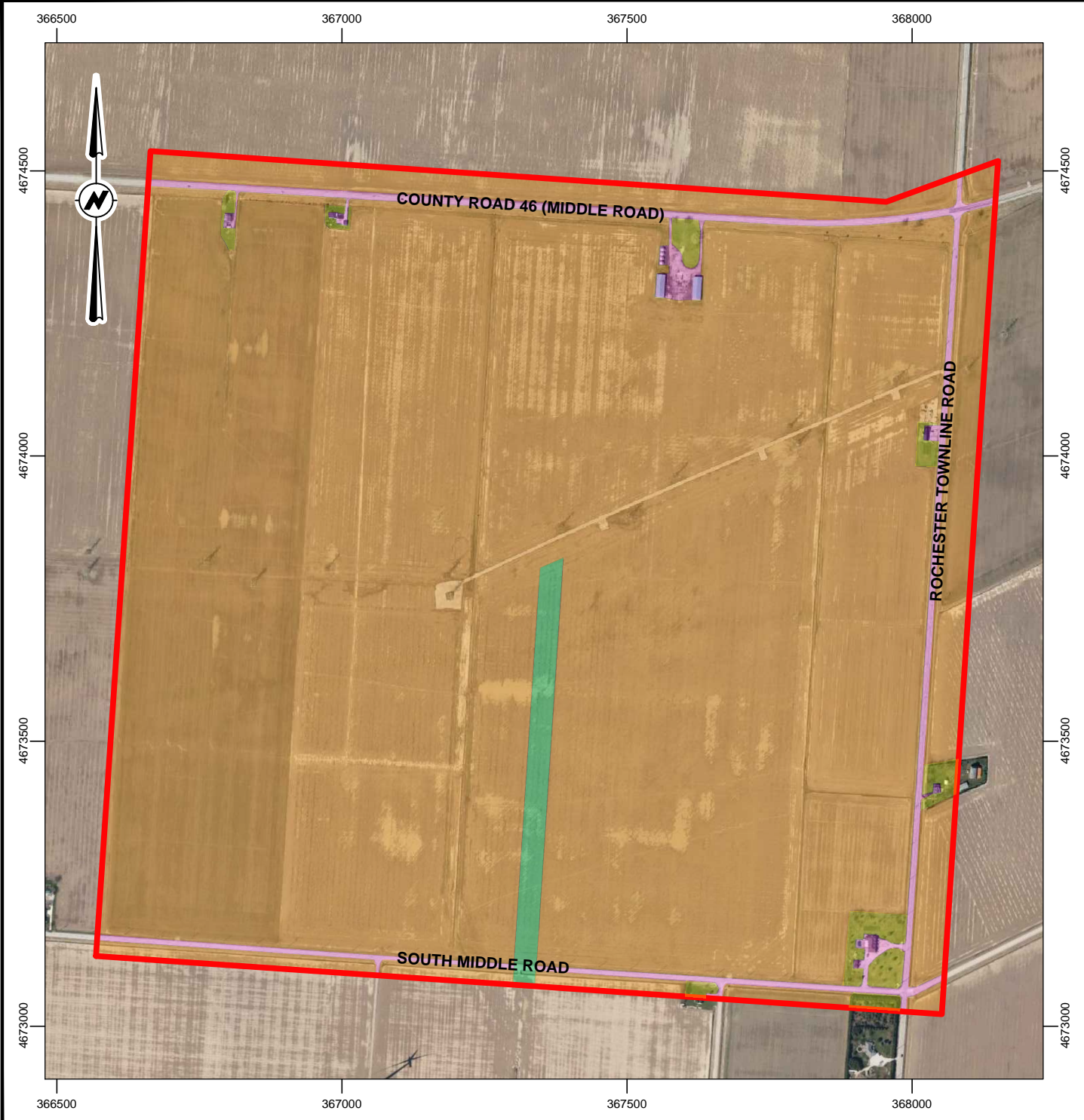
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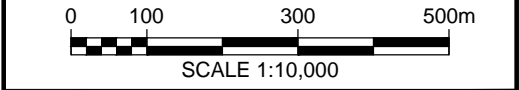
PROJECT:
 STAGE 1 PRELIMINARY BACKGROUND STUDY
 LAKESHORE TRANSFORMER STATION CLASS ENVIRONMENTAL
 ASSESSMENT
 LOTS 15, 16 & 17, CONCESSION MIDDLE ROAD SOUTH SIDE,
 GEOGRAPHIC TOWNSHIP OF ROCHESTER, ESSEX COUNTY, ONTARIO

TITLE:
 STAGE 1 RESULTS

- LEGEND:
- STUDY AREA
 - AREAS OF ARCHAEOLOGICAL POTENTIAL - STAGE 2 RECOMMENDED:
 - AGRICULTURAL FIELD, PEDESTRIAN SURVEY AT 5m INTERVALS RECOMMENDED
 - LAWN-NON-PLOUGHABLE; TEST PIT SURVEY AT 5m INTERVALS RECOMMENDED
 - AREAS OF NO ARCHAEOLOGICAL POTENTIAL - NO FURTHER FIELD WORK REQUIRED:
 - PREVIOUSLY DISTURBED - TO BE DOCUMENTED DURING STAGE 1-2 ASSESSMENT
 - PREVIOUSLY ASSESSED BY PEDESTRIAN SURVEY - NO FURTHER FIELD WORK REQUIRED

NOTES:
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REFERENCES:
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DATUM: NAD83	PROJECTION: UTM Zone 17	PROJECT No: SCL191337
REV No: 0		FIGURE No: 8

**Stage 1 Archaeological Assessment
Hydro One**

**Supply to Essex – Leamington Study Area
Essex County, Ontario**

Submitted to

Hydro One Networks Inc.

483 Bay Street, North Tower, 13th Floor, Toronto, ON M5G 2P5
Tel: (416) 345-5031 Fax: (416)345-6919

and

The Ontario Ministry of Culture

Prepared by



**Timmins Martelle
Heritage Consultants Inc.**

205 Oxford Street East, Suite 203A, London, ON N6A 5G6
Phone: (519) 641-7222 Fax: (519) 641-7220

Archaeological License Number: P064

Our File: 2007-079

PIF Number: P064-184-2008

March 2008

Table of Contents

List of Figures	iii
TMHC Personnel	iv
Acknowledgements	iv
Project Summary	v
1.0 INTRODUCTION	1
2.0 PURPOSE	1
3.0 METHODS AND SOURCES OF INFORMATION	2
4.0 STAGE 1 ASSESSMENT	3
4.1 Overview of the Study Area	3
4.2 Physiography, Drainage and Soils	3
4.3 Evaluation of Archaeological Potential: First Peoples Sites	8
4.4 Evaluation of Archaeological Potential: Historic Era Sites	13
5.0 MAPPING OF ARCHAEOLOGICAL POTENTIAL	18
6.0 SUMMARY AND RECOMMENDATIONS	20
References	21
Appendix A: Photographic Documentation of the Study Area	23
Table 1: Registered Archaeological Sites Within and In Close Proximity to the Study Area	12
Table 2: General Cultural Chronology for Essex County	13



List of Figures

1:	Project Mapping Showing the Location of the Study Area	4
2:	Aerial Photo of the Study Area	5
3:	Study Area Shown on a 1:50,000 Topographic Map	6
4:	Physiographic Features in the Project Vicinity	9
5:	Soils Within the Project Vicinity	10
6:	Drainage in the Project Vicinity	11
7:	Study Area Shown on the 1881 Historic Atlas Maps	17
8:	Generalized Zones of Archaeological Potential Within the Study Area	19
A – Photographic Documentation of the Study Area		
1:	Sturgeon Creek, East of Morse Road	23
2:	Greenhouses East of Morse Road	23
3:	Field With Low Knolls East of Hwy 77	23
4:	Roach Family Cemetery	23
5:	Agricultural and Oil Operation	23
6:	Glacial Beach Ridge Crossing Cty Rd 4	23
7:	Flat Agricultural Field Typical of North Portion of Study Area	24
8:	Hillman Creek At Conc. Rd 7	24
9:	Flat Agricultural Field	24
10:	Deep Roadside Ditches for Drainage	24
11:	Ruscum River at Conc. Rd 10	24
12:	Existing Hydro Corridor	24



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TMHC would like to thank the following staff members who contributed to this project:

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Field Reconnaissance:	Holly Martelle, Ph.D. (P064)
Report Contributors:	Holly Martelle, Ph.D. (P064) Eileen Marion-Bellemare, M.A. (R298)

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Patricia Staite

Environmental Planner
Hydro One, Environmental Services & Approvals

Megan Kevill

Archaeological Database Assistant
Ministry of Culture, Toronto, Ontario



Project Summary

Hydro One is preparing a Class Environmental Assessment for a project in Essex County. One option is building a new transmission line and transformer station between Leamington and Comber. Timmins Martelle Heritage Consultants Inc. was contracted to carry out a Stage 1 archaeological assessment of a 7.25 by 19 km study area. The purpose of the Stage 1 work is to evaluate the archaeological potential of the study area, determine if known sites are present therein and if a Stage 2 field survey is warranted. The information collected will be used during route and site layout so that significant sites may be avoided where possible, and if this is not possible, it will be used in the evaluation of the alternative routes and sites.

The Stage 1 background review noted significant differences in soils, topography and drainage between the northern and southern portions of the study area. The southern portion of the study area has nearly uniform high potential due to the presence of watercourses, sandier soils and glacial beach features. The flat northern portion of the study area has more limited archaeological potential due to poor drainage and near absence of natural watercourses. In this section, the zones of archaeological potential are limited to the roadways that were open in 1881 and the lands adjacent to the Ruscum River. A search of the Ministry of Culture's archaeological sites database revealed the presence of numerous registered sites along the western study area boundary and, particularly within the southwest corner of the study area. Because most of these sites have not undergone intensive study, they continue to be a planning concern.

If any new transmission line or transformer station site crosses through areas of archaeological potential, a Stage 2 survey will be required. Once the route and transformer site has been determined a more detailed review of existing conditions should be carried out, including the photo documentation of all areas of low potential.

The Ministry of Culture is asked to review the information presented in this report and issue a letter concurring with its recommendations.



Stage 1 Archaeological Assessment Hydro One

Supply to Essex – New Leamington Line Essex County, ON

1.0 INTRODUCTION

Hydro One is preparing a Class Environmental Assessment for a project in Essex County. One option is building a new transmission line and transformer station between Leamington and Comber. Timmins Martelle Heritage Consultants Inc. was contracted to carry out a Stage 1 archaeological assessment of a 7.25 by 19 km study area. The purpose of the Stage 1 work is to evaluate the archaeological potential of the study area, determine if known sites are present therein and if a Stage 2 field survey is warranted. The information collected will be used during route and site layout so that significant sites may be avoided where possible, and if this is not possible, it will be used in the evaluation of the alternative routes and sites.

The background information review and field reconnaissance of the study area was carried out in March of 2008. The field “windshield” survey on March 16 took place in generally sunny conditions after a period of winter thawing. Some areas were still snow covered so its purpose was merely to photo-document typical land use conditions and physiographic features that were pertinent to the evaluation of archaeological potential. All archaeological consulting activities were performed under the Professional Archaeological License of Dr. Holly Martelle (P064) and in accordance with the “Archaeological Assessment Technical Guidelines” of the Ministry of Culture (MCTR 1993). Permission to carry out our study was given by Patricia Staite, Environmental Planner for Hydro One Networks Inc.

2.0 PURPOSE

The *Ontario Heritage Act* makes provisions for the protection and conservation of heritage resources in the Province of Ontario. Heritage concerns are recognized as a matter of provincial interest in Section 2.6.2 of the *Provincial Policy Statement* which states:

“development and site alteration shall only be permitted on lands containing archaeological resources or areas of archaeological potential if the significant archaeological resources have been conserved by removal and documentation, or by preservation on site. Where significant archaeological resources must be preserved on site, only development and site alteration which maintain the heritage integrity of the site may be permitted.” (emphasis in the original)

The *Environmental Assessment Act* provides for the protection and conservation of the environment. In this case, the environment is widely defined to cover “cultural heritage” resources. Section 5(3)(c) of the *Act* stipulates that heritage resources to be affected by the proposed undertaking be identified during the environmental screening process. Within the EA process, the purpose of a Stage 1 background study is to determine if there are known cultural resources within the proposed areas of impact or potential for such resources to exist. Subsequently, it can act as a planning tool by identifying areas of concern that, where possible, could be avoided to minimize environmental impact. It is also used to determine the need for a Stage 2 field assessment involving the search for archaeological sites. If significant sites are found, a strategy (usually avoidance, preservation or excavation) must be put forth for their mitigation.

3.0 METHODS AND SOURCES OF INFORMATION

A Stage 1 overview and background study was conducted to gather information about known and potential cultural heritage resources within the proposed project area. Landscape and environmental conditions were reviewed using physiographic, topographic and soils mapping for the area. Early historic maps and historical summaries for townships covered by the project lands were consulted and a review of the Provincial registered archaeological sites database was carried out. A review of background documents was supplemented by a preliminary field reconnaissance of the study area to photo document existing conditions. The latter was conducted in winter conditions and was not intended to be used as a method for excluding areas from survey. Instead, it was employed to highlight significant features within the study area that indicate archaeological potential.

When compiled, this information was used to create a summary of the characteristics of the study area and evaluate its archaeological potential. For the Province of Ontario, the Ministry of Culture has identified a number of criteria that can be used to determine if an area has archaeological potential. These criteria primarily relate to geographic and cultural-historic features which would have influenced past land and resource use, as well as encouraged settlement (MCCR 1997:11). The presence or absence of such features allows an archaeologist to estimate the likelihood of ancient land use and thus the presence of archaeological sites.

Typically, a Stage 1 assessment will determine potential for precontact aboriginal and historic Euro-Canadian or aboriginal sites independently. This is due to the fact that lifeways varied considerably between the prehistoric and historic eras so that the criteria used to evaluate potential for each type of site differs.

Given the large size of the study area, a detailed review of existing conditions for all lands within its boundaries was not conducted. The evaluation and mapping of areas of archaeological potential provided in this report reflect this fact. Nevertheless, some factors can negate archaeological potential. For example, in many cases extensive modern



land disturbance can eliminate the possibility for the discovery of intact archaeological deposits. Further, areas that are low-lying and wet have low archaeological potential but these must be confirmed in the field. Thus, some areas described in this report as having archaeological potential may be deemed of low potential upon detailed field review. Such a review should be conducted once a corridor location has been selected.

4.0 STAGE 1 ASSESSMENT

4.1 Overview of the Study Area

In an effort to choose a route for a potential new hydro transmission line and transformer site, Hydro One has identified a roughly 7.25 km (east-west) by 19 km (north-south) study area extending from the north end of the urban boundaries of the Town of Leamington north to just south of Comber (Figure 1). The southern boundary lies just north of Mersea 3 Road (Concession Road 3 E or Wilkinson Drive). Oriented more-or-less parallel to the northeastern branch of Middle Road, the northern study area boundary extends roughly 750 metres north of an existing hydro corridor (lines C23Z C22J C21J C24Z; Appendix A-12) north of South Middle Road. The western study area boundary follows extends southward from the same corridor along Concession Road 7. The eastern boundary falls to the east of Side Road 12 and Jones Road. Highway 77 winds through the central portion of the study area.

With the exception of small parcels around Comber and Leamington, the majority of the study area is essentially agricultural in nature (Figure 2). Rural farmsteads and residences dot the major concession roads throughout the study area. Intensified residential development occurs along Highway 77 and the Talbot Road, as well as in the north end of Leamington and the community of Comber. The major thoroughfares are also home to numerous commercial and industrial complexes, many of which relate to agricultural industries. There are numerous greenhouse complexes (Appendix A-2) and oil drills (Appendix A-5) along the first few concessions north of Leamington and along both Highway 3 and the Talbot Road. Figure 3 maps the study area on a 1:50,000 topographic map.

4.2 Physiography, Drainage and Soils

The study area falls primarily within the St. Clair Clay Plains physiographic region, as defined by Chapman and Putnam (1984:147-151). The region consists of an extensive system of clay plains covering some 2,270 square miles and is characterized by relatively little relief (Chapman and Putnam 1984:147). In Essex County, a deep layer of clay overburden overlies limestone bedrock (Chapman and Putnam 1984:147). Much of the plain was at one time glacial lake bed. Most of Essex County consists of till plains that have been smoothed by shallow deposits of lacustrine clay which settled in lake bottom depressions (Chapman and Putnam 1984:147). Because of its flat topography, drainage within the region is sometimes poor, with most surface water draining northward to Lake St. Clair (Chapman and Putnam 1984:149). In many areas, agricultural



Supply to Essex - Data Collectin Area - Leamington

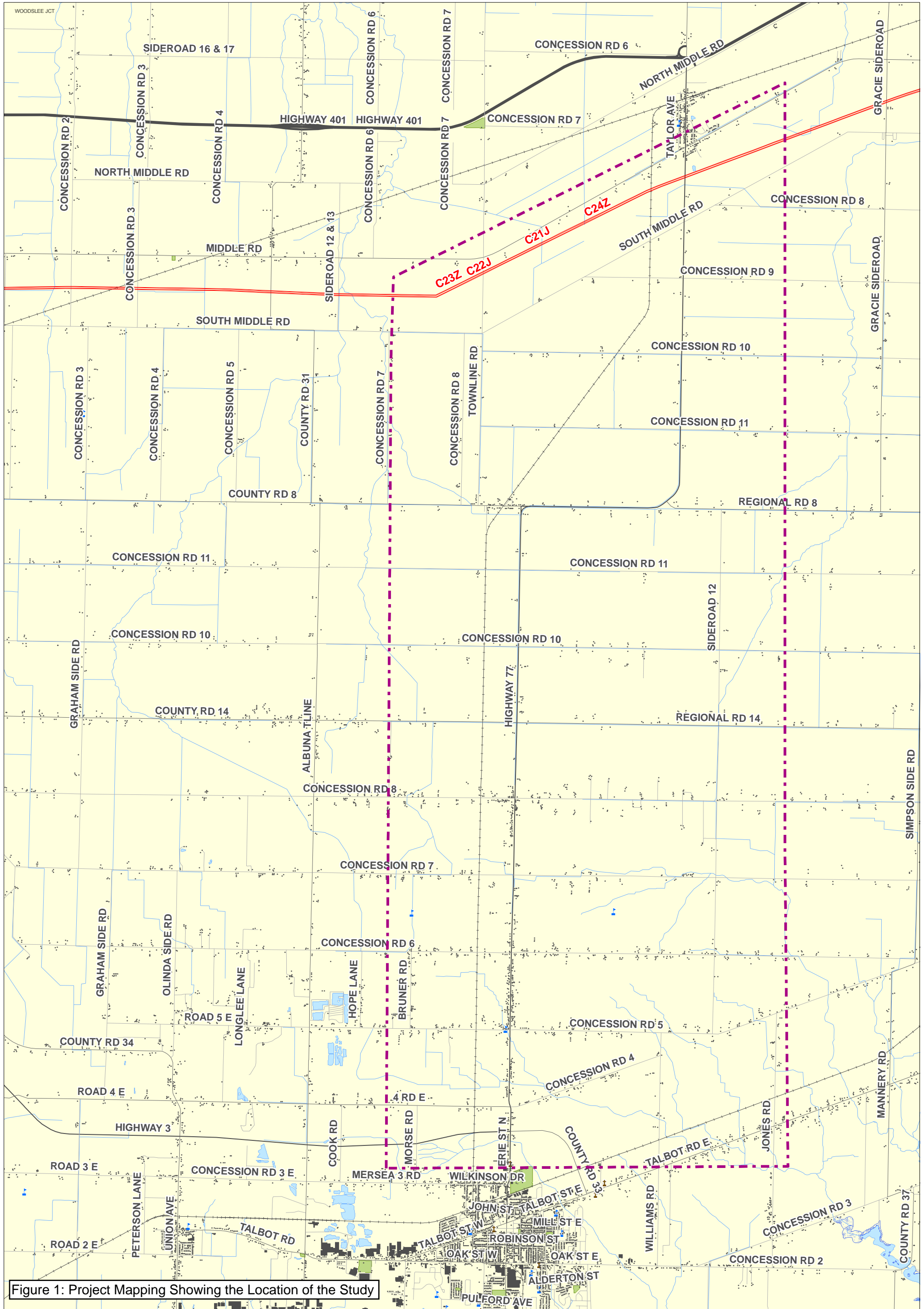
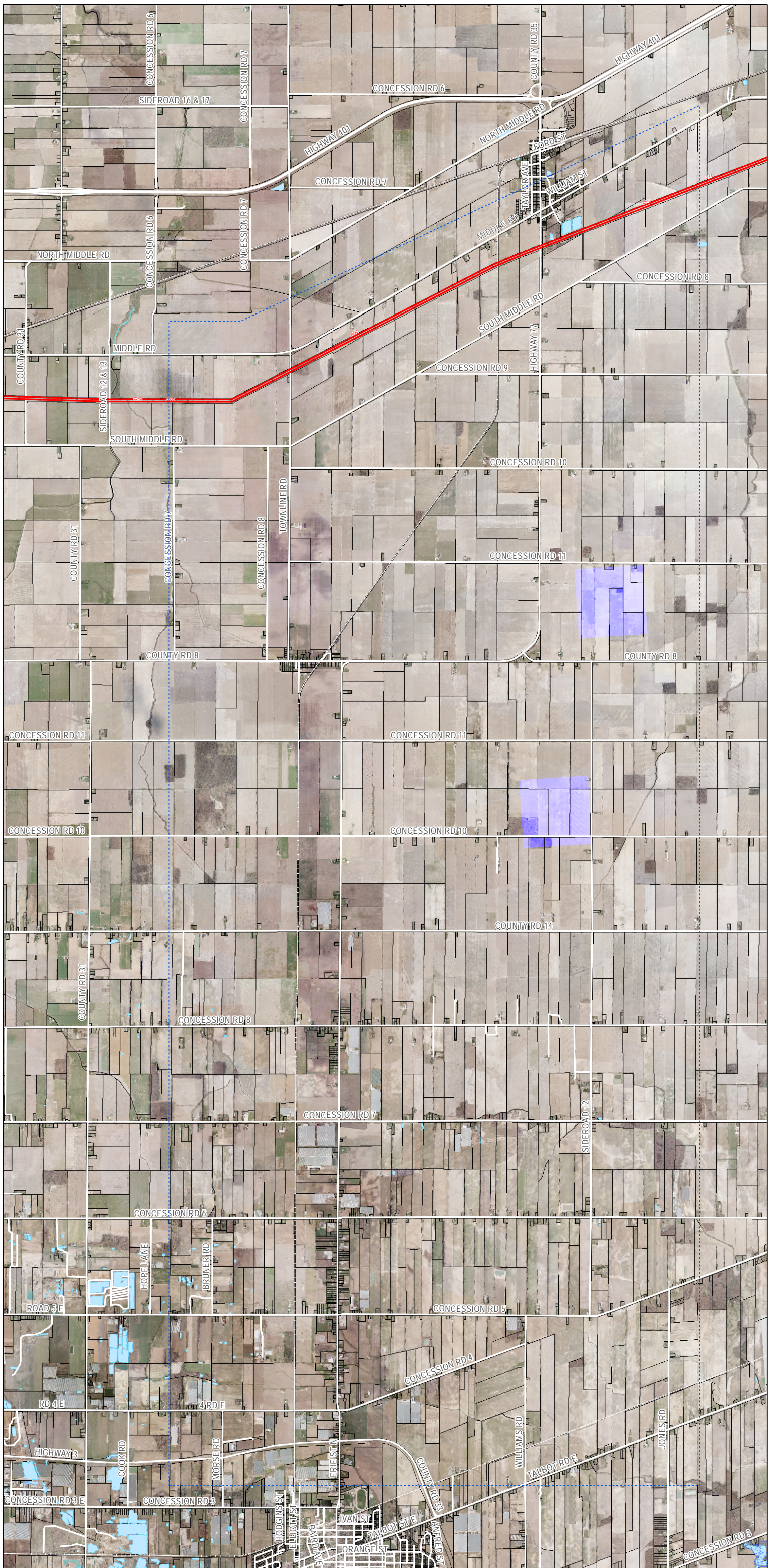


Figure 1: Project Mapping Showing the Location of the Study

- | | | | | | | |
|-------------|----------------------|--------------------|---------------|---------------|-------------|------------------------|
| • Buildings | Transformer Stations | Transmission Lines | Roads | — Railway | ■ Buildings | ■ Parks and Recreation |
| • Schools | ■ 115 kV | — 115 kV | — Expressway | — Rivers | ■ Wetlands | ■ Native Reserves |
| • Churches | ■ 230 kV | — 230 kV | — Highway | ■ Hydrography | ■ ANSI | ■ Data Collection Area |
| | | | — Major Roads | | ■ ESA | |
| | | | — Local Roads | | | |

1:29,000
 0 0.5 1 1.5 2
 Kilometres

Produced by Inergi LP GIS Services Date: February 2008
 Map07-41_Leamington_StudyArea_1kmBuffer_v3
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Leamington TS and Associated Lines - Orthomaps

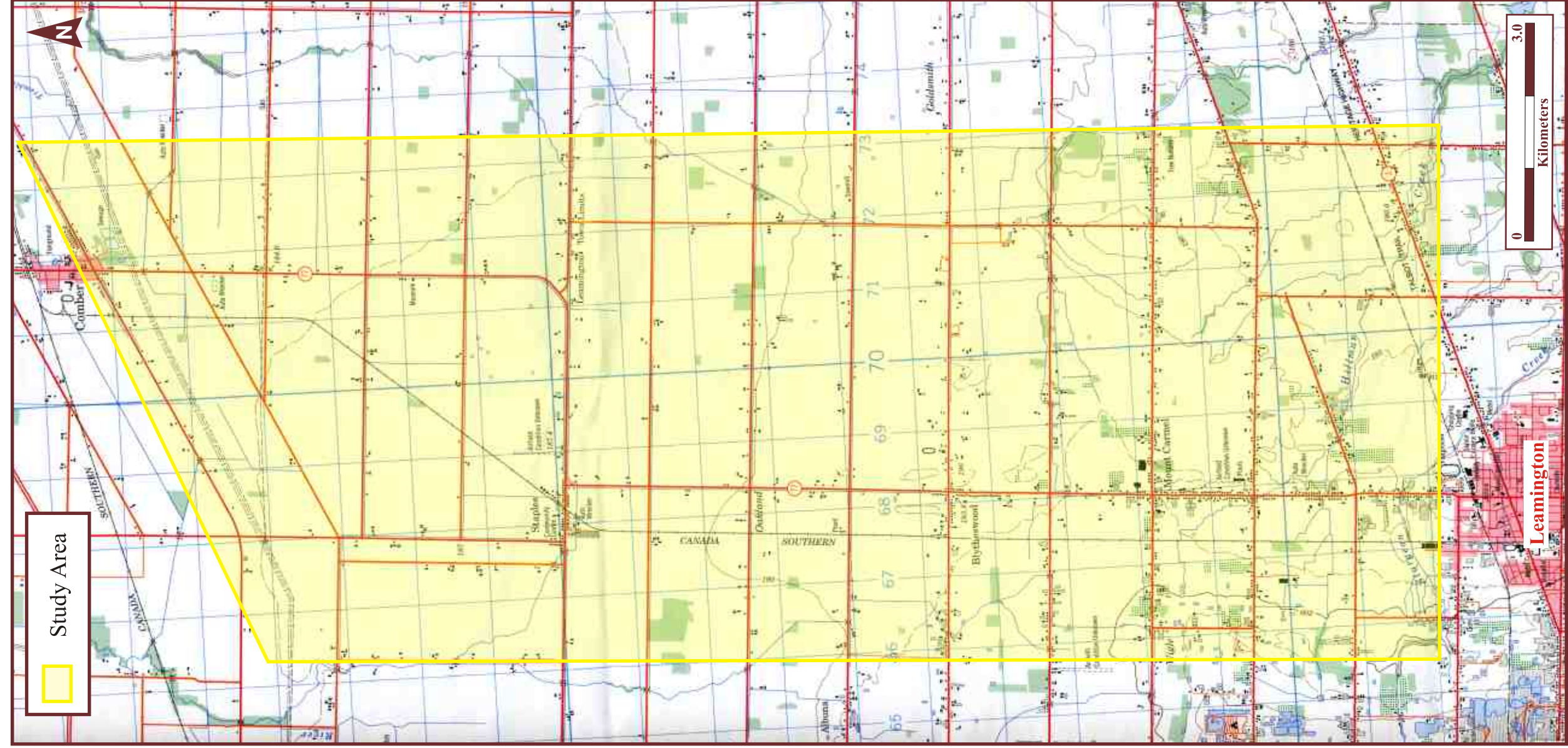


Towers	Roads	1 km Buffer from Line	Current Parcels Only	ANSI	Hydrography	Land Rights
TS/JCT	Railway	Municipal Boundary	ESA	Wetland	Parks	Easement
Tx Lines	Trails	Study Area	Ownership			

Prepared by: Inertis LP GIS Services
 Date: February 2024
 MapID: 41_Leamington_24022

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Figure 3: Study Area Shown on a 1:50,000 Topographic Map



productivity is only permitted by deeply dredged ditches and tile installation, both of which have served to greatly improve surface drainage (Chapman and Putnam 1984:149).

