

Imperial Oil Relocation Project

Application For Leave to Construct
EB-2022-0171

EXHIBIT A

GENERAL

A.1.1 Acronyms and Abbreviations

Terminology used in this document is defined where it is first used. The following list will assist readers who may choose to review only portions of the document.

AA	Stage 1 Archaeological Assessment
A/G	Above Ground
API	American Petroleum Institute
ARO	Abrasion Resistant Overcoat
ASME	American Society of Mechanical Engineers
CSA	Canadian Standards Association
ENDM	Energy, Northern Development and Mines
EPP	Environmental Protection Plan
ER	Environmental Report
FBE	Fusion Bonded Epoxy
GP	Global Practice (Imperial Oil Limited Standards)
HCCC	Haudenosaunee Confederacy Chiefs Council
Imperial Oil	Imperial Oil Limited
kPag	kilopascal gauge
Lafarge	Lafarge Canada Inc.
LTC	Leave to Construct
LVP	Low Vapor Pressure
m	metres
MCFN	Mississauga of the Credit First Nation
MHSTCI	Ministry of Heritage, Sport, Tourism and Culture Industries

mm	Millimetre
MOE	Ministry of Energy
MOP	Maximum Operating Pressure
MPa	Megapascal
NPS	nominal pipe size
O.D.	Outer Diameter
OEB	Ontario Energy Board
OEB Act	<i>Ontario Energy Board Act</i>
OPCC	Ontario Pipeline Coordinating Committee
PDM	Pipelines & Distribution Manual (IOL Standards)
psig	Pounds per square inch gauge
PSW	Provincially Significant Wetland
RoW	Right of way
SAR	Species at Risk
SMYS	Specified Minimum Yield Strength
SMLS	Seamless
SNGR	Six Nations of the Grand River
SPPL	Sarnia Products Pipeline
TSSA	Technical Standards and Safety Authority
U/G	Under Ground
WT	Wall Thickness

A.1.2 Exhibit List

Exhibit A: General

Exhibit	Tab	Schedule	Description
A	1	1	Acronyms and Abbreviations
	1	2	Exhibit List
	1	3	Application and Approval Requested
	1	4	Map of Project
	1	5	OPCC Distribution List
	1	6	List of Interested Parties

Exhibit B: Purpose, Project Need, Proposed Project and Timing

Exhibit	Tab	Schedule	Description
B	1	1	Purpose, Project Need, Proposed Project and Timing
	1	2	Map of Preferred Route

Exhibit C: Route Selection and Environmental

Exhibit	Tab	Schedule	Description
C	1	1	Route Selection
	1	2	Environmental Report Summary
	1	3	Environmental Protection Plan
	1	4	Archaeology Assessment
	1	5	Correspondence related to Archaeological Resources

Exhibit D: Engineering and Construction

Exhibit	Tab	Schedule	Description
D	1	1	Introduction
	1	2	Project Construction Methods
	1	3	Design Specifications
	1	4	Pressure Testing
	1	5	Project Costs (Section Not Applicable)
	1	6	Project Schedule

Exhibit E: Land Matters

Exhibit	Tab	Schedule	Description
E	1	1	Summary of Land Matters
	1	2	Negotiations to Date
	1	3	Land-Related Permits and Agreements Required
	1	4	Attachment 1 – Grant of Easement Pipeline (Ontario) Agreement
	1	5	Line List

Exhibit F: Indigenous Consultation Report

Exhibit	Tab	Schedule	Description
F	1	1	Indigenous Consultation Summary
	1	2	Indigenous Correspondence Summary Table
	1	3	Attachment 1 – Duty to Consult Letter
	1	4	Attachment 2 – Indigenous Peoples Policy

Exhibit G: Record of Consultation

Exhibit	Tab	Schedule	Description
G	1	1	Consultation Summary
	1	2	Ontario Energy Board Correspondence Summary Table
	1	3	Federal and Provincial Ministries, Conservation Authority and Municipal Correspondence Summary Table

Appendices

Appendix	Description
1	Environmental Report
2	Indigenous Consultation Records and Supporting Documentation
3	Record of Consultation – Support Documents

A.1.3 Application and Approvals Requested

Ontario Energy Board

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15 (Sched. B), as amended (the “OEB Act”).

AND IN THE MATTER OF an application by Imperial Oil Limited under section 90(1) of the OEB Act for an order granting leave to relocate an approximately 2000 metre (m) portion of existing 12-inch nominal pipe size (NPS) pipeline that is currently located on land owned by Lafarge Canada Inc. in the City of Hamilton.

AND IN THE MATTER OF an application by Imperial Oil Limited under section 97 of the OEB Act for approval of the proposed form of easement agreements included herein.

LEAVE TO CONSTRUCT APPLICATION: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

1. The Applicant, Imperial Oil Limited (“Imperial Oil”) is a corporate body duly formed pursuant to the laws of Canada having an office in the City of Hamilton. Imperial Oil was formed in 1880 by sixteen southwestern-Ontario refiners to find, produce and distribute petroleum products in Canada.
2. Imperial Oil owns and operates the Sarnia Products Pipeline (SPPL), a 12-inch nominal pipe size (“NPS”) pipeline connecting Imperial Oil’s Waterdown and Nanticoke stations. This section of the SPPL system is 74.23 km in length.
3. Lafarge Canada Inc. (“Lafarge”) will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON. A small length (2000 m) of Imperial Oil’s SPPL system crosses Lafarge’s property. Imperial Oil is proposing to remove the existing section of pipeline which crosses the Lafarge property and install a new section of pipeline in a location which does not impede Lafarge’s approved South Quarry Extension lands.

4. Imperial Oil hereby applies ("Application") to the Ontario Energy Board ("OEB"), pursuant to section 90(1) of the OEB Act for Leave to Construct ("LTC") for the Imperial Oil Pipeline Relocation (the "Project"): specifically, the Project involves the construction of approximately 2000 metres (m) of new pipeline. Once the new segment of pipeline is installed, the existing segment will be decommissioned by cutting out / isolating it from the new pipeline alignment, removing any remaining product, and then removing the existing segment. The Project is in the vicinity of Concession 4 West between Brock Road and Millgrove Side Road in the City of Hamilton.
5. The new pipeline will be primarily located adjacent to the municipal road allowance of Concession 4 West on land owned by Lafarge. The new pipeline will cross Concession 4 West in two locations.
6. With exception of the two road crossings, the new pipeline will be located entirely within new easement. The new easement will be approximately 2000 m in length and 15 m in width and the new easement crosses property owned by Lafarge. Imperial Oil will secure temporary workspace required to accommodate construction from Lafarge. No landowners, other than Lafarge, will be affected.
7. Pending LTC approval, receipt of permits, agreements, and other necessary approvals, construction is planned to occur during the Fall and Winter of 2022. The purpose, need, and timing of the Project is described in greater detail in Exhibit B.1.1 and Exhibit D.1.6 A map identifying the approximate location of the new pipeline is included as Exhibit A.1.4 of this Application.
8. Through the completion of an Environmental Report (ER), Imperial Oil has planned the Project pursuant to the OEB's Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016) ("Environmental Guidelines"). A copy of the ER is attached as Appendix 1 of the Application. The principal objective of the ER was to identify an environmentally preferred route and outline various environmental mitigation and protection measures for the construction and operation of the Project while meeting the intent of the OEB's Environmental Guidelines.
9. The route selection process, documented within the ER, was undertaken in accordance with the OEB Environmental Guidelines, which identifies the environmental and socio-economic features, and the routing principles, to be considered. The location of the new pipeline was determined by considering the confines of available space and the tie-in locations to the existing pipeline. Routing also considered socio-economic constraints,

environmental considerations, and constructability while utilizing the most reasonably direct route. Further discussion on route selection is included in Exhibit C.1.1 of the Application.

10. Imperial Oil recognizes the importance of consultation and engagement and that it is an essential requirement of the OEB Environmental Guidelines. Imperial Oil identified interested and potentially affected parties and informed them about the Project, solicited information about their values and local environmental and socio-economic circumstances, and received advice about key Project decisions, before those decisions were finalized. Exhibit A.1.5 lists the Ontario Pipeline Coordinating Committee ("OPCC") members, while Exhibit A.1.6 lists interested parties. Exhibit F outlines the engagement and consultation activities and plans with Indigenous communities. Exhibit G outlines the engagement and consultation activities with the public, municipalities and agencies. Exhibit G is comprised of the Record of Consultation and supporting documents, which includes a record of the consultation log and detailed supporting documents.
11. With respect to Indigenous consultation, the Ministry of Energy, Northern Development and Mines (ENDM), now the Ministry of Energy (MOE), Indigenous Energy Policy team provided a letter on April 26, 2021, that outlined the Crown's direction on the duty to consult. ENDM stated that based on information Imperial Oil provided, ENDM was of the view that the Project would not result in any appreciable adverse impacts on the asserted or established rights of First Nations of Métis communities. ENDM further noted that based on currently available information that no duty to consult has been triggered and it is not necessary for ENDM to provide a letter of opinion regarding the sufficiency of consultation. ENDM recommended that Imperial Oil continue to maintain a record of its interactions with Indigenous communities it has engaged with on an interests-basis regarding the Project. A copy of ENDM's response is located in Exhibit F.1.3.
12. Exhibit D includes details on project design specifications, construction methodologies, pressure testing procedures and key milestones.
13. Exhibit E includes a summary of land matters, an affidavit of title search, a list of the directly affected parties, and any temporary land use agreements and easement agreements. A copy of which will be filed in accordance with the OEB's rules on confidentiality.
14. Imperial Oil is a non-rate regulated private enterprise and the Project is financed by Imperial Oil. There are no cost impacts on ratepayers. Therefore, disclosure of Project costs and an economic feasibility assessment are not applicable. No supporting

information is required relating to project costs and economic feasibility assessment.

15. This approach is supported by the OEB's recent Decision and Order dated March 12, 2020, in EB-2019-0007 which at page 5 notes:

"In this case, the OEB's review does not include consideration of the Project cost and economics as Imperial Oil is not a rate-regulated entity, and the costs of the Project will therefore not be passed on to ratepayers through any OEB-approved rates."

16. Imperial Oil requests that this Application proceed by way of a written hearing in English.

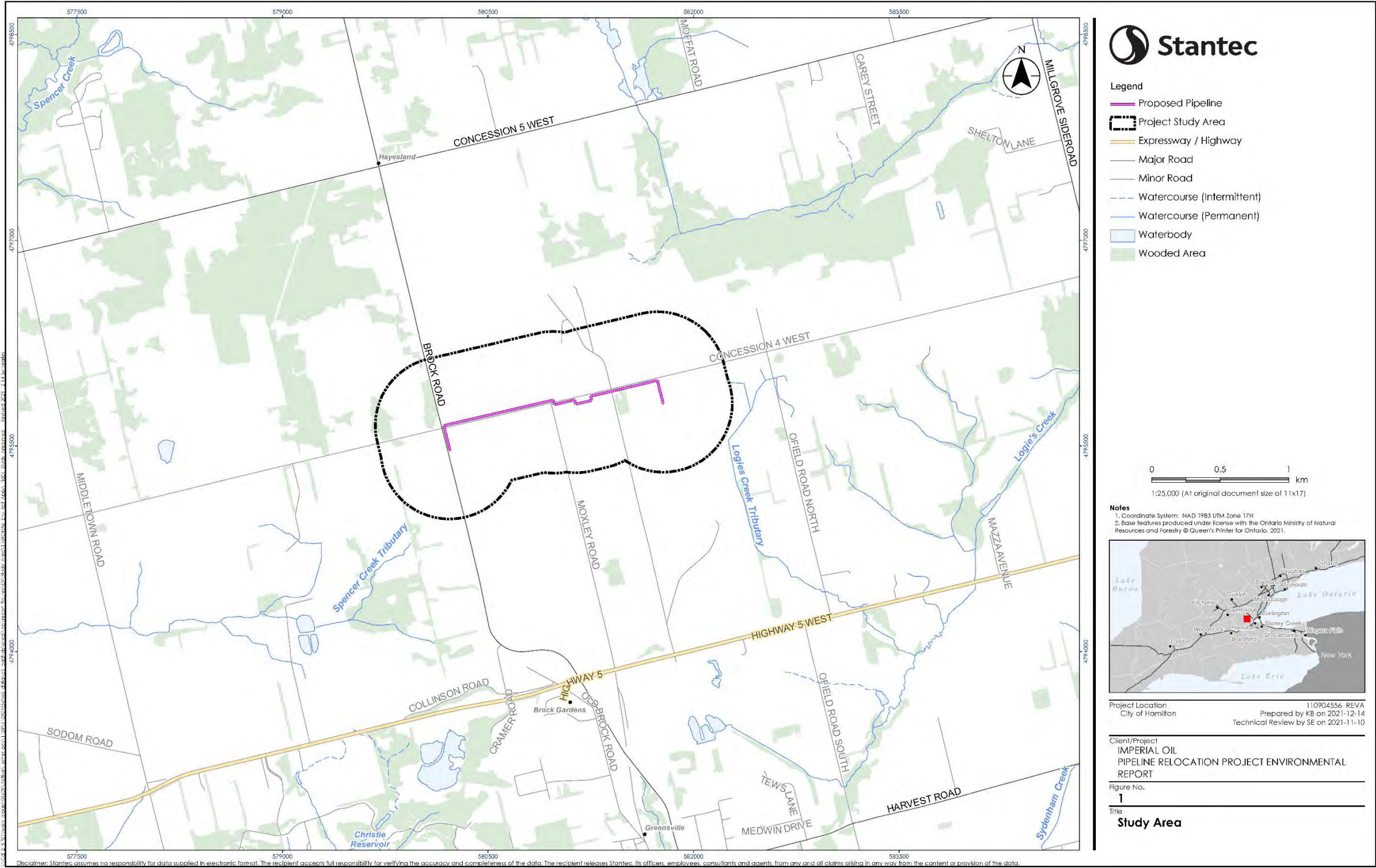
17. Imperial Oil requests that the OEB make the following orders:

- (1) an order pursuant to section 90 of the *Ontario Energy Board Act* granting Leave to Construct the Project; and
- (2) an order pursuant to section 97 of the *Ontario Energy Board Act* approving the proposed grant of easement pipeline agreement found in Exhibit E.1.4.

18. Imperial Oil requests that copies of all documents filed with the Board in connection with this proceeding be provided to Imperial Oil's regulatory lead and legal counsel as follows:

- a) Applicant: Imperial Oil Limited
- b) Address: 5 0 5 Quarry Park Blvd., Calgary, AB, T2C 5N1
- c) Contact: Thomas Cao
- d) Phone: 587-476-4669
- e) Email: thomas.cao@esso.ca

A.1.4 Map of Project



A.1.5 OPCC Distribution List

Table A.1.5-1: OPCC Distribution List

First Name	Last Name	Title	Representing	Address	Town	Province	Postal Code	Phone	Email
Zora	Crnojacki		Ontario Energy Board	P.O Box 2319, 2300 Young Street, 26th Floor	Toronto	ON	M4P 1E4	416-440-8104	zora.crnojacki@oeb.ca
Helma	Geerts		Ministry of Agriculture, Food and Rural Affairs	1 Stone Road West, 3rd Floor SE	Guelph	ON	N1G 4Y2	519-546-7423	helma.geerts@ontario.ca
James	Hamilton	Manager, Heritage Planning Unit	Ministry of Heritage, Sport, Tourism and Culture Industries	400 University Avenue, 5th Floor	Toronto	ON	M7A 2R9	416-995-8404	james.hamilton@ontario.ca
Tony	Difabio		Ministry of Transportation	301 St. Paul Street, 2nd Floor	St. Catharines	ON	L2R 7R4	905-704-2656	tony.difabio@ontario.ca
Kourosh	Manouchehri		Technical Standards and Safety Authority	345 Carlingview Drive	Toronto	ON	M9W 6N9	416-734-3539	kmanouchehri@tssa.org
Keith	Johnston	Environmental Planning Team Lead (Acting)	Ministry of Northern Development, Mines, Natural Resources and Forestry	99 Wellesley St W	Toronto	ON	M7A 1W3	705-313-6960	keith.johnston@ontario.ca
Maya	Harris	Manager, Community Planning and Development	Ministry of Municipal Affairs and Housing, Western Municipal Services Office	777 Bay Street, 13th Floor	Toronto	ON	M5G 2E5	416-585-6063	maya.harris@ontario.ca
Jonathon	Wilkinson	Senior Advisor (Acting), Indigenous Energy Policy	Ministry of Energy	77 Grenville Street, 6th Floor	Toronto	ON	M7A 1B3	705-313-3658	jonathon.wilkinson@ontario.ca
Barbara	Slattery	Regional Contact-West Central	Ministry of Environment, Conservation and Parks	119 King Street West, 12th Floor	Hamilton	ON	L8P 4Y7	905-521-7864	barbara.Slattery@ontario.ca
Cory	Ostrowka	Environmental Specialist	Infrastructure Ontario	1 Dundas Street West, Suite 2000	Toronto	ON	M5G 2L5	647-264-3331	cory.ostrowka@infrastructureontario.ca

A.1.6 List of Interested Parties

1. In addition to OPCC members, Imperial Oil identified key municipal and provincial staff, Indigenous communities and local organizations that may have an interest in the Project. The identification of interested and potentially affected parties was undertaken using a variety of sources, including the Ministry of the Environment, Conservation and Parks (MECP)'s Environmental Assessment Government Review Team Master Distribution List. Indigenous communities were identified through both Imperial Oil and Stantec Consulting Ltd.'s ("Stantec") experience on past projects in the area. Directly affected and adjacent landowners were also consulted. A list of directly affected and adjacent landowners can be found in Exhibit E.1.5.

Table A.1.6-1: Federal, Provincial, Municipal, Other Agency and Indigenous Community Contacts

Title	First Name	Surname	Organization	Department	Position	Address	City/Town	Province	Postal Code	Telephone	E-Mail
ELECTED OFFICIALS											
Ms.	Donna	Skelly	Province Of Ontario	Flamborough-Glanbrook	Minister Of Provincial Parliament	Suite 104, 2000 Garth Street	Hamilton	ON	L9B 0C1	905-679-3770	Donna.Skelly@Pc.Ola.Org
Mr.	David	Sweet	Government Of Canada	Flamborough-Glanbrook	Minister Of Parliament	1654 Wilson Street West	Jerseyville	ON	L0R 1R0	905-648-3850	David.Sweet@Parl.Gc.Ca
FEDERAL AGENCIES											
Mr.	Sandro	Leonardelli	Environment And Climate Change Canada	Environmental Protection Operations - Ontario	Manager, Environmental Assessment Section	4905 Dufferin Street, 2nd Floor	Toronto	ON	M3H 5T4	416-749-5858	Sandro.Leonardelli@Canada.Ca
Ms.	Anjala	Puvananathan	Canadian Environmental Assessment Agency	Ontario Regional Office	Director	55 York Street, Suite 600	Toronto	ON	M5J 1R7	416-952-1575	Anjala.Puvananathan@Canada.Ca
PROVINCIAL AGENCIES											
Ms.	Karla	Barboza	Ministry Of Heritage, Sport, Tourism And Culture Industries	Heritage, Tourism And Culture Division	Team Lead - Heritage (Acting)	401 Bay Street	Toronto	ON	M7A 0A7	416-314-7120	Karla.Barboza@Ontario.Ca
Mr.	Trevor	Fleck	Ministry Of Infrastructure	Capital Planning & Coordination Branch	Director	777 Bay Street, 4th Floor, Suite 425	Toronto	ON	M5G 2E5	416-325-8559	Trevor.Fleck@Ontario.Ca
Ms.	Heather	Malcolmson	Environmental Assessment And Permissions Branch	Director (Acting)		135 St. Clair Ave. W, 1st Floor	Toronto	ON	M4V 1P5	416-314-0934	Heather.Malcolmson@Ontario.Ca
Mr.	Dan	Dobrin	Air, Pesticides And Environmental Planning	Technical Support Section, West Central Region	Manager	Ellen Fairclough Bldg., 9th Floor, 119 King Street West	Hamilton	ON	L8P 4Y7	905-379-3707	Dan.Dobrin@Ontario.Ca
Mr.	Stephen	Burt	Ministry Of Environment, Conservation And Parks	Hamilton District Office	Acting Manager	Ellen Fairclough Bldg., 9th Floor, 119 King Street West	Hamilton	ON	L8P 4Y7	905-541-4533	Stephen.Burt@Ontario.Ca
Ms.	Barb	Slattery	Ministry Of Environment, Conservation And Parks	Regional Contact, West Central Region	Regional Contact	733 Exeter Road	London	ON	N6E 1L3	905-521-7864	Barbara.Slattery@Ontario.Ca
Mr.	Michael	Falconi	Ministry Of Economic Development, Job Creation And Trade	Cabinet Office Liaison Unit, Policy Coordination Branch	Senior Manager	56 Wellesley Street West, 11th Floor	Toronto	ON	M5S 2S3	647-325-9535	Michael.Falconi@Ontario.Ca
To Whom It May Concern			Ministry Of Agriculture And Food, Ministry Of Rural Affairs			1 Stone Road West, 3rd Floor	Guelph	On	N1G 4Y2	ON	Omafra.Eanotices@Ontario.Ca
To Whom It May Concern			Ministry Of Environment, Conservation And Parks	Source Protection Programs Branch		40 St. Clair Ave. W. 14th Floor	Toronto	On	M4V 1M2	ON	Sourceprotectionscreening@Ontario.Ca
Mr.	David	Marriott	Ministry Of Natural Resources And Forestry	Mnrf Guelph	District Planner	1 Stone Road West	Guelph	ON	N1G 4Y2	519-826-4926	David.Marriott@Ontario.Ca
CONSERVATION AUTHORITY											
Mr.	Mike	Stone	Hamilton Conservation Authority	Watershed Planning And Engineering	Manager, Planning, Stewardship And Ecology	838 Mineral Springs Road	Ancaster	ON	L9G 4X1	905-525-2181 Ext. 133	Mike.Stone@Conservationhamilton.Ca
Ms.	Cassandra	Connolly	Conservation Halton	Planning And Regulations	Regulations Officer	2596 Britannia Road West	Burlington	ON	L7P 0G3	905-336-1158 Ext. 2301	Cconnolly@Hrca.On.Ca
MUNICIPAL											
Mr.	Fred	Eisenberger	City Of Hamilton	Mayor And Council	Mayor	71 Main Street West, 2nd Floor	Hamilton	ON	L8P 4Y5	905-546-4200	Mayor@Hamilton.Ca
Ms.	Arlene	Vanderbeek	City Of Hamilton	Mayor And Council	Councillor, Ward 13	71 Main Street West, 2nd Floor	Hamilton	ON	L8P 4Y5	905-546-2714	Arlene.Vanderbeek@Hamilton.Ca
Ms.	Andrea	Holland	City Of Hamilton	Corporate Services	Clerk	71 Main Street West, 1st Floor	Hamilton	ON	L8P 4Y5	905-546-2489	Clerk@Hamilton.Ca

EXHIBIT B
PURPOSE, PROJECT NEED, PROPOSED
PROJECT AND TIMING

B.1.1 Purpose, Need, Proposed Project and Timing*Purpose and Need for Project*

1. Lafarge will be mining their approved South Quarry Extension lands located on the south side of Concession 4 West, Hamilton, ON. Imperial Oil's existing NPS 12" pipeline crosses Lafarge's South Quarry Extension lands and must be removed and relocated in order for quarrying operations to continue. The pipeline to be removed is a small section of the SPPL, 12-inch nominal pipe size ("NPS") pipeline connecting Imperial Oil's Waterdown and Nanticoke stations.
2. A new pipeline will be constructed outside of the approved extraction limit of the South Quarry Extension lands, the new pipeline will be located within a new easement on lands owned by Lafarge, primarily adjacent to the municipal road allowance of Concession 4 West and the municipal road allowance of Brock Road. The new pipeline will cross Concession 4 West in two separate locations.
3. A map of the Project Study Area is attached as Exhibit A.1.4 and a map of the Preferred Route is attached as Exhibit B.1.2.

Proposed Project

4. The proposed Project involves the installation of approximately 2,000 m of new NPS 12 pipeline primarily adjacent to the road allowance of Concession 4 West and the road allowance of Brock Road. The new pipeline requires a new easement as well as two crossings of Concession 4 West.
5. To reduce potential impacts to adjacent landowners and the environment, the route for the new pipeline follows a reasonably direct path between endpoints. The length has been reduced by running adjacent to the existing municipal road allowance. The route of the new pipeline avoids potential constraints such as: Lafarge owned lands zoned for mining purposes, environmental features such as a woodlot east of the intersection of Concession 4 West and Moxley Road, a Provincially Significant Wetland (PSW) northeast of the Study Area and the potential to encounter geological hazards on the north side of Concession 4 West.
6. The new pipeline will be constructed using trenching and backfilling methods, which will involve the use of a hydraulic hoe to excavate the trench to a depth of at least 1 m, which will then be prepared for the installation of the new pipeline. The pipeline will be welded into a continuous length in which the pipe welds are non-destructively tested and coated. The originally excavated subsoil will be placed over the pipe, and the pipe will be sand padded to protect the coating. Stripped topsoil will then be replaced.

7. Mainline valves will be installed to serve as shut off and isolation measures for maintenance and security purposes. Above ground facilities along the pipeline will include post-mounted signs identifying the pipeline, aerial patrol signs for aircraft patrol, fence stiles, foot bridges for ditch crossings (if applicable) and “test boxes” located along fence lines at roads that are used to assess the adequacy of the corrosion protection system.
8. After the new pipeline is installed, the existing segment of NPS12 pipeline that is no longer required will be decommissioned.

Project Timing

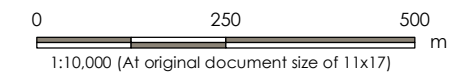
9. Subject to regulatory and permitting approvals, the construction of the Project is planned to occur in the fall of 2022. Once constructed, the pipeline is expected to continue to operate for 50 years. A Project construction schedule is provided as Exhibit D.1.6.

B.1.2 Map of Preferred Routing



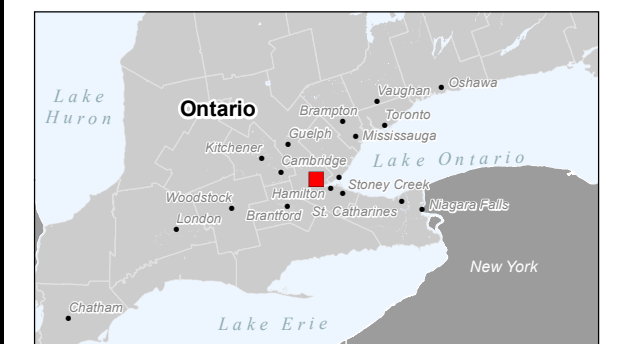
Legend

- Tie In Location
- Existing Pipeline
- Proposed Pipeline
- Project Study Area
- Road
- Watercourse
- Lot Boundary
- Waterbody



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2021.
3. Orthoimagery © First Base Solutions, 2021. Imagery Date, 2019.



Project Location
City of Hamilton

110904556 REVA
Prepared by KB on 2021-12-14
Technical Review by SE on 2021-11-10

Client/Project
IMPERIAL OIL
PIPELINE RELOCATION PROJECT ENVIRONMENTAL
REPORT

Figure No.

3

Title

Preferred Route

EXHIBIT C

ROUTE SELECTION AND ENVIRONMENTAL

C.1.1 Route Selection

1. The selected route presents the least potential for adverse environmental and socio-economic impacts.
2. The route evaluation was supported by a review of available background information, desktop studies, environmental and socio-economic field surveys, consultation with regulators and other stakeholders and constructability reviews.
3. The route selection process was supported by requests to several agencies and stakeholders to assist with identifying environmental features, constraints and the potential for the presence of Species at Risk (SAR) and their habitat. The results of this data collection are visually summarized within the Existing Conditions Figures within Appendix C of the ER, located in Appendix 1 of this Application.
4. The Preferred Route was circulated to agencies and stakeholders for review, no comments were received.
5. The Preferred Route may be subject to minor adjustments as the Project progresses through detail design, supplemental studies (including environmental studies) and site-specific requests from agencies. As identified in Section 2.5 of the ER (located in Appendix 1 of this Application) the following key input will be considered in the detailed design:
 - a. While construction of the pipeline is not anticipated to occur outside of Lafarge property, a permit under O. Reg. 161/06 may be required from Hamilton Conservation Authority (HCA) in the event that temporary workspaces overlap with the watercourse in the eastern extent of the Study Area. A map of the regulation limits of HCA is located on Figure 10, Appendix C of the ER, located in Appendix 1 of this Application.
6. In general, the detailed design exercise will seek to further avoid sensitive natural features to the extent practicable while considering utilities and infrastructure.

C.1.2 Environmental Report Summary

1. The ER fulfills the requirements of the Ontario Energy Board (OEB's) Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016). The ER is a component of the LTC application for the Project.

The ER describes the actions taken to identify an environmentally preferred route and to outline various environmental mitigation and protection measures for the construction and operation of the Project. The ER has three main phases:

- Phase 1 – Identification of Project Study Area and Preferred Route

This phase defined the study area, determined routing parameters and routing objectives, and identified environmental and socio-economic opportunities and constraints. This information and criteria were then used to evaluate potential alignments through a detailed review of available literature, mapping, and digital data, as well as engineering factors and constructability. The product of this phase was the determination of the Preferred Route.

- Phase 2 – Gather Information and Consultation

During this phase environmental and socio-economic background data relevant to the study area was confirmed and further supported through information requests to several agencies and stakeholders to assist with identifying environmental features, constraints, the potential for presence of Species at Risk (SAR) and their habitat. This data was used to develop mitigation and protective measures based on predicted effects and potential impacts.

Feedback on the Project was also sought through the issuance of public notices and targeted letters to agencies, municipal representatives, Indigenous communities, landowners, and other stakeholders.

- Phase 3- Environmental Report

During this phase potential environmental and socio-economic impacts and cumulative effects that would result from the Project were identified and mitigation and protection measures to reduce these impacts were determined. Mitigation and protection measures included the identification of supplemental studies, monitoring and contingency plans to be prepared and implemented.

C.1.3 Environmental Protection Plan

1. A Project specific Environmental Protection Plan (EPP) along with several management and contingency plans will be developed through the detailed design process prior to construction. The EPP will outline the required environmental protection measures and commitments to avoid or reduce potential effects on the environment as a result of the Project. The EPP builds on the mitigation measures, monitoring and contingency plans identified within the ER. It will provide the overarching structure upon which environmental management will be completed during construction by identifying environmental requirements, compliance procedures, roles and responsibilities, training procedures, inspection and reporting structures, and other processes and procedures for environmental management.
2. The EPP is a dynamic document that will be progressively developed as the Project moves through the design, permitting, and construction phases.
3. The EPP will include several Project specific management plans that will be topic specific to provide clear and transparent guidance regarding permit approval terms and conditions, other regulatory requirements, and commitments made as part of the ER.

C.1.4 Archaeology Assessment

1. A Stage 1 Archaeological Assessment (AA) was completed for the Study Area. A copy of the completed Stage 1 AA report was submitted to the MHSTCI for review and inclusion in the *Ontario Public Register of Archaeological Reports*. Initial background research included a review of current land use, historic and modern maps and past settlement history. It also involved a review of previously registered archeological resources within 1 km of the Project Study Area and previous archaeological assessments within 50 m of the Project Study Area. The Stage 1 AA is included as Appendix E of the ER, the ER is attached to the application as Appendix 1.
2. The Stage 1 AA determined that approximately 51% of the Study Area retains archaeological potential. Approximately 29.9 % of the Study Area had been previously archaeologically assessed and cleared of further archaeological concerns and 19% was identified as previously disturbed and did not retain archaeological potential.
3. The Stage 1 AA Report (prepared by Heather Kerr under PIF# P1148-0024-2021) was submitted to the MHSTCI on March 16, 2022.
4. Stage 2 AA work is scheduled to commence in May 2022.

C.1.5 Correspondence Related to Archaeological Resources

1. A summary of key correspondence with MHSTCI and Indigenous communities related to archaeological resources is provided in Table C.1.5-1. Additional information on consultation is included in Appendix B of the ER (located in Appendix 1 of the Application).

Table C.1.5-1: Archaeological Resource Correspondence

Date	Party	Description	Subject Matter
June 28, 2021	Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	Notice of Commencement	Stantec sent the Notice of Commencement (newspaper notice).
July 12, 2021	Haudenosaunee Confederacy Chiefs Council (HCCC)	Notice of Commencement	Imperial Oil provided a copy of the Notice of Commencement (newspaper notice) and a letter which detailed the components of the Project.
July 12, 2021	Mississauga of the Credit First Nation (MCFN)	Notice of Commencement	Imperial Oil provided a copy of the Notice of Commencement (newspaper notice) and a letter which detailed the components of the Project.
July 12, 2021	Six Nations of the Grand River (SNGR) Elected Council	Notice of Commencement	Imperial Oil provided a copy of the Notice of Commencement (newspaper notice) and a letter which detailed the components of the Project.
October 21, 2021	Haudenosaunee Confederacy Chiefs Council (HCCC)	Notice of Project Update	Imperial Oil provided a copy of the Notice of Project Update and a letter which detailed the components of the Project. Additional project team contract information was also provided.
October 21, 2021	Mississauga of the Credit First Nation (MCFN)	Notice of Project Update	Imperial Oil provided a copy of the Notice of Project Update and a letter which detailed the components of the Project. Additional project team contract information was also provided.
October 21, 2021	Six Nations of the Grand River (SNGR) Elected Council	Notice of Project Update	Imperial Oil provided a copy of the Notice of Project Update and a letter which detailed the components of the Project. Additional project team contract information was also provided.
July 28, 2021	MHSTCI	Response to Notice of Commencement	<p>The MHSTCI responded to the Notice of Commencement and provided the following information:</p> <ul style="list-style-type: none"> • While some cultural heritage resources may have been already formally identified, others may be identified through assessment • A combined Staged 1-2 Archaeological Assessment (AA) is recommended for the Study Area during the planning phase; at a minimum a Stage 1 AA should be undertaken for the entire Study Area. • A Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment (CHECPIA) will be undertaken by a qualified person. • The Environmental Report must include specific information from the AA report(s) and the CHECPIA.

Table C.1.5-1: Archaeological Resource Correspondence

Date	Party	Description	Subject Matter
October 10, 2021	MHSTCI	Notice of Project Update	Stantec sent a Notice of Project Update (newspaper notice and map).
April 13, 2022	Haudenosaunee Confederacy Chiefs Council (HCCC)	Environmental Report and Stage 1 AA	Stantec sent notice of the completed Environmental Study and provided a link to the report on the Stantec SharePoint. The Stage 1 AA was appended to the Environmental Study.
April 13, 2022	Mississauga of the Credit First Nation (MCFN)	Environmental Report and Stage 1 AA	Stantec sent notice of the completed Environmental Study and provided a link to the report on the Stantec SharePoint. The Stage 1 AA was appended to the Environmental Study.
April 13, 2022	Six Nations of the Grand River (SNGR) Elected Council	Environmental Report and Stage 1 AA	Stantec sent notice of the completed Environmental Study and provided a link to the report on the Stantec SharePoint. The Stage 1 AA was appended to the Environmental Study.

EXHIBIT D

ENGINEERING AND CONSTRUCTION

D.1.1 Introduction

1. This section of the Application describes the proposed Project construction methods, engineering design specifications, and testing methodology and procedures. The proposed Project schedule, including key milestone dates, are also included as evidence to this Application. Refer to Exhibit D.1.6 for the anticipated Project schedule and milestones.

D.1.2 Project Construction Methods

The pipeline construction process includes various activities as described below:

1. **Site Preparation and Clearing:** The first activity is typically the survey and staking, which delineate the boundaries of the RoW and temporary work areas. Next, the RoW and temporary work areas are cleared of brush and trees where required. Safety fence is installed at the edge of the construction RoW where public safety considerations are required, and aspects of the traffic management plan are implemented (i.e., signs, vehicle access). Silt fence is installed at required locations.
2. **Grading and Stripping:** The RoW is graded where required to allow for access by construction equipment. At this stage, the topsoil (on agricultural lands) or the duff layer (on natural lands) is stripped by bulldozers and graders then segregated so it will not be mixed with the subsoil later removed from the trench. Existing landscaping is also removed, and dewatering undertaken, where necessary.
3. **Trenching:** A hydraulic hoe will excavate the trench to a depth of at least 1m, which will then be prepared for the installation of the new pipeline. Laneways and trails are left over the trench as long as feasible where requested by the landowner. Concession 4 West will be crossed by open cut method at both locations.
4. **Stringing:** Stringing is the process where pipeline sections are delivered to the RoW, placed on wooded skids adjacent to the trench.
5. **Pipe Fabrication:** The pipeline is welded into a continuous length. The pipe welds are non-destructively tested (e.g., x-ray) and coated.
6. **Backfilling:** During backfilling the originally excavated subsoil is placed over the pipe in the open trench. The pipe will be sand-padded to protect the coating. Topsoil is then replaced.
7. **Hydrostatic Testing:** The pipeline is pressure tested by filling the pipe with water and holding it at a high pressure for a set period of time, typically 24 hours. Water is typically drawn from nearby source if available. Municipal water may also be used for hydrostatic testing. The suitable water source is determined based on discussions with the appropriate authorities. Upon completion of the hydrostatic testing, the pipeline is drained and dried, purged of air and then put into service.
8. **Clean-Up and Restoration:** Clean-up is the restoration of the RoW and other work areas. On agricultural land this may require decompaction of the subsoil to maintain productivity. In natural areas, clean-up restores the environment including re-seeding of the RoW and returning the topography to match preconstruction contours after grading. Any erosion and sediment controls installed during construction are also removed. Clean-up will also restore landscaping, laneways and driveways.

D.1.3 Design Specifications

Table D.1.3-1 presents the existing pipe specifications at SPPL NPS 12 Waterdown to Nanticoke pipeline in the vicinity of the Lafarge property. Table D.1.3.2 presents the design specifications for the pipe, fittings and associated equipment used to contract the project; the replacement pipe specifications are in compliance with CSA Z662-19.

Table D.1.3-1: Existing Pipe Specifications at Lafarge Area

Name	From	To	Year Built ¹	W.T (mm) ¹	Type & Grade ¹	Coating	Product ¹	O.D. (mm) ¹	SMYS (MPa) ¹	MOP (kPa) ¹
SPPL 12 Wat-Nan	Waterdown	Nanticoke	1951	8.38	SMLS API 5L Gr. B	Ext. Coal Tar Enamel	Refined LVP	323.9	241	6,900

Notes:

- 1) Confirmed from PODS (accessed on March 16, 2021)

Table D.1.3.2: Replacement Pipe Specifications

Description	O.D (mm)	W.T. (mm) ¹	SMYS (MPa) & Type	Ext. Coating ^{2, 3}
NPS 12 Line Pipe Replacement	323.9	11.91	API 5L Gr. X65 (CSA Z245.1 Gr. 448 Cat. II M35C) SMLS	Dual Layer Abrasion Resistant Fusion Bonded Epoxy (FBE) ³
NPS 12 Transition Pieces	323.9	11.91	API 5L Gr. X65 (CSA Z245.1 Gr. 448 Cat. II M35C) SMLS	Two Part Liquid Epoxy ³
NPS 12 Bends	323.9	11.91	API 5L Gr. X65 (CSA Z245.1 Gr. 448 Cat. II M35C) SMLS	Two Part Liquid Epoxy ³

Notes:

- 1) Refer to 110904556PL-CAL0002 for the CSA Combined Stress Calculations.
- 2) Coating to meet requirements from CSA Z662-19, CSA Z245.20-18, CSA Z245.30-18, GP 56-02-09 and GP 56-02-12. Refer to CSSP List (Document No. 110904556PM-LST0003).
1. Refer to 110904556AI-RPT0001 for the Coating Selection Report.

DESIGN PRESSURE (MOP)

9930 kPag (1440 psig)

DESIGN TEMPERATURE CONDITIONS:

- **Installation:** > -5°C
- **Pressure Test:** > 2°C
- **Start-Up:** > -5°C and < 28°C
- **Operation:** > 5°C and < 28°C
- **Maximum Allowable Temperature Differential:** 33°C

OPERATING TEMPERATURE:

- Ambient – UG piping

MINIMUM RESTRAIN TEMPERATURE:

- U/G Piping: -5°C

DESIGN FACTOR:

- 0.800 as per CSA Z662-19 Clause 4.3.6

CLASS LOCATION:

- Class 2 as per Class Location Study conducted by Stantec Geomatics (Document No.: 110904140AI-LST0006)

CLASS LOCATION FACTOR:

- 0.9 as per CSA Z662-19 Table 4.2 / Clause 4.3.7.4 for an uncased road crossing in a Class 2 location and for a pipeline with LVP service (high flammability). Note that this Location Factor agrees with TSSA Code Adoption Requirements.

JOINT FACTOR:

- 1.00 for SMLS pipe as per CSA Z662-19 Table 4.3

TEMPERATURE FACTOR:

- 1.00 for pipe operating temperature less than 120 °C as per CSA Z662-19 Table 4.4

TOUGHNESS REQUIREMENTS:

- Low Temperature Toughness Requirements for M35C as per ASME B31.3

FIELD TRANSITION PIECES - MANUFACTURING:

- Refer to the IFC drawing package, which meets CSA Z662-19 Clause 7.3.1.2 requirements
- Transition piece to be manufactured from NPS 12 CSA Z 245.1-18 Gr. 448 11.91 mm WT pipe
- Fracture toughness testing shall be conducted at -45 °C.
- The absorbed energy (based on full-size specimens) for each Charpy V-notch impact test shall be greater than or equal to 27 J.
- Pipe bend tolerances as per CSA Z245.11-17 Table 14.

WELDING SPECIFICATIONS:

- As per CSA Z662-19 Clause 7.0 and GP 59-01-12

WELDING CONSIDERATIONS:

- Construction Contractor to provide welding procedure specifications (WPS) for review and application review.
- WPS's should include potential for high carbon equivalent (CE > 0.40%) in the existing pipe. Imperial may use its WPS IOL-C01 and get a welder qualified to it.
- **Note 1:** Welding is anticipated for winter conditions (with Ambient Temperature < 0°C). Pipeline contractor to plan for welding shelters and pre-heating the pipe (e.g., using electric blankets or induction coils) prior to welding activities during construction. For such welding activities, the following considerations shall be followed:
 - Incomplete welds are not permitted (i.e., welds shall be completed, including the cap pass before interrupting the welding).
 - Completed welds and an area extending 50 mm on each side of the weld shall be re-heated to a temperature between 120°C minimum and 180°C maximum after the cap pass and shall be tightly wrapped with thermal blankets that are approved by the Company. Care shall be taken to ensure that no coating or pipe damage occurs because of the re-heating.
 - Thermal blankets shall not be removed until the temperature of the weld and surrounding 50 mm of pipe has reached a temperature of 50 °C or less.

NEW PIPE FBE/ARO COATING SPECIFICATIONS:

Plant applied ARO/FBE, liquid and tape coatings to meet the following code and standards.

- Canadian Standard CSA Z662-19 – Oil and Gas Pipeline Systems
- Canadian Standard CSA Z245.20-18 - Plant-applied external coatings for steel pipe
- Canadian Standard CSA Z245.30-14 – Field-applied External Coatings for Steel Pipeline Systems
- ExxonMobil Global Practice GP 56-02-09 - Fusion-Bonded Epoxy (FBE) Pipeline Coating

- ExxonMobil Global Practice GP 19-01-01 – Paint and Protective Coatings
- ExxonMobil Global Practice GP 56-02-12 – Liquid Field Joint Coating for Pipelines
- Imperial Oil PDM 03-08-19 Pipeline Coatings
- ExxonMobil External Protective Coatings – Coating System Descriptions and Accepted Coatings

NEW PIPE FBE/ARO COATING:

- U/G Coating: 32 mils Dual Layer-Fusion Bonded Epoxy (FBE) and Abrasion Resistant Overcoat (ARO)

Table D.1.3-3: FBE-ARO Coating System Thickness Criteria (GP 56-02-09 Table 10)

Minimum Average Thickness		Minimum Thickness		Maximum Thickness	
First Coat:	305 µm (12 mils)	First Coat:	255 µm (10 mils)	First Coat:	508 µm (20 mils) ¹
Second Coat:	510 µm (20 mils)	Second Coat:	405 µm (16 mils)	Second Coat:	762 µm (30 mils) ¹
Total:	815 µm (32 mils)	Total:	660 µm (26 mils)	Total:	1,270 µm (50 mils) ¹

Note 1: GP Deviation approved by IOL/EM on August 25, 2020

Table D.1.3-4: FBE-ARO Coating Approved Products (GP 56-02-09 Table 11)

First Coat	Second Coat
DuPont, Nap-Gard 7-2500 Series	DuPont, Nap-Gard Nap Rock 7-2610
Jotun, Corro-Coat EP-F 1000 Series	Jotun, Corro-Coat EP-F 3002
3M, Scotchkote 226N/6233 (6233 only up to 65 °C [150 °F])	3M Scotchkote 6352 ARO
Akzo Nobel Resicoat R726 Series	Akzo Nobel Resicoat R-641 Series

NEW PIPE LIQUID COATING (Field Welds Coating Repairs, Transition Pieces, and Bends):

- U/G Coating Field Welds and Repairs: Two-Part High-Built Liquid Epoxy (e.g., Canusa CPS HBE-DX BG or SPC SP-2888)
- U/G Coating Bends and Transition Pieces: Two-Part Liquid Epoxy (e.g., Denso Protal 7200)

Table D.1.3-5: Liquid Coating Recommended Product – Field Welds, Coating Repairs, Transition Pieces, and Bends

Product Name	Generic Coating Type	Upper Service Temperature Limit	Lower Application Temperature Limit (Steel Temperature)	Application
Denso Protal 7200	Two-Part Liquid Epoxy	85°C (185°F)	4°C (40°F)	Bends and Transition Pieces
SPC SP2888	Epoxy Polyurethane	80°C (176°F)	10°C (50°F)	Field Welds and Coating Repairs
Canusa HBE-DX	Two-Part (High-Built) Liquid Epoxy	95°C (203°F)	10°C (50°F)	
1. Refer to Manufacturer's recommendations for handling and application. 2. Refer to GP 56-02-12 for additional application requirements.				

FIELD WELDS COATING (TRANSITION PIECES, AND BENDS) AND COATING REPAIRS:

- Field Welds and Coating Repairs on Dual Layer FBE mill applied coated pipe: Two Part (High Build) Liquid Epoxy – Canusa CPS HBE-DX BG
- Liquid epoxy shop applied coated pipe (Transition Pieces and Bends): Two Part Liquid Epoxy – Denso Protal 7200

TRANSITION COATING (Dual Layer FBE/TWO-PART LIQUID EPOXY TO EXISTING COAL TAR):

- Visco-Elastic Tape: Two (2) layers Stopaq Coating System. Installation as recommended by the Manufacturer.
- For existing Coal Tar coating, use Stopaq 4100 Putty to smooth the transition and avoid coating tenting (when required). Refer to manufacturer's recommendation.
- **Note 1:** Coating application is anticipated for winter conditions (Ambient Temperature < 0°C). Pipeline contractor is to plan for preparing pipe and ambient temperature prior to coating application during construction.

Table D.1.3-6: Transition Coating – Coal Tar to Dual Layer FBE/Two-Part Liquid Epoxy

STOPAQ – VISCOELASTIC TAPE		
Tape Wrap	Outerwrap	Paste
Wrappingband CZH	Wrappingband PVC	4100 Putty (as required)
1. Refer to Manufacturer's recommendation for coating on existing bitumen coatings. 2. Applicable substrate: -30°C (-22°F) to 70°C (158°F). 3. Applicable Stopaq: 5°C (40°F) to 70°C (158°F).		

D.1.4 Pressure Testing

This section provides an overview of the hydrostatic pressure testing that consists of the strength test and leak test.

1. Conduct hydrotesting as specified in CSA Z662-19, GP 87-87-17, GP 59-01-18, and PDM 03-08-04.
2. Hydro-Test Medium: Fresh, clean water (per CSA Z662-19, Clause 8.8.2). Minimum water temperature of 2 °C.

Note 1: Pressure test is anticipated to be completed under cold winter conditions. Pipeline contractor is to plan for using a mixture of water and glycol/methanol to prevent the test medium from freezing.

PRESSURE TEST – AG SECTION PRIOR TO PIPE INSTALLATION:

3. **Strength Pressure Test:** Minimum Pressure of 12412.5 kPag (9930 kPag × 1.25) and Maximum Pressure of 12712.5 kPa, for four (4) hour duration for fully exposed new construction pipe, bends, and transition spools as per CSA Z662-19 Table 8.1 and Clause 8.7.5.2, and GP 87-87-17
4. **Leak Pressure Test:** Immediately following the strength hydro-test, the pressure shall be reduced, and a visual inspection shall be conducted for leak detection. Duration is as required to conduct a complete visual inspection to detect leaks. Minimum Pressure of 10923 kPag (9930 kPag × 1.10) as per CSA Z662-19 Clauses 8.2.5 and 8.7.1.2)

Note: Test Pressure does not exceed 100% Hoop Stress.

PRESSURE TEST – UG SECTION, BENDS AND TRANSITION PIECES:

5. **Strength Pressure Test:** Minimum strength test pressure at the test head of 12412.5 kPag (9930 kPag × 1.25) and a maximum pressure of 12712.5 kPa, for four (4) hours duration as per CSA Z662-19 Clause 8.7.5.1, and GP 87-87-17.
6. **Leak Pressure Test:** Immediately following the strength hydro-test, the pressure shall be reduced to a minimum leak test pressure of 10923 kPag (9930 kPag × 1.10) and maintained for four (4) hour-duration as per CSA Z662-19 Table 8.1 and GP 87-87-17.

D.1.5 Project Costs (Section Not Applicable)

1. Imperial Oil is a non-rate regulated entity, it is a private corporation, and the cost of the proposed Project will be borne by the Applicant.

D.1.6 Project Schedule

1. The construction of the project will occur over a period ranging from 4 to 6 months (planning, mobilization, execution, demobilization) through the Fall and Winter of 2022. Construction of the new pipeline is anticipated to take 60 to 90 days. Subject to receipt of all necessary permits and approvals, Imperial Oil anticipates a proposed line in-service date in late Q4 2022.
2. The project milestones are summarized in Table D.1.6-1, and the construction schedule is shown in Table D.1.6-2. The operation and maintenance phase is predicted to be from 2022 to 2072.

Table D.1.6-1: Project Milestones

Project Phase	Anticipated Timeline
ER and technical design	2021 to 2022
Expected LTC approval	Q3 2022
Receipt of permits and approvals	August 2022
Commence construction	September 2022
Completion of construction	December 2022
Complete hydrostatic testing	December 2022
Final inspection	December 2022
Line in-service	Q4 2022
Operation and Maintenance	2022 to 2072

Table D.1.6-2: Project Construction Schedule

Imperial Oil Pipeline Relocation Project Schedule	2022			
	September	October	November	December
Construction Phases				
Site Preparation and Clearing				
Grading and Stripping				
Trenching				
Pipe Fabrication				
Tie-in and Commissioning				
Backfilling				
Hydrostatic Testing				
Clean-Up and Restoration				

EXHIBIT E

LAND MATTERS

E.1.1 Summary of Land Matters

1. The new pipeline parallels the alignment of the existing pipeline, at approximately a 125 m offset. The new pipeline is approximately 2000 m in length and travels adjacent to Brock Road and Concession 4 West. The new pipeline requires a new easement.
2. The Project will be constructed using the open trench construction method. With the exception of 2 road crossings over Municipal right of way owned by the City of Hamilton, the Project work area is entirely located on property owned by Lafarge Except, including new easement and temporary work space. The temporary work space is illustrated on Figure E1.1-1.
3. Permanent easement is required from one landowner – Lafarge. An agreement is in place with Lafarge to discharge the easement that contains the existing pipeline, subsequently a new easement agreement between Lafarge and Imperial Oil will be required for the new pipeline.
4. Existing easements are in place with Imperial Oil and Lafarge on all three parcels for the existing pipeline. These easements will be released following decommissioning of the existing pipeline. Access and temporary workspace is required on a parcel owned by Lafarge. The temporary workspace and laydown area is 135m x 35m as illustrated on Figure E1.1-1. Imperial Oil has reached an agreement with Lafarge on temporary workspace requirements. No new landowners will be affected.
5. The Project is located within the City of Hamilton.
6. The land use designation for the impacted lands includes “Mineral Aggregate Resource Extraction Area” both north and south of Concession 4 West and two sections of land designated as “Rural” on the north side of Concession 4 West, which are owned by Lafarge. Both designations permit major oil and gas transmission pipelines.

Figure E.1.1-1: TWS and Laydown Location



Land Rights Required – 1 Landowner

7. The Project will require the use of new permanent easement. The estimated land requirements required for the Project are further detailed in Table E.1.1-1.

Table E.1.1-1: Estimated Land Requirements

Land Type	Approximate Area Required Hectares (acres)
Existing Easement (to be discharged)	2.7 ha (6.7 acres)
New Permanent Easement	3.0 ha (7.4 acres)
Temporary Workspace	0.5 ha (1.2 acres)

8. One new permanent easement will be required for the new pipeline, the new permanent easement is entirely on parcels owned by Lafarge. The new easement will be approximately 2000 m in length by 15 m in width.
9. One temporary workspace area will be required for construction of the Project. Imperial Oil has reached agreement with Lafarge on temporary workspace requirements. No new landowners will be affected.
10. Due to the new easement being adjacent to Concession 4 West and Brock Road, the new pipeline construction area will be accessed directly off of Concession 4 West and Brock Road.

E.1.2 NEGOTIATIONS TO DATE

Impacted landowners/tenants will be compensated for access and disturbance as per Imperial Oil's standard compensation procedure. Compensation is provided at pre-determined rates for temporary workspace required on or off of the pipeline easement. Applicable rates are determined using a percentage of current property values and crop values. Consideration is given for disturbance and property restoration.

Lafarge is the only landowner directly impacted by new easement and has agreed to the new easements.

Adjacent landowners, tenants and neighbours have been advised of the proposed Project and will be kept informed of progress as the work progresses.

E.1.3 LAND-RELATED PERMITS AND AGREEMENTS REQUIRED

1. Construction of the new pipeline segment will include crossing Concession 4 West at two locations, a collector road maintained by the City of Hamilton. A variety of municipal infrastructure occupies the road allowance of Concession 4 West (e.g., hydro lines, communication lines).

Table E.1.3-1: Permits and Agreements Required

Administering Agency	Permit/Approval Name
City of Hamilton Public Works 71 Main Street West, Hamilton, ON L8P 4Y5 Craig Murdoch – General Manager (Acting) Email: craig.murdoch@hamilton.ca	Road Crossing Agreement Road Occupancy Permit Utility crossing approval
Hydro One Networks Inc. / Infrastructure Ontario Facilities and Real Estate Services 185 Clegg Road, Markham, ON L6G 1B7 Robert Reynolds, Land Use Agent Telephone: 416 721-3772 Email: Robert.Reynolds@HydroOne.com	Permanent crossing approval Temporary equipment crossing approval
Bell Canada (*potential) 140 Bayfield Street, 2 nd Floor, Barrie, L4M 3B1 Charleyne Hall, <i>External Liaison – Right of Way</i> Telephone: 705 722-2264 Email: charleyne.hall@bell.ca	Permanent crossing approval Temporary equipment crossing approval
Telus Corporation (*potential) Engineering Operations & Implementations East 22 nd Floor, 25 York Street, Toronto, M5J 2V5 Frederic Sua, <i>Design Specialist II – Access Engineering</i> Telephone: 647 837-9112 Email: frederic.sua@telus.com	Permanent crossing approval Temporary equipment crossing approval

E.1.4 ATTACHMENT 1 – GRANT OF EASEMENT PIPELINE (ONTARIO) AGREEMENT

«Tract_No»

**GRANT OF EASEMENT
PIPELINE
(Ontario)**

This grant of easement agreement is dated as of «Date_of_Agreement».

BETWEEN:

«REGISTERED_OWNER_NAME_CORPORATE»

(“Transferor”)

- and -

IMPERIAL OIL LIMITED

(“Transferee”)

RECITALS:

- A. The Transferor is the registered and beneficial owner of an estate in fee simple subject, however, to such encumbrances, liens and interests as are at the date hereof set forth in the existing parcel register of those lands and premises legally described on Schedule A attached hereto (the “**Lands**”).
- B. The Transferor has agreed to grant an easement to the Transferee on and subject to the terms and conditions set forth in this agreement.

In consideration of the sum of One Dollar (\$1.00) paid by the Transferee to the Transferor, the receipt and sufficiency of which is hereby acknowledged by the Transferor, and of the mutual covenants and terms and conditions contained in this agreement, the parties therefore agree as follows:

Grant of Rights

1. (a) The Transferee shall pay to the Transferor the sum of _____ dollars (\$) (the “**Purchase Price**”), for the rights granted herein.
- (b) The Transferee hereby represents and warrants to the Transferor that:
- (i) Transferee shall be purchasing the Easement as principal for its own account and not as an agent, trustee or otherwise on behalf of another person;
 - (ii) that for the purposes of the federal goods and services tax/harmonized sales tax (“**HST**”) pursuant to the Excise Tax Act of Canada (the “**Act**”), the Transferee is a registrant under the Act and its registration number is

RT0001 and such registration is in good standing and has not been revoked; and

- (iii) the Transferee undertakes to self-assess and, if necessary, remit directly any HST in respect of this agreement to the appropriate governmental authorities pursuant to and in accordance with the provisions of the Act.

If the grant by the Transferor of the easement and rights to the Transferee herein is subject to HST, then such tax shall be in addition to the Purchase Price. Transferee shall indemnify and save harmless the Transferor from and against any and all HST, penalties, costs and/or interest which may become payable by or assessed against the Transferor as a result of any inaccuracy, misstatement or misrepresentation made by Transferee in connection with any matter raised in this Section.

2. Transferor does hereby grant, convey and transfer unto the Transferee in perpetuity:

- (a) The non-exclusive right, licence, liberty, privilege, easement and right-of-way on, over, upon, across, along, in, under and through that part of the Lands described in or as shown on Schedule B attached hereto (“**Easement**”), together with the right licence, privilege and easement of ingress and egress over that portion of the Lands abutting the Easement and any public highway, to and from the Easement, to sample soil, survey lands and to lay down, construct, operate, maintain, inspect, patrol (including aerial patrol), alter, remove, replace, reconstruct and repair one line of pipe together with all facilities, appurtenances or works of the Transferee useful in connection with or incidental to its undertaking, including, but without limiting the generality of the foregoing, all such pipes, drips, valves, fittings, connections, meters, markers, corrosion control equipment, cathodic protection equipment and other equipment and appurtenances, whether or not similar to the foregoing, as may be useful or convenient in connection therewith or incidental thereto for the carriage, transmission, conveyance, transportation and handling of oil, diluent, refined products, natural and artificial gas and other gaseous or liquid hydrocarbons and any product or by-product thereof (such line of pipe together with such related facilities or works being referred to, collectively, as “**Pipeline**”); and
- (b) the full and free right, licence, liberty, privilege and easement of ingress and egress at any and all times over, along, across and upon the Easement.

(the rights, licences, liberties, privileges, easements and Easement specifically described in subclauses (a) and (b) above, as hereafter supplemented, being referred to, collectively, as “**Easement Rights**”). The Easement Rights shall be subject at all times to the rules and regulations imposed by the *Aggregate Resources Act* (Ontario) or the Ministry of Natural Resources and Forestry, including any licences held by the Transferor, the applicable site plan, and any other rules and regulations in effect from time to time (the “**ARA Regulations**”).

3. The Easement Rights extend to the Transferee and its directors, officers, agents, employees, contractors, subcontractors and invitees. The Transferee may exercise the Easement Rights on foot and/or with vehicles, together with materials, machinery and equipment for all purposes useful or convenient in connection with or incidental to the

exercise and enjoyment of the Easement Rights as and from the date hereof upon the terms and subject to the conditions hereinafter set forth.

Above Ground Works and Access Easement

4. Provided that any of the following work is completed in connection with an emergency, on a temporary basis, and subject to the ARA Regulations, if applicable, the Transferee shall, at any time, have the right to locate any part or parts of the Pipeline above ground (in each case, “**Aboveground Works**”) and to fence and use such portions of the Easement as are, in its opinion, required for the Aboveground Works. Upon request of the Transferee in respect of each of the Aboveground Works, the Transferor hereby grants, conveys and transfers unto the Transferee, for itself, its directors, officers, agents, employees, contractors, subcontractors and invitees, a non-exclusive right, licence, liberty, privilege, easement and right-of-way to clear and to use a portion of the Lands, as may be reasonably required by the Transferee and for as long as may be reasonably required by the Transferee for convenient access on foot and/or with vehicles, together with materials, machinery and equipment, within and across the Lands to the Aboveground Works, provided that the same does not adversely impact the operations of the Transferor on its lands (“**Access Easement**”). The Transferee shall:
 - (a) consult with the Transferor as to the location of any Aboveground Works and any required Access Easement to minimize, so far as may be practicable, any inconvenience to the Transferor and compliance with the ARA Regulations, and to the extent practicable each such Access Easement shall encompass existing roads, trails and gates located within the Lands;
 - (b) furnish to the Transferor a drawing showing the location of any Aboveground Works and any required Access Easement, together with an estimated schedule for the completion and subsequent removal of the Aboveground Works, both of which shall be subject to the review and consent of Transferor, acting reasonably (it would be reasonable for the Transferor to withhold its consent if the Aboveground Works or Access easement adversely impacts the operations of the Transferor on its lands); and
 - (c) by separate agreement(s), pay compensation to the Transferor for the loss of use by the Transferor of such portions of the Easement fenced and used for the Aboveground Works and for any nuisance, noise, inconvenience and interference that might arise or be caused to the Transferor’s use of the Lands by the Aboveground Works and Access Easement.

Transferee’s Obligations

5. Subject to clause 7 of this agreement, the Transferee shall, as soon as weather and soil conditions permit and insofar as it is practicable to do so, bury those portions of the Pipeline that are designed to be underground so as not to unreasonably obstruct the natural surface runoff from the Easement or ordinary cultivation of the Easement.
6. In connection with the construction of the Pipeline, the Transferee shall, insofar as may be practicable to do so by employing good industry practices and in accordance with the

legislation and regulations in force at the time, separate and save excavated topsoil from the Easement and thereafter restore it thereon.

7. As soon as reasonably practicable after the construction of the Pipeline, the Transferee, unless otherwise agreed to by the Transferor, shall remove all construction debris from the Easement and in all respects restore the Easement to a condition similar to the surrounding environment and consistent with the current use of the Lands as far as is reasonable and practicable and in accordance with the legislation and regulations in force at the time of such restoration, save and except for: (a) items in respect of which compensation is due under clause 14; and (b) any soil rise above grade to allow for soil settling.
8. The Transferee's use of the Lands shall be restricted to uses in connection with the Pipeline unless the Transferor provides written consent to any proposed additional use at the time of the proposed additional use, which consent shall not be unreasonably or arbitrarily withheld.

Use of Easement by Transferor

9. The Transferor shall have the right to use and enjoy the Easement, including the right to cross the Easement with vehicles as necessary in connection with ordinary business practices of the Transferor, all in accordance with the provisions of the applicable legislation and any regulations, orders or guidelines made thereunder, including the installation, from time to time, of such pipes, conveyor belts, and tunnels, provided that none of the foregoing could compromise the integrity of the Pipeline. Notwithstanding the foregoing, the Transferor shall not, without the prior written consent of the Transferee, which shall not be unreasonably or arbitrarily withheld:
 - (a) excavate, construct, drill, install, erect or permit to be excavated, constructed, drilled, installed or erected on, over or under any part of the Easement any pipe, pit, well, foundation, building or other structure, installation or improvement, or do or permit to be done any mining, quarrying, land levelling, landscaping or other work or activity of any like or similar nature on, in or under the Easement;
 - (b) alter the grade of the Easement;
 - (c) add any paving or other material to the Easement;
 - (d) use the Easement for any other purpose which could compromise the integrity of the Pipeline; or
 - (e) take any action which restricts or limits the exercise by the Transferee of any of the Easement Rights, except as otherwise provided for herein, including pursuant to the ARA Regulations.
10. Subject to clause 9, where the Transferor notifies the Transferee in writing that the Transferor wishes to make a non-recurring improvement which can be practically made to the Lands, the Transferee agrees to reimburse the Transferor for the reasonable additional costs of making such improvement that are a direct result of the existence of the Pipeline. If the Transferee and the Transferor fail to agree within ninety (90) days of such a notification as to the practicality of making the proposed improvement or the amount by

which the cost of making such an improvement is increased as a direct result of the existence of the Pipeline, then the Transferor or the Transferee may proceed to negotiation or arbitration in accordance with the provisions of the *Ontario Energy Board Act, 1998* (the “Act”).

Ownership of Pipeline

11. Notwithstanding any rule of law or equity, the Pipeline shall, until surrendered, at all times remain the property of the Transferee notwithstanding that it may be annexed or affixed to the Lands.

Abandonment of Pipeline

12. The Transferee may, at any time, abandon the Pipeline by either leaving the Pipeline in place or removing it at the Transferee’s option subject to and in accordance with the legislation and regulations in force at the time of such abandonment. The Transferee agrees that upon abandonment or removal, the Transferee shall restore the said Lands to the same condition, so far as it is practicable to do so, as the same was in prior to the entry by the Transferee.

Damages

13. The Transferee shall compensate the Transferor for all damages suffered as a result of the operations, Pipelines or abandoned Pipelines of the Transferee including all damage done to any drainage system, crops, pasture, timber, trees, hedges, produce, water wells, artesian springs, livestock, buildings, fences, culverts, bridges, lanes, improvements or equipment on the Lands.

Indemnification

14. The Transferee shall indemnify the Transferor from all liabilities, damages, claims, suits and actions arising out of the operations, Pipelines or abandoned Pipelines of the Transferee other than any liabilities, damages, claims, suits or actions resulting from the negligence (save and except for any contributory negligence of the Transferee) or wilful misconduct of the Transferor.

Discharge of Encumbrances

15. If this agreement has been registered, then upon termination of this agreement the Transferee shall register in the appropriate Land Titles Office such documents as may be necessary to remove such registration from title to the Lands. If the Transferee fails to comply with its obligations in this Section 14, the Transferee hereby irrevocably appoints the Transferor as the attorney for the Transferee with full power and authority to execute and register in the name of the Transferee the instruments required to remove such registration from title as contemplated herein.

Quiet Enjoyment

16. The Transferee, in performing and observing the covenants and conditions on its part to be observed and performed herein, shall and may peaceably hold and enjoy all the rights granted to it hereunder without hindrance, molestation or interruption on the part of the Transferor or of any person claiming by, through, under or in trust for, the Transferor.

Binding Effect

17. If it appears that at the date this agreement is entered into, the Transferor is not the sole owner of the Lands, this agreement shall nevertheless bind the Transferor to the full extent of the Transferor's interest herein, and if the Transferor shall later acquire a greater or the entire interest in the Lands this agreement shall likewise extend to such after-acquired interest.

Representations and Warranties

18. The Transferor represents and warrants that it is the legal and beneficial owner in fee simple of the Lands, it has the legal right and authority to convey all of the rights granted hereunder free from all encumbrances [NTD: To be confirmed by Transferor upon confirmation of the location of the Easement], that it has done no act to encumber the Easement and the Easement Rights and that it has not granted any other rights to any third party, and the Transferor is not otherwise aware of any other rights, that would conflict with the rights granted hereunder. The Transferor will not grant an option, easement, lease or any other property rights related to the Lands to any other person that would interfere with the rights granted to the Transferee, save and except for any easements, rights-of-way, restrictions or any other property rights granted prior to the date hereof.
19. The Transferor represents that the Transferor is not a non-resident of Canada within the meaning of the *Income Tax Act* (Canada) and that if the Transferor's status for income tax purposes changes, the Transferor will promptly notify the Transferee in writing.

The Transferor represents and warrants to the Transferee that the Transferor is a corporation, but no portion of the Easement Land has been occupied by any officer, director or shareholder of the corporation or by any of their Spouses as a Matrimonial Home.

Notices

20. All notices or payments required or permitted to be given under or in connection with this agreement shall be in writing and shall be personally delivered, delivered by courier, mailed by registered mail, faxed or sent by electronic transmission to the party to whom the notice is to be given and, when mailed, any such notice shall be deemed to be given to, and received by, the addressee seven (7) days (Saturdays, Sundays and statutory holidays in the province of Ontario excluded) after the mailing thereof.
21. Unless changed by notice, the addresses of the parties shall be:

Transferor:

Lafarge Canada Inc.
6509 Airport Road
Mississauga, Ontario L4V 1S7

Fax No.: (905) 738-0224

Transferee:

Imperial Oil Limited
c/o Imperial Oil Resources Limited
Surface Land Manager
505 Quarry Park Blvd SE
Calgary, AB T2C 5N1

Fax No.: ●
Email: ●

General

22. If any provision of this agreement is invalid under any applicable statute or is declared invalid by a court of competent jurisdiction, then it shall be deemed to be severed from this agreement provided, however, that the remainder of this agreement shall continue in full force and effect.
23. This agreement may be assigned by the Transferee in whole or in part and as to all or any portion of the rights hereby granted, transferred and conveyed upon the prior written consent of the Transferor.
24. The Easement Rights and Access Easement are and shall be of the same force and effect to all intents and purposes as covenants running with the land and this agreement, including all the covenants herein, shall extend to, be binding upon and enure to the benefit of the heirs, executors, administrators, successors-in-title, successors and assigns of the parties respectively.
25. Wherever the singular or masculine is used, it shall be construed as if the plural or the feminine or the neuter, as the case may be, had been used, where the context of the party or parties so require, and this agreement shall be construed as if the grammatical and terminological changes thereby rendered necessary had been made.
26. The Transferor consents to the collection, use and disclosure of the Transferor's personal information as described within this agreement as long as the agreement is in force or as required by law. The Transferee collects, uses and discloses the personal information for land rights acquisition and regulatory disclosure as described in this agreement, as required by law. The Transferee collects, uses, discloses and maintains personal information in accordance with the *Personal Information Protection and Electronic Documents Act* and the Transferee's personal information policy.
27. The Transferor will, from time to time, execute such further assurances of the rights granted herein as may be required by the Transferee. Without limiting the foregoing, the Transferor hereby agrees from time to time to execute and deliver all such additional documents, instruments and agreements and to take all such additional steps and actions as may be reasonably required to fully implement the terms of this agreement and as may be required to register and perfect the Transferee's interest in the Lands.
28. This agreement and the schedules attached set forth the entire agreement and understanding between the parties as to the subject matter contained herein, and the Transferor agrees that there are no representations, warranties, agreements, terms or conditions affecting this agreement other than as contained herein.
29. The Easement Rights herein granted are declared, agreed and acknowledged to be appurtenant to and run with the Transferee's refinery located in the City of Sarnia, Ontario and the Transferee's refinery located in Nanticoke, Ontario, and the pipe line system, pumping stations, bulk plant terminals and other corporeal hereditaments serving such refinery and to each separately as well as collectively.
30. This agreement may be executed and delivered in counterparts and by facsimile or electronic (pdf) transmission and electronic signatures shall be deemed original signatures.

When all counterpart documents are executed and delivered, the counterparts shall be deemed to be an original, and shall constitute a single binding instrument. This Agreement shall not be binding upon either party until it has been executed and delivered by both parties.

31. This agreement shall be governed by and construed in accordance with the laws in force in the province of Ontario and the federal laws of Canada applicable therein.

[Signature Page Follows]

The parties are executing this agreement with effect on the date stated in the introductory clause.

TRANSFEROR:

LAFARGE CANADA INC.

Per: 

Print Name: David Redfern
Position Title: CEO, Eastern Canada

Per: _____

Print Name: _____
Position Title: _____
I/We have authority to bind the corporation

TRANSFeree:

IMPERIAL OIL LIMITED

Per: _____

Print Name: _____
Position Title: _____

Per: _____

Print Name: _____
Position Title: _____

I/We have authority to bind the corporation

E.1.5 Line List

Table E.1.5-1: Directly Affected Landowners

DIRECTLY AFFECTED LANDOWNERS					
PIN	LANDOWNER	MAILING ADDRESS	LEGAL DESCRIPTION	MUNICIPALITY	AGREEMENT TYPE
17549-0062	[REDACTED]	[REDACTED]	PT LT 7, CON 3 WEST FLAMBOROUGH, AS IN CD160929	CITY OF HAMILTON	EXISTING EASEMENT TO BE DISCHARGED, NEW EASEMENT REQUIRED
17549-0061	[REDACTED]	[REDACTED]	PT LT 7, CON 3 WEST FLAMBOROUGH, AS IN CD502305	CITY OF HAMILTON	EXISTING EASEMENT TO BE DISCHARGED, NEW EASEMENT REQUIRED
17549-0063	[REDACTED]	[REDACTED]	PT LT 7, CON 3 WEST FLAMBOROUGH, AS IN CD321814	CITY OF HAMILTON	EXISTING EASEMENT TO BE DISCHARGED, NEW EASEMENT REQUIRED
17549-0055	[REDACTED]	[REDACTED]	PT LT 7, CON 3 WEST FLAMBOROUGH, AS IN CD510408	CITY OF HAMILTON	EXISTING EASEMENT TO BE DISCHARGED, NEW EASEMENT REQUIRED
17545-0001	[REDACTED]	[REDACTED]	PT LT 7, CON 4 WEST FLAMBOROUGH, PART 1, 62R4595	CITY OF HAMILTON	EXISTING EASEMENT TO BE DISCHARGED, NEW EASEMENT REQUIRED
17545-0002	[REDACTED]	[REDACTED]	PT LT 7, CON 4 WEST FLAMBOROUGH, PART 2, 62R4595	CITY OF HAMILTON	EXISTING EASEMENT TO BE DISCHARGED, NEW EASEMENT REQUIRED
17545-0209	[REDACTED]	[REDACTED]	SEE GEOWAREHOUSE PIN INFORMATION	CITY OF HAMILTON	EXISTING EASEMENT TO BE DISCHARGED, NEW EASEMENT REQUIRED
17545-0003	[REDACTED]	[REDACTED]	PT LT 7, CON 4 WEST FLAMBOROUGH, AS IN CD348222	CITY OF HAMILTON	EXISTING EASEMENT TO BE DISCHARGED, NEW EASEMENT REQUIRED
17545-0004	[REDACTED]	[REDACTED]	PT LT 7, CON 4 WEST FLAMBOROUGH, PART 1, 62R12579	CITY OF HAMILTON	EXISTING EASEMENT TO BE DISCHARGED, NEW EASEMENT REQUIRED

DIRECTLY AFFECTED LANDOWNERS					
PIN	LANDOWNER	MAILING ADDRESS	LEGAL DESCRIPTION	MUNICIPALITY	AGREEMENT TYPE
17549-0078	[REDACTED]	[REDACTED]	PT LT 9, CON 3 WEST FLAMBOROUGH, AS IN CD342010;S/T CD342010; S/T WF17911	CITY OF HAMILTON	EXISTING EASEMENT TO BE DISCHARGED, NEW EASEMENT REQUIRED
17549-0096	[REDACTED]	[REDACTED]	PT LTS 9, 10 & 11, CON 3 WEST FLAMBOROUGH, PART 1, 2, 3, 62R1984, EXCEPT PTS 1-4 62R8073; S/T WF17913	CITY OF HAMILTON	EXISTING EASEMENT TO BE DISCHARGED, NEW EASEMENT REQUIRED
17545-0100	[REDACTED]	[REDACTED]	PT RDAL BTN LTS 3&4, CON 4 WFLAM, LYING E OF BROCK RD AND W OF MILLGROVE SIDE RD	CITY OF HAMILTON	EXISTING EASEMENT TO BE DISCHARGED, NEW EASEMENT REQUIRED

Table E.1.5-2: Adjacent Landowners

ADJACENT LANDOWNERS					
PIN	LANDOWNER	MAILING ADDRESS	LEGAL DESCRIPTION	MUNICIPALITY	AGREEMENT TYPE
17549-0053	[REDACTED]	[REDACTED]	PT LT 6, CON 3 WEST FLAMBOROUGH, AS IN CD499807; S/T WF17891	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17543-0129	[REDACTED]	[REDACTED]	PT LT 6 CON 4 WEST FLAMBOROUGH; BEING PT 1 ON 62R-12376	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17549-0056	[REDACTED]	[REDACTED]	PT LT7, CON 3 WEST FLAMBOROUGH, PART 1, 62R2997	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17549-0057	[REDACTED]	[REDACTED]	PT LT 7, CON 3 WEST FLAMBOROUGH, AS IN CD413852	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17549-0058	[REDACTED]	[REDACTED]	PT LT7, CON 3 WEST FLAMBOROUGH, AS IN AB351043	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17549-0059	[REDACTED]	[REDACTED]	PT LT 7, CON 3 WEST FLAMBOROUGH, AS IN VM44780; S/T WF17940	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17549-0060	[REDACTED]	[REDACTED]	PT LT 7, CON 3 WEST FLAMBOROUGH, AS IN VM201968	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17549-0076	[REDACTED]	[REDACTED]	PT LT 7, CON 3 WEST FLAMBOROUGH, AS IN CD211884	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER

ADJACENT LANDOWNERS					
PIN	LANDOWNER	MAILING ADDRESS	LEGAL DESCRIPTION	MUNICIPALITY	AGREEMENT TYPE
17549-0075			PT LT 8, CON 3 WEST FLAMBOROUGH, AS IN CD384017	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17549-0079			PT LT 9 CON 3 W FLAMBOROUGH AS IN WF9606	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17545-0034			PT LT 10, CON 4 WEST FLAMBOROUGH, PART 3, 62R6963	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17545-0007			PT LT 10, CON 4 WEST FLAMBOROUGH, PART 2, 62R6963	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17545-0011			PT LT 10, CON 4 WEST FLAMBOROUGH, AS IN CD36370	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17545-0174			PT LT 10, CON 4 WEST FLAMBOROUGH, AS IN CD186693 EXCEPT CD36370 & EXCEPT PART 1 ON 62R14056	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17545-0173			PT LT 10, CON 4 WEST FLAMBOROUGH, PART 1 ON 62R- 14056	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17549-0130			PT LT 11, CON 3 WEST FLAMBOROUGH DESIGNATED AS PART 1 ON 62R14395	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER

ADJACENT LANDOWNERS					
PIN	LANDOWNER	MAILING ADDRESS	LEGAL DESCRIPTION	MUNICIPALITY	AGREEMENT TYPE
17549-0129			PT LT 11, CON 3 WEST FLAMBOROUGH	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17549-0077			SEE GEOWAREHOUSE PIN INFORMATION	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17545-0192			PT LT 11 CON 4 W. FLAM BEING PART 1 ON 62R-15892	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER
17549-0054			SEE SERVICEONTARIO PROPERTY IDENTIFIER	CITY OF HAMILTON	NOTIFICATION - ADJACENT LANDOWNER

EXHIBIT F

INDIGENOUS CONSULTATION REPORT

F.1.1 Indigenous Consultation Summary

Introduction

1. This section will elaborate on Imperial Oil's approach to consultation activities with Indigenous communities for the Project.

Purpose of Indigenous Consultation

2. Indigenous consultation is required to support the LTC application as stipulated in:
 - a. Section 3.3 of the OEB Environmental Guidelines.
3. As noted in the ENDM (now MOE) response letter dated April 26, 2021, based on information Imperial Oil provided, ENDM was of the view that the Project would not result in any appreciable adverse impacts on the asserted or established rights of First Nations of Métis communities. ENDM further noted that based on currently available information that no duty to consult has been triggered and it is not necessary for ENDM to provide a letter of opinion regarding the sufficiency of consultation. ENDM recommended that Imperial Oil continue to maintain a record of its interactions with Indigenous communities about the Project it has engaged on an interests-basis. A copy of the response from ENDM is located in Exhibit F.1.3.
4. Imperial Oil's approach to consultation and the consultation activities undertaken to date are provided in Exhibit F of the Application.

Imperial Oil's Commitment to Indigenous Communities

5. Imperial Oil's goal is to collaborate with Indigenous communities on a common vision for progress, sustainable prosperity and environmental stewardship.
6. The commitments of Imperial Oil continue to support positive and progressive Indigenous relations, demonstrated through Imperial Oil's guiding principles:
 - a. Conduct business in a manner that respects the land, environment, rights and cultures of Indigenous communities, in accordance with the laws of Canada.
 - b. Engage Indigenous communities and their representatives in open and meaningful consultation.
 - c. Seek to understand Indigenous perspectives on issues of mutual interest and to deal constructively with differing views.
 - d. Strive to provide employment opportunities to our Indigenous neighbours.

- e. Foster the development of Indigenous businesses in ways that provide benefits to the company and to Indigenous communities.
- f. Expect Imperial Oil's contractors to conduct their business in a manner consistent with Imperial Oil's corporate principles, policies and guidelines.

Identification of Indigenous Communities

- 7. The Indigenous communities were identified through both Imperial Oil and Stantec Consulting Ltd.'s ("Stantec") experience on past projects in the area.
- 8. The Indigenous communities identified included:
 - a. The Mississaugas of the Credit First Nation (MCFN):
 - b. Six Nations of the Grand River (SNGR):
 - c. Haudenosaunee Confederacy Chiefs Council ("HCCC"), copying the Haudenosaunee Development Institute ("HDI") on all correspondence

Consultation Activities

- 9. The consultation program allowed Indigenous communities to provide input for the Project. Throughout consultation, Imperial Oil has been clear that it will work to ensure feedback, comments, and concerns can be raised by the communities at any time for consideration and response by Imperial Oil and that the process is not dependant on the OEB's defined regulatory consultation process.
- 10. This section of the LTC consists of records representing the Project information shared and comments received during the pre-application filing period.
- 11. Exhibit F.1.2 contains a summary of Imperial Oil's Indigenous consultation activities for the Project. Appendix 2 contains the records and associated supporting documentation related to Indigenous consultation.

F.1.2 Indigenous Correspondence Summary Table

Record	Date	Community	Correspondent	Method of Communication	Subject Matter	Comment
1	February 26, 2021	Ministry of Energy, Northern Development and Mines (ENDM)	Mariell Lenuik Imperial Oil	Email	Project Description and Duty to Consult	Imperial Oil provided Project Description and Duty to Consult request.
2	April 26, 2021	ENDM	Dan Delaquis	Email	Project Description and Duty to Consult	ENDM responded to the Imperial Oil Project Description and Duty to Consult and noted that based on the information provided by Imperial Oil, the view of the Ministry is that no duty to consult has been triggered by the proposed Project.
3	July 12, 2021	Haudenosaunee Confederacy Chiefs Council (HCCC)	Kelly Williams Imperial Oil	Email	Notice of Commencement	Imperial Oil introduced the Project, provided information on the Environmental Study process, and invited the HCCC to provide comments and feedback regarding the Project.
4	July 12, 2021	Six Nations of the Grand River (SNGR)	Kelly Williams Imperial Oil	Email	Notice of Commencement	Imperial Oil introduced the Project, provided information on the Environmental Study process, and invited the SNGR to provide comments and feedback regarding the Project.

Record	Date	Community	Correspondent	Method of Communication	Subject Matter	Comment
5	July 12, 2021	Mississaugas of the Credit First Nation (MCFN)	Kelly Williams Imperial Oil	Email	Notice of Commencement	Imperial Oil introduced the Project, provided information on the Environmental Study process, and invited the MCFN to provide comments and feedback regarding the Project.
6	October 21, 2021	Haudenosaunee Confederacy Chiefs Council (HCCC)	Kelly Williams	Email	Notice of Project Update	Imperial Oil provided a project update including new project team contact information
7	October 21, 2021	Six Nations of the Grand River (SNGR)	Imperial Oil	Email	Notice of Project Update	Imperial Oil provided a project update including new project team contact information
8	October 21, 2021	Mississaugas of the Credit First Nation (MCFN)	Kelly Williams	Email	Notice of Project Update	Imperial Oil provided a project update including new project team contact information
9	April 13, 2022	Haudenosaunee Confederacy Chiefs Council (HCCC)	Emily Hartwig Stantec	Email	Environmental Report	Stantec sent notice of the completed Environmental Study and provided a link to the report on the Stantec SharePoint.
10	April 13, 2022	Six Nations of the Grand River (SNGR)	Emily Hartwig Stantec	Email	Environmental Report	Stantec sent notice of the completed Environmental Study and provided a link to the report on the Stantec SharePoint.
11	April 13, 2022	Mississaugas of the Credit First Nation (MCFN)	Emily Hartwig Stantec	Email	Environmental Report	Stantec sent notice of the completed Environmental Study and provided a link to the report on the Stantec SharePoint.

EXHIBIT G

RECORD OF CONSULTATION

G.1.1 Consultation Summary

1. Notice of Study Commencement letters were sent via email by Stantec to all parties identified on the OPCC and Agency Contact List on June 28, 2021, and by Imperial Oil via email to all parties identified on the Indigenous Contact List on July 12, 2021. The Notice of Study Commencement provided information on the Project, the proposed pipeline route, and requested any available additional information. Letters were mailed to landowners and residents within approximately 500 m of the proposed pipeline route via Canada Post regular mail on June 30, 2021.
2. A Notice of Study Commencement was published on July 1, 2021, in the Flamborough Review. The Notice introduced and described the Project, provided a map, and listed Project contact information.
3. Project update letters were mailed via Canada Post regular mail to landowners and residents within approximately 500 m of the Study Area on October 14, 2021. The Notice of Project Update was also published in the October 21, 2021, edition of the Flamborough Review. Appended to the letters was a map of the Study Area.
4. An email indicating the release of the ER for review was sent to the OPCC on January 12, 2022. The email provided a link to the ER on a Stantec SharePoint site.
5. An email indicating the release of the ER for review was sent to the agencies, municipalities and other stakeholders on the Project Contact List on April 5, 2022. The email provided a link to the ER on a Stantec SharePoint site.
6. An email indicating the release of the ER for review was sent to Indigenous communities on the Project Contact List on April 13, 2022. The email provided a link to the ER on a Stantec SharePoint site.
7. Imperial Oil is committed to sharing Project updates as they become available.

G.1.2 Ontario Energy Board Correspondence Summary Table

Table G.1.2-1: Summary of Correspondence with the Ontario Energy Board (OPCC)

Record	Correspondent	Type	Date	Subject Matter
1	All contacts on the Ontario Pipeline Coordinating Committee (OPCC) contact list.	Email	June 28, 2021	Stantec sent the Notice of Study Commencement via email, which included a copy of the Notice of Study Commencement newspaper notice.
2	Kourosh Manouchehri Technical Standards & Safety Authority (TSSA)	Email	September 30, 2021	The TSSA provided a link to the Application for Review of Pipeline Project, which must be completed and submitted for the TSSA to review the Project as part of the OPCC.
3	All contacts on the OPCC contact list	Email	October 21, 2021	Stantec sent the Notice of Project Update letter via email which included a map of the Study Area.
4	Kourosh Manouchehri TSSA)	Email	October 21, 2021	The TSSA thanked Stantec for the Project update and noted that an application needs to be filled and submitted for the review of the Project by TSSA as part of the Ontario Pipeline Coordinating Committee.
5	All contacts on the Ontario Pipeline Coordinating Committee (OPCC) contact list.	Email	January 12, 2022	Stantec sent a link to the Environmental Report to all contacts on the OPCC contact list.
6	Kourosh Manouchehri Technical Standards & Safety Authority (TSSA)	Email	January 12, 2022	The TSSA thanked Stantec for the Project update and noted that an application needs to be filled and submitted for the review of the Project by TSSA as part of the Ontario Pipeline Coordinating Committee.
7	Sally Renwick Ministry of Environment, Conservation and Parks (MECP)	Email	January 12, 2022	The MECP responded and noted that the information was forwarded to Keith Johnston (the Natural Resources and Forestry contact for OPCC).

Record	Correspondent	Type	Date	Subject Matter
8	Laura Hatcher Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	Email	February 23, 2022	<p>The MHSTCI provided comments on the Environmental Report:</p> <ul style="list-style-type: none"> • At a minimum a Stage 1 AA should be prepared during the project planning phase and the findings should be incorporated into the Environmental Report. • Reminder to submit the Stage 1 AA to MHSTCI for inclusion in the Ontario Public Register of Archaeological Reports to be considered finalized • MHSTCI recommends that the Cultural Heritage Report is prepared now so that it can inform the Environmental Report and make preliminary recommendations for the conservation of known and potential cultural heritage resources.
9	Emily Hartwig Stantec	Email	March 1, 2022	<p>Stantec thanked MHSTCI for their comments on the ER and noted that:</p> <ul style="list-style-type: none"> • The Stage 1 AA is expected to be submitted during the week of February 28 to March 4. • The ER will be updated to include the detailed recommendations of the Stage 1 AA. • The Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment (CHECPA) will be completed prior to construction, and all reports and findings will be submitted to MHSTCI for review.
10	Emily Hartwig Stantec	Email	March 1, 2022	<p>Stantec sent an email to the OPCC chair, Zora Crnojacki, to note that the 42-day comment period ended on February 23, 2022, and that one comment has been received as of March 1, 2022 (from MHSTCI).</p>
11	Zora Crnojacki Ontario Energy Board	Email	March 1, 2022	<p>The OPCC chair thanked Stantec.</p>

Record	Correspondent	Type	Date	Subject Matter
12	Laura Hatcher MHSTCI	Email	April 6, 2022	<p>MHSTCI replied to the email sent by Stantec on March 1, 2022 and noted that the Stage 1 AA was submitted on March 15, 2022 and is currently under review.</p> <p>MHSTCI advised that they recommend the CHECPIA be completed during Environmental Reporting so that it can inform the report.</p>

G.1.3 Federal and Provincial Ministries, Conservation Authority and Municipal Correspondence Summary Table

Record	Correspondent	Type	Date	Subject Matter
1	All contacts on the Agency (elected officials, federal agencies, provincial agencies, conversation authorities) Municipal and Stakeholder contact lists.	Email	June 28, 2021	Stantec sent the Notice of Study Commencement via email, which included a copy of the Notice of Study Commencement newspaper notice.
2	Paulena Yousif Constituency Assistant Office of the Mayor City of Hamilton	Email	June 29, 2021	The office of the mayor thanked Stantec for providing the Notice of Study Commencement.
3	Joan Del Villar Cuicas Regional Environmental Planner Ministry of Environment, Conservation and Parks (MECP)	Email	June 29, 2021	The MECP replied to the Notice of Study Commencement noting the notification procedure for providing Class EA notices to the ministry as of May 1, 2018, and provided instructions to submit the Notice to the appropriate MECP regional email address.
4	Cassandra Connolly Regulations Officer Conservation Halton (CH)	Email	June 30, 2021	CH responded noting that according to CH approximate regulation limit mapping, the Study Area appears to be within the jurisdiction of the Hamilton Conservation Authority.
5	Mike Stone Manager – Watershed Planning Services Hamilton Conservation Authority (HCA)	Email	July 7, 2021	HCA noted they would like to receive updates and new information as the study progresses, noting interest in general is related to natural heritage features such as wetlands and watercourses and any potential impacts to such features as a result of the project. HCA noted that a future permit may be required for Project construction depending on the determined pipeline alignment.

Record	Correspondent	Type	Date	Subject Matter
6	Karina Cerniavskaja District Planner Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNRF)	Email	July 8, 2021	MNDMNRF noted they received the Notice of Study Commencement. The MNDMNRF noted that the following should be reviewed to determine applicability to the project: Natural Heritage and Endangered Species Act, Petroleum Wells & Oil, Gas and Salt Resources Act, Public Lands Act & Lakes and Rivers Improvement Act. The MNDMNRF also provided a PDF version of the Natural Heritage Guide document.
7	Kim Valentine Administrative Clerk, Ontario Region Impact Assessment Agency of Canada (IAAC)	Email	July 19, 2021	The IAAC provided a letter via email that based on the information provided in the Notice of Study Commencement, it is the agency's view that the Project is not a designated project, and as a result an Initial Project Description is not required.
8	Christine Vernem Legislative Secretary (on behalf of Janet Pilon, Deputy Clerk) City of Hamilton	Email	July 19, 2021	The City of Hamilton noted that the Notice of Study Commencement was referred to the General Manager of Public Works for appropriate action.

Record	Correspondent	Type	Date	Subject Matter
9	Joseph Harvey (on behalf of Laura Hatcher) Heritage Planner Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	Email	July 28, 2021	The MHSTCI responded to the Notice of Study Commencement and provided the following information: <ul style="list-style-type: none"> • While some cultural heritage resources may have been already formally identified, others may be identified through assessment • A combined Staged 1-2 Archaeological Assessment (AA) is recommended for the Study Area during the planning phase; at a minimum a Stage 1 AA should be undertaken for the entire Study Area. • A Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment (CHECPIA) will be undertaken by a qualified person. • The Environmental Report must include specific information from the AA report(s) and the CHECPIA.
10	All contacts on the Agency (elected officials, federal agencies, provincial agencies, conversation authorities) Municipal and Stakeholder contact lists.	Email	October 21, 2021	Stantec sent the Notice of Project Update letter via email which included a map of the Study Area.
11	Cassandra Connolly Regulations Officer Conservation Halton (CH)	Email	October 21, 2021	CH responded noting that while there may be a small portion of the Project within the CH watershed, the works would be located outside of lands considered to be regulated by Conservation Halton. Therefore, CH has no comments on the Project and defers to the Hamilton Conservation Authority.
12	Sean Earles GIS Specialist Stantec	Email	November 12, 2021	Stantec sent HCA a request to obtain regulation data for use in the Environmental Report.
13	Richard Woodworth GIS Specialist Hamilton Conservation Authority	Email	November 16, 2021	HCA responded noting that the dataset and sharing agreement will be sent to Stantec.

Record	Correspondent	Type	Date	Subject Matter
14	Richard Woodworth GIS Specialist Hamilton Conservation Authority	Email	November 19, 2021	HCA sent the dataset and agreement.
15	All contacts on the Agency (elected officials, federal agencies, provincial agencies, conversation authorities) Municipal and Stakeholder contact lists.	Email	April 5, 2022	Stantec sent notice of the completed Environmental Study to all contacts on the agency, municipal and stakeholder contact lists, and provided a link to the report on the Stantec SharePoint.

APPENDIX 1: ENVIRONMENTAL REPORT

APPENDIX 1: ENVIRONMENTAL REPORT



**Imperial Oil Limited Pipeline
Relocation Project:
Environmental Report**

FINAL REPORT

Prepared for:
Imperial Oil Limited
505 Quarry Park Boulevard
Calgary, AB T2C 5N1

Prepared by:
Stantec Consulting Ltd.
100-300 Hagey Boulevard
Waterloo ON N2L 0A4

File: 110904260
January 6, 2022

Sign-off Sheet

This document entitled Imperial Oil Limited Pipeline Relocation Project: Environmental Report was prepared by ("Stantec") for the account of Imperial Oil Limited (the "Client"). The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by Emily Hartwig
(signature)

Emily Hartwig, B.Sc., EP
Environmental Scientist

Reviewed by Mark Knight
(signature)

Mark Knight, MA, RPP, MCIP
Team Leader – Assessment and Permitting

Reviewed by Rooly Georgopoulos
(signature)

Rooly Georgopoulos, B.Sc.
Principal – Environmental Services



Table of Contents

1.0	INTRODUCTION	1.1
1.1	PROJECT DESCRIPTION	1.1
1.2	ENVIRONMENTAL STUDY.....	1.1
1.2.1	Objectives	1.1
1.2.2	Process	1.2
1.2.3	The Environmental Report.....	1.3
1.2.4	The OEB Regulatory Process	1.3
1.2.5	Additional Environmental Regulatory Processes	1.4
2.0	CONSULTATION PROGRAM	2.1
2.1	OBJECTIVES.....	2.1
2.2	IDENTIFYING INTERESTED AND POTENTIALLY AFFECTED PARTIES	2.1
2.3	COMMUNICATION METHODS	2.2
2.3.1	Newspaper Notices.....	2.2
2.3.2	Letters and Emails	2.2
2.3.3	Project Email.....	2.3
2.4	INPUT RECEIVED.....	2.3
2.4.1	Public Input	2.3
2.4.2	Agency Input	2.3
2.4.3	Municipal Input.....	2.3
2.4.4	Indigenous Input	2.4
2.4.5	Interest Group Input.....	2.4
2.5	REFINEMENTS BASED ON INPUT	2.4
3.0	IMPACT IDENTIFICATION, ASSESSMENT AND MITIGATION	3.1
3.1	METHODOLOGY.....	3.1
3.1.1	Construction	3.2
3.1.2	Operation and Maintenance	3.3
3.2	PHYSICAL FEATURES.....	3.3
3.2.1	Bedrock Geology and Drift Thickness	3.3
3.2.2	Physiography and Surficial Geology	3.5
3.2.3	Hydrogeology.....	3.6
3.2.4	Extractive Resources: Aggregates and Petroleum Resources.....	3.9
3.2.5	Soil and Soil Capability	3.10
3.2.6	Agricultural Tile Drains.....	3.13
3.2.7	Natural Hazards	3.14
3.3	BIOPHYSICAL FEATURES.....	3.15
3.3.1	Aquatic Features.....	3.15
3.3.2	Designated Natural Areas and Vegetation	3.17
3.3.3	Wildlife, Wildlife Habitat and Species at Risk.....	3.19
3.4	SOCIO-ECONOMIC ENVIRONMENT	3.26
3.4.1	Employment and Business	3.26
3.4.2	Community Services & Infrastructure.....	3.28
3.4.3	Culture, Tourism and Recreational Facilities	3.31
3.4.4	Infrastructure	3.32



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

3.4.5	Air Quality and Noise	3.34
3.4.6	Waste Management and Landfills	3.35
3.4.7	Land Use	3.36
3.4.8	Archaeological Resources	3.36
3.4.9	Cultural Heritage Resources	3.37
3.4.10	Indigenous Interests.....	3.39
3.5	SUMMARY OF RECOMMENDATIONS.....	3.39
4.0	ROUTING.....	4.1
4.1	THE PROCESS	4.1
4.2	ROUTING PARAMETERS	4.1
4.2.1	Study Area	4.1
4.2.2	Routing Objectives.....	4.1
4.2.3	Environmental and Socio-Economic Opportunities and Constraints	4.2
4.3	IDENTIFY PREFERRED ROUTE	4.2
4.4	CONFIRMATION OF THE PREFERRED ROUTE	4.3
5.0	CUMULATIVE EFFECTS ASSESSMENT	5.1
5.1	METHODOLOGY.....	5.1
5.2	STUDY BOUNDARIES.....	5.2
5.3	PROJECT INCLUSION LIST.....	5.2
5.4	ANALYSIS OF CUMULATIVE EFFECTS	5.3
5.4.1	Construction – Spring and Summer 2022	5.3
5.4.2	Operation and Maintenance – Year 2024	5.5
5.5	SUMMARY OF CUMULATIVE EFFECTS	5.5
6.0	MONITORING AND CONTINGENCY PLANS	6.1
6.1	MONITORING.....	6.1
6.1.1	Exposed Soils	6.1
6.1.2	Water Wells.....	6.2
6.1.3	Vegetation	6.2
6.1.4	Species at Risk	6.2
6.1.5	Cultural Heritage Resources	6.2
6.1.6	Residents and Business	6.2
6.2	CONTINGENCY	6.3
6.2.1	Accidental Spills.....	6.3
6.2.2	Unexpected Finds: Archaeological or Heritage Resources and Unknown Contaminated Soils	6.3
7.0	CONCLUSION.....	7.1
8.0	REFERENCES	8.1



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

LIST OF TABLES

Table 1.1:	Summary of Potential Environmental Permits/Regulatory Requirements	1.5
Table 3.1:	Soil Types and Soil Capability along Proposed Pipeline Route and Alternative Pipeline Route	3.11
Table 3.2:	Potential Terrestrial Species of Conservation Concern Within the Proposed Pipeline Replacement	3.21
Table 3.3:	Potential Terrestrial Species at Risk (Threatened or Endangered) within Proximity of the Proposed Replacement	3.23
Table 3.4:	Labour Characteristics, Ontario and Flamborough-Glanbrook, 2016	3.26
Table 3.5:	Median Income, Ontario and Flamborough-Glanbrook, 2015.....	3.27
Table 3.6:	Population Ontario and Flamborough-Glanbrook 2016.....	3.28
Table 3.7:	Screening for Known (or recognized) Cultural Heritage Value According to MHSTCI Checklist	3.38
Table 3.8:	Summary of Potential Impacts and Recommended Mitigation and Protective Measures	3.40
Table 5.1:	Project Inclusion List for Cumulative Effects	5.3

LIST OF APPENDICES

APPENDIX A: ROUTE FIGURES

- Figure 1: Study Area
- Figure 2: Alternative Pipeline Route
- Figure 3: Preferred Route

APPENDIX B: CONSULTATION

- Appendix B1: Project Summary and Contact List
- Appendix B2: Newspaper Notice
- Appendix B3: Letters
- Appendix B4: Project Correspondence

APPENDIX C: EXISTING CONDITIONS FIGURES

- Figure 1: Bedrock Geology
- Figure 2: Drift Thickness
- Figure 3: Physiography
- Figure 4: Surficial Geology
- Figure 5: Groundwater Conditions
- Figure 6: Aggregates and Petroleum Resources
- Figure 7: Soil Type
- Figure 8: Soil Capability
- Figure 9: Agricultural Tile Drainage
- Figure 10: Floodplain and Regulation Limit
- Figure 11: Potential Watercourse Crossings
- Figure 12: Designated Natural Heritage Features

APPENDIX D: WILDLIFE HABITAT ASSESSMENT

APPENDIX E: STAGE 1 ARCHAEOLOGICAL ASSESSMENT

APPENDIX F: CULTURAL HERITAGE CHECKLIST

APPENDIX G: ENVIRONMENTAL ALIGNMENT SHEETS



Executive Summary

Lafarge Canada Inc. (Lafarge Canada) will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated. The intent is to relocate the pipeline along Concession 4 West primarily within a private easement on lands owned by Lafarge Canada, with the rest being located within the municipal road Right-of-Way, including two road crossings of Concession 4 West. A proposed replacement pipeline route and alternative pipeline route have been selected, and the length of the pipeline will be approximately 2 km. Construction of the replacement pipeline is planned to begin as early as spring 2022 and be completed by the end of 2022.

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) *"Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)"*. It is anticipated that the Environmental Report for the study will be completed by late fall / early winter 2021, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. It is anticipated that the Environmental Report will be available for public viewing by spring 2022.

For the remainder of this report, the construction and operation of the proposed pipeline is referred to as 'the Project'.

A route evaluation was undertaken to identify and confirm an environmentally acceptable preferred route. The preferred route is currently illustrated within a general location. Imperial Oil will undertake detailed design to determine the exact location of the running line, permanent easement, temporary land use requirements and road/watercourse crossings. Detailed design will also be influenced by supplemental studies (including environmental studies) and site-specific requests from landowners and agencies. In general, this micro-siting exercise will seek to avoid sensitive natural and socio-economic features to the extent practicable.

A consultation program was conducted for the Project to engage with landowners, municipalities, agencies, Indigenous communities, and other interested parties. The consultation program included notices in a local newspaper and letters. Imperial Oil and Stantec have also been in direct contact with agency and municipal staff. Imperial Oil has committed to on-going consultation with directly affected and interested parties throughout the detailed design and construction phases and will continue to respond to concerns through the life of the Project.

The potential effects and impacts of the Project on physical, biophysical and socio-economic features have been assessed. In the opinion of Stantec, the recommended program of supplemental studies, mitigation and protective measures are considered sufficient to protect the features encountered.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Where appropriate, post construction monitoring will be conducted to assess whether mitigation and protective measures were effective in both the short and long term.

The potential cumulative effects of the Project were assessed by considering development that has a high probability of proceeding just prior to or concurrent with construction and operation of the Project. The cumulative effects assessment determined that, provided the mitigation and protective measures outlined in this report are implemented and assuming that concurrent Projects implement similar mitigation and protective measures, potential cumulative effects are not anticipated to be significant.

With the implementation of the recommendations in this report, on-going communication and consultation, and adherence to permit, regulatory and legislative requirements, potential adverse residual environmental and socio-economic impacts of the Project are not anticipated to be significant.



Abbreviations

AA	Archaeological Assessment
ANSI	Area of Natural and Scientific Interest
ARA	Aggregate Resources Act
BGS	Below ground surface
CA	Conservation Authority
CEA	Cumulative Effects Assessment
CH	Conservation Halton
CHAR	Cultural Heritage Assessment Report
CLI	Canada Land Inventory for Agriculture
COSSARO	Committee on the Status of Species at Risk in Ontario
DFO	Fisheries and Oceans Canada
EASR	Environmental Activity and Sector Registry
ECCC	Environment and Climate Change Canada
END	Endangered
ENDM	Ministry of Energy, Northern Development and Mines
ER	Environmental Report
ESA	<i>Endangered Species Act</i>
ESC	Erosion and Sediment Control
GIS	Geographic Information System
HADD	Harmful Alteration Disruption and Destruction
HCA	Hamilton Conservation Authority
IPZ	Intake Protection Zone
LIO	Land Information Ontario



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

MBCA	<i>Migratory Birds Convention Act</i>
MECP	Ministry of Environment, Conservation and Parks
MNR	Ministry of Natural Resources
MNRF	Ministry of Natural Resources and Forestry
MHSTCI	Ministry of Heritage, Sport, Tourism and Culture Industries
MTO	Ministry of Transportation
NDMNRF	Ministry of North Development Mining Natural Resources and Forestry
NHIC	Natural Heritage Information Centre
OBBA	Ontario Breeding Bird Atlas
OEB	Ontario Energy Board
OGS	Ontario Geological Survey
OHA	<i>Ontario Heritage Act</i>
OMAFRA	Ontario Ministry of Agriculture, Food and Rural Affairs
OPCC	Ontario Pipeline Coordinating Committee
O. Reg.	Ontario Regulation
ORAA	Ontario Reptile and Amphibian Atlas
OWES	Ontario Wetland Evaluation System
PTTW	Permit to Take Water
PSW	Provincially Significant Wetland
RoW	Right-of-way
SAR	Species at Risk
SARA	<i>Species at Risk Act</i>
SC	Special Concern
SGRA	Significant Groundwater Recharge Area
Stantec	Stantec Consulting Ltd.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Imperial Oil	Imperial Oil Limited
SWH	Significant Wildlife Habitat
THR	Threatened
WHPA	Wellhead Protection Area
WWR	Water Well Record(s)



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Introduction
January 6, 2022

1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and therefore the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated. The intent is to relocate the pipeline along Concession 4 West primarily within a private easement on lands owned by Lafarge Canada, with the rest of the relocation being located within the municipal road Right-of-Way, including two road crossings of Concession 4 West. A proposed replacement pipeline route and alternative pipeline route have been selected, and the length of the pipeline will be approximately 2 km.

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*". It is anticipated that the Environmental Report (ER) for the study will be completed by late fall / early winter 2021, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. If approved, construction is currently anticipated to begin in spring 2022.

For the remainder of this report, the construction and operation of the proposed pipeline is referred to as 'the Project'.

1.2 ENVIRONMENTAL STUDY

1.2.1 Objectives

A multidisciplinary team of environmental planners and scientists from Stantec conducted the Environmental Study. Imperial Oil provided environmental support and engineering expertise throughout the study.

The Environmental Study was completed in accordance with the OEB Environmental Guidelines, as well as relevant provincial and federal environmental guidelines and regulations.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Introduction

January 6, 2022

The principal objective of the Environmental Study was to outline various environmental mitigation and protection measures for the construction and operation of the Project while meeting the intent of the OEB Environmental Guidelines. To meet this objective, the Environmental Study was prepared to:

- Identify a preferred route that reduces potential environmental impacts
- Complete a detailed review of environmental features along the preferred route and assess the potential environmental impacts of the Project on these features
- Establish mitigation and protective measures that may be used to reduce or eliminate potential environmental impacts of the Project
- Develop a consultation program to receive input from interested and potentially affected parties
- Identify any necessary supplemental studies, monitoring and contingency plans

1.2.2 Process

The Environmental Study was divided into three main phases:

Phase I: Identification of a Project Study Area, Proposed Pipeline Route and Alternative Pipeline Route

The initial phase of the Environmental Study began by defining the Project Study Area (Figure 1, Appendix A), the development of routing parameters, and generating routing objectives. Routing was based on the location of the existing section of pipeline and the tie-in points where the replacement will connect to the existing system. Environmental and socio-economic constraints and opportunities were evaluated through a review of available literature, mapping and digital data, as well as engineering factors and constructability. Imperial Oil determined a proposed pipeline route and an alternative pipeline route based on these criteria (Figure 2, Appendix A).

Phase II: Gather Information and Consultation

Phase II of the Environmental Study process was to gather relevant environmental and socio-economic background data relevant to the Study Area. Specific information requests were made to several agencies and stakeholders to assist with identifying environmental features, constraints, the potential for presence of Species at Risk (SAR) and their habitat. This data was used to develop mitigation and protective measures based on predicted effects and potential impacts. The gathering of information continued throughout the Project.

Feedback on the proposed Project was sought through newspaper notices and letters to agencies, municipal representatives, Indigenous communities, landowners, and other stakeholders.

Phase III: Confirmation of the Route; Environmental Report

Based on feedback received during the consultation program (Section 2) and the evaluation of the alternative, the proposed pipeline route was confirmed as the preferred route and Phase III concluded with the preparation of this ER as well as Environmental Alignment Sheets to identify where site-specific mitigation and protective measures are recommended along the preferred route (see Appendix G).



1.2.3 The Environmental Report

The Environmental Study has relied on technically sound and consistently applied procedures that are replicable and transparent. As mentioned above, the study was also undertaken in accordance with the OEB Environmental Guidelines, as well as relevant federal and provincial environmental guidelines and regulations. The ER, which documents the Environmental Study, will form the foundation for future environmental management activities related to the Project.

The ER is organized into the following sections:

- 1.0 Introduction:** provides a description of the Project and the Environmental Study
- 2.0 Consultation Program:** describes the consultation program
- 3.0 Impact Identification, Assessment and Mitigation:** describes the existing conditions, predicts potential effects and impacts, recommends supplemental studies, mitigation and protective measures, and considers net impacts
- 4.0 Route Selection:** provides an overview of the pipeline route evaluation and selection process
- 5.0 Cumulative Effects Assessment:** provides an analysis of potential cumulative effects associated with the proposed Project
- 6.0 Monitoring and Contingency Plans:** describes monitoring and contingency plans to address potential environmental impacts of the proposed Project
- 7.0 Conclusion:** provides a discussion and consideration of the potential environmental impacts associated with the proposed Project

The ER also includes references, and appendices for documentation.

1.2.4 The OEB Regulatory Process

Once complete, the ER is circulated to affected municipalities, conservation authorities and to the Ontario Pipeline Coordinating Committee (OPCC) for their review and comment. The OPCC is an inter-ministerial committee that includes provincial government ministries, boards, and authorities with potential interest in the construction and operation of hydrocarbon transmission and storage facilities. The ER is also circulated to landowners, Indigenous communities, and other interested parties. The ER will accompany a future Imperial Oil 'Leave-to-Construct' (LTC) application to the OEB for the proposed Project.

Upon receiving the application, the OEB will hold a public hearing. Communication about the hearing will include notices in local newspapers and letters to directly affected landowners, both of which will outline how the general public and landowners can get involved with the hearing process. If after the public hearing the OEB finds the Project is in the public interest it will approve construction of the Project. The OEB typically attaches conditions to approved Projects. Imperial Oil must comply with these conditions at all stages of the Project, including during construction and site restoration.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Introduction

January 6, 2022

1.2.5 Additional Environmental Regulatory Processes

Imperial Oil will also be required to obtain additional environmental permits, approvals and notifications from federal, provincial and municipal agencies as outlined in Table 1.1 below. This ER will serve to support these permit and approval applications and notifications.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Introduction
January 6, 2022

Table 1.1: Summary of Potential Environmental Permits/Regulatory Requirements

Permit/Approval Name	Administering Agency	Description
FEDERAL PERMITS AND APPROVALS		
Clearing of Vegetation under the <i>Migratory Bird Convention Act</i> (MBCA) (1994)	Environment Canada	No permit is necessary; however, precautions need to be taken so that no breeding birds or their nests are harmed or destroyed during the bird nesting season. Nest sweeps will be required at a maximum of 7 days prior to vegetation removal during the MBCA bird nesting season (April 1 to August 31).
PROVINCIAL PERMITS AND APPROVALS		
Development Permits under <i>Ontario Regulations 161/06</i> (Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses), as per the <i>Conservation Authorities Act</i> (1990)	Hamilton Conservation Authority (HCA)	Required for works within HCA Regulated Areas, respectively, including shorelines, watercourses, wetlands and hazardous lands (flooding and erosion hazards, and unstable soils and bedrock).
Permit to Take Water (PTTW) or Environmental Activity and Sector Registry (EASR) (surface and groundwater) under the <i>Ontario Water Resources Act</i> (1990)	Ministry of the Environment, Conservation and Parks (MECP)	Under Ontario Regulation (O. Reg.) 64/16 and O. Reg. 63/16, the MECP requires a PTTW for dewatering in excess of 400,000 L/day, and an EASR for dewatering between 50,000 and 400,000 L/day. This can include trench dewatering and taking water for hydrostatic testing from a pond, lake, etc. There are some exceptions for surface water takings where active or passive surface water diversions occur such that all water taken is returned to within another portion of the same surface water feature.
Permitting or registration under the <i>Endangered Species Act</i> (ESA) (2007)	MECP	An ESA permit or Registration is required for activities that could impact species protected under the ESA. Consultation will occur with the MECP to determine ESA permitting requirements. As indicated in Section 9 (1) a of the ESA (2007), "No person shall kill, harm, harass, capture or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species." As indicated in Section 17 (1), "the Minister may issue a permit to a person that, with respect to a species specified in the permit that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species, authorizes the person to engage in an activity specified in the permit that would otherwise be prohibited by section 9 or 10."
Archaeological clearance under the <i>Ontario Heritage Act</i> (OHA) (1990)	Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	A Stage 1-2 archaeological assessment (AA) is required along the Right-of-Way (RoW) and temporary land use areas to identify areas of archaeological potential prior to any ground disturbances and/or site alterations. Depending on the results of the Stage 1-2 AA, Stage 3



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Introduction

January 6, 2022

Table 1.1: Summary of Potential Environmental Permits/Regulatory Requirements

Permit/Approval Name	Administering Agency	Description
		and 4 AA's may be required. The completed AA reports are forwarded to the MHSTCI for review and comment.
Review of Built Heritage and Cultural Landscape under the OHA	MHSTCI	A Heritage Overview Study will be completed to determine the presence of built heritage and cultural landscapes. If identified, a Heritage Impact Assessment is required to determine the effects of the Project on heritage resources and recommend mitigation measures, if necessary.
MUNICIPAL PERMITS AND APPROVALS		
Noise Control By-Law No. 11-285	City of Hamilton	Project activities should adhere to the local noise by-law.



2.0 CONSULTATION PROGRAM

2.1 OBJECTIVES

Consultation is an important component of the *OEB Environmental Guidelines, 7th Edition (2016)*. Consultation is the process of identifying interested and potentially affected parties and informing them about the Project, soliciting information about their values and local environmental and socio-economic circumstances, and receiving input into key Project decisions before those decisions are finalized.

The consultation program for this Project included the following objectives:

- Identify interested and potentially affected parties early in the process
- Provide a forum for the identification of issues
- Identify how input will be used in the planning stages of the Project
- Summarize issues for resolution and resolve as many issues as feasible
- Revise the program to meet the needs of those being consulted, as feasible
- Develop a meaningful yet safe forum/mode of engagement which considers the need to maintain the physical distancing requirements set out by the Government of Canada and the Province of Ontario due to COVID-19
- Through the established (meaningful, yet safe) modes of engagement, inform and educate interested parties about the nature of the Project, potential impacts, proposed mitigation measures and how to participate in the consultation program in a clear, concise, relevant and timely manner
- Develop a framework for ongoing communication during the construction and operation phase of the Project

2.2 IDENTIFYING INTERESTED AND POTENTIALLY AFFECTED PARTIES

The identification of interested and potentially affected parties was undertaken using a variety of sources, including the OEB's OPCC Members List, the MECP's Environmental Assessment Government Review Team Master Distribution List, and the experience of Imperial Oil and Stantec. A Project summary letter was submitted to the Ministry of Energy (MOE) (formally the Ministry of Energy, Northern Development, and Mines) in February 2021. The MOE responded in a letter dated April 26, 2021, noting that based on the information provided by Imperial Oil, the view of the Ministry is that no duty to consult has been triggered by the proposed Project (see Appendix B1). Imperial Oil elected to include Indigenous communities located near the Project in the contact list.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Consultation Program
January 6, 2022

In addition, the parties listed below were among those considered when developing the initial stakeholder contact lists:

- Federal and provincial agencies and authorities, including the HCA, CH and members of the OPCC
- Municipal personnel
- Special interest groups
- Indigenous communities
- Directly affected and adjacent landowners
- The initial contact list was updated as the Environmental Study progressed based on changes in personnel. The Agency and Indigenous Contact List is in Appendix B1.

Directly affected and adjacent landowners were identified through use of publicly available mapping and through landowner information provided by Imperial Oil, and were tracked in a Landowner Contact List.

2.3 COMMUNICATION METHODS

2.3.1 Newspaper Notices

A Notice of Study Commencement was published on July 1, 2021 in the Flamborough Review. The Notice introduced and described the Project, provided a map, and listed Project contact information. A Notice of Project Update was published on October 21, 2021 in the Flamborough Review.

A copy of the tear sheets from the newspaper notices are in Appendix B2

2.3.2 Letters and Emails

2.3.2.1 Notice of Commencement

Notice of Study Commencement letters were sent via email by Stantec to all parties identified on the OPCC and Agency Contact List on June 28, 2021, and by Imperial Oil via email to all parties identified on the Indigenous Contact List on July 12, 2021. The Notice of Study Commencement provided information on the Project, the proposed pipeline route, and to request any available additional information. Letters were mailed to landowners and residents within approximately 500 m of the proposed pipeline route via Canada Post regular mail on June 30, 2021.

Generic copies of the letters noted above are in Appendix B3.

2.3.2.2 Project Updates

Project update letters were mailed via Canada Post regular mail to landowners and residents within approximately 500 m of the Study Area on October 14, 2021. The Notice of Project Update was also published in the October 21, 2021, edition of the Flamborough Review. Appended to the letters was a map of the Study Area.



Generic copies of the letters noted above are in Appendix B3.

2.3.3 Project Email

A Project specific email address was created that enabled all interested and potentially affected parties to contact the Project team regarding the Project. The email address was communicated on the newspaper notices and in the Notice of Study Commencement and Notice of Project Update letters.

2.4 INPUT RECEIVED

The consultation and engagement program allowed interested and potentially affected parties to provide input into the Project. Input was evaluated and integrated into the Project. The following sections summarize key input received.

A comment-response summary table and a copy of all written comments and responses are in Appendix B5.

2.4.1 Public Input

One comment was received from a member of the public at the time of writing this ER.

- A resident located on the west side of Brock Road noted in an email that the existing pipeline is located on their property and asked if there will be any works on the west side of Brock Road.

2.4.2 Agency Input

Five (5) comments were received from agencies at the time of writing this ER.

- MOE noted that the duty to consult was not triggered.
- HCA noted that a permit under O. Reg. 161/06 may be required.
- CH noted that while a small portion of the Project is located in the CH watershed, the works would be located outside of lands which are considered to be regulated by CH, and therefore CH has no further comments on the Project.
- Impact Assessment Agency of Canada (IAAC) noted that the proposed Project is not a designated Project under the Impact Assessment Act (IAA) and therefore Imperial Oil would not need to submit an Initial Project Description.
- MHSTCI recommended that a combined Stage 1-2 AA be completed for the entire Study Area, and that a Cultural Heritage Report is required to be completed.

2.4.3 Municipal Input

No comments were received from municipalities at the time of writing this ER.



2.4.4 Indigenous Input

No comments were received from Indigenous communities at the time of writing this ER.

2.4.5 Interest Group Input

No comments were received from interest groups at the time of writing this ER.

2.5 REFINEMENTS BASED ON INPUT

At each stage of the consultation program input received was compiled, reviewed, and incorporated into the Environmental Study process. Responses were provided, as applicable, to questions and comments received.

Based on input received from agencies:

- It was noted that a permit under O. Reg. 161/06 will be required from HCA and correspondence will continue

Imperial Oil has committed to on-going consultation with directly and indirectly affected landowners and interested parties during detailed design and construction and will continue to respond to concerns through the life of the Project.

The proposed pipeline will be designed to meet or exceed all safety regulations and codes. In addition, Imperial Oil has a rigorous safety and integrity program so that the pipeline is constructed and maintained to operate safely.



3.0 IMPACT IDENTIFICATION, ASSESSMENT AND MITIGATION

3.1 METHODOLOGY

The potential effects and impacts of the Project on physical, biophysical and socio-economic features have been assessed along the proposed pipeline route. With an understanding of pipeline construction and operation activities (see Sections 3.1.1 and 3.1.2), the assessment:

- Describes the environmental and socio-economic setting along the proposed pipeline route and related facilities
- Predicts the effects and associated impacts of Project construction and operation activities
- Recommends supplemental studies, mitigation and protective measures (including construction methods and timing, site-specific mitigation, environmental protection measures, and compensation measures)
- Outlines the net impacts that are likely to remain

The inventory of existing environmental conditions, determination of effects and impacts, and mitigation and protective measures reflect:

- Input received from the consultation program
- Information available from published and unpublished literature
- Maps and digital data
- Mitigation guidance documents
- Desktop assessments of environmental features conducted by Stantec technical staff
- A field assessment conducted by Stantec technical staff
- The pipeline development experience of Imperial Oil and Stantec

By necessity, the analysis, integration, and synthesis of the data is an iterative process since information becomes available at various stages of the study and at different mapping scales. The level of detail of data and mapping increases as the study moves from analysis of the Study Area, to analysis of alternative corridors, to a site-specific survey of features along the proposed pipeline route. The data available at the current stage of the Environmental Study is appropriate for predicting effects and potential impacts and recommending mitigation and protective measures.

Specific information requests were made to several agencies throughout the Project. The information collected assisted in identifying environmental features and constraints located on and adjacent to the proposed pipeline route. Information provided also identified the potential presence of SAR and their habitat, predicting effects and potential impacts, and developing mitigation and protective measures. Where agencies requested that information be kept confidential, such as the precise location of rare,



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

threatened, vulnerable or endangered species and archaeological sites, such information has been withheld from the report or mapped in such a way that specific site locations cannot be determined.

Site-specific field surveys will be completed prior to construction, as required.

The existing conditions maps (Appendix C) have been generated from data obtained from Land Information Ontario (LIO). Conservation Authority (CA) regulated area data was obtained from HCA. Scales have been adjusted from the original source to better represent the features mapped. Stantec has digitally reproduced features added to the base maps. Additional mapping sources are identified on the respective map, and in the references.

There are instances where field investigations are recommended along the proposed pipeline route before construction. Given the location of the Project components and experience of Stantec in providing environmental services for pipelines, these supplemental studies are not expected to change the conclusions regarding potential adverse residual impacts. The environmental and socio-economic information presented in the ER is based on sources cited throughout.

3.1.1 Construction

Constructing the Proposed Pipeline

The pipeline construction process includes various activities as described below:

1. **Site Preparation and Clearing:** The first activity is typically the survey and staking, which delineate the boundaries of the RoW and temporary work areas. Next, the RoW and temporary work areas are cleared of brush and trees where required. Safety fence is installed at the edge of the construction RoW where public safety considerations are required, and aspects of the traffic management plan are implemented (i.e., signs, vehicle access). Silt fence is installed at required locations.
2. **Grading and Stripping:** The RoW is graded where required to allow for access by construction equipment. At this stage, the topsoil (on agricultural lands) or the duff layer (on natural lands) is stripped by bulldozers and graders then segregated so it will not be mixed with the subsoil later removed from the entry and exit pits. Existing landscaping is also removed, and dewatering undertaken, where necessary.
3. **Stringing:** Stringing is the process where pipeline sections are delivered to the RoW, placed on wooded skids at the pipe laydown area.
4. **Trenching:** Once the road allowance has been graded, a hydraulic hoe will excavate the trench to a depth of at least 1m, which will then be prepared for the installation of the new pipeline. Laneways and trails are left over the trench as long as feasible where requested by the landowner.
5. **Pipe Fabrication:** The pipeline is welded into a continuous length. The pipe welds are non-destructively tested (e.g. x-ray) and coated.
6. **Backfilling:** During backfilling the originally excavated subsoil is placed over the pipe in the entry and exit pits. The pipe will be sand-padded to protect the coating. Topsoil is then replaced.
7. **Hydrostatic Testing:** The pipeline is pressure tested by filling the pipe with water and holding it at a high pressure for a set period of time, typically 24 hours. Water is typically drawn from nearby source



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

if available. Municipal water may also be used for hydrostatic testing. The suitable water source is determined based on discussions with the appropriate authorities. Upon completion of the hydrostatic testing, the pipeline is drained and dried, purged of air and then put into service.

8. **Clean-Up and Restoration:** Clean-up is the restoration of the RoW and other work areas. On agricultural land this may require decompaction of the subsoil to maintain productivity. In natural areas, clean-up restores the environment including re-seeding of the RoW and returning the topography after grading. Any erosion and sediment controls installed during construction are also removed. Clean-up will also restore landscaping, laneways and driveways.

3.1.2 Operation and Maintenance

Pipeline operation consists of pressurized natural gas flowing through the pipeline. Mainline valves located at valve sites will serve to shut off and isolate the pipeline for maintenance and security purposes. Additional above-ground facilities along the pipeline include post-mounted signs identifying the pipeline, aerial patrol signs for aircraft patrols, fence stiles, foot bridges for ditch crossings (if applicable), and "test boxes" located along fence lines at roads that are used to assess the adequacy of the corrosion protection system.

Once the pipeline is operational, the activities will be undertaken by Imperial Oil to monitor and maintain the pipeline.

3.2 PHYSICAL FEATURES

3.2.1 Bedrock Geology and Drift Thickness

Existing Conditions

The bedrock geology within the Study Area is comprised of dolostone of the Guelph Formation (Armstrong and Dodge 2007).

The general depth from the soil surface to the bedrock indicates a drift thickness along the proposed pipeline route ranging from about 0 – 12.7 m (Gao et al 2006).

Potential Impacts

The planned drill depth will be approximately 2 m below grade at the entry and exit pit locations approximately 15 m below Concession 4 West. The drill path will be designed to utilize stable soil and bedrock. Based on the thin to absent drift thickness along the west end of the proposed pipeline, bedrock may be encountered at the entry and exit locations.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Open Cut

If bedrock is encountered during trenching, a hoe-ram will break up the rock to the required trench depth and width. Blasting may also be used to excavate through rock where necessary. Where hoe-ram and blasting are used to excavate bedrock material, potential impacts may include fly rock damage, increased noise, blasting vibration, impacts to nearby wells, and impacts to structural foundations.