The northern two-thirds of the study area have topography typical of the St. Clair Clay Plains. Flat and extensively cleared agricultural fields (Appendix A-7, 9, 12) are found throughout and are broken, albeit rarely, by a few remnant woodlots and treed property boundaries. The view across the landscape for a considerable distance shows almost not change in topography or elevation. In this part of the study area in particular there are numerous deep drainage ditches both along property boundaries and roadsides (Appendix A-10). This characteristic topography stands in contrast to that observed in the southern portion of the study area near Leamington where the St. Clair Clay Plain is broken by deposits of sand and gravel, surrounded by gravel beaches (Chapman and Putnam 1984:149). Whereas beveled till plain is predominant in the northern portion of the study area (Figure 4), sand plains are common in the south. The transition to sand plain is obvious on visual inspection in terms of both soils (Appendix A-2) and topography. The flat lands of the northern study area give way to very gently undulating sand plains in the south containing very low but noticeable rises and dips. Sand and gravel surface soils are recurrent as are extraction areas which utilize these resources.

In the south, a series of glacial beaches lay to the west of the study area, with one strandline extending across the western study area boundary and Bruner Road. The rise along Bruner Road is noticeable, both by the change in elevation and the extent of agricultural and industrial land uses that draw on the sandier soils of the old beach ridge. A more prominent beach line crosses County Road 4 to the west of County Road 31 and the study area (Appendix A-6). These beaches have been attributed to glacial Lake Grassmere (Leverett and Taylor 1915) which resided in the Lake Erie basin over 12, 000 years ago.

As was the case with physiography, the soils within the study area vary from north to south (Figure 5). In the north, Brookston clay is predominant. Berrien sand and sandy loam is present in the southern portion of the study area beginning north of Blytheswood. Small pockets of Fox sandy loam are present along the western section of the project area, together with Brookston clay loam north of Bruner Road. A small deltaic deposit of Caister clay is present at the crossroads of Highway 77 and Concession Road 5, in association with Hillman Creek. A narrow ribbon of Tuscola fine sandy loam follows a significant portion of the northeast draining Sturgeon Creek and areas to the north to just beyond Concession Road 4. With the exception of Fox sandy loam, these soil types are characterized by imperfect or poor drainage (Richards et al. 1949).

The southern portion of the study area, closest to Leamington, is drained by Sturgeon Creek and Hillman Creek (Figure 6). Branches of Sturgeon Creek (Appendix A-1) cross the Talbot Road and Highway 77 north of Leamington and drain the southernmost extreme of the study area. Sturgeon Creek empties into an embayment on



Lake Erie southeast of Leamington. The main branch of Hillman Creek crosses the Talbot Road west of Jones Road and drains land to the northwest near Mount Carmel. Smaller branches of Hillman Creek (Appendix A-8) drain the southeastern portion of the study area. These flow into the Hillman Marsh east of Leamington. The northern two-thirds of the project area are drained by northward flowing tributaries that empty into Lake St. Clair. The Ruscum River (Appendix A-11) and its tributaries drain the western study area north of Mount Carmel. Given the relatively poor drainage found in this region, some of the tributaries have been ditched and straightened in the past.

Regardless of their size, the natural watercourses within the study area are major features on the landscape. Where they cut through the flat land of the northern portion of the study area, the watercourses often provide the only appreciable variation in elevation. The trees and scrub growth that lines their banks are often the only vegetation that can be observed on the bare, flat agricultural expanse that typifies much of the St. Clair Clay Plain. In the southern portion of the study area, the valley lands associated with Hillman and Sturgeon creeks are slightly more expansive than those observed for the Ruscum River to the north.

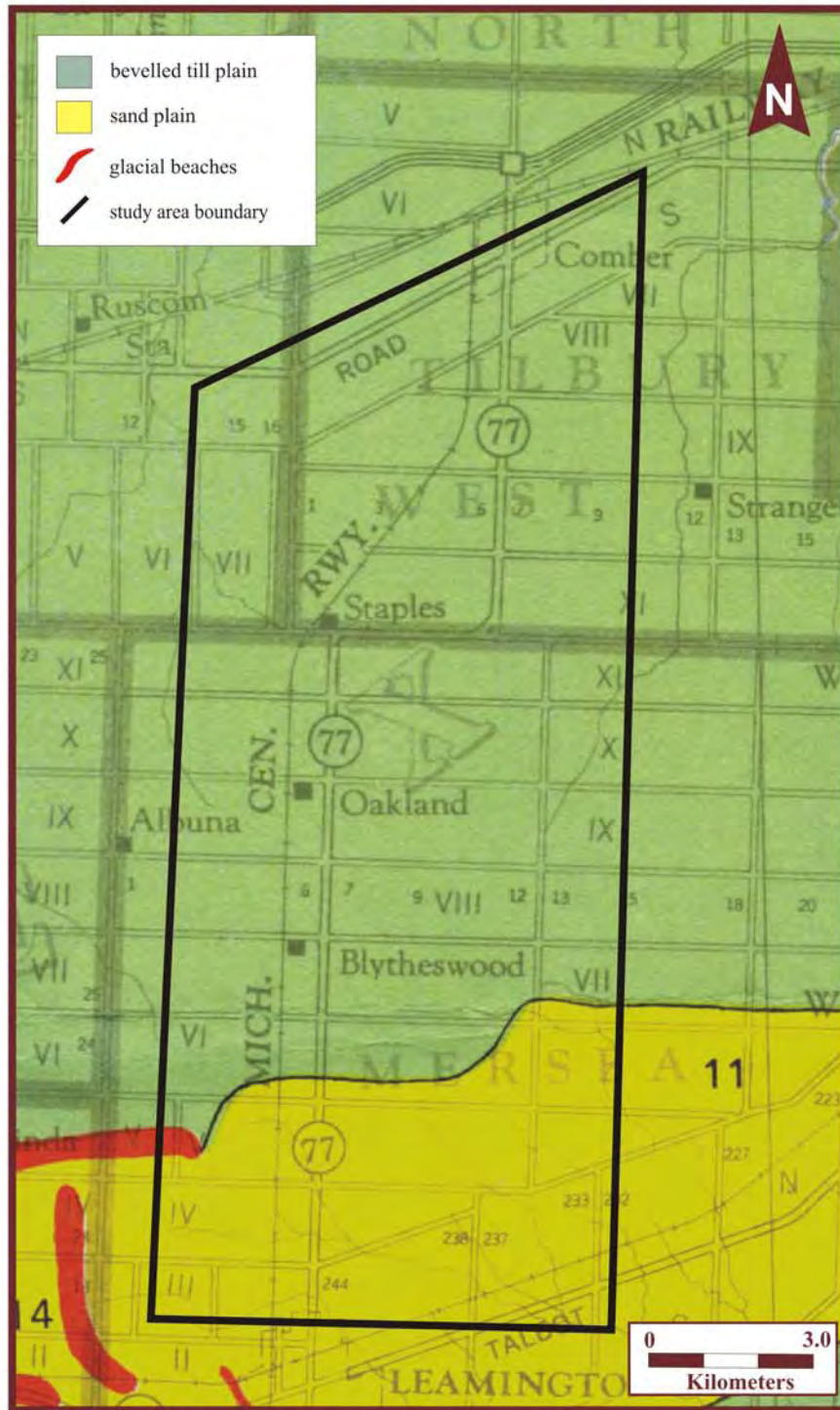
4.3 Evaluation of Archaeological Potential: First Peoples Sites

The archaeological record in this portion of Essex County is limited, largely due to a lack of survey in the area. According to the Provincial archaeological sites database there are 26 registered sites within or immediately adjacent to the study area. Most of these sites are concentrated in the southern portion of the study area north of Leamington. Three of these rest east of Highway 77 and the remainder are concentrated in areas evaluated for sand and gravel extraction, clustering around Regional Road 31 just to the west of the study area. Ten sites were recorded by avocational archaeologist Doug Carey. The remaining sites were registered as a result of cultural resource management assessments for pipeline and road construction as well as gravel extraction. Ten sites were reported during investigations of potential aggregate sources for the Ministry of Transportation (Lennox 1993a,b,c). Four other sites were reported during surveys associated with improvements to Highway 3.

The 26 registered sites range in time period from Late Paleoindian (circa 10,000 years before the present) to the 19th century. The majority include First Peoples components. Fourteen sites have recorded Archaic occupations. The Woodland period is well represented in this inventory (n = 15 sites), with notable Western Basin sites being recorded (AaHp-56, AaHp-53). Few of these sites have either required or undergone intensive study.



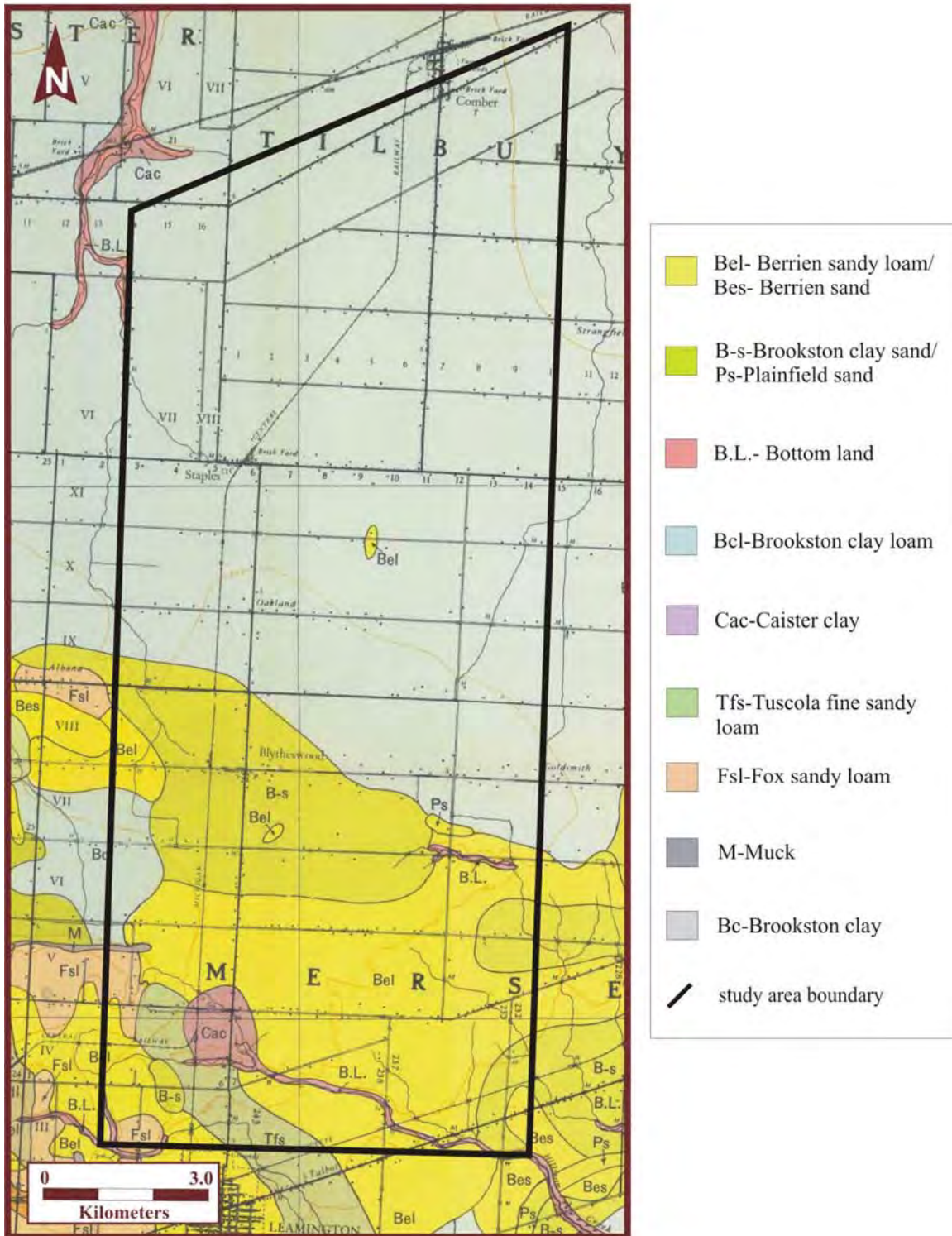
Figure 4: Physiographic Features in the Project Vicinity



Physiography of the Southwestern Portion of Southern Ontario
Map 2225 Ontario Department of Mines and Northern Affairs
Ontario Research Foundation 1972



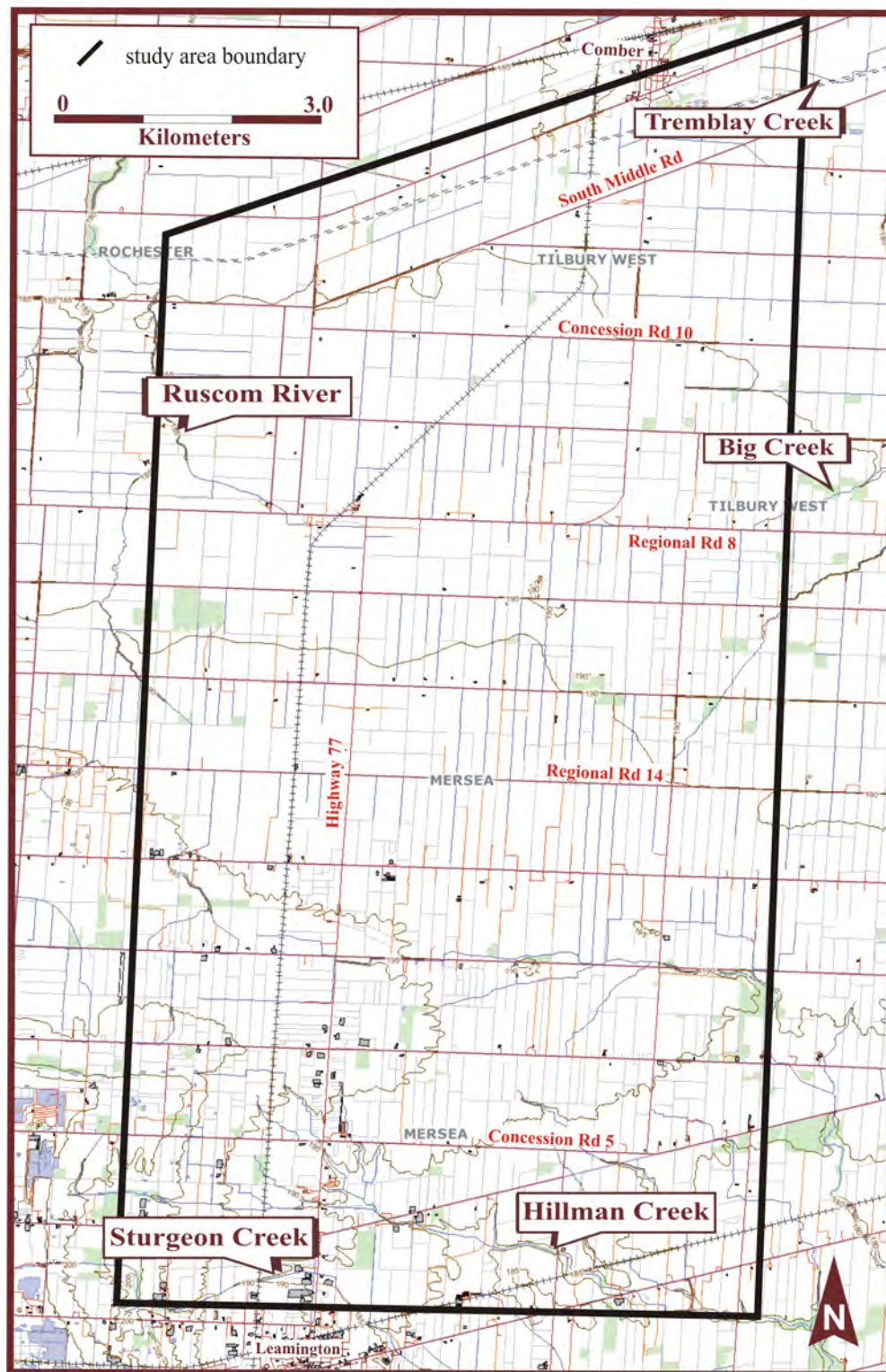
Figure 5: Soils Within the Project Vicinity



Soil Map Essex County, Province of Ontario, Canada
 Report No. 11 of the Ontario Soil Survey



Figure 6: Drainage in the Project Vicinity



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Table 1: Registered Archaeological Sites In And In Close Proximity To The Study Area

Borden	Name	Function	Time Period/Affiliation	Researcher
AaHp-11	Whittle	camp	Archaic/Woodland	Carey (1978)
AaHp-12	Adamson	camp	Archaic/Woodland	Carey (1978)
AaHp-15	Scott	camp	Archaic/Woodland	Carey (1978)
AaHp-17	Bickery	camp	Archaic/Woodland	Carey (1978)
AaHp-26	Rauch 2	camp	Late/Middle Woodland	Carey (1979)
AaHp-27	Rauch 1	camp	Archaic/Woodland	Carey (1979)
AaHp-29	Harris 2	camp	Archaic/Woodland	Carey (1979)
AaHp-30	Harris 1	midden	EuroCanadian	Carey (1979)
AaHp-42	Tri-V	find spot	Woodland	Lennox (1993a)
AaHp-43	Bakes	camp/homestead	First Peoples/EuroCanadian	Lennox (1993a)
AaHp-44	Bates # 1	unknown	Late Woodland	Lennox (1993b)
AaHp-45	Bates # 2	unknown	Late Woodland	Lennox (1993b)
AaHp-46	Coulter	unknown	undetermined First Peoples	Lennox (1993c)
AaHp-47	Neifer # 1	unknown	Late Woodland	Lennox (1993c)
AaHp-48	Neifer # 2	unknown	Archaic	Lennox (1993c)
AaHp-49	Willms # 1	unknown	Late Archaic/EuroCanadian	Lennox (1993c)
AaHp-50	Willms # 2	unknown	Late Archaic	Lennox (1993c)
AaHp-51	Willms # 3	unknown	undetermined First Peoples	Lennox (1993c)
AaHp-53	Sturgeon Pond	unknown	Archaic/Paleoindian/Western Basin	Lennox (1994)
AaHp-54	Seres	unknown	Woodland	Lennox (1994)
AaHp-55	Settingington	unknown	Late/Middle Archaic	Lennox (1994)
AaHp-56	Juniper	camp	Late Woodland/Springwells	Lennox (1994)
AaHp-61	n/a	camp	undetermined First Peoples	Wilson (2003)
AaHp-8	Brown	camp	Archaic/Woodland	Carey (1978)
AaHp-57	n/a	lithic scatter	Late Archaic	MHC (1997)
AaHp-32	Seres	camp	Archaic/Woodland	Carey (n.d.)

Despite the recording of these sites, our knowledge of past First Peoples occupation of the general area remains incomplete. Nonetheless, based on province-wide and region-specific archaeological data, a general cultural chronology for Essex County can be proposed and is provided in Table 1.

Several factors can be used to assess an area's potential for housing First Peoples sites. These include the presence of well-drained sandy soils, rolling topography, impressive and elevated landscape features and proximity to both water and known archaeological sites. When these are taken into consideration, a good portion of land within the study area demonstrates archaeological potential. High potential lands are those in close proximity to the natural watercourses, associated with pockets of sandy soil and in proximity to the glacial shorelines, sand and gravel ridges in the southeastern portion of the study area.



Table 1: General Cultural Chronology for Essex County

Period		Time Range (circa)	Diagnostic Features	Complexes
Paleoindian	Early	9300 - 8500 B.C.	fluted projectile points	Gainey, Barnes, Crowfield
	Late	8500 - 8000 B.C.	non-fluted and lanceolate points	Holcombe, Hi-Lo, Lanceolate
Archaic	Early	8000 - 6000 B.C.	serrated, notched, bifurcate base points	Nettling, Bifurcate Base Horizon
	Middle	6000 - 2500 B.C.	stemmed, side & corner notched points	Brewerton, Otter Creek, Stanly/Neville
	Late	2000 - 1800 B.C.	narrow points	Lamoka
		1800 - 1500 B.C.	broad points	Genesee, Adder Orchard, Perkiomen
		1500 - 100 B.C.	small points	Crawford Knoll
	Terminal	1100 - 850 B.C.	first true cemeteries	Hind
Woodland	Early	800 - 400 B.C.	expanding stemmed points, Vinette pottery	Meadowood/Middlesex
	Middle	400 B.C. - A.D. 600	thick, coiled pottery with notched rims; cord marked	Couture
	Late	Western Basin A.D. 600 - 900	Wayne ware, vertical cord marked pottery	Riviere au Vase Phase - Algonquin
		A.D. 900 - 1200	first corn; pottery with multiple bands of impressions	Younge - Algonquin
		A.D. 1200 - 1400	longhouses; bag shaped pots; ribbed paddle	Springwells - Algonquin
		A.D. 1400 - 1600	villages with earthworks; Parker Fестоoned pots	Wolf - Algonquin
Contact	Aboriginal	A.D. 1600 - 1700	early historic native settlements	Neutral, Huron, Odawa, Wenro
	Euro-Canadian	A.D. 1700-1760	fur trade, missionization, early military establishments	French
		A.D. 1760- 1900	military establishments, pioneer settlement	British colonials, UELs

4.4 Evaluation of Archaeological Potential: Historic Era Sites

The potential of an area to contain historic era or EuroCanadian sites can be considered through an overview of the historical development of a region, a review of land records and a consideration of landscape features that might have been attractive for settlement during the period. The study area crosses the geographic townships of Mersea, Gosfield (north and south), Tilbury West, and Rochester and includes several historical communities including Leamington, Mount Carmel, Blytheswood, Staples and Comber. This historical review will focus primarily on the origin of these places, the identification of early roads that made settlement possible, other features that would indicate historic era archaeological potential.

Mersea Township

Much of the earliest EuroCanadian settlement in the Township of Mersea was concentrated along the Talbot Road (now Highway 3), laid out through to Leamington by Colonel Mahlon Burwell in 1818 (H. Belden & Co. 1881:13). At this time a range of long narrow lots was surveyed on either side of the road. Later the remaining portions of the township were laid out using the typical system of concessions. Among the first to arrive in Mersea Township and settle along the Talbot Road were William Coultis (who settled on Lot 238 in the study area), John Lemarsh (Lot 242), John Richardson (Lot 240) and Alexander Wilkinson. The families of these gentlemen were followed by others who arrived steadily, although not in great numbers. The township population grew very gradually. The lakeshore also saw early settlement, however fewer families settled there. Nonetheless, the Wilkinson, Robson and Bell families are said to have homesteaded along the lakeshore just after the War of 1812, together with a French gentleman by the



name of Maisonville. At that time the Point Pelee area is said to have been settled by local native populations (H. Belden & Co. 1881:13).

Settlement was considerably slower in the interior of Mersea Township, away from Talbot Road. This area was covered by dense and sometimes swampy forest for a significant period longer. One of the first to settle away from the Talbot Road was John Bailey who took up land between the 9th and 10th concessions. Following the McKenzie Rebellion, additional settlers came to the interior. By 1867 much of the interior of Mersea Township was still densely overgrown (Morrison 1954:58).

Early settlement in the community of Leamington focused on the intersection of Talbot and Erie Streets, with the first settler Alexander Wilkinson arriving on Lot 244 in 1818 (H. Belden & Co. 1881:13). It was not until 1835 that his family was joined by the town's second settler John McGaw. Leamington's early success would be owed to the area's high agricultural productivity and the community's docking facilities on the lakeshore that "afforded good water transportation for an active trade in square timber, lumber and farm produce" (Morrison 1954:93). By the 1880s, Leamington had two iron foundries, a grist mill, saw mill, saddler, carriage factories, telegraph office and a number of stores and additional services (Morrison 1954:94).

Situated on the Leamington Side Road (now Highway 77), Blytheswood emerged as a small crossroads community and post office. By 1881 it contained several buildings, including two mills and a number of shops. In the early days the district around Blytheswood was called the "Elm Swamp." Like in other parts of the county, the excavation of deep irrigation ditches improved drainage and effectively helped to transform the swamp into some of the best farming land in the region (Morrison 1954:100).

The similarly small centres of Mount Carmel and Staples emerged along the Leamington Side Road (Hwy 77), as it was one of few good through roads at the time. Some of the first to settle in Staples included William and David Alexander who arrived and established shelter on a 200 acre lot where Tilbury West, Mersea and Rochester come together (McCracken and St. John 2007:5). Early on, the community was essentially just a crossroads centre but the arrival of the railroad sprung the community to life in 1887. By 1888, the Alexanders were selling portions of their lot to accommodate the growing town. Jessie McDougall was the first to open store here and in 1887 the Larue Brothers opened the first mill (McCracken and St. John 2007:5, 13). Several additional mills were opened in subsequent years and following the completion of the railway the community's commercial enterprises included three general stores, two blacksmiths, one machine shop and several additional businesses. By 1898 the centre's population had grown to 800 (McCracken and St. John 2007:13).



Gosfield Township

The first settlers in Gosfield are reported to have arrived some time around 1790. Some of the earliest settlement in the township focused on Grosse Isle. Nonetheless, after enduring great hardship some of the area's first immigrants quickly abandoned the region and moved elsewhere. As it was quite removed from the fortified military centres along the Detroit River, few ex-military men were willing to settle in Gosfield. However, by the late 1700s many lands along the township's lakeshore were being taken up by German settlers from the American colonies (KGHS 2003:5). The original lakeshore shore survey, comprising part of the "New Settlement" and conducted by Patrick McNiff and Abraham Iredell, saw the creation of deep, narrow lots in the "French" style. East of the "New Settlement" survey lots were more typical in size.

In Gosfield, the Talbot Road was also a locus for early settlement. Some of the first settlers to take up land along the road were George and Frank Nevil, Thomas Williams and John Clarke (H. Belden & Co. 1881:12). Settlement along the Gosfield portion of the Talbot Road began about 1825. In contrast to those who settled along the lakeshore, most of the Talbot Road settlers in Gosfield were from the British Isles.

The remaining, interior lands of the township were far more slowly settled, similar to those in the rest of Essex County. This was due largely to the presence of poorly drained lands but also to the unproductive Crown reserves and Canada Company landholdings which were untended and created transportation barriers. By 1846 only one fifth of all land in Gosfield Township was cleared and under cultivation.

Tilbury West Township

The first EuroCanadian settlers in the Township of Tilbury West were a number of French families who established farms along the shore of Lake St. Clair, to the north of the study area. Until some time following the McKenzie Rebellion few other came to the township. Although the Middle Road became one focus of early settlement it was not cleared through the township until after 1840 (H. Belden & Co. 1881:12). Some of the earliest to settle along the Middle Road included the Dodd and Nicholson families and Samuel Taylor who settled in what is now Comber in 1842 (H. Belden & Co. 1881:12). For some time, the interior lands between the lakeshore and Middle Road settlements were uncleared until they drew the attention of lumbermen John Allister and John Whiteman (H. Belden & Co. 1881:14). Settlement by French and English families followed thereafter.