Mitigation and Protective Measures

Since bedrock may be encountered in some locations, specific mitigation measures are required. Mitigation includes the following:

- Where excavations of the trench occur in immediate proximity to the roads or road embankments and there exists potential to disturb/damage the road and existing infrastructure, the use of a temporary shoring system such as trench boxes (or a more rigorous shoring system for deeper sections) should be implemented. The trench box system should be designed in accordance with the methods described in the Canadian Foundation Engineering Manual (2006 edition).
- The trench box design (or any alternative shoring design) should be carried out by a Professional Engineer retained by the Contractor, licensed to practice in the Province of Ontario, with signed and sealed drawings will be available prior to commencement of the open cut excavations.
- The open cut excavations must be conducted in accordance with the requirements of the *Occupational Health and Safety Act* and Regulations.
- Potential presence of weathered zones, soil seams and/or shale interbeds within the bedrock should be considered in the design to address impacts to bedrock.
- If blasting is required, the Project team should consider implementing a pre/post blasting well monitoring program. It is essential that blasting be planned well in advance, notification be given to nearby landowners and documentation of existing conditions (e.g. water wells, foundation integrity, etc.) be completed before blasting. Alternatives to blasting must also be investigated.

Net Impacts

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts to bedrock geology and drift thickness are anticipated.



3.2.2 Physiography and Surficial Geology

Existing Conditions

The Study Area is located within the Norfolk Sand Plain physiographic region of southern Ontario (Chapman and Putnam 1984) which is a region characterized by relatively flat to undulating sands and silts which were deposited by glacial Lakes Whittlesey and Warren. These sand beds are generally about 10 m thick but have been measured up to 23 m in thickness and are observed to cover or partially cover the moraines in the area (Chapman and Putnam 1984; Barnett 1982). The Study Area crosses the sand plains physiographic feature (Chapman and Putnam 2007).

Surficial geology mapping (OGS 2010) suggests that the pipeline route will encounter paleozoic bedrock at or very near the surface along the western half of the Study Area and crosses through coarse textured glaciolacustrine deposits along the eastern half of the Study Area.

Potential Impacts

Disturbance to the overburden along the proposed pipeline is anticipated to be limited to the entry and exit pit locations and may cause surface soil erosion. Slumping may occur within the entry and exit pits during construction.

Mitigation and Protective Measures

Surface soil erosion can occur in the absence of vegetative cover. Where there is potential for soil erosion, the need for and location of erosion and sediment control (ESC) measures should be determined by an inspector with appropriate qualifications and installed prior to the commencement of work in the area.

When land is exposed, the exposure should be kept to the shortest practical period. Natural features should be preserved to the extent practical. Temporary vegetation and mulching should be used to protect areas as appropriate. Where required, natural vegetation should be re-established as soon as practical.

The Contractor must obtain adequate quantities of materials to control erosion. Additional supplies should be maintained in a readily accessible location for maintenance and contingency purposes. ESC structures should be monitored to maintain their effectiveness through the life of construction and post-construction rehabilitation.

Extreme precipitation events could result in damage to ESC measures which could lead to erosion. When site conditions permit, ESC measures should be repaired and re-installed on erosion susceptible surfaces. If the erosion is resulting from a construction-related activity, the activity should be halted immediately until the situation is rectified.

To avoid the entry and exit pits from slumping, pit walls should be sloped and should be monitored during wet conditions. Trench boxes may be required depending on site specific conditions.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

ESC and stabilization measures should be maintained during construction, restoration and rehabilitation until vegetative cover is established. Where evidence of erosion exists, corrective control measures should be implemented as soon as conditions permit. If a permit is required from HCA, the permit may contain conditions pertaining to ESC.

Net Impacts

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on or from physiography and surficial geology are anticipated.

3.2.3 Hydrogeology

Existing Conditions

Based on physiographic and surficial geology mapping the Study Area crosses the Norfolk Sand Plain (sands and silts) and paleozoic bedrock may be encountered at or near the surface. The Study Area includes a small unevaluated wetland on the south side of Concession 4 W in the eastern extent of the Study Area. This unevaluated wetland is located within the boundary of Lafarge Canada's ARA license #5473.

A review of the MECP Source Protection Information Atlas (2021), the Study Area is located in a significant groundwater recharge area (SGRA) with a vulnerability score of 6 along the western extent of the proposed pipeline and a score of 4 along the east. These areas correspond to the presence of near surface bedrock and coarse textured deposits along the west and east portions of the pipeline, respectively.

MECP Water Well Records (WWR) within 500 m of the Study Area signify the presence of approximately 55 water supply wells, 35 of which are domestic, 10 are commercial or industrial, 3 livestock, 2 public, 1 irrigation, and 4 are test holes/observation wells or of unknown use. The 2 WWR with a use designated as public are interpreted to be associated with a former school building along Brock Road which has been demolished and is no longer present. A review of the domestic supply WWRs indicates that they are installed within the overburden at depths ranging from 7.6 m below ground surface (BGS) to 61.0 m BGS.

According to MECP WWR's of the 35 domestic water wells, 19 fell within 50 m of the proposed pipeline. These wells were installed in the bedrock at depths ranging from 9.1 m BGS to 23.2 m BGS. The depth to groundwater in these wells ranged from 2.4 m to 22.8 m BGS, averaging 7.2 m BGS. In conversation with Lafarge Canada, it has been established that the houses within the Lafarge Canada South Quarry Extension, along the east side of Brock Road, south of Concession 4 West and along the south side of Concession 4 West, have been demolished and their associated wells have been decommissioned.

Regional groundwater flow near the proposed pipeline route in the overburden aquifer is generally to the east towards Lake Ontario (Earth FX 2010). Local groundwater flow conditions are impacted by surface water features.

In the Hamilton-Halton Region Source Protection Area, municipal drinking water intakes use surface water from various sources to supply drinking water to the residents and other water users in the region.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

The Study Area does not include any wellhead protection areas (WHPA). The closest WHPA is associated with the Greenville water supply system which is approximately 3 km south of the proposed pipeline (MECP 2021). A review of nearby surface water system intake protection zones (IPZs) indicates that the proposed pipeline does not cross an IPZ for a surface water system (MECP 2021).

Potential Impacts

Hydrostatic Testing and Dewatering/Sand-pointing

A hydrostatic test will be undertaken for the proposed pipeline.

Where the entry and exit pits encounter shallow groundwater conditions or following a large precipitation event, removing water (known as dewatering) may be necessary. During dewatering, discharge water will be released to the environment. An uncontrolled discharge of water could cause downstream flooding, erosion, sedimentation, or contamination.

Private Water Wells

There are approximately 55 water supply wells within 500 m of the proposed pipeline route, 35 of which are domestic. There are 19 domestic water supply wells within 50 m of the proposed pipeline, 14 of which have been decommissioned. Depending on the proximity to wells, the depth of the well installation and the groundwater levels encountered during excavation, dewatering has the potential to impact water well quality or quantity at some of the overburden supply wells.

Municipal Water Supply

A review of the MECP Source Protection Information Atlas (2021), the Study Area is located within a significant groundwater recharge area (SGRA) with a vulnerability score of 6 along the western extent of the proposed pipeline and a score of 4 along the east. These areas correspond to the presence of near surface bedrock and coarse textured deposits along the west and east portions of the pipeline, respectively.

Based on *the Clean Water Act* (2006), there are no significant chemical, pathogen or dense non-aqueous phase liquids source water threats to municipal supply sources based on the construction or operation of the proposed pipeline.

Mitigation and Protective Measures

Hydrostatic Testing and Dewatering/Sand-pointing

For groundwater dewatering, the MECP allows registration under the EASR for construction dewatering Projects where groundwater takings will be greater than 50,000 L/day and less than 400,000 L/day; however, should groundwater takings exceed 400,000 L/day, a PTTW may be required from the MECP.

Municipal water is not available in the area. Water will be brought in and taken out of the site by truck for use in the hydrostatic test.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

To reduce the potential for erosion and scouring at discharge locations during construction dewatering/sand-pointing and/or hydrostatic testing, energy dissipation techniques should be used. Discharge piping should be free of leaks and should be properly anchored to prevent bouncing or snaking during surging. Protective measures may include dewatering at low velocities, dissipating water energy by discharging into a filter bag or diffuser and utilizing protective riprap or equivalent. If energy dissipation measures are found to be inadequate, the rate of dewatering should be reduced or dewatering discontinued until satisfactory mitigation measures are in place. Discharge should be monitored to make sure that no erosion or flooding occurs.

To assess the potential for introduction of contaminated water to soils or bodies of water, testing of hydrostatic and dewatering discharge water should be considered. Testing requirements can be influenced by the nature and quality of the source water used, any additives to the test water, the nature of the pipeline, and pipeline contents. An environmental consultant should be consulted to determine what testing is necessary for the discharge water.

Private Water Wells

A private well survey should take place to assess domestic groundwater use near the proposed pipeline and a private well monitoring program may be recommended focusing on residents within 100 m of construction activities with shallow wells who rely on groundwater supply for domestic use.

Municipal Water Supply

There are no nearby municipal supply wells, and therefore additional mitigation measures are not required to protect groundwater drinking supply sources.

During construction, the primary concern to surface water quality is the potential for a contaminant spill. To address this concern, the following mitigation measures are proposed:

- Refueling of equipment should be undertaken a minimum of 30 m from wetlands and watercourses to reduce potential impacts to surface water and groundwater quality if an accidental spill occurs. If a 30 m refueling distance is not possible, under approval from on-site environmental personnel, special refueling procedures for sensitive areas should be undertaken that include, at a minimum, using a two-person refueling system with one worker at each end of the hose.
- To reduce the impact of potential contaminant spills, the Contractor should implement spill management protocols such as secondary containment of any temporary fuel storage and preparation of a spill response plan.
- Work should be limited or stopped during and immediately following significant precipitation events (i.e. 100-year storm event), at the discretion of on-site environmental personnel.

Net Impacts

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on groundwater are anticipated.



3.2.4 Extractive Resources: Aggregates and Petroleum Resources

Existing Conditions

Aggregate operations have existed in the Project area since 1912. The Study Area is adjacent to several active aggregate sites that are currently owned and operated by Dufferin Aggregates and Lafarge Canada.

Located to the south and north of the Study Area, the Lafarge Canada Dundas Quarry is one of the largest aggregate sites in Ontario and is comprised of four licensed quarries – three of which are active quarries, and one of which is currently inactive but will be active in 2022. There is also an unlicensed area south of Highway 5, owned and operated by Lafarge Canada, that is used for storage and processing. The Lafarge Canada quarry produces crushed stone which is used in construction work, railway ballast, as well as agricultural limestone, stone for lining open-hearth furnaces, and flux-stone for the steel industry in Hamilton (Elliott 2001).

The Rural Hamilton Official Plan (City of Hamilton 2021a), Appendix C-1, maps the location of gas and petroleum wells across rural parts of the municipality. According to this mapping, the Study Area is located more than approximately 24 km from the nearest active gas well and more than 4 km from the nearest abandoned natural gas well.

A map of aggregate and petroleum resources is in Figure 6, Appendix C.

Potential Impacts

The location of the existing natural gas pipeline, being adjacent to active quarries, acts as a constraint to expansion. The relocation of the pipeline will reduce land that is prevented from being developed for aggregate extraction.

Mitigation and Protective Measures

Imperial Oil should continue discussions with Lafarge Canada and other quarry operators in the area to better understand potential constraints to their operation.

Net Impacts

Relocation of the pipeline will reduce land that is currently prevented from being developed for aggregate extraction. As this reduction is considered to be a benefit to extractive resources, no significant adverse residual impacts on extractive resources are anticipated.



3.2.5 Soil and Soil Capability

Existing Conditions

Farmington Loam, Toledo Silt Loam, Tuscola Silt Loam, and Oneida Loam are the four soil types identified within the Study Area (Ontario GeoHub, MNRF 2020). Loam soils are comprised of mostly sand, as well as smaller amounts of silt and clay. Generally, these soils contain more nutrients and moisture, and have better drainage and infiltration of air and water than other soil types that have higher compositions of silt and clay. A description of each type of Loam soil identified along the proposed pipeline route is provided below:

Farmington Loam soils, found along the western extent of the Study Area, are part of the Brunisolic soil order. These soils have little profile development and, apropos of their proximity to bedrock, consist of materials that may be calcareous, even at the surface (Agriculture and Agri-Food Canada [AAFC] 1998). The organic matter content is generally high and may, in some areas, be present in the subsoil. Found on large contiguous blocks of limestone tablelands, Farmington Loam soils occur predominately in areas where there is a thin covering of soil materials of limestone origin. Given the shallow covering of soils found in this region and in the area surrounding the pipeline, soil capability is relatively low due to rooting limitations (Gillespie and Action 1981). Further compounding the limited agricultural capability of Farmington Loam soils is their poor drainage. Rarely do these soils demonstrate conditions (such as mottled effects, that are commonly produced by imperfect drainage) that are preferred for agricultural uses (Gillespie and Action, 1981). Farmington Loam soils do, however, have some value as pasture lands (Gillespie and Action, 1981).

Toledo Silt Loam and Tuscola Silt Loam are found along the center of the Study Area. Toledo Silt Loam is a poorly drained member of the Brantford catena soil series formed in clayey glaciolacustrine sediments. The chief limitation to successful crop production on the Toledo soils is its poor drainage (Ontario Agricultural College 1949). Provided drainage improvement is affected, wheat, corn and beans grow satisfactorily; the growing of tomatoes and onions is also well suited for these soils (Ontario Agricultural College 1949).

Tuscola Silt Loam is part of the Tuscola soil series. Soils in these series are characterized as imperfectly drained soils which generally occur on gently undulating topography. The composition of Tuscola soils is similar to Brant soils, with the exception of the presence of mottling in the Ae and B horizons (Soil Research Institute 1964). Tuscola soils are used mainly for the production of hay and pasture. Some grains and silage corn are grown when spring seeding is not delayed by excess moisture (Soil Research Institute 1964).

Oneida Loam, which occurs along the eastern extent of the Study Area, is a part of the moderately well-drained Oneida catena soil series. These moderately well-drained soils contain considerable quantities of illuviated clay and have low pore volume in the Ael horizon and a calcareous C horizon. The Oneida soils are regarded as being agriculturally productive as they have only moderate limitation in areas severely dissected by streams emanating from the escarpment face. The crops most commonly seen growing on Oneida soils are hay (including alfalfa), fall wheat, barley, oats, and corn. A number of fruit farms are located on Oneida soils with apples being most commonly grown as well (Soil Research Institute 1966).



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Other soils found in the Study Area, not traversed by the proposed pipeline route, include Chinguacousy Loam and Grimsby Sandy Loam.

Soil capability for agriculture is mapped by AAFC in the Canada Land Inventory (CLI). Lands classified as Class 1 are the most agriculturally productive, while those classified as Class 7 have the lowest capability for agriculture. Class 1 to 5 agricultural lands are generally arable, while classes 1 through 3 are defined by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) to be prime agricultural soils for common field crop production.

Table 3.1 shows the soil types mapped along the proposed pipeline route, the estimated percentage of the proposed pipeline route that the soil covers, and the CLI for Agriculture rating of each soil type. The CLI rating of the majority of lands, approximately 53%, along the proposed pipeline route are rated as 1 under the Soil Capability Classification of Agriculture; soils in this class have no significant limitations in use for crops (AAFC 2005).

Approximately 40% of the proposed pipeline route is rated as 7 under the Soil Capability Classification of Agriculture; soils in this class have no capacity for arable culture or permanent pasture. Approximately 7% of the proposed pipeline route is rated as 4 under the Soil Capability Classification for Agriculture; soils in this class have severe limitations that restrict the range of crops or require special conservation practices (AAFC 2005).

Table 3.1: Soil Types and Soil Capability along Proposed Pipeline Route and Alternative Pipeline Route

Soil Type	% of Route	CLI Class
Farmington Loam	40	7
Toledo Silt Loam – Shallow Phase	5	4
Tuscola Silt Loam	2	4
Oneida Loam	53	1

Maps of soil type and soil capability are on Figures 7 and 8 respectively, Appendix C.

Potential Impacts

Agricultural lands are present within the Study Area; however, the proposed pipeline relocation will cross agricultural lands that are owned by Lafarge Canada and these lands have already been approved for aggregate extraction as per the Aggregate Resources Act (ARA) license #5473 and #625711. Where there is interaction with agricultural lands within the Study Area but outside of the ARA license #5473 boundary, there are potential impacts to topsoil as a result of construction including compaction, loss of organic matter and degraded soil structure. No topsoil will be removed from the site. Excess subsoil may be removed from the site.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Excavation and construction activities across agricultural land have the potential to affect soil quality and agricultural capability. The movement of heavy machinery on wet soil may cause rutting, compaction, and mixing of topsoil with subsoil. When exposed, soils are more prone to erosion due to the loss of vegetative cover. Improperly salvaged topsoil can result in topsoil and subsoil mixing, compaction, rutting, and erosion, which can potentially decrease crop yields.

Mitigation and Protective Measures

Excess Soil

It is noted that O.Reg. 406/19 was filed in December 2019 and came into force January 1, 2021. O.Reg. 406/19 includes regulations for the management of soil on-site as well as the movement of excess soils off-site in the province of Ontario, including stockpile size and setback requirements and environmental soil quality characterization requirements prior to the movement of drilling mud and soil off-site. It is recommended that Imperial Oil retain a qualified person for environmental site assessment who is knowledgeable in environmental soil quality characterization, as well as O.Reg. 406/19.

The Contractor is solely responsible for the location and management of stockpiles on-site as they relate to traffic management, construction staging, and the effective management of construction productivity. With the exception of such variances as may be allowed under O.Reg. 406/19, Soil Rules, and/or site-specific instruments such as Environmental Compliance Approvals (ECAs), stockpiling and storage of soil shall be according to the Soil Rules referenced by O.Reg. 406/19, including, but not limited to, the following:

- Managed in such a way as to prevent adverse effects relating to noise, dust, mud tracking, leaching, run-off and erosion, and odour or other air impacts.
- Stored in stockpiles with total volume of less than 2,500 m³.
- Soil of different quality, or from different areas, or that has not yet been sampled is segregated.
- Stored more than 30 m away from a waterbody, and more than 10 m away from property boundaries.
- Stored in a manner that prevents leaching of contaminants into the groundwater.

Materials that are surplus and required to be removed from site for disposal or reuse must be tested in accordance with O.Reg. 406/19, Reg. 347, or receiving site requirements under a site-specific instrument to determine management options. For excess soil, the Contractor Qualified Person (QP) shall determine sampling frequency and analytical parameters as required by O.Reg. 406/19 and Reg. 347, and in consultation with the CA. The Contractor QP shall be responsible for the production of all required documentation per O.Reg. 406/19.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Wet Soil Shutdown

To the extent feasible, construction activities should occur during drier times of the year. Lands affected by heavy rainfall events should be monitored for wet soil conditions, to avoid the potential for topsoil and subsoil mixing and loss of structure.

If a situation develops that necessitates construction during wet soil conditions, soil protection measures should be implemented, such as confining construction activity to the narrowest area practical, installing surface protection measures, and using wide tracked or low ground pressure vehicles.

High Winds

During construction activities, weather should be monitored to identify the potential onset of high wind conditions and to preserve topsoil. If high winds occur, the Contractor should implement protective measures such as:

- Suspend earth moving operations
- Apply dust suppressants or vegetate soil stockpiles
- Protect soil stockpiles with a barrier or windscreen

In conjunction with the above measures, all required materials and equipment should be readily accessible and available for use as required.

Soil Stripping

Topsoil depths should be measured prior to stripping so that the proper depth of topsoil is removed and replaced. Where stripping is undertaken on agricultural lands, topsoil and subsoil should be stripped and stockpiled separately to avoid mixing.

If clean-up is not practical during the construction year, it should be undertaken in the year following construction, starting once the soils have sufficiently dried. Interim soil protection measures should be implemented in sensitive areas to stabilize the RoW for over-wintering.

Net Impacts

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on soil and soil capability are anticipated.

3.2.6 Agricultural Tile Drains

Existing Conditions

The Study Area does not include any properties mapped as containing either systematic or random agricultural tile drains. A map of agricultural tile drains is located on Figure 9, Appendix C.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Potential Impacts

Construction activities, including excavation and the movement of heavy machinery, typically have the potential to crush and/or sever agricultural tile drains. As no agricultural tile drains are anticipated to be crossed, no impacts to these resources are anticipated.

Mitigation and Protective Measures

As no potential impacts are anticipated, no mitigation or protective measures are required.

Net Impacts

No significant adverse residual impacts on agricultural tile drains are anticipated.

3.2.7 Natural Hazards

Existing Conditions

Natural hazards are elements of the physical environment that have the potential to affect a Project in an adverse manner. Potential natural hazards in the Study Area are limited. Natural hazards that may occur are seismic activity and flooding and erosion.

The Study Area lies in the southern Great Lakes Seismic Zone (Natural Resources Canada, 2016). This zone has a low to moderate level of seismicity when compared to the more active seismic zones to the east, along the Ottawa River and in Quebec. Over the past 30 years, on average, 2 to 3 magnitude 2.5 or larger earthquakes have been recorded in the southern Great Lakes region. By comparison, over the same time period, the smaller region of Western Quebec experienced 15 magnitude 2.5 or greater earthquakes per year.

Three moderately sized (magnitude 5) events have occurred in the 250 years of European settlement of this region, all of them in the United States - 1929, Attica, New York, 1986, near Cleveland, Ohio, and 1998, near the Pennsylvania/Ohio border. All three earthquakes were widely felt but caused no damage in Ontario.

While the likelihood of seismic activity occurring in the Study Area is low, flooding and erosion are the more prevalent natural hazard concerns in the HCA and Conservation Halton watershed's (Conservation Halton n.d.). Flooding can occur throughout the year as a result of extreme rainfall but often occurs in the in the spring and is the result of rapid snow melt or ice melt (Conservation Halton n.d.). During flooding events, the risk of erosion increases which can lead to the weakening in stability of stream banks and/or slopes (Conservation Halton n.d.).

The pipeline crosses one mapped headwater drainage feature, identified on HCA mapping. A second watercourse, a tributary of Logies Creek, is located in the eastern portion of the Study Area and is an HCA regulated watercourse.

A map of the regulation limits of HCA is located on Figure 10, Appendix C. As provided on the figure, the proposed pipeline is located outside the HCA regulated area.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Potential Impacts

The probability of significant seismic activity in the area traversed by the proposed pipeline route is low; therefore, no potential impacts are anticipated. Similarly, the probability of flooding along the proposed pipeline is low. The headwater drainage feature that occurs along the pipeline route is an ephemeral feature, it is unlikely that significant flooding of this feature would occur. During heavy rainfall or snow melt, flooding of the watercourse in the eastern extent of the Study Area may occur; however, the likelihood of a flooding event interfering with pipeline construction is reduced by construction occurring outside of the spring freshet. A flooding event during construction could result in construction delays, soil erosion, sedimentation of a watercourse, and damage or loss of construction equipment and contamination of a watercourse because of equipment entering a watercourse. The nature of these impacts would depend on the spatial extent, duration, and magnitude of the flooding event.

Mitigation and Protective Measures

If flooding necessitates a change in the construction schedule, affected landowners and regulatory agencies should be notified and construction should continue at non-affected locations. Temporary workspaces should be located above the floodplain to the extent practical. While construction of the replacement pipeline is not anticipated to occur outside of the Lafarge Canada ARA license #5473 and #625711 boundary, in the event that temporary workspaces overlaps with the watercourse in the eastern extent of the Study Area, a permit from HCA will be required.

Net Impacts

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts from natural hazards are anticipated.

3.3 BIOPHYSICAL FEATURES

3.3.1 Aquatic Features

Fish and Fish Habitat

The Study Area includes portions of the Middle Spencer Creek and the Logie's Creek sub-watersheds which are both in the Hamilton Conservation Authority (HCA) jurisdiction. Several headwater drainage features (HDFs) are shown as watercourses on HCA mapping in the Study Area and the Project Footprint (Hamilton Conservation 2021). HDF are the source and extreme upper reaches of a river, creek, stream or watercourse (Government of Ontario 2014). They are ill-defined, non-permanently flowing drainage features that may not have defined bed or banks; they are zero-order intermittent and ephemeral channel, swales and rivulets, but do not include rills or furrows (TRCA 2014). Based on a review of recent aerial photos (Hamilton Conservation 2021) the majority of these HDFs are annually cultivated and not apparent as a surface feature. A section of the main HDF between the western side of Moxley Road and Concession Road 4 appears as naturally vegetated. Through consultation with Lafarge Canada the feature in this location falls within the boundary of their ARA license #625711. The HDF feature is shown as a "mapped headwater drainage feature" on Figure 11, Appendix C. The HDFs ultimately drain



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

northward towards the quarry north of Concession Road 4 and do not connect to fish bearing waters and do not provide contributing or direct fish habitat. The nearest watercourse that may provide fish habitat is an unnamed tributary of Logie's Creek which is located more than 450 m east of the proposed pipeline replacement (NDMNRF 2021a). There are no constructed drains in the Study Area (NDMNRF 2021b).

Fish Species at Risk

There are no records of fish or mussel SAR for the Project Footprint or the Study Area (DFO 2021). The nearest record of an aquatic SAR is for Black Redhorse (*Moxostoma duquesnei*) is in the Spencer Creek tributary more than 700 m west of the Project Footprint (DFO 2021).

Potential Impacts

Construction of the proposed pipeline route will not impact fish habitat. Construction of the proposed pipeline route may impact a HDF that does not provide contributing or direct fish habitat.

Mitigation and Protective Measures

The following general environmental mitigation measures should be taken to mitigate impacts to the headwater drainage feature (HDF) to the extent feasible:

- Prior to removal of vegetative cover, effective mitigation techniques for erosion and sedimentation should be in place to protect water quality. Disturbance to the area during construction should be limited and grubbing activities should be delayed until immediately prior to grading operations.
- Temporary erosion and sediment control measures should be maintained and kept in place until work near the HDF has been completed and the area has been stabilized. Temporary sediment control measures should be removed at the completion of the work but not until permanent erosion control measures have been established (i.e., vegetative cover).
- Construction material, excess material, construction debris and empty containers should be stored a minimum of 30 m from the HDF, where practical.
- Equipment maintenance and refueling should be controlled to prevent entry of petroleum products or other deleterious substances, including any debris, waste, rubble, or concrete material, into the HDF, unless otherwise specified in the contract.
- Deleterious substances (fuel, oil, spoil) should be stored a minimum of 30 m where practical. Any such material that inadvertently enters a watercourse should be removed in a manner satisfactory to the environmental inspector.
- Following construction, any disturbed vegetation should be restored to pre-construction conditions to the extent possible in accordance with environmental permits.

Permitting

The Project will not cause a harmful alteration disruption or destruction (HADD) of fish or fish habitat and will therefore not be in contravention of the federal *Fisheries Act*. The Project poses no risk to fish and fish habitat and can proceed without review by DFO.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

The Project will not result in the killing or harming of a protected aquatic species, or damage or destruction of their habitat (i.e., residences), and will not be subject to the provincial ESA or the federal SARA.

The pipeline route will be located outside of the regulated boundary of the HCA. A permit under O. Reg. 161/06 may be required for work in the headwater drainage feature prior to construction activities.

Net Impact

With the implementation of the mitigation and contingency measures described in this report, no adverse residual impacts on fish species or fish habitat are anticipated.

There are no records of fish or mussel SAR for the Project Footprint or the Study Area.

3.3.2 Designated Natural Areas and Vegetation

Existing Conditions

The Study Area falls within the Niagara section of the Deciduous Forest Region (Rowe 1972). According to CH (2018), forest conditions in proximity to the proposed pipeline replacement are ranked as Poor, based on a ranking system that considers percentage of forest cover, forest interior (100 m from the forest edge) and forested streamside vegetation. The proposed pipeline route will occur within a largely agricultural setting, with aggregate extraction immediately to the north and south.

A map of designated natural areas is provided on Figure 12, Appendix C.

Wetlands

The Ontario Wetland Evaluation System (OWES) is used to identify Provincially Significant Wetlands (PSW). An evaluated wetland may be one contiguous unit or may be a series of smaller wetlands that function as a whole. Evaluated wetlands that do not qualify as provincially significant may be designated as locally significant and may be protected through local planning and policy measures. There may also be unevaluated wetlands in an area.

There were no PSWs identified on NDMNRF LIO mapping (NDMNRF 2021a) or in the Natural Heritage Information Centre (NHIC) database (NDMNRF 2021c) within the Study Area. An unevaluated wetland was identified south of Concession 4 West in the eastern extent of the Study Area; however, the unevaluated wetland is located within the boundary of Lafarge Canada's ARA license #5473. An unmapped wetland was identified through aerial photograph interpretation, in a swale between the western side of Moxley Road and Concession 4 West, adjacent to the proposed pipeline route. The unmapped wetland is dominated by grassy vegetation. In consultation with Lafarge Canada, the unmapped feature is located within the boundary of the Lafarge Canada ARA license #625711. The unmapped wetland feature is shown as a "mapped headwater drainage feature" on Figure 11, Appendix C.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Significant Woodlands

A woodland is defined as a treed area, woodlot, or forested area. The Natural Heritage Reference Manual notes that the local planning authority is responsible for designating significant woodlands (MNR 2010).

It is the local planning authority's responsibility to designate significant woodlands. The proposed pipeline replacement is in the City of Hamilton. The Rural Hamilton Official Plan (2021) was reviewed for the identification and designation of significant woodlands that occur in the Study Area. The Rural Hamilton Official Plan provides criteria by which significant woodlands are identified, including feature size, presence of interior forest habitat, connectivity, proximity to water, age and presence of rare species.

There were no significant woodlands identified in Schedule B-2 of Rural Hamilton Official Plan, or woodlands that met the Plan's criteria in Study Area.

Other Woodlands

The proposed pipeline replacement is located adjacent to a woodlot area, located within the mapped HDF between the west side of Moxley Road and Concession 4 West within the Study Area (NDMNRF 2021a). Woodland communities are comprised of mid-aged mixed deciduous / coniferous trees, characteristic of woodlands over shallow bedrock.

The proposed pipeline route does not overlap with the woodland area, however limited tree clearing or running in hedgerows or roadside trees may be required. As noted previously, through consultation with Lafarge Canada the unmapped feature is located within the boundary of the Lafarge Canada ARA license #625711.

Areas of Natural and Scientific Interest (ANSI)

Life science ANSIs are significant representative segments of Ontario's biodiversity and natural landscapes, including specific types of forests, valleys, prairies, savannahs, alvars and wetlands, their native plants and animals, and their supporting environments. They contain relatively undisturbed vegetation and landforms, and their associated species and communities. Provincially significant life science ANSIs include the most significant and best examples of the natural heritage features in the province, and many will correspond to other significant features and areas such as wetlands, valleylands and woodlands (MNR 2010).

There were no ANSIs identified on NDMNRF LIO mapping (NDMNRF 2021a) or in the NHIC database (NDMNRF 2021c) within the Study Area.

Potential Impacts

The proposed pipeline construction will not result in the direct removal of designated natural areas.

In areas where natural vegetation is present within or adjacent to the proposed pipeline route, potential impacts include the removal of native vegetation, introduction or spread of invasive species, and indirect effects such as dust, erosion, and accidental spills.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Mitigation and Protective Measures

Environmental mitigation and protective measures during construction include the following:

- Where the RoW abuts a woodland on one side, detailed design should avoid the feature where possible.
- Determine municipal requirements or permits for tree removal outside of the Lafarge Canada ARA licence #5473 and #625711 boundary (if required) prior to construction.
- Clearing should be reduced/avoided to the extent possible in sensitive areas such as woodlots, along drainage features and in areas of significant groundwater recharge.
- The limits of clearing should be surveyed and staked in the field, to allow for the protection of off-site natural areas and vegetation.
- All brush and trees should be felled (if required) within the Project footprint.
- Clearing should be done during dry soil conditions to the extent practical to limit disturbance to vegetation and terrain.
- Mitigation measures for aquatic features (see Section 3.3.1 above) should be implemented to address potential impacts to wetlands.
- Precautionary measures (e.g., equipment washing before site access) may be necessary to mitigate for the spread of non-native species.
- A re-vegetation program should be initiated for all vegetated temporary work areas. Imperial Oil should consult with Lafarge Canada to confirm replanting plans.
- Seeding of the disturbed temporary work areas and permanent easement should be done with a native seed mix. Replaced soils should contain native seed bank, facilitating successful revegetation.
- One year following construction, planted vegetation should be inspected for survival; in areas of severe dieback, dead and diseased planted vegetation should be replaced.

Mitigation and protective measures are outlined in Section 3.2.5 for dust and erosion and Section 3.3.2 for accidental spills.

Net Impacts

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on designated natural areas and vegetation are anticipated.

3.3.3 Wildlife, Wildlife Habitat and Species at Risk

Significant Wildlife Habitat

Wildlife habitat is defined as an area where plants, animals and other organisms live, including areas where species concentrate at a vulnerable point in their life cycle, and areas that are important to migratory and non-migratory species (MNR 2000). Significant wildlife habitats (SWHs) are grouped into four categories:



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

1. Seasonal concentration areas
2. Animal movement corridors
3. Rare vegetation communities or specialized habitats
4. Habitats of Species of Conservation Concern (SOCC)

The presence of SWH along the proposed pipeline replacement area was determined in two ways. First, publicly available NHIC data was reviewed for SWH (NDMNRF 2021c). Second, potential SWH was identified using the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF 2015) which provide descriptions of wildlife habitats and guidance on criteria for determining the presence of SWH. These descriptions were then compared to results of aerial photograph interpretation and GIS data. Details of the significant wildlife assessment are summarized below.

Seasonal Concentration Areas

Seasonal Concentration Areas are sites where large numbers of a species gather at one time of the year, or where several species congregate. Only the best examples of these concentration areas are typically designated as SWH. The potential for seasonal concentration areas to occur within 120 m of the proposed pipeline relocation is assessed in Appendix D. Candidate habitat for the following seasonal concentration areas may be present along the proposed pipeline replacement route:

- Bat maternity roost colonies
- Reptile Hibernaculum
- Colonial Waterbird Nesting Area
- Terrestrial Crayfish

Rare vegetation communities or specialized habitats

Rare vegetation communities or specialized habitats are defined as separate components of SWH. Rare vegetation communities are habitats that are considered rare or uncommon in the ecoregion, as defined in the SWH Criteria Schedules (MNRF 2015). These habitats may support wildlife species that are considered significant. Specialized habitats are microhabitats that are critical to some wildlife species. There were no rare vegetation communities or specialized habitats identified in the NHIC (NDMNRF 2021c) database within the proposed pipeline replacement. Potential rare vegetation communities or specialized habitats based on the SWH Criteria Schedule for Ecoregion 6E (MNRF 2015) are discussed in Appendix D. Rare communities and specialized habitats were not identified in proximity to the proposed pipeline replacement area.

Animal Movement Corridors

Animal movement corridors are elongated, naturally vegetated parts of the landscape used by animals to move from one habitat to another (MNR 2000). As wetlands and vernal pools that support breeding amphibians and deer wintering areas were absent in proximity to the proposed pipeline replacement, animal movement corridors are also considered absent.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Habitat for Species of Conservation Concern

Habitats of SOCC include wildlife species that are listed as Special Concern or rare, that are declining, or are featured species in the province. This includes marsh breeding birds, shrub/early successional breeding bird habitat, terrestrial crayfish, as well as rare species, as defined in the SWH Criteria Schedules (MNRF 2015).

Provincially rare (S1-S3 ranked species) are determined by status rankings (S-ranks) for wildlife and are based on the number of occurrences in Ontario, as follows:

- S1: critically imperiled; often fewer than 5 occurrences
- S2: imperiled; often fewer than 20 occurrences
- S3: vulnerable; often fewer than 80 occurrences

Designation of Special Concern is determined by the Committee on the Status of Species at Risk in Ontario (COSSARO).

The NHIC database was searched to obtain recent records (1990 - present) of SOCC (S1-S3 ranked species and provincially designated Special Concern species) in the vicinity of the proposed pipeline route. The Ontario Breeding Bird Atlas (Cadman et al., 2007), the Ontario Reptile and Amphibian Atlas (Ontario Nature 2021) and the Ontario Mammal Atlas (Dobbyn 1994) were also searched. The exact location of species occurrences is not available from these atlases; instead, occurrences are recorded within 1 x 1 km or 10 x 10 km squares.

Based on a review of background information, 10 SOCC are known to occur in the vicinity of the proposed pipeline replacement, as shown in Table 3.2.

Table 3.2: Potential Terrestrial Species of Conservation Concern Within the Proposed Pipeline Replacement

Common Name	Scientific Name	Srank	Provincial Status (COSSARO)	Source	Potential Habitat in the Study Area? (Y/N)
Plants					
Perfoliate Bellwort	<i>Uvularia perfoliata</i>	S1, S2	-	NHIC	Y - dry rocky woodlands present
Stiff Gentian	<i>Gentianella quinquefolia</i>	S2	-	NHIC	Y - dry rocky woodlands present
Reptiles					
Eastern Milksnake	<i>Lampropeltis triangulum</i>	S3	SC	ORAA	Y – Habitat generalist that could occur throughout Study Area
Snapping Turtle	<i>Chelydra serpentina</i>	S3	SC	NHIC, ORAA	N – Wetlands or waterbodies with standing water not present



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.2: Potential Terrestrial Species of Conservation Concern Within the Proposed Pipeline Replacement

Common Name	Scientific Name	Srank	Provincial Status (COSSARO)	Source	Potential Habitat in the Study Area? (Y/N)
Midland Painted Turtle	<i>Chrysemys picta marginata</i>	S4	-	NHIC, ORAA	N – Wetlands or waterbodies with standing water not present
Birds					
Eastern Wood-Pewee	<i>Contopus virens</i>	S4B	SC	OBBA	N – Deciduous forests absent
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	S4B	SC	OBBA	Y – open/cultural woodlands, hedgerows, roadside
Wood Thrush	<i>Hylocichla mustelina</i>	S4B	SC	OBBA	N – Deciduous forests absent
Grasshopper Sparrow	<i>Ammodramus savannarum pratensis</i>	S4B	SC	OBBA	N – grassy fields or meadows absent
Insects					
Monarch	<i>Danaus plexippus</i>	S2N, S4B	SC	TEA	N – Open areas of wildflowers and milkweed absent

Notes:

Sources: NDMNRF 2021c (NHIC), Cadman et. al. 2007 (OBBA), Ontario Nature 2021 (ORAA), Dobbyn 1994 (AMO), TEA (2021)

SC - Special Concern - a species with characteristics that make it sensitive to human activities or natural events

S1: Critically Imperiled—Critically imperiled in the province (often 5 or fewer occurrences)

S2: Imperiled—Imperiled in the province, few populations (often 20 or fewer)

S3: Vulnerable—Vulnerable in the province, relatively few populations (often 80 or fewer)

S4: Apparently Secure—Uncommon but not rare

S#B- Breeding status rank

S#N- Non Breeding status rank

The potential for SOCC to be present along the proposed pipeline route is limited by habitat suitability and availability; therefore, species listed in Table 3.3 may not occur along the proposed pipeline route. Habitat suitability for each species in Table 3.3 is discussed in Appendix D. Potentially suitable habitat for the following SOCC occurs in the Study Area:

- Perfoliate Bellwort
- Stiff Gentian
- Eastern Milksnake
- Red-headed Woodpecker



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Species at Risk

SAR are those species identified as Endangered or Threatened by provincial (ESA) legislation. The NHIC database was searched to obtain recent records (1990– present) of SAR from the vicinity of the proposed pipeline route. The Ontario Breeding Bird Atlas (Cadman et al., 2007), the Ontario Reptile and Amphibian Atlas (Ontario Nature 2021) and the Ontario Mammal Atlas (Dobbyn 1994) were also searched. The exact location of species occurrences is not available from these atlases; instead, occurrences are recorded within 1 x 1 km or 10 x 10 km squares.

Based on a review of background information, 13 SAR are known to occur in the vicinity of the proposed pipeline route, as shown in Table 3.3.

Table 3.3: Potential Terrestrial Species at Risk (Threatened or Endangered) within Proximity of the Proposed Replacement

Common Name	Scientific Name	Provincial Status (COSSARO)	Source	Potential Habitat in the Study Area? (Y/N)
Plant				
Butternut	<i>Juglans cinerea</i>	END	Stantec	Y – Woodlands and hedgerows
Amphibians				
Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	END	NHIC	N – Deciduous forest absent
Reptile				
Blanding's Turtle	<i>Emydoidea blandingii</i>	THR	OBBA	N – Wetlands or waterbodies with standing water not present
Birds				
Least Bittern	<i>Ixobrychus exilis</i>	THR	OBBA	N – Large wetland absent
Eastern Whip-poor-will	<i>Antrostomus vociferous</i>	THR	OBBA	N – large woodlands absent
Bank Swallow	<i>Riparia riparia</i>	THR	OBBA	N – exposed banks absent
Barn Swallow	<i>Hirundo rustica</i>	THR	OBBA	Y – Suitable nesting habitat in buildings
Bobolink	<i>Dolichonyx oryzivorus</i>	THR	NHIC, OBBA	N – grassy fields or meadows absent
Eastern Meadowlark	<i>Sturnella magna</i>	THR	NHIC, OBBA	N – grassy fields or meadows absent



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.3: Potential Terrestrial Species at Risk (Threatened or Endangered) within Proximity of the Proposed Replacement

Common Name	Scientific Name	Provincial Status (COSSARO)	Source	Potential Habitat in the Study Area? (Y/N)
Mammals				
Little Brown Myotis	<i>Myotis lucifugus</i>	END	AMO	Y – mature trees and buildings present
Northern Myotis	<i>Myotis septentrionalis</i>	END	AMO	Y – mature trees and buildings present
Eastern Small-footed Myotis	<i>Myotis leibii</i>	END	AMO	Y – buildings present
Tri-coloured Bat	<i>Perimyotis subflavus</i>	END	AMO	Y – mature trees and buildings present

Notes:

Sources: NDMNRF, 2021c (NHIC); Cadman et. al., 2007 (OBBA); Ontario Nature, 2021 (ORAA); Dobbyn 1994 (AMO)

END – Endangered - a species facing imminent extinction or extirpation

THR – Threatened - a species that is at risk of becoming endangered

SC - Special Concern - a species with characteristics that make it sensitive to human activities or natural events

S1: Critically Imperiled—Critically imperiled in the province (often 5 or fewer occurrences)

S2: Imperiled—Imperiled in the province, few populations (often 20 or fewer)

S3: Vulnerable—Vulnerable in the province, relatively few populations (often 80 or fewer)

S4: Apparently Secure—Uncommon but not rare

S? – Rank Uncertain

SH: Possibly Extirpated (Historical)

S#B- Breeding status rank

S#N- Non-Breeding status rank

Potentially suitable habitat for the following SAR occurs in the Study Area:

- Butternut
- Barn Swallow
- Bat SAR
 - Little Brown Myotis
 - Northern Myotis
 - Small-footed Myotis
 - Tri-colored Bat

Butternut trees may occur in woodlands or hedgerows in the Study Area.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Barn Swallows nest in buildings, such as barns, as well as other structures including bridges or large culverts. Buildings, including barns and shed are present in the Study Area, set back from the proposed pipeline route. There are no bridges or culverts suitable for Barn Swallows along the proposed pipeline route.

Bat SAR will communally roost in mature trees or buildings during the summer maternity season. Mature trees in woodlands hedgerows or landscape trees may support bat SAR, although they are limited in the Study Area. Buildings, including houses, barns and shed, may also provide roost habitat for bat SAR.

Potential Impacts

Potential impacts on wildlife and wildlife habitat from construction include direct mortality from construction vehicles, habitat destruction through vegetation removal, habitat degradation through spills and sensory disturbance of wildlife during construction. Colonial nesting birds are particularly sensitive to sensory disturbance.

Candidate bat maternity and snake hibernacula occur in woodland habitat, which is avoided by the proposed pipeline route. Likewise, the proposed route avoids candidate chimney crayfish habitat in the wetland. As such, direct impacts to the candidate habitats are not anticipated.

The proposed pipeline route avoids woodland habitat that is suitable for SAR and SOCC. However, limited tree clearing, if required, would have the potential to directly impact butternut and bat SAR.

Mitigation and Protective Measures

Environmental mitigation and protective measures during construction include the following:

- Detailed design of the proposed pipeline should be reviewed to avoid and reduce the likelihood of impact on wildlife habitat to the extent possible, and in particular habitats of Endangered, Threatened, Special Concern and rare species.
- Equipment and vehicles should yield the RoW to wildlife.
- Fencing should be erected around deep excavations to prevent wildlife entrapment.
- The Contractor should inform their personnel to not threaten, harass or injure wildlife.
- If wildlife are encountered during construction, personnel are required to move away from the animal and wait for the animal to move off the construction site.
- A pre-construction survey should be completed for butternut trees within 25m of the work zones. If butternuts are found and cannot be avoid, authorization through Section 23.7 of Ontario Regulation 242/08 under the ESA may be required.
- If limited tree removal or pruning is required, it should not occur between April 1 and October 1 to avoid direct impacts to bats. Consultation with MECP is recommended to confirm requirements under the ESA.
- Silt fencing is recommended along the perimeter of the excavation to exclude reptiles and amphibians during their active period (approximately April 1 – October 31), as well as prevent sedimentation.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

- A pre-construction survey for colonial nesting birds (i.e. herons) should be completed. If found within one kilometer of the proposed pipeline route, heavy construction should be avoided during the breeding season (March 15 – August 1), as it may result in sensory disturbance to the colony.
- Construction activities with the potential to remove migratory bird habitat, such as vegetation clearing, should be avoided during the breeding season which is generally from April 1- August 31 in southern Ontario (Environment Canada 2021). If vegetation clearing activities are unavoidable during this window, a mitigation program should be developed, which includes measures to reduce and avoid impacts to migratory birds and their nests (Government of Canada 2021). This program should include preventative and mitigation measures but may also include avoidance of clearing during key sensitive periods and in key locations.
- If SAR are encountered during the proposed pipeline replacement, work will stop and consultation with the MECP regarding the potential need for a permit under the ESA and/or species-specific mitigation will be conducted.

Mitigation and protective measures are outlined in Section 3.3.2 for vegetation removal and Section 3.3.2 for accidental spills.

Net Impacts

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on wildlife, wildlife habitat and SAR are anticipated.

3.4 SOCIO-ECONOMIC ENVIRONMENT

3.4.1 Employment and Business

Existing Conditions

While the Study Area falls within the Statistics Canada census subdivision of the City of Hamilton, the Federal electoral district of 'Flamborough-Glanbrook' provides a better statistical representation of the area. The unemployment rate in Flamborough-Glanbrook at 4.7% was below the provincial and national average rates of 7.4%. Refer to Table 3.4 for labour characteristics.

Table 3.4: Labour Characteristics, Ontario and Flamborough-Glanbrook, 2016

Location	Total Population 15 years and over	Labour Force	Employed	Participation Rate (percent)	Employment Rate (percent)	Unemployment Rate (percent)
Ontario	11,038,440	7,141,675	6,612,150	64.7	59.9	7.4
Flamborough-Glanbrook	88,415	61,250	58,360	69.3	66.0	4.7

Source: Statistics Canada, 2017



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

The median income for all census households in Flamborough in 2015 was \$99,358; the median income for individuals aged 15 years and over was \$41,116 (Table 3.5).

Table 3.5: Median Income, Ontario and Flamborough-Glanbrook, 2015

Location	Median Family Income	Median Income of individuals - 15 Years and Over		
		All individuals	Male	Female
Ontario	\$74,287	\$33,539	\$39,889	\$28,676
Milton (Town)	\$99,358	\$41,116	\$50,370	\$33,919

Source: Statistics Canada, 2017

In 2016, the main sources of employment by industry for Flamborough-Glanbrook were health care and social assistance (11.4%), manufacturing (11.2%), retail trade (11%) and construction (9.2%) (Statistics Canada, 2017).

Flamborough-Glanbrook's labour force is concentrated in three main occupations: sales and services occupations (20.9%), trades, transport and equipment operators (15.4%) and business, finance and administration occupations (15.1%) (Statistics Canada, 2017).

Potential Impacts

Project construction is expected to take place in the Summer of 2022 and take an estimated 3 months to complete. Project demands for labour and goods and services can result in both beneficial and adverse effects. Positive effects may not be evenly distributed among populations, with some residents in a better position to receive economic benefits than others. Similarly, adverse effects may affect some residents more than others.

Residual effects on employment are related to the Project's labour demand compared to the labour supply. Three types of employment are considered:

- Direct employment: labour that is hired directly for the Project
- Indirect employment: labour hired by companies to produce and provide goods and services needed for the Project
- Induced employment: labour hired by industries that produce and provide consumer items and services purchased by people who are directly or indirectly employed by the Project

Labour conditions will be affected by direct, indirect and induced employment during all Project phases.

The Project could affect business through purchases of labour, goods and services from local businesses, including businesses owned by Indigenous peoples, and will result in increased local employment income and municipal government revenue. Local businesses will likely benefit from supplying the Project with goods and services.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Mitigation and Protective Measures

It is expected that the Project will generally result in positive effects on employment by employing local and Indigenous people, and by reducing the unemployment rate in the region. These positive effects do not require mitigation, but Imperial Oil should identify and implement various mechanisms to enhance Project benefits.

The potential effects of the Project because of employment opportunities and purchasing local goods and services is expected to be positive during construction and operation, so no mitigation will be required.

Net Impacts

With the above initiatives to encourage local and Indigenous participation on the Project, it is anticipated that the effects from the Project on employment and business will be positive, including creating positive economic activity through new direct, indirect, and induced employment. Project expenditures on local businesses and suppliers also have the potential to positively affect the local economies. Additionally, those who have worked on the Project will gain transferrable skills and experience that could help them gain employment in other industries. Consultation with businesses and landowners will address any concerns to their operations.

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on employment and business are anticipated.

3.4.2 Community Services & Infrastructure

Existing Conditions

Demographics

In 2016, Flamborough-Glanbrook had a population of 97,081 (Statistics Canada, 2017). Flamborough-Glanbrook experienced a large population increase between 2011 and 2016 with a percentage change in population of +14.4%, above the population growth in Ontario (Table 3.6).

Table 3.6: Population Ontario and Flamborough-Glanbrook 2016

Location	Total Population	Percent Change from 2011
Ontario	13,448,494	4.6
Flamborough-Glanbrook	97,081	14.4

*Numbers are rounded by Statistics Canada and are reported herein exactly as they are reported by Statistics Canada. Totals may not necessarily add up as a result of rounding.

Source: Statistics Canada, 2017

In 2016, the median age of the population of Flamborough-Glanbrook was 39.9 years (Statistics Canada, 2017); Ontario's median age was 41.3 (Statistics Canada, 2017).



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

In 2016, 1,625 residents of Flamborough-Glanbrook identified themselves as Aboriginal (Statistics Canada, 2017). Together this represents approximately 0.009% of the provincial Aboriginal population (Statistics Canada, 2017).

Permanent and Temporary Accommodations

In 2016, there were 38,115 private dwellings in Flamborough-Glanbrook. The majority (81.7%) of homes were owned and 3,970 were rental homes (Statistics Canada, 2017).

Municipal Services and Infrastructure

The City of Hamilton provides recycling, hazardous household waste, yard waste and other garbage disposal services (City of Hamilton, 2021b). The City of Hamilton water supply is from Lake Ontario (City of Hamilton, 2021b).

Health Services and Infrastructure

Flamborough-Glanbrook is serviced by the Hamilton Health Services. There are currently 10 hospitals within Hamilton: Chedoke Hospital, Hamilton General Hospital, Juravinski Cancer Centre, Juravinski Hospital, St. Joseph's Healthcare Hamilton, McMaster Children's Hospital, McMaster University Medical Centre, St. Peter's Hospital, Main Street West Urgent Care Centre and the Wes Lincoln Memorial Hospital. The closest hospital to the Study Area is McMaster University Medical Centre (City of Hamilton, 2020).

Roads and Highways

The proposed pipeline route crosses Concession Road 4. This two-lane road carries mainly low-volume rural traffic.

The City of Hamilton is responsible for maintaining cities road system, including pothole repairs, street lighting and sign maintenance, entrance culverts and rural roadside mowing. Within the City of Hamilton there are various classifications of roads and highways, from high volume urban arterials to rural collector roads.

Policing, Fire and Emergency Response Services

The Hamilton Police Service serves Flamborough-Glanbrook (City of Hamilton, 2021c). The City of Hamilton's Fire Department provides fire prevention/public education, fire communications/dispatch, firefighting and rescue operations, medical response with the Hamilton Paramedic Service, emergency planning/preparedness, and mechanical and fleet services for both Fire and Hamilton Paramedic Service.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Potential Impacts

The presence of temporary workers in the local communities during the construction period has the potential to increase the demand for housing and local community services and infrastructure. Non-local Project workers are expected to stay in temporary accommodations, including hotels, motels, and campgrounds. They may also choose to rent houses or apartments. The vacancy rate for temporary rentals will likely be able to accommodate the temporary increase. The short duration that the workers will reside near any one community, as well as the structure of the work shifts, will limit the need for workers to use the services and infrastructure in local communities.

The transportation of Project goods, services and workers has the potential to lead to increased use of existing transportation infrastructure. Also, increased traffic volumes along local road networks could increase travel times and reduce road safety, which might lead to increased use of local emergency services due to potential vehicle accidents and workplace accidents. In addition, the production of Project-related waste could place additional stress on the capacity of local landfills.

Potential impacts to roads are outlined in Sections 3.4.3 and 3.4.4

Mitigation and Protective Measures

Project employees might require medical attention while staying in the area. The Contractor and Imperial Oil should have emergency response equipment and trained personnel on-site during construction. In addition, an Emergency Response Plan will be developed and implemented, which will address field health services, emergency call-out procedures and fire response plans. Safety fencing will be used where necessary to separate the work area.

Environmental mitigation and contingency and management plans will be in place to reduce the likelihood of emergency events and to prepare for the management of emergency events on site. If an emergency incident were to occur, it is anticipated that the comprehensive mitigation, contingency plans, and safety strategies will result in a localized and low-intensity response.

A Traffic Management Plan should be in place for all roads affected by construction, which at a minimum outline measures to:

- Control the movement of materials and personnel to and from the construction site
- Post signs to warn oncoming motorists of construction activity
- Control traffic at road crossings
- Reduce on-road disturbance and land closures
- Store equipment as far from the edge of the road as practical
- Install construction barricades at road crossings



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Traffic disruptions during construction will be reduced by adherence to the Traffic Management Plan. Guidelines will be developed for vehicular use on the RoW and associated access roads to avoid traffic congestion and accidents. Access to existing transportation infrastructure will be addressed through standard mitigation and will be reversible once the construction phase ends. Additional mitigation and protective measures for roads are outlined in Section 3.4.3 and 3.4.4.

The capacity of waste disposal sites will be considered and if Project needs are not easily accommodated, alternative disposal locations will be considered.

Additional consultation with residents and businesses adjacent to the proposed pipeline route will be held in advance of construction commencement. Contact information for a designated Imperial Oil representative should be available to address questions and concerns during construction. Consultation has been initiated and will continue with municipal personnel.

Net Impacts

Community services and infrastructure appear to have additional capacity to absorb potential increased temporary demands that may result from the Project. Adverse effects on traffic will be minimal because the proposed pipeline route crosses Concession 4 West via open cut. Construction equipment will access the RoW from Brock Road and Concession 4 West.

Given the available capacity of the local community services and infrastructure, along with the implementation of the mitigation and protective measures outlined above, no significant adverse residual impacts on community services and infrastructure are anticipated.

3.4.3 Culture, Tourism and Recreational Facilities

Existing Conditions

There are no recreational, cultural or tourism-based facilities within the Study Area. Facilities and businesses near the Study Area include: Elements Casino Flamboro (approximately 1km west of the Study Area) The Dutch Mill Country Market (located on Millgrove Side Road near Highway 5, approximately 2.9km southeast of the Study Area) and an indoor skydiving facility called Skydive SWOOP (approximately 2km south of the Study Area).

Potential Impacts

Construction activity will temporarily affect the landscape of the construction area and could impede property access. Potential safety concerns exist at locations where properties, residents and vehicles come in proximity to construction activities.

Potential increases in noise, dust, exhaust (see Section 3.4.5) and traffic congestion on roads could also cause stress and affect how people perceive their quality of life. Increased traffic could also impede customer access to businesses.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Mitigation and Protective Measures

Mitigation and protective measures for air quality and noise are outlined in Section 3.4.5.

Access to businesses should always be maintained to reduce stress on local residents and safety fences should be installed at the edge of the construction RoW, where public safety considerations are required.

A Traffic Management Plan should be implemented to reduce effects of Project-related traffic on traffic volumes, which could reduce access to businesses (see Section 3.4.2). In addition, Imperial Oil should work with landowners to address specific concerns they may have regarding monetary compensation and their property, such as access and disruption to business.

While pipeline construction activities have the potential to temporarily affect the local landscape, restoration of the construction area will leave little evidence that a pipeline exists in the area.

Additional consultation with residents and businesses along and adjacent to the proposed pipeline route will take place in advance of construction activity. Imperial Oil should develop an issues resolution framework to help resolve stakeholder issues that may arise during Project construction and operation, and to select the appropriate mitigation measures to resolve these issues.

Net Impacts

With planned restoration of the construction site after the proposed pipeline has been built, changes to landscapes are anticipated to be short-term. Additionally, Imperial Oil will complete restoration of the construction area. This will reduce any adverse impact that construction may have on the aesthetic value placed on the land by residents.

With the implementation of the above mitigation and protective measures, the Project is not anticipated to alter the lifestyles of residents. Nor will it adversely affect social and community networks or living and environmental conditions. Therefore, no significant adverse residual impacts on perceived health and well-being are anticipated.

3.4.4 Infrastructure

Existing Conditions

Infrastructure crossed by the proposed pipeline route includes roads, access roads/driveways, and hydroelectric lines. The proposed pipeline route and the alternative pipeline route cross Concession 4 West twice; both routes cross Brock Road to the north side of Concession 4 West, with the proposed pipeline route crossing back to the southern side of Concession 4 West at the intersection with Moxley Road and the alternative route crossing back to the southern side of Concession 4 West in the eastern extent of the Study Area, directly north of the tie-in to the existing pipeline. The road will be crossed via open cut. Existing conditions for roads are outlined in Section 3.4.2.

The Study Area is located adjacent to actively mined Lafarge Canada property to the north, with private residences and agricultural fields located adjacent to the western and eastern extents of the Study Area.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

The proposed pipeline route and alternative pipeline route both intersect with existing overhead hydroelectric and telecommunications utilities.

A variety of buried utilities such as telecommunication cables, low-voltage hydroelectric lines and watermains are in the road RoWs.

Potential Impacts

Construction activity has the potential to temporarily affect access roads and driveways and landscaping features to residences and businesses.

The pipeline will be constructed within municipal road RoW's and a new Lafarge Canada easement with some temporary lands required for construction purposes. Where temporary lands are required, limited impacts to residences and businesses may occur. The construction of the pipeline has the potential to interact with roads, hydroelectric lines, and buried and overhead utilities. Potential impacts include damage to the infrastructure and harm to personnel.

The crossing of Concession 4 West will be completed by way of open cut. This has the potential to produce extended periods of noise and vibration. There is also the possibility of extended work hours and the need for construction lighting (due to low light conditions).

Mitigation and Protective Measures

Access to residential properties and businesses should always be maintained to reduce stress on local residents and safety fences should be installed at the edge of the construction RoW, where public safety considerations are required.

Arrangements will be made with the community and landowners for replacement of features that are impacted by construction activities.

Mitigation and protective measures for roads is outlined in Section 3.4.2. Consultation is ongoing with the City of Hamilton to determine if there are impacts from the Project to City infrastructure.

The Contractor will be responsible for locating and exposing existing pipelines and utilities on lands that will be affected by excavation and open cut. During construction, machine operators will be informed where electrical transmission lines are present overhead. Lines that may interfere with the operation of construction equipment will be identified with warning poles and red flags.

When crossing Concession 4 West, the Traffic Management Plan (Section 3.4.2) and additional traffic controls should be implemented. Imperial Oil should work with nearby landowners and businesses to develop appropriate mitigation measures for noise, vibration and lighting.

Standard construction mitigation measures will be implemented that include:

- Wood decking may be installed to support continuous construction access during wet soil conditions, and assist in protecting vegetation and seed beds



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

- Erosion and sediment control measures will be installed around soil stockpiles

Net Impacts

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on infrastructure are anticipated.

3.4.5 Air Quality and Noise

Existing Conditions

The landscape within the Study Area is urban, commercial, residential and natural heritage. Urban and commercial operations have the potential to expel air emissions through automobile and equipment use.

According to the MECP's Environmental Noise Guideline (2016), the majority of the landscape along the within the Study Area would be categorized as a Class 2 area, meaning "an area with an acoustical environment that has quality representative of both Class 1 and Class 3 areas" with an acoustical environment dominated by the activities of people, usually road traffic during the day, and evening and night background sound defined by natural environment and infrequent human activity.

Noise sources in the Study Area include those attributed to mining activities on the Lafarge Canada properties. Minor noise sources in the Study Area and surrounding landscape include occasional sounds due to anthropogenic agricultural maintenance activities and occasional sounds due to anthropogenic domestic activities such as property maintenance and recreation.

Potential Impacts

Residential and business properties may experience noise, dust, vibration and equipment exhaust associated with construction activity. During operation, no substantial air or noise emissions are anticipated to occur.

Mitigation and Protective Measures

During construction, motorized construction equipment should be equipped with functioning mufflers and silencers. Company and construction personnel should avoid excessive idling of vehicles; vehicles and equipment should be turned off when not in use unless required for operation. To the greatest extent practical, activities that could create noise should be restricted to daylight hours and adhere to local noise by-laws. Sources of continuous noise, such as portable generators, should be shielded or located to reduce disturbance to residents and businesses.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

The Contractor should implement site practices during construction that are in line with the Environment Canada document 'Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities' (Cheminfo Services Inc., 2005), which may include:

- Maintaining equipment in compliance with regulatory requirements
- Protecting stockpiles of friable material with a barrier or windscreen in the event of dry conditions and dust
- Dust suppression of source areas
- Covering loads of friable materials during transport

Watering for dust control must not result in the formation of puddles, rutting by equipment or vehicles, the tracking of mud onto roads or the siltation of watercourses.

See Section 3.2.1 for mitigation and protective measures for blasting activities.

Net Impacts

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts from air quality and noise are anticipated.

3.4.6 Waste Management and Landfills

There are no waste management facilities, active landfills or closed landfills in the Study Area. Construction activities generate waste that requires appropriate disposal. The closest active landfill is approximately 4.5 km from the Study Area.

Potential Impacts

Improper disposal of waste material generated during construction may result in contamination to soil, groundwater, and/or surface water resources on and off the construction RoW. Litter generated during construction may also become a nuisance to landowners and/or surrounding residents if not contained.

Mitigation and Protective Measures

The Contractor should implement a site-specific waste collection and disposal management plan, which may include:

- Waste materials, sanitary waste and recycling transported off-site by licensed waste contractors.
- The responsible management of fill (see Section 3.2.5).
- Labelling and storage of hazardous and liquid wastes in a secure area that would contain material in the event of a spill.
- Implementation of a waste management program consisting of reduction, reuse, and recycling of materials.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Net Impacts

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts from waste management are anticipated.

3.4.7 Land Use

Existing Conditions

According to the City of Hamilton Official Plan (City of Hamilton 2021a), land within the Study Area is designated as “Extractive Industrial” and “Rural”. According to Section 31.1 permitted uses in rural industrial zones includes “pipeline and pumping station”. The Study Area is located outside of the Niagara Escarpment Plan (Niagara Escarpment Commission, 2020). The lands deemed “Extractive Industrial” are owned and operated by Lafarge Canada.

Potential Impacts

As noted above, oil pipelines are permitted facilities in the various municipal land uses, and thus no impacts to municipal land use designations will occur.

Potential impacts on agricultural and non-agricultural businesses are discussed in Section 3.4.1. Potential impacts on uses of land will be interruption to access or use, including potential increases in traffic during construction.

Mitigation and Protective Measures

Mitigation and protective measures for agricultural soils and for businesses are discussed in Sections 3.2.5 and 3.4.1, respectively.

Consultation has been initiated, and will continue, with Lafarge Canada and the City of Hamilton as well as landowners along the proposed pipeline route in order to identify methods of minimizing disturbance to property and maintaining access to lands, to the extent possible. If temporary workspace is required within CA regulated areas, permits will be obtained from HCA as per O. Reg. 161/06.

Net Impacts

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on land use are anticipated.

3.4.8 Archaeological Resources

Existing Conditions

A Stage 1 Archaeological Assessment (AA) (Appendix E) has been conducted for the Study Area. A copy of the completed Stage 1 AA report has been submitted to the MHSTCI for review and inclusion in the *Ontario Public Register of Archaeological Reports*.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Initial background research included a review of current land use, historic and modern maps and past settlement history. It also involved a review of previously registered archeological resources within 1 km of the Project area and previous archaeological assessments within 50 m.

Overall, the Stage 1 AA determined that approximately 51% of the Study Area retains archaeological potential. Approximately 29.9 % of the Study Area had been previously archaeologically assessed and cleared of further archaeological concerns and 19% was identified as previously disturbed and did not retain archaeological potential.

Potential Impacts

The Stage 1 AA determined that approximately 51% of the Study Area retains potential for the presence of archaeological resources. A map of archaeological potential is provided in Appendix E.

Mitigation and Protective Measures

Based on the findings of the Stage 1 AA, further stages of archaeological assessment (i.e., Stage 2 AA) are required, which will provide for the assessment and mitigation of identified archaeological resources, if any are found. Wherever possible, archaeological sites that are determined to have cultural heritage value and interest should be mitigated in whole or in part by avoidance and preservation. However, if avoidance and preservation is not feasible, mitigation by excavation is an approved alternative. For identified Indigenous sites that could be subject to impact by the Project, Stage 2, 3 and Stage 4 work will include engagement with the appropriate Indigenous communities.

Net Effects

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on archaeological resources are anticipated.

3.4.9 Cultural Heritage Resources

The MHSTCI Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes (the Checklist) was completed for the Study Area. The checklist is used to identify protected and potential cultural heritage resources within the Study Area and make recommendations for future work, as appropriate.

In order to identify cultural heritage resources, the MHSTCI, Ontario Heritage Trust (OHT), and City of Hamilton were consulted. At the provincial level, Karla Barboza, Team Lead, Heritage, with MHSTCI confirmed there are no provincial heritage properties or properties designated by the Minister within or adjacent to the Study Area. As of November 17, 2021, a response is still pending from the OHT.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

At the municipal level, Julian Lee, Assistant Cultural Heritage Planner, with the City of Hamilton, replied that the Study Area contains a registered non-designated property (565 Moxley Road), six inventoried properties (633 Brock Road, 582 Brock Road, 580 Moxley Road, 662 4th Concession Road West, 632 4th Concession Road West, and 677 4th Concession Road West), and one property on the inventory of cemeteries and burial grounds (Glenwood Cemetery). Through consultation with Lafarge Canada, the following information was provided: there is no longer a residence at 582 Brock Road or at 580 Moxley Road, and the properties are part of their licensed quarry approved for extraction.

The Checklist was completed for the Study Area based on background research, agency consultation, and review of historic mapping. Overall, three indicators of cultural heritage value or interest (CHVI) were identified in the Study Area. Results of the checklist are included in Table 3.7 and the completed Checklist is included in Appendix F.

Table 3.7: Screening for Known (or recognized) Cultural Heritage Value According to MHSTCI Checklist

Indicators of Cultural Heritage Value or Interest	Identified within the Study Area
Property identified, designated or otherwise protected under the OHA as being of cultural heritage value	Identified
A National Historic Site (or part of)	Not Identified
Designated under the Heritage Railway Stations Protection Act	Not Identified
Designated under the Heritage Lighthouse Protection Act	Not Identified
Identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office	Not Identified
Located within a United Nations Educational, Scientific and Cultural Organization World Heritage Site	Not Identified
Is subject of a municipal, provincial or federal commemorative or interpretative plaque	Not Identified
Has or is adjacent to a known burial site and/or cemetery	Identified
Is in a Canadian Heritage River watershed	Not Identified
Contains buildings or structures that are 40 or more years old	Identified
Is considered a landmark in the local community or contains any structures or sites that are important in defining the character of the area	Not Identified
Has a special association with a community, person or historical event	Not Identified
Contains or is part of a cultural heritage landscape	Not Identified

Potential Impacts

The Project may have the potential to directly impact heritage resources during construction. A Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment will be completed prior to construction. The report will assess the potential heritage resources, the relationship of each heritage resource to the Project and the impacts of the proposed undertaking on heritage resources. The Report will also provide recommendations pertaining to the mitigation of negative impacts to safeguard these resources during the construction and operation phases of the Project.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Mitigation and Protective Measures

Prior to construction, the above-referenced Cultural Heritage Report will be undertaken and submitted to the MHSTCI for review and comment. The Report will contain mitigation measures for potential impacts, if required.

Net Impacts

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on cultural heritage resources are anticipated.

3.4.10 Indigenous Interests

Existing Conditions

The Ministry of Energy noted in their letter dated April 26, 2021, that the Duty to Consult would not be triggered as a result of the proposed Project. Imperial Oil and Stantec identified potentially interested Indigenous communities in the general area. These Indigenous communities include:

- Mississaugas of the Credit First Nation
- Six Nations of the Grand River (Six Nations of the Grand River Elected Council)
- Six Nations of the Grand River (Haudenosaunee Confederacy Chiefs)

Potential Impacts

There is the potential to disturb culturally significant resources or artifacts. Archaeological surveys could also result in the finding of Indigenous artifacts.

Mitigation and Protective Measures

Imperial Oil has sought input from the identified Indigenous communities and will continue engaging with Indigenous communities as the Project moves forward. Information on the current state of Indigenous engagement will be provided in the application to the OEB.

Mitigation and protective measures for archaeology are discussed in Section 3.4.8.

Net Impacts

By undertaking the above engagement and archaeological assessments, no significant adverse residual impacts on Indigenous interests are anticipated.

3.5 SUMMARY OF RECOMMENDATIONS

Table 3.8 provides a summary of the recommended supplemental studies, mitigation and protective measures identified in Sections 3.2-3.4.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.8: Summary of Potential Impacts and Recommended Mitigation and Protective Measures

Environmental Feature(s)	Potential Impact(s)	Mitigation and Protective Measures
PHYSICAL FEATURES		
Bedrock Geology <i>Section 3.2.1</i>	<p>The planned drill depth will be approximately 2 m below grade at the entry and exit pit locations approximately 15 m below Concession 4 West. The drill path will be designed to utilize stable soil and bedrock. Based on the thin to absent drift thickness along the west end of the proposed pipeline, bedrock may be encountered at the entry and exit locations.</p> <p><u>Open Cut</u></p> <p>If bedrock is encountered during trenching, a hoe-ram will break up the rock to the required trench depth and width. Blasting may also be used to excavate through rock where necessary. Where hoe-ram and blasting are used to excavate bedrock material, potential impacts may include fly rock damage, increased noise, blasting vibration, impacts to nearby wells, and impacts to structural foundations.</p>	<p>Since bedrock may be encountered in some locations, specific mitigation measures are required. Mitigation includes the following:</p> <ul style="list-style-type: none"> • Where excavations of the trench occur in immediate proximity to the roads or road embankments and there exists potential to disturb/damage the road and existing infrastructure, the use of a temporary shoring system such as trench boxes (or a more rigorous shoring system for deeper sections) should be implemented. The trench box system should be designed in accordance with the methods described in the Canadian Foundation Engineering Manual (2006 edition). • The trench box design (or any alternative shoring design) should be carried out by a Professional Engineer retained by the Contractor, licensed to practice in the Province of Ontario, with signed and sealed drawings will be available prior to commencement of the open cut excavations. • The open cut excavations must be conducted in accordance with the requirements of the <i>Occupational Health and Safety Act</i> and Regulations. • Potential presence of weathered zones, soil seams and/or shale interbeds within the bedrock should be considered in the design to address impacts to bedrock. • If blasting is required, the Project team should consider implementing a pre/post blasting well monitoring program. It is essential that blasting be planned well in advance, notification be given to nearby landowners and documentation of existing conditions (e.g. water wells, foundation integrity, etc.) be completed before blasting. Alternatives to blasting must also be investigated.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.8: Summary of Potential Impacts and Recommended Mitigation and Protective Measures

Environmental Feature(s)	Potential Impact(s)	Mitigation and Protective Measures
<p>Physiography and Surficial Geology <i>Section 3.2.2</i></p>	<p>Disturbance to the overburden along the proposed pipeline is anticipated to be limited to the entry and exit pit locations and may cause surface soil erosion. Slumping may occur within the entry and exit pits during construction.</p>	<p>Surface soil erosion can occur in the absence of vegetative cover. Where there is potential for soil erosion, the need for and location of erosion and sediment control (ESC) measures should be determined by an inspector with appropriate qualifications and installed prior to the commencement of work in the area.</p> <p>When land is exposed, the exposure should be kept to the shortest practical period. Natural features should be preserved to the extent practical. Temporary vegetation and mulching should be used to protect areas as appropriate. Where required, natural vegetation should be re-established as soon as practical.</p> <p>The Contractor must obtain adequate quantities of materials to control erosion. Additional supplies should be maintained in a readily accessible location for maintenance and contingency purposes. ESC structures should be monitored to maintain their effectiveness through the life of construction and post-construction rehabilitation.</p> <p>Extreme precipitation events could result in damage to ESC measures which could lead to erosion. When site conditions permit, ESC measures should be repaired and re-installed on erosion susceptible surfaces. If the erosion is resulting from a construction-related activity, the activity should be halted immediately until the situation is rectified.</p> <p>To avoid the entry and exit pits from slumping, pit walls should be sloped and should be monitored during wet conditions. Trench boxes may be required depending on site specific conditions.</p> <p>ESC and stabilization measures should be maintained during construction, restoration and rehabilitation until vegetative cover is established. Where evidence of erosion exists, corrective control measures should be implemented as soon as conditions permit. If a permit is required from HCA, the permit may contain conditions pertaining to ESC.</p>
<p>Hydrogeology <i>Section 3.2.3</i></p>	<p><u>Hydrostatic Testing and Dewatering/Sand-pointing</u></p> <p>A hydrostatic test will be undertaken for the proposed pipeline.</p> <p>Where the entry and exit pits encounter shallow groundwater conditions or following a large precipitation event,</p>	<p><u>Hydrostatic Testing and Dewatering/Sand-pointing</u></p> <p>For groundwater dewatering, the MECP allows registration under the EASR for construction dewatering Projects where groundwater takings will be greater than 50,000 L/day and less than 400,000 L/day; however, should groundwater takings exceed 400,000 L/day, a PTTW may be required from the MECP.</p>



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.8: Summary of Potential Impacts and Recommended Mitigation and Protective Measures

Environmental Feature(s)	Potential Impact(s)	Mitigation and Protective Measures
	<p>removing water (known as dewatering) may be necessary. During dewatering, discharge water will be released to the environment. An uncontrolled discharge of water could cause downstream flooding, erosion, sedimentation, or contamination.</p> <p><u>Private Water Wells</u></p> <p>There are approximately 55 water supply wells within 500 m of the proposed pipeline route, 35 of which are domestic. There are 19 domestic water supply wells within 50 m of the proposed pipeline, 14 of which have been decommissioned. Depending on the proximity to wells, the depth of the well installation and the groundwater levels encountered during excavation, dewatering has the potential to impact water well quality or quantity at some of the overburden supply wells.</p> <p><u>Municipal Water Supply</u></p> <p>A review of the MECP Source Protection Information Atlas (2021), the Study Area is located within a significant groundwater recharge area (SGRA) with a vulnerability score of 6 along the western extent of the proposed pipeline and a score of 4 along the east. These areas correspond to the presence of near surface bedrock and coarse textured deposits along the west and east portions of the pipeline, respectively.</p> <p>Based on <i>the Clean Water Act</i> (2006), there are no significant chemical, pathogen</p>	<p>Municipal water is not available in the area. Water will be brought in and taken out of the site by truck for use in the hydrostatic test.</p> <p>To reduce the potential for erosion and scouring at discharge locations during construction dewatering/sand-pointing and/or hydrostatic testing, energy dissipation techniques should be used. Discharge piping should be free of leaks and should be properly anchored to prevent bouncing or snaking during surging. Protective measures may include dewatering at low velocities, dissipating water energy by discharging into a filter bag or diffuser and utilizing protective riprap or equivalent. If energy dissipation measures are found to be inadequate, the rate of dewatering should be reduced or dewatering discontinued until satisfactory mitigation measures are in place. Discharge should be monitored to make sure that no erosion or flooding occurs.</p> <p>To assess the potential for introduction of contaminated water to soils or bodies of water, testing of hydrostatic and dewatering discharge water should be considered. Testing requirements can be influenced by the nature and quality of the source water used, any additives to the test water, the nature of the pipeline, and pipeline contents. An environmental consultant should be consulted to determine what testing is necessary for the discharge water.</p> <p><u>Private Water Wells</u></p> <p>A private well survey should take place to assess domestic groundwater use near the proposed pipeline and a private well monitoring program may be recommended focusing on residents within 100 m of construction activities with shallow wells who rely on groundwater supply for domestic use.</p> <p><u>Municipal Water Supply</u></p> <p>There are no nearby municipal supply wells, and therefore additional mitigation measures are not required to protect groundwater drinking supply sources.</p> <p>During construction, the primary concern to surface water quality is the potential for a contaminant spill. To address this concern, the following mitigation measures are proposed:</p> <ul style="list-style-type: none"> Refueling of equipment should be undertaken a minimum of 30 m from wetlands and watercourses to reduce potential impacts to surface water and groundwater quality if an accidental spill occurs. If a 30 m refueling distance



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.8: Summary of Potential Impacts and Recommended Mitigation and Protective Measures

Environmental Feature(s)	Potential Impact(s)	Mitigation and Protective Measures
	or dense non-aqueous phase liquids source water threats to municipal supply sources based on the construction or operation of the proposed pipeline.	<p>is not possible, under approval from on-site environmental personnel, special refueling procedures for sensitive areas should be undertaken that include, at a minimum, using a two-person refueling system with one worker at each end of the hose.</p> <ul style="list-style-type: none"> To reduce the impact of potential contaminant spills, the Contractor should implement spill management protocols such as secondary containment of any temporary fuel storage and preparation of a spill response plan. Work should be limited or stopped during and immediately following significant precipitation events (i.e. 100-year storm event), at the discretion of on-site environmental personnel.
<p>Extractive Resources: Aggregates and Petroleum Resources <i>Section 3.2.4</i></p>	<p>The proposed pipeline is adjacent to several active aggregate sites that are currently owned and operated by Dufferin Aggregates and Lafarge Canada.</p> <p>Located to the south and north of the proposed pipeline, the Lafarge Canada Dundas Quarry is one of the largest aggregate sites in Ontario and is comprised of four licensed quarries – as well as an unlicensed area used for storage and processing.</p> <p>The location of the existing natural gas pipeline, being adjacent to active quarries, acts as a constraint to expansion. The relocation of the pipeline will reduce land that is prevented from being developed for aggregate extraction.</p>	<p>Imperial Oil should continue discussions with Lafarge Canada and other quarry operators in the area to better understand potential constraints to their operation.</p>
<p>Soil and Soil Capability <i>Section 3.2.5</i></p>	<p>Agricultural lands are present within the Study Area; however, the proposed pipeline relocation will cross agricultural lands that are owned by Lafarge Canada and these lands have already been approved for extraction as per the Aggregate Resources Act (ARA) license #5473 and ARA license #625711. Where</p>	<p><u>Excess Soil</u></p> <p>It is noted that O.Reg. 406/19 was filed in December 2019 and came into force January 1, 2021. O.Reg. 406/19 includes regulations for the management of soil on-site as well as the movement of excess soils off-site in the province of Ontario, including stockpile size and setback requirements and environmental soil quality characterization requirements prior to the movement of drilling mud and soil off-site. It is recommended that Imperial Oil retain a qualified person for</p>



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.8: Summary of Potential Impacts and Recommended Mitigation and Protective Measures

Environmental Feature(s)	Potential Impact(s)	Mitigation and Protective Measures
	<p>there is interaction with agricultural lands within the Study Area but outside of the ARA license #5473 boundary and ARA license #625711 boundary, there are potential impacts to topsoil as a result of construction including compaction, loss of organic matter and degraded soil structure. No topsoil will be removed from the site. Excess subsoil may be removed from the site.</p> <p>Excavation and construction activities across agricultural land have the potential to affect soil quality and agricultural capability. The movement of heavy machinery on wet soil may cause rutting, compaction, and mixing of topsoil with subsoil. When exposed, soils are more prone to erosion due to the loss of vegetative cover. Improperly salvaged topsoil can result in topsoil and subsoil mixing, compaction, rutting, and erosion, which can potentially decrease crop yields.</p>	<p>environmental site assessment who is knowledgeable in environmental soil quality characterization, as well as O.Reg. 406/19.</p> <p>The Contractor is solely responsible for the location and management of stockpiles on-site as they relate to traffic management, construction staging, and the effective management of construction productivity. With the exception of such variances as may be allowed under O.Reg. 406/19, Soil Rules, and/or site-specific instruments such as Environmental Compliance Approvals (ECAs), stockpiling and storage of soil shall be according to the Soil Rules referenced by O.Reg. 406/19, including, but not limited to, the following:</p> <ul style="list-style-type: none"> • Managed in such a way as to prevent adverse effects relating to noise, dust, mud tracking, leaching, run-off and erosion, and odour or other air impacts. • Stored in stockpiles with total volume of less than 2,500 m³. • Soil of different quality, or from different areas, or that has not yet been sampled is segregated. • Stored more than 30 m away from a waterbody, and more than 10 m away from property boundaries. • Stored in a manner that prevents leaching of contaminants into the groundwater. <p>Materials that are surplus and required to be removed from site for disposal or reuse must be tested in accordance with O.Reg. 406/19, Reg. 347, or receiving site requirements under a site-specific instrument to determine management options. For excess soil, the Contractor Qualified Person (QP) shall determine sampling frequency and analytical parameters as required by O.Reg. 406/19 and Reg. 347, and in consultation with the CA. The Contractor QP shall be responsible for the production of all required documentation per O.Reg. 406/19.</p> <p><u>Wet Soil Shutdown</u></p> <p>To the extent feasible, construction activities should occur during drier times of the year. Lands affected by heavy rainfall events should be monitored for wet soil conditions, to avoid the potential for topsoil and subsoil mixing and loss of structure.</p> <p>If a situation develops that necessitates construction during wet soil conditions, soil protection measures should be implemented, such as confining construction</p>



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.8: Summary of Potential Impacts and Recommended Mitigation and Protective Measures

Environmental Feature(s)	Potential Impact(s)	Mitigation and Protective Measures
		<p>activity to the narrowest area practical, installing surface protection measures, and using wide tracked or low ground pressure vehicles.</p> <p><u>High Winds</u></p> <p>During construction activities, weather should be monitored to identify the potential onset of high wind conditions and to preserve topsoil. If high winds occur, the Contractor should implement protective measures such as:</p> <ul style="list-style-type: none"> • Suspend earth moving operations • Apply dust suppressants or vegetate soil stockpiles • Protect soil stockpiles with a barrier or windscreen <p>In conjunction with the above measures, all required materials and equipment should be readily accessible and available for use as required.</p> <p><u>Soil Stripping</u></p> <p>Topsoil depths should be measured prior to stripping so that the proper depth of topsoil is removed and replaced. Where stripping is undertaken on agricultural lands, topsoil and subsoil should be stripped and stockpiled separately to avoid mixing.</p> <p>If clean-up is not practical during the construction year, it should be undertaken in the year following construction, starting once the soils have sufficiently dried. Interim soil protection measures should be implemented in sensitive areas to stabilize the RoW for over-wintering.</p>
Agricultural Tile Drains <i>Section 3.2.6</i>	As no agricultural tile drains are anticipated to be crossed, no impacts to these resources are anticipated.	As no potential impacts are anticipated, no mitigation or protective measures are required.
Natural Hazards <i>Section 3.2.7</i>	A flooding event during construction could result in construction delays, soil erosion, sedimentation of a watercourse, and damage or loss of construction equipment and contamination of a watercourse	If flooding necessitates a change in the construction schedule, affected landowners and regulatory agencies should be notified and construction should continue at non-affected locations. Temporary workspaces should be located above the floodplain to the extent practical. While construction of the replacement pipeline is not anticipated to occur outside of the Lafarge Canada ARA license #5473 and ARA license #625711 boundaries, in the event that temporary



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.8: Summary of Potential Impacts and Recommended Mitigation and Protective Measures

Environmental Feature(s)	Potential Impact(s)	Mitigation and Protective Measures
	because of equipment entering a watercourse.	workspaces are required within the floodplain area, a permit from HCA will be required.
BIOPHYSICAL FEATURES		
Aquatic Features <i>Section 3.3.1</i>	<p>Construction of the proposed pipeline will not impact fish habitat.</p> <p>Construction of the proposed pipeline may impact a HDF that does not provide contributing or direct fish habitat.</p>	<p>The following general environmental mitigation measures should be taken to mitigate impacts to the headwater drainage feature (HDF) to the extent feasible:</p> <ul style="list-style-type: none"> • Prior to removal of vegetative cover, effective mitigation techniques for erosion and sedimentation should be in place to protect water quality. Disturbance to the area during construction should be limited and grubbing activities should be delayed until immediately prior to grading operations. • Temporary erosion and sediment control measures should be maintained and kept in place until work near the HDF has been completed and the area has been stabilized. Temporary sediment control measures should be removed at the completion of the work but not until permanent erosion control measures have been established (i.e., vegetative cover). • Construction material, excess material, construction debris and empty containers should be stored a minimum of 30 m from the HDF, where practical. • Equipment maintenance and refueling should be controlled to prevent entry of petroleum products or other deleterious substances, including any debris, waste, rubble, or concrete material, into the HDF, unless otherwise specified in the contract. • Deleterious substances (fuel, oil, spoil) should be stored a minimum of 30 m from the HDF. Any such material that inadvertently enters a watercourse should be removed in a manner satisfactory to the environmental inspector. • Following construction, any disturbed vegetation should be restored to pre-construction conditions to the extent possible in accordance with environmental permits. <p><u>Permitting</u></p> <p>The Project will not cause a harmful alteration disruption or destruction (HADD) of fish or fish habitat and will therefore not be in contravention of the federal <i>Fisheries Act</i>. The Project poses no risk to fish and fish habitat and can proceed without review by DFO.</p>



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.8: Summary of Potential Impacts and Recommended Mitigation and Protective Measures

Environmental Feature(s)	Potential Impact(s)	Mitigation and Protective Measures
		<p>The Project will not result in the killing or harming of a protected aquatic species, or damage or destruction of their habitat (i.e., residences), and will not be subject to the provincial ESA or the federal SARA.</p> <p>The pipeline route will be located outside of the regulated boundary of the HCA. A permit under O. Reg. 161/06 may be required for work in the headwater drainage feature or wetland prior to construction activities.</p>
<p>Designated Natural Areas and Vegetation <i>Section 3.3.2</i></p>	<p>The proposed pipeline construction will not result in the direct removal of designated natural areas.</p> <p>In areas where natural vegetation is present within or adjacent to the proposed pipeline route, potential impacts include the removal of native vegetation, introduction or spread of invasive species, and indirect effects such as dust, erosion, and accidental spills.</p>	<p>Environmental mitigation and protective measures during construction include the following:</p> <ul style="list-style-type: none"> • Where the RoW abuts a woodland on one side, detailed design should avoid the feature where possible. • Determine municipal requirements or permits for tree removal outside of the Lafarge Canada ARA license #5473 and ARA license #625711 boundaries (if required) prior to construction. • Clearing should be reduced/avoided to the extent possible in sensitive areas such as woodlots, along drainage features and in areas of significant groundwater recharge. • The limits of clearing should be surveyed and staked in the field, to allow for the protection of off-site natural areas and vegetation. • All brush and trees should be felled (if required) within the Project footprint. • Clearing should be done during dry soil conditions to the extent practical to limit disturbance to vegetation and terrain. • Mitigation measures for aquatic features (see Section 3.3.1 above) should be implemented to address potential impacts to wetlands. • Precautionary measures (e.g., equipment washing before site access) may be necessary to mitigate for the spread of non-native species. • A re-vegetation program should be initiated for all vegetated temporary work areas. Imperial Oil should consult with Lafarge Canada to confirm replanting plans. • Seeding of the disturbed temporary work areas and permanent easement should be done with a native seed mix. Replaced soils should contain native seed bank, facilitating successful revegetation. • One year following construction, planted vegetation should be inspected for survival; in areas of severe dieback, dead and diseased planted vegetation should be replaced.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.8: Summary of Potential Impacts and Recommended Mitigation and Protective Measures

Environmental Feature(s)	Potential Impact(s)	Mitigation and Protective Measures
		Mitigation and protective measures are outlined in Section 3.2.5 for dust and erosion and Section 3.3.2 for accidental spills.
Wildlife, Wildlife Habitat and Species at Risk <i>Section 3.3.3</i>	<p>Potential impacts on wildlife and wildlife habitat from construction include direct mortality from construction vehicles, habitat destruction through vegetation removal, habitat degradation through spills and sensory disturbance of wildlife during construction. Colonial nesting birds are particularly sensitive to sensory disturbance.</p> <p>The proposed pipeline route avoids woodland habitat that is suitable for SAR and SOCC. However, limited tree clearing, if required, would have the potential to directly impact butternut and bat SAR.</p>	<p>Environmental mitigation and protective measures during construction include the following:</p> <ul style="list-style-type: none"> • Detailed design of the proposed pipeline should be reviewed to avoid and reduce the likelihood of impact on wildlife habitat to the extent possible, and in particular habitats of Endangered, Threatened, Special Concern and rare species. • Equipment and vehicles should yield the RoW to wildlife. • Fencing should be erected around deep excavations to prevent wildlife entrapment. • The Contractor should inform their personnel to not threaten, harass or injure wildlife. • If wildlife are encountered during construction, personnel are required to move away from the animal and wait for the animal to move off the construction site. • A pre-construction survey should be completed for butternut trees within 25m of the work zones. If butternuts are found and cannot be avoid, authorization through Section 23.7 of Ontario Regulation 242/08 under the ESA may be required. • If limited tree removal or pruning is required, it should not occur between April 1 and October 1 to avoid direct impacts to bats. Consultation with MECP is recommended to confirm requirements under the ESA. • Silt fencing is recommended along the perimeter of the excavation to exclude reptiles and amphibians during their active period (approximately April 1 – October 31), as well as prevent sedimentation. • A pre-construction survey for colonial nesting birds (i.e. herons) should be completed. If found within one kilometer of the proposed pipeline route, heavy construction should be avoided during the breeding season (March 15 – August 1), as it may result in sensory disturbance to the colony. • Construction activities with the potential to remove migratory bird habitat, such as vegetation clearing, should be avoided during the breeding season which is generally from April 1- August 31 in southern Ontario (Environment Canada 2021). If vegetation clearing activities are unavoidable during this window, a mitigation program should be developed, which includes measures



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.8: Summary of Potential Impacts and Recommended Mitigation and Protective Measures

Environmental Feature(s)	Potential Impact(s)	Mitigation and Protective Measures
		<p>to reduce and avoid impacts to migratory birds and their nests (Government of Canada 2021). This program should include preventative and mitigation measures but may also include avoidance of clearing during key sensitive periods and in key locations.</p> <ul style="list-style-type: none"> If SAR are encountered during the proposed pipeline replacement, work will stop and consultation with the MECP regarding the potential need for a permit under the ESA and/or species-specific mitigation will be conducted. <p>Mitigation and protective measures are outlined in Section 3.3.2 for vegetation removal and Section 3.3.2 for accidental spills.</p>
SOCIO-ECONOMIC ENVIRONMENT		
<p>Employment and Business <i>Section 3.4.1</i></p>	<p>Project construction is expected to take place in the Summer of 2022 and take an estimated 3 months to complete. Project demands for labour and goods and services can result in both beneficial and adverse effects. Positive effects may not be evenly distributed among populations, with some residents in a better position to receive economic benefits than others. Similarly, adverse effects may affect some residents more than others.</p> <p>Residual effects on employment are related to the Project's labour demand compared to the labour supply. Three types of employment are considered:</p> <ul style="list-style-type: none"> Direct employment: labour that is hired directly for the Project Indirect employment: labour hired by companies to produce and provide goods and services needed for the Project Induced employment: labour hired by industries that produce and provide consumer items and services 	<p>It is expected that the Project will generally result in positive effects on employment by employing local and Indigenous people, and by reducing the unemployment rate in the region. These positive effects do not require mitigation, but Imperial Oil should identify and implement various mechanisms to enhance Project benefits.</p> <p>The potential effects of the Project because of employment opportunities and purchasing local goods and services is expected to be positive during construction and operation, so no mitigation will be required.</p>



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.8: Summary of Potential Impacts and Recommended Mitigation and Protective Measures

Environmental Feature(s)	Potential Impact(s)	Mitigation and Protective Measures
	<p>purchased by people who are directly or indirectly employed by the Project</p> <p>Labour conditions will be affected by direct, indirect and induced employment during all Project phases.</p> <p>The Project could affect business through purchases of labour, goods and services from local businesses, including businesses owned by Indigenous peoples, and will result in increased local employment income and municipal government revenue. Local businesses will likely benefit from supplying the Project with goods and services.</p>	
Community Services and Infrastructure <i>Section 3.4.2</i>	<p>The presence of temporary workers in the local communities during the construction period has the potential to increase the demand for housing and local community services and infrastructure. Non-local Project workers are expected to stay in temporary accommodations, including hotels, motels, and campgrounds. They may also choose to rent houses or apartments. The vacancy rate for temporary rentals will likely be able to accommodate the temporary increase. The short duration that the workers will reside near any one community, as well as the structure of the work shifts, will limit the need for workers to use the services and infrastructure in local communities.</p> <p>The transportation of Project goods, services and workers has the potential to lead to increased use of existing transportation infrastructure. Also,</p>	<p>Project employees might require medical attention while staying in the area. The Contractor and Imperial Oil should have emergency response equipment and trained personnel on-site during construction. In addition, an Emergency Response Plan will be developed and implemented, which will address field health services, emergency call-out procedures and fire response plans. Safety fencing will be used where necessary to separate the work area.</p> <p>Environmental mitigation and contingency and management plans will be in place to reduce the likelihood of emergency events and to prepare for the management of emergency events on site. If an emergency incident were to occur, it is anticipated that the comprehensive mitigation, contingency plans, and safety strategies will result in a localized and low-intensity response.</p> <p>A Traffic Management Plan should be in place for all roads affected by construction, which at a minimum outline measures to:</p> <ul style="list-style-type: none"> • Control the movement of materials and personnel to and from the construction site • Post signs to warn oncoming motorists of construction activity • Control traffic at road crossings • Reduce on-road disturbance and land closures • Store equipment as far from the edge of the road as practical • Install construction barricades at road crossings



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.8: Summary of Potential Impacts and Recommended Mitigation and Protective Measures

Environmental Feature(s)	Potential Impact(s)	Mitigation and Protective Measures
	<p>increased traffic volumes along local road networks could increase travel times and reduce road safety, which might lead to increased use of local emergency services due to potential vehicle accidents and workplace accidents. In addition, the production of Project-related waste could place additional stress on the capacity of local landfills.</p> <p>Potential impacts to roads are outlined in Sections 3.4.3 and 3.4.4</p>	<p>Traffic disruptions during construction will be reduced by adherence to the Traffic Management Plan. Guidelines will be developed for vehicular use on the RoW and associated access roads to avoid traffic congestion and accidents. Access to existing transportation infrastructure will be addressed through standard mitigation and will be reversible once the construction phase ends. Additional mitigation and protective measures for roads are outlined in Section 3.4.3 and 3.4.4.</p> <p>The capacity of waste disposal sites will be considered and if Project needs are not easily accommodated, alternative disposal locations will be considered.</p> <p>Additional consultation with residents and businesses adjacent to the proposed pipeline route will be held in advance of construction commencement. Contact information for a designated Imperial Oil representative should be available to address questions and concerns during construction. Consultation has been initiated and will continue with municipal personnel.</p>
<p>Culture, Tourism and Recreational Facilities <i>Section 3.4.3</i></p>	<p>Construction activity will temporarily affect the landscape of the construction area and could impede property access. Potential safety concerns exist at locations where properties, residents and vehicles come in proximity to construction activities.</p> <p>Potential increases in noise, dust, exhaust (see Section 3.4.5) and traffic congestion on roads could also cause stress and affect how people perceive their quality of life. Increased traffic could also impede customer access to businesses.</p>	<p>Mitigation and protective measures for air quality and noise are outlined in Section 3.4.5.</p> <p>Access to businesses should always be maintained to reduce stress on local residents and safety fences should be installed at the edge of the construction RoW, where public safety considerations are required.</p> <p>A Traffic Management Plan should be implemented to reduce effects of Project-related traffic on traffic volumes, which could reduce access to businesses (see Section 3.4.2). In addition, Imperial Oil should work with landowners to address specific concerns they may have regarding monetary compensation and their property, such as access and disruption to business.</p> <p>While pipeline construction activities have the potential to temporarily affect the local landscape, restoration of the construction area will leave little evidence that a pipeline exists in the area.</p> <p>Additional consultation with residents and businesses along and adjacent to the proposed pipeline route will take place in advance of construction activity. Imperial Oil should develop an issues resolution framework to help resolve stakeholder issues that may arise during Project construction and operation, and to select the appropriate mitigation measures to resolve these issues.</p>



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.8: Summary of Potential Impacts and Recommended Mitigation and Protective Measures

Environmental Feature(s)	Potential Impact(s)	Mitigation and Protective Measures
Infrastructure <i>Section 3.4.4</i>	<p>Construction activity has the potential to temporarily affect access roads and driveways and landscaping features to residences and businesses.</p> <p>The proposed Project will be constructed within municipal road RoW's and a new Lafarge Canada Canada easement with some temporary lands required for construction purposes. Where temporary lands are required limited impacts to residences and businesses may occur.</p> <p>The proposed pipeline has the potential to interact with roads, hydroelectric lines, and buried and overhead utilities. Potential impacts include damage to the infrastructure and harm to personnel.</p> <p>The crossing of Concession 4 West will be completed by way of open cut. This has the potential to produce extended periods of noise and vibration. There is also the possibility of extended work hours and the need for construction lighting (due to low light conditions).</p>	<p>Access to residential properties and businesses should always be maintained to reduce stress on local residents and safety fences should be installed at the edge of the construction RoW, where public safety considerations are required.</p> <p>Arrangements will be made with the community and landowners for replacement of features that are impacted by construction activities.</p> <p>Mitigation and protective measures for roads is outlined in Section 3.4.2. Consultation is ongoing with the City of Hamilton to determine if there are impacts from the Project to City infrastructure.</p> <p>The Contractor will be responsible for locating and exposing existing pipelines and utilities on lands that will be affected by excavation and open cut. During construction, machine operators will be informed where electrical transmission lines are present overhead. Lines that may interfere with the operation of construction equipment will be identified with warning poles and red flags.</p> <p>When crossing Concession 4 West, the Traffic Management Plan (Section 3.4.2) and additional traffic controls should be implemented. Imperial Oil should work with nearby landowners and businesses to develop appropriate mitigation measures for noise, vibration and lighting.</p> <p>Standard construction mitigation measures will be implemented that include:</p> <p>Wood decking may be installed to support continuous construction access during wet soil conditions, and assist in protecting vegetation and seed beds</p> <p>Erosion and sediment control measures will be installed around soil stockpiles</p>



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.8: Summary of Potential Impacts and Recommended Mitigation and Protective Measures

Environmental Feature(s)	Potential Impact(s)	Mitigation and Protective Measures
Air Quality and Noise <i>Section 3.4.5</i>	Residential and business properties may experience noise, dust, vibration and equipment exhaust associated with construction activity. During operation, no substantial air or noise emissions are anticipated to occur.	<p>During construction, motorized construction equipment should be equipped with functioning mufflers and silencers. Company and construction personnel should avoid excessive idling of vehicles; vehicles and equipment should be turned off when not in use unless required for operation. To the greatest extent practical, activities that could create noise should be restricted to daylight hours and adhere to local noise by-laws. Sources of continuous noise, such as portable generators, should be shielded or located to reduce disturbance to residents and businesses.</p> <p>The Contractor should implement site practices during construction that are in line with the Environment Canada document 'Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities' (Cheminfo Services Inc., 2005), which may include:</p> <ul style="list-style-type: none"> • Maintaining equipment in compliance with regulatory requirements • Protecting stockpiles of friable material with a barrier or windscreen in the event of dry conditions and dust • Dust suppression of source areas • Covering loads of friable materials during transport <p>Watering for dust control must not result in the formation of puddles, rutting by equipment or vehicles, the tracking of mud onto roads or the siltation of watercourses.</p> <p>See Section 3.2.1 for mitigation and protective measures for blasting activities.</p>
Waste Management and Landfills <i>Section 3.4.6</i>	Improper disposal of waste material generated during construction may result in contamination to soil, groundwater, and/or surface water resources on and off the construction RoW. Litter generated during construction may also become a nuisance to landowners and/or surrounding residents if not contained.	<p>The Contractor should implement a site-specific waste collection and disposal management plan, which may include:</p> <ul style="list-style-type: none"> • Waste materials, sanitary waste and recycling transported off-site by licensed waste contractors. • The responsible management of fill (see Section 3.2.5). • Labelling and storage of hazardous and liquid wastes in a secure area that would contain material in the event of a spill. • Implementation of a waste management program consisting of reduction, reuse, and recycling of materials.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.8: Summary of Potential Impacts and Recommended Mitigation and Protective Measures

Environmental Feature(s)	Potential Impact(s)	Mitigation and Protective Measures
Land Use <i>Section 3.4.7</i>	As noted above, oil pipelines are permitted facilities in the various municipal land uses, and thus no impacts to municipal land use designations will occur. Potential impacts on agricultural and non-agricultural businesses are discussed in Section 3.4.1. Potential impacts on uses of land will be interruption to access or use, including potential increases in traffic during construction.	Mitigation and protective measures for agricultural soils and for businesses are discussed in Sections 3.2.5 and 3.4.1, respectively. Consultation has been initiated, and will continue, with Lafarge Canada and the City of Hamilton as well as landowners along the proposed pipeline route in order to identify methods of minimizing disturbance to property and maintaining access to lands, to the extent possible. If temporary workspace is required within CA regulated areas, permits will be obtained from HCA as per O. Reg. 161/06.
Archaeological Resources <i>Section 3.4.8</i>	The Stage 1 AA determined that approximately 51% of the Study Area retains potential for the presence of archaeological resources.	Based on the findings of the Stage 1 AA, further necessary stages of archaeological assessment (i.e., Stage 2 AA) are required, which will provide for the assessment and mitigation of identified archaeological resources, if any are found. Wherever possible, archaeological sites that are determined to have cultural heritage value and interest should be mitigated in whole or in part by avoidance and preservation. However, if avoidance and preservation is not feasible, mitigation by excavation is an approved alternative. For identified Indigenous sites that could be subject to impact by the Project, Stage 2, 3 and Stage 4 work will include engagement with the appropriate Indigenous communities.
Cultural Heritage Resources <i>Section 3.4.9</i>	The Project may have the potential to directly impact heritage resources during construction. A CHAR will be completed prior to construction. The report will assess the potential heritage resources, the relationship of each heritage resource to the Project and the impacts of the proposed undertaking on heritage resources. The Report will also provide recommendations pertaining to the mitigation of negative impacts to safeguard these resources during the construction and operation phases of the Project.	Prior to construction, the above-referenced CHAR will be undertaken and submitted to the MHSTCI for their review and comment. The Report will contain mitigation measures for potential impacts, if required.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Impact Identification, Assessment and Mitigation
January 6, 2022

Table 3.8: Summary of Potential Impacts and Recommended Mitigation and Protective Measures

Environmental Feature(s)	Potential Impact(s)	Mitigation and Protective Measures
Indigenous Interests <i>Section 3.4.10</i>	There is the potential to disturb culturally significant resources or artifacts. Archaeological surveys could also result in the finding of Indigenous artifacts.	Imperial Oil has sought input from the identified Indigenous communities and will continue engaging with Indigenous communities as the Project moves forward. Information on the current state of Indigenous engagement will be provided in the application to the OEB. Mitigation and protective measures for archaeology are discussed in Section 3.4.8.



4.0 ROUTING

4.1 THE PROCESS

The route selection process was undertaken in accordance with the OEB Environmental Guidelines which identify the environmental and socio-economic features, and the routing principles, to be considered. The proposed pipeline replacement parallels Brock Road, turning east down Concession 4 West in the road right-of-way (RoW). The drill entry and exit points are located in the existing easement. The drill path is located in both the existing easement and the proposed new easement. The location of the proposed pipeline route and alternative route were determined by considering the confines of available space and the tie-in locations to the existing pipeline. Routing also considered socio-economic constraints, environmental considerations, and constructability while using the most reasonably direct route.

4.2 ROUTING PARAMETERS

4.2.1 Study Area

The Study Area is the area within which direct interactions with the socio-economic and natural environment could occur. It is within this area that desktop information on socio-economic and environmental features has been collected. The tie in points (drill entry and exit pits) of the replacement pipeline defined the Study Area boundaries with a 500 m buffer applied to these locations and the preferred route.

Study Area boundaries were established by considering the potential impacts of the route on important biophysical and socio-economic factors that may be affected by the Project.

The Study Area is shown on Figure 1, Appendix A.

4.2.2 Routing Objectives

The overarching objective in the route selection process is that the selected route presents the least potential for adverse environmental and socio-economic impacts. The following principles support that objective:

1. Routes should follow a reasonably direct path between end-points to reduce length; in general, a shorter route will help eliminate or reduce the extent of most potential environmental and socio-economic impacts.
2. Routes should avoid sensitive environmental and socio-economic features wherever practicable; where such features cannot be avoided, routes should be located to reduce potential impacts.
3. Existing linear infrastructure should be used or paralleled to the greatest extent feasible to reduce impacts on previously undisturbed environmental and socio-economic features and to limit constraints on future land development.



4. Where new easements are required, existing lot and property lines should be followed to the extent feasible to avoid deviations into previously undisturbed environmental and socio-economic features.

4.2.3 Environmental and Socio-Economic Opportunities and Constraints

The route selection process was completed with consideration of the OEB Environmental Guidelines (2016). Chapter 4 of the OEB Environmental Guidelines (2016), 'Route or Site Selection', outlines the environmental and socio-economic features that should be considered during route evaluation.

A geographical information system (GIS)-based environmental inventory was compiled to identify existing features in the Study Area. Once the inventory was complete, Stantec classified the features as either pipeline routing constraints or opportunities.

Environmental constraints are existing features that meet the following criteria:

- The feature would require site-specific mitigation measures to reduce potential effects.
- The feature has been selected or designated for protection (e.g., wetlands).
- The feature has been recognized through local, regional, provincial, or federal policy, plan, or statute, or is otherwise valued as an environmental or socio-economic resource.

Environmental opportunities are existing features, such as road allowances, property lines or existing linear infrastructure, which provide a suitable location for the alignment of a pipeline.

Existing features were identified using relevant published literature, maps and digital data, and discussions with agencies and municipalities. The location and extent of environmental and socio-economic features are outlined in Section 3 of this ER and are illustrated in Appendix C, Figures C-1 – C1-13.

Pipeline routing opportunities are limited to the existing municipal road RoW. The pipeline routing constraints present are Lafarge Canada owned lands zoned for mining purposes north of Concession 4 West and south of the existing pipeline, engineering and constructability, and environmental features such as a woodlot east of the Concession 4 West and Moxley Road, a Provincially Significant Wetland (PSW) northeast of the Study Area and the potential for geological hazards along a segment of the north side of Concession 4 West.

4.3 IDENTIFY PREFERRED ROUTE

The routing objectives were considered by Imperial Oil and based on the Study Area, and environmental and socio-economic constraints and opportunities. Two pipeline routes were considered for the proposed Project; these two routes were deemed to be the proposed pipeline route and the alternative route (Figure 2, Appendix A). While the constraints and opportunities of both routes were very comparable, it was determined that constructability issues could arise if the alternative pipeline route was carried forward, due to the alternative pipeline routes proximity to the active Lafarge Canada quarry. Construction practices in close proximity the active quarry could create potentially unstable soil conditions. Therefore,



the proposed pipeline route, which crosses back to the south side of Concession 4 West and avoids potential proximity issues with the active quarry, was carried forwarded as the preferred route.

The preferred route is approximately 2 km long and will be constructed in municipal road RoWs and a new easement on Lafarge Canada owned property. The location of the western tie-in is the entry point approximately 175 m south of the intersection of Brock Road and Concession 4 West. The eastern tie-in is the exit point located approximately 190 south of Concession 4 West.

4.4 CONFIRMATION OF THE PREFERRED ROUTE

Input on the preferred route was sought through consultation (see Section 3). No feedback was received that resulted in a revision to the preferred route location. Based on the environmental and socio-economic factors as outlined in Section 2.3, as well as constructability and engineering factors, the preferred route was confirmed. The preferred route is currently illustrated within a general location. Imperial Oil will undertake detailed design to determine the exact location of the running line, permanent easement for the section of pipeline that is to be constructed outside of the municipal road RoW along the eastern extent of the proposed pipeline, and temporary land use requirements. Detailed design will also be influenced by supplemental studies (including environmental studies) and site-specific requests from landowners and agencies. In general, this micro-siting exercise will seek to avoid sensitive natural features to the extent practicable while considering utilities and infrastructure.



5.0 CUMULATIVE EFFECTS ASSESSMENT

The recognition of cumulative effects assessment as a best practice is reflected in many regulatory and guidance documents. Regarding the development of hydrocarbon pipelines in Ontario, the *OEB Environmental Guidelines* (2016) note that cumulative effects of pipeline construction should be identified and discussed in the ER as an integral part of the assessment.

Building upon the intent of the *OEB Environmental Guidelines* (2016), the OEB has specified that only those effects that are additive or that interact with effects that have already been identified as resulting from the Project are to be considered under cumulative effects. In such cases, it will be necessary to determine whether these effects warrant mitigation measures such as alterations in routing, timing of construction, or other measures that can address the cumulative effects. The cumulative effects assessment (CEA) has been prepared with consideration of this direction from the OEB.

5.1 METHODOLOGY

This assessment describes the potential cumulative effects resulting from the interaction of residual effects of the construction and operation of the proposed pipeline with the effects of other unrelated Projects. The other Projects assessed are those that are either existing or approved and that have a high likelihood of proceeding.

Cumulative effects include the temporal and spatial accumulations of change that occur within an area or system due to past, present, and future activities. Change can accumulate within systems by either an additive (i.e., cumulative) or interactive (i.e., synergistic) manner. Positive residual effects, such as the continued supply of oil, employment or in property taxes, have not been assessed in the CEA.

By applying the principles of avoidance, minimization, and compensation to limit Project-specific effects, potential adverse residual effects on environmental and socio-economic features have been greatly limited before accounting for the effects of other unrelated Projects.

The cumulative effects assessment methodology is designed to evaluate and manage the additive and interactive effects from the following sources:

- Existing infrastructure, facilities, and activities as determined from available data sets
- The proposed pipeline
- Future activities where the undertaking will proceed, or has a high probability of proceeding

Although rare in occurrence, it is plausible that accidents or emergency events may arise due to an unforeseen chain of events during the Project's construction or operational life. Due to the rarity and magnitude of such events, they have not been assessed here, as they are extreme in nature when compared to the effects of normal construction and operation activities and require separate response plans.



5.2 STUDY BOUNDARIES

Spatial

To make assumptions about the magnitude and probability of effects, an approximate 100 m boundary around the proposed pipeline route was used for the CEA. The 100 m boundary has been found, through previous experience with pipeline construction, to be appropriate for the most common net effects. The boundary selected is considered conservative in terms of managing both effects and risks in that it considers all those features and areas that could be affected by construction.

Temporal

The temporal boundaries for the CEA reflect the nature and timing of Project activities, and the availability of information surrounding future Projects with a high probability of proceeding. The Project schedule identifies three key milestone activities:

1. ER and technical design – 2021/2022
2. Construction – 2022 (spring and summer)
3. Operation and Maintenance – 2022 to 2072*

**Fifty years of operation is used as an assumption, although the pipeline may be operational beyond fifty years.*

Based upon these milestone activities, two time periods were selected for evaluation: 2022 and 2024. The year 2022 was selected to represent the construction period, and the year 2024 was selected to represent the operation and maintenance period. Forecasting beyond 2024 increases the uncertainty in predicting whether Projects will proceed, and the effects associated with these Projects.

5.3 PROJECT INCLUSION LIST

The Project inclusion list was developed by reviewing publicly available information for Projects and activities with the potential for effects to interact with the identified effects of the proposed pipeline within the spatial and temporal study boundaries. The following resources were reviewed:

- Impact Assessment Agency of Canada, Canadian Impact Assessment Registry (IAAC, 2021)
- Government of Ontario, Environmental Assessment Projects by Category (Government of Ontario, 2021)
- MTO, Ontario's Highways Program Interactive Map (2016-2024) (MTO, 2020)
- Canadian Energy Regulator, Major Facilities Applications (CER, 2021)
- City of Hamilton 2021-2022 Capital Construction Projects (City of Hamilton, n.d.)
- OEB Applications Currently Before the Board (facilities applications only) (OEB, 2021)
- Hamilton's Truck Route Master Plan (City of Hamilton, 2021)



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Cumulative Effects Assessment
January 6, 2022

Based on the review of publicly available resources, the Project inclusion list in Table 5.1 included the following Projects for consideration of cumulative effects:

Table 5.1: Project Inclusion List for Cumulative Effects

Project Name	Project Location	Proponent	Schedule	Project Description	Interaction with the Proposed Pipeline
Hamilton - Truck Route Master Plan (TRMP)	City of Hamilton along Concession Road 4 from Highway 6 to Brock Road	City of Hamilton	Currently the Project is undergoing a second round of public and stakeholder consultation. According to the Project website. The TRMP report is anticipated to be finalized in Q3 of 2021. No construction timelines have been provided at this time.	The City of Hamilton TRMP is a review of Hamilton's existing truck route network. The purpose of the Plan was to evaluate current and Projected truck-route traffic and develop practical solutions. The work on the segment of Concession Road 4 from Highway 6 to Brock Road will include traffic control improvements, segment improvements, and road reconstruction.	Potential for traffic management issues and congestion due to construction vehicles.

In addition to the above, it is assumed that on-going improvements, upgrades and maintenance to municipal infrastructure such as bridges, culverts, drains or roads will occur within the spatial and temporal study boundaries.

5.4 ANALYSIS OF CUMULATIVE EFFECTS

Sections 4.2-4.4 of the ER consider the potential impacts of the Project on specific features and conditions and propose mitigation and protective measures to eliminate or reduce the potential impacts. The cumulative effects assessment evaluates the significance of residual impacts (after mitigation) of the Project along with the effects of other unrelated Projects.

5.4.1 Construction – Spring and Summer 2022

Residual Project impacts which may occur during Project construction are outlined in Sections 4.2-4.4. To consider the additive and interactive effects at their maximum intensity, the cumulative effects assessment assumes that construction of other unrelated Projects and the proposed pipeline construction will occur concurrently.

Potential cumulative effects resulting from the proposed pipeline construction and the concurrent Projects are additive effects on soil, vegetation, wildlife and wildlife habitat, air quality and the acoustic environment.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Cumulative Effects Assessment
January 6, 2022

Soil

Soil erosion and reduced soil capability is a potential residual effect associated with construction of the Project. Mitigation and protective measures for soil are outlined in Section 3.2.2. Provided that concurrent Projects follow mitigation measures similar to those outlined in this report, the probability of erosion control failure occurring concurrently is low and based on the nature of the proposed Projects the magnitude of such an event would be low. As such, adverse cumulative residual effects on the natural environment from erosion are not anticipated to be significant, and cumulative effects on soil capability are not anticipated to occur.

Vegetation

Where there is natural vegetation within or adjacent to the proposed pipeline route, potential impacts include the removal of native vegetation, and indirect effects such as dust, erosion, and accidental spills. However, with the implementation of the mitigation and protective measures outlined in this report, such as vegetation replanting, and provided that concurrent Projects follow mitigation measures similar to those outlined in this report, adverse cumulative residual effects on vegetation are not anticipated to be significant.

Wildlife and Wildlife Habitat

Potential residual effects on wildlife and wildlife habitat associated with construction of the Project are accidental direct mortality, habitat removal and sensory disturbance. Mitigation and protective measures for wildlife and wildlife habitat are outlined in Section 3.3.3. In the event of Project-related wildlife deaths, the NDMNRF and/or MECP will be contacted. If mortality occurs between concurrent Projects for similar species, the Ministry will be able to note the occurrences and coordinate with Imperial Oil to adjust construction activities. Potential cumulative effects resulting from sensory disturbance (i.e., noise, air pollution and dust) are discussed below.

Provided that the above measures are undertaken, and provided that concurrent Projects follow mitigation measures similar to those outlined in this report, adverse cumulative residual effects on wildlife and wildlife habitat will be of low probability and will be mitigated as coordinated through the MECP, and therefore are not anticipated to be significant.

Air Quality and Acoustic Environment

Potential residual effects on air quality associated with construction of the Project and concurrent Projects are an increase in noise and air pollutants from operation of vehicles and equipment, and an increase in dust from construction activities. Mitigation and protective measures for air quality and the acoustic environment are outlined in Section 3.4.5. Provided that the concurrent Projects follow mitigation measures similar to those outlined in this report, cumulative effects will be of low magnitude and reversible. Therefore, adverse residual cumulative effects on air quality and the acoustic environment are not anticipated to be significant.



5.4.2 Operation and Maintenance – Year 2024

Development and maintenance activities which have a probability of proceeding during operation and maintenance of the Project include:

- Road works: Future road rehabilitation and resurfacing
- Water works: Future installation of water and wastewater pipelines
- Pipeline construction and maintenance: Future pipeline construction and maintenance of existing hydrocarbon pipelines

Operation and maintenance activities undertaken by Imperial Oil will be completed in a manner that considers potential impacts on natural heritage and socio-economic environment. Appropriate mitigation measures will be developed and implemented based on the proposed maintenance work. Imperial Oil will obtain all necessary agency permits and approvals, as required. Given the limited scale of impact of any potential operation and maintenance activities, it is anticipated that residual impacts will be minimal and that should any interaction occur with other Projects, significant adverse residual effects are not anticipated to be significant.

5.5 SUMMARY OF CUMULATIVE EFFECTS

The potential cumulative effects of the Project were assessed by considering development that has a high probability of proceeding just prior to or concurrent with construction of the Project. An approximate 100 m boundary around the Project site was used to assess the potential for additive and interactive effects of the Project and other developments on environmental and socio-economic features.

Municipal Projects may contribute to cumulative effects within the study boundaries. Improvements to municipal infrastructure such as bridges, culverts, drains or roads may occur during the operational phase of the Project. The cumulative effects assessment determined that, provided the mitigation and protective measures outlined in this report are implemented and assuming that concurrent Projects implement similar mitigation and protective measures, potential cumulative effects are not anticipated to be significant.



6.0 MONITORING AND CONTINGENCY PLANS

6.1 MONITORING

The primary objective of compliance and effects monitoring is to check that mitigation and protective measures are effectively implemented and to measure the impacts of activities associated with construction on environmental and socio-economic features. Ultimately, the knowledge gained from monitoring is used to avoid or reduce issues which may arise during construction of subsequent pipeline Projects.

Previous pipeline construction experience, and a review of post-construction monitoring reports from other Projects, indicates that impacts from pipeline construction are for the most part temporary. The mitigation and protective measures to eliminate or reduce impacts are well known and have been shown to be effective. Accordingly, Imperial Oil should adhere to the following general monitoring practices:

- Trained personnel should be on-site to monitor construction and should be responsible for checking that the mitigation and protective measures and monitoring requirements within the ER are executed. Imperial Oil should implement an orientation program for inspectors and Contractor personnel to provide information regarding Imperial Oil's environmental program and commitments, as well as safety measures;
- Recommendations and commitments made in this ER and other applicable permits and reports should be incorporated into clearing and construction activities. The commitments of this ER and other permits and reports should become part of the contract specification with the Contractor selected to construct the Project, as noted in section 5.8.4 of the OEB Environmental Guidelines;
- A walking inspection of the entire pipeline route should be done approximately one year after construction to determine whether areas require further rehabilitation. Additional rehabilitation measures should be completed as necessary, and additional follow-up monitoring should be conducted.

The following sections list specific environmental monitoring activities recommended for the Project.

6.1.1 Exposed Soils

Where soils are exposed for construction activities, potential effects may include surface soil erosion, entry/exit pit slumping, and sedimentation of natural features. The movement of heavy machinery on wet soil may cause excessive rutting, compaction, and mixing of topsoil and subsoil. Improperly salvaged topsoil can result in mixing topsoil with subsoil, compaction, rutting and erosion, which can potentially decrease crop yields. Improper water discharge can lead to erosion, sedimentation or flooding. Monitoring of potential effects on exposed soils should occur during construction. Restored areas should be inspected one year after construction for erosion, and restoration measures should occur as necessary.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Monitoring and Contingency Plans
January 6, 2022

6.1.2 Water Wells

Before construction, consultation should occur with Lafarge Canada to determine if a private water well survey should take place to assess domestic groundwater use near the proposed pipeline route and determine the need for a water well monitoring program, as outlined in Section 3.2.3.

6.1.3 Vegetation

For at least one year after construction, planted vegetation should be inspected for survival. Dead and diseased vegetation should be replaced in areas of severe dieback or in areas with important environmental functions (e.g. riparian or slope cover).

6.1.4 Species at Risk

Should SAR be identified during vegetation, wildlife, and/or wildlife habitat field surveys, construction monitoring may need to be undertaken. The exact nature of monitoring will be determined in consultation with the MECP and DFO and will depend on the species present.

6.1.5 Cultural Heritage Resources

Any cultural heritage resources within 50 m of the proposed pipeline route will require site plan controls that will need monitoring. In addition, if a vibration assessment results in additional mitigation measures, these will need to be monitored where construction activities occur within 50 m of a cultural heritage resource. Further details are provided in Section 3.4.9.

6.1.6 Residents and Business

Construction activities may impact surrounding residents and businesses. During construction, a designated Imperial Oil representative will be available to monitor and respond to requests and concerns voiced by residents and business owners. Landowners affected by construction will be notified in advance of construction activities in their area, as feasible. The notification should provide the contact information for a designated Imperial Oil representative.

Imperial Oil should monitor the Contractors' implementation of the Traffic Management Plan, to see that site access to residences and businesses has been maintained and that traffic is not being unnecessarily interrupted.

While efforts will be undertaken to reduce impacts, a comment tracking system will also be implemented. An Imperial Oil representative should record the time and date of calls, the nature of the concern, the corrective action taken, and the time and date of follow-up contact.

Following completion of construction, Imperial Oil should contact residents and businesses along the easement to continue ongoing communications where necessary. During the first two years, particular attention will be paid to monitoring and documenting impacts associated with construction of the proposed pipeline.



6.2 CONTINGENCY

Contingency planning is necessary to prevent a delayed or ineffective response to unexpected events or conditions that may occur during construction of the proposed pipeline. An essential element of contingency planning is the preparation of plans and procedures that can be implemented if unexpected events occur. The absence of contingency plans may result in short or long term environmental or socio-economic impacts and possibly threaten public safety.

The following unexpected events require contingency planning during construction: human error causing accidental spills, and the discovery of unexpected finds. Although unexpected problems are not anticipated to occur during construction, Imperial Oil and the Contractor should be prepared to act when unexpected events occur. Construction personnel should be made aware of and know how to implement contingency measures.

6.2.1 Accidental Spills

During construction, an accidental spill of fluids may occur. The impact of the spill will depend upon the magnitude, extent, and nature of the spill and the environmental and socio-economic conditions in which it takes place. Upon release of a hydrocarbon-based construction fluid, Imperial Oil should immediately determine the magnitude and extent of the spill and rapidly take measures to contain it. Release of sediment should also be treated as a spill depending on the magnitude and extent. If necessary, the MECP Spills Action Center should be notified at 1-800-268-6060.

A Spills Response Plan should be developed, reviewed with personnel, and posted in site trailers. Spill containment equipment should be readily available, especially near watercourses. Personnel should be trained in the use of spill containment equipment.

Should a spill occur in the Project area the spill response contingency plan should be implemented. Specifics of the contingency plan will be documented on site.

6.2.2 Unexpected Finds: Archaeological or Heritage Resources and Unknown Contaminated Soils

Should previously unknown archaeological or heritage resources be uncovered or suspected of being uncovered during construction, ground disturbance in the find location should cease immediately. The MHSTCI and an archaeologist licensed in the Province of Ontario, and potentially impacted Indigenous communities should be notified immediately. A site-specific response plan should then be employed following further investigation of the specific find. The response plan would indicate under which conditions the ground disturbance activity in the find location may resume.

In the event that human remains are uncovered or suspected of being uncovered during ground disturbance, the above measures should be implemented along with notifying local police, the coroner's office, and the Cemeteries Regulation Unit of the Ontario Ministry of Government and Consumer Services (1-800-889-9768).



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

Monitoring and Contingency Plans
January 6, 2022

If previously unknown materials or contaminated soils are uncovered or suspected of being uncovered, construction in the find location should cease immediately. In such an instance, Imperial Oil should retain expert advice on assessing and developing a plan to include soil sampling, handling, disposal and remediation.



7.0 CONCLUSION

The Environmental Study investigated data on the physical, biophysical, and socio-economic environment along the proposed pipeline route. In the opinion of Stantec, the recommended program of supplemental studies, mitigation and protective measures, and contingency measures are considered appropriate to protect the features encountered. Monitoring will assess whether mitigation and protective measures were effective in both the short and long term.

With the implementation of the recommendations in this report, on-going communication and consultation, and adherence to permit, regulatory and legislative requirements, potential adverse residual environmental and socio-economic impacts of the Project are not anticipated to be significant.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

References

January 6, 2022

8.0 REFERENCES

- AAFC [Agriculture and Agri-Food Canada]. 1998. The Canadian System of Soil Classification. Edition 3. Available online: https://sis.agr.gc.ca/cansis/publications/manuals/1998-cssc-ed3/cssc3_manual.pdf. Accessed November 2021.
- AAFC [Agriculture and Agri-Food Canada] 2005. CLI Classes – Definitions. Available at: <http://sis.agr.gc.ca/cansis/nsdb/cliclass.html>.
- Armstrong, D.K. and Dodge, J.E.P. 2007. Paleozoic geology of southern Ontario; Ontario Geological Survey, Miscellaneous Release--Data 219.
- Cadman, M. D., Sutherland, D.A., Beck, G.G., Lepage, D., and A.R. Couturier, 2007. Atlas of the Breeding Birds of Ontario, 2001-2005. (eds) Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature, Toronto, 340-341pp.
- Chapman and Putnam, 1984. The Physiography of Southern Ontario. 3rd Edition. Published by the Government of Ontario, Ministry of Natural Resources.
- Chapman, L.J. and Putnam, D.F. 2007. Physiography of southern Ontario; Ontario Geological Survey, Miscellaneous Release--Data 228.
- Cheminfo Services Inc., 2005. Best Practices for the Reduction of Air Emissions From Construction and Demolition Activities. Prepared by Cheminfo Services for Environment Canada. Available online: <http://www.bieapfrempp.org/Toolbox%20pdfs/EC%20-%20Final%20Code%20of%20Practice%20-%20Construction%20%20Demolition.pdf>.
- City of Hamilton. 2021a. Rural Hamilton Official Plan. Available online: <https://www.hamilton.ca/sites/default/files/media/browser/2020-09-15/ruralhamiltonofficialplan-mastertableofcontents-feb2021.pdf>. Accessed November 2021.
- City of Hamilton. 2021b. Garbage and Recycling. Available online: <https://www.hamilton.ca/garbage-recycling>. Access November 2021.
- City of Hamilton. 2021c. Hamilton Police Service. Available online: <https://www.hamilton.ca/emergency-services/hamilton-police-service>. Accessed November 2021.
- Conservation Halton. No date. Natural Hazards: Flooding and Erosion. Available online: <https://www.conservationhalton.ca/natural-hazards>. Accessed December 2021.
- (DFO) Fisheries and Oceans Canada. 2021a. Aquatic Species at Risk Maps. Available at: <http://www.dfo-mpo.gc.ca/species-especes/fpp-ppp/index-eng.htm>. Last accessed November 1, 2021.
- Dobbyn, J., 1994. Atlas of the Mammals of Ontario. Federation of Ontario Naturalists.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

References

January 6, 2022

Earth FX, 2010. Vulnerability Assessment and Scoring of Wellhead Protection Areas. City of Hamilton, Ontario. April 2010.