The community of Comber was an early postal town, established about 1843 (H. Belden & Co. 1881:14). By 1851 Comber was one of only two postal offices situated in the township's interior (Morrison 1954:27). In 1846 Henry Richenbach opened the town's first store. For many years, it was essentially a cross roads and postal community,



that is, until the construction of the Canadian Southern Railway. The town's position on the railway opened up new opportunities for industry.

Rochester Township

Like with so many parts of Essex County, the first permanent EuroCanadian settlers in Rochester Township were French. The French settlement at Belle River along the Lake St. Clair shoreline was essentially the first in the township with arriving families later taking up lands along the Middle Road. Notable among the Middle Road settlers were the Simon brothers, whose farms formed the centre of what would be subsequently called the German Settlement, in the central portion of the township (H. Belden & Co. 1881:11).

Transportation Routes

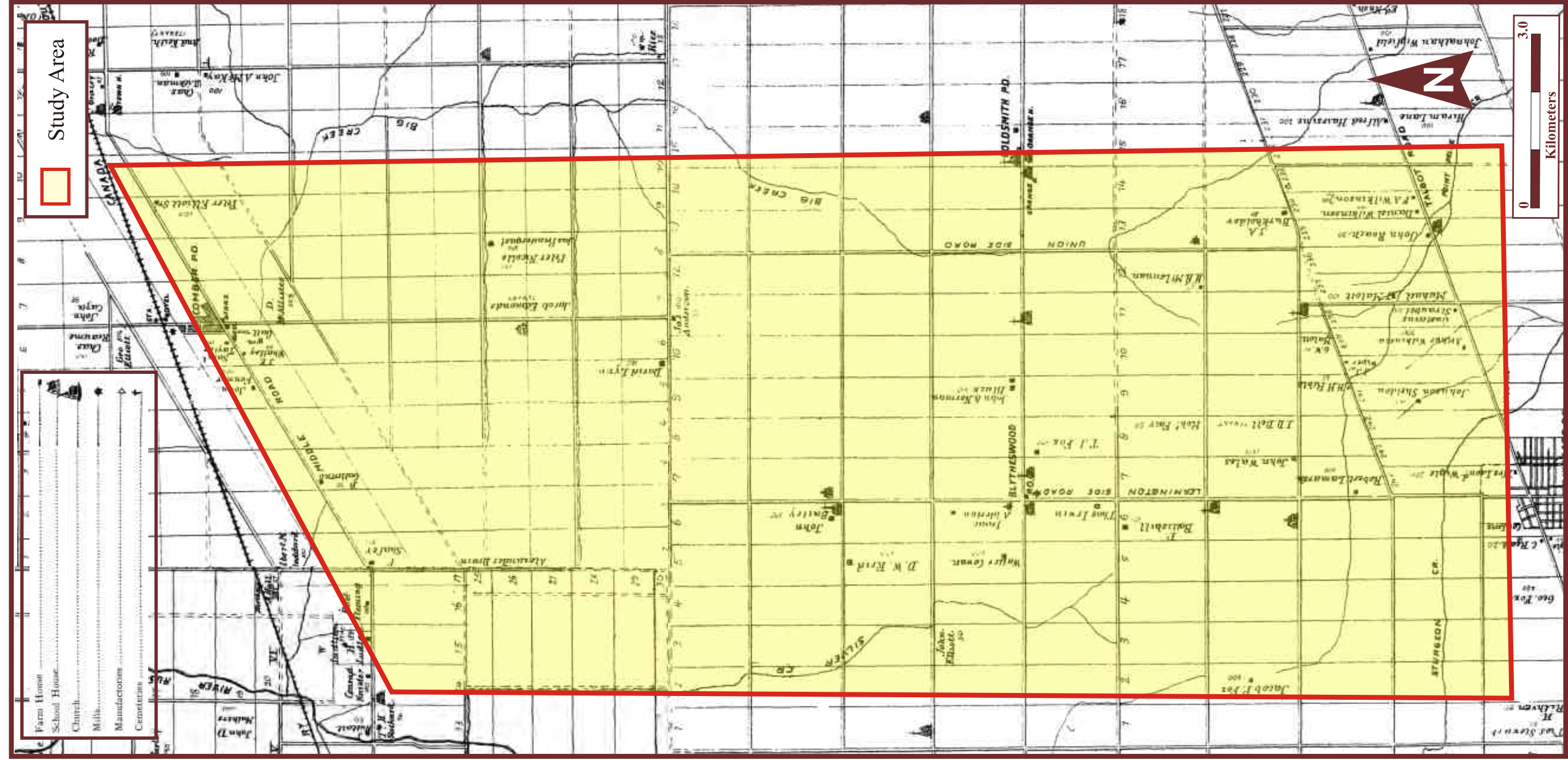
One of the primary factors determining historic site potential is proximity to an early transportation route. As the above historical summaries demonstrate, many of the early settlers in the affected townships settled on some of the earliest and most prominent thoroughfares – Talbot Road (Highway 3/County Road 34), the Middle Road (Highway 98), and the Leamington Side Road (Highway 77). The survey of the Talbot Road was initiated in 1818 by Colonel Mahlon Burwell and, once completed, the road became the site of numerous taverns and inns that provided services to early travelers. One such tavern was operated by Charles Hairsine on Lot 231 of Mersea Township (to the immediate east of the study area). Another was that within the current site of Leamington, on Lot 244 and run by Leonard Wigle, one of Mersea's more prominent early residents (H. Belden & Co. 1881:13). The Talbot Road was essentially laid out atop the gravel ridge running parallel to the lakeshore on what was formerly the site of an old native trail. Another early native trail followed the path of the Ruscom River, along the western portion of the study area (Lajeunesse 1960:xxxix). As was the case with the Talbot Road and Leamington Side Road, several small centres emerged along the route.

Railways came later to this portion of Essex County. It was not until the early 1870s that the Canada Southern Railway was constructed, connecting the Niagara and Detroit Rivers. The Michigan Central Railway came considerably later and does not show up on the 1881 historic atlas map.

A review of the 1881 historic atlas maps for the study area (Figure 7) highlights the areas of early initial settlement, as just discussed. By that time Comber and Leamington were well established communities and the early postal villages of both Blytheswood and Oakland incorporated a number of significant buildings. The open concession roads and main thoroughfares are dotted with structures. Along with lands in close proximity to potable water, these areas all demonstrate potential for the discovery of historic era archaeological sites. Nonetheless, it should be noted that map-based



Figure 7: Study Area Shown on the 1881 Historic Atlas Maps



Map of Rochester Township, Map of Mersea Township, and Map of
Tilbury West Township. Illustrated Atlas of Essex and Kent Counties 1881
Pages 17 & 24 Published by H. Belden & Co., Toronto. Reprint Edition 1973



evaluations of historic potential are not always reliable as historic maps are not always accurate renderings of land use conditions. For example, in the case of historic atlases, landowners often had to pay a subscribers fee to have their name and property information recorded. Many landowners simply chose not to pay the fee and were subsequently not named in the atlas.

5.0 MAPPING OF ARCHAEOLOGICAL POTENTIAL

It has already been determined that some lands within the project area demonstrate archaeological potential. Figure 8 maps generalized zones of archaeological potential based on Provincial criteria (MCCR 1997:11-15). In this study, the following factors were considered:

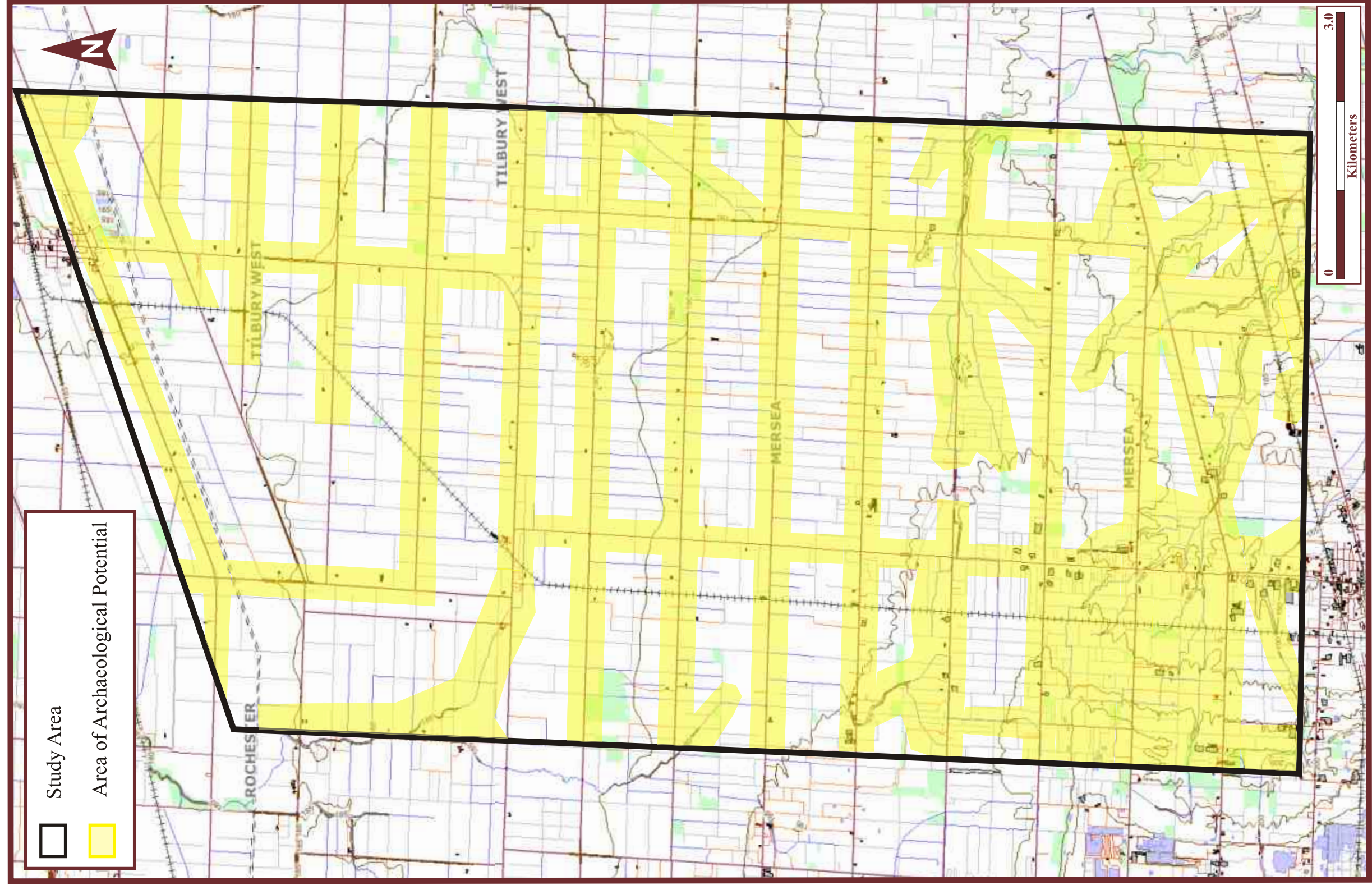
- the presence of known archaeological sites in the study area;
- proximity (within 250 m) to known archaeological sites;
- proximity to a water source (within 300 m);
- proximity to an ancient water source (e.g., relic streams, ancient shorelines; within 300 m);
- presence of elevated topography (e.g., ridges, eskers, drumlins);
- presence of well-drained soils;
- presence of distinctive or unusual landforms;
- proximity to resource-specific features (e.g., chert outcrops);
- proximity to known areas of initial non-Aboriginal settlement; and
- proximity to early transportation routes (e.g., trails, concession roads, railways).

Based on the 1:10,000 scale map shown in Figure 8, significant portions of the proposed study area have archaeological potential. Archaeological potential is highest in the southern portion of the study area where there are several active watercourses, glacial beach lines, as well as low knolls and rises associated with the sand plain areas around Leamington. Except where the Ruscum River enters the study area along the western boundary, the areas of archaeological potential in the northern part of the study area are essentially restricted to the road sides where there is likelihood for the discovery of EuroCanadian settler sites. The northern section has more limited potential for First Peoples sites given the absence of watercourses. However, as is the case for the St. Clair Clay Plain in other parts of Essex, Kent and Lambton counties, small native sites can occur in areas where there are very subtle rises on an otherwise flat landscape. More careful scrutiny and thorough field review of the northern portion of the study area should take place once a corridor location has been selected.

It appears that any new transmission corridor that will pass through the study area will cross lands demonstrating archaeological potential. Thus, a Stage 2 survey will be required. It should be noted that the mapping provided in Figure 8 is very general in nature and should not be used to exempt areas from Stage 2 survey. A detailed review of existing conditions within the selected corridor should be carried out prior to or during



Figure 8: Generalized Zones of Archaeological Potential Within the Study Area



survey. This is particularly important for the northern section of the study area where areas of low potential will need to be photo documented and confirmed in the field and where low rises may be present that do not otherwise appear on the 1:10,000 mapping provided. Further, the mapping herein does not take into consideration both small and large parcels of prior disturbance that would be considered of “low archaeological potential” by Ministry standards. These areas are typically restricted to road side areas and can be more carefully delineated and photo documented during the Stage 2 survey. One such area is the former rail bed that runs roughly parallel to and west of Highway 77.

6.0 SUMMARY AND RECOMMENDATIONS

A Stage 1 archaeological assessment was conducted for a large study area between Leamington and Comber in the County of Essex, Ontario. The Stage 1 background review noted significant differences in soils, topography and drainage between the northern and southern portions of the study area. The southern portion of the study area has nearly uniform high potential due to the presence of watercourses, sandier soils and glacial beach features. The flat northern portion of the study area has more limited archaeological potential due to poor drainage and near absence of natural watercourses. In the latter section, the zones of archaeological potential are limited to the roadways that were open in 1881 and the lands adjacent to the Ruscum River.

A search of the Ministry of Culture’s archaeological sites database revealed the presence of numerous registered sites along the western study area boundary and, particularly within the southwest corner of the study area. Because most of these sites have not undergone intensive study, they continue to be a planning concern.

If any new transmission line or transformer station site crosses through areas of archaeological potential, a Stage 2 survey will be required. Once construction plans are finalized, a more detailed review of existing conditions should be carried out, including the photo documentation of all areas of low potential.

Since typical archaeological assessment methods cannot always detect deeply buried archaeological deposits, if these are found at any point during construction, the Ministry of Culture should be notified immediately at (519) 675-7742. Upon the discovery of human remains during construction, the proponent should immediately contact a representative of Timmins Martelle Heritage Consultants, the Ministry of Culture as well as the Registrar of Cemeteries, Michael D’Mello, in the Cemeteries Regulation Unit of the Ministry of Consumer and Commercial Relations (416) 326-8392.

The Ministry of Culture is asked to review the information presented in this report and issue a letter concurring with our recommendations.



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1 - Sturgeon Creek, East of Morse Road (looking east)



2 - Greenhouses East of Morse Road (looking southeast)



3 - Field With Low Knolls East of Hwy 77 (looking north from Hwy 3)

Appendix A: Photographic Documentation of the Study Area



4 - Roach Family Cemetery (looking north from Cty Rd 34)



5 - Agricultural and Oil Operation (looking north from Cty Rd 4)



6 - Glacial Beach Ridge Crossing Cty Rd 4 (looking west)





7 - Flat Agricultural Field Typical of North Portion of Study Area (looking north from Conc. Rd 6 East of Hwy 77)



8 - Hillman Creek At Conc. Rd 7 (looking northeast)



9 - Flat Agricultural Field (looking north from Cty Rd 14, west of Rd 12)

Appendix A: Photographic Documentation of the Study Area



10 - Deep Roadside Ditches for Drainage (looking southwest along Cty Rd 14)



11 - Ruscum River at Conc. Rd. 10 (looking north)



12 - Existing Hydro Corridor (looking west from Hwy 77)



Appendix B2

*MHSTCI Built Heritage Checklist and Built
Heritage Memo*

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
Hydro One - Lakeshore TS, Class Environmental Assessment

Project or Property Location (upper and lower or single tier municipality)
Country Road 46 (Middle Road) and Rochester Townline Road, Town of Lakeshore, Essex County, Ontario

Proponent Name
Hydro One

Proponent Contact Information
Paul Dalmazzi, 416-345-6145, Paul.DALMAZZI@HydroOne.com

Screening Questions

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

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

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

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.

3. Is the property (or project area): Yes No

- 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. has or is adjacent to a known burial site and/or cemetery? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c. is in a Canadian Heritage River watershed? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d. contains buildings or structures that are 40 or more years old? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. has a special association with a community, person or historical event? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c. contains or is part of a cultural heritage landscape? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

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

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)

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)

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

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](#)

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](#).



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Memo

To: Paul Dalmazzi, Hydro One, Environmental Services **Date:** December 20, 2019
From: Heidy Schopf, Senior Cultural Heritage Specialist, Wood PLC
cc: Barbara Slim, Kristy O'Neal
Ref: SCL191337, Hydro One Lakeshore Transmission Station
Re: **Cultural Heritage Checklist and Identification of Properties 40 Years or Older**

1.0 Introduction

Wood Environment & Infrastructure (“Wood”) was retained Hydro One Networks Inc. (the “Client”) to complete a cultural heritage memo in support of the construction of a new switching station and new power transformation facilities that will house four new 230 kV transformers at the Lakeshore Transmission Station (TS). The Study Area is located on Lots 15, 16 and 17, Concession Middle Road South Side, in the Geographic Township of Rochester, Essex County, now in the Town of Lakeshore, Ontario (Figure 1 and Figure 2).

This cultural heritage memo was completed as part of a Class Environmental Assessment (EA) for the Hydro One Lakeshore TS. The electrical load growth in the County of Essex has exceeded expectations in recent years, largely due to the expansion of the greenhouse industry in the area. An immediate need for a new switching station in the area has been identified by the Independent Electricity System Operator (IESO) and formally communicated to Hydro One. The proposed switching station will increase the capability of the system to supply load in the Lakeshore-Kingsville-Leamington areas while contributing to improved performance of the bulk system. The IESO has also indicated that the station should be sized to accommodate future system reinforcement, including space for future expansion and additional equipment.

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SCL191337



To consider cultural heritage in the Hydro One Lakeshore TS EA, the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) (formerly the Ministry of Tourism, Culture and Sport) *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes: A Checklist for the Non-Specialist* (the Checklist) was completed to identify recognized heritage properties and potential heritage properties that may be of cultural heritage value. Following completion of the Checklist, it was found that no work related to the construction of the Hydro One Lakeshore TS is proposed within a property that contains a building or structure that is 40 years or older. Rather, the new transformer station, switching station, new/rebuilt transmission lines, and proposed station entrances and site access points are contained within properties that did not meet the screening criteria for cultural heritage value contained in the Checklist.

The approach and methodology used to complete the Checklist are provided in Section 2.0, the results of the Checklist are provided in Section 3.0, and recommendations are provided in Section 5.0. All figures are included in Appendix A, the completed MHSTCI Checklist is provided in Appendix B, and a figure showing the preferred alternative for the Hydro One Lakeshore TS is provided in Appendix C.

2.0 Approach and Methodology

2.1 Legislative Requirements and Guidance Documents

The requirements to consider cultural heritage under the Environmental Assessment (EA) process are found in the Provincial Policy Statement (PPS) 2014 (Government of Ontario 2014) and the Environmental Assessment Act (1990).

The PPS sets out the government's land use vision for how the Ontario landscape is settled, how the built environment is created, and how land and resources are managed (PPS 2014). The PPS is applicable to the entire Province of Ontario. Under the PPS, the conservation of cultural heritage is identified as a matter of provincial interest. Section 2.6 of the PPS gives direction on the consideration of cultural heritage and archaeology (Government of Ontario 2014). Specifically, the following direction is given regarding built heritage resources, cultural heritage landscapes, and protected heritage properties:

2.6.1 Significant built heritage resources and significant cultural heritage landscapes shall be conserved

2.6.3 Planning authorities shall not permit development and site alteration on adjacent lands to protected heritage property except where the proposed development and site alteration has been evaluated and it has been demonstrated

that the heritage attributes of the protected heritage property will be conserved (Government of Ontario 2014).

The Environmental Assessment Act R.S.O. 1990, c. E.18 (EA Act) sets out planning and decision-making process so that potential environmental effects are considered before a project begins (Government of Ontario 2019). The EA Act applies to provincial ministries and agencies, municipalities, and public bodies.

The Ontario Heritage Act, R.S.O. 1990, c.018, provides a framework for the protection of cultural heritage resources in the Province. It gives municipalities and the provincial government powers to protect heritage properties and archaeological sites. O. Reg. 157/10 of the Ontario Heritage Act lists prescribed public bodies that must follow the Standards and Guidelines for Provincial Heritage Properties. Presently, there are 12 prescribed public bodies in Ontario, including Hydro One Inc. (Ontario 2014).

The MHSTCI is responsible for the administration of the *Ontario Heritage Act* and has developed checklists, information bulletins, standards and guidelines, and policies to support the conservation of Ontario's cultural heritage resources, including built heritage resources, cultural heritage landscapes, and archaeological sites.

The MHSTCI developed the Checklist to screen for known (or recognized) heritage properties and properties with potential cultural heritage value. The Checklist also includes other considerations to account for local or Indigenous knowledge that may suggest a property acts as a landmark, have special historical associations, or is part of a cultural heritage landscape. The Checklist represents a high-level screening for properties with cultural heritage value or interest (CHVI). Where properties with known or potential CHVI are identified as part of the Checklist, further work, such as a Cultural Heritage Assessment Report (CHAR), Cultural Heritage Evaluation Report (CHER), or Heritage Impact Assessment, may be recommended as appropriate.

2.2 Desktop Data Collection and Consultation

The Checklist was completed through a combination of desktop data collection and municipal and agency consultation conducted via phone and email.

The desktop data collection was completed by following the instructions provided pages 4-8 of the Checklist. To identify known (or recognized) heritage properties, the following online sources were reviewed:

- Lakeshore Heritage (2019)
- Easements/Protections, (Ontario Heritage Trust 2019)

- Directory of Designated Heritage Railway Stations in Ontario (Parks Canada 2017)
- Designated Lighthouses (Parks Canada 2019)
- Directory of Federal Heritage Designations (Government of Canada 2019)
- World Heritage List (UNESCO 2019)

In addition, consultation was carried out to identify protected cultural heritage resources in the Study Area. The Town of Lakeshore, Ontario Heritage Trust, and the MHSTCI were contacted directly via email and/or phone to determine the presence of listed, designated, or protected heritage properties within, and adjacent to, the Study Area.

Ian Search, Planner Level 1, Town of Lakeshore, reported that there are no heritage properties in the Study Area for the Lakeshore TS Class EA project.

Karla Barboza, Acting Team Lead Heritage, MHSTCI, reported that there are no designated heritage properties or provincial heritage properties within the Study Area.

Kevin De Mille, Heritage Planner, Ontario Heritage Trust, reported the Ontario Heritage Trust does not have any conservation easements or Trust-owned properties within, or adjacent to the Study Area. De Mille also completed a search of the *Ontario Heritage Act Register* and confirmed that there are no documents indicating the presence of designated properties under the *Ontario Heritage Act* in the Study Area.

To identify properties with potential cultural heritage value, the following online sources were reviewed:

- Plaques Database (Ontario Heritage Trust 2019)
- Ontario Genealogical Society, Essex County Cemeteries (2019)
- Canadian Heritage Rivers System (2017)

In addition, historical mapping from 1877, 1881, and 1913 and an aerial photograph from 1954 were reviewed to identify the presence of properties containing buildings and structures 40 years or older. Maps and aerial images reviewed to complete the Checklist are contained in Appendix A.

The construction of the new transformer station, switching station, new/rebuilt transmission lines, and proposed station entrances and site access points for the Hydro One Lakeshore TS project are located within 3097 Middle Road. Google Earth aerial imagery and photographs of this property were reviewed to determine whether the buildings and structures on this property have potential cultural heritage value. Google Earth imagery demonstrated that an older residence was located on this property but that it was demolished between 2009 and 2016. Photographs of the

property demonstrate that the remaining buildings and silos are all new and do not have potential cultural heritage value (Plate 1 and Plate 2).



Plate 1: Photo of 3097 Middle Road showing new storage buildings and silos



Plate 2: Photo of 3097 Middle Road showing new storage facility

3.0 MHSTCI Checklist Results

As part of the Hydro One Lakeshore TS Class EA, the MHSTCI Checklist was completed. The full Checklist is included in Appendix B and a summary of the Checklist is provided in Table 1.

Table 1: MHSTCI Checklist Results		
Screening Questions	Yes	No
1. Is there a pre-approved screening checklist, methodology or process in place?		✓
Part A: Screening for known (or recognized) Cultural Heritage Value		
2. Has the property (or project area) been evaluated before and not found to be of cultural heritage value?		✓
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)?		✓

Table 1: MHSCTI Checklist Results		
Screening Questions	Yes	No
f. Located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?		✓
Part B: Screening for Potential Cultural Heritage Value		
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		
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?		✓

The completion of the Checklist determined that there are no known (or recognized) properties with cultural heritage value within, or adjacent to, the Study Area. However, the Checklist did confirm the presence of properties that contain buildings or structures 40 years or older. Per the Checklist, these properties have potential cultural heritage value. Properties within, or adjacent to, the Study Area that contain structures that are 40 or more years old include:

- 2993 County Road 46 (Middle Road)
- 2990 South Middle Road
- 2505 South Middle Road
- 2637 South Middle Road
- 2456 Rochester Townline Road

These properties are mapped in Figure 7.

4.0 Discussion

The MHSTCI Checklist determined the Study Area contains, and is adjacent to, properties with potential cultural heritage value due to the presence of buildings or structures 40 years or older (Figure 7). To determine whether these properties may be impacted by the proposed work, a drawing of the preferred alternative for the Hydro One Lakeshore TS was reviewed. The drawing is provided in Appendix C and shows that no work related to the construction of the Hydro One Lakeshore TS is proposed within a property that contains a building or structure that is 40 years or older. Rather, the new transformer station, switching station, new/rebuilt transmission lines, and proposed station entrances and site access points are contained within properties that did not meet the screening criteria for cultural heritage value contained in the Checklist.

5.0 Recommendations

Based on the completion of the MHSTCI Checklist and review of drawings for preferred alternative of the Hydro One Lakeshore TS, the following recommendation is made:

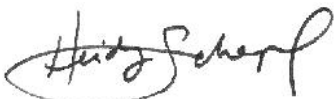
- 1) No work is planned within properties that contain known or potential cultural heritage resources. Accordingly, no further cultural heritage studies are recommended for the Hydro One Lakeshore TS EA.

The above recommendation was prepared using the drawing of the Hydro One Lakeshore TS preferred alternative contained in Appendix C. Should the preferred alternative be updated or changed, then the discussion presented in this memo should be revisited to confirm impacts to potential cultural heritage resources.

We trust that the information presented in this memo meets your current requirements. Should you have any questions, or concerns, please do not hesitate to contact the undersigned.