Ellio, T. (2001, May 24). Wat on Earth. U Waterloo News. Available online: <https://uwaterloo.ca/wat-on-earth/news/dundas-quarry-hidden-treasures> . Accessed November 2021.

Environment Canada, 2021. General nesting periods of migratory birds.

<https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods.html>.

Gao, C., Shiota, J., Kelly, R.I., Brunton, F.R. and van Haaften, S. 2006. Bedrock topography and overburden thickness mapping, Southern Ontario; Ontario Geological Survey, Miscellaneous Release—Data 207.

Government of Canada, 1985. Fisheries Act. R.S.C. 1985, c. F-14. Last amendment 2019. Electronic document. <http://laws-lois.justice.gc.ca/eng/acts/F-14/>

Government of Canada, 1994. Migratory Birds Convention Act, S.C. 1994, c. 22. Last amendment 2017. Electronic document. <http://laws-lois.justice.gc.ca/eng/acts/m-7.01/>

Government of Canada, 2002. Species at Risk Act. S.C. 2002, c. 29. Last amendment 2020. Electronic document. <http://laws.justice.gc.ca/eng/acts/S-15.3/>

Government of Ontario, 2007. Endangered Species Act. S.O. 2007, c.6. Electronic document: <https://www.ontario.ca/laws/statute/07e06>.

Government of Canada, 2021. Guidelines to reduce risk to migratory birds. Available at: <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-risk-migratory-birds.html>

Government of Ontario, 1990. Ontario Heritage Act. R.S.O. 1990, c. O.18. Last amendment 2017. C. 20, Sched. 8, s. 112. Electronic document: <https://www.ontario.ca/laws/statute/90o18>.

Government of Ontario, 1990. Ontario Water Resources Act, R.S.O. 1990, c. O.40. Last amendment: 2019, c. 2, Sched. 11, s. 4. Electronic document: <https://www.ontario.ca/laws/statute/90o40#top>.

Government of Ontario, 2006. Clean Water Act. S.O. 2006, c. 22. Last amendment: 2020, c. 2, Sched.11, s.1. Electronic document: <https://www.ontario.ca/laws/statute/06c22>.

Government of Ontario, 2007. Endangered Species Act. S.O. 2007, c.6. Electronic document: <https://www.ontario.ca/laws/statute/07e06>.

Government of Ontario, 2011. Standards and Guidelines of Consultant Archaeologists. Toronto: Ministry of Tourism, Culture and Sport.

Government of Ontario, 2014. Provincial Policy Statement.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

References

January 6, 2022

Government of Ontario, 2021. Environmental Registry of Ontario. Available online:

<https://ero.ontario.ca/map>. Accessed: November 2021.

Hamilton Conservation 2021 Hamilton Conservation Authority Regulated Areas Map Tool with Watercourse Layer accessed on November 10, 2021 online at:

https://maps2.camaps.ca/GVH/Index.html?viewerConfigUri=https%3A%2F%2Fmaps2.camaps.ca%2F%2FGVH%2FIndex.html%3FconfigBase%3Dhttps%3A%2F%2Fmaps2.camaps.ca%2FGeocortex%2F%2Fessentials%2F%2FREST%2F%2Fsites%2F%2FHRCAs_public%2F%2Fviewers%2F%2FReg_Map_Tool%2F%2Fvirtual_directory%2F%2FResources%2F%2FConfig%2F%2FDefault

Impact Assessment Agency of Canada (IAAC). 2021. Canadian Impact Assessment Registry, Browse Projects. Available at: <https://iaac-aeic.gc.ca/050/evaluations> Accessed: November 2021

Liberty, B.A., Bond, I.J. and Telford P.G. 1976. Paleozoic geology of the Hamilton area. Available online:

<http://www.geologyontario.mndmf.gov.on.ca/mndmfiles/pub/data/imaging/M2336/M2336.pdf>.

Accessed September 2020.

Ministry of the Environment, Conservation and Parks (MECP). 2021. Source Protection Information Atlas. Retrieved on October 22, 2021 from

www.gisapplication.lrc.gov.on.ca/SourceWaterProtection/Index.html?site=SourceWaterProtection&viewer=SWPViewer&locale=en-US

MOECC [Ministry of the Environment and Climate Change], 2016. Environmental Noise Guideline - Stationary and Transportation Sources? Approval and Planning. Available at:

<https://www.ontario.ca/page/environmental-noise-guideline-stationary-and-transportation-sources-approval-and-planning>.

MNR [Ontario Ministry of Natural Resources], 2000. Significant wildlife habitat technical guide. Fish and Wildlife Branch, Wildlife Section, Science Development and Transfer Branch, South Central Sciences Branch. pp.151.

MNR, March 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. Second Edition. Toronto: Queen's Printer for Ontario. 248 pp.

MNRF Ontario Ministry of Natural Resources and Forestry. 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E.

NDMNRF Ontario Ministry of Northern Development Mining Natural Resources and Forestry. 2021a.

Land Information Ontario Digital mapping of Aquatic resource area line segment, Ontario Ministry of Natural Resources. Available Online:

<https://geohub.lio.gov.on.ca/datasets/5e67132418f24488980fd19b4cbb0972/explore?location=49.291899%20-84.834657%205.30>. Last Accessed November 1, 2021.

NDMNRF Ontario Ministry of Northern Development Mining Natural Resources and Forestry. 2021b.

Constructed Drains digital dataset. Distributed and updated continuously by Land Information Ontario. Available online: <https://www.javacoeapp.lrc.gov.on.ca/geonetwork/srv/en/main.home>. Last Accessed November 1, 2021.



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

References

January 6, 2022

- NDMNRF Ontario Ministry of Northern Development Mining Natural Resources and Forestry. 2021c. Natural Heritage Information Centre (NHIC) Database. Available at: <http://nhic.mnr.gov.on.ca>. Last accessed: November 2021.
- MNRF [Ministry of Natural Resources and Forestry], 2013. In-water Work Timing Window Guidelines. March 2013. Available at: <https://docs.ontario.ca/documents/2579/stdprod-109170.pdf>
- Ministry of Transportation [MTO], 2021. Ontario's Highway Programs Interactive Map. Available online: <https://www.ontario.ca/page/ontarios-highway-programs>. Accessed: November, 2021.
- Natural Resources Canada, 2016. Earthquake zones in Eastern Canada. Available at: <http://www.earthquakescanada.nrcan.gc.ca/zones/eastcan-en.php#SGLSZ>. Last accessed: July, 2020.
- Ontario Agricultural College. 1949. Soil Survey of Essex County. Report No. 11 of the Ontario Soil Survey. Available online: https://sis.agr.gc.ca/cansis/publications/surveys/on/on11/on11_report.pdf. Accessed November 2021.
- OEB [Ontario Energy Board], 2016. *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines in Ontario, 7th Edition*.
- OGS [Ontario Geological Survey], 1991. Bedrock geology of Ontario, Southern Sheet; Ontario Geological Survey, Map 2544, scale 1:1,000,000.
- OGS, 2010. Surficial Geology of Southern Ontario; Ontario Geological Survey, Miscellaneous Release--Data 128-REV.
- Ontario Nature, 2021. Ontario Reptile and Amphibian Atlas. Available online: http://www.ontarionature.org/protect/species/herpetofaunal_atlas.php. Accessed: November 2021.
- Rowe, J.S., 1972. Forest Regions of Canada. Canadian Forestry Service Publication. No. 1300: 172pp.
- Statistics Canada. 2017. *Flamborough--Glanbrook [Federal electoral district], Ontario and Ontario [Province] (table). Census Profile. 2016 Census*. Statistics Canada Catalogue no. 98-316-X2016001. Ottawa. Released November 29, 2017. <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E> (accessed November 17, 2021).
- Soil Research Insititute [Canada Department of Agriculture and the Ontario Agriculture College]. 1964. Report No.38 of the Ontario Soil Survey. *Soil Survey of Dufferin County*. Available online:



IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT: ENVIRONMENTAL REPORT

References

January 6, 2022

https://sis.agr.gc.ca/cansis/publications/surveys/on/on38/on38_report.pdf. Accessed November 2021.

Soil Research Institute [Canada Department of Agriculture and the Ontario Agriculture College]. 1966. Report No.43 of the Ontario Soil Survey. *Soils of Halton County*. Accessed online November 2021.

Toronto Entomologists' Association (TEA). [2021. Ontario Butterfly Atlas.](https://www.ontarioinsects.org/atlas/)
<https://www.ontarioinsects.org/atlas/>

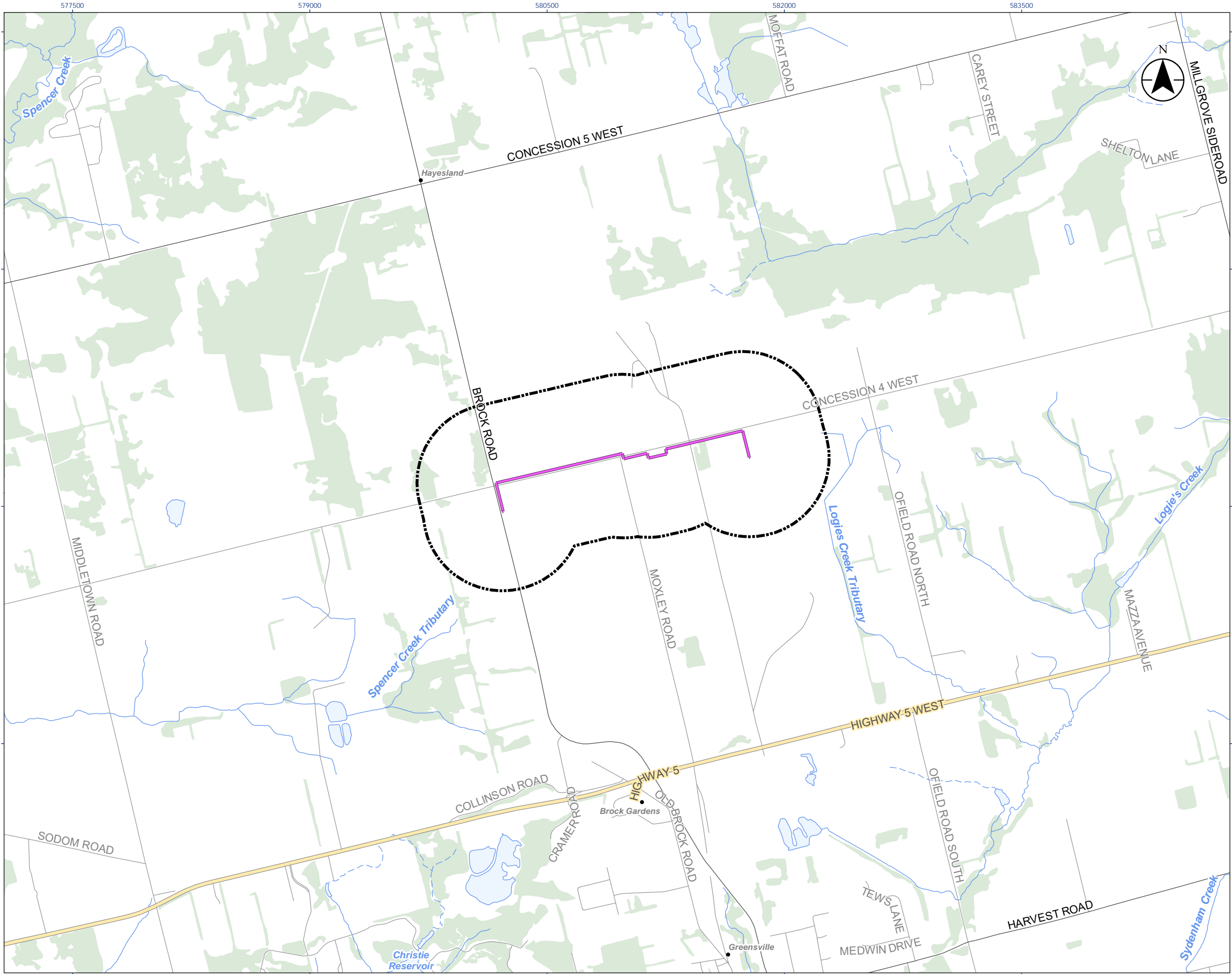
TRCA [Toronto & Region Conservation Authority]. 2014. The Living City Policies for Planning and Development in the Watersheds of the Toronto and Region Conservation Authority. Toronto and Region Conservation Authority, November 28, 2014.



APPENDIX A: ROUTE FIGURES

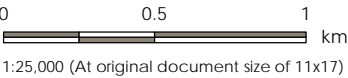


\\G01215-801\work\groups\01662\Actives\other\662\1109\110904556\03_data\Nds_cadd\Map\Study Area\110904556_Env_Rpt_Apca_Ep01_Study Area.mxd Revised: 2021-12-14 By: seules



Legend

- Proposed Pipeline
- Project Study Area
- Expressway / Highway
- Major Road
- Minor Road
- Watercourse (Intermittent)
- Watercourse (Permanent)
- Waterbody
- Wooded Area



- Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
 2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2021.



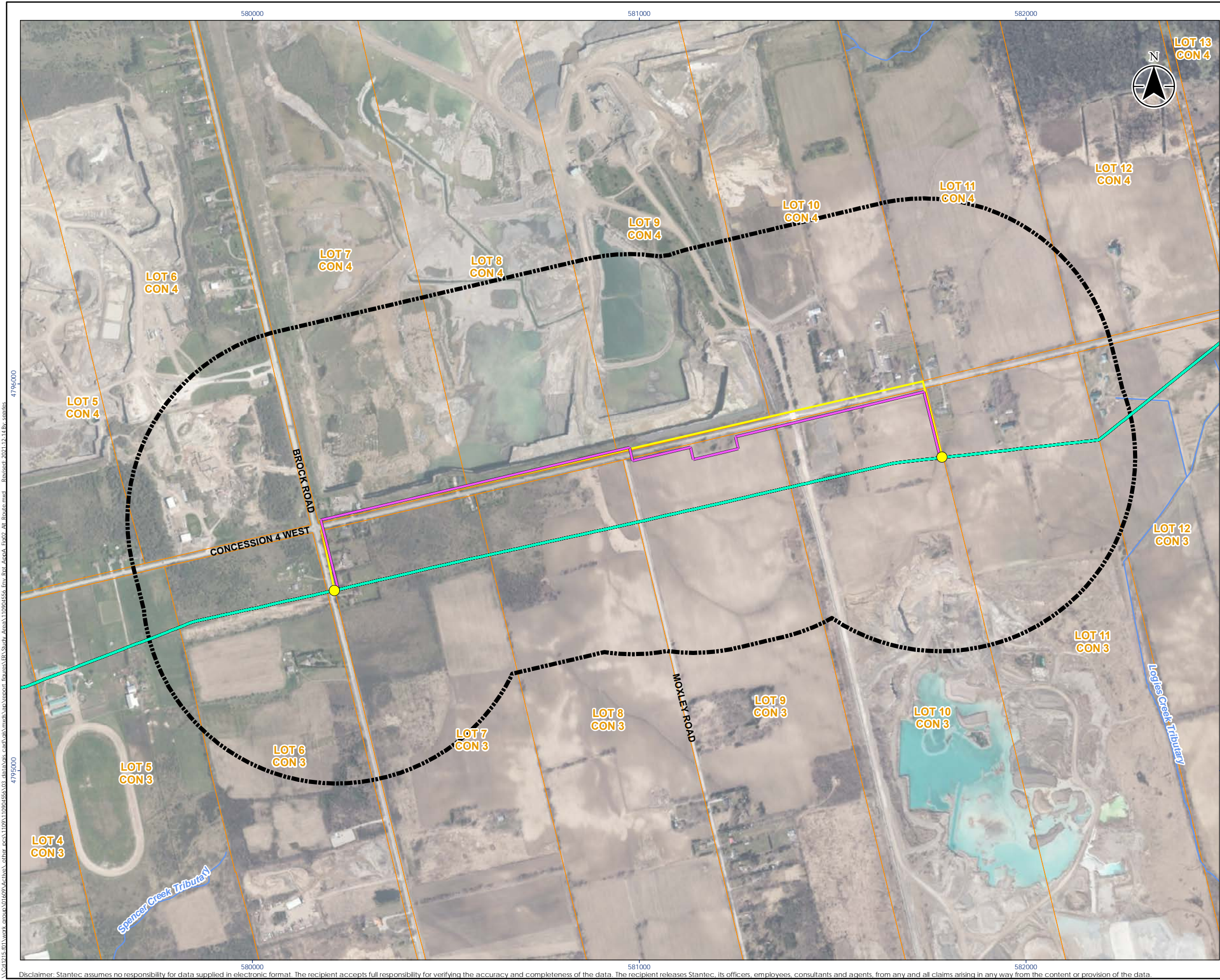
Project Location
City of Hamilton

110904556 REVA
Prepared by KB on 2021-12-14
Technical Review by SE on 2021-11-10

Client/Project
IMPERIAL OIL
PIPELINE RELOCATION PROJECT ENVIRONMENTAL
REPORT

Figure No.
1

Title
Study Area

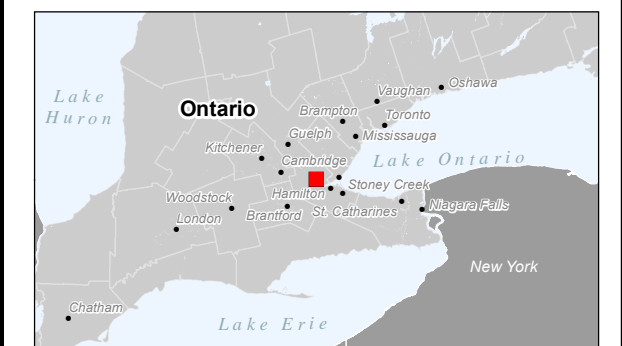


Legend

- Tie In Location
- Alternative Pipeline Route
- Existing Pipeline
- Proposed Pipeline
- Project Study Area
- Road
- Watercourse
- Lot Boundary

0 250 500 m
1:10,000 (At original document size of 11x17)

- Notes
- Coordinate System: NAD 1983 UTM Zone 17N
 - Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2021.
 - Orthoimagery © First Base Solutions, 2021. Imagery Date, 2019.



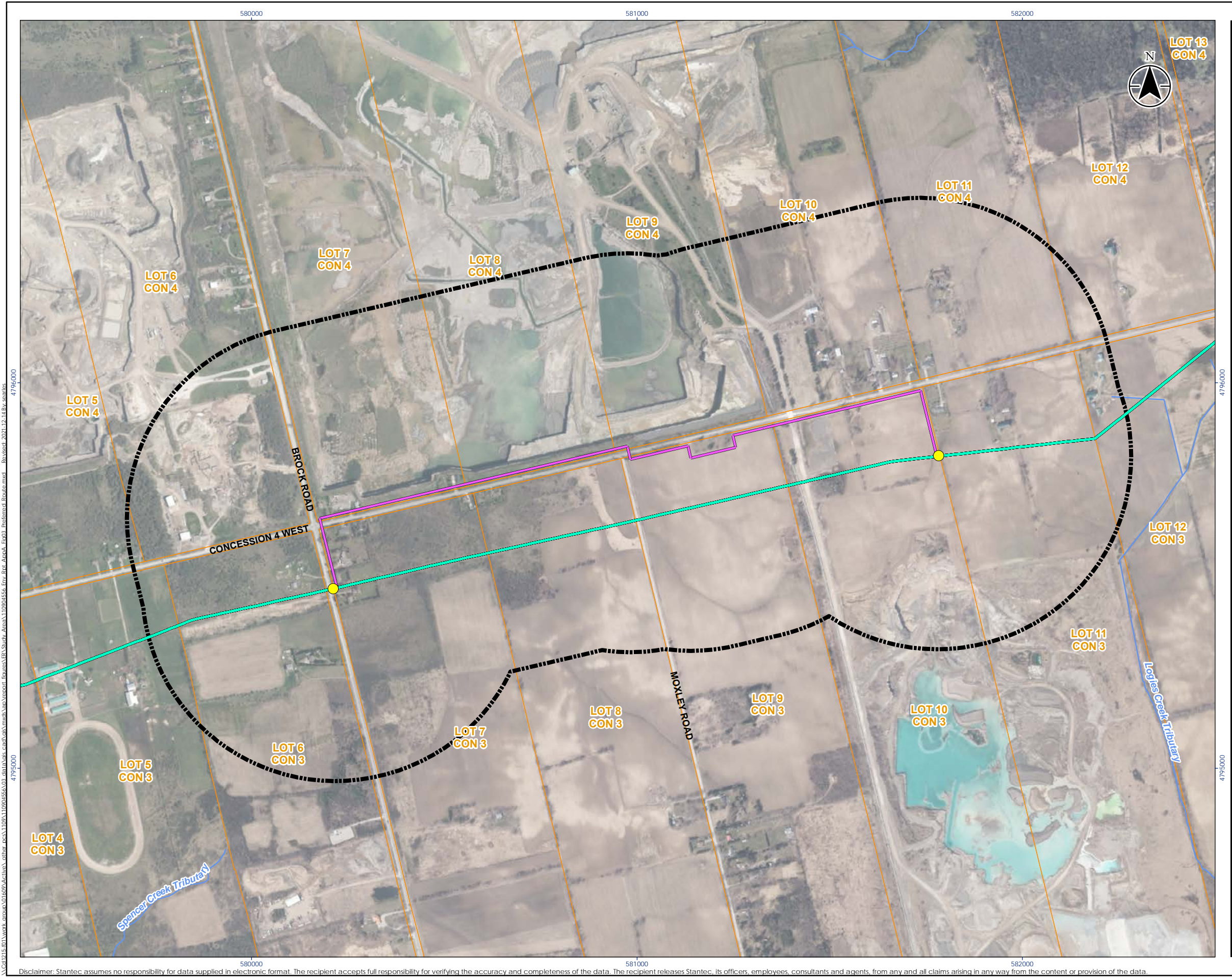
Project Location
City of Hamilton

110904556 REVA
Prepared by KB on 2021-12-14
Technical Review by SE on 2021-11-10

Client/Project
IMPERIAL OIL
PIPELINE RELOCATION PROJECT ENVIRONMENTAL
REPORT

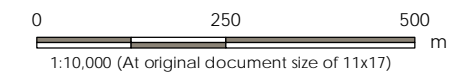
Figure No.
2

Title
Alternative Routes



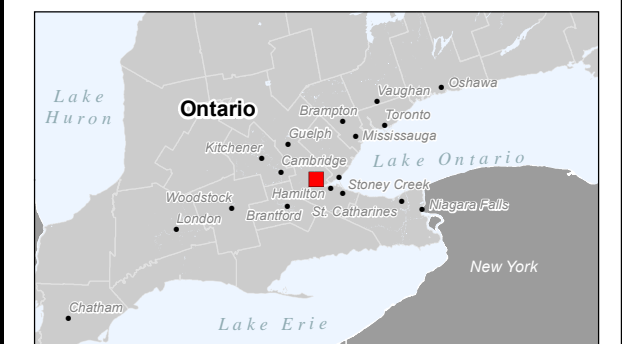
Legend

- Tie In Location
- Existing Pipeline
- Proposed Pipeline
- Project Study Area
- Road
- Watercourse
- Lot Boundary
- Waterbody



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2021.
3. Orthoimagery © First Base Solutions, 2021. Imagery Date, 2019.



Project Location
City of Hamilton

110904556 REVA
Prepared by KB on 2021-12-14
Technical Review by SE on 2021-11-10

Client/Project
IMPERIAL OIL
PIPELINE RELOCATION PROJECT ENVIRONMENTAL
REPORT

Figure No.

3

Title

Preferred Route

APPENDIX B: CONSULTATION



*APPENDIX B1:
PROJECT SUMMARY AND
CONTACT LIST*



VIA EMAIL

April 26, 2021

Mariell Leniuk
Environmental & Regulatory Advisor, Canada Fuels Operations
Imperial Oil Ltd.
505 Quarry Park Blvd SE
Calgary, AB T2P 3M9

Re: Imperial Oil Pipeline Relocation Project

Dear Ms. Leniuk:

Thank you for your email dated February 26, 2021 notifying the Ministry of Energy, Northern Development and Mines (ENDM) of Imperial Oil Ltd.'s (Imperial) intention to apply to the Ontario Energy Board (OEB) for Leave to Construct for the Imperial Oil Pipeline Relocation Project (the Project).

I understand that Imperial is planning to relocate an existing 12" nominal pipe size pipeline to the north side of Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be approximately 2 km.

Based on the information Imperial has provided to date, ENDM is of the view that the Project will not result in any appreciable adverse impact on the asserted or established rights of First Nation or Métis communities. Should new project information become available that indicates a potential to impact Aboriginal and Treaty rights (e.g. the result of the archeological assessment), I request that you notify ENDM as appropriate.

Given that the ENDM has determined, based on currently available information, that no duty to consult has been triggered it will not be necessary for ENDM to provide a letter of opinion regarding the sufficiency of consultation.

Also, ENDM recommends that Imperial continue to maintain a record of its interactions with Indigenous communities about the Project it has engaged on an interests-basis. In the event that an Indigenous community provides Imperial with information indicating a potential adverse impact of this project on its Aboriginal or Treaty rights, I request that you notify ENDM as appropriate.

Please contact Jason McCullough, Senior Advisor, Indigenous Energy Policy, Ministry of Energy, Northern Development and Mines at 416-426-2963 or jason.mccullough@ontario.ca if you have any questions or wish to discuss the matter in more detail.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dan Delaquis', with a stylized flourish at the end.

Dan Delaquis
Manager
Indigenous Energy Policy

First Name	Last Name	Title	Representing	Address	Town	Province	Postal Code	Phone	Email
ONTARIO PIPELINE COORDINATING COMMITTEE									
Zora	Crnojacki		Ontario Energy Board	P.O Box 2319, 2300 Young Street, 26th Floor	Toronto	ON	M4P 1E4	416-440-8104	zora.crnojacki@oeb.ca
Helma	Geerts	Land Use Policy & Stewardship	Ministry of Agriculture, Food and Rural Affairs	1 Stone Road West, 3rd Floor SE	Guelph	ON	N1G 4Y2	519-546-7423	Helma.Geerts@ontario.ca
James	Hamilton	Heritage Planning Unit Manager	Ministry of Heritage, Sport, Tourism and Culture Industries	400 University Avenue, 5th Floor	Toronto	ON	M7A 2R9	416-995-8404	James.Hamilton@ontario.ca
Tony	Difabio		Ministry of Transportation	301 St. Paul Street, 2nd Floor	St. Catharines	ON	L2R 7R4	905-704-2656	tony.difabio@ontario.ca
Kourosh	Manouchehri		Technical Standards and Safety Authority	345 Carlingview Drive	Toronto	ON	M9W 6N9	416-734-3539	kmanouchehri@tssa.org
Keith	Johnston	Environmental Planning Team Lead (A)	Ministry of Northern Development, Mines, Natural Resources and Forestry	300 Water Street, 3rd Floor	Peterborough	ON	K9J 3C7	705-313-6960	keith.johnston@ontario.ca
Maya	Harris	Manager, Community Planning and Development	Ministry of Municipal Affairs and Housing, Western Municipal Services Office	777 Bay Street, 13th Floor	Toronto	ON	M5G 2E5	416-585-6063	maya.harris@ontario.ca
Jason	McCullough	Senior Advisor, Indigenous Energy Policy Unit	Ministry of Energy	77 Grenville Street, 6th Floor	Toronto	ON	M7A 2C1	416-526-2963	jason.mccullough@ontario.ca
Barbara	Slattery	Regional Contact-West Central	Ministry of Environment, Conservation and Parks	119 King Street West, 12th Floor	Hamilton	ON	L8P 4Y7	905-521-7864	Barbara.Slattery@ontario.ca
Cory	Ostrowka	Environmental Specialist	Infrastructure Ontario	1 Dundas Street West, Suite 2000	Toronto	ON	M5G 2L5	647-264-3331	cory.ostrowka@infrastructureontario.ca
Debbie	Scanlon	Approvals Section Manager, Source Protection Program Branch	Ministry of Environment, Conservation and Parks	40 St. Clair Av. W., 14th Floor	Toronto	ON		647-627-5917	sourceprotectionscreening@ontario.ca

Title	First Nane	Surname	Organization	Department	Position	Address	City/Town	Province	Postal Code	Telephone	E-Mail
ELECTED OFFICIALS											
Ms.	Donna	Skelly	Province of Ontario	Flamborough-Glanbrook	Minister of Provincial Parliament	Suite 104, 2000 Garth Street	Hamilton	ON	L9B 0C1	905-679-3770	donna.skelly@pc.ola.org
Mr.	David	Sweet	Government of Canada	Flamborough-Glanbrook	Minister of Parliament	1654 Wilson Street West	Jerseyville	ON	L0R 1R0	905-648-3850	david.sweet@parl.gc.ca
FEDERAL AGENCIES											
Mr.	Sandro	Leonardelli	Environment and Climate Change Canada	Environmental Protection Operations - Ontario	Manager, Environmental Assessment Section	4905 Dufferin Street, 2nd Floor	Toronto	ON	M3H 5T4	416-749-5858	sandro.leonardelli@canada.ca
Ms.	Anjala	Puvananathan	Impact Accessment Agency of Canada	Ontario Regional Office	Director	55 York Street, Suite 600	Toronto	ON	M5J 1R7	416-952-1575	anjala.puvananathan@canada.ca
PROVINCIAL AGENCIES											
Ms.	Karla	Barboza	Ministry of Heritage, Sport, Tourism and Culture Industries	Heritage, Tourism and Culture Division	Team Lead - Heritage (Acting)	401 Bay Street	Toronto	ON	M7A 0A7	416-314-7120	Karla.barboza@ontario.ca
Mr.	Trevor	Fleck	Ministry of Infrastructure	Capital Planning & Coordination Branch	Director	777 Bay Street, 4th Floor, Suite 425	Toronto	ON	M5G 2E5	416-325-8559	trevor.fleck@ontario.ca
Ms.	Heather	Malcolmson	Environmental Assessment and Permissions Branch	Director (Acting)		135 St. Clair Ave. W., 1st Floor	Toronto	ON	M4V 1P5	416-314-0934	heather.malcolmson@ontario.ca
Mr.	Dan	Dobrin	Ministry of Environment, Conservation and Parks	Drinking Water and Environmental Compliance Division	Manager	119 King Street West, 12th Floor	Hamilton	ON	L8P 4Y7	905-379-3707	Dan.Dobrin@ontario.ca
Mr.	Stephen	Burt	Ministry of Environment, Conservation and Parks	Hamilton District Office	Acting Manager	Ellen Fairclough Bldg., 9th Floor, 119 King Street West	Hamilton	ON	L8P 4Y7	905-541-4533	stephen.burt@ontario.ca
Mr.	Michael	Falconi	Ministry of Economic Development, Job Creation and Trade	Cabinet Office Liaison Unit, Policy Coordination Branch	Senior Manager	56 Wellesley Street West, 11th Floor	Toronto	ON	M5S 2S3	647-325-9535	michael.falconi@ontario.ca
To Whom it May Concern			Ministry of Agriculture and Food, Ministry of Rural Affairs			1 Stone Road West, 3rd Floor	Guelph	ON	N1G 4Y2		omafra.eanotices@ontario.ca
To Whom it May Concern			Ministry of Environment, Conservation and Parks								eanotification_wcregion@ontario.ca
To Whom it May Concern			Ministry of Environment, Conservation and Parks	Source Protection Programs Branch		40 St. Clair Ave. W. 14th Floor	Toronto	ON	M4V 1M2		sourceprotectionscreening@ontario.ca
Mr.	David	Marriott	Ministry of Northern Development, Mines, Forestry and Natural Resources	NDMNRF Guelph	District Planner	1 Stone Road West	Guelph	ON	N1G 4Y2	519-826-4926	david.marriott@ontario.ca
CONSERVATION AUTHORITY											
Mr.	M ke	Stone	Hamilton Conservation Authority	Watershed Planning and Engineering	Manager, Planning, Stewardship and Ecology	838 Mineral Springs Road	Ancaster	ON	L9G 4X1	905-525-2181 ext. 133	m.ke.stone@conservationhamilton.ca
Ms.	Cassandra	Connolly	Conservation Halton	Planning and Regulations	Regulations Officer	2596 Britannia Road West	Burlington	ON	L7P 0G3	905-336-1158 ext. 2301	cconnolly@hrca.on.ca

First Name	Last Name	Title	Representing	Address	Town	Prov.	Postal Code	Phone	Email
MUNICIPAL									
Fred	Eisenberger	Mayor	City of Hamilton	71 Main Street West, 2nd Floor	Hamilton	ON	L8P 4Y5	905-546-4200	mayor@hamilton.ca
Arlene	VanderBeek	Councillor, Ward 13	City of Hamilton	71 Main Street West, 2nd Floor	Hamilton	ON	L8P 4Y5	905-546-2714	arlene.vanderbeek@hamilton.ca
Andrea	Holland	Clerk	City of Hamilton	71 Main Street West, 1st Floor	Hamilton	ON	L8P 4Y5	905-546-2489	clerk@hamilton.ca

First Name	Last Name	Title	Representing	Address	City	Province	Postal Code	Phone	Email
BUSINESSES AND ORGANIZATIONS									
Roman	Dorfman	Real Estate Coordinator	Hydro One Networks Inc.	185 Clegg Road	Markham	ON	L6G 1B7	905-946-6243	roman.dorfman@hydroone.com

Name		Address / Contact Information	City	Province	Postal Code	
LANDOWNER AND RESIDENT						
		N/A	Brock Road	Hamilton	ON	L9H 5E4
		N/A	4th Concession Road West	Hamilton	ON	L9H 5E4
		N/A	4th Concession Road West	Hamilton	ON	L9H 5E4
		N/A	4th Concession Road West	Hamilton	ON	L9H 5E4
		N/A	4th Concession Road West	Hamilton	ON	L9H 5E4
			4th Concession Road West	Hamilton	ON	L9H 5E4
		N/A	4th Concession Road West	Hamilton	ON	L9H 5E4
			Concession 4 West	Hamilton	ON	L0R 2H2
			Ofield Road North	Waterdown	ON	L0R 2H2
		N/A	Brock Road	Flamborough	ON	L9H 5E4
			4th Concession Road West	Hamilton	ON	L9H 5E4
		N/A	4th Concession Road West	Hamilton	ON	L9H 5E4
			4th Concession Road, West	Hamilton	ON	L9H 5E4
			Concession Road 4 West	Waterdown	ON	L8B 1J6
			Brock Road	Hamilton	On	L9H 5E4
		N/A	Brock Road	Hamilton	ON	L9H 5E4
		N/A	4th Concession Road West	Dundas	ON	L9H 5E4
		N/A	4th Concession Road West	Dundas	ON	L9H 5E4
		N/A	4th Concession Road West	Dundas	ON	L9H 5E4
		N/A	Brock Road	Flamborough	ON	L9H 5E4
		N/A	4th Concession Road West	Dundas	ON	L9H 5E4
		N/A	Brock Road	Hamilton	ON	L9H 5E4
		N/A	Brock Road	Hamilton	ON	L9E 5E4
		N/A	Brock Road	Hamilton	ON	L9H 5E4
		N/A	Moxley Road	Dundas	ON	L9H 5E2
		N/A	4th Concession Road West	Dundas	ON	L9H 5E4
		N/A	Moxley Road	Dundas	ON	L9H 5E2
		N/A	HWesty 5 West	Flamborough	ON	L9H 5E2
		N/A	4th Concession Road West	Hamilton	ON	L9H 5E2
		N/A	4th Concession Road West	Hamilton	ON	L9H 5E2
		N/A	4th Concession Road West	Hamilton	ON	L9H 5E2
			4th Concession Road West	Dundas	ON	L9H 5E2
		N/A		N/A	N/A	N/A

*APPENDIX B2:
NEWSPAPER NOTICE*



NOTICE OF STUDY COMMENCEMENT

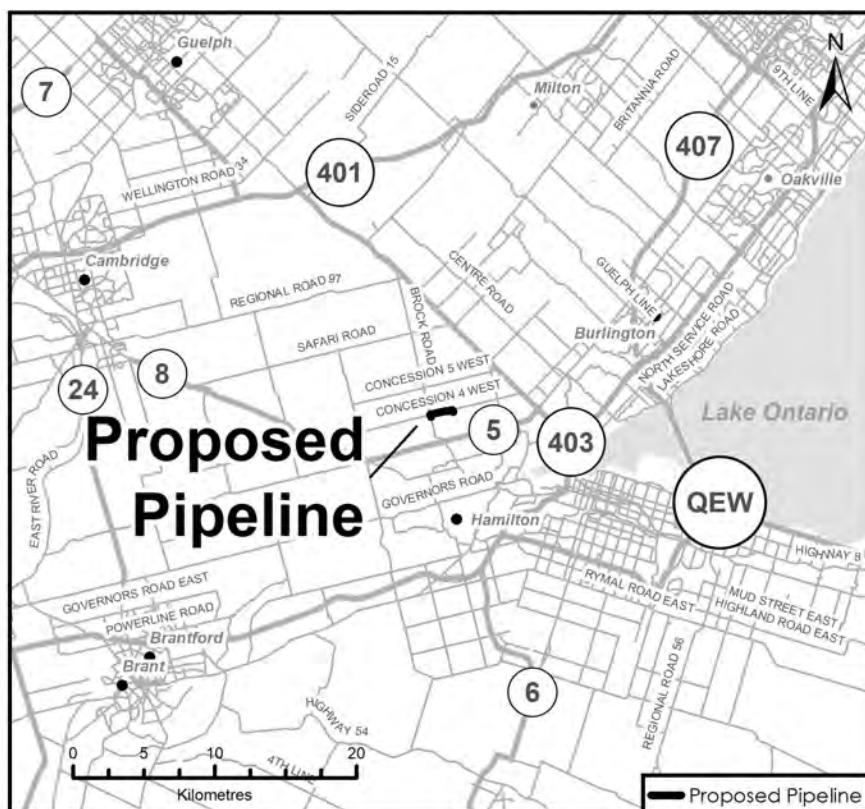
IMPERIAL OIL - PIPELINE RELOCATION PROJECT

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated.

The intent is to relocate the pipeline to either the north or the south side of Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be determined by the final route chosen but will be approximately 2 km.

Environmental Study process

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)". It is anticipated that the Environmental Report for the study will be completed in late Summer/early Fall 2021, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. If approved, construction is currently anticipated to begin in Spring 2022.



Public consultation

Engagement with Indigenous communities, landowners, government agencies, the general public and other interested parties is an integral component of the environmental study process. As a result of the physical distancing requirements set out by the Province of Ontario due to COVID-19, no in-person Open House will take place.

Please send comments or questions regarding the Environmental Study or the proposed Imperial Oil Pipeline Relocation Project to:

Telephone: (519) 780-8186

Email: IOLRelocation@stantec.com

NOTICE OF PROJECT UPDATE

Imperial Oil – Pipeline Relocation Project

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated.

The intent is to relocate the pipeline along Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be approximately 2 km.

Environmental Study process

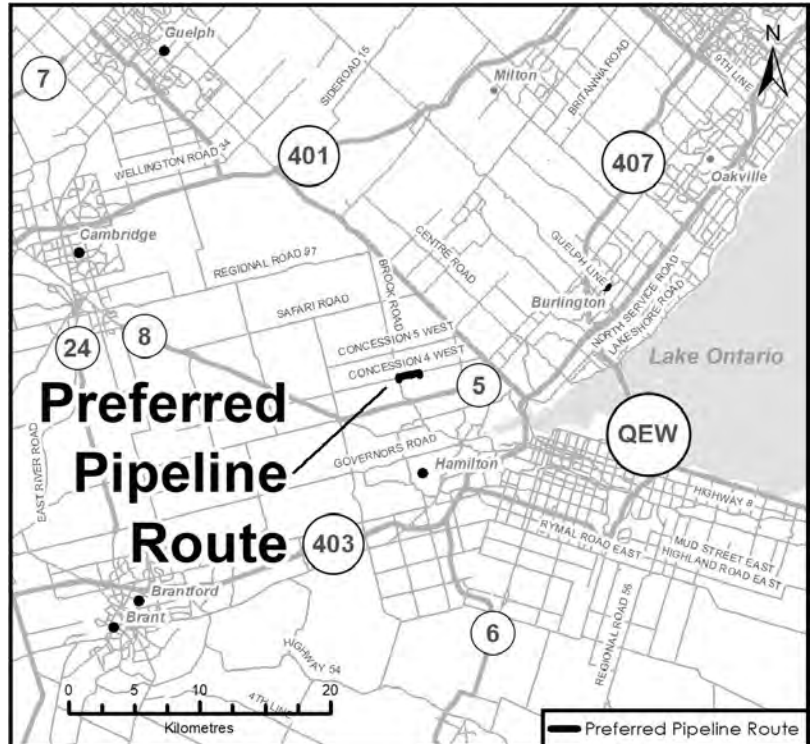
Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)". It is anticipated that the Environmental Report for the study will be completed in late fall / early winter 2021, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. It is anticipated that the Environmental Report will be available for public viewing by spring 2022. If approved, construction is currently anticipated to begin in summer 2022.

Public consultation

Engagement with Indigenous communities, landowners, government agencies, the general public and other interested parties is an integral component of the environmental study process. As a result of the physical distancing requirements set out by the Province of Ontario due to COVID-19, no in-person Open House will take place.

Please send comments or questions regarding the Environmental Study or the proposed Imperial Oil Pipeline Relocation Project to:

Telephone: (519) 585-3849
Email: IOLRelocation@stantec.com



*APPENDIX B3:
LETTERS*





Stantec Consulting Ltd.
1-70 Southgate Drive, Guelph ON N1G 4P5

June 30, 2021

Dear Landowner / Resident,

Reference: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated. The intent is to relocate the pipeline to either the north or south side of Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be determined by the final route chosen but will be approximately 2 km.

For more details on the location of the Project, please refer to the notice.

You are receiving this letter because the Project Study Area is located near your property.

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) *"Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)"*.

It is anticipated that the Environmental Report for the study will be completed by late summer / early fall 2021, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. If approved, construction is currently anticipated to begin in spring 2022.

Engagement with Indigenous communities, landowners, government agencies, the public, and other interested persons is an integral component of the planning process. As a result of the social distancing requirements set out by the Province of Ontario due to COVID-19, an information session will not take place.

If you are a landowner with tenants, it would also be appreciated if this letter could be shared with your tenants.

Yours truly,

Stantec Consulting Ltd.

Emily Hartwig B.Sc., EP
Environmental Consultant, Assessment and Permitting
Phone: (519) 780-8186
IOLRelocation@stantec.com

Attachment: Notice of Study Commencement

c. Thomas Cao, Imperial Oil

NOTICE OF STUDY COMMENCEMENT

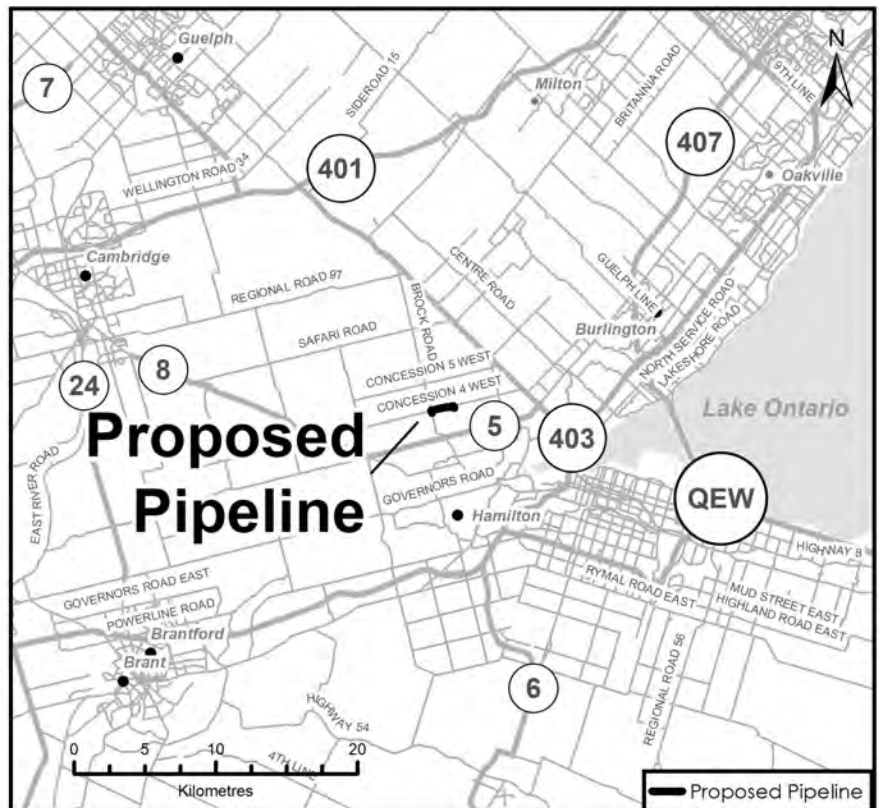
IMPERIAL OIL - PIPELINE RELOCATION PROJECT

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated.

The intent is to relocate the pipeline to either the north or the south side of Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be determined by the final route chosen but will be approximately 2 km.

Environmental Study process

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)". It is anticipated that the Environmental Report for the study will be completed in late Summer/early Fall 2021, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. If approved, construction is currently anticipated to begin in Spring 2022.



Public consultation

Engagement with Indigenous communities, landowners, government agencies, the general public and other interested parties is an integral component of the environmental study process. As a result of the physical distancing requirements set out by the Province of Ontario due to COVID-19, no in-person Open House will take place.

Please send comments or questions regarding the Environmental Study or the proposed Imperial Oil Pipeline Relocation Project to:

Telephone: (519) 780-8186

Email: IOLRelocation@stantec.com

June 28, 2021

«TITLE» «FIRST_NAME» «SURNAME»
«POSITION»
«ORGANIZATION»
«DEPARTMENT»
«ADDRESS»
«CITYTOWN» «PROVINCE» «POSTAL_CODE»

Dear «TITLE» «SURNAME»,

Reference: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated. The intent is to relocate the pipeline to either the north or south side of Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be determined by the final route chosen but will be approximately 2 km.

For more details on the location of the Project, please refer to the notice.

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) *"Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)"*.

It is anticipated that the Environmental Report for the study will be completed by late summer / early fall 2021, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. If approved, construction is currently anticipated to begin in spring 2022.

As an agency with jurisdiction or a potential interest in developments in the area of the Project, you are invited to provide or coordinate comments regarding the proposed Project. Specifically, Stantec is seeking information regarding planning principles or guidelines implemented by your agency that may affect routing, construction and/or operation of the proposed Project. Stantec is also seeking background environmental, socio-economic, and archaeological/cultural heritage information that may be useful in compiling the baseline inventory of the Study Area.

To support the quality of the assessment process, we also request that you provide us with information regarding other proposed developments within the Study Area. This information will be incorporated into the Environmental Study and related report as a component of the cumulative effect's assessment. Please contact us to discuss the most efficient way to obtain this information.

Engagement with Indigenous communities, landowners, government agencies, the public and other interested persons is an integral component of the environmental study process. As a result of the physical distancing requirements set out by the Province of Ontario due to COVID-19, an information session will not take place.

June 28, 2021

«TITLE» «FIRST_NAME» «SURNAME»

Page 2 of 2

Reference: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

If you have questions or comments regarding the Imperial Oil Pipeline Relocation Project, please do not hesitate to contact the undersigned.

Yours truly,

Stantec Consulting Ltd.



Emily Hartwig B.Sc., EP

Environmental Consultant, Assessment and Permitting

Phone: (519) 780-8186

IOLRelocation@stantec.com

Attachment: Notice of Study Commencement

c. Thomas Cao, Imperial Oil

NOTICE OF STUDY COMMENCEMENT

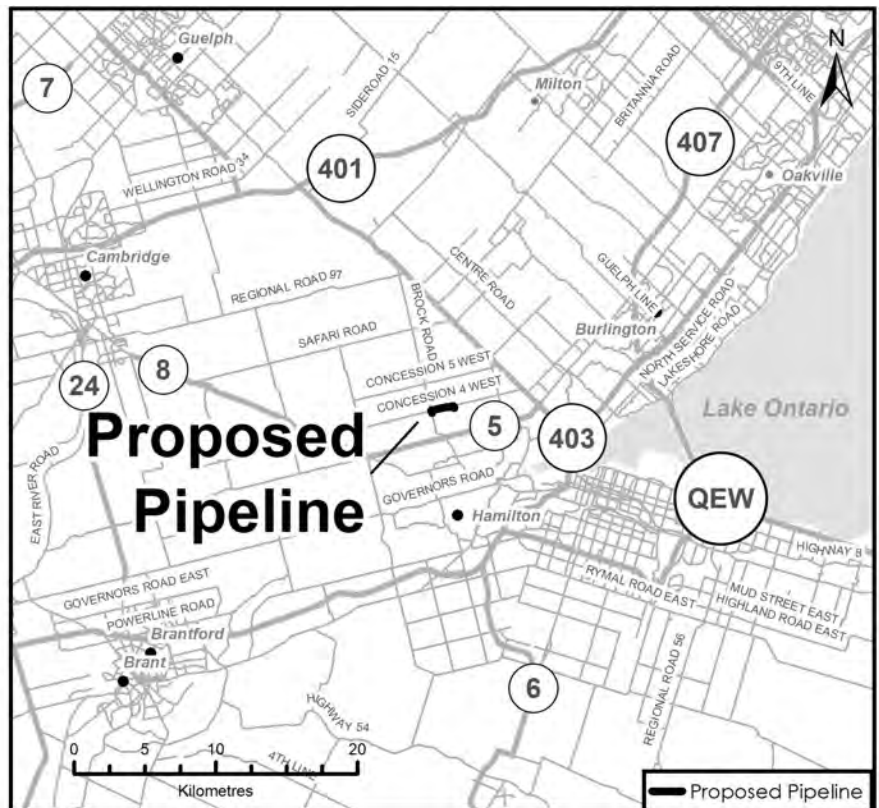
IMPERIAL OIL - PIPELINE RELOCATION PROJECT

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated.

The intent is to relocate the pipeline to either the north or the south side of Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be determined by the final route chosen but will be approximately 2 km.

Environmental Study process

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)". It is anticipated that the Environmental Report for the study will be completed in late Summer/early Fall 2021, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. If approved, construction is currently anticipated to begin in Spring 2022.



Public consultation

Engagement with Indigenous communities, landowners, government agencies, the general public and other interested parties is an integral component of the environmental study process. As a result of the physical distancing requirements set out by the Province of Ontario due to COVID-19, no in-person Open House will take place.

Please send comments or questions regarding the Environmental Study or the proposed Imperial Oil Pipeline Relocation Project to:

Telephone: (519) 780-8186

Email: IOLRelocation@stantec.com



Stantec Consulting Ltd.
100-300 Hagey Blvd., Waterloo ON N2L 0A4

October 14, 2021

Dear Landowner / Resident,

Reference: Imperial Oil Pipeline Relocation Project – Notice of Project Update

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated. The intent is to relocate the pipeline along Concession 4 West on a new easement on lands owned by Lafarge Canada. A preferred route has been selected, and the length of the pipeline will be approximately 2 km.

For more details on the location of the preferred route, please refer to the attached map.

You are receiving this letter because the Project Study Area is located adjacent to or near your property.

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*". It is anticipated that the Environmental Report for the study will be completed by late fall / early winter 2021, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. It is anticipated that the Environmental Report will be available for public viewing by spring 2022. If approved, construction is currently anticipated to begin in summer 2022.

Engagement with Indigenous communities, landowners, government agencies, the public, and other interested persons is an integral component of the planning process. As a result of the social distancing requirements set out by the Province of Ontario due to COVID-19, an information session will not take place.

If you are a landowner with tenants, it would also be appreciated if this letter could be shared with your tenants.

Yours truly,

Stantec Consulting Ltd.

Emily Hartwig B.Sc., EP
Environmental Consultant, Assessment and Permitting
Phone: (519) 585-3849
IOLRelocation@stantec.com

Attachment: Figure – Study Area and Preferred Route

c. Thomas Cao, Imperial Oil

Design with community in mind

From: [Hartwig, Emily](#)
To: [IOLRelocation](#)
Bcc: [zora.crnjacki@oeb.ca](#); [Helma.Geerts@ontario.ca](#); [dan.minkin@ontario.ca](#); [tony.difabio@ontario.ca](#); [kmanouchehri@tssa.org](#); [sally.renwick@ontario.ca](#); [maya.harris@ontario.ca](#); [jason.mccullough@ontario.ca](#); [Barbara.Slatery@ontario.ca](#); [cory.ostrowka@infrastructureontario.ca](#)
Subject: Imperial Oil Pipeline Relocation Project - Notice of Project Update
Date: Wednesday, October 20, 2021 3:44:00 PM
Attachments: [Notice_20211008.pdf](#)
[110904556_NoC_Fig01_Site_Loc_20210929.pdf](#)

Please find attached a Notice of Project Update and Map in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact the undersigned.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: [IOLRelocation](#)
Bcc: [donna.skelly@pc.ola.org](#); [david.sweet@parl.gc.ca](#); [sandro.leonardelli@canada.ca](#); [anjala.puvananathan@canada.ca](#); [Karla.barboza@ontario.ca](#); [trevor.fleck@ontario.ca](#); [heather.malcolmson@ontario.ca](#); [stephen.burt@ontario.ca](#); [michael.falconi@ontario.ca](#); [omafra.eanotices@ontario.ca](#); [sourceprotectionscreening@ontario.ca](#); [david.marriott@ontario.ca](#); [mike.stone@conservationhamilton.ca](#); [cconnolly@hrca.on.ca](#); [dan.dobrin@ontario.ca](#)
Subject: Imperial Oil Pipeline Relocation Project - Notice of Project Update
Date: Wednesday, October 20, 2021 3:47:00 PM
Attachments: [Notice_20211008.pdf](#)
[110904556_NoC_Fig01_Site_Loc_20210929.pdf](#)

Please find attached a Notice of Project Update and Map in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact the undersigned.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: [IOLRelocation](#)
Bcc: [mayor@hamilton.ca](#); [arlene.vanderbeek@hamilton.ca](#); [clerk@hamilton.ca](#); [steve.robichaud@hamilton.ca](#)
Subject: Imperial Oil Pipeline Relocation Project - Notice of Project Update
Date: Wednesday, October 20, 2021 3:50:00 PM
Attachments: [Notice_20211008.pdf](#)
[110904556_NoC_Fig01_Site_Loc_20210929.pdf](#)

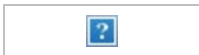
Please find attached a Notice of Project Update and Map in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact the undersigned.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: [IOLRelocation](#)
Bcc: roman.dorfman@hydroone.com
Subject: Imperial Oil Pipeline Relocation Project - Notice of Project Update
Date: Wednesday, October 20, 2021 3:51:00 PM
Attachments: [Notice_20211008.pdf](#)
[110904556 NoC Fig01 Site Loc 20210929.pdf](#)

Please find attached a Notice of Project Update and Map in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact the undersigned.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

*APPENDIX B4:
PROJECT CORRESPONDENCE*



IMPERIAL OIL PIPELINE RELOCATION PROJECT

Appendix B4 – Project Correspondence

Table B4.1: Summary of Project Correspondence – Agency

Record	Correspondent	Type	Date	Subject Matter	Forwarded/ Date	Responder/Date	Response
Notice of Study Commencement published in local newspaper on July 1, 2021.							
Notice of Project Update published in local newspaper on October 21, 2021.							
1	All contacts on the Ontario Pipeline Coordinating Committee (OPCC), Agency (elected officials, federal agencies, provincial agencies, conversation authorities) Municipal and Business and Organizations contact lists.	Email	June 28, 2021	Stantec sent the Notice of Study Commencement via email, which included a copy of the Notice of Study Commencement newspaper notice.	N/A	N/A	N/A
2	Paulena Yousif Constituency Assistant Office of the Mayor City of Hamilton	Email	June 29, 2021	The office of the mayor thanked Stantec for providing the Notice of Study Commencement.	N/A	N/A	N/A
3	Joan Del Villar Cuicas Regional Environmental Planner Ministry of Environment, Conservation and Parks (MECP)	Email	June 29, 2021	The MECP replied to the Notice of Study Commencement noting the notification procedure for providing Class EA notices to the ministry as of May 1, 2018 and provide instructions to submit the Notice to the appropriate MECP regional email address.	N/A	N/A	N/A
4	Cassandra Connolly Regulations Officer Conservation Halton (CH)	Email	June 30, 2021	CH responded noting that according to CH approximate regulation limit mapping, the Study Area appears to be within the jurisdiction of the Hamilton Conservation Authority.	N/A	N/A	N/A
5	Mike Stone Manager – Watershed Planning Services Hamilton Conservation Authority (HCA)	Email	July 7, 2021	HCA noted they would like to receive updates and new information as the study progresses, noting interest in general is related to natural heritage features such as wetlands and watercourses and any potential impacts to such features as a result of the project. HCA noted that a future permit may be required for Project construction depending on the determined pipeline alignment.	N/A	N/A	N/A
6	Karina Cerniavskaja District Planner Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNRF)	Email	July 8, 2021	MNDMNRF noted they received the Notice of Study Commencement. The MNDMNRF noted that the following should be reviewed to determine applicability to the project: Natural Heritage and Endangered Species Act, Petroleum Wells & Oil, Gas and Salt Resources Act, Public Lands Act & Lakes and Rivers Improvement Act. The MNDMNRF also provided a PDF version of the Natural Heritage Guide document.	N/A	N/A	N/A

IMPERIAL OIL PIPELINE RELOCATION PROJECT

Appendix B4 – Project Correspondence

Table B4.1: Summary of Project Correspondence – Agency

Record	Correspondent	Type	Date	Subject Matter	Forwarded/ Date	Responder/Date	Response
7	Kim Valentine Administrative Clerk, Ontario Region Impact Assessment Agency of Canada (IAAC)	Email	July 19, 2021	The IAAC provided a letter via email that based on the information provided in the Notice of Study Commencement, it is the agency’s view that the Project is not a designated project, and as a result an Initial Project Description is not required.	N/A	N/A	N/A
8	Christine Vernem Legislative Secretary (on behalf of Janet Pilon, Deputy Clerk) City of Hamilton	Email	July 19, 2021	The City of Hamilton noted that the Notice of Study Commencement was referred to the General Manager of Public Works for appropriate action.	N/A	N/A	N/A
9	Joseph Harvey (on behalf of Laura Hatcher) Heritage Planner Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	Email	July 28, 2021	The MHSTCI responded to the Notice of Study Commencement and provided the following information: <ul style="list-style-type: none">• While some cultural heritage resources may have been already formally identified, others may be identified through assessment• A combined Staged 1-2 Archaeological Assessment (AA) is recommended for the Study Area during the planning phase; at a minimum a Stage 1 AA should be undertaken for the entire Study Area.• A Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment (CHECPIA) will be undertaken by a qualified person.• The Environmental Report must include specific information from the AA report(s) and the CHECPIA.	N/A	N/A	N/A
10	Kourosh Manouchehri Engineer, Fuels Technical Standards & Safety Authority (TSSA)	Email	September 30, 2021	The TSSA provided a link to the Application for Review of Pipeline Project, which must be completed and submitted for the TSSA to review the Project as part of the Ontario Pipeline Coordinating Committee.	N/A	N/A	N/A
11 12 13 14	All contacts on the Ontario Pipeline Coordinating Committee (OPCC), Agency (elected officials, federal agencies, provincial agencies, conversation authorities) Municipal and Business and Organizations contact lists.	Email	October 21, 2021	Stantec sent the Notice of Project Update letter via email which included a map of the Study Area.	N/A	N/A	N/A

IMPERIAL OIL PIPELINE RELOCATION PROJECT

Appendix B4 – Project Correspondence

Table B4.1: Summary of Project Correspondence – Agency

Record	Correspondent	Type	Date	Subject Matter	Forwarded/ Date	Responder/Date	Response
15	Cassandra Connolly Regulations Officer Conservation Halton (CH)	Email	October 21, 2021	CH responded noting that while there may be a small portion of the Project within the CH watershed, the works would be located outside of lands considered to be regulated by Conservation Halton. Therefore, CH has no comments on the Project and defers to the Hamilton Conservation Authority.	N/A	N/A	N/A
16	Kourosh Manouchehri Engineer, Fuels Technical Standards & Safety Authority (TSSA)	Email	October 21, 2021	The TSSA thanked Stantec for the Project update and noted that an application needs to be filled and submitted for the review of the Project by TSSA as part of the Ontario Pipeline Coordinating Committee.	N/A	N/A	N/A
17	Sean Earles GIS Specialist Stantec	Email	November 12, 2021	Stantec sent HCA a request to obtain regulation data for use in the Environmental Report.	N/A	Richard Woodworth GIS Specialist Hamilton Conservation Authority November 16, 2021	HCA responded noting that the dataset and sharing agreement will be sent to Stantec.
				Stantec sent a follow-up email on November 16, 2021.			HCA sent the dataset and agreement on November 19, 2021.
				Stantec responded to the November 19 email noting that the internal Stantec legal group would be reviewing the agreement.			
				Stantec sent the signed agreement on November 25, 2021.			

From: [Office of the Mayor](#)
To: [Naylor, Carol](#); [Office of the Mayor](#)
Cc: [IOLRelocation](#)
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Tuesday, June 29, 2021 1:53:25 PM
Attachments: [image008.png](#)
[image015.png](#)
[image002.png](#)
[image001.png](#)
[image007.png](#)
[image009.png](#)

Good afternoon Carol,

Thank you for reaching out the Office of Mayor Eisenberger!

I have forwarded your correspondence to our staff team on your behalf.

Should you have any further comments or concerns, please feel free to reach out!

Best regards,

Paulena Yousif

Constituency Assistant
Office of the Mayor
City of Hamilton
(905) 546-4200



From: Naylor, Carol <carol.naylor@stantec.com>
Sent: June 28, 2021 5:02 PM
To: Office of the Mayor <mayor@hamilton.ca>
Cc: IOLRelocation <IOLRelocation@stantec.com>
Subject: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Good afternoon Fred,

Please find attached a Notice of Study Commencement in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact:

Emily Hartwig B.Sc., EP
Environmental Consultant, Assessment and Permitting
Phone: (519) 780-8186
IOLRelocation@stantec.com

Sincerely,

Carol Naylor

Team Leader, Administration Services, Environmental Services

Direct: 519 820-7559

Fax: 519 836-2493

Carol.Naylor@stantec.com

Stantec

1-70 Southgate Drive

Guelph ON N1G 4P5



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

From: [Naylor, Carol](#)
To: [IOLRelocation](#)
Subject: FW: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Tuesday, June 29, 2021 2:28:20 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image006.png](#)
[Instructions for Providing Class EA Notices to the Ministry of the Environment, Conservation and Parks.pdf](#)

From: Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>
Sent: Tuesday, June 29, 2021 2:14 PM
To: Naylor, Carol <carol.naylor@stantec.com>
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Thank you for your email.

As of May 1, 2018, the MECP has a new mandatory notification procedure for providing Class EA notices to the MECP. Per our notification procedures: Notices of Commencement, Completion, Addendum and Statements of Completion when applicable are required to be sent to the appropriate MECP regional email address, and other notices such as notices of public information centres can either be sent to the regional email address or directly to the Regional Environmental Assessment Coordinator who is assigned to your project. Please review the attached document and re-submit your notice to the appropriate MECP Regional Email address. Instructions on how to determine the appropriate email address are included in the document.

Thank you,

Joan Del Villar Cuicas

Regional Environmental Planner

Project Review Unit | Environmental Assessment Branch

Ontario Ministry of the Environment, Conservation and Parks

Joan.delvillarcuicas@ontario.ca | Phone: 365-889-1180

From: Naylor, Carol <carol.naylor@stantec.com>
Sent: June 28, 2021 4:29 PM
To: Malcolmson, Heather (MECP) <Heather.Malcolmson@ontario.ca>
Cc: IOLRelocation <IOLRelocation@stantec.com>
Subject: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good afternoon Heather,

Please find attached a Notice of Study Commencement in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact:

Emily Hartwig B.Sc., EP
Environmental Consultant, Assessment and Permitting
Phone: (519) 780-8186
IOLRelocation@stantec.com

Sincerely,

Carol Naylor
Team Leader, Administration Services, Environmental Services
Direct: 519 820-7559
Fax: 519 836-2493
Carol.Naylor@stantec.com

Stantec
1-70 Southgate Drive
Guelph ON N1G 4P5



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

From: [Cassandra Connolly](#)
To: [Naylor, Carol](#)
Cc: [IOLRelocation](#)
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Wednesday, June 30, 2021 3:09:29 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)

Hi Carol,

Thank you for this information. Based on the Notice of Study Commencement, and our Approximate Regulation Limit (ARL) mapping, it appears that the proposed works will be occurring within the jurisdiction of the Hamilton Conservation Authority.

Conservation Halton will defer the review of this project to the HCA.

I trust this information is of assistance.

Cassandra Connolly

Regulations Officer

Conservation Halton

2596 Britannia Road West, Burlington, ON L7P 0G3

905-336-1158 ext. 2301 | cconnolly@hrca.on.ca

Conservation Halton's Administration Office is currently closed to the public due to COVID-19. During this time, we are accessing email and phone messages, responding to messages, and processing planning and permit applications remotely. For more information and updates on Conservation Halton's planning and permitting services, please visit <https://conservationhalton.ca/planning-permits>. We are providing the best service we can during these uncertain times and appreciate your patience and understanding.

This message, including any attachments, is intended only for the person(s) named above and may contain confidential and/or privileged information. Any use, distribution, copying or disclosure by anyone other than the intended recipient is strictly prohibited. If you are not the intended recipient, please notify us immediately by telephone or e-mail and permanently delete the original transmission from us, including any attachments, without making a copy.

From: Naylor, Carol <carol.naylor@stantec.com>

Sent: June 28, 2021 4:41 PM

To: Cassandra Connolly <cconnolly@hrca.on.ca>

Cc: IOLRelocation <IOLRelocation@stantec.com>

Subject: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Good afternoon Cassandra,

Please find attached a Notice of Study Commencement in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact:

Emily Hartwig B.Sc., EP

Environmental Consultant, Assessment and Permitting

Phone: (519) 780-8186

IOLRelocation@stantec.com

Sincerely,

Carol Naylor

Team Leader, Administration Services, Environmental Services

Direct: 519 820-7559

Fax: 519 836-2493

Carol.Naylor@stantec.com

Stantec

1-70 Southgate Drive

Guelph ON N1G 4P5



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

From: [Mike Stone](#)
To: [Naylor, Carol](#)
Cc: [IOLRelocation](#)
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Wednesday, July 7, 2021 11:38:41 AM
Attachments: [image011.png](#)
[image018.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

Good morning,

Thank you for providing the Notice of Commencement for the note project. HCA would appreciate receiving updates and new information as the study progresses. In general, our interest would relate to natural heritage features such as wetlands and watercourses and any potential impacts to such features as a result of the project. HCA regulates watercourses and wetlands, and a future permit may be required for project construction depending on the determined pipeline alignment.

Kind regards,
Mike

Mike Stone MA, MCIP, RPP | Manager, Watershed Planning Services | Hamilton Conservation Authority

838 Mineral Springs Road, P.O. Box 81067, Ancaster (Hamilton), Ontario L9G 4X1

T: 905.525.2181 ext. 133 | E: mike.stone@conservationhamilton.ca | W:

www.conservationhamilton.ca

The contents of this e-mail and any attachments are intended for the named recipient(s). This e-mail may contain information that is privileged and confidential. If you have received this message in error or are not the named recipient(s), please notify the sender and permanently delete this message without reviewing, copying, forwarding, disclosing or otherwise using it or any part of it in any form whatsoever.

From: Naylor, Carol <carol.naylor@stantec.com>
Sent: Monday, June 28, 2021 4:38 PM
To: Mike Stone <Mike.Stone@conservationhamilton.ca>
Cc: IOLRelocation <IOLRelocation@stantec.com>
Subject: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Good afternoon Mike,

Please find attached a Notice of Study Commencement in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact:

Emily Hartwig B.Sc., EP
Environmental Consultant, Assessment and Permitting
Phone: (519) 780-8186

IOLRelocation@stantec.com

Sincerely,

Carol Naylor

Team Leader, Administration Services, Environmental Services

Direct: 519 820-7559

Fax: 519 836-2493

Carol.Naylor@stantec.com

Stantec

1-70 Southgate Drive

Guelph ON N1G 4P5



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

From: [MNRF Ayl Planners \(MNRF\)](#)
To: [IOL Relocation](#)
Cc: [Naylor, Carol](#)
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Thursday, July 8, 2021 10:04:25 AM
Attachments: [image002.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)
[image001.emz](#)
[image003.png](#)
[image004.png](#)
[let_110904556_NoC-OPCC_20210628_fin_renwick.pdf](#)
[NHGuide_MNRF_2019-04-01.pdf](#)

Ministry of Northern Development,
Mines, Natural Resources
and Forestry

Ministère du Développement du Nord,
des Mines, des Richesses naturelles
et des Forêts

July 8, 2021

Subject: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

The Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF) received the notice for the Imperial Oil Pipeline Relocation Project. Thank you for circulating this information to our office, however, please note that we have not completed a screening of natural heritage or other resource values for the project at this time. Please also note that it is your responsibility to be aware of and comply with all relevant federal or provincial legislation, municipal by-laws or other agency approvals.

This response provides information to guide you in identifying and assessing natural features and resources as required by applicable policies and legislation, and engaging with the Ministry for advice as needed.

Natural Heritage & Endangered Species Act

-
In order to provide the most efficient service possible, the attached Natural Heritage Information Request Guide has been developed to assist you with accessing natural heritage data and values from convenient online sources.

It remains the proponent's responsibility to complete a preliminary screening for each project, to obtain available information from multiple sources, to conduct any necessary field studies, and to consider any potential environmental impacts that may result from an activity. We wish to emphasize the need for the proponents of development activities to complete screenings prior to contacting the Ministry or other agencies for more detailed technical information and advice.

The Ministry continues to work on updating data housed by Land Information Ontario and the Natural Heritage Information Centre, and ensuring this information is accessible through online resources. Species at risk data is regularly being updated. To ensure access to reliable and up to date information, please contact the Ministry of the Environment, Conservation and Parks at SAROntario@ontario.ca.

Petroleum Wells & Oil, Gas and Salt Resource Act

- There may be petroleum wells within the proposed project area. Please consult the Ontario Oil, Gas and Salt Resources Library website (www.ogsrlibrary.com) for the best known data on any wells recorded by NDMNRF. Please reference the 'Definitions and Terminology Guide' listed in the publications on the Library website in order to better understand the well information available. Any oil and gas wells in your project area are regulated by the *Oil, Gas and Salt Resource Act*, and the supporting regulations and operating standards. If any unanticipated wells are encountered during development of the project, or if the proponent has questions regarding petroleum operations, the proponent should contact the Petroleum Operations Section at POSRecords@ontario.ca or 519-873-4634.

Public Lands Act & Lakes and Rivers Improvement Act

Some projects may be subject to the provisions of the *Public Lands Act* or the *Lakes and Rivers Improvement Act*. Please review the information on NDMNRF's web pages provided below regarding when an approval is required or not. Please note that many of the authorizations issued under the *Lakes and Rivers Improvement Act* are administered by the local Conservation Authority.

- For more information about the *Public Lands Act*: <https://www.ontario.ca/page/crown-land-work-permits>
- For more information about the *Lakes and Rivers Improvement Act*: <https://www.ontario.ca/document/lakes-and-rivers-improvement-act-administrative-guide>

After reviewing the information provided, if you have not identified any of NDMNRF's interests stated above, there is no need to circulate any subsequent notices to our office.

If you have any questions or concerns, please feel free to contact me.

Sincerely,
Karina

Karina Černiavskaja | District Planner

Ministry of Northern Development, Mines, Natural Resources and Forestry

Email: MNRF.Ayl.Planners@ontario.ca



As part of providing [accessible customer service](#), please let me know if you have any accommodation needs or require communication supports or alternate formats.

From: Naylor, Carol <carol.naylor@stantec.com>

Sent: June 28, 2021 4:57 PM

To: Renwick, Sally (MECP) <Sally.Renwick@ontario.ca>

Cc: IOLRelocation <IOLRelocation@stantec.com>

Subject: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good afternoon Sally,

Please find attached a Notice of Study Commencement in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact:

Emily Hartwig B.Sc., EP
Environmental Consultant, Assessment and Permitting
Phone: (519) 780-8186
IOLRelocation@stantec.com

Sincerely,

Carol Naylor
Team Leader, Administration Services, Environmental Services
Direct: 519 820-7559
Fax: 519 836-2493
Carol.Naylor@stantec.com

Stantec
1-70 Southgate Drive
Guelph ON N1G 4P5



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

From: [Naylor, Carol](#)
To: [IOLRelocation](#)
Cc: [Hartwig, Emily](#)
Subject: FW: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Monday, July 19, 2021 10:00:57 AM
Attachments: [image007.png](#)
[image008.png](#)
[image010.png](#)
[image012.png](#)
[image015.png](#)
[Letter - IAAC to Hartwig - Stantec - Imperial Oil Pipeline Relocation Project 2020-07-02.pdf](#)

From: Ontario Region / Region d'Ontario (IAAC/AEIC) <ontarioregion-regiondontario@iaac-aeic.gc.ca>

Sent: Thursday, July 15, 2021 2:56 PM

To: Naylor, Carol <carol.naylor@stantec.com>

Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Hello Carol,

Please see attached letter in response to your June 28th correspondence regarding the Imperial Oil Pipeline Relocation Project.

Kind regards,

Kim Valentine

(she/her|elle)

Administrative Clerk, Ontario Region

Impact Assessment Agency of Canada / Government of Canada

Kimberly.Valentine@iaac-aeic.gc.ca / Tel: 647-617-5960

Commis administrative, Bureau régional de l'Ontario

Agence d'évaluation d'impact du Canada / Gouvernement du Canada

Kimberly.Valentine@iaac-aeic.gc.ca / Tél. : 647-617-5960

From: Naylor, Carol <carol.naylor@stantec.com>

Sent: June 28, 2021 4:25 PM

To: Puvananathan, Anjala (ECCC) <Anjala.Puvananathan@ec.gc.ca>

Cc: IOLRelocation <IOLRelocation@stantec.com>

Subject: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Good afternoon Anjala,

Please find attached a Notice of Study Commencement in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact:

Emily Hartwig B.Sc., EP

Environmental Consultant, Assessment and Permitting

Phone: (519) 780-8186

IOLRelocation@stantec.com

Sincerely,

Carol Naylor

Team Leader, Administration Services, Environmental Services

Direct: 519 820-7559

Fax: 519 836-2493

Carol.Naylor@stantec.com

Stantec

1-70 Southgate Drive

Guelph ON N1G 4P5



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

From: [Naylor, Carol](#)
To: [IOLRelocation; Hartwig, Emily](#)
Subject: FW: City Council - July 9, 2021
Date: Monday, July 19, 2021 12:55:23 PM

FYI

From: Vernem, Christine <Christine.Vernem@hamilton.ca>
Sent: Monday, July 19, 2021 11:49 AM
To: Naylor, Carol <carol.naylor@stantec.com>
Cc: McKinnon, Dan <Dan.McKinnon@hamilton.ca>
Subject: City Council - July 9, 2021

Emily Hartwig,

Re: Correspondence from Stantec Consulting Ltd. respecting Imperial Oil Pipeline Relocation Project - Notice of Study Commencement.

At the meeting of July 9, 2021, Hamilton City Council received your correspondence respecting the above and referred it to the General Manager of Public Works for appropriate action.

Regards,

*Christine Vernem,
Legislative Secretary*

on behalf of
Janet Pilon,
Deputy Clerk

21-012
(4.6)

From: [Harvey, Joseph \(MHSTCI\)](#)
To: [IOLRelocation](#)
Cc: [Barboza, Karla \(MHSTCI\)](#); [Hatcher, Laura \(MHSTCI\)](#); [Naylor, Carol](#)
Subject: File 0014554: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Wednesday, July 28, 2021 5:11:11 PM
Attachments: [2021-07-28_ImpOilRelocation-MSHTCI-Ltr.pdf](#)

Emily Hartwig,

Please find attached MHSTCI's comments on the above referenced undertaking. Unfortunately, we are unable to provide additional information regarding other proposed developments within the Study Area. The Ministry of Environment, Conservation and Parks and City of Hamilton should be able assist you further. Please do not hesitate to contact us with any other questions or concerns.

Kind Regards,

Joseph Harvey

On behalf of

Laura Hatcher
Heritage Planner
Heritage Planning Unit
laura.e.hatcher@ontario.ca

From: [Kourosh Manouchehri](#)
To: [Naylor, Carol](#)
Cc: [IOLRelocation](#)
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Thursday, September 30, 2021 3:02:06 PM
Attachments: [image008.png](#)
[image009.png](#)
[image010.png](#)
[image011.png](#)
[image012.png](#)
[image013.png](#)
[image014.png](#)
[image015.png](#)
[image016.png](#)
[image017.png](#)

Hi Naylor,

Thank you for the provided information about this project. I don't know if the LTC application is submitted to OEB by now or not. An application needs to be filled and submitted for the review of this project by TSSA as part of Ontario Pipeline Coordinating Committee. Please fill or ask the operator to fill [Application for Review of Pipeline Project](#) and send it to the email address provided on the form.

If you have any question, please contact me.

Regards,



Kourosh Manouchehri, P.Eng., PMP | Engineer, Fuels

Engineering

345 Carlingview Drive

Toronto, Ontario M9W 6N9

Tel: +1 416-734-3539 || Fax: +1 416-231-7525 | E-Mail: kmanouchehri@tssa.org

www.tssa.org



From: Naylor, Carol <carol.naylor@stantec.com>

Sent: June 28, 2021 4:56 PM

To: Kourosh Manouchehri <KManouchehri@tssa.org>

Cc: IOLRelocation <IOLRelocation@stantec.com>

Subject: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

[CAUTION]: This email originated outside the organisation.

Please do not click links or open attachments unless you recognise the source of this email and know the content is safe.

Good afternoon Kourosh,

Please find attached a Notice of Study Commencement in regards to the Imperial Oil Pipeline Relocation

Project. If you have any questions or comments, please contact:

Emily Hartwig B.Sc., EP
Environmental Consultant, Assessment and Permitting
Phone: (519) 780-8186
IOLRelocation@stantec.com

Sincerely,

Carol Naylor
Team Leader, Administration Services, Environmental Services
Direct: 519 820-7559
Fax: 519 836-2493
Carol.Naylor@stantec.com

Stantec
1-70 Southgate Drive
Guelph ON N1G 4P5



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

This electronic message and any attached documents are intended only for the named recipients. This communication from the Technical Standards and Safety Authority may contain information that is privileged, confidential or otherwise protected from disclosure and it must not be disclosed, copied, forwarded or distributed without authorization. If you have received this message in error, please notify the sender immediately and delete the original message.

From: [Hartwig, Emily](#)
To: [IOLRelocation](#)
Bcc: [zora.crnjacki@oeb.ca](#); [Helma.Geerts@ontario.ca](#); [dan.minkin@ontario.ca](#); [tony.difabio@ontario.ca](#); [kmanouchehri@tssa.org](#); [sally.renwick@ontario.ca](#); [maya.harris@ontario.ca](#); [jason.mccullough@ontario.ca](#); [Barbara.Slatery@ontario.ca](#); [cory.ostrowka@infrastructureontario.ca](#)
Subject: Imperial Oil Pipeline Relocation Project - Notice of Project Update
Date: Wednesday, October 20, 2021 3:44:00 PM
Attachments: [Notice_20211008.pdf](#)
[110904556_NoC_Fig01_Site_Loc_20210929.pdf](#)

Please find attached a Notice of Project Update and Map in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact the undersigned.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: [IOLRelocation](#)
Bcc: [donna.skelly@pc.ola.org](#); [david.sweet@parl.gc.ca](#); [sandro.leonardelli@canada.ca](#); [anjala.puvananathan@canada.ca](#); [Karla.barboza@ontario.ca](#); [trevor.fleck@ontario.ca](#); [heather.malcolmson@ontario.ca](#); [stephen.burt@ontario.ca](#); [michael.falconi@ontario.ca](#); [omafra.eanotices@ontario.ca](#); [sourceprotectionscreening@ontario.ca](#); [david.marriott@ontario.ca](#); [mike.stone@conservationhamilton.ca](#); [cconnolly@hrca.on.ca](#); [dan.dobrin@ontario.ca](#)
Subject: Imperial Oil Pipeline Relocation Project - Notice of Project Update
Date: Wednesday, October 20, 2021 3:47:00 PM
Attachments: [Notice_20211008.pdf](#)
[110904556 NoC Fig01 Site Loc 20210929.pdf](#)

Please find attached a Notice of Project Update and Map in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact the undersigned.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: [IOLRelocation](#)
Bcc: [mayor@hamilton.ca](#); [arlene.vanderbeek@hamilton.ca](#); [clerk@hamilton.ca](#); [steve.robichaud@hamilton.ca](#)
Subject: Imperial Oil Pipeline Relocation Project - Notice of Project Update
Date: Wednesday, October 20, 2021 3:50:00 PM
Attachments: [Notice_20211008.pdf](#)
[110904556_NoC_Fig01_Site_Loc_20210929.pdf](#)

Please find attached a Notice of Project Update and Map in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact the undersigned.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: [IOLRelocation](#)
Bcc: roman.dorfman@hydroone.com
Subject: Imperial Oil Pipeline Relocation Project - Notice of Project Update
Date: Wednesday, October 20, 2021 3:51:00 PM
Attachments: [Notice_20211008.pdf](#)
[110904556 NoC Fig01 Site Loc 20210929.pdf](#)

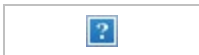
Please find attached a Notice of Project Update and Map in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact the undersigned.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Cassandra Connolly](#)
To: [Hartwig, Emily](#); [IOLRelocation](#)
Subject: RE: Imperial Oil Pipeline Relocation Project - Notice of Project Update
Date: Thursday, October 21, 2021 10:53:01 AM

Hi Emily,

While there may be a small portion of the project which is within our watershed, the works would be located outside of lands which are considered to be regulated by Conservation Halton. Therefore, we have no comments on the project and would defer review to the Hamilton Conservation Authority.

Have a great day,

Cassandra Connolly

Regulations Officer

Conservation Halton

2596 Britannia Road West, Burlington, ON L7P 0G3
905-336-1158 ext. 2301 | cconnolly@hrca.on.ca

Conservation Halton's Administration Office is currently closed to the public due to COVID-19. During this time, we are accessing email and phone messages, responding to messages, and processing planning and permit applications remotely. For more information and updates on Conservation Halton's planning and permitting services, please visit <https://conservationhalton.ca/planning-permits>. We are providing the best service we can during these uncertain times and appreciate your patience and understanding.

This message, including any attachments, is intended only for the person(s) named above and may contain confidential and/or privileged information. Any use, distribution, copying or disclosure by anyone other than the intended recipient is strictly prohibited. If you are not the intended recipient, please notify us immediately by telephone or e-mail and permanently delete the original transmission from us, including any attachments, without making a copy.

X: 581497.39251
Y: 4796000.79818

Near 701 Concession 4 W

From: Hartwig, Emily <Emily.Hartwig@stantec.com>
Sent: October 20, 2021 3:48 PM
To: IOLRelocation <IOLRelocation@stantec.com>
Subject: Imperial Oil Pipeline Relocation Project - Notice of Project Update

Please find attached a Notice of Project Update and Map in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact the undersigned.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

From: [Kourosh Manouchehri](#)
To: [Hartwig, Emily](#); [IOLRelocation](#)
Subject: RE: Imperial Oil Pipeline Relocation Project - Notice of Project Update
Date: Thursday, October 21, 2021 1:57:33 PM
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

Hi Emily,

Thank you for the provided information about this project. An application needs to be filled and submitted for the review of this project by TSSA as part of Ontario Pipeline Coordinating Committee. Please fill [Application for Review of Pipeline Project](#) and send it to the email address provided on the form.

If you have any question, please contact me.

Regards,



Kourosh Manouchehri, P.Eng., PMP | Engineer, Fuels

Engineering

345 Carlingview Drive

Toronto, Ontario M9W 6N9

Tel: +1 416-734-3539 | Fax: +1 416-231-7525 | E-Mail: kmanouchehri@tssa.org

www.tssa.org



From: Hartwig, Emily <Emily.Hartwig@stantec.com>

Sent: October 20, 2021 3:45 PM

To: IOLRelocation <IOLRelocation@stantec.com>

Subject: Imperial Oil Pipeline Relocation Project - Notice of Project Update

[CAUTION]: This email originated outside the organisation.

Please do not click links or open attachments unless you recognise the source of this email and know the content is safe.

Please find attached a Notice of Project Update and Map in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact the undersigned.

Regards,

Emily Hartwig B.Sc., EP.

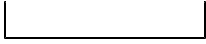
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849

Mobile: (226) 979-4457

Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

This electronic message and any attached documents are intended only for the named recipients. This communication from the Technical Standards and Safety Authority may contain information that is privileged, confidential or otherwise protected from disclosure and it must not be disclosed, copied, forwarded or distributed without authorization. If you have received this message in error, please notify the sender immediately and delete the original message.

From: [Earles, Sean](#)
To: [Rick Woodworth](#)
Cc: [Hartwig, Emily](#); [Georgopoulos, Rooly](#)
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Thursday, November 25, 2021 2:16:35 PM
Attachments: [DLA 2021-0016 Stantec \(002\).pdf](#)
[image001.png](#)
[image011.png](#)
[image012.png](#)
[image013.png](#)
[image014.png](#)
[image016.png](#)

Hi Rick!

We finally heard back from our legal team and the only change they requested was changing “Stantec” to “Stantec Consulting Ltd” – so we made that change. Please let us know if this is an issue.

Cheers,
Sean
He/Him/His

From: Earles, Sean
Sent: Friday, November 19, 2021 12:31 PM
To: Rick Woodworth <Richard.Woodworth@conservationhamilton.ca>
Cc: Hartwig, Emily <Emily.Hartwig@stantec.com>; Georgopoulos, Rooly <Rooly.Georgopoulos@stantec.com>
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Thanks Rick! I've send off the DLA to our legal team and await their response (fyi – we need there approval before we can sign).

Cheers,
Sean
He/Him/His

From: Rick Woodworth <Richard.Woodworth@conservationhamilton.ca>
Sent: Friday, November 19, 2021 9:49 AM
To: Earles, Sean <Sean.Earles@stantec.com>
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Hi Sean,

Please see attached dataset and DLA. Kindly sign and return the latter at your earliest convenience. Thank you.

Regards,

Rick

Richard Woodworth

G.I.S. Specialist
Hamilton Conservation Authority
838 Mineral Springs Road, P.O. Box 81067
Ancaster, ON L9G 4X1
Office Phone: 905-525-2181 Ext. 161
Remote Phone: 289-527-6724
Email: Richard.Woodworth@conservationhamilton.ca



A Healthy Watershed for Everyone

The contents of this e-mail and any attachments are intended for the named recipient(s). This e-mail may contain information that is privileged and confidential. If you have received this message in error or are not the named recipient(s), please notify the sender and permanently delete this message without reviewing, copying, forwarding, disclosing or otherwise using it or any part of it in any form whatsoever.

From: Earles, Sean <Sean.Earles@stantec.com>
Sent: November 12, 2021 9:53 AM
To: Mike Stone <Mike.Stone@conservationhamilton.ca>; Rick Woodworth <Richard.Woodworth@conservationhamilton.ca>
Cc: Hartwig, Emily <Emily.Hartwig@stantec.com>; Georgopoulos, Rooly <Rooly.Georgopoulos@stantec.com>
Subject: FW: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Importance: High

Good morning!

We are working on the above mentioned project and would like to request the regulation data for use in our environmental report. We are attaching our study area, is it possible to obtain the regulated data?

Cheers,
Sean
He/Him/His

IMPERIAL OIL PIPELINE RELOCATION PROJECT

Appendix B4 – Project Correspondence

Table B4.2: Summary of Project Correspondence – Indigenous Communities

Record	Correspondent	Type	Date	Subject Matter	Forwarded/ Date	Responder/Date	Response
Notice of Study Commencement published in local newspaper on July 1, 2021. Notice of Project Update published in local newspaper on October 21, 2021.							
1	All Indigenous communities noted in the Contact List (Appendix B1)	Email	July 12, 2021	Imperial Oil (IOL) sent an email to each Indigenous community noted on the Contact List to let the communities know of the Imperial Oil Pipeline Relocation Project. IOL provided a copy of the newspaper notice and an address letter which detailed the components of the Project.	N/A	N/A	N/A

From: [Williams, Kelly /C](#)
To: [REDACTED]
Subject: Lafarge Project-IOL-Notice of Study Commencement
Date: Monday, July 12, 2021 12:41:12 PM
Attachments: [Notification-HCCC-HDI-July 2021.pdf](#)
[ad_110904556_IOL-Lafarge_NoC_8x11_20210624_fnl.pdf](#)

Good afternoon Wayne and Todd,

I hope you are both well and are enjoying the summer so far. Imperial has a new project on the horizon near Hamilton, ON scheduled for Spring of 2022. Lafarge Canada has requested to relocate a section of pipeline currently located within the right of way. The details are in the attached letter from Thomas Cao, the Project Manager, along with the Notice of Study Commencement.

Let me know if you have any questions.

Kind regards,

kelly

Kelly Williams

Community Relations Officer Waterdown-Finch Project

Imperial

E kelly.williams@esso.ca

C 519.328.8681

imperialoil.ca | [Twitter](#) | [YouTube](#)



July 12, 2021

Haudenosaunee Confederacy Chiefs Council
Haudenosaunee Development Institute
16 Sunrise Court
Ohsweken, ON N0A 1M0

Imperial Oil Pipeline Relocation Project – Notice of Study Commencement via Email

Dear Chiefs and Staff,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated. The intent is to relocate the pipeline to either the north or south side of Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be determined by the final route chosen but will be approximately 2 km.

For more details on the location of the Project, please refer to the notice.

Due to the current government restrictions on public gatherings as a result of COVID-19, an information session will not take place.

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*". It is anticipated that the Environmental Report for the study will be completed by late summer / early fall 2021, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. If approved, construction is currently anticipated to begin in spring 2022.

As an Indigenous community with a potential interest in the Study Area, we are inviting the Haudenosaunee Confederacy Chiefs Council to provide comments and feedback regarding the Project. Stantec is presently compiling an environmental, socio-economic, and archaeological/cultural heritage inventory of the project location. We would welcome your feedback and comments regarding the proposed Project as we undertake the requisite environmental study.

Imperial Oil is committed to meaningful engagement with Indigenous communities. As such, we would be interested in holding a conference call with your consultation office staff to share project related information, should you wish. If you would be interested in setting up a briefing on this Project please reach out to Kelly Williams, and she will coordinate accordingly.

We kindly request that any initial input and comments regarding the Project are provided by **August 10, 2021**. Please let us know if you are unable to respond by this date but are interested in participating in the consultation and engagement process for the Project.

If you have any questions or want to discuss the Project, please feel free to contact Kelly Williams, Community Relations Officer at any time (kelly.williams@esso.ca; C: 519-328-8681). We look forward to engaging with you to ensure your community's interests are being considered and represented.

Respectfully,

Thomas Cao
Project Manager

Attachment: Notice of Study Commencement

cc. Thomas Cao, Imperial Oil
Emily Hartwig, Environmental Consultant, Stantec Consulting Ltd.

From: [Williams, Kelly /C](#)
To: [REDACTED]
Cc: [REDACTED]
Subject: Lafarge Project-IOL-Notice of Study Commencement
Date: Monday, July 12, 2021 12:40:59 PM
Attachments: [Notification-SNGREC-July 2021.pdf](#)
[ad_110904556_IOL-Lafarge_NoC_8x11_20210624_fnl.pdf](#)

Good afternoon Lonny,

I hope you are well and looking forward to your retirement. Imperial has a new project on the horizon near Hamilton, ON for Spring of 2022. Lafarge Canada has requested to relocate a section of pipeline currently located within the right of way. The details are in the attached letter from Thomas Cao, the Project Manager, along with the Notice of Study Commencement.

Let me know if you have any questions.

Kind regards,

kelly

Kelly Williams

Community Relations Officer Waterdown-Finch Project

Imperial

E kelly.williams@esso.ca

C 519.328.8681

imperialoil.ca | [Twitter](#) | [YouTube](#)



July 12, 2021

██████████
Six Nations of the Grand River
Lands and Resources Department
2498 Chiefswood Road
Ohsweken, ON N0A1M0

Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Dear ██████████,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated. The intent is to relocate the pipeline to either the north or south side of Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be determined by the final route chosen but will be approximately 2 km.

For more details on the location of the Project, please refer to the notice.

Due to the current government restrictions on public gatherings as a result of COVID-19, an information session will not take place.

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*". It is anticipated that the Environmental Report for the study will be completed by late summer / early fall 2021, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. If approved, construction is currently anticipated to begin in spring 2022.

As an Indigenous community with a potential interest in the Study Area, we are inviting Six Nations of the Grand River First Nation to provide comments and feedback regarding the Project. Stantec is presently compiling an environmental, socio-economic, and archaeological/cultural heritage inventory of the project location. We would welcome your feedback and comments regarding the proposed Project as we undertake the requisite environmental study.

Imperial Oil is committed to meaningful engagement with Indigenous communities. As such, we would be interested in holding a conference call with your consultation office staff to share project related information, should you wish. If you would be interested in setting up a briefing on this Project please reach out to Kelly Williams, and she will coordinate accordingly.

We kindly request that any initial input and comments regarding the Project are provided by **August 10, 2021**. Please let us know if you are unable to respond by this date but are interested in participating in the consultation and engagement process for the Project.

If you have any questions or want to discuss the Project, please feel free to contact Kelly Williams, Community Relations Officer at any time (kelly.williams@esso.ca; C: 519-328-8681). We look forward to engaging with you to ensure your community's interests are being considered and represented.

Respectfully,

Thomas Cao
Project Manager

Attachment: Notice of Study Commencement

c. Thomas Cao, Imperial Oil
Emily Hartwig, Environmental Consultant, Stantec Consulting Ltd.

From: [Williams, Kelly /C](#)
To: [REDACTED]
Cc: [REDACTED]
Subject: Lafarge Project-IOL-Notice of Study Commencement
Date: Monday, July 12, 2021 12:41:19 PM
Attachments: [Notification-MCFN-July 2021.pdf](#)
[ad_110904556_IOL-Lafarge_NoC_8x11_20210624_fnl.pdf](#)

Dear [REDACTED]

I hope you are well and are enjoying the summer so far. Imperial has a new project on the horizon near Hamilton, ON scheduled for Spring of 2022. Lafarge Canada has requested to relocate a section of pipeline currently located within the right of way. The details are in the attached letter from Thomas Cao, the Project Manager, along with the Notice of Study Commencement.

Let me know if you have any questions.

Kind regards,

kelly

Kelly Williams

Community Relations Officer Waterdown-Finch Project
Imperial

E kelly.williams@esso.ca

C 519.328.8681

imperialoil.ca | [Twitter](#) | [YouTube](#)



July 12, 2021

[REDACTED]
Director
Mississaugas of the Credit First Nation
Department of Consultation and Accommodation
4065 Hwy 6
Hagersville, ON N0A1H0

Imperial Oil Pipeline Relocation Project – Notice of Study Commencement via Email

Dear [REDACTED],

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated. The intent is to relocate the pipeline to either the north or south side of Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be determined by the final route chosen but will be approximately 2 km.

For more details on the location of the Project, please refer to the notice.

Due to the current government restrictions on public gatherings as a result of COVID-19, an information session will not take place.

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*". It is anticipated that the Environmental Report for the study will be completed by late summer / early fall 2021, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. If approved, construction is currently anticipated to begin in spring 2022.

As an Indigenous community with a potential interest in the Study Area, we are inviting Mississaugas of the Credit First Nation to provide comments and feedback regarding the Project. Stantec is presently compiling an environmental, socio-economic, and archaeological/cultural heritage inventory of the project location. We would welcome your feedback and comments regarding the proposed Project as we undertake the requisite environmental study.

Imperial Oil is committed to meaningful engagement with Indigenous communities. As such, we would be interested in holding a conference call with your consultation office staff to share project related information, should you wish. If you would be interested in setting up a briefing on this Project please reach out to Kelly Williams, and she will coordinate accordingly.

We kindly request that any initial input and comments regarding the Project are provided by **August 10, 2021**. Please let us know if you are unable to respond by this date but are interested in participating in the consultation and engagement process for the Project.

If you have any questions or want to discuss the Project, please feel free to contact Kelly Williams, Community Relations Officer at any time (kelly.williams@esso.ca; C: 519-328-8681). We look forward to engaging with you to ensure your community's interests are being considered and represented.

Respectfully,

Thomas Cao
Project Manager

Attachment: Notice of Study Commencement

cc. Thomas Cao, Imperial Oil
Emily Hartwig, Environmental Consultant, Stantec Consulting Ltd.

IMPERIAL OIL PIPELINE RELOCATION PROJECT

Appendix B4 – Project Correspondence

Table B4.3: Summary of Project Correspondence – Landowner / Resident

Record	Correspondent	Type	Date	Subject Matter	Forwarded/ Date	Responder/Date	Response
Notice of Study Commencement published in local newspaper on July 1, 2021. Notice of Project Update published in local newspaper on October 21, 2021.							
1	All landowners and residents within approximately 500 m of the proposed pipeline relocation	Letter sent via Canada Post	June 30, 2021	Notice of Study Commencement letters were mailed via Canada Post regular mail to all landowners and residents within 500 m of the proposed pipeline relocation.	N/A	N/A	N/A
2	[REDACTED] [REDACTED]	Email	July 5, 2021	A landowner / resident who received the Notice of Study Commencement letter sent an email to the Project email address. The landowner / resident noted that the existing pipeline crosses their property and noted that the scale of the map provided made it difficult to see Project details.	N/A	Stantec / July 16, 2021	Stantec responded noting that while the exact alignment of the pipeline relocation has not yet been determined, Imperial Oil does not anticipate that the section of the pipeline west of Brock Road will required relocation. Stantec noted that as the Project progresses updated mapping will be provided which will include a more focused view of the proposed pipeline relocation.

From: [Hartwig, Emily](#)
To: [REDACTED]
Cc: [IOLRelocation](#); [Cao, Thomas](#); [Escobar, Juan](#)
Subject: RE: Imperial oil pipeline relocation
Date: Friday, July 16, 2021 2:01:56 PM

Good afternoon [REDACTED],

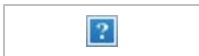
My apologies for the delay in our response and thank-you for reaching out regarding the Imperial Oil Pipeline Relocation Project. While the exact alignment of the pipeline relocation is still under consideration, Imperial Oil does not anticipate that the section of pipeline west of Brock Road will require relocation. However, a replacement of the road crossing within the same Right-of-Way is being considered. As the Project progresses updated mapping will be provided which will include a more focused view of the proposed pipeline relocation.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: 519 780-8186
Mobile: 226 979-4457
Emily.Hartwig@stantec.com

Stantec
1-70 Southgate Drive
Guelph ON N1G 4P5



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [REDACTED]
Sent: Monday, July 5, 2021 8:00 PM
To: IOLRelocation <IOLRelocation@stantec.com>
Subject: Imperial oil pipeline relocation

Hello - received a letter today about the Imperial oil pipeline relocation at the intersection of 4th concession and Brock Rd. on Lafarge property.

The pipeline goes through my property on [REDACTED], and I was wondering if there will be any works [REDACTED]. The included map was next to useless.

Thanks,

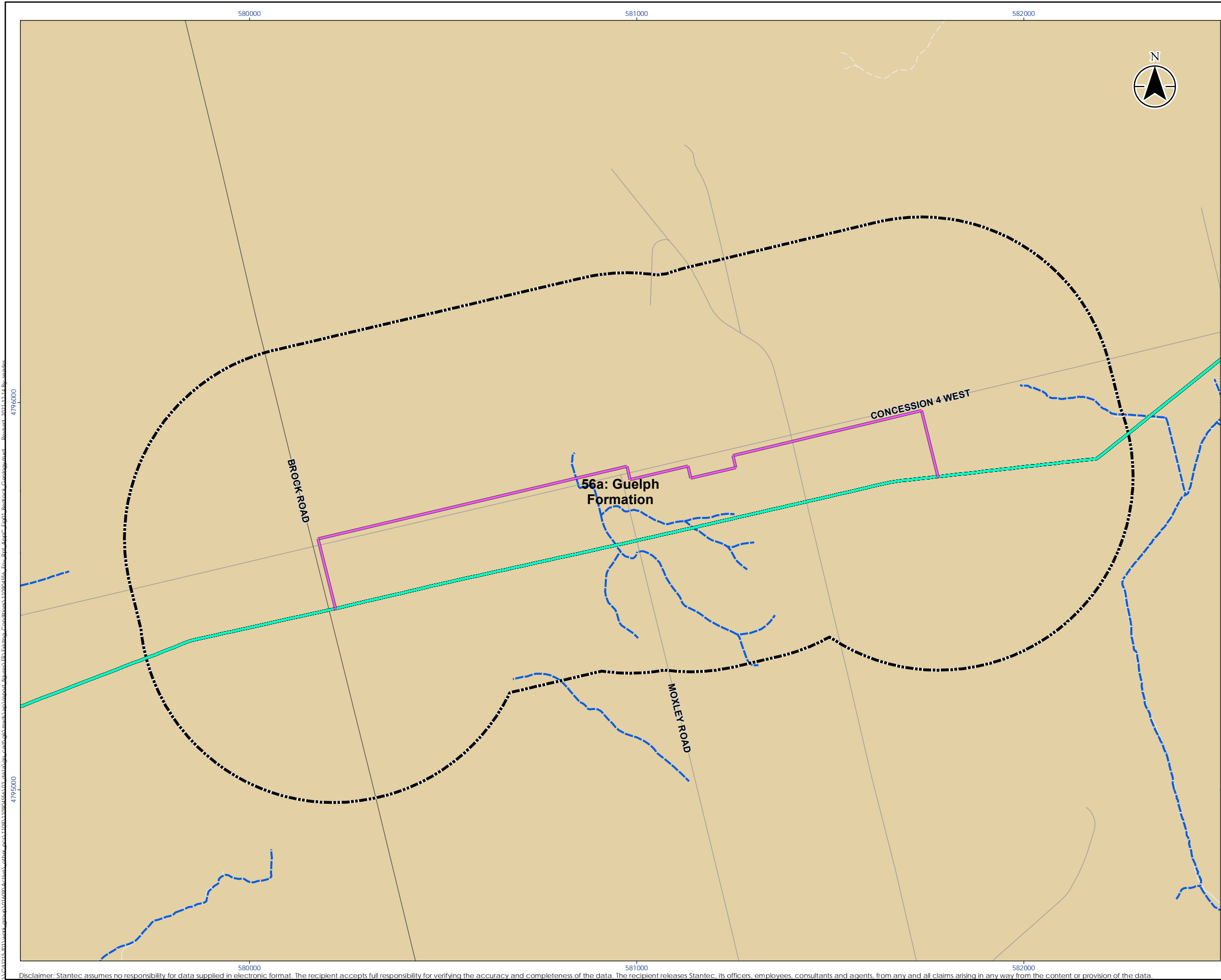
[REDACTED]

[REDACTED]

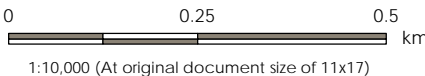
[REDACTED]

APPENDIX C: EXISTING CONDITIONS FIGURES





- Legend
- Existing Pipeline
 - Proposed Pipeline
 - Project Study Area
 - Major Road
 - Minor Road
 - Mapped Headwater Drainage Features (HCA, 2021)
 - Watercourse (Intermittent)
 - Watercourse (Permanent)
- Bedrock Geology
- 56a: Guelph Fm. (also present in the Upper Silurian)



- Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
 2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2021.
 3. Bedrock geology data source: Ontario Geological Survey 2011. 1:250 000 scale bedrock geology of Ontario: Ontario Geological Survey, Miscellaneous Release-Data 126-Revision 1. ISBN 978-1-4435-5704-7 (CD) ISBN 978-1-4435-5705-4.
 4. Hamilton Conservation Authority (HCA) features provided under Data Licensing Agreement, November 19, 2021.



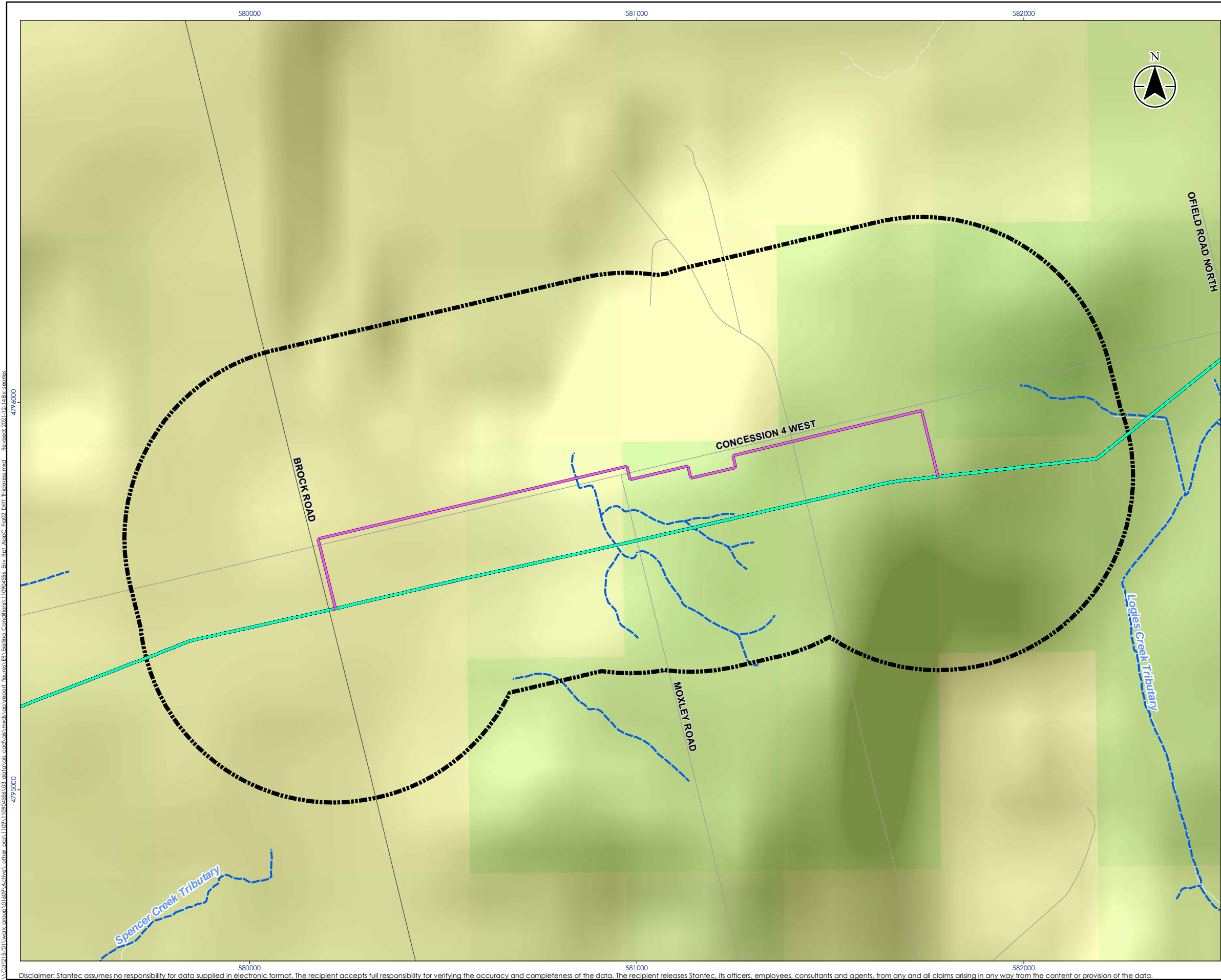
Project Location
City of Hamilton

110904556 REVA
Prepared by KB on 2021-12-14
Technical Review by SE on 2021-11-10

Client/Project
IMPERIAL OIL
PIPELINE RELOCATION PROJECT ENVIRONMENTAL
REPORT

Figure No.
1

Title
Bedrock Geology



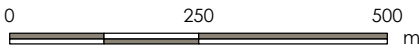
Legend

- Existing Pipeline
- Proposed Pipeline
- Project Study Area
- Major Road
- Minor Road
- Mapped Headwater Drainage Features (HCA, 2021)
- Watercourse (Intermittent)
- Watercourse (Permanent)

Drift Thickness (m)

Value

- High : 160
- Low : 0



1:10,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2021.
3. Drift thickness data source: Gao, C., Shiota, J., Kelly, R.J., Brunton, F.R. and van Haften, S. 2006. Bedrock topography and overburden thickness mapping, Southern Ontario; Ontario Geological Survey, Miscellaneous Release—Data 207.
4. Hamilton Conservation Authority (HCA) features provided under Data Licensing Agreement, November 19, 2021.



Project Location
City of Hamilton

110904556 REVA
Prepared by KB on 2021-12-14
Technical Review by SE on 2021-11-10

Client/Project
IMPERIAL OIL
PIPELINE RELOCATION PROJECT ENVIRONMENTAL
REPORT

Figure No.

2

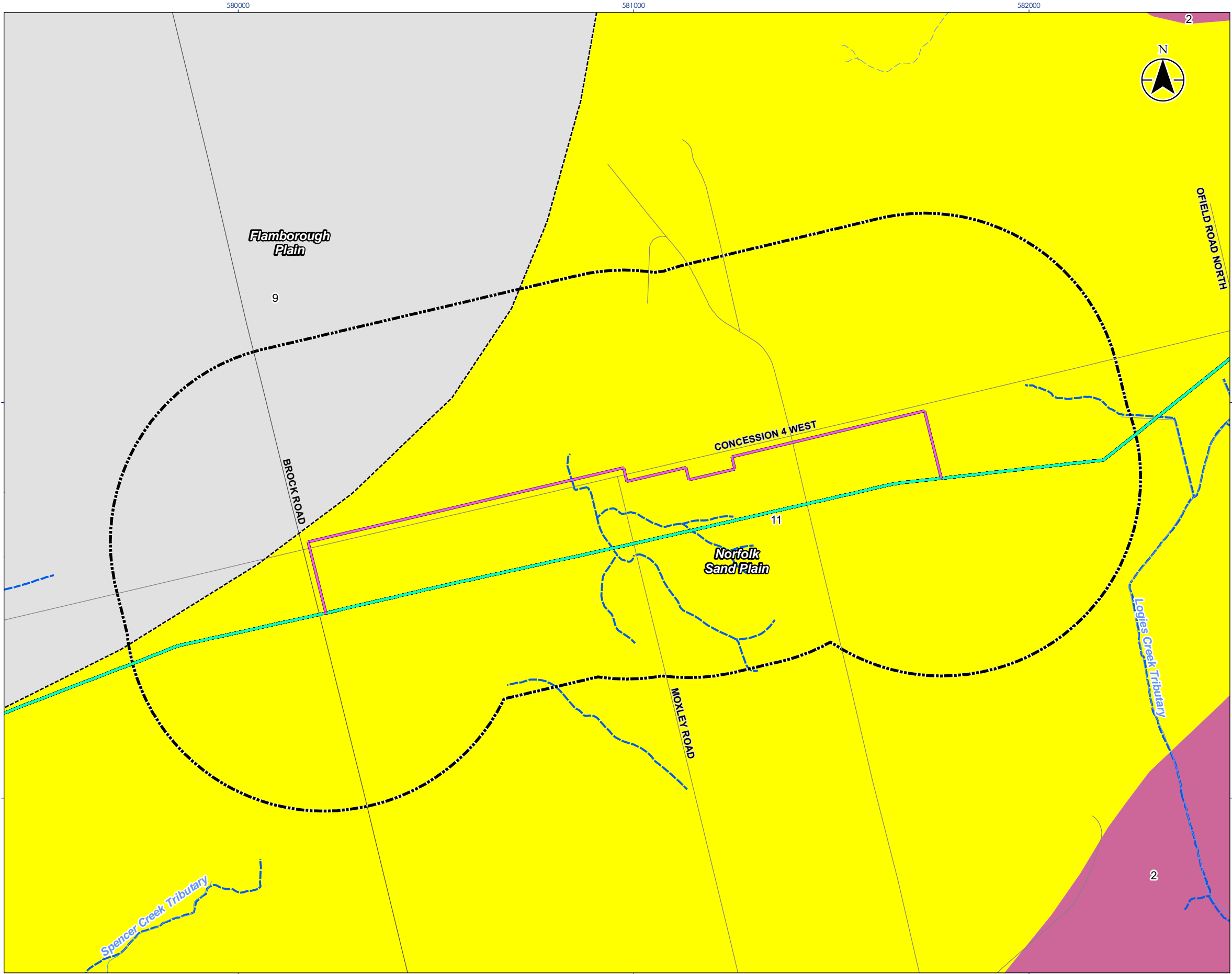
Title

Drift Thickness

\\C:\1215\01\work\arqae\01\02\Actives\other\eca\1109\110904556\03_data\ysis_cad\ca\mod\env\report_110904556_Env_Rpt_Apoc_Fig02_Drift_Thickness.mxd - Reviset: 2021-12-14 by seadss

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

\\Ca1215.01\work\arqae\01\602\Active\other\eca\1109\110904556\03_data\03s_cad\03a_mxd\cap_report_faures\FA_Pipeline_Condition\110904556_Env_Rpt_Apoc_Fig03_Physiography.mxd - Revised: 2021-12-14.Bk.scd.ses

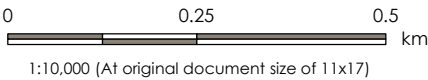


Legend

- Existing Pipeline
- Proposed Pipeline
- Project Study Area
- Major Road
- Minor Road
- Mapped Headwater Drainage Features (HCA, 2021)
- Watercourse (Intermittent)
- Watercourse (Permanent)

Physiography

- 2: Till Moraines
- 9: Limestone Plains
- 11: Sand Plains



- Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
 2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2021.
 3. Physiography data source: Chapman, L.J. and Putnam, D.F. 2007. Physiography of southern Ontario; Ontario Geological Survey, Miscellaneous Release—Data 228.
 4. Hamilton Conservation Authority (HCA) features provided under Data Licensing Agreement, November 19, 2021.



Project Location
City of Hamilton

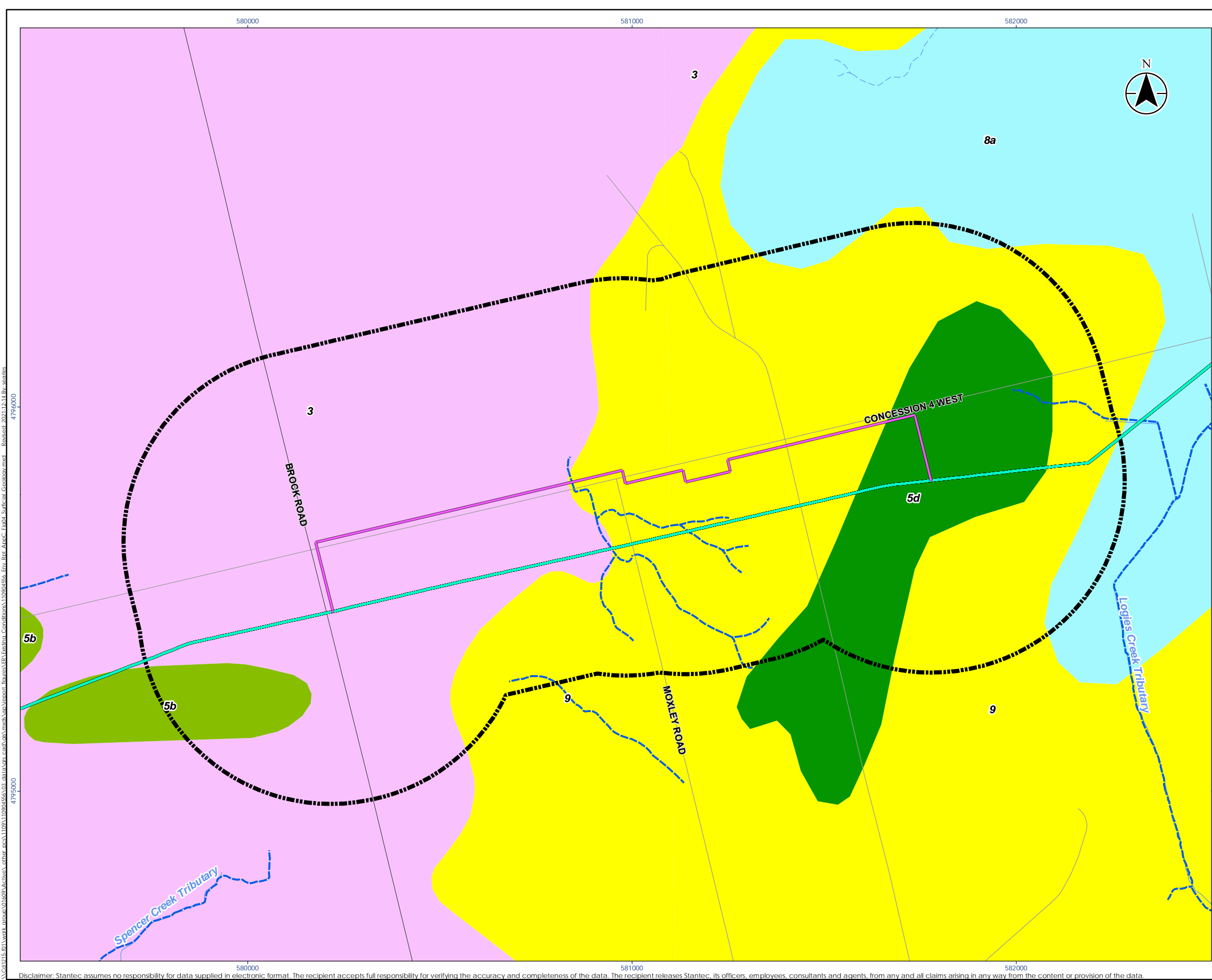
110904556 REVA
Prepared by KB on 2021-12-14
Technical Review by SE on 2020-11-10

Client/Project
IMPERIAL OIL
PIPELINE RELOCATION PROJECT ENVIRONMENTAL
REPORT

Figure No.
3

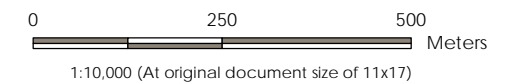
Title
Physiography

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.



Legend

- Existing Pipeline
- Proposed Pipeline
- Project Study Area
- Major Road
- Minor Road
- Mapped Headwater Drainage Features (HCA, 2021)
- Watercourse (Intermittent)
- Watercourse (Permanent)
- Surficial Geology
 - 9: Coarse-textured glaciolacustrine deposits
 - 8a: Fine-textured glaciolacustrine deposits (Massive-well laminated)
 - 5b: Stone-poor, carbonate-derived silty to sandy till
 - 5d: Glaciolacustrine-derived silty to clayey till
 - 3: Paleozoic bedrock



Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2021.
3. Surficial geology data source: Ontario Geological Survey 2010. Surficial geology of Southern Ontario: Ontario Geological Survey, Miscellaneous Release--Data 128-REV ISBN 978-1-4435-2483-4.
4. Hamilton Conservation Authority (HCA) features provided under Data Licensing Agreement, November 19, 2021.



Project Location City of Hamilton 110904556 REVA
Prepared by KB on 2021-12-14
Technical Review by SE on 2021-11-10

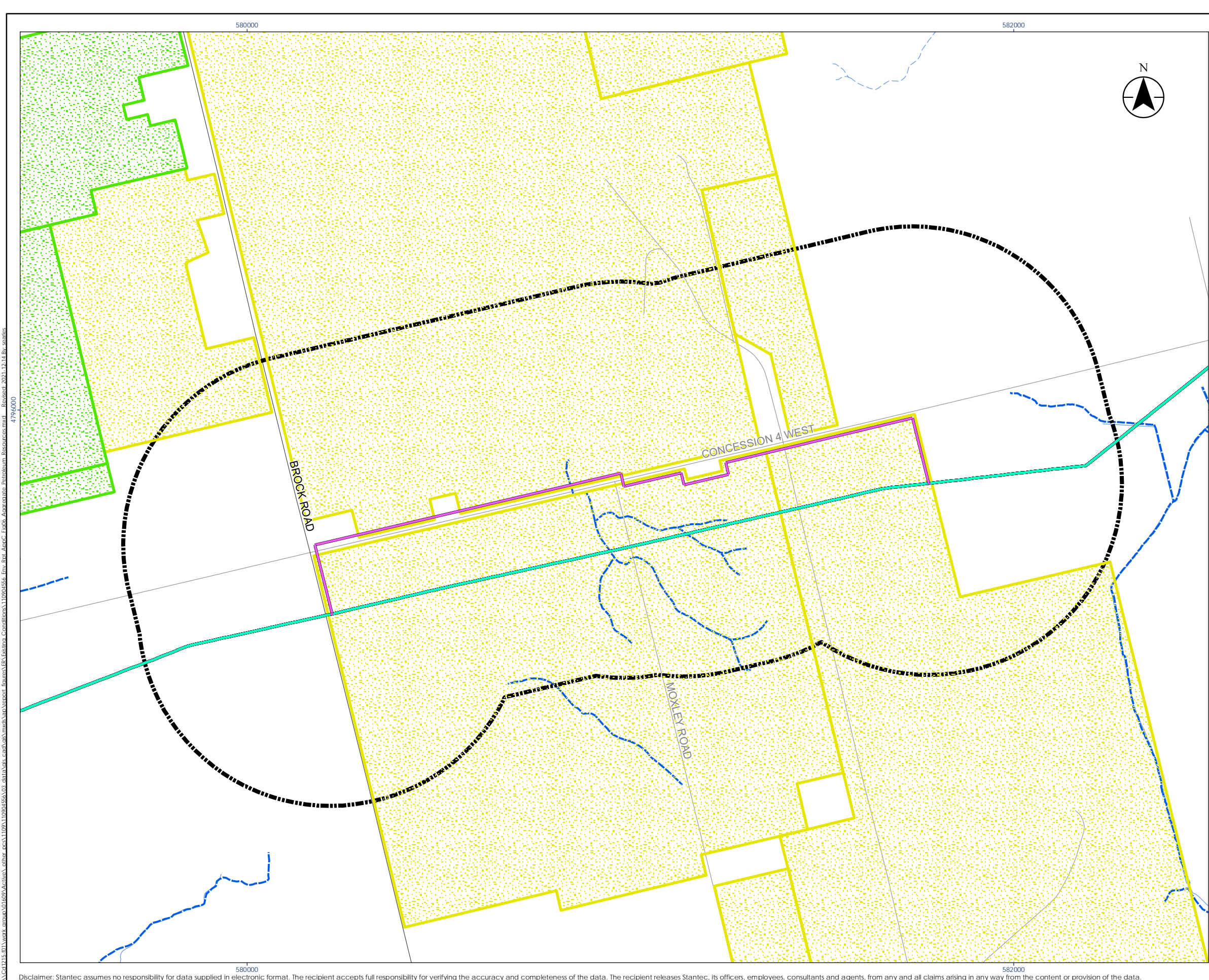
Client/Project
IMPERIAL OIL
PIPELINE RELOCATION PROJECT ENVIRONMENTAL
REPORT

Figure No.

4

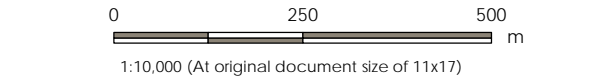
Title

Surficial Geology



Legend

- Existing Pipeline
- Proposed Pipeline
- Project Study Area
- Major Road
- Minor Road
- Mapped Headwater Drainage Features (HCA, 2021)
- Watercourse (Intermittent)
- Watercourse (Permanent)
- Aggregate Site - Surrendered
- Aggregate Site - Active



- Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
 2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2021.
 3. Hamilton Conservation Authority (HCA) features provided under Data Licensing Agreement, November 19, 2021.