Respectfully Submitted,

**Wood Environment & Infrastructure Solutions,
a Division of Wood Canada Limited**



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Associate Archaeologist (P141)
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APPENDIX

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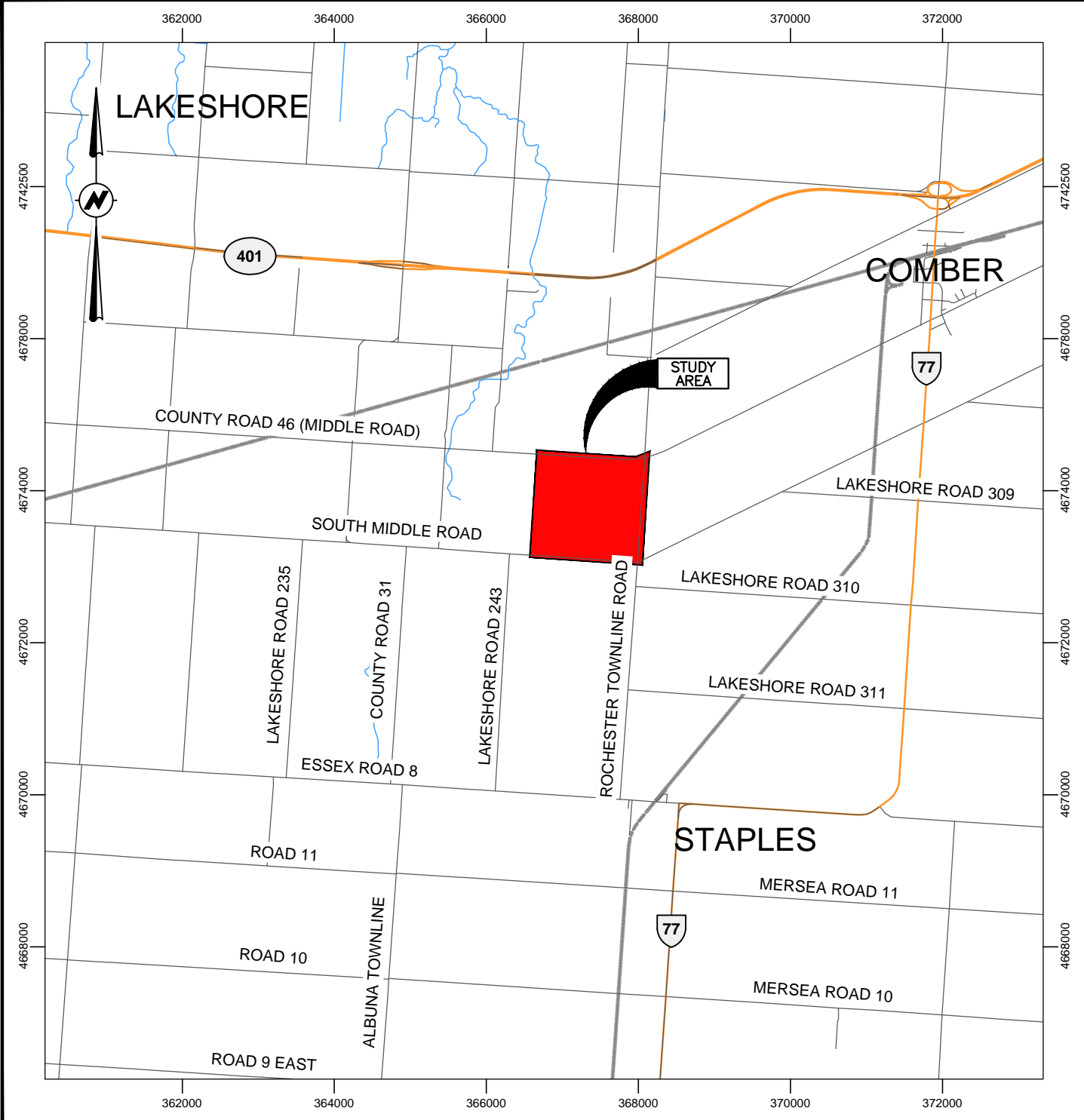
'Wood' is a trading name for John Wood Group PLC and its subsidiaries

SCL191337



Appendix A: Figures

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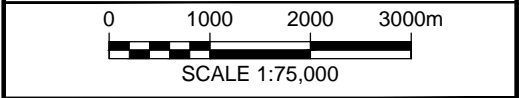


PROJECT:
 CULTURAL HERITAGE CHECKLIST AND IDENTIFICATION OF PROPERTIES 40 YEARS OR OLDER

TITLE:
 LOCATION OF THE STUDY AREA

LEGEND:
 ■ STUDY AREA

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS REPORT No. SCL191337.
 ALL LOCATIONS ARE APPROXIMATE.
 REFERENCES:
 CANMAP STREETFILES V2008.4.



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DWN BY: LMK	CHK'D BY: KO	DATE: DEC. 17, 2019
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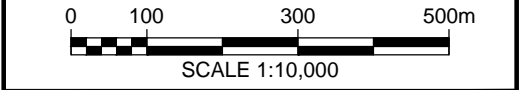


PROJECT:
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TITLE:
 AERIAL PHOTOGRAPH SHOWING LOCATION OF THE STUDY AREA

LEGEND:
 STUDY AREA

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS REPORT No. SCL191337.
 ALL LOCATIONS ARE APPROXIMATE.
 REFERENCES:
 DRAWING BASED ON 2017 AERIAL IMAGE FROM THE COUNTY OF ESSEX INTERACTIVE WEB MAPPING SITE, BY PERMISSION .



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DWN BY: LMK	CHK'D BY: KO	DATE: DEC. 17, 2019
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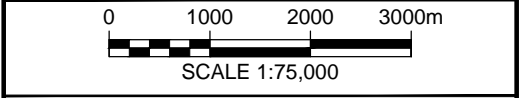


PROJECT:
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TITLE:
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LEGEND:
 STUDY AREA

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS REPORT No. SCL191337.
 ALL LOCATIONS ARE APPROXIMATE.
 REFERENCES:
 H.R. PAGE ESSEX COUNTY MAP (1877).



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DWN BY: LMK	CHK'D BY: KO	DATE: DEC. 17, 2019
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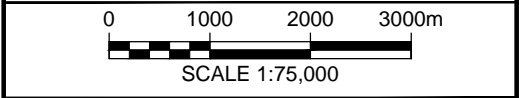


PROJECT:
CULTURAL HERITAGE CHECKLIST AND IDENTIFICATION OF PROPERTIES 40 YEARS OR OLDER

TITLE:
 STUDY AREA ON 1881 HISTORICAL ATLAS MAP OF ESSEX COUNTY

LEGEND:
 STUDY AREA

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS REPORT No. SCL191337.
 ALL LOCATIONS ARE APPROXIMATE.
 REFERENCES:
 HISTORICAL ATLAS OF ESSEX & KENT COUNTIES ONTARIO, H. BELDEN & Co., 1880-1881.



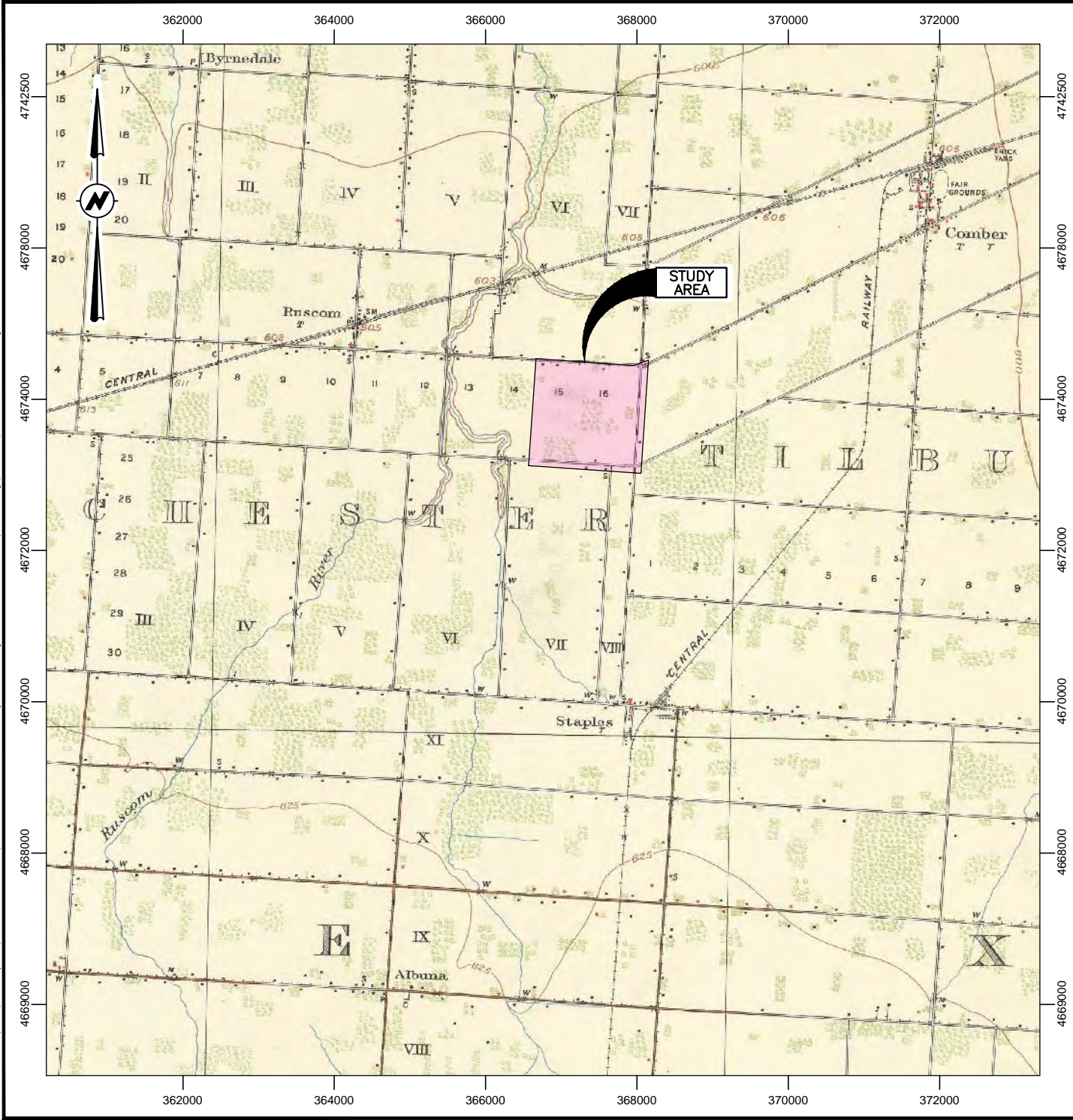
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DWN BY: LMK	CHK'D BY: KO	DATE: DEC. 17, 2019
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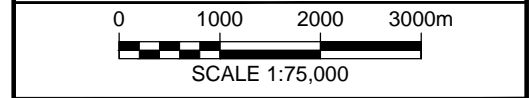


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 CULTURAL HERITAGE CHECKLIST AND
 IDENTIFICATION OF PROPERTIES 40 YEARS OR
 OLDER

TITLE:
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 ONTARIO, ESSEX SHEET

LEGEND:
 STUDY AREA

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE
 WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS
 REPORT No. SCL191337.
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 REFERENCES:
 DEPARTMENT OF MILITIA AND DEFENCE
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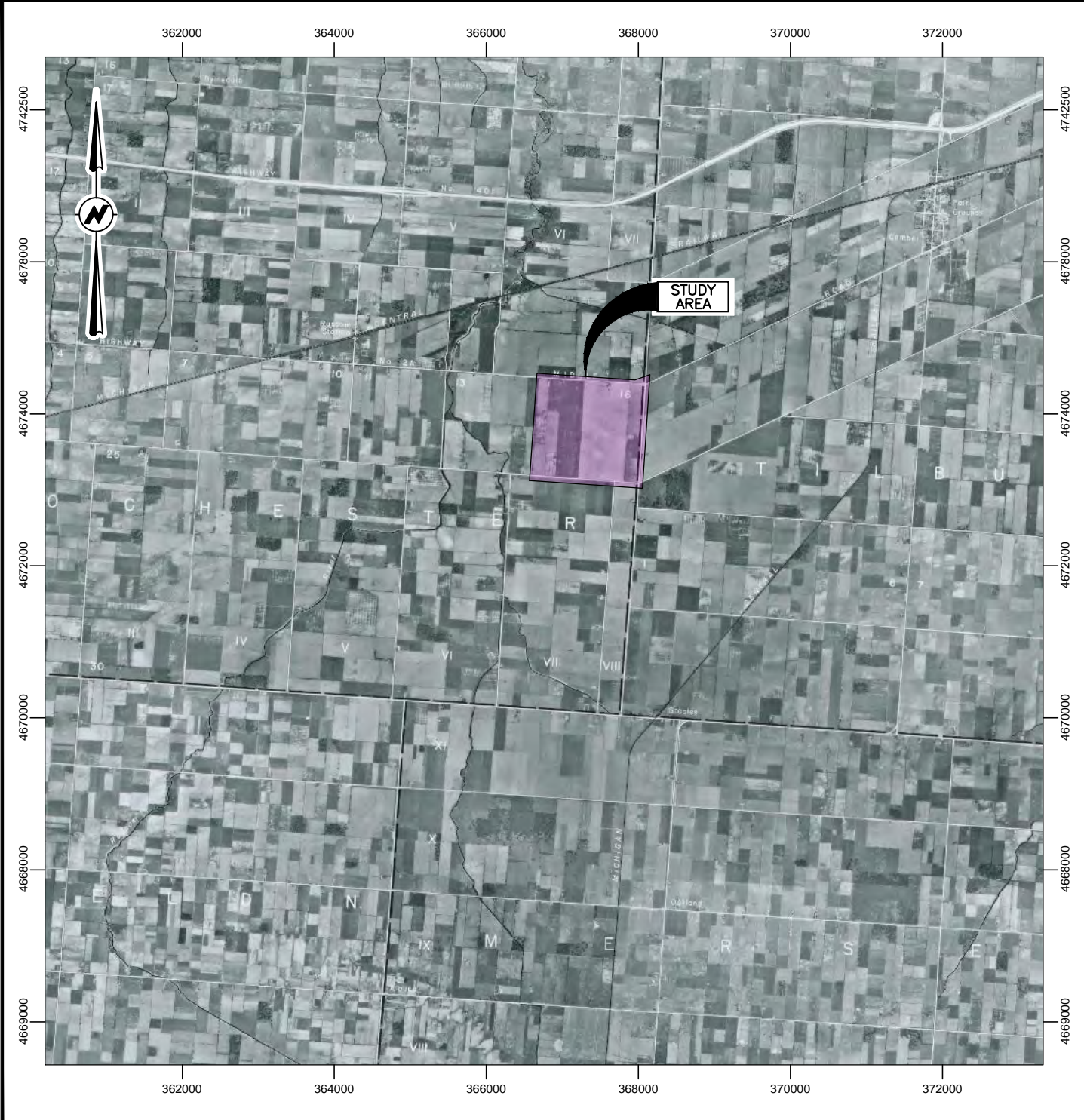
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DWN BY: LMK	CHK'D BY: HS	DATE: DEC. 17, 2019
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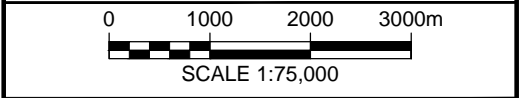


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 CULTURAL HERITAGE CHECKLIST AND IDENTIFICATION OF PROPERTIES 40 YEARS OR OLDER

TITLE:
 STUDY AREA ON 1954 AERIAL PHOTOGRAPH

LEGEND:
 STUDY AREA

NOTES:
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 ALL LOCATIONS ARE APPROXIMATE.
 REFERENCES:
 HUNTING SURVEY CORPORATION LIMITED
 1954 AIR PHOTOS OF SOUTHERN ONTARIO, PLATE 422.823.



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DWN BY: LMK	CHK'D BY: HS	DATE: DEC. 17, 2019
DATUM: NAD83	PROJECTION: UTM Zone 17	PROJECT No: SCL191337
REV No: 0		FIGURE No: 6

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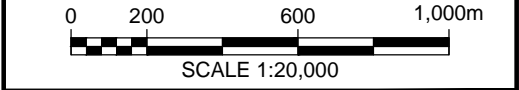


PROJECT:
 CULTURAL HERITAGE CHECKLIST AND IDENTIFICATION OF PROPERTIES 40 YEARS OR OLDER

TITLE:
 PROPERTIES WITH BUILDINGS OR STRUCTURES 40 YEARS OR OLDER

LEGEND:
 [Red outline] STUDY AREA
 [Green fill] PROPERTIES WITH BUILDINGS OR STRUCTURES 40 YEARS OR OLDER

NOTES:
 THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS REPORT No. SCL191337.
 ALL LOCATIONS ARE APPROXIMATE.
 REFERENCES:
 DRAWING BASED ON 2017 AERIAL IMAGE FROM THE COUNTY OF ESSEX INTERACTIVE WEB MAPPING SITE, BY PERMISSION .



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DWN BY: LMK	CHK'D BY: KO	DATE: DEC. 18, 2019
DATUM: NAD83	PROJECTION: UTM Zone 17	PROJECT No: SCL191337
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Appendix B: MHSTCI Checklist

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

Hydro One - Lakeshore TS, Class Environmental Assessment

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

Country Road 46 (Middle Road) and Rochester Townline Road, Town of Lakeshore, Essex County, Ontario

Proponent Name

Hydro One

Proponent Contact Information

Paul Dalmazzi, 416-345-6145, Paul.DALMAZZI@HydroOne.com

Screening Questions

	Yes	No
1. Is there a pre-approved screening checklist, methodology or process in place?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 <i>Ontario Heritage Act</i> as being of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. a National Historic Site (or part of)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. designated under the <i>Heritage Railway Stations Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. designated under the <i>Heritage Lighthouse Protection Act</i> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office (FHBRO)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has or is adjacent to a known burial site and/or cemetery?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. is in a Canadian Heritage River watershed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. contains buildings or structures that are 40 or more years old?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has a special association with a community, person or historical event?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. contains or is part of a cultural heritage landscape?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

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.:

- 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)

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)

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

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](#)

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:

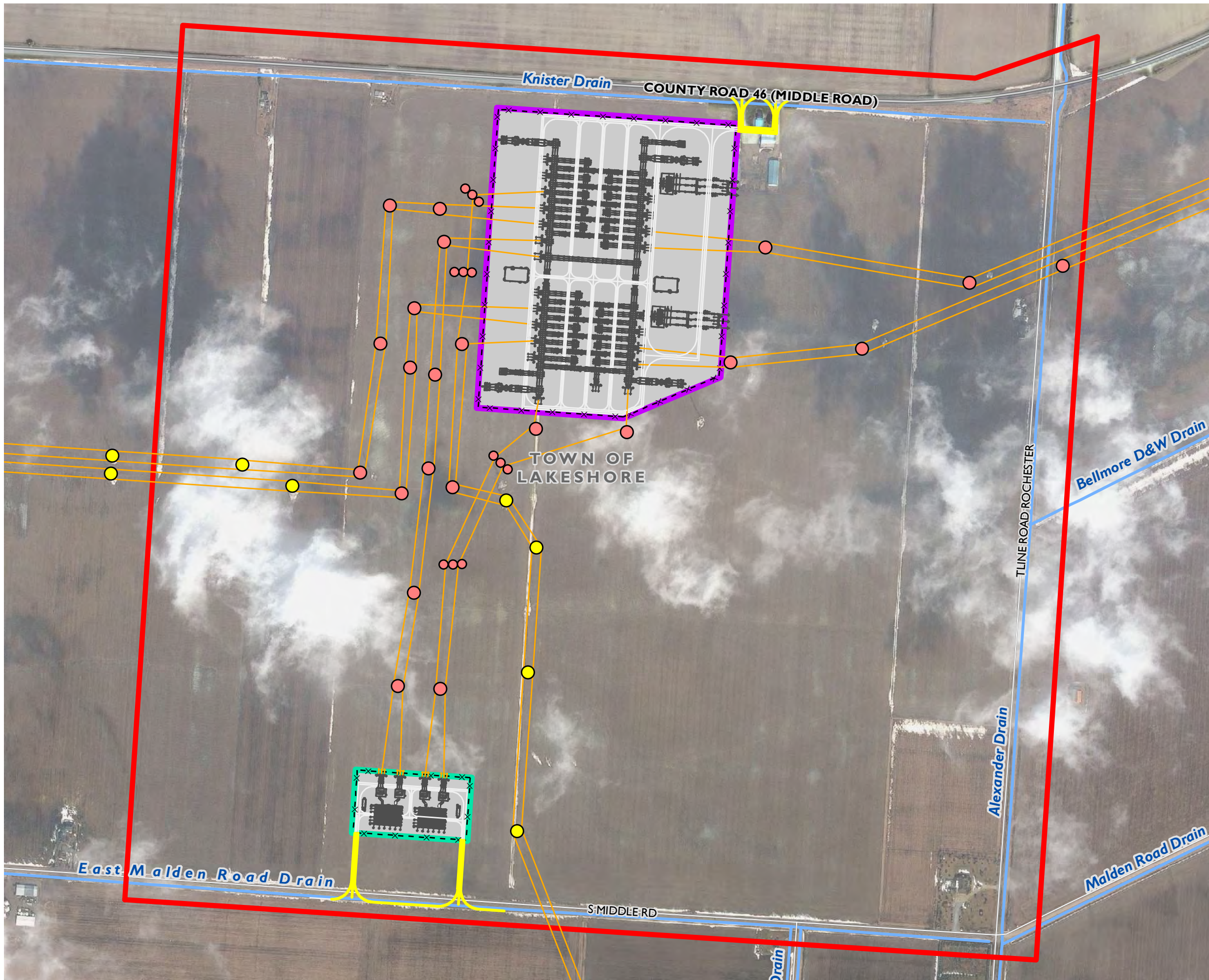
- Elders in Aboriginal Communities or community researchers who may have information on potential cultural heritage resources. Please note that Aboriginal traditional knowledge may be considered sensitive.
- [municipal heritage committees](#) or local heritage organizations
- Ontario Historical Society's "[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](#).

Appendix C: Preferred Alternative



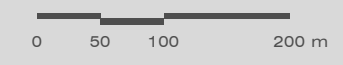
**HYDRO ONE – LAKESHORE
TRANSMISSION STATIONS PROJECT
CLASS ENVIRONMENTAL ASSESSMENT**

PREFERRED ALTERNATIVE

- Class EA Study Area
- Existing Transmission Tower
- New / Rebuilt Transmission Tower
- Transmission Line
- Station Fence
- Proposed Site Plan
- Proposed Station Entrance
- Proposed Site Access
- Watercourse/Constructed Drain
- Switching Station
- Transformer Station



1:6,000



MAP CREATED BY: LK
MAP CHECKED BY: DB
MAP PROJECTION: NAD 1983 UTM Zone 17N



Appendix B3

Existing Conditions Technical Memo

Memo

To: Paul Dalmazzi, Hydro One Networks Inc.
From: Jessica Wright, Dillon Consulting Limited
CC: Daniel Bourassa, Dillon Consulting Limited
Date: October 25, 2019
Subject: 2019 Natural Environment Existing Conditions for the Lakeshore Transmission Stations Project Class EA
Our File: 19-9558

Introduction

Dillon Consulting Limited (Dillon) was retained by Hydro One Networks Inc. (Hydro One) to undertake an Environmental Assessment (EA) for the Lakeshore Transmission Stations Project (the Project) under the Class Environmental Assessment (Class EA) process.

An assessment was completed by the Independent Electricity System Operator (IESO) on the electricity load forecast for Essex County, which led to the IESO requesting that Hydro One construct a new switching station (SS) to help meet the growing needs of the area. In addition to the IESO request, Hydro One also identified the need for additional transformers in order to supply more low-voltage electricity to homes and businesses in the area. The Project involves a new 230 kV SS and a separate 230/27.6 kV transformer station (TS). Based on the recommendations provided by the IESO, to optimize the utilization of the existing transmission infrastructure, the Project will be located within the vicinity of the existing Leamington Junction (JCT) within the Town of Lakeshore (**Attachment A**; Figure 1).

The EA document will outline existing conditions of the natural environment, evaluate the potential for environmental impacts associated with the construction for the Project, and recommend mitigation, restoration, and enhancement measures to preserve and/or restore natural features. In support of the EA, this memo provides a summary of the findings of the field assessment undertaken in the Project study area (the study area).

Methodology of the Biophysical Inventory

The study area for the class EA is bounded by County Road (Middle Road) to the north, Rochester Townline Road to the east, South Middle Road to the south, and extends west approximately 550 metres (m) from the Leamington JCT (**Attachment A**; Figure 1).

A total of seven municipal drains exist within the study area, six of which are associated with municipal/county roads; the seventh drain (Bellmore D&W Drain) extends northeast from Rochester Townline Road and bisects agricultural fields. The remainder of the study area is associated with residential properties, and active agriculture lands and associated agricultural infrastructure. Agricultural is the dominant land use within the study area.

Field investigations were conducted between May and October 2019 when weather conditions and timing were deemed suitable based on applicable survey protocols. Field investigations consisted of Ecological Land Classification (ELC), a summer botanical survey, an aquatic assessment, visual encounter surveys (VES) paired with road surveys targeting Species at Risk (SAR) snakes and Barn Swallow (*Hirundo rustica*) nest presence/absence survey. Incidental wildlife observations made during each site visit were also documented. Field surveys were limited to Hydro One existing right-of-ways (RoW) as well as lands where access permission was granted. In instances where permission to access was not granted, an attempt was made to assess the areas from Hydro One RoWs as well as municipal/county road RoWs. Dates associated with each of the field studies completed during the 2019 field program are outlined below in **Table 1**.

Table 1: 2019 Field Study Dates

Survey	Dates (2019)
Ecological Land Classification (ELC)	August 15
Botanical Survey	August 15
Aquatic Assessment	May 6
	May 21
Snake Visual Encounter Surveys (VES)	Survey 1: May 6
	Survey 2: May 21
	Survey 3: June 6
	Survey 4: June 11
	Survey 5: June 27
	Survey 6: August 15
	Survey 7: August 30
	Survey 8: September 18
	Survey 9: October 10
	Survey 10: October 18
Barn Swallow Nest Presence/Absence Survey	October 30

Methods associated with each of the surveys identified in **Table 1** are summarized below.

Ecological Land Classifications

Vegetation communities were assessed using ELC as a first step to identify and assess potential natural heritage features within the study area. During the field investigations, vegetation was characterized using the ELC System for Southern Ontario, second approximation (Lee et al., 1998; Lee, 2008) in order to classify and map ecological communities to the vegetation level. The ecological community boundaries were determined through the review of aerial photography and then further refined during field surveys.

The ELC protocol recommends that a vegetation community be a minimum of 0.5 hectares (ha) in size before it is defined. Based on the composition of vegetation communities within the study area, patches of vegetation less than 0.5 ha or disturbed/planted vegetation were described (if required), provided they clearly fit within an ELC vegetation type.

Vegetation Inventory

A single summer vegetation survey was conducted in August 2019. Surveys consisted of wandering transects and/or area searches to determine the presence, richness and abundance of floral species within the Study Area. Vegetation surveys were conducted in conjunction with ELC surveys. Species nomenclature is based on the Ontario Plant List (Newmaster *et al.*, 1998).

Aquatic Assessment

Potential habitat for Mapleleaf Mussel (*Quadrula quadrula*), a species listed as Threatened under the federal *Species at Risk Act, 2002* (SARA) and Special Concern under the provincial *Endangered Species Act, 2007* (ESA) was identified during initial desktop review in association with the Knister Drain). Watercourses (including municipal drains) fall under federal regulation; as such, the SARA applies to the drains within the study area. According to Agricultural Maps (AgMaps) the Knister Drain is classified by the Department of Fisheries and Oceans (DFO) as “Intermittent” (F); intermittent drains are dry for at least three months of the year and therefore provide habitat for a portion of the season (AFRA, 2019; DFO, 2017).

An aquatic habitat assessment was completed for the Knister Drain which included the collection of general aquatic habitat information such as substrate type, watercourse morphology and aquatic vegetation, as well as an overall determination of the presence/absence of fish habitat.

Eastern Foxsnake Surveys

Potential habitat for eastern foxsnake (*Pantherophis gloydi*; Carolinian Population), was identified during initial desktop reviews as having the potential to occur within the study area. Eastern foxsnake are listed as Threatened (THR) under the ESA; therefore, the species and their habitat is protected. In accordance with the Ministry of Natural Resources and Forestry (MNRF) Survey Protocol for Ontario’s Species at Risk Snakes (2016), 10 Visual Encounter surveys (VES) were conducted to confirm the presence or absence of Eastern Foxsnake within the study area. Road surveys were also completed concurrently with each of the 10 VES in accordance with ministry protocol. Road surveys were limited to municipal/county roads that intersect the study area.

VES surveys were conducted via wandering transects within suitable habitat; wandering transects were completed within Hydro One RoWs as well as areas within the study area where access was granted. Additional road surveys were completed within the study area to increase the level of effort/detection. VES and road surveys were completed in accordance with the time and temperature requirements set out in the protocol. Of the 10 VES, five were completed prior to July 1.

Barn Swallow Nest Presence/Absence Survey

The potential for barn swallow was identified during initial background reviews as having the potential to occur within the study area. Barn swallow are listed as THR under the ESA; therefore, the species and their habitat is protected. Agricultural infrastructure with the potential to be impacted as a result of the Project was assessed for nests in October 2019.