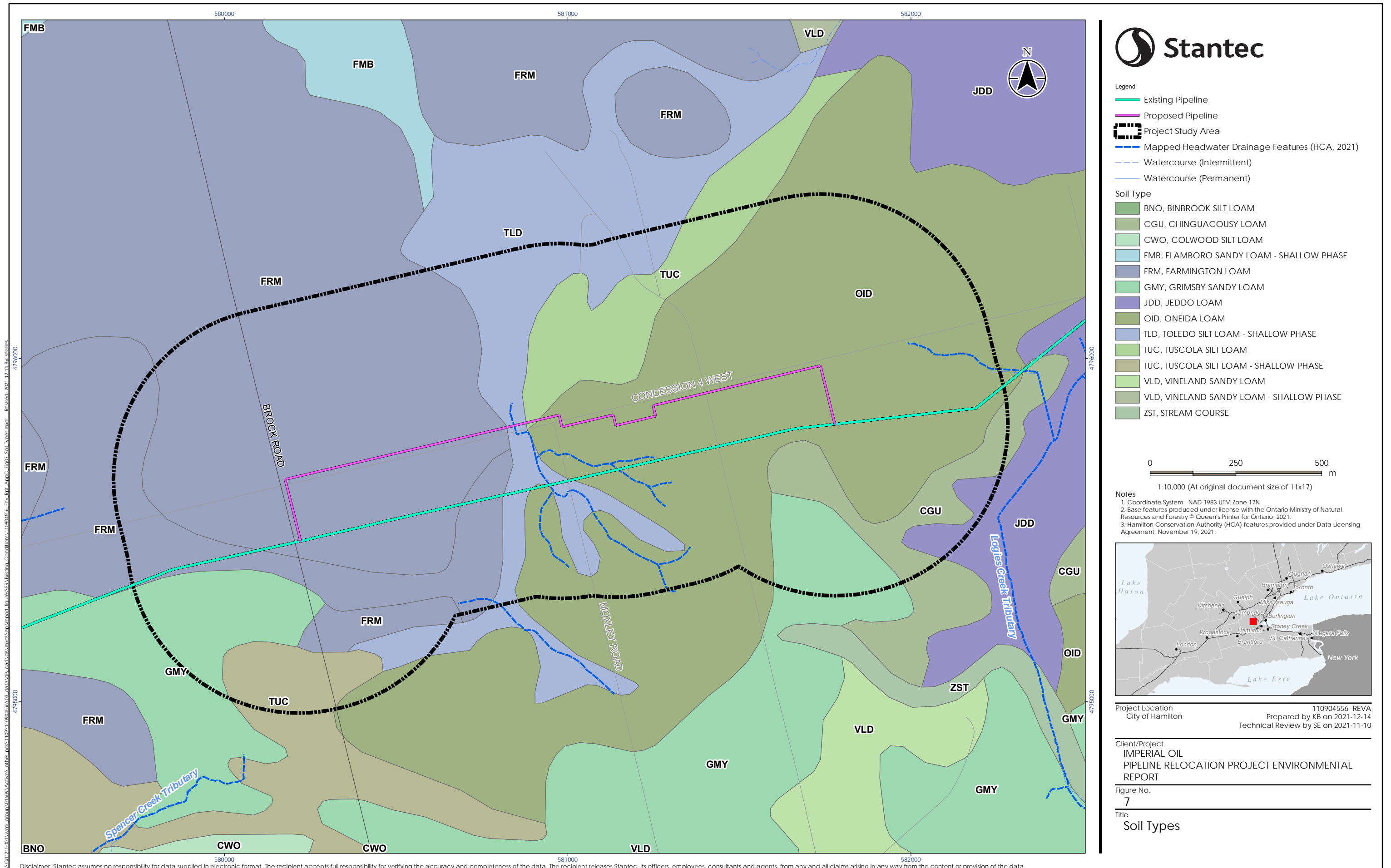
Project Location
City of Hamilton

110904556 REVA
Prepared by KB on 2021-12-14
Technical Review by SE on 2021-11-10

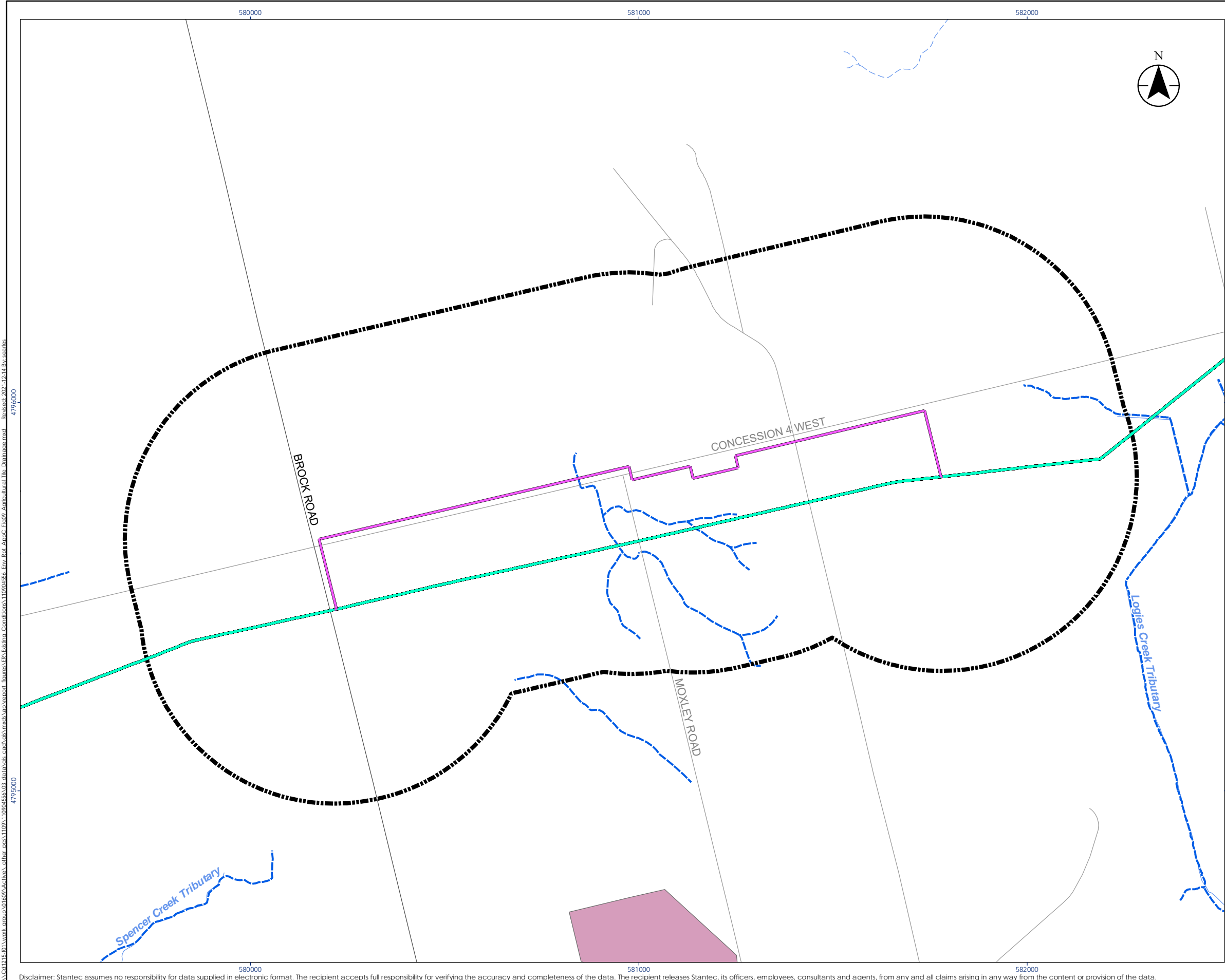
Client/Project
IMPERIAL OIL
PIPELINE RELOCATION PROJECT ENVIRONMENTAL
REPORT

Figure No.
6

Title
Aggregate and Petroleum Resources



\\Cd1215-f01\work_group\01609\Active\other_pcs\1109\110904556\03_data\gis\mxd\mxd\figures\ER\Existing_Conditions\110904556_Env_Rpt_AppC_Fig07_Soil_Types.mxd Revised: 2021-12-14 By: searles

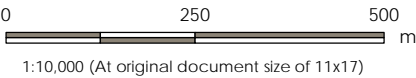


Legend

- Existing Pipeline
- Proposed Pipeline
- Project Study Area
- Major Road
- Minor Road
- Mapped Headwater Drainage Features (HCA, 2021)
- Watercourse (Intermittent)
- Watercourse (Permanent)

Tile System Type

- Random



- Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
 2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2021.
 3. Hamilton Conservation Authority (HCA) features provided under Data Licensing Agreement, November 19, 2021.



Project Location
City of Hamilton

110904556 REVA
Prepared by KB on 2021-12-14
Technical Review by SE on 2021-11-10

Client/Project
IMPERIAL OIL
PIPELINE RELOCATION PROJECT ENVIRONMENTAL
REPORT

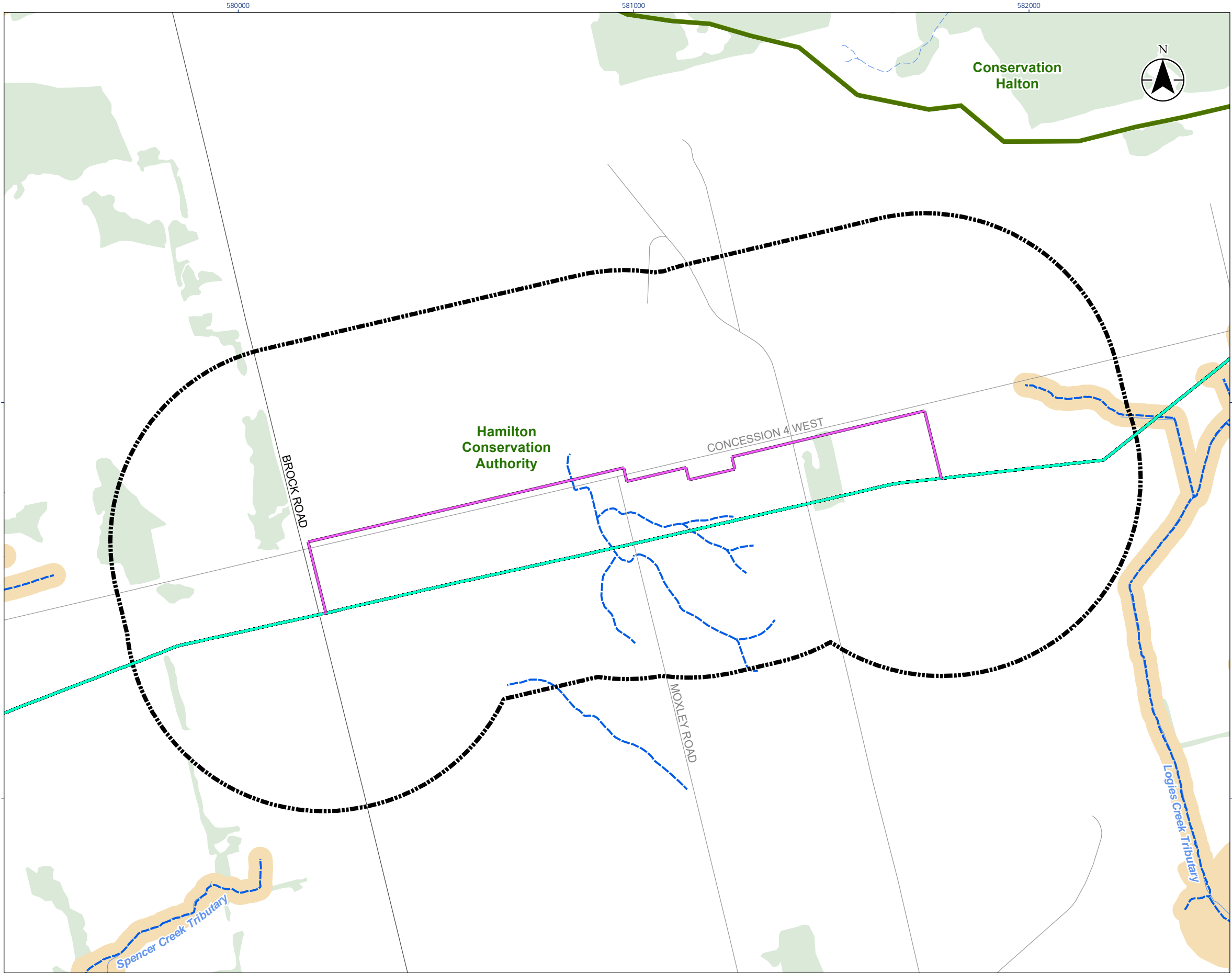
Figure No.
9

Title
Agricultural Tile Drainage

\\G:\1215.801\work\croque\01662\Active\other\ecs\1109\110904556\03_data\gis_cad\mxd\map_report_figures\FX\Jeslin\Conditions\110904556_Env_Rpt_AgriC_Fig09_Agricultural Tile Drainage.mxd Revised: 2021-12-14 By: seides

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

\\G:\1215\01\work\aroupe\01662\active\other\cca\1109\110904556\03_data\gis\cad\mxd\mxd\report_figures\FIG\regulation_limits.mxd Revised: 2021-12-14 By: searles



Legend

- Existing Pipeline
- Proposed Pipeline
- Study Area
- Major Road
- Minor Road
- Mapped Headwater Drainage Features (HCA, 2021)
- Watercourse (Intermittent)
- Watercourse (Permanent)
- Conservation Area Administrative Boundary
- Regulated Area (HCA)
- Wooded Area

0 250 500 m
1:10,000 (At original document size of 11x17)

- Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
 2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2021.
 3. Hamilton Conservation Authority (HCA) features provided under Data Licensing Agreement, November 19, 2021.



Project Location
City of Hamilton

110904556 REVA
Prepared by KB on 2021-12-14
Technical Review by SE on 2021-11-10

Client/Project
IMPERIAL OIL
PIPELINE RELOCATION PROJECT ENVIRONMENTAL
REPORT

Figure No.

10

Title

Regulation Limits

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.

APPENDIX D: WILDLIFE HABITAT ASSESSMENT



Appendix D: Terrestrial Habitat

Table D: Wildlife Habitat Assessment (Ecoregion 6E) for the Imperial Oil Limited Pipeline Relocation Project

Wildlife Habitat Type	Criteria	Results of Desktop and Field Habitat Assessment
SEASONAL CONCENTRATION AREAS		
Waterfowl Stopover and Staging Area (Terrestrial and Aquatic)	Fields with evidence of annual spring flooding from meltwater or runoff; aquatic habitats such as ponds, marshes, lakes, bays, and watercourses used during migration, including large marshy wetlands.	Absent. Ponds, marshes and lakes absent.
Shorebird Migratory Stopover Area	Beaches and un-vegetated shorelines of lakes, rivers, and wetlands.	Absent. Waterbodies absent.
Raptor Wintering Area	Combination of fields and woodland (>20 ha).	Absent. Large forests interspersed with meadows absent.
Bat Hibernacula	Hibernacula may be found in caves, mine shafts, underground foundations and karsts.	Absent. Caves, mine shafts, and karsts absent.
Bat Maternity Colonies	Maternity colonies considered significant wildlife habitat are found in forested ecosites.	Candidate SWH present in forested areas.
Turtle Wintering Areas	Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate dissolved oxygen. Water has to be deep enough not to freeze and have soft mud substrate.	Absent. Waterbodies absent.
Reptile Hibernaculum	Rock piles or slopes, stone fences, crumbling foundations.	Candidate SWH present in woodland with shallow bedrock.
Colonial-Nesting Bird Breeding Habitat (Bank and Cliff)	Eroding banks, sandy hills, steep slopes, rock faces or piles.	Absent. No banks or cliffs noted during field surveys.
Colonial-Nesting Bird Breeding Habitat (Tree/Shrubs)	Dead trees in large marshes and lakes, flooded timber, and shrubs, with nests of colonially nesting heron species.	Potentially present as identified during the background review of the NHIC. Likely associated with the Hayesland Christie Wetland Complex to the northeast of the Study Area.
Colonial-Nesting Bird Breeding Habitat (Ground)	Rock islands and peninsulas in a lake or large river.	Absent. Waterbodies absent.
Migratory Butterfly Stopover Areas	Meadows and forests that are a minimum of 10 ha and are located within 5 km of Lake Erie.	Absent. Study Area is not within 5 km of Lake Erie.
Landbird Migratory Stopover Areas	Woodlands of a minimum size located within 5 km of Lake Ontario.	Absent. Study Area is not within 5 km of Lake Erie.

Appendix D: Terrestrial Habitat

Table D: Wildlife Habitat Assessment (Ecoregion 6E) for the Imperial Oil Limited Pipeline Relocation Project

Wildlife Habitat Type	Criteria	Results of Desktop and Field Habitat Assessment
Deer Yarding or Winter Congregation Areas	Deer winter congregation's areas are mapped by MNDMNRF and species use surveys are not required.	Absent. No records of deer winter congregation areas were identified by NDMNRF in the Study Area.
RARE VEGETATION COMMUNITIES		
Sand Barren, Alvar, Cliffs and Talus Slopes	Sand barren, Alvar, Cliff and Talus ELC Community Classes, and other areas of exposed bed rock and patchy soil development, near vertical exposed bedrock and slopes of rock rubble.	Absent.
Old-growth Forest	Relatively undisturbed, structurally complex; dominant trees >100 years' old.	Absent.
Tallgrass Prairie and Savannah	Open canopy habitats (tree cover < 60%) dominated by prairie species.	Absent.
Other Rare Vegetation Communities	Provincially Rare S1, S2 and S3 vegetation communities listed by the NHIC.	Absent.
SPECIALIZED HABITAT FOR WILDLIFE		
Waterfowl Nesting Area	Upland habitats adjacent to wetlands (within 120 m).	Absent. Wetlands with standing water absent.
Bald Eagle and Osprey nesting, Foraging, and Perching Habitat	Treed communities adjacent to rivers, lakes, ponds, and other wetlands with stick nests of Bald Eagle or Osprey.	Absent. Waterbodies absent.
Woodland Raptor Nesting Habitat	Forested ELC communities >30 ha with 10 ha of interior habitat.	Absent. Large woodlands absent.
Turtle Nesting Areas	Exposed soil, including sand and gravel in open sunny areas near wetlands.	Absent. Wetlands with standing water absent.
Seeps and Springs	Any forested area with groundwater at surface within the headwaters of a stream or river system.	Absent.
Amphibian Breeding Habitat (Woodland and Wetland)	Treed uplands with vernal pools, and wetland ecosites.	Absent. Wetlands with standing water absent.
Woodland Area-sensitive Bird Breeding Habitat	Large mature forest stands, woodlots >30 ha and >200 m from the forest edge.	Absent. Large mature forest absent.
HABITAT FOR SPECIES OF CONSERVATION CONCERN		

Appendix D: Terrestrial Habitat

Table D: Wildlife Habitat Assessment (Ecoregion 6E) for the Imperial Oil Limited Pipeline Relocation Project

Wildlife Habitat Type	Criteria	Results of Desktop and Field Habitat Assessment
Marsh Bird Breeding Habitat	Wetlands with shallow water and emergent aquatic vegetation.	Absent. Wetlands with standing water absent.
Open Country Bird Breeding Habitat	Large grasslands and fields (>30 ha).	Absent. Large open fields absent.
Shrub/Early Successional Bird Breeding Habitat	Large shrub and thicket habitats (>10 ha).	Absent. Thickets > 10ha absent.
Terrestrial Crayfish	Wet meadows and edges of shallow marshes.	Candidate SWH potentially present.
ANIMAL MOVEMENT CORRIDORS		
Amphibian Movement Corridor	Corridors may be found in all ecosites associated with water. Determined based on identifying significant amphibian breeding habitat (wetland).	Absent. No SWH for amphibians present.
Deer Movement Corridors	Corridors may be found in all forested ecosites.	Absent. Deer wintering areas.

APPENDIX E: STAGE 1 ARCHAEOLOGICAL ASSESSMENT





**Stage 1 Archaeological
Assessment: Imperial Oil Limited
Pipeline Relocation Project**

Lots 7 to 10, Concession 3 and Lots 7 to
9, Concession 4, Geographic Township
of West Flamborough, former
Wentworth County, now City of
Hamilton, Ontario

March 15, 2022

Prepared for:

Imperial Oil Limited
Canada Fuels Operations
505 Quarry Park Blvd. SE
Calgary, AB T2C 5N1

Prepared by:

Stantec Consulting Ltd.
400-1331 Clyde Avenue
Ottawa, Ontario K2C 3G4

Licensee: Heather Kerr, MA
License Number: P1148
Project Information Form Number:
P1148-0024-2021
Project Number: 110904556

ORIGINAL REPORT



Table of Contents

EXECUTIVE SUMMARY	V
1.0 PROJECT CONTEXT	1
1.1 DEVELOPMENT CONTEXT	1
1.1.1 Objectives	1
1.2 HISTORICAL CONTEXT	2
1.2.1 Post-contact Indigenous Resources	2
1.2.2 Euro-Canadian Resources	4
1.3 ARCHAEOLOGICAL CONTEXT	8
1.3.1 Natural Environment	8
1.3.2 Pre-contact Indigenous Resources.....	8
1.3.3 Known Archaeological Sites and Surveys	11
1.3.4 Existing Conditions.....	14
2.0 FIELD METHODS	15
3.0 ANALYSIS AND CONCLUSIONS	16
4.0 RECOMMENDATIONS	18
5.0 ADVICE ON COMPLIANCE WITH LEGISLATION	20
6.0 BIBLIOGRAPHY AND SOURCES	21
7.0 PHOTOS	25
7.1 IMAGES	25
8.0 MAPS.....	29
9.0 CLOSURE.....	36



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

LIST OF TABLES

Table 1: Property Owners and Historical Features Depicted on Historical Mapping of West Flamborough Township	6
Table 2: Generalized Pre-contact Indigenous Cultural Chronology for Southern Ontario	9
Table 3: Registered Sites and Documented Findspots or Scatters within One Kilometre of the Study Area	11
Table 4: Previous Archaeological Assessments within 50 metres of the Study Area	13

LIST OF FIGURES

Figure 1: Location of Project	30
Figure 2: Treaties and Purchases (Adapted from Morris 1943)	31
Figure 3: Study Area as Shown Over Portion of 1850 Rottenburg Map of Canada West.....	32
Figure 4: Study Area as Shown Over 1859 Map of Wentworth County	33
Figure 5: Study Area as Shown Over Portion of 1875 Map of West Flamborough Township	34
Figure 6: Stage 1 Results and Recommendations	35



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Executive Summary

Imperial Oil Limited (IOL) retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of a relocated 12" nominal pipe size (NPS) pipeline (the Project). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition* (OEB 2016). The relocation of the pipeline is necessary as Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, in the Geographic Township of West Flamborough, former Wentworth County, now City of Hamilton, Ontario. The pipeline will be relocated into a new easement, on lands owned by Lafarge Canada, on the north and south sides of Concession 4 West which avoids the area which will be mined as part of the South Quarry Extension.

The proposed Project comprises a construction corridor of 15 metres width and a linear distance of approximately two kilometres, extending from the IOL pipeline right of way (RoW) approximately 180 metres south of Concession 4 West on the east side of Brock Road, running north along Brock Road across Concession 4 West, turning east and running along the north side of Concession 4 West for approximately 850 metres, then turning south across Concession 4 West, turning east for approximately 800 metres along the south side of Concession 4 West and the Glenwood United Cemetery, and then turning south for approximately 230 metres along the lot line between Lots 10 and 11 in Concession 3, West Flamborough Township.

As part of the environmental study, Stantec completed a Stage 1 archaeological assessment of the proposed route of the project. This assessment was triggered by the OEB's *Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition* and was completed with reference to the *Ontario Heritage Act* and the Ministry of Heritage, Sport, Tourism and Culture Industries' (MHSTCI) 2011 *Standards and Guidelines for Consultant Archaeologists*.

The Stage 1 archaeological assessment, involving background research and a property inspection, resulted in the determination that portions of the study area were observed to exhibit potential for the identification and recovery of archaeological resources. In accordance with Section 1.3.1 and Section 7.7.4 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a), **Stage 2 archaeological assessment is required for portions of the study area which have been identified as retaining archaeological potential.**

Should any additional areas of disturbance or features indicating that archaeological potential has been removed not previously identified during the Stage 1 property inspection be encountered during the Stage 2 archaeological assessment, they will be documented as outlined in Section 2.1.8 of the MHSTCI's 2011a *Standards and Guidelines for Consultant Archaeologists*.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Portions of the Project study area have been subject to previous archaeological assessments. All previously assessed lands and any archaeological resources within them have been cleared of further archaeological concerns. No further assessment is recommended for any portion of the Project that lies within areas that have been previously assessed.

The Glenwood United Cemetery is located adjacent to a section of the Project study area. The legal boundaries of the Glenwood United Cemetery could not be determined during the background research. As such, lands adjacent to the Glenwood United Cemetery require Stage 3 Cemetery Investigations to confirm that there are no burials outside of the cemetery boundary, in accordance with *Ontario Regulation 30/11: General of the Funeral, Burial and Cremation Services Act*.

In addition to the above, the Stage 1 archaeological assessment determined that there are areas within the study area which retain low to no archaeological potential. In accordance with Section 1.3.2 and Section 7.7.4 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists*, **Stage 2 archaeological assessment is not required for portions of the study area which retain low to no archaeological potential.**

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.

The MHSTCI is asked to accept this report into the Ontario Public Register of Archaeological Reports.

The Executive Summary highlights key points from the report only; for complete information and findings, the reader should examine the complete report.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Project Personnel

Project Manager:	Rooly Georgopoulos B.Sc.
Licensed Archaeologist:	Heather Kerr, MA (P1148)
Licensed Field Director:	Heather Kerr, MA (P1148)
Report Writer:	Colin Varley, MA, RPA (P002)
GIS Analysts:	Sean Earles. M.Sc., Baljeet Kaur, MA
Quality Review:	Tracie Carmichael, BA, B.Ed. (R140)
Independent Review:	Parker Dickson, MA (P256)

Acknowledgements

Ministry of Heritage, Sport, Tourism and Culture Industries:	Robert von Bitter, Archaeological Data Coordinator
Imperial Oil Limited:	Thomas Cao



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Project Context

1.0 PROJECT CONTEXT

1.1 DEVELOPMENT CONTEXT

Imperial Oil Limited (IOL) retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of a relocated 12" nominal pipe size (NPS) pipeline (the Project). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition* (OEB 2016). The relocation of the pipeline is necessary as Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, in the Geographic Township of West Flamborough, former Wentworth County, now City of Hamilton, Ontario (Figure 1). The pipeline will be relocated into a new easement, on lands owned by Lafarge Canada, on the north and south sides of Concession 4 West which avoids the area which will be mined as part of the South Quarry Extension.

The proposed Project comprises a construction corridor of 15 metres width and a linear distance of approximately two kilometres, extending from the IOL pipeline right-of-way (RoW) approximately 180 metres south of Concession 4 West on the east side of Brock Road, running north along Brock Road across Concession 4 West, turning east and running along the north side of Concession 4 West for approximately 850 metres, then turning south across Concession 4 West, turning east for approximately 800 metres along the south side of Concession 4 West and the Glenwood United Cemetery, and then turning south for approximately 230 metres along the lot line between Lots 10 and 11 in Concession 3, West Flamborough Township (Figure 1).

As part of the Environmental Study, Stantec was retained to complete a Stage 1 archaeological assessment of the proposed relocation route of the Project. This assessment was triggered by the OEB's *Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition* (OEB 2016) and was completed with reference to the *Ontario Heritage Act* (Government of Ontario 1990a).

1.1.1 Objectives

The objectives of the Stage 1 assessment were to compile available information about the registered and potential archaeological resources within the study area and to provide specific direction for the protection, management and/or recovery of these resources. In compliance with the provincial standards and guidelines set out in the Ministry of Heritage, Sport, Tourism and Culture Industries' (MHSTCI) 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a), the objectives of the Stage 1 Archaeological Overview/Background Study are as follows:

- To provide information about the study area's geography, history, previous archaeological fieldwork, and current land conditions.
- To evaluate the study area's archaeological potential which will support recommendations for Stage 2 survey for all or parts of the property.
- To recommend appropriate strategies for Stage 2 survey.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Project Context

To meet these objectives, Stantec archaeologists employed the following research strategies:

- A review of relevant archaeological, historical, and environmental literature pertaining to the study area.
- A review of the land use history, including pertinent historical maps.
- An examination of the *Ontario Archaeological Sites Database* to determine the presence of registered archaeological sites in and around the study area.
- A site visit to document existing ground conditions and confirm and presence or absence of features of archaeological potential.

Permission for Stantec staff to conduct archaeological field work was provided by IOL. The property inspections occurred in publicly accessible lands and no specific landowner permission to access was required.

1.2 HISTORICAL CONTEXT

1.2.1 Post-contact Indigenous Resources

“Contact” is typically used as a chronological benchmark when discussing Indigenous archaeology in Canada and describes the contact between Indigenous and European cultures. The precise moment of contact is a constant matter of discussion. Contact in what is now the province of Ontario is broadly assigned to the 16th century (Loewen and Chapdelaine 2016).

The post-contact Indigenous occupation of southern Ontario was heavily influenced by the dispersal of various Iroquoian-speaking communities by the New York State Iroquois and the subsequent arrival of Algonkian speaking groups from northern Ontario at the end of the 17th century and the beginning of the 18th century (Konrad 1981; Schmalz 1991). Broadly, numerous Indigenous groups and communities are associated with the post-contact occupation of southern Ontario and the general area of the Project.

The Mississauga traditional homeland stretched along the north shore of Lake Ontario and its tributary rivers from present-day Gananoque in the east to Long Point on Lake Erie in the west. In the winter, the communities dispersed into smaller groups and travelled in-land to the north, to the area around present-day Bancroft and the Haliburton Highlands. Mississauga oral history relates that their ancestors occupied this part of southern Ontario from the time of the last deglaciation and continued to occupy it up to the start of the Contact period (Kapyrka 2018).

At the turn of the 17th century, the region of the study area was occupied by Iroquoian populations who are historically described as the *Neutre* (by the French) or the *Attiwandaron* (by the Huron Wendat); their autonym is not conclusively known (Birch 2015). Claude Bernou's 1680 map indicates the then dispersed *Attiragenga* (near modern day Hamilton) and *Antouaronon* (west of the Grand River along the Lake Erie north shore) occupied the region of the study area (White 1978: Figure 2) and settlements dating to the 17th century have been identified in the Fairchild-Big Creeks, Upper Twenty Mile Creek, and Lower Grand River settlement clusters, near to the study area (Lennox and Fitzgerald 1990: Table 13.1). In 1649, the Seneca and the Mohawk led a campaign into southern Ontario and dispersed the Attiwandaron (Neutral), and the Seneca established dominance over the region (Heidenreich 1978; Konrad 1981).



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Project Context

In 1667, surviving Huron Wendat warriors joined alliance with the French-allied Ojibwa and Mississaugas to counterattack the Iroquois who had settled along the north shore of Lake Ontario. By 1690, Ojibwa (Anishinaabe) speaking people had begun moving south into the lower Great Lakes basin (Konrad 1981; Rogers 1978). Mississauga oral traditions, as told by Chief Robert Paudash and recorded in 1905, indicate that after the Mississauga defeat of the Mohawk, the Mohawk retreated to their homeland south of Lake Ontario and a peace treaty was negotiated between those groups around 1695 (Paudash 1905). The Indigenous economy since the turn of the 18th century focused on fishing and the fur trade, supplemented by agriculture and hunting.

The expansion of the fur trade led to increased interaction between European and Indigenous people, and ultimately intermarriage between European men and Indigenous women. During the 18th century the progeny of these marriages began to no longer identify with either their paternal or maternal cultures, but instead as Métis. The ethnogenesis of the Métis progressed with the establishment of distinct Métis communities along the major waterways in the Great Lakes of Ontario. Métis communities were primarily focused around the upper Great Lakes and along Georgian Bay, however, Métis people have historically lived throughout Ontario (Métis Nation of Ontario 2016; Stone and Chaput 1978:607-608).

The study area falls within the historical and traditional territory of a number of Indigenous communities, including but not limited to the Mississaugas of the Credit First Nation (Mississaugas of the New Credit First Nation n.d.), the Six Nations of the Grand River, and the Haudenosaunee Confederacy. Since contact with European explorers and immigrants, and, later, with the establishment of provincial and federal governments (the Crown), the lands within Ontario have been included in various treaties, land claims, and land cessions. Though not an exhaustive list, Morris (1943) provides a general outline of some of the treaties within the Province of Ontario from 1783 to 1923. While it is difficult to exactly delineate treaty boundaries today, Figure 2 provides an approximate outline of the treaty lands described by Morris (1943), and the study area is situated within Treaty Number 3, marked as 'D'.

Treaty 3 is also known as the Between the Lakes Treaty. Recognizing that under the terms of the Royal Proclamation of 1763 the land needed to be purchased from its owners before the resettlement of the Grand River Valley could begin, Colonel John Butler was sent to negotiate with the Mississaugas at the western end of Lake Ontario. On May 22, 1784, for the sum of £1,180 worth of trade goods, the Mississaugas of the Credit ceded to the Crown approximately 3,000,000 acres (1,214,057 hectares) of land located between Lakes Huron, Ontario, and Erie. Of those lands, some 550,000 acres (222,577 hectares) were granted to the Six Nations in the Haldimand Proclamation of October 25, 1784, with the remainder to be utilized for the settlement of other Loyalists. The land grant to the Six Nations was to extend six miles (9.7 kilometres) on both sides of the Grand River from its mouth to its source. When it was later discovered that the upper limits of the Between the Lakes Treaty were in error due to faulty geographical assumptions, actual boundaries were defined, and a confirming document was signed by the Mississaugas and the Crown in 1792. At this point Treaty Number 3:

...was made with the Mississa[ug]a Indians 7th December, 1792, though purchased as early as 1784. This purchase was to procure for that part of the Six Nation Indians coming into Canada a permanent abode.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Project Context

The area included in this Treaty is, Lincoln County excepting Niagara Township; Saltfleet, Binbrook, Barton, Glanford and Ancaster Townships, in Wentworth County; Brantford, Onondaga, Tusc[a]r[o]ra, Oakland and Burford Townships in Brant County; East and West Oxford, North and South Norwich, and Dereham Townships in Oxford County; North Dorchester Township in Middlesex County; South Dorchester, Malahide and Bayham Township in Elgin County; all Norfolk and Haldimand Counties; Pelham, Wainfleet, Thorold, Cumberland and Humberstone Townships in Welland County...

(Morris 1943:17-18)

As demonstrated above, the nature of Indigenous settlement size, population distribution, and material culture shifted as European settlers encroached upon Indigenous territory. Despite this shift, “written accounts of material life and livelihood, the correlation of historically recorded villages to their archaeological manifestations, and the similarities of those sites to more ancient sites have revealed an antiquity to documented cultural expressions that confirms a deep historical continuity to...systems of ideology and thought” (Ferris 2009:114). As a result, Indigenous peoples have left behind archaeological resources throughout the region which show continuity with past peoples, even if they have not been explicitly recorded in Euro-Canadian documentation.

1.2.2 Euro-Canadian Resources

At its inception, Upper Canada was only sparsely settled by Europeans and the land had not been officially surveyed to any great extent. Thus, there was an urgency, by the then Lieutenant Governor of Upper Canada John Graves Simcoe, to survey this new province to establish military roads and to prevent settlers from clearing and settling land not legally belonging to them. In 1791, the Provinces of Upper Canada and Lower Canada were created from the former Province of Quebec by an act of British Parliament (Craig 1963:17). At this time, Colonel John Graves Simcoe was appointed as the Lieutenant Governor of Upper Canada and was tasked with governing the new province, directing its settlement and establishing a constitutional government modelled after that of Britain (Coyne 1895). The change was affected at the behest of United Empire Loyalists who wished to live under the British laws and customs they were familiar with in Great Britain and the former 13 Colonies (Craig 1963:10-11). Simcoe had ambitious plans to create a model British society in North America, stating a desire to “inculcate British customs, manners, and principles in the most trivial, as well as most serious matters” in Upper Canada (Craig 1963:21).

1.2.2.1 Wentworth County

In 1792, Simcoe divided Upper Canada into 19 counties consisting of previously settled lands, new lands opened for settlement, and lands not yet acquired by Crown. These new counties stretched from Essex in the west to Glengarry in the east. In 1792, at Simcoe’s behest, the Eighth Act of the Upper Canada Parliament divided the province into four districts: Eastern, Midland, Home, and Western (Kernighan 1875:iii). The four districts were subdivided into 19 counties. The future location of Wentworth County was in the Home District, and was in parts of Haldimand, Lincoln, and York Counties. In 1816, the Gore District was created from lands in the Home and Niagara Districts, and the County of Wentworth was formed (Archives of Ontario 2015). Wentworth County was named in honour of John Wentworth, Royal



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Project Context

Governor of New Hampshire from 1766-1775, and later a Lieutenant Governor of Nova Scotia (Johnston 1958:3-4). In 1849, the District System was abolished (Archives of Ontario 2015), and the Counties of Halton and Wentworth formed a single municipality, but in 1853, the two counties were separated. Wentworth County totaled 272,000 acres (110,074.5 hectares) and comprised the City of Hamilton, Town of Dundas, and the Townships of Beverly, Binbrook, Barton, Ancaster, Saltfleet, East and West Flamborough (alternatively spelled Flamboro), and the Township of Glanford (Kernighan 1875:iii-iv).

For a brief period between 1850 and 1854, Wentworth County and Halton County were joined for government purposes as the United Counties of Wentworth and Halton, although for administrative purposes they remained distinct (Johnston 1958). In 1973, Wentworth County was replaced by the Regional Municipality of Hamilton-Wentworth. In 2001, the Regional Municipality and its six constituent municipalities were amalgamated as a "megacity", the City of Hamilton (Hamilton Public Library 2017).

1.2.2.2 Geographic Township of West Flamborough

The township of Flamborough was named after Flamborough Head and the town of Flamborough in East Yorkshire, England. The township of Flamborough was established in 1792. In 1816, it became part of Halton County until 1854 when two townships, West and East Flamborough, were transferred to Wentworth County. When Regional Government was implemented in 1974, the townships of East and West Flamborough, the town of Waterdown, and the township of Beverly were amalgamated to form the town of Flamborough in the Regional Municipality of Hamilton-Wentworth (Hamilton Public Library 2021). In 2001, the area was incorporated into the City of Hamilton.

West Flamborough was initially surveyed in 1793 (Smith 1793). The original survey map was reviewed for this Stage 1 assessment, and although there were no specific historical features noted in the Project study area, the map did indicate that Lot 7, Concession 3 was originally part of an extensive landholding of 1,600 acres in East and West Flamborough awarded to Captain Peter Russell, after he submitted a petition to the colonial government of Upper Canada in 1796 (The Niagara Settlers 2021). Russell was a former Captain of the Royal Garrison Battalion and holder of high offices in the colonial government. Russell had additional land in the Town of York (now Toronto) and it is highly unlikely that he ever actually saw his lands in West Flamborough but sold them at a later date.

One of the early maps with documentation of historical features in the vicinity of the Project study area is the Rottenburg map (1850) of Canada West, which was produced primarily as a military document to identify the location and condition of roads throughout the western part of the province and identify inns and other locations where troops could be overnighed as they were deployed. Of particular note on Rottenburg's map is that Concession 4 West had already been opened up through the width of the township, and that Middeltown Road was in the "course of being graded, planked and gravelled" (Rottenburg 1850) (Figure 3). Based on the colouration of the study area on the map, it appears that the township had been widely cleared and converted to agricultural purposes.

The 1859 map of Wentworth County published by Surtees (1859) offers up several details about the Project study area. Brock Road (as it was called even back then) is indicated as a "macadamised" road (Figure 4). These roads were constructed with a base (or subgrade) of stones designed to support loads and an upper wear surface of smaller stone or gravel which provides for smoother rolling and sheds water



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Project Context

more efficiently, similar to a present-day gravel road, based on road building principles developed by John MacAdam, a Scottish engineer who pioneered the method at the end of the 18th century (Britannica n.d.). Macadamised roads were a great improvement from simple dirt cart paths or wooden corduroy roads and allowed for faster, smoother travel through all weather conditions. The cost of such roads was also much more than other road types, and to help pay for them toll gates, such as the one indicated in Lot 7, Concession 4 (Figure 4), were placed along these roads to collect money to help pay for their upkeep and extension. Although no houses or private structures are shown in any of the lots that encompass the Project study area, a schoolhouse is indicated in the northwest corner of Lot 8, Concession 3 (Figure 4).

The map of West Flamborough in the 1875 *Illustrated Historical Atlas of the County of Wentworth, Ontario* (Page & Smith 1875) shows far more details about the settlement in the vicinity of the Project study area (Figure 5). Almost every parcel of land within the lots has at least one residence, and many lots are shown as having orchards. In addition to these private buildings, there is a church and school in Lot 7, Concession 3, a blacksmith shop in the southwest corner of Lot 7, Concession 4, right at the intersection of Brock Road and Concession 4 West, and another church in Lot 9, Concession 3 (Figure 5). This latter church is likely the Glenwood Methodist, which was destroyed by a fire in 1912, rebuilt, and then damaged by a second fire in 1971, after which the building was demolished (City of Hamilton 2005:127). Oddly, the extant cemetery associated with the church, also located in Lot 9, Concession 3, is not shown on the 1875 map. The cemetery, now known as the Glenwood United Cemetery, was originally used as early as 1859 by the Dunkin family as their family burial plot (City of Hamilton 2005:127). The cemetery, as it is now delineated, was originally three separate burial grounds; the Dunkin family plot, the Binkley/Bamberger family plot, and a Methodist Episcopal cemetery (City of Hamilton 2005:127). The Binkley/Bamberger plot was purchased from Thomas Dunkin (shown as the landowner on both the 1859 and 1875 maps) in 1861 and the church plot purchased in 1871, creating the cemetery limits as they are known today (City of Hamilton 2005:127). The cemetery is still active and open for burials.

Table 3 summarizes the applicable landowner information from the 1859 and 1875 historical maps of West Flamborough Township.

Table 1: Property Owners and Historical Features Depicted on Historical Mapping of West Flamborough Township

Lot	Con.	1859			1875		
		Portion	Owner / Resident	Features	Portion	Owner / Resident	Features
7	3	North ½ Central ¼ South ¼	Wm. Secord Wm. Clutten F. Morden	Macadamized Road along west part of lot	Whole lot	W. Secord	House at north end, church on west side and schoolhouse in NE corner
8		North ½ South ½	David Black Sam'l. Bamberger	School house in NW corner None indicated	Whole lot	Jas. Black	House and orchard at south end



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Project Context

Lot	Con.	1859			1875		
		Portion	Owner / Resident	Features	Portion	Owner / Resident	Features
9		North ½ South ½	Thos. Duncan Rees Tunis	None indicated None indicated	Whole lot	Thos. Dunkin	House and orchard at south end, church in NE corner
10		North ½ SW ¼ SE ¼	Jas. Markle Thos. Duncan Brn'd. Collins	None indicated None indicated	Whole lot	Solm. Markle	Two houses and orchard, central part of lot
7	4	N ½ of N ½ S ½ of N ½ N ½ of S ½ S ½ of S ½	J. Jenkins M. Brady Geo. King Mr. Williams	Macadamized Road along west part of lot; tollgate on macadamized road	N ½ of N ½ S ½ of N ½ N ½ of S ½ S ½ of S ½	Frank Jefferson John Washington W. Granger Heirs of Sam. Bamberger	House and Haysland post office None indicated House along west side Two houses and blacksmith shop
8		Whole lot	Henry Derwent (sic)	None indicated	West ½ East ½	Thos. Durrant Cha. Durrant	House in SE corner None indicated
9		West ½ SE ¼ W ½ of NE ¼ E ½ of NE ¼	None indicated Jeff Lightfoot Francis Campbell Michael Green	None indicated None indicated None indicated None indicated	West ½ SE ¼ W ½ of NE ¼ E ½ of NE ¼	H.F. Durrant Jeff. Lightfoot Peter Ray Thos. Bridle	House and orchard, south end House at south end None indicated House at north end

Structures illustrated on historical county atlases and maps were not necessarily depicted or placed accurately (Gentilcore and Head 1984). In fact, historical county atlases were produced primarily to identify factories, offices, residences, and landholdings of subscribers and were funded by subscription fees. Landowners who did not subscribe were not always listed on the maps (Caston 1997:100). However, the road grid depicted demonstrates that, by 1878, much of the current road system was constructed and still recognizable today. Further, review of historical mapping also has inherent accuracy difficulties due to potential error in geo-referencing. Geo-referencing is conducted by assigning spatial coordinated to fixed locations and using these points to spatially reference the remainder of the map. Due to changes in “fixed” locations over time (e.g., road intersections, road alignment, watercourses, etc.), errors/difficulties of scale and the relative idealism of the historical cartography, historical maps may not translate accurately into real space points. This may provide obvious inconsistencies during historical map review.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Project Context

1.3 ARCHAEOLOGICAL CONTEXT

1.3.1 Natural Environment

The majority of the Project study area is located within the Flamborough Plain physiographic region (Chapman and Putnam 1984:113). The Flamborough Plain encompasses an area of approximately 150 square miles (approximately 390 square kilometres) across West and East Flamborough townships, bordered by Galt Moraine on the northwest and the sand plains to the south and east (Chapman and Putnam 1984:129). Essentially, the region is a limestone plain covered by shallow and/or rocky soils (Chapman and Putnam 1984:129). Overall, the region is best suited to pasture or hay, but deeper cultivable soils can be found, mainly on the few drumlins or gravel terraces scattered throughout (Chapman and Putnam 1984:130).

Surface soils in the Project study area are primarily Farmington loam, with smaller areas of Oneida loam and Toledo silt-loam (Presant *et al.* 1965). Farmington loam is a well-drained, shallow soil, with a depth over bedrock of 30 centimetres or less (Presant *et al.* 1965: 43). Located primarily on level or very gently sloping land, Farmington soils are relatively easily worked, but suffer from a moisture deficiency in the summer ((Presant *et al.* 1965:44). Oneida loam is a well-drained clay-loam soil that is typically found on gently rolling terrain (Presant *et al.* 1965:31). Oneida soils are typically used for forage and grain cultivation (Presant *et al.* 1965:32). Toledo silt-loam is a poorly-drained silty-clay loam found in low or level areas (Presant *et al.* 1965:39). While the soil is rich in organics, they typically require drainage improvement to make them useful for crops, otherwise only being useful for pasture or hay (Presant *et al.* 1965:39). In general, the soils in the Project study area would be useful for Indigenous horticultural practices, and are currently, or have recently been used for Euro-Canadian agricultural purposes.

Potable water is the single most important resource for any extended human occupation or settlement and since water sources in southwestern Ontario have remained relatively stable over time, proximity to drinkable water is regarded as a useful index for the evaluation of archaeological site potential. In fact, distance to current water is one of the most commonly used variables for predictive modeling of archaeological site locations in Ontario. The Project study area is flanked at both ends by separate tributaries of Spencer Creek, an unnamed tributary approximately 700 metres southwest of the west end and Logie's Creek approximately 500 metres southeast of the east end. Additionally, there is a wetland that forms the headwaters of Grindstone Creek located approximately 600 metres northeast of the east end of the study area. Additional water sources may have existed in the past but are not visible now due to nearby extensive quarrying activities, conversion of land into agricultural fields, or modern road and residential development.

1.3.2 Pre-contact Indigenous Resources

It has been demonstrated that Indigenous people began occupying southern Ontario as the Laurentide glacier receded, as early as 11,000 years Before the Common Era (BCE) (Ellis and Ferris 1990:13). Much of what is understood about the lifeways of these Indigenous peoples is derived from archaeological evidence and ethnographic analogy. In Ontario, Indigenous culture prior to the period of contact with European peoples has been distinguished into cultural periods based on observed changes in material



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Project Context

culture. These cultural periods are largely based in observed changes in formal lithic tools, and separated into the Early Paleo-Indian, Late Paleo-Indian, Early Archaic, Middle Archaic, and Late Archaic periods. Following the advent of ceramic technology in the Indigenous archaeological record, cultural periods are separated into the Early Woodland, Middle Woodland, and Late Woodland periods, based primarily on observed changes in formal ceramic decoration. It should be noted that these cultural periods do not necessarily represent specific cultural identities but are a useful paradigm for understanding changes in Indigenous culture through time. The current understanding of Indigenous archaeological culture is summarized in Table 2 below, based on Ellis and Ferris (1990).

Table 2: Generalized Pre-contact Indigenous Cultural Chronology for Southern Ontario

Period	Characteristics	Time Period	Comments
Early Paleo-Indian	Fluted Projectiles	9000 – 8400 BCE	Spruce parkland, caribou hunters
Late Paleo-Indian	Hi-Lo Projectiles	8400 – 8000 BCE	Smaller but more numerous sites
Early Archaic	Kirk and Bifurcate Base Points	8000 – 6000 BCE	Slow population growth
Middle Archaic	Brewerton-like points	6000 – 2500 BCE	Environment similar to present
Late Archaic	Narrow Points	2000 – 1800 BCE	Increasing site size
	Broad Points	1800 – 1500 BCE	Large chipped lithic tools
	Small Points	1500 – 1100 BCE	Introduction of bow hunting
Terminal Archaic	Hind Points	1100 - 950 BCE	Emergence of true cemeteries
Early Woodland	Meadowood Points	950 - 400 BCE	Introduction of pottery
Middle Woodland	Dentate/Pseudo-Scallop Pottery	400 BCE – 500 Common Era (CE)	Increased sedentism
	Princess Point	500 – 900 CE	Introduction of corn
Late Woodland	Early Late Woodland	900 – 1300 CE	Emergence of agricultural villages
	Middle Late Woodland	1300 – 1400 CE	Long longhouses (100+ metres)
	Late Woodland	1400 – 1650 CE	Tribal warfare and displacement

Between 9000 and 8000 BCE, Indigenous populations were sustained by hunting, fishing, and foraging and lived a relatively mobile existence across an extensive geographic territory. Despite these wide territories, social ties were maintained between groups, one method in particular was through gift exchange, evident through exotic lithic material documented on many sites (Ellis 2013:35-40).

By approximately 8000 BCE, evidence exists and becomes more common for the production of ground-stone tools such as axes, chisels and adzes. These tools themselves are believed to be indicative specifically of woodworking. This evidence can be extended to indicate an increase in craft production and arguably craft specialization. This latter statement is also supported by evidence, dating to approximately 7000 BCE of ornately carved stone objects which would be laborious to produce and have explicit aesthetic qualities (Ellis 2013:41). This is indirectly indicative of changes in social organization which permitted individuals to devote time and effort to craft specialization. Since 8000 BCE, the Great Lakes basin experienced a low-water phase, with shorelines significantly below modern lake levels



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Project Context

(Stewart 2013: Figure 1.1.C). It is presumed that the majority of human settlements would have been focused along these former shorelines. At approximately 6500 BCE the climate had warmed considerably since the recession of the glaciers and the environment had grown more similar to the present day. By approximately 4500 BCE, evidence exists from southern Ontario for the utilization of native copper (naturally occurring pure copper metal) (Ellis 2013:42). The known origin of this material along the north shore of Lake Superior indicates the existence of extensive exchange networks across the Great Lakes basin.

At approximately 3500 BCE, the isostatic rebound of the North American plate following the melt of the Laurentide glacier had reached a point which significantly affected the watershed of the Great Lakes basin. Prior to this, the Upper Great Lakes had drained down the Ottawa Valley via the French-Mattawa river valleys. Following this shift in the watershed, the drainage course of the Great Lakes basin had changed to its present course. This also prompted a significant increase in water-level to approximately modern levels (with a brief high-water period); this change in water levels is believed to have occurred catastrophically (Stewart 2013:28-30). This change in geography coincides with the earliest evidence for cemeteries (Ellis 2013:46). By 2500 BCE, the earliest evidence exists for the construction of fishing weirs (Ellis *et al.* 1990: Figure 4.1). Construction of these weirs would have required a large amount of communal labour and are indicative of the continued development of social organization and communal identity. The large-scale procurement of food at a single location also has significant implications for permanence of settlement within the landscape. This period is also marked by further population increase and by 1500 BCE evidence exists for substantial permanent structures (Ellis 2013:45-46).

By approximately 950 BCE, the earliest evidence exists for populations using ceramics. Populations are understood to have continued to seasonally exploit natural resources. This advent of ceramic technology correlated, however, with the intensive exploitation of seed foods such as goosefoot and knotweed as well as mast such as nuts (Williamson 2013:48). The use of ceramics implies changes in the social organization of food storage as well as in the cooking of food and changes in diet. Fish also continued to be an important facet of the economy at this time. Evidence continues to exist for the expansion of social organization (including hierarchy), group identity, ceremonialism (particularly in burial), interregional exchange throughout the Great Lakes basin and beyond, and craft production (Williamson 2013:48-54).

By approximately 550 CE, evidence emerges for the introduction of maize into southern Ontario. This crop would have initially only supplemented Indigenous people's diet and economy (Birch and Williamson 2013:13-14). Maize-based agriculture gradually became more important to societies and by approximately 900 CE permanent communities emerge which are primarily focused on agriculture and the storage of crops, with satellite locations oriented toward the procurement of other resources such as hunting, fishing, and foraging. By approximately 1250 CE, evidence exists for the common cultivation of historic Indigenous cultigens, including maize, beans, squash, sunflower and tobacco. The extant archaeological record demonstrates many cultural traits similar to historical Indigenous nations (Williamson 2013:55).

The study area is located within the understood territory of the ancestral Neutral (Birch 2015). Specifically, the study area is located near the well-documented Spencer-Bronte Creek settlement cluster attributed to the pre-contact Neutral. The pre-contact component of this settlement cluster has



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Project Context

documented occupation from the 16th century, continuing through the fur trade and contact periods in the 18th century (Lennox and Fitzgerald 1990: Table 13.1).

1.3.3 Known Archaeological Sites and Surveys

In Canada, archaeological sites are registered within the Borden system, a national grid system designed by Charles Borden in 1952 (Borden 1952). The grid covers the entire surface area of Canada and is divided into major units containing an area that is two degrees in latitude by four degrees in longitude. Major units are designated by upper case letters. Each major unit is subdivided into 288 basic unit areas, each containing an area of 10 minutes in latitude by 10 minutes in longitude. The width of basic units reduces as one moves north due to the curvature of the earth. In southern Ontario, each basic unit measures approximately 13.5 kilometres east-west by 18.5 kilometres north-south. In northern Ontario, adjacent to Hudson Bay, each basic unit measures approximately 10.2 kilometres east-west by 18.5 kilometres north-south. Basic units are designated by lower case letters. Individual sites are assigned a unique, sequential number as they are registered. These sequential numbers are issued by the MHSTCI who maintain the *Ontario Archaeological Sites Database*. The Project study area is located within Borden block AhGx.

Information concerning specific site locations is protected by provincial policy and is not fully subject to the *Freedom of Information and Protection of Privacy Act* (Government of Ontario 1990b). The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to media capable of conveying location, including maps, drawings, or textual descriptions of a site location. The MHSTCI will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

An examination of the *Ontario Archaeological Sites Database* has shown that 34 archaeological sites and non-registered isolated findspots or small scatters have been documented within a one kilometre radius of the study area (Government of Ontario 2021a). The sites are detailed below in Table 3. One site, AhGx-698, is located within the Project study area, however, it has been subject to Stage 3 assessment and its cultural heritage value or interest (CHVI) has been sufficiently documented, and no further assessment has been recommended (AMICK Consultants Limited [AMICK] 2020). The remainder of the sites are located greater than 50 metres from the Project study area.

Table 3: Registered Sites and Documented Findspots or Scatters within One Kilometre of the Study Area

Borden #	Site Name	Cultural Affiliation	Site Type	Disposition
AhGx-625	Location 1	Indeterminate pre-contact Indigenous	Scatter	No further CHVI
AhGX-626	Location 5	Early Archaic Indigenous	Isolated findspot	No further CHVI
AhGX-627	Location 7	Indeterminate pre-contact Indigenous	Scatter	No further CHVI
AhGx-630	Location 8	Indeterminate pre-contact Indigenous	Scatter	No further CHVI
AhGx-628	Location 9	Early-late 19 th century Euro-Canadian	Homestead	No further CHVI
AhGx-629	Location 10	Indeterminate pre-contact Indigenous	Camp/work station	No further CHVI



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Project Context

Borden #	Site Name	Cultural Affiliation	Site Type	Disposition
AhGx-631	Location 13	Indeterminate pre-contact Indigenous	Scatter	No further CHVI
AhGx-632	Location 15	Indeterminate pre-contact Indigenous	Scatter	No further CHVI
AhGx-634	Location 25	Indeterminate pre-contact Indigenous	Scatter	No further CHVI
AhGx-633	Location 30	Indeterminate pre-contact Indigenous	Camp/work station	No further CHVI
AhGx-635	Location 33	Early-mid 19 th century Euro-Canadian	Scatter	No further CHVI
AhGx-636	Location 34	Indeterminate pre-contact Indigenous	Scatter	No further CHVI
AhGx-698	Location 2	19 th century Euro-Canadian	Homestead	No further CHVI
Not applicable (n/a)	Location 2	Indeterminate pre-contact Indigenous	Isolated findspot	No further CHVI
n/a	Location 3	Indeterminate pre-contact Indigenous	Scatter	No further CHVI
n/a	Location 4	Indeterminate pre-contact Indigenous	Scatter	No further CHVI
n/a	Location 6	Indeterminate pre-contact Indigenous	Isolated findspot	No further CHVI
n/a	Location 11	19 th -20 th century Euro-Canadian	Scatter	No further CHVI
n/a	Location 12	19 th -20 th century Euro-Canadian	Scatter	No further CHVI
n/a	Location 14	Indeterminate pre-contact Indigenous	Isolated findspot	No further CHVI
n/a	Location 16	Late Archaic Indigenous	Isolated findspot	No further CHVI
n/a	Location 17	Early Woodland Indigenous	Scatter	No further CHVI
n/a	Location 18	Indeterminate pre-contact Indigenous	Isolated findspot	No further CHVI
n/a	Location 19	Indeterminate pre-contact Indigenous	Isolated findspot	No further CHVI
n/a	Location 20	Indeterminate pre-contact Indigenous	Scatter	No further CHVI
n/a	Location 21	Indeterminate pre-contact Indigenous	Scatter	No further CHVI
n/a	Location 22	20 th century Euro-Canadian	Scatter	No further CHVI
n/a	Location 23	Indeterminate pre-contact Indigenous	Scatter	No further CHVI
n/a	Location 24	Indeterminate pre-contact Indigenous	Scatter	No further CHVI
n/a	Location 26	Indeterminate pre-contact Indigenous	Scatter	No further CHVI
n/a	Location 27	Indeterminate pre-contact Indigenous	Isolated findspot	No further CHVI
n/a	Location 28	Indeterminate pre-contact Indigenous	Scatter	No further CHVI
n/a	Location 29	Indeterminate pre-contact Indigenous	Scatter	No further CHVI
n/a	Location 32	Indeterminate pre-contact Indigenous	Scatter	No further CHVI

An examination of the *Ontario Archaeological Sites Database* has shown that three previous archaeological assessments have been completed in, or within 50 metres of, the study area (Government of Ontario 2021b). These assessments are summarized below in Table 4. Each of the previous studies has assessed a portion of the current Project study area. An additional Stage 4 mitigation of four archaeological sites was completed more than 50 metres from the Project study area but is associated with Stage 1-2 assessment in the Project study area and has been included.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Project Context

Table 4: Previous Archaeological Assessments within 50 metres of the Study Area

Project Information Form (PIF) Number	Report	Reference
P084-0025-2006	<i>Archaeological Assessment (Stages 1, 2 and 3), Soares Quarry (Dundas), Part of Lots 7 & 8, Concession 3, R.M. of Hamilton-Wentworth, Geo. Township of West Flamborough, Now City of Hamilton, Wentworth County, Ontario</i>	Archaeologix Inc. (Archaeologix) 2006
P084-0102-2006	<i>Archaeological Assessment (Stage 4), Soares Quarry (Dundas), Part of Lots 7 & 8, Concession 3, R.M. of Hamilton-Wentworth, Geo. Township of West Flamborough, Now City of Hamilton, Wentworth County, Ontario</i>	Archaeologix 2007
P340-0013-2012	<i>Stage 1-2 Lafarge Dundas South Quarry Extension, 626, 632, 634, and 638 Brock Road, 826 and 832 Fourth Concession Road, Part of Lot 7, Concession 3, Formerly West Flamborough Township, Wentworth County, now City of Hamilton, Ontario</i>	Golder Associates Ltd. (Golder) 2012
P058-1914-2020	<i>Stage 3 Site-specific Assessment of Location 2 (AhGx-698) within the Lafarge Dundas South Quarry Extension (ARA Licence #625711), 626, 632, 634, and 638 Brock Road, and 826 and 832 Fourth Concession Road, Part of Lot 7 Concession 3 (Geographic Township of West Flamborough, County of Wentworth), City of Hamilton, Ontario</i>	AMICK 2021

In 2006 Archaeologix completed Stage 1-2 assessment of the proposed Lafarge Dundas Soares Quarry, located in most of the north half of Lots 7 and 8, Concession 3, West Flamborough, under PIF number P084-0025-2006 issued to Adam Hossack, MA (Archaeologix 2006). The Stage 2 assessment resulted in the identification of 34 archaeological locations, 29 of which were pre-contact Indigenous and five of which were 19th and/or 20th century Euro-Canadian sites (Archaeologix 2006). All of the pre-contact Indigenous locations were of indeterminate age or cultural affiliation except for Location 5 (Early Archaic), Location 15 (Late Archaic), and Location 16 (Early Woodland) (Archaeologix 2006). Stage 3 assessment was recommended for nine Indigenous sites, Location 1 (AhGx-625), Location 7 (AhGx-627), Location 8 (AhGx-630), Location 10 (AhGx-629), Location 13 (AhGx-631), Location 15 (AhGx-632), Location 25 (AhGx-634), Location 30 (AhGx-633), Location 31 and Location 34 (AhGx-636), and two Euro-Canadian sites, Location 9 (AhGx-628), and Location 33 (AhGx-635). Stage 3 assessment of those sites was completed under the same PIF and resulted in the determination that four of the sites, pre-contact Indigenous sites Location 10 (AhGx-629) and Location 30 (AhGx-633) and the two Euro-Canadian sites Location 9 (AhGx-628) and Location 33 (AhGx-635), warranted Stage 4 mitigation (Archaeologix 2006). The remaining 30 locations were deemed to have been sufficiently documented at Stage 2 or Stage 3 (Archaeologix 2006).

The Stage 4 mitigation of the four sites, Location 10 (AhGx-629), Location 30 (AhGx-633), Location 9 (AhGx-628), and Location 33 (AhGx-635), was completed under PIF number P084-0102-2006 issued to Adam Hossack, MA (Archaeologix 2007). The Stage 4 mitigation sufficiently documented the cultural heritage value or interest of the remaining four sites (Archaeologix 2007). Stage 4 mitigation of Location 9 (AhGx-628) resulted in the recovery of 6,200 Euro-Canadian artifacts, including 2,321 ceramic artifacts, 1,860 metal artifacts, 953 glass artifacts, 835 miscellaneous artifacts, 189 personal artifacts, and 42 structural artifacts, and the documentation of 9 subsurface cultural features, including 3 foundations



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Project Context

(Archaeologix 2007). Stage 4 mitigation of Location 33 (AhGx-635) resulted in the recovery of 1,504 Euro-Canadian artifacts, including 823 ceramic artifacts, 283 faunal pieces, 277 metal artifacts, 63 glass artifacts, and 58 personal artifacts, 1 piece of pre-contact chipping detritus, and the documentation of 5 subsurface cultural features and 9 post moulds (Archaeologix 2007). Stage 4 mitigation of Location 10 (AhGx-629) resulted in the recovery of an additional 21 artifacts, including 19 pieces of chipping detritus, 1 scraper, and 1 hammerstone, none of which were diagnostic and would allow further determination of time period or cultural affiliation of the site (Archaeologix 2007). Stage 4 mitigation of Location 10 (AhGx-629) resulted in the recovery of an additional 255 artifacts, including 253 pieces of chipping detritus, 1 scraper, and 1 utilized flake, none of which were diagnostic and would allow further determination of time period or cultural affiliation of the site (Archaeologix 2007).

Golder completed Stage 1-2 assessment of the properties at 626, 632, 634, and 638 Brock Road and 826 and 832 Fourth Concession Road in the northwest corner of Lot 7, Concession 3 for Lafarge Canada's Dundas South Quarry Extension under PIF number P340-0013-2012 issued to Shan Ling, MA (Golder 2012). The Stage 2 assessment resulted in the identification of two archaeological resources: Location 1, a small assemblage of 23 19th or 20th century Euro-Canadian artifacts, 19 of which were structural; and Location 2 (AhGx-698), a 19th century Euro-Canadian site composed of 543 artifacts, largely comprising structural (n=238), glass (n=109), and ceramics (n=63) (Golder 2012). Location 1 was considered to have its CHVI sufficiently documented at Stage 2 and was not recommended for further assessment. Location 2 (AhGx-698) was determined to retain further CHVI and was recommended for Stage 3 assessment (Golder 2012). Location 2 (AhGx-698) is located within the proposed Project footprint.

Stage 3 archaeological assessment of Location 2 (AhGx-698) was completed by AMICK in 2020 under PIF number P058-1914-2020 issued to Mike Henry MA (AMICK 2021). A total of 59 test units were excavated on a five-metre grid, and an additional 12 infill test units were excavated in areas of interest or near high artifact count units. In total, 4,969 artifacts were recovered from the Stage 3 assessment of Location 2 (AhGx-698) (AMICK 2021). The CHVI of Location 2 (AhGx-698) was considered to be fully documented at Stage 3 and the site was not recommended for Stage 4 mitigation of development impacts (AMICK 2021).