Incidental Wildlife

A general wildlife assessment was completed within the Study Area through incidental observations while on site. Incidental observations of wildlife, including evidence of wildlife such as dens, tracks, and scat were documented, and when possible, photos were taken. These observations helped to determine potential ecological functions or linkages within the study area.

The Results of Biophysical Inventory

Each section below summarizes the results of field surveys conducted as part of the 2019 field investigations; field notes for each site visit have been included within **Attachment B** for review.

Ecological Land Classifications

A total of five cultural communities were observed within the study area during the ELC survey. The absence of natural communities within the study area is reflective of past and ongoing land uses (i.e. active agriculture and residential). Cultural communities identified within the study area are illustrated in **Attachment A** (Figure 2). Representative photos of the ELC communities are provided in **Attachment C** (Photos 1 - 6).

Open Agricultural (OAG) comprise the majority of the study area; these areas consist of annual cash crops (wheat, soybean, corn) (**Attachment C**; Photos 1 - 2). Agricultural surface drainage features within convey surface flow to adjacent municipal drains. Agricultural fields are surrounded and bisected by areas delineated as Transportation and Utilities (CV1) (**Attachment C**; Photos 3 - 6).

A total of five residential properties (CVR), including agricultural infrastructure (IAG) are located within the study area. A small area of Greenlands (CGL) is located within the study area in association with the County Road 46 (Middle Road)/Rochester Townline Road intersection (i.e. road RoW).

Vegetation observed in association with the Greenlands (CGL) consisted of species such as Wild Carrot (*Daucus carota*), Common Yarrow (*Achillea millefolium*), Great Ragweed (*Ambrosia trifida*), Chicory (*Cichorium intybus*), Bull Thistle (*Cirsium vulgare*), Common Dandelion (*Taraxacum officinale*), Red Clover (*Trifolium pratense*), and Smooth Crab Grass (*Digitaria ischaemum*).

Vegetation Inventory

A total of 40 plant species were documented during 2019 field studies. Of the 40 species, 10 are listed as native species and are considered to be very common (SRank of S5) in the province of Ontario. The remaining 30 species are listed as introduced species; therefore, a status ranking is not applicable as the species is not a suitable target for conservation activities (SRank of SE or SNA). No SAR or species of conservation concern were observed during the vegetation survey.

The Co-efficient of Conservatism (CC) provides additional information on the nature of the vegetation communities within the study area. The CC values range from 0 to 10 and represent an estimated probability that a plant is likely to occur in a landscape that is relatively unaltered or is in a pre-settlement condition. For example, a CC of 0 is given to plants such as Manitoba maple (*Acer negundo*) that demonstrate little fidelity to any remnant natural community, i.e. may be found almost anywhere. Similarly, a CC of 10 is applied to plants like shrubby cinquefoil (*Potentilla fruticosa*) that are almost always restricted to a pre-settlement remnant, i.e. a high quality natural area. Introduced plants were not part of the pre-settlement flora, so no CC values have been applied to these species.

Of the 40 species identified within the Study Area, none have a CC value of 7 or greater. The mean CC value for the site was 1.92 out of a possible 10, indicating a highly disturbed landscape. Refer to **Attachment D** (Table D-1) for a full list of the vegetation species observed.

Aquatic Assessment

The feature flows in a westerly direction outletting to the Ruscom River approximately 1.2 km downstream of the Study Area. At the time of the assessment the feature was observed to have a small amount of flow with a mean wetted width of approximately 2 m and a mean wetted depth of approximately 0.5 m. Clay was the dominant substrate observed, with areas of cobble also documented. While instream organic debris and emergent vegetation within the drain provides potential cover for fish, manicured lands on the banks provide limited to no riparian cover (**Attachment C**; Photos 7 – 9). Where emergent vegetation was present within the drain, it was dominated by European Common Reed (*Phragmites australis* ssp. *australis*), an invasive species.

Based on the aquatic assessment, the Knister Drain likely provides fish habitat and contributes flows and nutrients downstream to the Ruscom River. Furthermore, as Mapleleaf are usually found in medium to large rivers with slow and moderate flow, and require substrates consisting of dense sand, coarse gravel, and mud, the Knister Drain likely does not provide suitable habitat for Mapleleaf (Queen's Printer for Ontario, 2019). While Habitat may not exist within the study area, it is possible that flow from the drain contributes to Mapleleaf habitat located west of the study area in association with the Ruscom River.

Eastern Foxsnake Visual Encounter Surveys

No eastern foxsnake or any other snake species were observed within the study area during the VES and road surveys.

Barn Swallow Nest Presence/Absence Survey

No barn swallow nests were observed within the study area in association with agricultural infrastructure with the potential to be impacted as a result of the Project.

Incidental Wildlife

During the 2019 field investigations, the following 13 bird species listed in **Table 2** were incidentally observed.

Table 2: Incidental Wildlife Observations

Scientific Name	Common Name	SARA ¹	ESA ²	Srank ³
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	---	---	S4
<i>Anas platyrhynchos</i>	Mallard	---	---	S5
<i>Ardea herodias</i>	Great Blue Heron	---	---	S4
<i>Carduelis tristis</i>	American Goldfinch	---	---	S5B
<i>Charadrius vociferus</i>	Killdeer	---	---	S5B,S5N
<i>Eremophila alpestris</i>	Horned Lark	---	---	S5B
<i>Hirundo rustica</i>	Barn Swallow	THR	THR	S4B
<i>Larus delawarensis</i>	Ring-billed Gull	---	---	S5B,S4N
<i>Melospiza melodia</i>	Song Sparrow	---	---	S5B
<i>Molothrus ater</i>	Brown-headed Cowbird	---	---	S4B
<i>Passerculus sandwichensis</i>	Savannah Sparrow	---	---	S4B
<i>Quiscalus quiscula</i>	Common Grackle	---	---	S5B
<i>Turdus migratorius</i>	American Robin	---	---	S5B

¹Federal Species at Risk Act: THR = threatened; ²Provincial Endangered Species Act, THR = Threatened; ³Subnational (Provincial) Rank where S5= Secure, S4= Apparently Secure, B = Breeding Population.

Twelve of the 13 incidentally observed species are considered apparently secure and secure in Ontario (SRank of S4 or S5). One additional species, barn swallow was incidentally observed foraging over agricultural lands (OAG) within the study area.

As previously mentioned, barn swallow are listed as THR under the ESA; therefore, the species and their habitat are protected. Potential breeding habitat for barn swallow exists in association with agricultural infrastructure (IAG) and residential properties within the study area. Agricultural infrastructure with the potential to be impacted (e.g. displaced) as a result of the Project was assessed for presence of barn swallow nest, of which no nests were observed. Residential properties are not anticipated to be impacted (e.g. displaced) as a result of the Project.

Summary

Given the results of the 2019 field program and our understanding of the Project, it is the opinion of Dillon the study area contains no natural features and is absent of potential wildlife habitat. Hydro One will be notified should any wildlife habitat or observations of SAR be observed within the Study Area during the remainder of the field season.

Should you have any questions or concerns, please feel free to contact me at 905-901-2912 ext. 3451 or jwright@dillon.ca.

Enclosure:

Attachment A – Figures

Attachment B – Field Notes

Attachment C – Site Photos

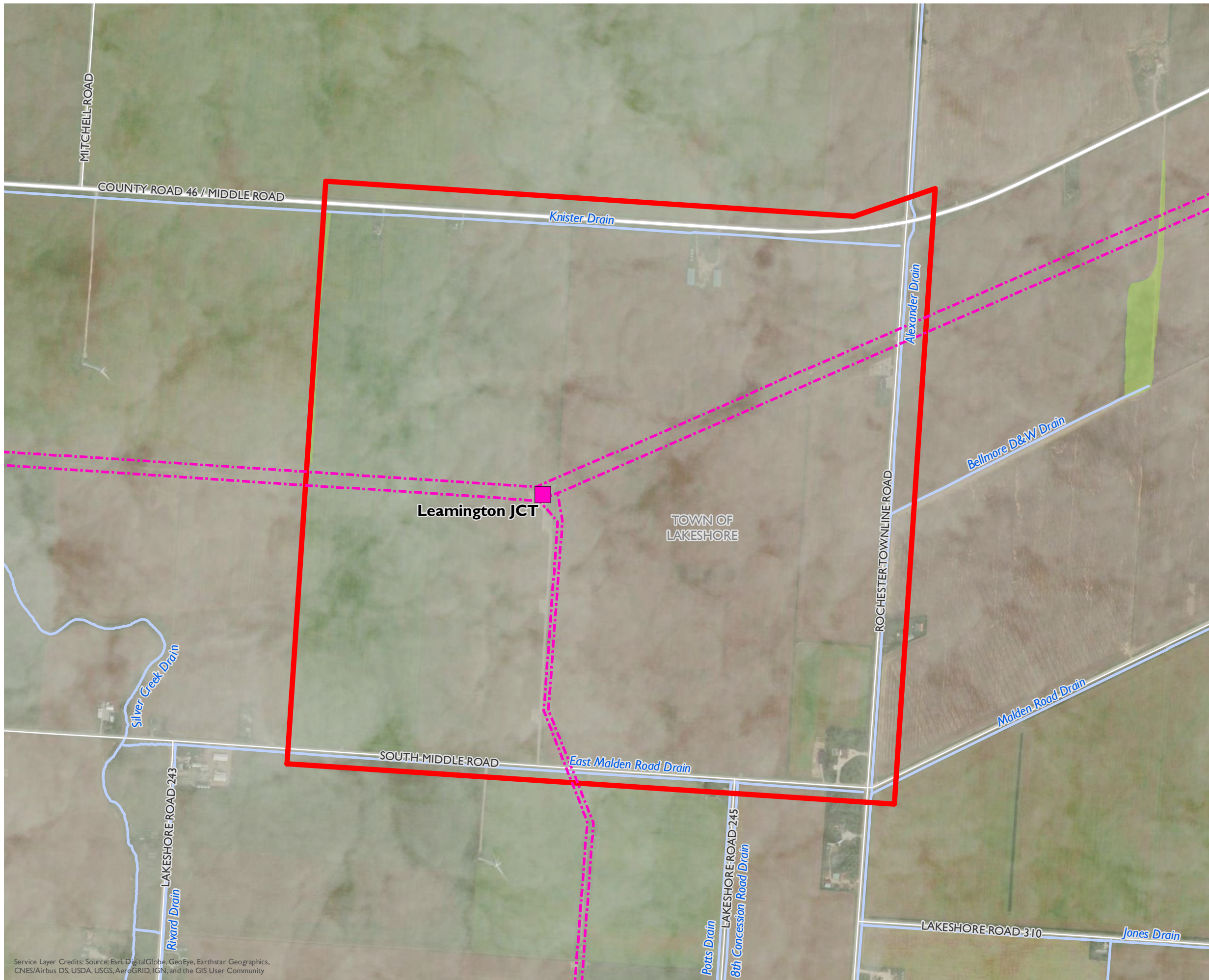
Attachment D – Vegetation List

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Attachment A

Figures



HYDRO ONE NETWORKS INC.
LAKESHORE TRANSMISSION STATIONS PROJECT
CLASS ENVIRONMENTAL ASSESSMENT

CLASS EA STUDY AREA
FIGURE I

-  Study Area
-  Junction
-  Existing 230 kV Electrical Transmission Line
-  Major Road
-  Minor Road
-  Watercourse / Constructed Drain
-  Woodland



MAP DRAWING INFORMATION:
 DATA PROVIDED BY MNRFP

MAP CREATED BY: LK
 MAP CHECKED BY: CV
 MAP PROJECTION: NAD 1983 UTM Zone 17N



PROJECT: 19-9558
 STATUS: DRAFT
 DATE: 2019-10-24

Attachment B

Field Notes

DETAILED STREAM ASSESSMENT



GENERAL INFORMATION								
PROJECT #:	19-9558	NAME OF PROJECT:	Lakeshore SS-TS	TIME STARTED:	1000	TIME FINISHED:	1020	
COLLECTORS:	Brad McLeod			STREAM ID #:	-	DATE:	May 21, 2019	
WEATHER:	T:12 P:N/A W:1N C:85							
LOCATION								
NAME OF WATERBODY:	Knister Drain							
GENERAL AREA OF PROJECT LOCATION:	Essex Co., Lakeshore, South of Co. Rd. 46							
CHAINAGE OR OTHER IDENTIFYING ATTRIBUTE:	-							
GPS COORDINATES (UTM):	NAD 83, Zone 17T, E:367137 N:4674438							
LAND USE AND POLLUTION								
SURROUNDING LAND USE:	Agriculture			SOURCES OF POLLUTION:	Agriculture			
EXISTING STRUCTURE TYPE (IF ANY)								
Bridge	<input type="checkbox"/>	Box Culvert	<input checked="" type="checkbox"/>	Open Foot Culvert	<input type="checkbox"/>	CSP	<input type="checkbox"/>	
Other	<input type="checkbox"/>	Describe:				Size (w x h) m ²	2 x 3	
SECTION TYPE AND MORPHOLOGY								
TYPE:	Stream / river	Channelized	Permanent	Intermittent	Ephemeral	ASSOCIATED WETLAND:		
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A		
HYDRAULIC HEAD (mm):	low flow							
Habitat Type	Substrate	Mean width wetted (m)	Mean depth wetted (m)	Mean bankfull width (m)	Mean bankfull depth (m)	Other		
Run, Pool, Riffle, Flat?								
Flat	Cl	2	0.5	5	2.5	-		
Bedrock Br	Boulder Bo	Cobble Co	Gravel Gr	Sand Sa	Silt Si	Clay Cl	Muck Mu	Detritus D
BANK STABILITY								
	Eroding	Vulnerable	Protected	Deposition Zone				
	Angle > 45°, erodible soil, undercut or bare soil	Angle > 45°, erodible soil, no sign of recent erosion	Angle > 45°, non-erodible material/soil	Angle < 45° (gradual slope), fine grained sediments				
Left Upstream Bank	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
Right Upstream Bank	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
HABITAT								
IN-STREAM COVER (check all that apply; D is for dominant cover):	Undercut banks	Boulders	Cobble	Woody Debris	Organic debris	Vascular Macrophytes	None	
			X	Instream X Overhanging X	X	Instream Overhanging		

DETAILED STREAM ASSESSMENT

SHORE COVER (% stream shaded):	100 – 90 % <input type="checkbox"/>	90 – 60% <input type="checkbox"/>	60- 30% <input type="checkbox"/>	30 – 1% <input type="checkbox"/>	None <input checked="" type="checkbox"/>
VEGETATION TYPE (D for dominant):	Submergent		Floating		Emergent
Predominant Species	D PHRAAUS, TYPHLAT				
MIGRATORY OBSTRUCTIONS:	None <input checked="" type="checkbox"/>		Seasonal/Temporary		Permanent
POTENTIAL CRITICAL HABITAT LIMITING:	Spawning		Evidence of Groundwater		Other

RIPARIAN COMMUNITY

		Dominant Vegetation Type									
		Left Upstream Bank					Right Upstream Bank				
Riparian Zone	None	Cultivated	Meadow	Scrubland	Forest	None	Cultivated	Meadow	Scrubland	Forest	
1.5-10 m		<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
10-30 m		<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>				
30+ m		<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>				

PHOTOGRAPHIC RECORD:

UPSTREAM PHOTO #:	LEFT UPSTREAM BANK PHOTO #:
DOWNSTREAM PHOTO #:	RIGHT UPSTREAM BANK PHOTO #:
OTHER PHOTO #S:	

COMMENTS, INCLUDING POTENTIAL ENHANCEMENT OPPORTUNITIES:

Additional Notes Appended?	<input type="checkbox"/> No	<input type="checkbox"/> Yes	number of pages _____	DESCRIPTION _____
----------------------------	-----------------------------	------------------------------	-----------------------	-------------------

Mon, May 6/9 19-9558
Travel 930-1540 Lakeshore SS-TS
1010-1500 (60.3 km)

VES, ^(round 1) Aquatic Assessment

T: 19.3-23.8 P: NA W: 2SW-2SW C: 40-30

KILL, HOLA, RWBL, AMGO, AMRO,
SAVS, SOSP, RBGU, BARS, COGR,

Photos W+E @ 014 (S drain)

Photos W+E @ 015 (S drain)

Photos W+E @ 016 (S drain)

Photos E+W @ 017 (N drain)

Photos E+W @ 018 (N drain)

Photos E+W @ 019 (N drain)

* No ⊗'s @ bridge NE of study area

MALL, GBHE, C. white, BHCO

Photo W @ 020

Photo W+E @ 021

Tue, May 21, 19
Travel 8:40 - 11:45
9:10 - 11:15

19-9558
Lakeshore
(60 Km)

VES round 2

T: 12-14. | P: N/A

W: IN-INC: 85-60

- Nothing seen

Thu, Jun 6, 19
Travel 900 - 1200
940 - 1130

19-9558
Lake Shore
60 Km

VES round 3

T: 16.2-17.8 P: N/A W: 1 N-INC: 90-90

- none seen

Tue; Jun 11, 19 19-9558
Travel 1415-1800 Lakeshore
1450-1725

Deliver NoC letters to nearby residences
and VES round 4

T: 23.1 P: N/A W: 1 N C: 30

- 31 residences received NoC letters
- no snakes seen.

Thu, June 27, 19 19-9558
Travel 900-1325 Lake store
1045-1250 rental

Snake 5

T: 29.2 P: N/A W: 15 C: 20

Thu, Aug 15, 19 19-9558
840-4130 Lakeshore

Snake G, Summer veg

T: 22.7-27.2 P: N/A W: 2E-2EC: 25-45

★ Photos N, W, E @ 149

N: Tile drainage w Soy

POACOMP, MORUALB, OR. grass, C. Milkweed,
Flow. Rush, C. Dock, PHRAAUS, C. Dandelion
TYPH LAT, Monarch, DACCAR, C. Mullen
Yarrow, C. Groundsel, Wh. Sw-clover,

JUNIVIR, Poor Man's pepper

★ Photo N @ 150: Soy to the W,
Corn to the E all the way to
E road, G. Rag, G. Fox tail,

Y. Sw-clover, Scor. Rush, TYPHANG
RHUSHIR, Velvet leaf, Chicory, F. Mustard
Crabgrass, E. Plantain, B. Thistle,
Lady's Thumb, Sow Thistle, Can. Thistle,
★ Photos N, S @ 151: Dram
Bird-foot Trefoil, Viper's Bugloss, Teasel
★ Photos S, E @ 152
★ Photo N @ 153
★ Photos N, S @ 154
Sw. Milk, W. Parsnip, C. White, R. Clover
★ Photos N, NE, S @ 155
B. Vervain, Butter-n-eggs, E. Primrose

Fri, Aug 30, 19 19-9558
Travel 855' - 1145' Lakeshore
920 - 1120 (95 km)

Snake 7

T: 20.5 - 23.1 P: N/A W: W - INWC: 25 - 50

* Photos E, S, W @ 192

Wed, Sep 18, 19 19-9558
Travel 1330-1630 Lakeshore
1400-1600 (90 km)

Snake 8

T: 23.5-25.1 P: N/A W: 2E-2E G: 0-0

Thu, Oct 10 19 19-9558
Travel 1245-1500 Lakeshore
1305-1445 (90 km)

Snake 9

T: 20.4-20.3P: NA W: 2E-2E C: 10-10

Fri, Oct 18, 19 19-9558




Travel 1400-1630 Lakeshore




1420-1610 (90 km)

Snake 10

T: 12.8-2.4 P: N/A W: 1N-2N C: 10-30

Attachment C
Site Photographs

Description	Photo
<p>Photo 1</p> <p>August 15, 2019</p> <p>North view of Open Agriculture (OAG) containing annual cash crops (soy bean) from South Middle Road.</p>	
<p>Photo 2</p> <p>August 15, 2019</p> <p>North view of Open Agriculture (OAG) containing annual cash crops (soy bean and corn) from South Middle Road.</p>	
<p>Photo 3</p> <p>August 15, 2019</p> <p>South view of Rochester Townline Road, Open Agriculture (OAG), and the Alexander Drain.</p>	

Description	Photo
<p>Photo 4</p> <p>August 15, 2019</p> <p>South view of Rochester Townline Road, Open Agriculture (OAG), and the Alexander Drain.</p>	
<p>Photo 5</p> <p>August 15, 2019</p> <p>South view of the 230 kV Transmission Line from the Leamington JCT.</p>	
<p>Photo 6</p> <p>May 6, 2019</p> <p>East view of the 230 kV Transmission Line to the Leamington JCT.</p>	

Description	Photo
<p>Photo 7</p> <p>May 6, 2019</p> <p>West view of shallow flow within the Knister Drain along County Road 46/Middle Road.</p>	
<p>Photo 8</p> <p>August 15, 2019</p> <p>East view of riparian vegetation of the Knister Drain along County Road 46/Middle Road.</p>	
<p>Photo 9</p> <p>August 15, 2019</p> <p>West view of riparian vegetation of the Knister Drain along County Road 46/Middle Road.</p>	

Attachment D

Vegetation List

Table C-1: Vegetation List

Scientific Name	Common Name	SARA ¹	ESA ²	SRank ³	CC ⁴
<i>Abutilon theophrasti</i>	Velvetleaf	---	---	SNA	---
<i>Achillea millefolium</i>	Common Yarrow	---	---	SE	---
<i>Ambrosia trifida</i>	Great Ragweed	---	---	S5	0
<i>Asclepias incarnata</i>	Swamp Milkweed	---	---	S5	6
<i>Asclepias syriaca</i>	Common Milkweed	---	---	S5	0
<i>Brassica rapa</i>	Field Mustard/Turnip	---	---	SNA	---
<i>Butomus umbellatus</i>	Flowering-rush	---	---	SNA	---
<i>Cichorium intybus</i>	Chicory	---	---	SNA	---
<i>Cirsium arvense</i>	Canada Thistle	---	---	SNA	---
<i>Cirsium vulgare</i>	Bull Thistle	---	---	SNA	---
<i>Dactylis glomerata</i>	Orchard Grass	---	---	SNA	---
<i>Daucus carota</i>	Wild Carrot	---	---	SNA	---
<i>Digitaria ischaemum</i>	Smooth Crabgrass	---	---	SNA	---
<i>Dipsacus fullonum</i>	Fuller's Teasel	---	---	SE5	---
<i>Echium vulgare</i>	Common Viper's-bugloss	---	---	SNA	---
<i>Equisetum hyemale</i>	Common Scouring-rush	---	---	S5	2
<i>Juniperus virginiana</i>	Eastern Red Cedar	---	---	S5	4
<i>Lepidium virginicum</i>	Poor-man's Peppergrass	---	---	S5	0
<i>Linaria vulgaris</i>	Butter-and-eggs	---	---	SNA	---
<i>Lotus corniculatus</i>	Garden Bird's-foot Trefoil	---	---	SNA	---
<i>Melilotus albus</i>	White Sweet-clover	---	---	SNA	---
<i>Melilotus officinalis</i>	Yellow Sweet-clover	---	---	SNA	---
<i>Morus alba</i>	White Mulberry	---	---	SNA	---
<i>Oenothera biennis</i>	Common Evening Primrose	---	---	S5	0
<i>Pastinaca sativa</i>	Wild Parsnip	---	---	SNA	---
<i>Persicaria maculosa</i>	Spotted Lady's-thumb	---	---	SNA	---
<i>Phragmites australis</i> <i>ssp. australis</i>	European Common Reed	---	---	SNA	---
<i>Plantago lanceolata</i>	English Plantain	---	---	SNA	---
<i>Poa compressa</i>	Canada Bluegrass	---	---	SNA	0
<i>Rhus hirta</i>	Staghorn Sumac	---	---	S5	1

Scientific Name	Common Name	SARA ¹	ESA ²	SRank ³	CC ⁴
<i>Rumex crispus</i>	Curly Dock	---	---	SNA	---
<i>Senecio vulgaris</i>	Common Ragwort	---	---	SNA	---
<i>Setaria viridis</i>	Green Foxtail	---	---	SNA	---
<i>Sonchus arvensis</i> ssp. <i>arvensis</i>	Field Sow-thistle	---	---	SNA	---
<i>Taraxacum officinale</i>	Common Dandelion	---	---	SNA	---
<i>Trifolium pratense</i>	Red Clover	---	---	SNA	---
<i>Typha angustifolia</i>	Narrow-leaved Cattail	---	---	SNA	3
<i>Typha latifolia</i>	Broad-leaved Cattail	---	---	S5	3
<i>Verbascum thapsus</i>	Common Mullein	---	---	SNA	---
<i>Verbena hastata</i>	Blue Vervain	---	---	S5	4

¹Federal Species at Risk Act, ²Provincial Endangered Species Act, ³Provincial Conservation ranking where SNA= Not Applicable, SE= Non-Native species, S1= Extremely Rare, S2= Very Rare, S3= Rare, S4= Apparently Secure and S5= Secure, ⁴=Coefficient of Conservatism.

Appendix B4

Species at Risk Screening

Table B-4: Species at Risk (SAR) with the potential to occur within the Study Area for the Lakeshore Transmission Stations Project

Scientific Name	Common Name	SARA Status ¹	ESA Status ²	SRank ³	Information Source ⁴	Regulated Habitat	Habitat Requirements ^{2,5}	Potential Habitat in the Study Area	Rationale for Potential to Occur
Insects									
<i>Danaus plexippus</i>	Monarch	SC	SC	S2N,S4B	OBA	No	Caterpillars feed on milkweed plants and are confined to meadows and open areas where milkweed grows. Adult butterflies can be found in more diverse habitats where they feed on nectar from a variety of wildflowers. Monarchs spend the winter in Oyamel Fir forests found in central Mexico.	Yes	Open Agriculture areas (OAG) and Greenlands (CGL) may provide suitable breeding and foraging habitat for this species.
<i>Erynnis martialis</i>	Mottled Duskywing	---	END	S2	OBA	No	The mottled duskywing tends to live in dry habitats with sparse vegetation. These include open barrens, sandy patches among woodlands, and alvars. In Ontario, the mottled duskywing will only deposit their eggs on two closely-related plants: New Jersey Tea and Prairie Redroot.	No	Suitable habitat requirements have not been observed in the Study Area.
Birds									
<i>Chaetura pelagica</i>	Chimney Swift	THR	THR	S4B,S4N	OBBA	No	Commonly found in urban areas near buildings; nests in hollow trees, crevices of rock cliffs, chimneys; highly gregarious; feeds over open water.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Hirundo rustica</i>	Barn Swallow	THR	THR	S4B	OBBA, NHIC	No	Barn Swallows often live in close association with humans, building their cup-shaped mud nests almost exclusively on human-made structures such as open barns, under bridges and in culverts. The species is attracted to open structures that include ledges where they can build their nests, which are often re-used from year to year. They prefer unpainted, rough-cut wood, since the mud does not adhere as well to smooth surfaces.	No	While agricultural (IAG) and residential land uses (CVR_1) may provide suitable habitat for the species, only three agricultural buildings (two barns and a silo; IAG) within the Study Area have the potential to be impacted by the proposed Project. No barn swallow nests were observed during targeted surveys of these three buildings on October 30, 2019. Residential buildings are not proposed for removal. As such, impacts to the species or its habitat are not anticipated to be impacted as a result of the proposed Project.
<i>Riparia riparia</i>	Bank Swallow	THR	THR	S4B	OBBA, NHIC	No	Sand, clay or gravel river banks or steep riverbank cliffs; lakeshore bluffs of easily crumbled sand or gravel; gravel pits, road-cuts, grassland or cultivated fields that are close to water; nesting sites are limiting factor for species presence..	No	Suitable habitat requirements have not been observed in the Study Area.

Scientific Name	Common Name	SARA Status ¹	ESA Status ²	SRank ³	Information Source ⁴	Regulated Habitat	Habitat Requirements ^{2,5}	Potential Habitat in the Study Area	Rationale for Potential to Occur
<i>Dolichonyx oryzivorus</i>	Bobolink	THR	THR	S4B	OBBA, NHIC	No	Large, open expansive grasslands with dense ground cover; hayfields, meadows or fallow fields; marshes; requires tracts of grassland >50 ha.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Sturnella magna</i>	Eastern Meadowlark	THR	THR	S4B	NHIC, OBBA	No	Open, grassy meadows, farmland, pastures, hayfields or grasslands with elevated singing perches; cultivated land and weedy areas with trees; old orchards with adjacent, open grassy areas >10 ha in size.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Contopus virens</i>	Eastern Wood-pewee	SC	SC	S4B	OBBA	No	Open, deciduous, mixed or coniferous forest; predominated by oak with little understory; forest clearing, edges; farm woodlots, parks.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Hylocichla mustelina</i>	Wood Thrush	END	SC	S4B	OBBA	No	Carolinian and Great Lakes-St. Lawrence forest zones; undisturbed moist mature deciduous or mixed forest with deciduous sapling growth; near pond or swamp; hardwood forest edges; must have some trees higher than 12m.	No	Suitable habitat requirements have not been observed in the Study Area.
Mammals									
<i>Urocyon cinereoargenteus</i>	Gray Fox	THR	THR	S1	MWH	No	Hardwood forests with a mix of fields and woods; swamps; wooded, brushy or rocky habitats; woodland farmland edge; old fields with thickets; dens in hollow log or tree; individual has numerous winter dens throughout its range which is > 40 ha.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Microtus pinetorum</i>	Woodland Vole	SC	SC	S3?	MWH	No	Mature deciduous forest in the Carolinian forest zone, with loose sandy soil and deep humus; grasslands, meadows and orchards with groundcover of duff or grass.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Myotis leibii</i>	Eastern Small-footed Myotis	---	END	S2S3	MWH	No	Roosts in caves, mine shafts, crevices or buildings that are in or near woodland; hibernates in cold dry caves or mines; maternity colonies in caves or buildings; hunts in forests.	No	Suitable habitat requirements have not been observed in the Study Area.

Scientific Name	Common Name	SARA Status ¹	ESA Status ²	SRank ³	Information Source ⁴	Regulated Habitat	Habitat Requirements ^{2,5}	Potential Habitat in the Study Area	Rationale for Potential to Occur
<i>Myotis lucifugus</i>	Little Brown Myotis	END	END	S4	MWH	No	Uses caves, quarries, tunnels, hollow trees or buildings for roosting; winters in humid caves; maternity sites in dark warm areas such as attics and barns; feeds primarily in wetlands, forest edges.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Myotis septentrionalis</i>	Northern Myotis	END	END	S3	MWH	No	Hibernates during winter in mines or caves; during summer males roost alone and females form maternity colonies of up to 60 adults; roosts in houses, manmade structures but prefers hollow trees or under loose bark; hunts within forests, below canopy.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Pipistrellus subflavus</i>	Tri-colored Bat	END	END	S3?	MWH	No	Can be found in a variety of forested habitats. They form day roosts and maternity colonies in older forest and occasionally in barns or other structures, and overwinter in caves. They forage over water and along streams in the forest.	No	Suitable habitat requirements have not been observed in the Study Area.

Plants

<i>Cornus florida</i>	Eastern Flowering Dogwood	END	END	S2?	NHIC	Yes	Eastern Flowering Dogwood grows under taller trees in mid-age to mature deciduous or mixed forests. It most commonly grows on floodplains, slopes, bluffs and in ravines, and is also sometimes found along roadsides and fencerows. It can only be found in southern Ontario in the Carolinian Zone (the small area of Ontario southwest of Toronto to Sarnia down to the shores of Lake Erie).	No	This species was not detected during botanical surveys, and suitable habitat requirements have not been observed in the Study Area.
-----------------------	---------------------------	-----	-----	-----	------	-----	--	----	---

Herpiles

<i>Ambystoma texanum</i>	Small-mouthed Salamander	END	END	S1	OHA	No	Prefers moist habitats, such as tall grass prairies, dense deciduous forests and agricultural lands that provide suitable breeding ponds. They require soft soil for digging burrows and ponds without fish for breeding. Eggs are laid on leaf litter and debris at the bottom of the pond. It is important that the ponds do not support fish because these predators would eat the young salamanders. Adults spend most of the non-breeding season hidden in burrows dug by themselves or by other animals, underneath decomposing tree trunks, rocks or fallen leaves.	No	Suitable habitat requirements have not been observed in the Study Area.
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Scientific Name	Common Name	SARA Status ¹	ESA Status ²	SRank ³	Information Source ⁴	Regulated Habitat	Habitat Requirements ^{2,5}	Potential Habitat in the Study Area	Rationale for Potential to Occur
<i>Chelydra serpentina</i>	Snapping Turtle	SC	SC	S3	OHA	No	Permanent, semi-permanent fresh water; marshes, swamps or bogs; rivers and streams with soft muddy banks or bottoms; often uses soft soil or clean dry sand on south-facing slopes for nest sites; may nest at some distance from water; often hibernate together in groups in mud under water; home range size ~28 ha.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Coluber constrictor foxii</i>	Blue Racer	END	END	S1	OHA	No	Prefers open habitat with abundant cover such as prairie, savanna, alvar and open woodlands. It also lives in pastures and abandoned farm fields where it can find a plentiful bounty of rodents, its primary food source.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Heterodon platirhinos</i>	Eastern Hog-nosed Snake	THR	THR	S3	OHA	No	Sandy upland fields, pastures, savannahs, sandy beaches; dry open oak-pine-maple forest with sandy soils; prefer forest areas > 5ha.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Nerodia sipedon insularum</i>	Lake Erie Watersnake	END	SC	S2	OHA	No	Most commonly found along rocky beaches of the Lake Erie islands it inhabits provide abundant locations to bask in the sun as well as plentiful hiding places. During the fall, these snakes move a short distance inland to find suitable hibernation sites, called hibernacula. Watersnakes have been known to hibernate in a variety of different sites where they can get below the frost line, including abandoned quarries, deserted cisterns, and in rock crevices.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Pantherophis gloydi pop. 2</i>	Eastern Foxsnake (Carolinian population)	END	END	S2	OHA, NHIC	Ye	Usually found in old fields, marshes, along hedgerows, drainage canals and shorelines. Females lay their eggs in rotting logs, manure or compost piles, which naturally incubate the eggs until they hatch.	No	While open areas of the Hydro One right-of-way (RoW) and Greenlands (CGL) within the Study Area may provide suitable habitat for this species, no Eastern Foxsnake were observed within the Study Area during the 2019 field studies. A total of 10 Visual Encounter Surveys (VES) were completed by Dillon in 2019; no snake species were observed within the Study Area as a result of the ten VES.

Scientific Name	Common Name	SARA Status ¹	ESA Status ²	SRank ³	Information Source ⁴	Regulated Habitat	Habitat Requirements ^{2,5}	Potential Habitat in the Study Area	Rationale for Potential to Occur
<i>Thamnophis butleri</i>	Butler's Gartersnake	END	END	S2	OHA	No	Prefers open, moist habitats, such as dense grasslands and old fields, with small wetlands where it can feed on leeches and earthworms. Burrows made by small mammals and even crayfish are sometimes used as hibernation sites, called hibernacula. This species is also commonly found in rock piles or old stone walls.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Emydoidea blandingii</i>	Blanding's Turtle	THR	THR	S3	OHA	No	Shallow water marshes, bogs, ponds or swamps, or coves in larger lakes with soft muddy bottoms and aquatic vegetation; basks on logs, stumps, or banks; surrounding natural habitat is important in summer as they frequently move from aquatic habitat to terrestrial habitats; hibernates in bogs; not readily observed.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Graptemys geographica</i>	Northern Map Turtle	SC	SC	S3	OHA	No	Inhabits rivers and lakeshores where it basks on emergent rocks and fallen trees throughout the spring and summer. In winter, the turtles hibernate on the bottom of deep, slow-moving sections of river.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Sternotherus odoratus</i>	Eastern Musk Turtle	SC	SC	S3	OHA	No	Aquatic, except when laying eggs; shallow slow moving water of lakes, streams, marshes and ponds; hibernate in underwater mud, in banks or in muskrat lodges; eggs are laid in debris or under stumps or fallen logs at waters edge; often share nest sites; sometimes congregate at hibernation sites; not readily observed.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Plestiodon fasciatus</i> pop. 1	Common Five-lined Skink (Carolinian population)	END	END	S2	OHA, NHIC	Yes	The Carolinian population can be found under woody debris in clearings with sand dunes, open forested areas, and wetlands. They bask on sunny rocks and logs to maintain a preferred body temperature (28-36°C). During the winter, they hibernate in crevices among rocks or buried in the soil.	No	Suitable habitat requirements have not been observed in the Study Area.
<i>Sistrurus catenatus</i> pop. 2	Massasauga (Carolinian population)	END	END	S1	OHA	No	Use upland, old field in summer; marsh, shrub swamp or bog; rivers and streams that provide sedge or low vegetative growth; in fall and winter; hibernate underground in mammal burrows, under rotting stumps, in rock crevices.	No	Suitable habitat requirements have not been observed in the Study Area.

Molluscs

Scientific Name	Common Name	SARA Status ¹	ESA Status ²	SRank ³	Information Source ⁴	Regulated Habitat	Habitat Requirements ^{2,5}	Potential Habitat in the Study Area	Rationale for Potential to Occur
<i>Quadrula quadrula</i>	Mapleleaf	THR	SC	S2	DFO	No	Usually found in medium-to-large rivers with slow-to-moderate currents and firmly packed sand, coarse gravel or clay/mud bottoms (substrates).	No	<p>Potential habitat for this species had been previously identified in the Study Area by the DFO within the Knister Drain. Habitat within the Knister Drain was evaluated during an aquatic assessment conducted in May, 2019.</p> <p>Based on the aquatic assessment of the Knister Drain, the conditions present do not likely provide suitable habitat for the species. During the Assessment, the Knister Drain contained low flow, with cobble and clay substrate. Riparian cover of the Knister Drain was dominated by European Common Reed (<i>Phragmites australis ssp. australis</i>), an invasive species. Mapleleaf are usually found in medium to large rivers with slow and moderate flow, and require substrates consisting of dense sand and coarse gravel and mud. Habitat for this species is not likely to be impacted due to the proposed Project.</p>

1 – Status identified by the Committee on the Status of Endangered Wildlife in Canada under the federal SARA, 2002; 2 – SAR in Ontario List under the provincial ESA, 2007; 3 – Ontario SRank; S5 = secure; S4= apparently secure; S3 = vulnerable; S2 = imperilled; SX = Extirpated; SH = Possibly Extirpated; SNA = non-native or exotic species to Ontario; 4 – NHIC = MNRF Natural Heritage Information Centre, OBBA = Ontario Breeding Bird Atlas, MWH = Digital Distribution Maps of the Mammals of the Western Hemisphere, version 3.0, OBA = Ontario Butterfly Atlas; CBC = Christmas Bird Count; 5 – MNRF Significant Wildlife Technical Guide - Appendix G (2000).

Appendix B5

Water Well Records

UTM 1172 366240E

5R 4673700N

Elev 5R 0605

The Ontario Water Resources Commission Act, 1957

Basin 23



110J2R

21 No 2650

65 X

WATER WELL RECORD

County or District

Essex

Township, Village, Town or City

Rochester

Con. VI Lot 25

Date completed

1 July 60
(day month year)

Casing and Screen Record

Pumping Test

Inside diameter of casing 3"
Total length of casing 101'
Type of screen
Length of screen
Depth to top of screen
Diameter of finished hole 3"

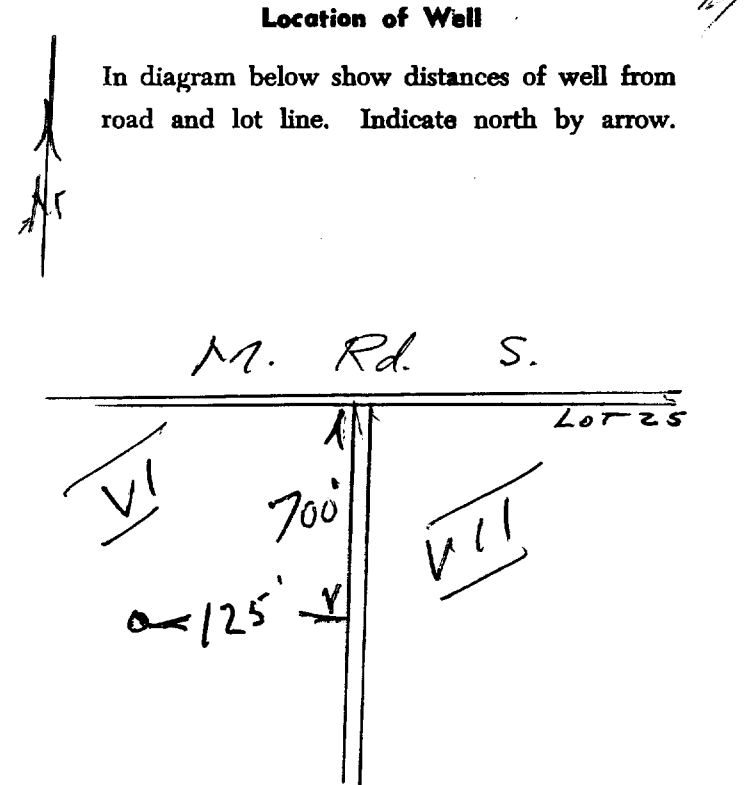
Static level 3'
Test-pumping rate 2000 G.P.M.H.
Pumping level 13'
Duration of test pumping 2 hr
Water clear or cloudy at end of test clear
Recommended pumping rate 2000 G.P.M.H.
with pumping level of 13'

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, sulphur)
blue clay	0	101			
grey limestone	101	102	102	99	a little sulphur

For what purpose(s) is the water to be used?
small farm
Is well on upland, in valley, or on hillside?
Drilling Firm M.J. Williams
Address R.R. 5 Leamington
Licence Number 4351
Name of Driller Same as above
Address
Date
(Signature of Licensed Drilling Contractor)



UTM 17R 3167161010 E

19R 46172181010 N

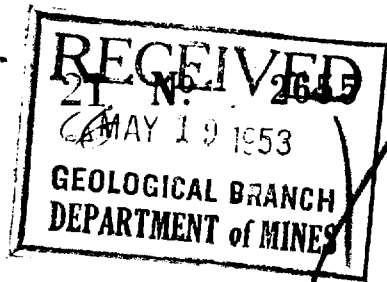
El. 906.8
E. of ~~the River East~~

Basin ~~Mid. of the South~~

Corr VII
lot 25



The Well Drillers Act
Department of Mines, Province of Ontario



Water Well Record

County or Territorial District... ~~Proctor~~ ... Township, Village, Town or City... Rochester
Con... 6 ... Lot... 25 ... Street and Number (if in Village, Town or City) ...
Owner... Malda. report School ... Address... W. road
Date Completed... 19 (day) April (month) 53 (year) ... Cost of Well (excluding pump)... 40.2

Pipe and Casing Record

Pumping Test

Casing diameter(s)... 3
Length(s) of casing(s)... 115
Type of screen... (hand-drawn)
Length of screen... (hand-drawn)
Distance from top of screen to ground level...
Is well a gravel-wall type? shale
Date... Apr 19 53
Static level... 5
Pumping level... 1.2
Pumping rate... 100 gph
Duration of test... 2 hrs
Distance from cylinder or bowls to ground level...

Water Record

Kind (fresh or mineral)	Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
<u>fresh</u>	<u>115</u>	<u>fresh</u>	<u>110</u>
Quality (hard, soft, contains iron, sulphur, etc.)... <u>sulphur</u>			
Appearance (clear, cloudy, coloured)... <u>clear</u>			
For what purpose(s) is the water to be used?... <u>School</u>			
How far is well from possible source of contamination?			
What is the source of contamination?			
Enclose a copy of any mineral analysis that has been made of water			

Well Log

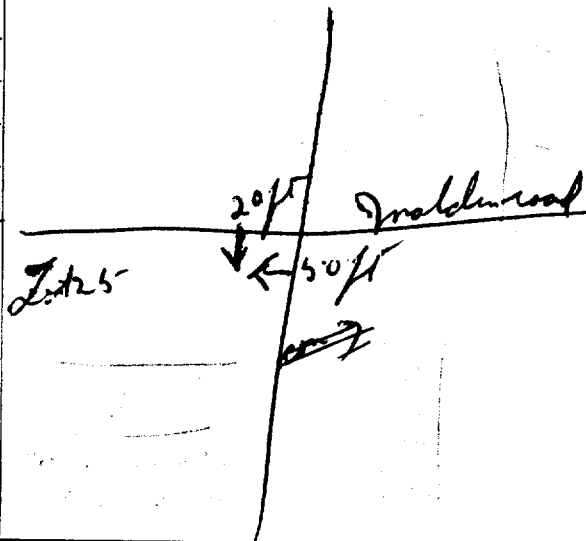
Overburden and Bedrock Record

From To
0 ft.ft.

<u>clay</u>	<u>0</u>	<u>112</u>
<u>bedrock</u>	<u>112</u>	<u>114</u>
<u>1 ft in shale</u>	<u>114</u>	<u>115</u>

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Situation: Is well on upland, in valley, or on hillside?

Drilling Firm.....

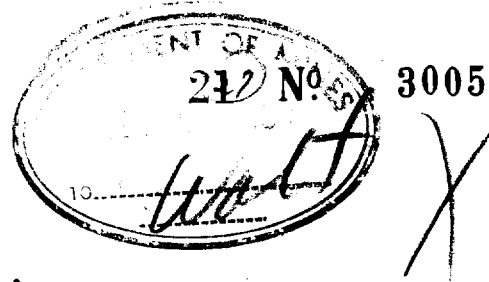
Address.....

Name of Driller... M. J. Williams ... Address... Lough

Date... Apr 14 53 ... Licence Number... 245

Signature of Licensee
M. J. Williams

UTM 17 Z 36810910 E
469 R 46725510 N
 Elev. 9 R 0608
 Basin 23 | | | |



The Well Drillers Act
 Department of Mines, Province of Ontario

Water Well Record

County or Territorial District... Essex ... Township, Village, Town or City... Talbury West
 Con... 9 ... Lot... 1 ... Street and Number, (if in Village, Town or City) ...
 Owner... [Redacted] ... Address... Staples
 Date Completed... 14 (day) 9 (month) 50 (year) ... Cost of Well (excluding pump)... 168.00

Pipe and Casing Record

Pumping Test

Casing diameter(s)..... <u>4"</u>	Date..... <u>Nov 16</u>
Length(s) of casing(s)..... <u>123'</u>	Static level..... <u>8 ft</u>
Type of screen.....	Pumping level..... <u>12 ft</u>
Length of screen.....	Pumping rate..... <u>15 gpm</u>
Distance from top of screen to ground level.....	Duration of test..... <u>3 hrs</u>
Is well a gravel-wall type?.....	Distance from cylinder or bowls to ground level..... <u>20 ft</u>

Water Record

Kind (fresh or mineral).....	Depth(s) to Water Horizon(s)	Kind of Water	No. of Feet Water Rises
<u>sulfur</u>	<u>127</u>	<u>sulfur</u>	<u>119</u>
Quality (hard, soft, contains iron, sulphur, etc.).....			
Appearance (clear, cloudy, coloured)..... <u>clear</u>			
For what purpose(s) is the water to be used?..... <u>stock</u>			
How far is well from possible source of contamination?.....			
What is the source of contamination?.....			
Enclose a copy of any mineral analysis that has been made of water.....			

Well Log

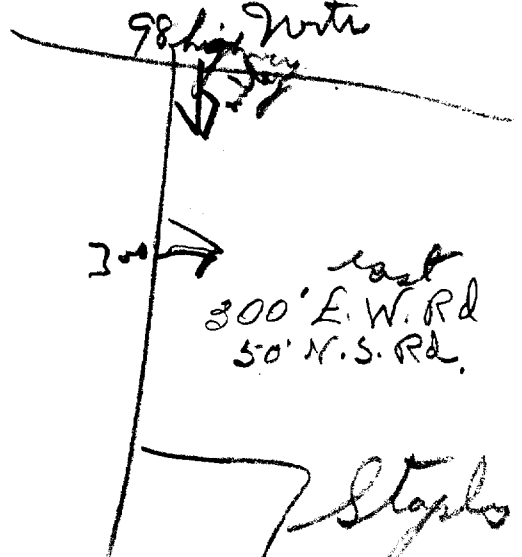
Overburden and Bedrock Record

From To
0 ft.ft.

<u>clay</u>	<u>0</u>	<u>123</u>
<u>hard clay</u>	<u>123</u>	<u>125</u>
<u>limestone</u>	<u>125</u>	<u>127</u>
<u>Total depth</u>		<u>127</u>

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



Situation: Is well on upland, in valley, or on hillside?..... no
 Drilling Firm..... M. J. Williams
 Address..... Staples
 Name of Driller..... M. J. Williams ... Address..... 336 Nelson Park
 Date..... Nov 14/50 ... Licence Number..... 245
 Signature of Licensee..... M. J. Williams

Appendix C

Agency Resources and Background Review

Appendix C1

Land Use



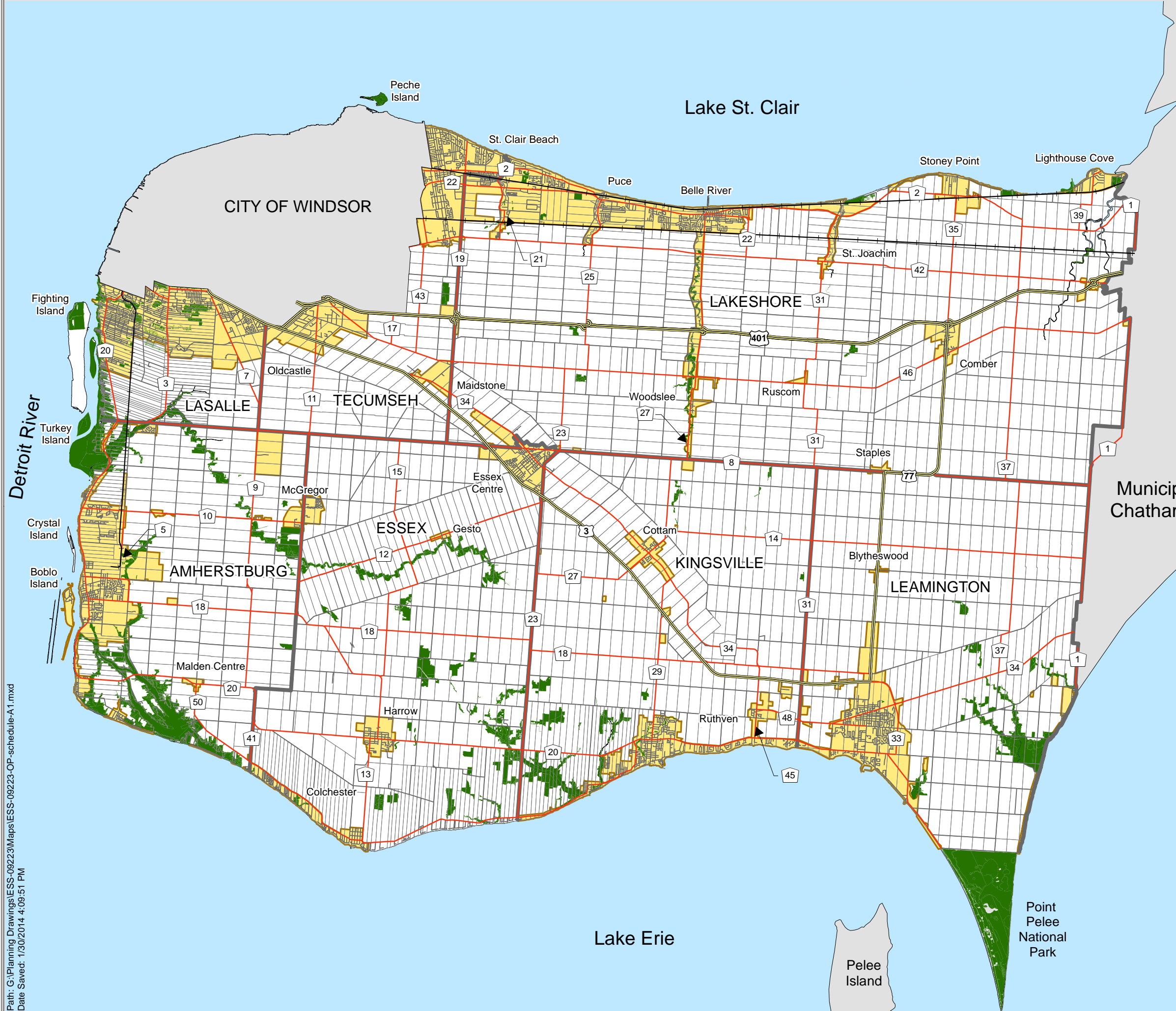
County of Essex

Schedule A1

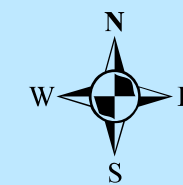
Land Use Plan

Legend

- Local Roads
- County Roads
- Provincial Highway
- Railway
- Essex County Municipalities
- Lot Fabric
- Settlement Areas
- Agricultural
- Natural Environment



Municipality of Chatham - Kent



0 2.5 5 10 km



County of Essex

Schedule B1

Natural Heritage System Natural Environment Designation

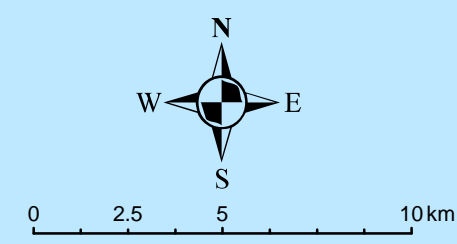
Legend

- Local Roads
- County Roads
- Provincial Highway
- Railway
- Essex County Municipalities
- Settlement Areas
- Lot Fabric
- Significant Terrestrial Features
- Provincially Significant Wetlands



Municipality of Chatham - Kent

Note*
The current mapping does not differentiate between those features which are related to components of Table 3. Specifically, existing natural features identified as Significant Terrestrial Features may represent multiple Significant Natural Heritage Features as indicated in Table 3, i.e., Significant habitat of Endangered Species or Threatened Species, lands designated in local Official Plans for natural heritage protection, other high priority existing natural features, fish habitat, significant woodlands, Areas of Natural and Scientific Interest, Significant Wildlife Habitat, or Significant Valleylands.





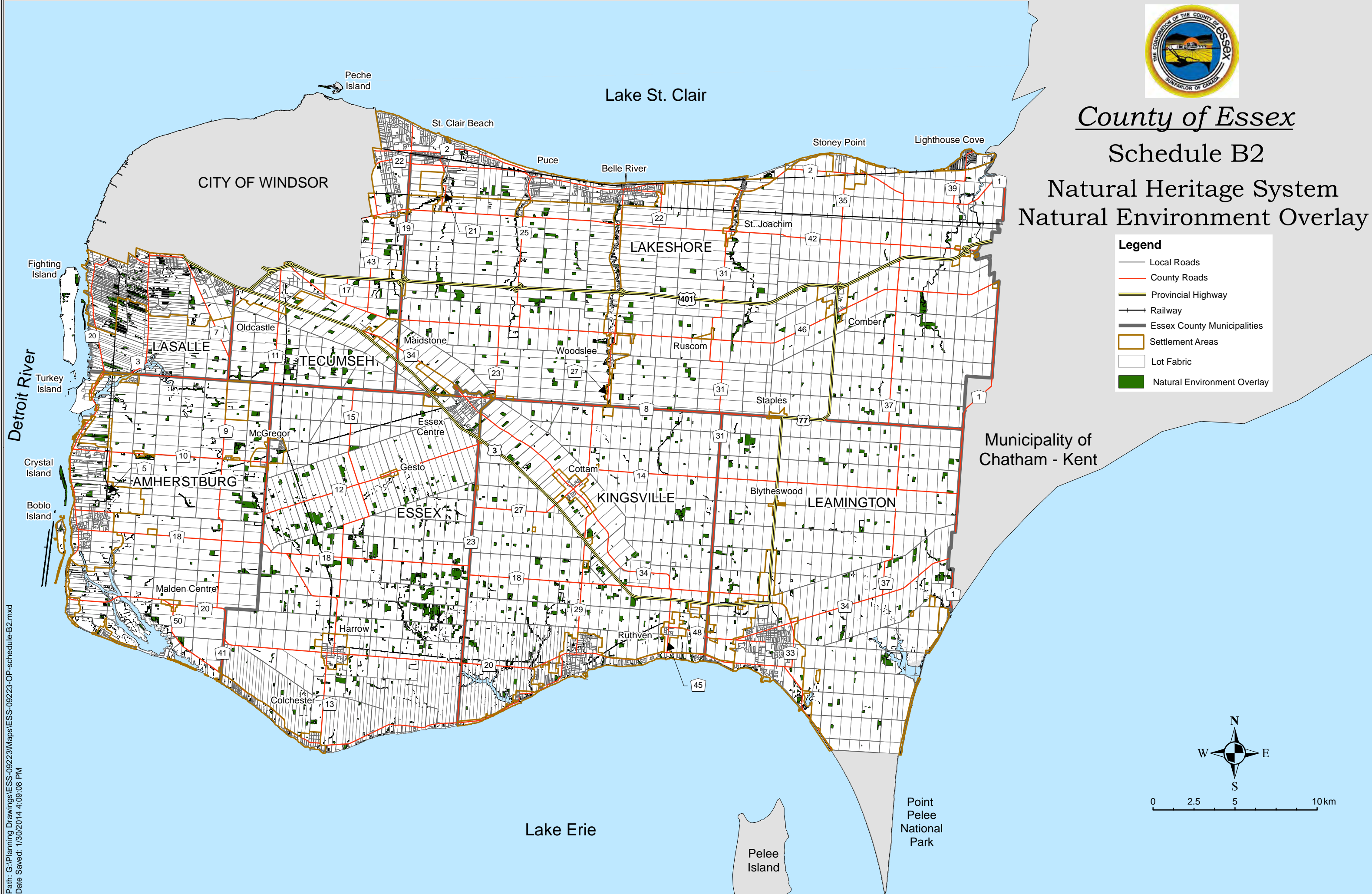
County of Essex

Schedule B2

Natural Heritage System Natural Environment Overlay

Legend

- Local Roads
- County Roads
- Provincial Highway
- Railway
- Essex County Municipalities
- Settlement Areas
- Lot Fabric
- Natural Environment Overlay





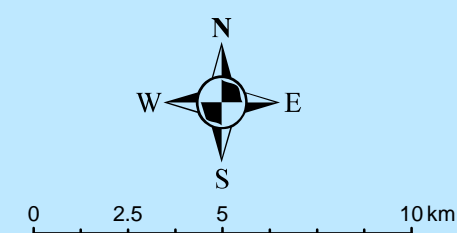
County of Essex

Schedule B3

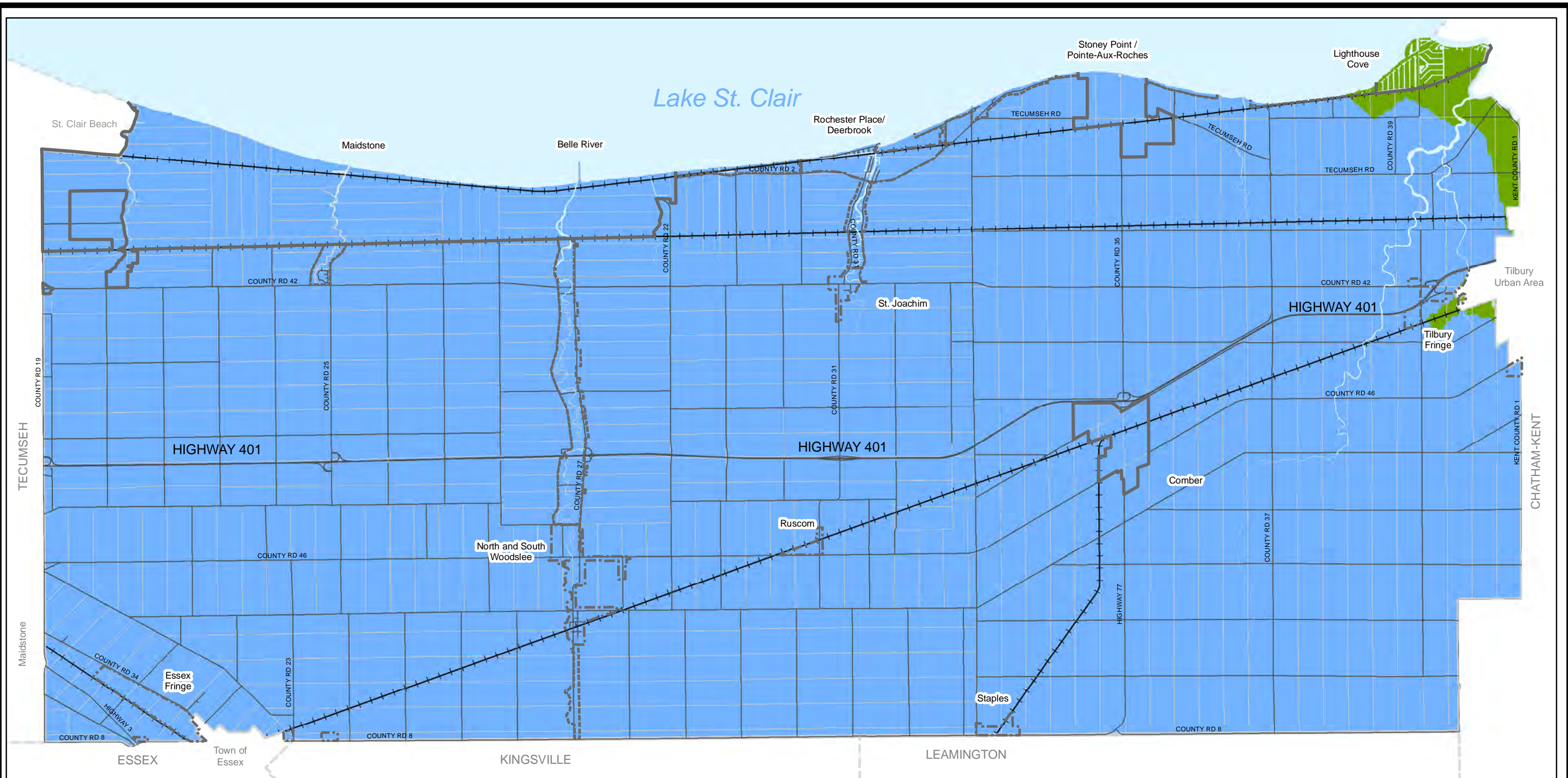
Natural Heritage System Restoration Opportunities Overlay

Legend

- Local Roads
- County Roads
- Provincial Highway
- Railway
- Essex County Municipalities
- Settlement Areas
- Lot Fabric
- Primary (3-5)
- Secondary (1-2)



Path: G:\Planning Drawings\ESS-09223\Maps\ESS-09223-OP-schedule-B3.mxd
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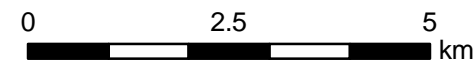


AQUIFER INTRINSIC SUSCEPTIBILITY (SECTION 5.1)

- High Susceptibility
- Medium Susceptibility
- Low Susceptibility

LEGEND

- Urban Area Boundary
- Hamlet Area Boundary
- Waterfront Area Boundary
- Urban Fringe Area Boundary
- Town Boundary



Interpretation Note: This Schedule will be read and interpreted in conjunction with the Official Plan in its entirety.

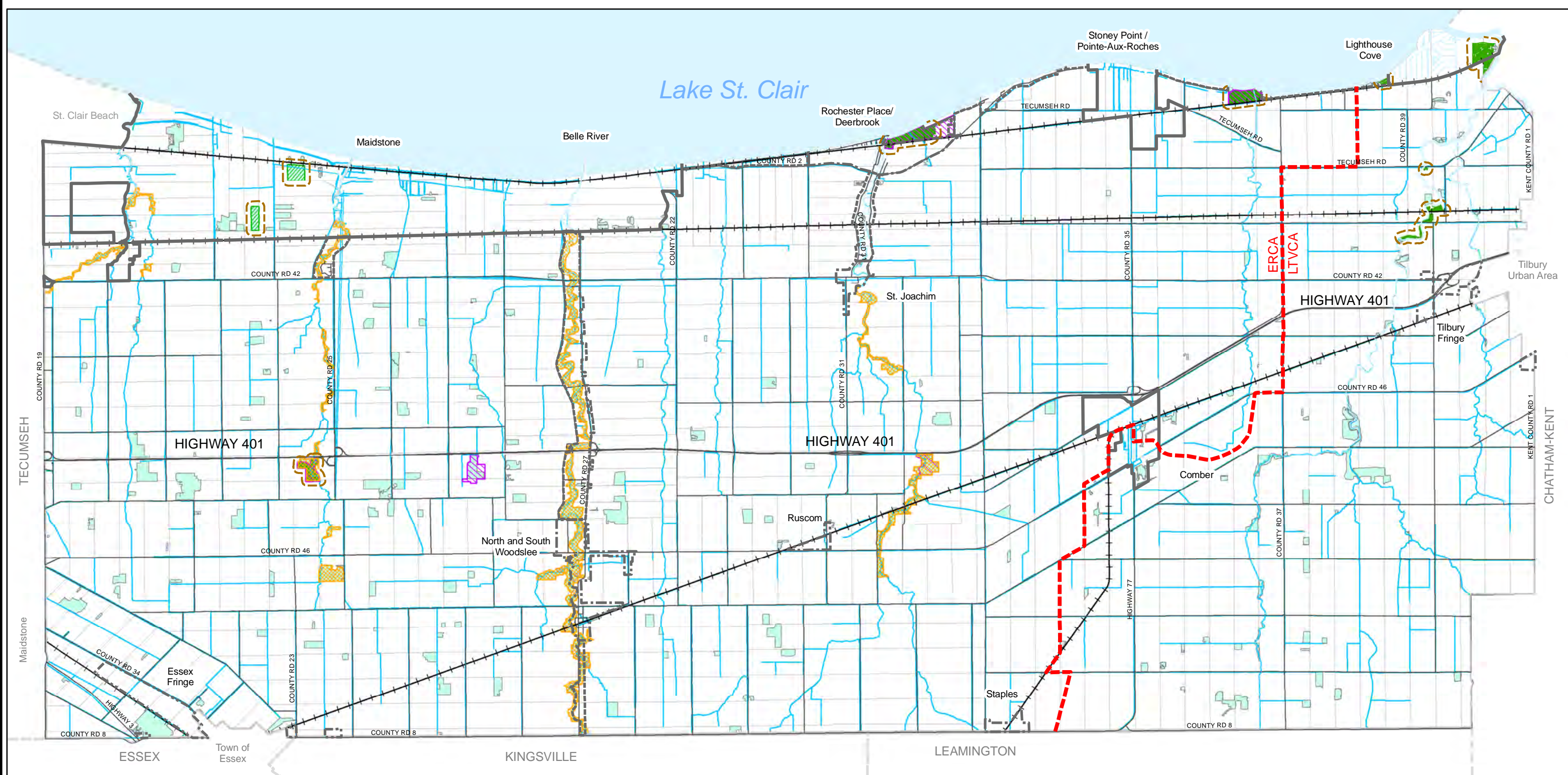
**Town of Lakeshore
OFFICIAL PLAN**



**SCHEDULE "B.1"
AQUIFER INTRINSIC
SUSCEPTIBILITY**



Revision Date: July 6, 2010
(as approved by the Ontario Municipal Board)

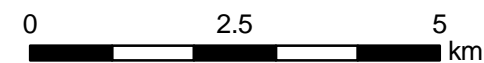


NATURAL HERITAGE (SECTION 5.2)

- Provincially Significant Wetlands
- Candidate Provincially Significant Wetlands
- Woodlands
- Environmentally Significant Area (ERCA)
- Significant Valley Lands (ERCA)
- 120m Adjacent Land

LEGEND

- Urban Area Boundary
- Hamlet Area Boundary
- Waterfront Area Boundary
- Urban Fringe Area Boundary
- Town Boundary
- Conservation Authority Jurisdiction Boundary
- Surface Water Feature



Interpretation Note: This Schedule will be read and interpreted in conjunction with the Official Plan in its entirety.

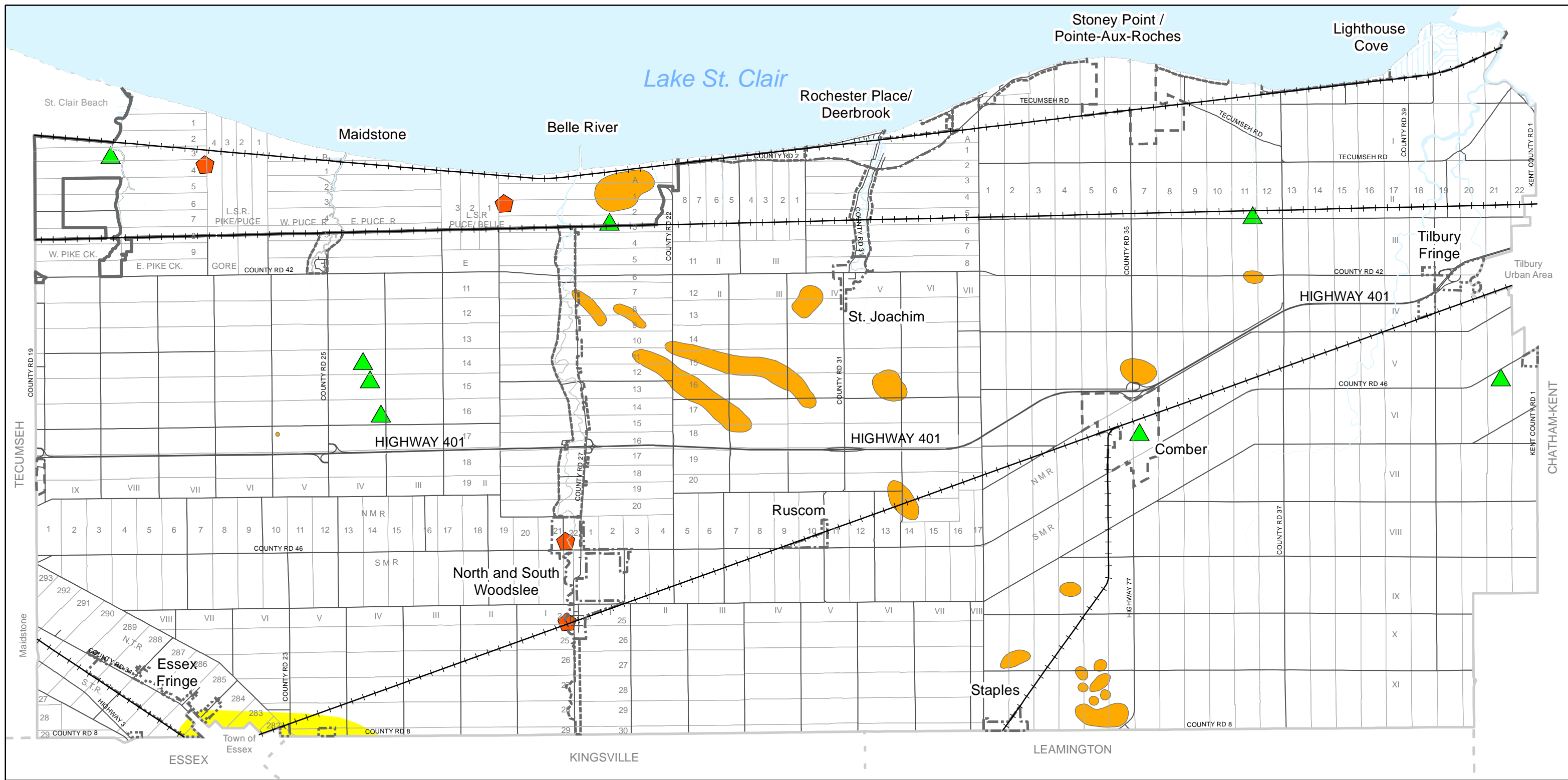
**Town of Lakeshore
OFFICIAL PLAN**








**SCHEDULE "B.2"
NATURAL HERITAGE FEATURES**









Revision Date: July 6, 2010
(as approved by the Ontario Municipal Board)

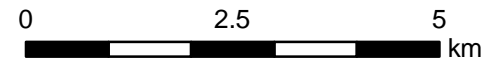


NATURAL RESOURCES AND HUMAN MADE HAZARDS

-  Active Waste Disposal Site (Section 5.4.2.4)
-  Closed Waste Disposal Site (Section 5.4.2.4)
-  Sewage Treatment Plant (Section 7.3)
-  Salt Deposits (Section 5.3)
-  Petroleum Resources (Section 5.3)

LEGEND

-  Urban Area Boundary (Primary)
-  Urban Area Boundary (Secondary)
-  Hamlet Area Boundary (Secondary)
-  Waterfront Area Boundary (Secondary)
-  Urban Fringe Area Boundary (Secondary)
-  Town Boundary



Interpretation Note: This Schedule will be read and interpreted in conjunction with the Official Plan in its entirety.

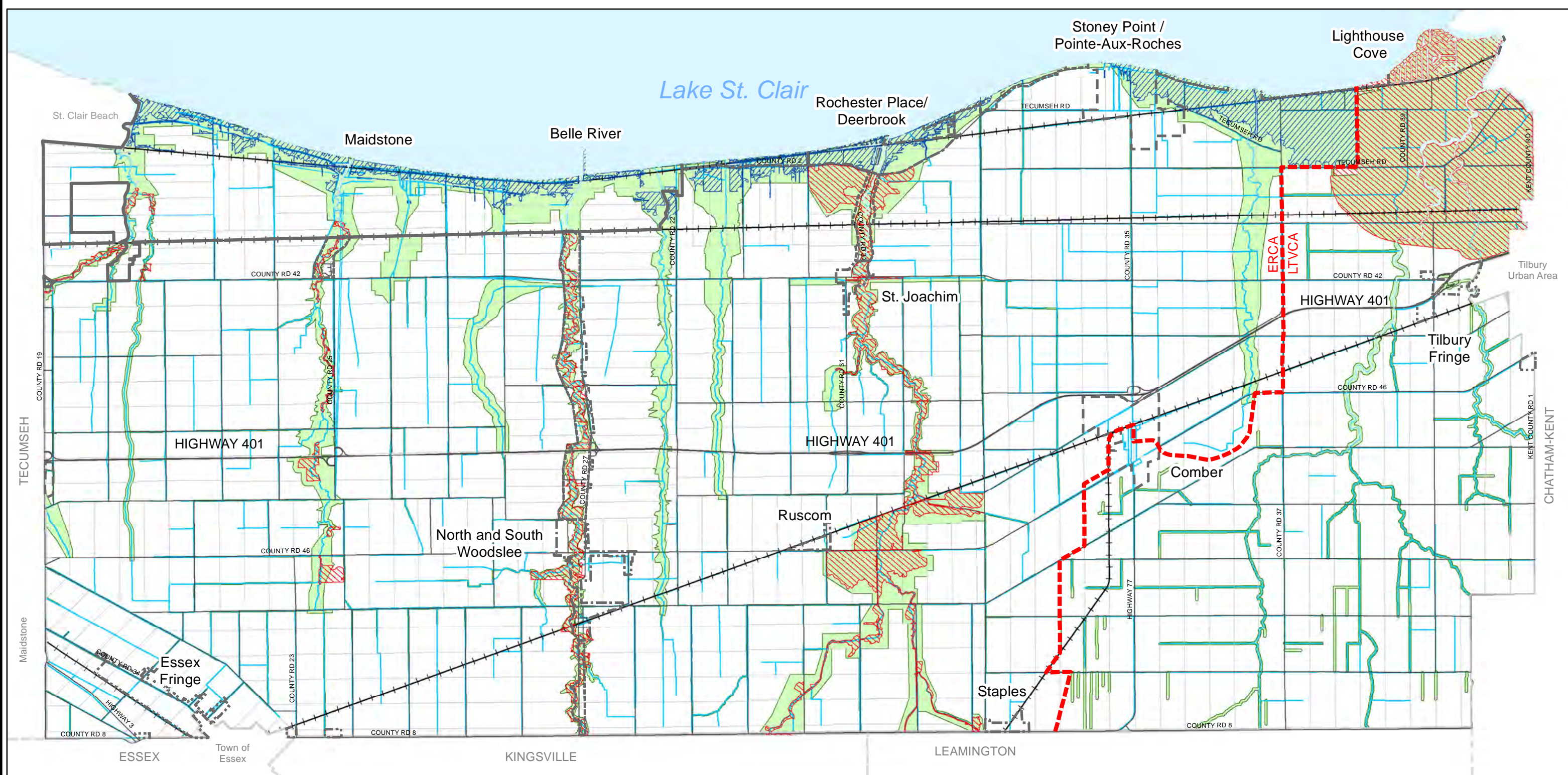
Known petroleum wells and associated works should be considered in the review of Planning Act applications. Please reference the Ontario Oil, Gas and Salt Resources Library website (www.ogsrlibrary.com) to obtain the most up-to-date information regarding known petroleum wells.

Town of Lakeshore OFFICIAL PLAN



SCHEDULE "B.3" NATURAL RESOURCES AND HUMAN MADE HAZARDS DRAFT



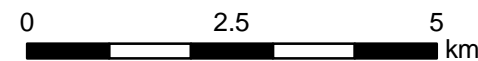


HAZARD LANDS (SECTION 5.4)

- Limit of the Regulated Area
- Inland Floodprone Areas
- Lake St Clair Floodprone Area

LEGEND

- Urban Area Boundary (Primary)
- Urban Area Boundary (Secondary)
- Hamlet Area Boundary (Secondary)
- Waterfront Area Boundary (Secondary)
- Urban Fringe Area Boundary (Secondary)
- Town Boundary
- Conservation Authority Jurisdiction Boundary
- Surface Water Feature

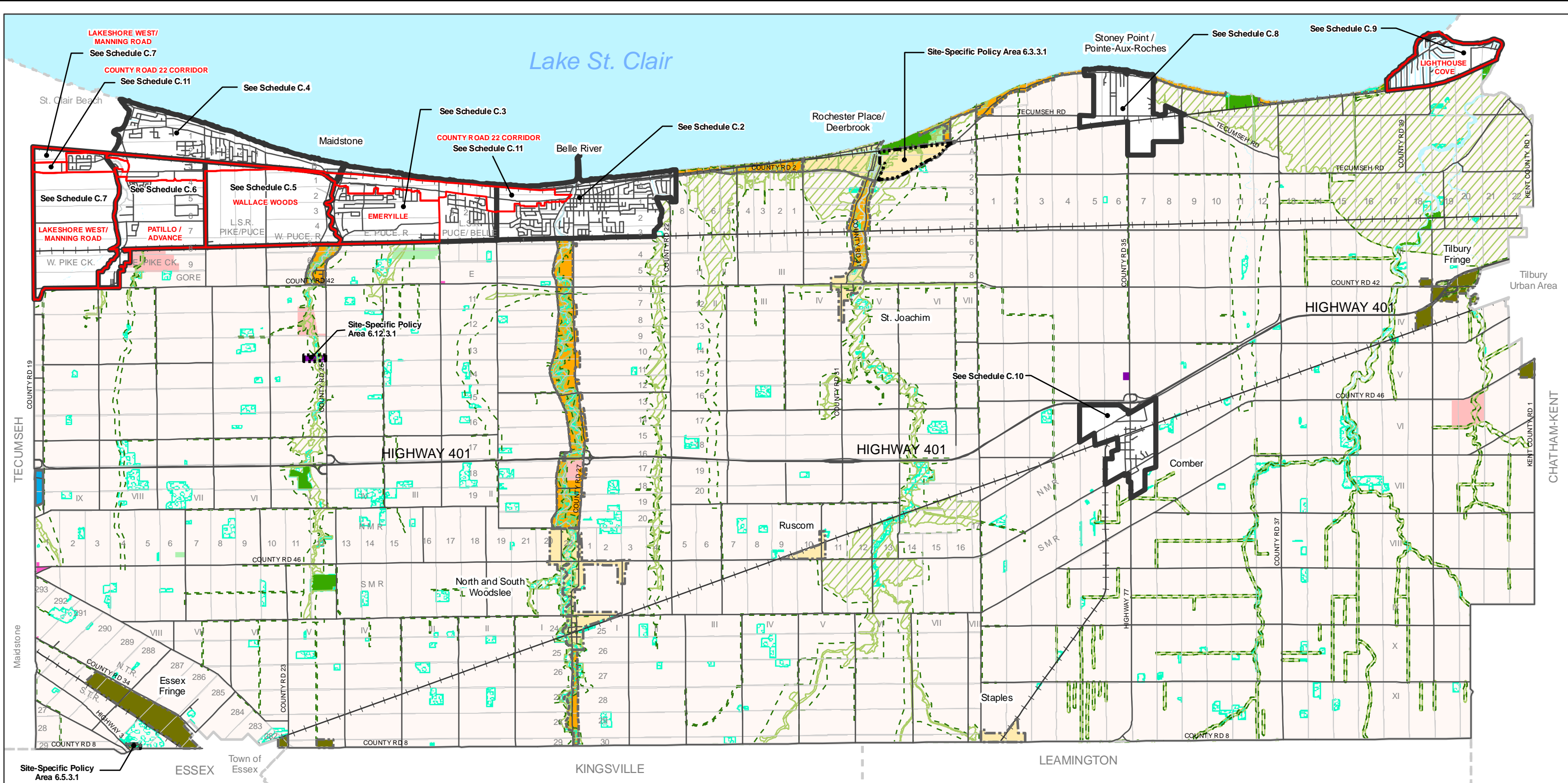


Interpretation Note: This Schedule will be read and interpreted in conjunction with the Official Plan in its entirety.

Town of Lakeshore OFFICIAL PLAN

SCHEDULE "B.4" NATURAL HAZARDS AND FLOODPRONE AREAS DRAFT



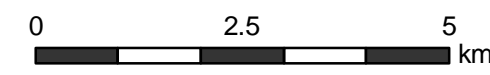


LAND USE DESIGNATION (SECTION 6.0)

- | | | | |
|--|-------------------------------------|--|----------------------------------|
| | Agricultural Designation | | Mixed Use Designation |
| | Hamlet Designation | | Central Area Designation |
| | Waterfront Residential Designation | | Employment Designation |
| | Urban Fringe Designation | | Major Institutional Designation |
| | Residential Designation | | Natural Conservation Designation |
| | Service Commercial Designation | | Parks and Open Space Designation |
| | Recreational Commercial Designation | | Urban Reserve Designation |

LEGEND

- | | | | |
|--|----------------------------|--|---|
| | Urban Area Boundary | | Lake St. Clair Floodprone Areas/ Inland Floodplain Development Control Area |
| | Hamlet Area Boundary | | Limit of the Regulated Area |
| | Waterfront Area Boundary | | Woodlands |
| | Urban Fringe Area Boundary | | |
| | Town Boundary | | |
| | Site-Specific Policy Area | | |
| | Special Planning Area | | |



Interpretation Note: This Schedule will be read and interpreted in conjunction with the Official Plan in its entirety. Land Use Designations on this Schedule must be interpreted in conjunction with Schedule B.2 (Natural Heritage Features).

Town of Lakeshore OFFICIAL PLAN



SCHEDULE "C.1" LAND USE (RURAL AREA)

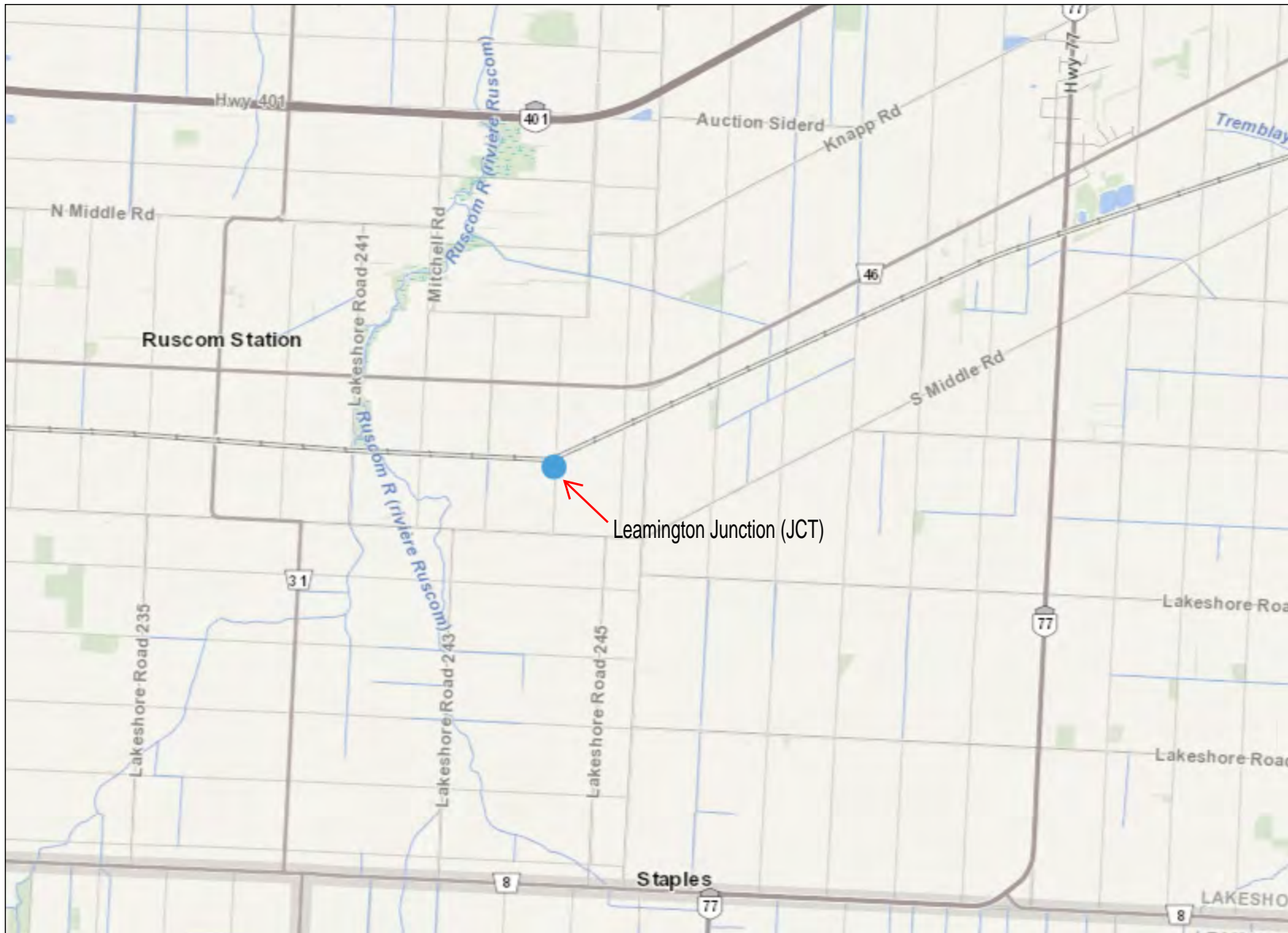



Revision Date: January 10, 2012

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Appendix C2

*Ministry of Energy, Northern Development
and Mines - Aggregate Resources*



Projection: Web Mercator 

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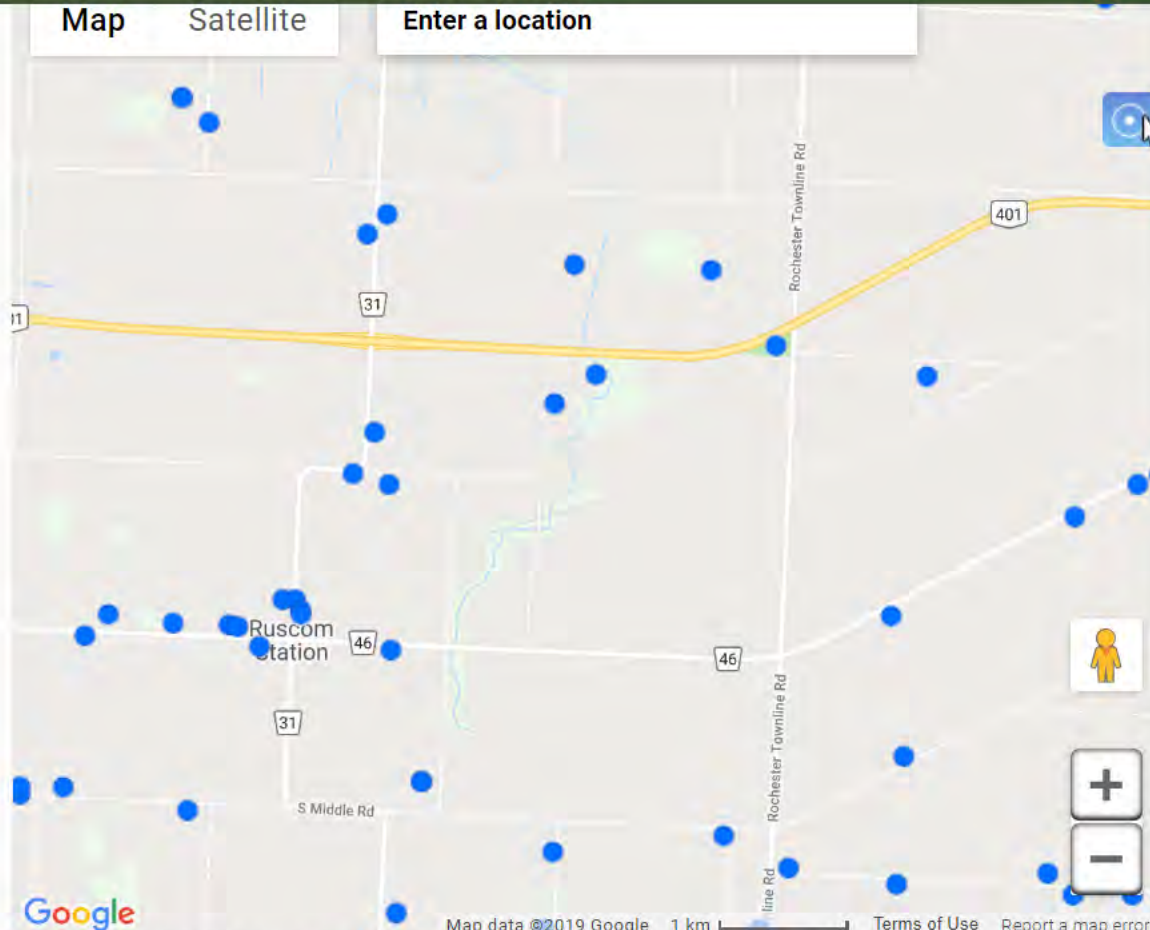
Appendix C3

*Ministry of the Environment, Conservation
and Parks Water Well Records*


Map

Satellite

Enter a location



Google

Map data ©2019 Google 1 km  Terms of Use Report a map error

Latitude:42.19942, Longitude:-82.57374 (UTM Zone:17, Easting:370073, Northing:4673117)

Recommended for you

How to use a Ministry of the Environment map

Technical documentation: Metadata record



Appendix C4

Conservation Authority Regulated Areas




Essex Region Conservation Authority Regulated Area

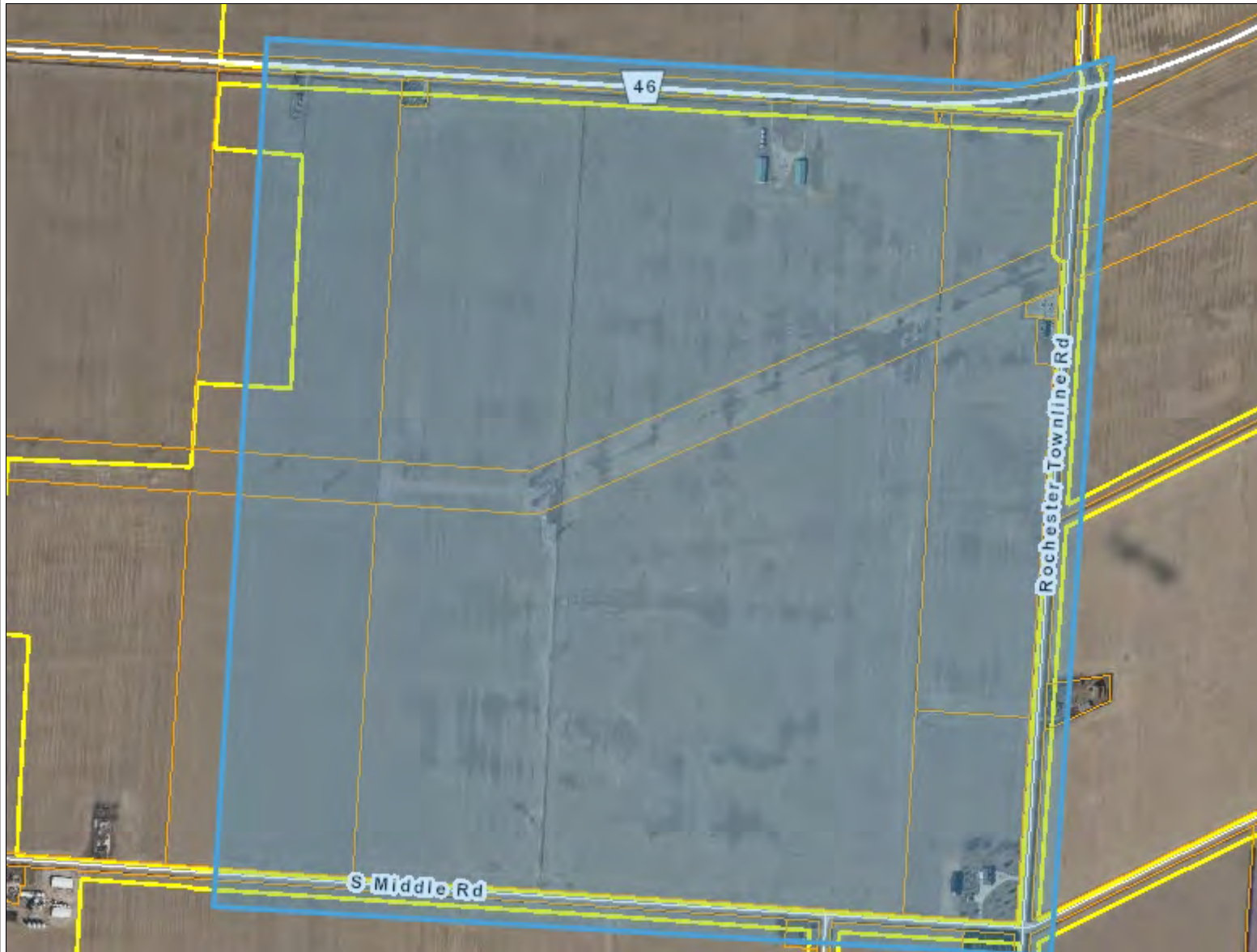


Essex Region
Conservation
Authority

Public Interactive Mapping

Legend

-  Parcel Fabric - City
-  Parcel Fabric - County
-  Limit of Regulated Area



Location



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Notes



1: 10,000



10/25/2019

Apendix D

General Acoustics Information and Lakeshore SS/TS Environmental Noise Checklist

Appendix E: General Acoustics Information

Acoustics

The study of sound and its properties is known as acoustics. By considering basic physical properties of sound and the acoustic environment, the potential effect of excess or unwanted sound (i.e., noise) can be modelled prior to construction of the sound source. The relevant acoustics used for modelling the sound levels from outdoor power transformers are found in the International Organization for Standardization (ISO) standard ISO 9613-2 “Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation” (ISO, 1996).

The principal factor determining the attenuation (reduction) of sound outdoors is the separation distance between the sound source and the receptor. Simply, the farther the receptor is from the source, the less sound it will receive from that source. The relationship between the sound attenuation and distance is logarithmic, thus the sound perceived will decrease rapidly in the areas very near to outdoor sound source(s), but more gradually as the separation distance becomes greater. See **Figure 1** below for a chart illustrating this reduction.

Other factors that influence sound propagation are included in ISO 9613-2. These account for atmospheric, meteorological and physical conditions that will slightly affect sound propagation (relative to the attenuation due to the source/receptor separation distance). Some factors considered include: surrounding topography; the ground surface between the source and receptor; acoustic frequency range(s) of the sound; surrounding development; and influence of screens/barriers between the source and receptor. The effects of these other factors are not included in Figure 1 since their combined influence is unique to each location.

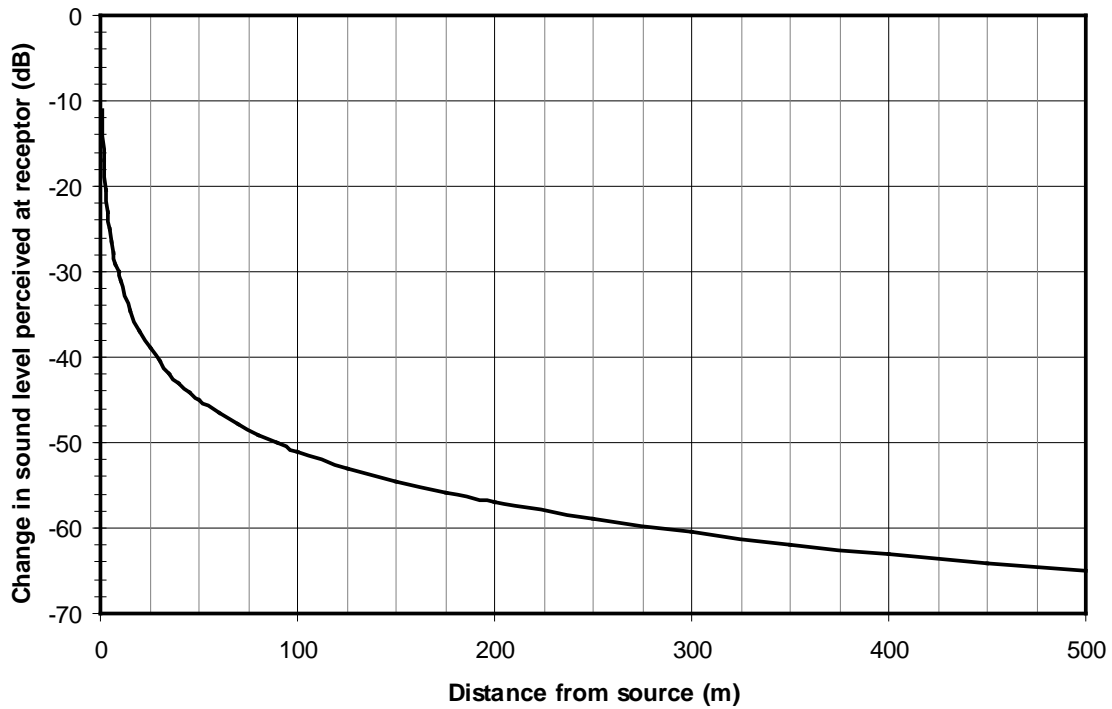


Figure 1: Sound reduction resulting from source/receptor separation distance

Typical Noise Approval Requirements

Sound emissions from high-voltage power transformers are subject to Ontario's *Environmental Protection Act* (EPA) and must be approved by the Ministry of the Environment, Conservation, and Parks (MECP) via either a registration with the Environmental Activity and Sector Registry (EASR) or by an Environmental Compliance Approval (ECA). In order to obtain the appropriate approval, Hydro One must complete an acoustic assessment of the proposed facility following the MECP's requirements, including their NPC-300 guideline.

Occasionally other equipment, such as large standby power generators, is loud enough to also merit an acoustic assessment and approval. As the facility design develops, the potential sound levels of the selected equipment will be evaluated for their significance to the site's sound emissions. Significant sources are subject to the same approval requirements as the high voltage power transformers.

When the nearest receptors are within 500 metres of the site, a detailed acoustic assessment must be performed by a Professional Engineer and the results reported in an Acoustic Assessment Report (AAR). The acoustic assessment evaluates the existing acoustic environment at the proposed site and uses predictive modelling to anticipate what sound levels may occur due to the proposed sound sources associated with the station. If a sound level above MECP noise guidelines is expected, the acoustic assessment also identifies appropriate noise control measures for the site. Hydro One has successfully used noise barriers and specialized transformers and cooling fans to control sound at several stations. The final AAR includes detailed descriptions of the site and proposed sound sources, a summary of the acoustic assessment results, and specifications for sound control measures (as needed).

When the nearest receptors are farther than 500 metres away, a detailed acoustic assessment is not required for the application. Instead, the MECP provides noise screening tools for a basic assessment that there is sufficient separation distance to reduce the sound to acceptable levels.

The MECP's NPC-300 guideline and eventually their site specific approval establish noise limits for the approved sound sources. Based on the normal operation of Hydro One sites, generally the noise limits are 45 dBA in Class 1 or 2 acoustical areas or 40 dBA in Class 3 acoustical areas, but may be louder based on existing background noise levels.

The acoustical class of a site is determined by the predominant sounds of the area. A Class 1 area is "typical of a major population centre, where the background noise is dominated by the urban hum." A Class 3 area is "a rural area with an acoustical environment that is dominated by natural sounds having little or no road traffic." A Class 2 area has a mix of the acoustic environments found in Class 1 and 3 areas. A Class 2 area is distinguished from a Class 1 and Class 3 area primarily by the timing of the noisiest periods of the day and the amount of audible human activity at the site.

References

- Institute of Electrical and Electronics Engineers (IEEE). 2006. IEEE Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers.
- International Organization for Standardization (ISO). 1996. Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation.
- Ministry of the Environment (MOE). MOE. 1995. Information to be Submitted for Approval of Stationary Sources of Sound (Publication NPC-233). <http://www.ene.gov.on.ca/envision/gp/3405e.pdf>.
- MOE. 1995. Sound Level Limits for Stationary Sources in Class 3 Areas (Rural) (Publication NPC-232). <http://www.ene.gov.on.ca/envision/gp/3405e.pdf>.
- MOE. 1995. Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban) (Publication NPC-205). <http://www.ene.gov.on.ca/envision/gp/3405e.pdf>.
- MOE. 2005. Noise Screening Process for S.9 Applications (PIBS 4871). <http://www.ene.gov.on.ca/envision/gp/4871e.pdf>.
- MECP. 2013. Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning (Publication NPC-300).
- MECP. 2016. Environmental Activity and Sector Registry - Limits and Other Requirements.

Environmental Noise Checklist

Site: Proposed Lakeshore SS & TS site

Noise Sources	
How many transformers are proposed at this site?	4
What is their electrical rating?	125 MVA; 230/27.6 kV
What is the specified maximum sound level? ⁱ	66 dBA
Other noise sources?	One 800kW standby diesel generator

Noise Receptors	
What is the land use according to the local official plan for the area(s) adjacent to the proposed site?	
<input type="checkbox"/> Residential	<input checked="" type="checkbox"/> Agricultural
<input type="checkbox"/> Institutional	<input type="checkbox"/> Utility
<input type="checkbox"/> Other(s):	
<input type="checkbox"/> Commercial	<input type="checkbox"/> Industrial
<input type="checkbox"/> Park	<input type="checkbox"/> Greenbelt/Conservation
Receptors within approximately 500 metres of the proposed site? ⁱⁱ	
Permanent or seasonal residences	<input checked="" type="checkbox"/>
Hotels/motels	<input type="checkbox"/>
Nursing/retirement homes	<input type="checkbox"/>
Rental residences	<input type="checkbox"/>
Hospitals	<input type="checkbox"/>
Campgrounds	<input type="checkbox"/>
Schools	<input type="checkbox"/>
Places of worship	<input type="checkbox"/>
See the attached map identifying the four nearest points of reception (POR) described below.	
<i>Name</i>	<i>Description</i>
POR1	vacant lot
POR2	Residence
POR3	Residence
POR4	Residence
POR5	Vacant lot
POR6	Residence
POR7	Residence and farming buildings
POR8	Residence
POR9	Residence
POR10	Residence
POR11	Residence
POR12	Residence
POR13	Residence
What is the Acoustic Class of the noise environment at the receptors as per MOECP guidelines NPC -300? ⁱⁱⁱ	
<input type="checkbox"/> Class 1 or 2	
<input checked="" type="checkbox"/> Class 3	

Noise Approval Requirements	
Is Environmental Activity and Sector Registry (EASR) registration or an Environmental Compliance Approval (ECA) under s.9 of the <i>Environmental Protection Act</i> required?	
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Is a detailed technical Acoustic Assessment Report (AAR) necessary for the EASR or ECA process?	
<input checked="" type="checkbox"/> Definitely (<500 m separation)	<input type="checkbox"/> Unlikely (>500m separation)
Are noise control measures (i.e., acoustic barriers, specialized equipment) necessary to meet the applicable Ministry of the Environment noise guidelines?	
<input type="checkbox"/> Likely	<input type="checkbox"/> Unlikely
<input checked="" type="checkbox"/> To be determined by AAR	

ⁱ Maximum sound level rating as specified in Hydro One procurement specifications, as a measure of sound pressure per standard IEEE C57.12.90-2006. Actual operating sound levels of the installed transformers are generally quieter than specified maximum.

ⁱⁱ According to the MOE *Noise Screening Process* (PIBS 4871), electrical power transmission, control and distribution facilities do not require an acoustic assessment for approval when the nearest sensitive receptor is more than 500 metres away. This distance is based on conservative assumptions; noise levels at or below guidelines occur at shorter distances for most Hydro One facilities.

ⁱⁱⁱ The acoustic class determines the applicable noise guidelines for the site. Based on Hydro One's typical operating conditions, in Class 1 and 2 areas the sound level limit is the typical One Hour Level Equivalent Sound Level (L_{eq}) measured at the receptor, starting from a minimum value of 45 dBA (MECP publication NPC-300). For Class 3 areas, the minimum limit is 40 dBA at the receptor. In either case the may be higher based on background sound level measurements (NPC-300).

Lakeshore SS & TS

Legend



Apendix E

Health Canada EMF Factsheet (2012)



Health
Canada

Santé
Canada

Your health and
safety... our priority.

Votre santé et votre
sécurité... notre priorité.

Electric and Magnetic Fields

Updated: November 2012

Original: November 2001

IT'S YOUR HEALTH

Electric and Magnetic Fields from Power Lines and Electrical Appliances

THE ISSUE

Some people are concerned that daily exposure to electric and magnetic fields (EMFs) may cause health problems.



ELECTRICITY AND ELECTRIC AND MAGNETIC FIELDS (EMFS)

Electricity delivered through power lines is important in today's society. It is used to light homes, prepare food, run computers and operate other household appliances, such as TVs and radios. In Canada, appliances that plug into a wall socket use electric power that flows back and forth at a frequency of 60 cycles per second (60 hertz). The frequency used with the distribution of electricity from power lines and electrical appliances is different than the frequencies used for [Wi-Fi](#), [cell phones](#), and [smart meters](#).

Every time you use electricity and electrical appliances, you are exposed to electric and magnetic fields (EMFs) at extremely low frequencies (ELFs). The term "extremely low" is described as any frequency below 300 hertz. EMFs produced by the transmission and use of electricity belong to this category.

EMFs are invisible forces that surround electrical equipment, power cords, and wires that carry electricity, including outdoor power lines.

- *Electric Fields:* These are formed whenever a wire is plugged into an outlet, even when the appliance is not turned on. The higher the voltage, the stronger the electric field.
- *Magnetic Fields:* These are formed when electric current is flowing within a device or wire. The greater the current, the stronger the magnetic field.

EMFs can occur separately or together. For example, when you plug the power cord for a lamp into a wall socket, it creates an electric field along the cord. When you turn the lamp on, the flow of current through the cord creates a magnetic field. Meanwhile, the electric field is still present.

Canada

POWER LINES AND YOUR HOME

EMFs are strongest when close to their source. As you move away from the source, the strength of the fields fades rapidly. This means you are exposed to stronger EMFs when standing close to a source (e.g., right beside a transformer box or under a high voltage power line), and you are exposed to weaker fields as you move away.

When you are inside your home, the magnetic fields from high voltage power lines and transformer boxes are often weaker than those from household electrical appliances.

Electric fields can be shielded using materials such as metal. Things like buildings and trees—and even the ground when power lines are buried—can block electric fields.

CANADIANS EXPOSURE TO EMFS AT EXTREMELY LOW FREQUENCIES (ELFS)

On a daily basis, most Canadians are exposed to EMFs generated by household wiring, lighting, and any electrical appliance that plugs into the wall, including hair dryers, vacuum cleaners and toasters. In the workplace, common sources of EMFs include computers, air purifiers, photocopiers, fax machines, fluorescent lights, electric heaters, and electric tools in machine shops, such as drills, power saws, lathes and welding machines.

EXPOSURE IN CANADIAN HOMES, SCHOOLS AND OFFICES PRESENT NO KNOWN HEALTH RISKS

There have been many studies on the possible health effects from exposure to EMFs at ELFs. While it is known that EMFs can cause weak electric currents to flow through the human body, the



intensity of these currents is too low to cause any known health effects. Some studies have suggested a possible link between exposure to ELF magnetic fields and certain types of childhood cancer, but at present this association is not established.

The [International Agency for Research on Cancer \(IARC\)](#) has classified ELF magnetic fields as “possibly carcinogenic to humans”. The IARC classification of ELF magnetic fields reflects the fact that some limited evidence exists that ELF magnetic fields might be a risk factor for childhood leukemia. However, the vast majority of scientific research to date does not support a link between ELF magnetic field exposure and human cancers. At present, the evidence of a possible link between ELF magnetic field exposure and cancer risk is far from conclusive and more research is needed to clarify this “possible” link.

Health Canada is in agreement with both the World Health Organization and IARC that additional research in this area is warranted.

REDUCE YOUR RISK

Health Canada does not consider that any precautionary measures are needed regarding daily exposures to EMFs at ELFs. There is no conclusive evidence of any harm caused by exposures at levels found in Canadian homes and schools, including those

located just outside the boundaries of power line corridors.

THE GOVERNMENT OF CANADA'S ROLE

Health Canada, along with the World Health Organization, monitors scientific research on EMFs and human health as part of its mission to help Canadians maintain and improve their health.

International exposure guidelines for exposure to EMFs at ELFs have been established by the [International Commission on Non-Ionizing Radiation Protection \(ICNIRP\)](#). These guidelines are not based on a consideration of risks related to cancer. Rather, the point of the guidelines is to make sure that exposures to EMFs do not cause electric currents or fields in the body that are stronger than the ones produced naturally by the brain, nerves and heart. EMF exposures in Canadian homes, schools and offices are far below these guidelines.

FOR MORE INFORMATION

- Health Canada’s [Electric and magnetic fields](#) at: www.hc-sc.gc.ca/ewh-semt/radiation/cons/electri-magnet/index-eng.php
- The World Health Organization – Electromagnetic fields and public health:
 - [Exposure to extremely low frequency fields](#) at: www.who.int/mediacentre/factsheets/fs322/en/index.html
 - [Extremely low frequency](#) at: www.who.int/docstore/peh-mf/publications/facts_press/efact/efs205.html
 - [Extremely low frequency fields and cancer](#) at: www.who.int/docstore/peh-emf/publications/facts_press/efact/efs263.html



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Electric and Magnetic Fields

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IT'S YOUR HEALTH



FOR INDUSTRY AND PROFESSIONALS

- The International Agency for Research on Cancer (IARC) *Volume 80 – Non-ionizing Radiation, Part 1: Static and Extremely Low-Frequency (ELF) Electric and Magnetic Fields* at: <http://monographs.iarc.fr/ENG/Monographs/vol80/volume80.pdf>
- IARC Carcinogen classifications at: <http://monographs.iarc.fr/ENG/Classification/index.php>

RELATED RESOURCES

- Health Canada, *It's Your Health*:
 - Safety of Wi-Fi Equipment at: www.hc-sc.gc.ca/hl-vs/iyh-vsv/prod/wifi-eng.php
 - Safety of Cell Phones and Cell Phone Towers at: www.hc-sc.gc.ca/hl-vs/iyh-vsv/prod/cell-eng.php
- For safety information about food, health and consumer products, visit the [Healthy Canadians](http://www.healthycanadians.gc.ca) website at: www.healthycanadians.gc.ca
- For more articles on health and safety issues go to the *It's Your Health* web section at: www.health.gc.ca/iyh

You can also call toll free at
1-866-225-0709 or TTY at
1-800-267-1245*

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