1.3.4 Existing Conditions

The Project study area is approximately two kilometres in length, in a proposed construction corridor approximately 15 metres wide. Though centred on municipal RoWs, the Project study area does include areas of scrubland, agricultural fields, and manicured lawn, as well as some disturbed areas from quarrying preparation activities.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Field Methods

2.0 FIELD METHODS

The Stage 1 archaeological assessment compiled information concerning registered and/or potential archaeological resources within the Project study area. A property inspection was conducted on October 21, 2021, under PIF number P1148-0024-2021 issued to Heather Kerr, MA, by the MHSTCI. The property inspection involved spot checks of the study area to identify the presence or absence of features of archaeological potential, in accordance with Section 1.2 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a). Prior to the start of the Stage 1 property visit, the Client provided mapping which defined the proposed pipeline route for the Project. These maps were uploaded for use in the field with handheld devices.

The Project study area was accessed by publicly accessible roadways. During the property inspection, the weather was sunny to overcast and cool. Visibility of land features was excellent throughout the study area. Lighting and weather conditions were not detrimental to the identification of features of archaeological potential. The photography from the property inspection (see Section 7.1) confirms that the requirements for a Stage 1 property inspection were met, as per Section 1.2 and Section 7.7.2 Standard 1 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a).

The Project study area incorporates approximately two kilometres of linear length within a proposed construction corridor of 15 metres (Figure 6). The Stage 1 property inspection consisted of reviewing and photographing the general conditions of the proposed pipeline route.

At the west end, and along the north side of Concession 4 West of the proposed pipeline route is generally composed of manicured lawn (Photos 1 to 7). There were some areas of previous disturbance due to road and driveway construction noted (Photos 5 and 7). On the south side of Concession 4 West, much of the pipeline route is located in agricultural field that abuts the west, south and east sides of the Glenwood United Cemetery (Photos 8 and 9). When the pipeline leaves the agricultural field, it passes through an area of manicured lawn at the north end of the Lafarge Canada South Quarry (Photo 10). After crossing the disturbed quarry access road (Photo 10), the pipeline route passes through a short area of scrubland (Photo 11). For most of the east end of the route, the pipeline is proposed to run through a large built-up earthen berm, approximately 18 metres wide, that has been constructed along the north and east sides of the Lafarge Canada South Quarry property (Photos 12 and 13). The construction of the berm will have disturbed the natural ground surface underneath and this area is considered to have been previously disturbed.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Analysis and Conclusions

3.0 ANALYSIS AND CONCLUSIONS

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. Stantec applied archaeological potential criteria commonly used by the Ontario MHSTCI (Government of Ontario 2011a) to determine areas of archaeological potential within the region under study. These variables include proximity to previously identified archaeological sites, distance to various types of water sources, soil texture and drainage, glacial geomorphology, elevated topography, and the general topographic variability of the area.

Distance to modern or ancient water sources is generally accepted as the most important determinant of past human settlement patterns and considered alone, may result in a determination of archaeological potential. However, any combination of two or more other criteria, such as well-drained soils or topographic variability, may also indicate archaeological potential. Finally, extensive land disturbance can eradicate archaeological potential (Government of Ontario 2011a).

Distance to water is an essential factor in archaeological potential modeling. When evaluating distance to water it is important to distinguish between water and shoreline, as well as natural and artificial water sources, as these features affect site locations and types to varying degrees. The MHSTCI (Government of Ontario 2011a) categorizes water sources in the following manner:

- Primary water sources: lakes, rivers, streams, creeks.
- Secondary water sources: intermittent streams and creeks, springs, marshes, and swamps.
- Past water sources: glacial lake shorelines, relic river or stream channels, cobble beaches, shorelines of drained lakes or marshes.
- Accessible or inaccessible shorelines: high bluffs, swamp or marshy lake edges, sandbars stretching into marsh.

The Project study area is flanked at both ends by separate tributaries of Spencer Creek, an unnamed tributary approximately 700 metres southwest of the west end and Logie's Creek approximately 500 metres southeast of the east end. Additionally, there is a wetland that forms the headwaters of Grindstone Creek located approximately 600 metres northeast of the east end of the study area. Additional water sources may have existed in the past but are not visible now due to nearby extensive quarrying activities, conversion of land into agricultural fields, or modern road and residential development.

Soil texture can be an important determinant of past settlement, usually in combination with other factors such as topography. Surface soils in the Project study area are primarily Farmington loam, with smaller areas of Oneida loam and Toledo silt-loam. In general, the soils in the Project study area would be useful for Indigenous horticultural practices and are currently or have recently been used for Euro-Canadian agricultural purposes. The Project study area is situated on generally level ground.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Analysis and Conclusions

There are 10 registered pre-contact Indigenous archaeological sites and 18 non-registered pre-contact Indigenous isolated findspots or small scatters within one kilometre of the Project study area. Moreover, the study area is located in the general location of the archaeologically documented pre-contact Neutral Spencer-Bronte Creek settlement cluster.

Archaeological potential can be extended to areas of early Euro-Canadian settlement, including places of military or pioneer settlements; early transportation routes; properties listed on the municipal register or designated under the *Ontario Heritage Act* (Government of Ontario 1990a); and properties that local histories or informants have identified with possible historical events, activities or occupations. Much of the study area was initially settled in the early to mid-19th century and by the late 19th century settlement had occurred over most of the lands in and around the Project study area. Historical mapping does document the location of 19th century structures in proximity to the Project study area. Additionally, the Project route does run along the west, south and east sides of the Glenwood United Cemetery. There are also three registered Euro-Canadian archaeological sites and three non-registered Euro-Canadian scatters within one kilometre of the Project study area

When the above listed criteria are applied, the study area demonstrates general potential for the recovery of Indigenous and Euro-Canadian archaeological resources. However, the property visit has determined that the existing roadway and associated ditches have caused disturbance has removed archaeological potential where those disturbances have occurred. Additionally, portions of the east end of the study area have been disturbed due the construction of earthen berms along the north and east edges of the Lafarge Canada South Quarry area. The land under these constructed berms has also been determined not to retain archaeological potential

Four previous archaeological assessments have been completed within the Project study area, including almost all of the north half of Lots 7 to 9 in Concession 3, West Flamborough Township. These previous assessments have identified that no further archaeological assessment is required for the portions of the Project study area located in Lot 7, Concession 3. No further Stage 2 assessment is required for the portions of the Project study area located in Lot 9, Concession 3.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Recommendations

4.0 RECOMMENDATIONS

The Stage 1 archaeological assessment, involving background research and a property inspection, resulted in the determination that portions of the study area were observed to exhibit potential for the identification and recovery of archaeological resources. In accordance with Section 1.3.1 and Section 7.7.4 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a), **Stage 2 archaeological assessment is required for portions of the study area which have been identified as retaining archaeological potential (Figure 6).**

The objective of the Stage 2 archaeological assessment will be to document any archaeological resources within the portions of the study area still retaining archaeological potential and to determine whether these archaeological resources require further assessment. As all of the areas recommended for Stage 2 assessment are either manicured lawn or scrubland Stage 2 archaeological assessment will be conducted through test pit survey as outlined in Section 2.1.2 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a). The MHSTCI standards require that each test pit be at least 30 centimeters in diameter, excavated to at least five centimeters into subsoil, and have all soil screened through six-millimetre hardware cloth to facilitate the recovery of any cultural material that may be present. Prior to backfilling, each test pit will be examined for stratigraphy, cultural features, or evidence of fill.

Should any additional areas of disturbance or features indicating that archaeological potential has been removed not previously identified during the Stage 1 property inspection be encountered during the Stage 2 archaeological assessment, they will be documented as outlined in Section 2.1.8 of the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a).

Portions of the Project study area have been subject to previous archaeological assessments (Archaeologix 2006, 2007; Golder 2012; AMICK 2021). All previously assessed lands and any archaeological resources within them have been cleared of further archaeological concerns. No further assessment is recommended for any portion of the Project that lies within areas that have been previously assessed.

The Glenwood United Cemetery is located adjacent to a section of the Project study area. The legal boundaries of the Glenwood United Cemetery could not be determined during the background research. As such, lands adjacent to the Glenwood United Cemetery require Stage 3 Cemetery Investigation to confirm that there are no burials outside of the cemetery boundary, in accordance with *Ontario Regulation 30/11: General* (Government of Ontario 2011b) of the Funeral, Burial and Cremation Services Act (Government of Ontario 2002). Given that the legal boundaries of the cemetery have been confirmed there is no requirement to apply to the Bereavement Authority of Ontario for a Cemetery Investigation Authorization (CIA) to undertake the Stage 3 cemetery investigation (see correspondence in Supplementary Documentation).

Under the observation of a licensed archaeologist, areas within 10 metres of the cemetery limits are recommended to have the topsoil mechanically excavated using a flat-edged bucket to expose the



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Recommendations

underlying subsoil. The exposed subsoil should then be examined to confirm the absence of any exposed human remains or grave shafts. In the event that human remains are identified, the police or coroner should be contacted to determine if they are forensic remains, as outlined in the Advice on Compliance with Legislation (Section 6.0). Once that determination has been made and any forensic concern has been cleared, excavation should proceed as stated above until a 10-metre buffer of subsoil has been exposed outward around the extent of the identified remains. The remains should then be covered in geotextile, shallowly buried with a layer of fine white sand, and then completely reburied with topsoil. The Cemeteries Registrar should be contacted, and the site protected from any proposed impacts until a decision is made regarding their mitigation, either by protection and avoidance or disinterment and reburial.

In addition to the above, the Stage 1 archaeological assessment determined that there are areas within the study area which retain low to no archaeological potential. In accordance with Section 1.3.2 and Section 7.7.4 of the MHSTCI's 2011a *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011a), **Stage 2 archaeological assessment is not required for portions of the study area which retain low to no archaeological potential (Figure 6).**

The MHSTCI is asked to accept this report into the Ontario Public Register of Archaeological Reports.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Advice on Compliance with Legislation

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

In accordance with Section 7.5.9 of the MHSTCI's 2011a Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011a), the following standard statements are a required component of archaeological reporting and are provided verbatim from the MHSTCI's 2011a Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011a).

This report is submitted to the Minister of Heritage, Sport, Tourism and Culture Industries as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18 (Government of Ontario 1990a). 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 Heritage, Sport, Tourism and Culture Industries, 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.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* (Government of Ontario 1990a) 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 time as a licensed archaeologist has completed 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* (Government of Ontario 1990a).

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* (Government of Ontario 1990a). 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* (Government of Ontario 1990a).

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (Government of Ontario 2002) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Government and Consumer Services.

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48(1) of the *Ontario Heritage Act* (Government of Ontario 1990a) and may not be altered, or have artifacts removed, except by a person holding an archaeological license.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Bibliography and Sources

6.0 BIBLIOGRAPHY AND SOURCES

- AMICK Consultants Limited. 2021. *Stage 3 Site-specific Assessment of Location 2 (AhGx-698) within the Lafarge Dundas South Quarry Extension (ARA Licence #625711), 626, 632, 634, and 638 Brock Road, and 826 and 832 Fourth Concession Road, Part of Lot 7 Concession 3 (Geographic Township of West Flamborough, County of Wentworth), City of Hamilton, Ontario*. PIF # P058-1914-2020. Report on file with the Ministry of Heritage, Sport, Tourism and Culture Industries, Toronto, Ontario.
- Archaeologix Inc. 2006. *Archaeological Assessment (Stages 1, 2 and 3), Soares Quarry (Dundas), Part of Lots 7 & 8, Concession 3, R.M. of Hamilton-Wentworth, Geo. Township of West Flamborough, Now City of Hamilton, Wentworth County, Ontario*. PIF # P084-0025-2006. Report on file with the Ministry of Heritage, Sport, Tourism and Culture Industries, Toronto, Ontario.
- Archaeologix Inc. 2007. *Archaeological Assessment (Stage s4), Soares Quarry (Dundas), Part of Lots 7 & 8, Concession 3, R.M. of Hamilton-Wentworth, Geo. Township of West Flamborough, Now City of Hamilton, Wentworth County, Ontario*. PIF # P084-0102-2006. Report on file with the Ministry of Heritage, Sport, Tourism and Culture Industries, Toronto, Ontario.
- Archives of Ontario. 2015. *The Changing Shape of Ontario*. Electronic Document: <http://www.archives.gov.on.ca/en/maps/ontario-districts.aspx> . Last Accessed on November 10, 2021.
- Birch, Jennifer. 2012. Coalescent Communities: Settlement Aggregation and Settlement Integration in Iroquoian Ontario. *American Antiquity*. Volume 77:646-671.
- Birch, Jennifer. 2015. Current Research on the Historical Development of Northern Iroquoian Societies. *Journal of Archaeological Research*. 23(3):263-323.
- Birch, Jennifer and Ronald F. Williamson. 2013. *The Mantle Site: An Archaeological History of an Ancestral Huron Wendat Community*. Lanham: Altamira Press.
- Borden, Charles E. 1952. A Uniform Site Designation Scheme for Canada. *Anthropology in British Columbia*, No. 3, 44-48.
- Britannica. No date. Macadam Road Construction. Electronic Document: <https://www.britannica.com/technology/macadam-road-construction> Last Accessed on November 8, 2021.
- Caston, Wayne A. 1997. Evolution in the Mapping of Southern Ontario and Wellington County. *Wellington County History* 10:91-106.
- Chapman, L.J. and D.F. Putnam. 1984. *The Physiography of Southern Ontario*. Third Edition. Ontario Geological Survey. Special Volume 2.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Bibliography and Sources

- City of Hamilton. 2005. *Hamilton's Heritage, Volume 6: Inventory of Cemeteries and Burial Grounds*. Hamilton: Planning and Economic Development Department.
- Coyne, J.H. 1895. *The County of the Neutrals (As Far as Comprised in the County of Elgin): From Champlain to Talbot*. St. Thomas: Times Print.
- Craig, Gerald. 1963. *Upper Canada: The Formative Years*. Don Mills: Oxford University Press.
- Ellis, Christopher J. 2013. Before Pottery: Paleoindian and Archaic Hunter-Gatherers. In *Before Ontario: The Archaeology of a Province*. Edited by Marit K. Munson and Susan M. Jamieson, pp. 35-47. Montreal and Kingston: McGill-Queen's University Press.
- Ellis, Chris J. and Neal Ferris (editors). 1990. *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5.
- Ellis, Chris J., Ian T Kenyon and Michael W. Spence. 1990. The Archaic. In Ellis and Ferris 1990, pp. 65-124.
- Ferris, Neal. 2009. *The Archaeology of Native-Lived Colonialism: Challenging History in the Great Lakes*. Tucson: University of Arizona Press.
- Gentilcore, R. Louis and C. Grant Head. 1984. *Ontario's History in Maps*. Toronto: University of Toronto Press.
- Golder Associates Ltd. 2012. *Stage 1-2 Lafarge Dundas South Quarry Extension, 626, 632, 634, and 638 Brock Road, 826 and 832 Fourth Concession Road, Part of Lot 7, Concession 3, Formerly West Flamborough Township, Wentworth County, now City of Hamilton, Ontario*. PIF# P340-0013-2012. Report on file with the Ministry of Heritage, Sport, Tourism and Culture Industries, Toronto, Ontario.
- Government of Ontario. 1990a. *Ontario Heritage Act, R.S.O. 1990, CHAPTER O.18*. Last amendment: 2009, c. 33, Sched. 11, s. 6. Electronic document: <https://www.ontario.ca/laws/statute/90o18>. Last accessed May 25, 2021.
- Government of Ontario. 1990b. *Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c. F.31*. Electronic document: <https://www.ontario.ca/laws/statute/90f31>. Last accessed May 25, 2021.
- Government of Ontario. 2002. *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33*. Electronic document: <https://www.ontario.ca/laws/statute/02f33>. Last accessed May 25, 2021.
- Government of Ontario. 2011a. *Standards and Guidelines for Consultant Archaeologists*. Toronto: Ministry of Heritage, Sport, Tourism and Culture Industries.
- Government of Ontario. 2011b. *Ontario Regulation 30/11: General*. Electronic document: <https://www.ontario.ca/laws/regulation/110030> Last accessed November 11, 2021.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Bibliography and Sources

- Government of Ontario. 2021a. Sites within a one Kilometre Radius of the Study Area Provided from the Ontario Archaeological Sites Database.
- Government of Ontario. 2021b. Archaeological Assessments Completed with the Study Area or within 50 Metres of the Study Area Provided from the Ontario Public Register of Archaeological Reports.
- Hamilton Public Library. 2017. *Historical Flamborough*. Electronic Document: <http://www.hpl.ca/articles/historical-flamborough>. Last accessed on November 10, 2021.
- Heidenreich, Conrad E. 1978. Huron. In *Handbook of North American Indians*. Volume 15, Northeast. Edited by Bruce G. Trigger, pp. 368-388. Washington: Smithsonian Institution Press.
- Johnston, C.M. 1958. *The Head of the Lake: A History of Wentworth County*. Hamilton: Wentworth County Council.
- Kapyrka, Julie. 2018. Remembering Original Relationships: Mississauga and Wendat. *Arch Notes*, 23(1): 5-7.
- Kernighan, R. K. 1875. Historical Sketch of the County of Wentworth. In *Illustrated Historical Atlas of the County of Wentworth Ont.* pp. iii-xii. Toronto: Page and Smith.
- Konrad, Victor. 1981. An Iroquois Frontier: the North Shore of Lake Ontario during the Late Seventeenth Century. *Journal of Historical Geography* 7(2).
- Lennox, Paul A., and William R. Fitzgerald. 1990. The Culture History and Archaeology of the Neutral Iroquoians. In Ellis and Ferris 1990, pp. 405-456.
- Loewen, Brad and Claude Chapdelaine (editors). 2016. *Contact in the 16th Century: Networks among Fishers, Foragers and Farmers*. Mercury Series Archaeology Paper 176. Ottawa: University of Ottawa Press.
- Métis Nation of Ontario. 2016. *Métis Historic Timeline*. Electronic document: <http://www.metisnation.org/culture-heritage/m%C3%A9tis-timeline/>. Last accessed November 9, 2021.
- Mississaugas of the New Credit First Nation. n.d. *The History of the Mississaugas of the New Credit First Nation*. Hagersville: Mississaugas of the New Credit First Nation.
- Morris, J.L. 1943. *Indians of Ontario*. 1964 reprint. Department of Lands and Forests, Toronto.
- Ontario Energy Board. 2016. *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario*. Seventh Edition. Available online: <http://www.ontarioenergyboard.ca/OEB/Industry/Rules+and+Requirements/Rules+Codes+Guidelines+and+Forms#envguidelines>.
- Page, H.R., and Co. 1875. *Illustrated Historical Atlas of the County of Wentworth Ont.* Toronto: H.R. Page and Co.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Bibliography and Sources

- Paudash, Robert. 1905. The Coming of the Mississagas. *Ontario Historical Society, Papers and Records*. Volume VI: 7-11. Toronto: Ontario Historical Society.
- Presant, E. W., R. E. Wicklund and B. C. Matthews. 1965. *The Soils of Wentworth County. Report No. 32 of the Ontario Soil Survey*. Ottawa: Canada Department of Agriculture and the Ontario Department of Agriculture.
- Rogers, Edward S. 1978. Southeastern Ojibwa. In *Handbook of North American Indians, Volume 15 Northeast*. Edited by Bruce G. Trigger, pp. 760-771. Washington: Smithsonian Institution Press.
- Rottenburg, Major George F. Baron de, 1850. *Map of the principal communications in Canada West. Compiled from the most authentic sources, actual surveys, district maps, etc. etc.* National Map Collection, H1/400/[1850].
- Schmalz, Peter S. 1991. *The Ojibwa of Southern Ontario*. Toronto: University of Toronto Press.
- Smith D. W. 1793. *Flamborough East & West. Map No. A4*. Map on file at Ministry of Natural Resources and Forestry, Crown Land Survey Records, Peterborough.
- Stewart, Andrew M. 2013. Water and Land. In *Before Ontario: The Archaeology of a Province*. Edited by: Marit K. Munson and Susan M. Jamieson, pp. 24-34. Montreal and Kingston: McGill-Queen's University Press.
- Stone, Lyle M. and Donald Chaput. 1978. Southeastern Ojibwa. In *Handbook of North American Indians. Volume 15, Northeast*. Edited by Bruce G. Trigger, pp. 602-609. Washington: Smithsonian Institution Press.
- Surtees, Robert, 1859. *Map of the County of Wentworth, Canada West*. Compiled from authentic surveys by Robert Surtees, Civil Engineer and published by Hardy Gregory Lithographer & Engraver, Hamilton.
- The Niagara Settlers. 2021. *Land Petitions of the Niagara Settlers "Roche to Rymal"*. Electronic document: <https://sites.google.com/site/niagarasettlers/upper-canada-land-petitions/petitions-roche-to-rymal> . Last accessed November 9, 2021.
- White, Marian E. 1978. Neutral and Wenro. In *Handbook of North American Indians. Volume 15, Northeast*, edited by Bruce G. Trigger, pp. 407-411. Washington: Smithsonian Institution Press.
- Williamson, Ronald F. 2013. The Woodland Period, 900 BCE to 1700 CE. In *Before Ontario: The Archaeology of a Province*. Edited by Marit K. Munson and Susan M. Jamieson, pp. 48-61. Montreal and Kingston: McGill-Queen's University Press.



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Photos

7.0 PHOTOS

7.1 IMAGES

Photo 1: General ground conditions in previously assessed area, west end of study area, facing northwest



Photo 2: General ground conditions in previously assessed area, west end of study area, facing north



Photo 3: General ground conditions in previously assessed area, west end of study area, facing south



Photo 4: General view of study area, north side of Concession 4 West, facing west toward Brock Road



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Photos

Photo 5: General view of study area, north side of Concession 4 West, facing east, disturbed driveway in background and disturbed RoW to right



Photo 6: General view of study area, north side of Concession 4 West, facing north-northeast, Lafarge quarry boundary to left



Photo 7: General view of study area, north side of Concession 4 West, facing west, disturbed driveway in background and disturbed RoW to left



Photo 8: General ground conditions in previously assessed agricultural field, central part of study area, facing east, Glenwood United Cemetery in background



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Photos

Photo 9: East limit of Glenwood United Century and general ground conditions in previously assessed agricultural field, central part of study area, facing south



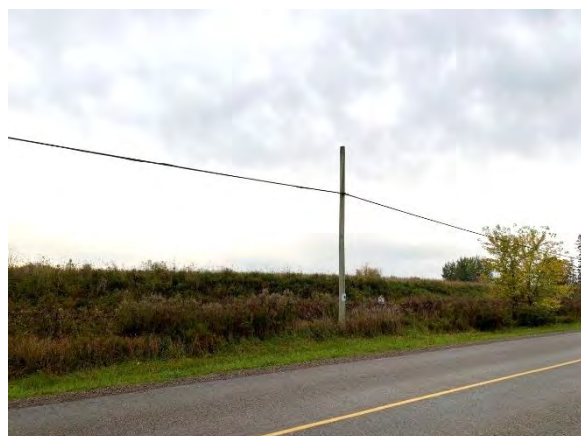
Photo 10: General view of study area on south side of Concession 4 West, facing southeast, disturbed Lafarge quarry access road to left



Photo 11: General view of study area on south side of Concession 4 West, facing southwest



Photo 12: Disturbed berm at north end of Lafarge quarry, narrow strip of potentially undisturbed RoW, south side of Concession 4 West, facing southwest



STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Photos

Photo 13: Disturbed berm at north end and east side of Lafarge quarry, east end of study area, facing south



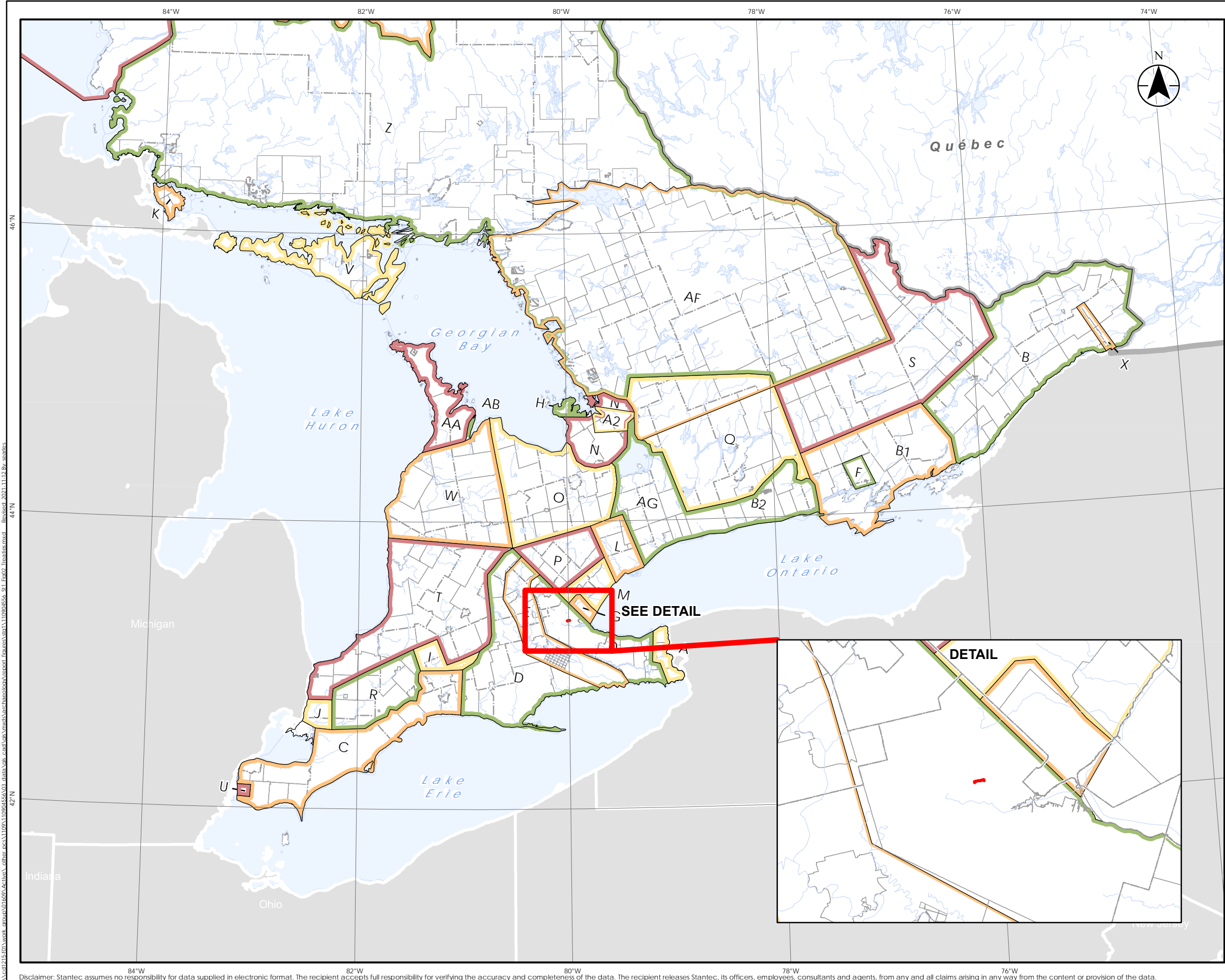
STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Maps

8.0 MAPS

Maps of the Project study area will follow on succeeding pages.





Legend

- Study Area
- Waterbody
- Municipal Boundary - Upper Tier
- Municipal Boundary - Lower or Single Tier

- A** Treaty No. 381, May 9th, 1781 (Mississauga and Chippewa)
- AA** Treaty No. 72, October 30th, 1854 (Chippewa)
- AB** Treaty No. 82, February 9th, 1857 (Chippewa)
- AE** Treaty No. 9, James Bay 1905, 1906 (Ojibwa and Cree)
- AF** Williams Treaty, October 31st and November 15th, 1923 (Chippewa and Mississauga)
- AG** Williams Treaty, October 31st, 1923 (Chippewa)
- A2** John Collins' Purchase, 1785 (Chippewa)
- B** Crawford's Purchase, October 9th, 1783 (Algonquin and Iroquois)
- B1** Crawford's Purchase, October 9th, 1783 (Mississauga)
- B2** Crawford's Purchase, 1783, 1787, 1788 (Mississauga)
- C** Treaty No. 2, May 19th, 1790 (Odawa, Chippewa, Pottawatomi, and Huron)
- D** Treaty No. 3, December 2nd, 1792 (Mississauga)
- E** Haldimand Tract: from the Crown to the Mohawk, 1793
- F** Tyendinaga: from the Crown to the Mohawk, 1793
- G** Treaty No. 3 3/4: from the Crown to Joseph Brant, October 24th, 1795
- H** Treaty No. 5, May 22nd, 1798 (Chippewa)
- I** Treaty No. 6, September 7th, 1796 (Chippewa)
- J** Treaty No. 7, September 7th, 1796 (Chippewa)
- K** Treaty No. 11, June 30th, 1798 (Chippewa)
- L** Treaty No. 13, August 1st, 1805
- M** Treaty No. 13A, August 2nd, 1805
- N** Treaty No. 16, November 18th, 1815 (Chippewa)
- O** Treaty No. 18, October 17th, 1818 (Chippewa)
- P** Treaty No. 19, October 28th 1818 (Chippewa)
- Q** Treaty No. 20, November 5th, 1818 (Chippewa)
- R** Treaty No. 21, March 9th, 1819 (Chippewa)
- S** Treaty No. 27, May 31st, 1819 (Mississauga)
- T** Treaty No. 27 1/2, April 25th, 1825 (Ojibwa and Cree)
- U** Treaty No. 35, August 13th, 1833 (Wyandot or Huron)
- V** Treaty No. 45, August 9th, 1836 (Chippewa and Odawa, "For All Indians To Reside Thereon")
- W** Treaty No. 45 1/2, August 9th, 1836
- X** Treaty No. 57, June 1st, 1847 (Iroquois of St. Regis)
- Y** Treaty No. 60, Robinson, Superior, September 7th, 1850 (Ojibwa)
- Z** Treaty No. 61, Robinson, Huron, September 9th, 1850 (Ojibwa)

0 50 100 Km
1:3,000,000 (At original document size of 11x17)

- Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
 2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2021.
 3. Treaty boundaries adapted from Morris 1943 (1964 reprint). For cartographic representation only.

Project Location 110904556 REVA
City of Hamilton Prepared by SPE on 2021-11-12
Technical Review by SE on 2021-11-05

Client/Project
IMPERIAL OIL LIMITED
STAGE1 ARCHAEOLOGICAL ASSESSMENT
PIPELINE RELOCATION PROJECT

Figure No.
2

Title
Treaties and Purchases (Adapted from
Morris 1943)

\\cd1215-f01\work_group\07609\active\other\eca\1109\110904556_03_data\gis_cadd\gis_cadd\archaeo\report_images\h1\110904556_h1_fig03.05_fig03.mxd Revised: 2021-11-12 By: stantec

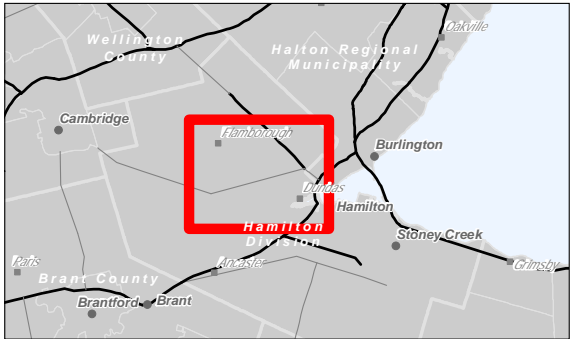


Legend

Study Area

Figure Not to Scale

Notes
1. Rottenburg, Major George F. Baron de, 1850. Map of the principal communications in Canada West. Compiled from the most authentic sources, actual surveys, district maps, etc. etc. National Map Collection, H1/400/[1850].



Project Location
City of Hamilton
110904556 REVA
Prepared by SPE on 2021-11-12
Technical Review by SE on 2021-11-05

Client/Project
IMPERIAL OIL LIMITED
STAGE1 ARCHAEOLOGICAL ASSESSMENT
PIPELINE RELOCATION PROJECT

Figure No.
3

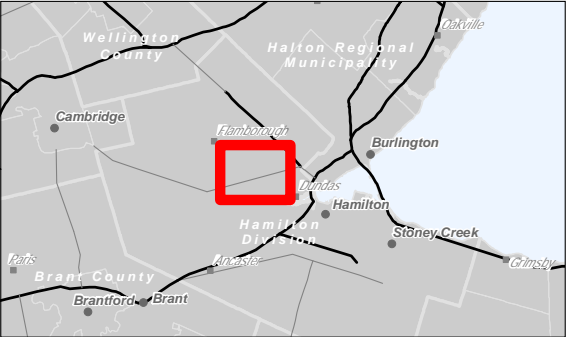
Title
Study Area as Shown Over Portion of 1850
Rottenburg Map of Canada West



Legend
 Study Area

Figure Not to Scale

Notes
1. Surtees, Robert, 1859. Map of the County of Wentworth, Canada West. Compiled from authentic surveys by Robert Surtees, Civil Engineer and published by Hardy Gregory Lithographer & Engraver, Hamilton, 1859.



Project Location
City of Hamilton
110904556 REVA
Prepared by SPE on 2021-11-12
Technical Review by SE on 2021-11-05

Client/Project
IMPERIAL OIL LIMITED
STAGE1 ARCHAEOLOGICAL ASSESSMENT
PIPELINE RELOCATION PROJECT

Figure No.
4
Title

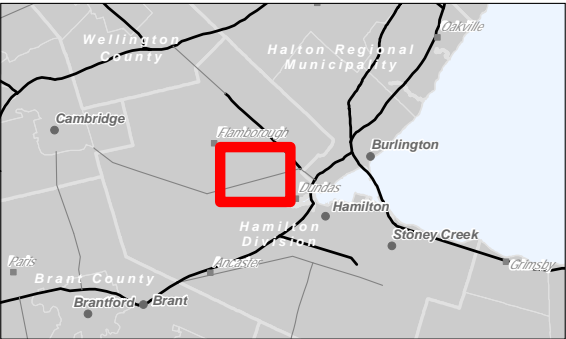
Study Area as Shown Over Portion of 1859
Map of Wentowrth County



Legend
Study Area

Figure Not to Scale

Notes
1. Page, H.R., and Co. 1875. Illustrated Historical Atlas of the County of Wentworth
Ont. Toronto: H.R. Page and Co.



Project Location 110904556 REVA
City of Hamilton Prepared by SPE on 2021-11-12
Technical Review by SE on 2021-11-05


Client/Project
IMPERIAL OIL LIMITED
STAGE1 ARCHAEOLOGICAL ASSESSMENT
PIPELINE RELOCATION PROJECT

Figure No.
5

Title
Study Area as Shown Over Portion of 1875
Map of West Flamborough Township


\\cd1215-001\work_group\01609\active\other\ecs\1109\110904556\03_data\gis_cadd\gis_mxd\archaeo\report_images\fig1_110904556_s1_fig06_methodresults.mxd Revised: 2021.11.12 By: searles










Stantec

Legend

 Archaeology Photo Log

 Study Area

Assessment Method

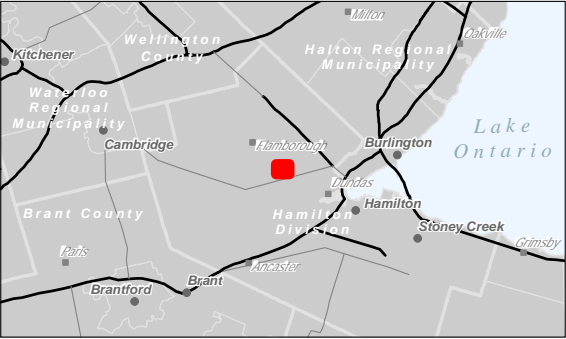
-  Area of Archaeological Potential - Further Archaeological Work Required (Stage 1)
-  Previously Disturbed, Low to No Archaeological Potential - No Further Archaeological Work Required
-  Previously Assessed - Archaeologix 2006, PIF# P084-0025-2006
-  Previously Assessed - Golder 2016, PIF P340-013-2012

0 100 200 Metres

1:6,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2021.
3. Orthoimagery © First Base Solutions, 2021. Imagery Date, 2019.



Project Location
City of Hamilton

110904556 REVA
Prepared by SPE on 2021-11-12
Technical Review by BCC on 2021-11-12

Client/Project
IMPERIAL OIL LIMITED
STAGE1 ARCHAEOLOGICAL ASSESSMENT
PIPELINE RELOCATION PROJECT

Figure No.
6

Title
Stage 1 Results and Recommendations

STAGE 1 ARCHAEOLOGICAL ASSESSMENT: IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

Closure

9.0 CLOSURE

This report documents work that was performed in accordance with generally accepted professional standards at the time and location in which the services were provided. No other representations, warranties or guarantees are made concerning the accuracy or completeness of the data or conclusions contained within this report, including no assurance that this work has uncovered all potential archaeological resources associated with the identified property.

All information received from the client or third parties in the preparation of this report has been assumed by Stantec to be correct. Stantec assumes no responsibility for any deficiency or inaccuracy in information received from others.

Conclusions made within this report consist of Stantec's professional opinion as of the time of the writing of this report and are based solely on the scope of work described in the report, the limited data available and the results of the work. The conclusions are based on the conditions encountered by Stantec at the time the work was performed. Due to the nature of archaeological assessment, which consists of systematic sampling, Stantec does not warrant against undiscovered environmental liabilities nor that the sampling results are indicative of the condition of the entire property.

This report has been prepared for the exclusive use of the client identified herein and any use by any third party is prohibited. Stantec assumes no responsibility for losses, damages, liabilities or claims, howsoever arising, from third party use of this report. We trust this report meets your current requirements. Please do not hesitate to contact us should you require further information or have additional questions about any facet of this report.

Quality Review _____
(signature)

Tracie Carmichael – Managing Principal, Environmental Services

Independent Review _____
(signature)

Parker Dickson – Associate, Senior Archaeologist





**Stage 1 Archaeological Assessment:
Imperial Oil Limited
Pipeline Relocation Project**

Lots 7 to 10, Concession 3 and Lots 7 to 9,
Concession 4, Geographic Township of West
Flamborough, former Wentworth County, now
City of Hamilton, Ontario.

March 15, 2022

Prepared for:

Imperial Oil Limited
Canada Fuels Operations
505 Quarry Park Blvd. SE
Calgary, AB T2C 5N1

Prepared by:

Stantec Consulting Ltd.
400-1331 Clyde Avenue
Ottawa, Ontario K2C 3G4

Licensee: Heather Kerr, MA
License Number: P1148
PIF Number: P1148-0024-2022
Project Number: 110904556

**ORIGINAL SUPPLEMENTARY
DOCUMENTATION**



Table of Contents

1.0	CORRESPONDENCE	1.1
-----	----------------------	-----



1.0 CORRESPONDENCE

The following pages provide correspondence with the Bereavement Authority of Ontario and the Ministry of Heritage, Sport, Tourism and Culture Industries.



From: [Prowse, Shari \(MHSTCI\)](#)
To: [Dickson, Parker](#)
Cc: [Archaeology \(MHSTCI\)](#); [Varley, Colin](#); [Kerr, Heather](#); [Michael D'Mello](#); [Carey Smith](#); [Ray Porriell](#); [Jim Cassimatis](#); [Wallace, Melissa \(MHSTCI\)](#); [Hadlari, Wai \(MHSTCI\)](#)
Subject: Re: Request for Advice: Application for a Cemetery Investigation Authorization - Glenwood United Cemetery, Waterdown, Ontario - Licensed Site # 01293 (related PIF P1148-0014-2021)
Date: Monday, January 17, 2022 10:08:30 AM
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)
[image012.png](#)
[Withdrawing CIA Application -10 Dec 2021 Glenwood United Cemetery #01293 MHSTCI Advice Request 20211210.pdf](#)

Hi Parker,

I received confirmation from the BAO that they are satisfied based on the attached that the boundaries of the cemetery have been confirmed. As such, and for the reasons outlined in the proposal, we support the proposed recommendations detailed in the attached and presented below:

- Withdraw the application for a CIA, previously submitted to the BAO dated October 20, 2021.
- Complete a Stage 3 cemetery investigation under a new PIF number to be issued by the MHSTCI.
 - An application for a CIA to the BAO is not required for this archaeological activity.
- The Stage 3 cemetery investigation will be a combination of Mechanical Topsoil Removal (MTR) in the first 10 metres surrounding the west, south, and east sides of Glenwood United Cemetery and monitoring within the minimum of 10 metre buffer zone.
- Under the observation of a licensed archaeologist, the topsoil will be mechanically excavated using a straight-edged bucket to expose the underlying subsoil. The exposed subsoil will then be examined to confirm the absence/presence of any exposed human remains or grave shafts. MTR will continue beyond the initial 10 metre buffer in the event that human burials are identified and continue for an additional 10 metres beyond the last encountered burial. The limits of MTR will coincide with the limits of the Project's anticipated impacts and/or footprint surrounding the cemetery.
- In the event that human burials are identified, the typical procedures for the identification of human remains and burial sites will be followed. This will include notification of the finds to local police and coroner, the Cemeteries Registrar at the Ministry of Government and Consumer Services, the BAO, and the MHSTCI.
- The Stage 3 cemetery investigation will be documented in an archaeological assessment report to be submitted to the MHSTCI for review and entry into the Ontario Public Register of Archaeological Reports.

This advice has been provided by MTCS under the assumption that the information submitted by the licensed archaeologist is complete and accurate. The advice provided applies only to the project in question and is not to be used as a precedent for future projects.

Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or if the information provided by the licensed archaeologist is otherwise found to be inaccurate, incomplete, misleading, or fraudulent.

Please include a PDF copy of this advice as supplementary documentation to your project report package.

Shari Prowse, MA
Archaeology Review Officer
Tel/Mobile: (519) 671-7742

From: Prowse, Shari (MHSTCI)
Sent: January 14, 2022 2:30 PM
To: Dickson, Parker <Parker.Dickson@stantec.com>
Cc: Archaeology (MHSTCI) <archaeology@ontario.ca>; Varley, Colin <Colin.Varley@stantec.com>; Kerr, Heather <Heather.Kerr@stantec.com>; Michael D'Mello <michael.dmello@thebao.ca>; Carey Smith <carey.smith@thebao.ca>; Ray Porriell <ray.porriell@thebao.ca>; Jim Cassimatis <Jim.Cassimatis@thebao.ca>; Wallace, Melissa (MHSTCI) <Melissa.Wallace@ontario.ca>
Subject: RE: Request for Advice: Application for a Cemetery Investigation Authorization - Glenwood United Cemetery, Waterdown, Ontario - Licensed Site # 01293

Hi Parker,

Thank you for your email. I am waiting to see how you respond to Michael's concern expressed regarding the boundaries to the west depicted in Photo #2 before I respond? How was the cemetery's boundaries field verified at this location? Please note that I could not open your attachment so I included the one Michael responded to.

Thanks,

Shari Prowse, MA
Archaeology Review Officer

Tel/Mobile: (519) 671-7742

From: Dickson, Parker <Parker.Dickson@stantec.com>

Sent: January 12, 2022 4:38 PM

To: Michael D'Mello <michael.dmello@thebao.ca>; Prowse, Shari (MHSTCI) <Shari.Prowse@ontario.ca>; Wallace, Melissa (MHSTCI) <Melissa.Wallace@ontario.ca>

Cc: Archaeology (MHSTCI) <archaeology@ontario.ca>; Varley, Colin <Colin.Varley@stantec.com>; Kerr, Heather <Heather.Kerr@stantec.com>; Carey Smith <carey.smith@thebao.ca>; Ray Porcill <ray.porcill@thebao.ca>; Jim Cassimatis <Jim.Cassimatis@thebao.ca>

Subject: RE: Request for Advice: Application for a Cemetery Investigation Authorization - Glenwood United Cemetery, Waterdown, Ontario - Licensed Site # 01293

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Thank you, Michael!

Shari, may you provide comment please? I've reattached the Advice Request for ease of reference.

Thanks,
PD

Parker Dickson, MA

Associate, Senior Archaeologist
Environmental Services
Cell: 226-268-7196

Stantec
600-171 Queens Avenue
London, ON N6A 5J7

The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

From: Michael D'Mello <michael.dmello@thebao.ca>

Sent: Friday, December 10, 2021 1:32 PM

To: Dickson, Parker <Parker.Dickson@stantec.com>; Prowse, Shari (MHSTCI) <Shari.Prowse@ontario.ca>; Wallace, Melissa (MHSTCI) <Melissa.Wallace@ontario.ca>

Cc: Archaeology (MHSTCI) <archaeology@ontario.ca>; Varley, Colin <Colin.Varley@stantec.com>; Kerr, Heather <Heather.Kerr@stantec.com>; Michael D'Mello <michael.dmello@thebao.ca>; Carey Smith <carey.smith@thebao.ca>; Ray Porcill <ray.porcill@thebao.ca>; Jim Cassimatis <Jim.Cassimatis@thebao.ca>

Subject: RE: Request for Advice: Application for a Cemetery Investigation Authorization - Glenwood United Cemetery, Waterdown, Ontario - Licensed Site # 01293

Hello Parker:

This will acknowledge receipt of your e-mail of December 10, 2021 cc'd below with the attached letter addressed to Shari Prowse, Archaeology Review Officer, Ministry of Heritage, Sport, Tourism and Culture Industries.

From my review of that letter I've concluded that you are satisfied with the credibility of the boundaries and have withdrawn the application for a Cemetery Investigation Authorization. I appreciate the efforts to confirm the boundaries. However, picture #2 of the west edge boundary drew my attention and raises some question about the boundary. Please double check.

Thank you for your cooperation and for contacting the Bereavement Authority of Ontario.

Mike

Th

Michael F. D'Mello | Deputy Registrar

Bereavement Authority of Ontario

Address: 100 Sheppard Avenue East, Suite 505, Toronto, Ontario, M2N 6N5

Direct: 647-483-2648 | Cell: 416-728-5396 | Toll Free: 1-844-493-6356 | Fax: 647-748-2645

www.thebao.ca |   



This message may contain confidential and/or privileged information. If you are not the addressee or authorized to receive this for the addressee, you must not use, copy, disclose, or take any action based on this message or any information herein. If you have received this message in error, please advise the sender immediately by reply email and delete this message. Thank

you for your cooperation.

From: Dickson, Parker <Parker.Dickson@stantec.com>
Sent: December 10, 2021 12:04 PM
To: Prowse, Shari (MHSTCI) <Shari.Prowse@ontario.ca>; Michael D'Mello <michael.dmello@thebao.ca>; Wallace, Melissa (MHSTCI) <Melissa.Wallace@ontario.ca>
Cc: Archaeology (MHSTCI) <archaeology@ontario.ca>; Varley, Colin <Colin.Varley@stantec.com>; Kerr, Heather <Heather.Kerr@stantec.com>
Subject: RE: Request for Advice: Application for a Cemetery Investigation Authorization - Glenwood United Cemetery, Waterdown, Ontario - Licensed Site # 01293

CAUTION: EXTERNAL MAIL. DO NOT CLICK ON LINKS OR OPEN ATTACHMENTS YOU DO NOT TRUST

Hi Shari, Michael, and Melissa,

Thank you again for taking the time out of your schedules to chat with us about the cemetery process. There was a lot of information to digest, and it was very well worth it!

We've taken another look at the information we have pertaining to the cemetery and believe we have a path forward that will address concerns from all parties. Please see the attached information package for your review. As always, we welcome any and all feedback.

Thanks again!
PD

Parker Dickson, MA
Associate, Senior Archaeologist
Environmental Services
Cell: 226-268-7196

Stantec
600-171 Queens Avenue
London, ON N6A 5J7

The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

From: Prowse, Shari (MHSTCI) <Shari.Prowse@ontario.ca>
Sent: Wednesday, November 3, 2021 10:06 AM
To: Dickson, Parker <Parker.Dickson@stantec.com>
Cc: Archaeology (MHSTCI) <archaeology@ontario.ca>; Varley, Colin <Colin.Varley@stantec.com>; Michael D'Mello <michael.dmello@thebao.ca>; Kerr, Heather <Heather.Kerr@stantec.com>
Subject: RE: Request for Advice: Application for a Cemetery Investigation Authorization - Glenwood United Cemetery, Waterdown, Ontario - Licensed Site # 01293

Hi Parker,

Thank you for the additional information. If this is considered credible mapping for the legal boundaries of the cemetery, a CIA would not be required for archaeological fieldwork adjacent to the cemetery. However, it would be useful to compare the mapping with the remaining monuments in the field to ensure everyone is accounted for.

The option for the CIA application is to provide a Stage 1 report with the background research and recommended strategy (that is accepted by MHSTCI on or after February 12, 2021) or confirmation of a concurrence from MHSTCI for a detailed strategy. In order for us to provide this concurrence, as part of a request for advice, we need to see the background research that supports your findings and the recommended strategy. I would be happy to set up a meeting to discuss this and our expectations on this in lieu of written guidance on these investigations. I have also attached our guidance on requests for advice for your reference. It is essential for the BAO and MHSTCI to have all of the relevant information in a single document presented in an orderly fashion to ensure there are no misunderstandings about the cemetery's circumstances and fieldwork strategy and to help expedited our review of these materials.

MHSTC has been working collaboratively with the BAO in the CIA process to ensure that the fieldwork carried out by the professionally licensed archaeologists meets the requirements of the S&Gs and best practices. Because MHSTCI sets the S&Gs and reviews the reporting, we are in the best position to advise on this and know what information is required in order to confirm ministry concurrence with a given strategy. MHSTCI would like to ensure that these investigations occur only when required in order to reduce the burden on the proponents and the upset to the quite order of cemetery properties and that a contingency plan is in place to address variations in field conditions and discoveries that will affect fieldwork strategies

Thank you and all the best,

Shari Prowse, MA
Archaeology Review Officer
Tel/Mobile: (519) 671-7742

From: Dickson, Parker <Parker.Dickson@stantec.com>
Sent: November 3, 2021 8:36 AM
To: Prowse, Shari (MHSTCI) <Shari.Prowse@ontario.ca>
Cc: Archaeology (MHSTCI) <archaeology@ontario.ca>; Varley, Colin <Colin.Varley@stantec.com>; Michael D'Mello <michael.dmello@thebao.ca>; Kerr, Heather <Heather.Kerr@stantec.com>
Subject: RE: Request for Advice: Application for a Cemetery Investigation Authorization - Glenwood United Cemetery, Waterdown, Ontario - Licensed Site # 01293

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good Morning Shari,

At this point, I do not believe we have acquired the information to address your information requests. If timing permits we can try to include it as part of the Stage 1 report and, as indicated below, it would be incorporated as part of the cemetery investigation. In this case, the proponent's due diligence for their project has asked that Stantec complete the investigation work surrounding the existing cemetery. Given the area surrounding the cemetery is agricultural field, what other methodology would the MHSTCI typically employ other than MTR? Correct me if I'm wrong, but I think what you are trying to ascertain is if a cemetery investigation is even warranted at all? If that's the case, I truly appreciate the effort. In this particular case, we are working with the proponent to develop a path forward for a cemetery investigation. Worst case scenario, and our final Stage 1 results determine that an investigation truly wasn't warranted, our investigation (or at least our planning of an investigation) of a potential unknown and removal of topsoil provides some assurance to the proponent that their project will not impact unmarked graves, and provides further assurance that the limits of the cemetery as physically defined are accurate.

That being said and with the limited information we have currently at hand, if the MHSTCI is recommending that Stage 3 cemetery investigation is not required we can take that back to the proponent for further discussion and rescind our application with the BAO. Given how late we are in the field season, we are trying to line our proverbial ducks in a row early so that we can complete the fieldwork before adverse weather impacts us and the proponent's construction schedule.

We are now in receipt of the attached map of Glenwood Cemetery, but as you can see, there are no exact reference points on the map that we can accurately tie to a real physical point.

Hope that helps to better understand where we are coming from.

Thanks,
PD

Parker Dickson, MA
Associate, Senior Archaeologist
Environmental Services
Cell: 226-268-7196

Stantec
600-171 Queens Avenue
London, ON N6A 5J7

The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

 Please consider the environment before printing this email.

From: Prowse, Shari (MHSTCI) <Shari.Prowse@ontario.ca>
Sent: Tuesday, November 2, 2021 4:10 PM
To: Dickson, Parker <Parker.Dickson@stantec.com>
Cc: Archaeology (MHSTCI) <archaeology@ontario.ca>; Varley, Colin <Colin.Varley@stantec.com>; Michael D'Mello <michael.dmello@thebao.ca>; Kerr, Heather <Heather.Kerr@stantec.com>
Subject: RE: Request for Advice: Application for a Cemetery Investigation Authorization - Glenwood United Cemetery, Waterdown, Ontario - Licensed Site # 01293

Hi Parker,

My questions were not only related to understanding the fieldwork methodology proposed but also to understand the nature of the potential for human burials within the subject property, if the boundaries are truly unknown, and if the Stage 3 cemetery investigation is needed. All of this needs to be addressed for me to confirm the strategy would meet the S&Gs.

I would happy to meet with you and your team to discuss this and my questions as they relate to this assessment so that you have a better understanding of what is needed going forward.

Shari Prowse, MA
Archaeology Review Officer
Tel/Mobile: (519) 671-7742

From: Dickson, Parker <Parker.Dickson@stantec.com>
Sent: November 2, 2021 3:06 PM
To: Prowse, Shari (MHSTCI) <Shari.Prowse@ontario.ca>
Cc: Archaeology (MHSTCI) <archaeology@ontario.ca>; Varley, Colin <Colin.Varley@stantec.com>; Michael D'Mello <michael.dmello@thebao.ca>; Kerr, Heather <Heather.Kerr@stantec.com>
Subject: RE: Request for Advice: Application for a Cemetery Investigation Authorization - Glenwood United Cemetery, Waterdown, Ontario - Licensed Site # 01293

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Hi Shari,

Thank you for your response. I'm including Michael D'Mello on this email string as I'm hoping he can provide further clarification regarding the BAO's requirements from the MHSTCI to issue a Cemetery Investigation Authorization (CIA). I think this will help establish expectations for this project and will certainly assist Stantec in seeking authorization for future cemetery-related projects. I am also including the archaeological licensee, Heather Kerr, for Stantec's Stage 1 assessment for the associated project.

As noted below, our Stage 1 assessment (PIF number P1148-0014-2021) is not complete and has not been submitted to the MHSTCI for review. Following the Registrar's Directive for reports not already submitted to the MHSTCI for review, we asked the MHSTCI for confirmation of our proposed fieldwork strategy for this cemetery investigation. This confirmation would then be provided to the BAO to support our application for a CIA.

Our application to the BAO (attached for ease of reference) confirms that Stage 2 assessment of the property surrounding the cemetery has been subject to previous Stage 1 to Stage 3 assessment under PIF number P084-025-2006. The Stage 2 assessment was completed through pedestrian survey of ploughed agricultural lands. As we understand it, no further Stage 2 archaeological assessment is required for this property. The proposed cemetery investigation would proceed directly to MTR as outlined below. We would certainly adjust the limits of the MTR should any encumbrances, such as trees, be identified, although the proposed work is anticipated to occur within the agricultural fields which abut the cemetery. Your information requests below will be incorporated as part of the Stage 3 Cemetery Investigation report submitted to the MHSTCI and BAO, as applicable. At this phase of the project, I believe all the BAO requires is confirmation of our field strategy. However, I will defer to Mr. D'Mello to advise and confirm what is needed from the MHSTCI to issue the CIA.

Acknowledging that the work plan may change pending the identification of encumbrances and/or burial objects and grave shafts during fieldwork, we would like to include the proposed Stage 3 cemetery investigation methodology being discussed here as part of our further work recommendations in our Stage 1 report for the project.

Thanks again for the help and support!
PD

Parker Dickson, MA
Associate, Senior Archaeologist
Environmental Services
Cell: 226-268-7196

Stantec
600-171 Queens Avenue
London, ON N6A 5J7

The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

 Please consider the environment before printing this email.

From: Prowse, Shari (MHSTCI) <Shari.Prowse@ontario.ca>

Sent: Tuesday, November 2, 2021 12:19 PM

To: Dickson, Parker <Parker.Dickson@stantec.com>

Cc: Archaeology (MHSTCI) <archaeology@ontario.ca>; Varley, Colin <Colin.Varley@stantec.com>

Subject: FW: Request for Advice: Application for a Cemetery Investigation Authorization - Glenwood United Cemetery, Waterdown, Ontario - Licensed Site # 01293

Hi Parker,

Thank you for this request for advice. In addition to what you provided below can you please include the following:

1. Have you contacted the BAO about the boundaries of the cemetery? We recommend you do this if your discussions with the cemetery operator do not provide you with sufficient information concerning the cemetery's boundaries and its history. Please include correspondence with the BAO on this.
2. Can you provide some history about the cemetery including the number of burials and if there are records to suggest that there may be burials outside of the currently understood boundaries.
3. Can you tell me the date of the burials closest to the subject property?
4. Can you confirm the field conditions within 10 metres of the cemetery assumed boundaries within the subject property. For example, are there trees that may make MTR difficult? Photographs will be helpful.

Please provide relevant correspondence from the cemetery operator and the BAO so we can confirm the details.

Please note that where it is feasible based on field conditions, MTR should be carried out working towards the currently understood cemetery boundaries in order to confirm them and lessen impacts to unmarked burials. Also, a Stage 2 assessment should be carried out in advance of the Stage 3 cemetery investigation if there is archaeological potential.

If you can address the above and resend, I can advise further. I would be happy to discuss directly with the licensee as well.

Shari Prowse, MA
Archaeology Review Officer
Tel/Mobile: (519) 671-7742

From: Archaeology (MHSTCI) <archaeology@ontario.ca>
Sent: October 21, 2021 2:28 PM
To: Prowse, Shari (MHSTCI) <Shari.Prowse@ontario.ca>
Subject: FW: Request for Advice: Application for a Cemetery Investigation Authorization - Glenwood United Cemetery, Waterdown, Ontario - Licensed Site # 01293

From: Dickson, Parker <Parker.Dickson@stantec.com>
Sent: October 21, 2021 1:34 PM
To: Archaeology (MHSTCI) <archaeology@ontario.ca>
Cc: Varley, Colin <Colin.Varley@stantec.com>
Subject: Request for Advice: Application for a Cemetery Investigation Authorization - Glenwood United Cemetery, Waterdown, Ontario - Licensed Site # 01293

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good afternoon,

To support our proposed work plan and application for a cemetery investigation authorization with the Bereavement Authority of Ontario (BAO), we are seeking advice and confirmation of archaeological methodology for Stage 3 cemetery investigation.

The limits of Glenwood United Cemetery could not be precisely determined during the Stage 1 background research associated with the project being completed under PIF # P1148-0014-2021 issued to Heather Kerr. Communication with members of the Glenwood United Board, operators of the cemetery, confirmed that they do not have a legal survey of the cemetery limits, although it was asserted that there were no burials that occurred outside of the currently identified limits of the cemetery. Despite this, since there is uncertainty about the limits of the cemetery, Stage 3 Cemetery Investigations in the area outlined on the attached map should be carried out first to determine the presence or absence of unmarked human burials, in accordance with *Ontario Regulation 30/11: General* (Government of Ontario 2011) of the Funeral, Burial and Cremation Services Act (Government of Ontario 2002). As the project is unable to avoid the area of investigation, on behalf of the proponent, Stantec Consulting Ltd. will obtain Cemetery Investigation Authorization for Glenwood United Cemetery and discuss the work with the BAO to ensure it addresses regulations under the *Funeral, Burial and Cremation Services Act, 2002*.

The Stage 3 Cemetery Investigation will be a combination of Mechanical Topsoil Removal (MTR) in the first 10 metres surrounding the west, south, and east sides of Glenwood United Cemetery and monitoring within the minimum of 10 metre buffer zone. Under the observation of a licensed archaeologist, the topsoil will be mechanically excavated using a straight-edged bucket to expose the underlying subsoil. The exposed subsoil will then be examined to confirm the absence/presence of any exposed human remains or grave shafts. The MTR will continue beyond the initial 10 metre buffer in the event that human burials are identified and continue for an additional 10 metres beyond the last encountered burial. The limits of MTR will coincide with the limits of the project's anticipated impacts and/or footprint surrounding the cemetery. In the event that human burials are identified, the BAO will be contacted for further instructions on next steps. The Cemeteries Registrar will also be contacted, and the site protected from any proposed impacts until a decision is made regarding their mitigation, either by protection and avoidance or disinterment and reburial.

Thank you,

Parker Dickson, MA
Associate, Senior Archaeologist
Environmental Services
Cell: 226-268-7196

Stantec
600-171 Queens Avenue
London, ON N6A 5J7

The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

 Please consider the environment before printing this email.

APPENDIX F: CULTURAL HERITAGE 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

Imperial Oil Pipeline Relocation Project Environmental Report

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

City of Hamilton, Ontario

Proponent Name

Imperial Oil

Proponent Contact Information

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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 plaques⁹ 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 G: ENVIRONMENTAL ALIGNMENT SHEETS



\\Cd1215-01\work_group\01609\Active\other_pos\1109\110904556\03_data\gis_cad\gis\mxd\rap\report_figures\ER\Alignment\sheet\Mapbook.mxd
Revised: 2021-12-14 By: searles

Resources											
	WETLAND WATERCOURSE	Mapped Headwater Drainage Features									
	VEGETATION										
	WATER WELL WITHIN 50 m	Wells Present					Wells Present				
	LINEAR FEATURES	Driveway Driveway Road Road									
	ENVIRONMENTALLY SENSITIVE AREA / ANSI										
	POTENTIAL SPECIES AT RISK (SAR) HABITAT	Potential SAR Habitat									
Construction Mitigation Notes: Note 1: HDD construction method with Open Cut contingency construction method. Refer to Tables 4.3 and D.1 of the ER. Note 2: No clearing activities during the migratory breeding bird restricted activity period (April 1 – August 31) without preconstruction nesting surveys. Refer to Table 4.3 of the ER. Note 3: Groundwater wells present. Water well monitoring program recommended. Refer to Table 4.3 of the ER. Note 4: Maintain emergency egress. Refer to Table 4.3 of the ER. Note 5: Overall Benefit Permit under the Endangered Species Act, 2007 from the MECP may be required if the species, or protected habitat, are impacted by project activities. Refer to Table 4.3 and E.1 of the ER. Note 6: Potential herpefaunal habitat. If construction is required during the herpetfaunal active season (April 1 to October 31), refer to Table 4.3 of the ER. Note 7: Potential bat maternity roosting habitat. If trees need to be removed during the bat active season (April 1 to October 1) refer to Table 4.3 of the ER.											
Acronyms List: ER: Environmental Report (Stantec 2020) HDD: Horizontal Directional Drill MECP: Ministry of Environment, Conservation and Parks MNR: Ministry of Natural Resources Forestry and Parks SAR: Species at Risk											
Construction Mitigation	CONSTRUCTION REQUIREMENTS	Note 4 Note 4									
	FISHERIES TIMING RESTRICTIONS (CONSTRUCT BETWEEN)										
	PIPELINE CROSSING METHODS	Note 1									
	MONITORING	Note 3					Note 3				
	VEGETATION RESTRICTIONS	Note 2									
	POTENTIAL SPECIES AT RISK (SAR) HABITAT	Notes 6 & 7					Note 5				

Legend

- Tie In Location
- Existing Pipeline
- Proposed Pipeline
- Water Well (MECP)
- Mapped Headwater Drainage Features (HCA, 2021)
- Unevaluated Wetland (per OWES)
- Wooded Area (LIO)
- Aggregate Site - Active

Notes

- Coordinate System: NAD 1983 UTM Zone 17N.
- Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2021.
- Orthoimagery © First Base Solution, 2021. Date of Imagery, 2019.
- MECP Water well locations are approximate and have been positioned based on published UTM coordinates © Queen's Printer for Ontario, 2021.
- Hamilton Conservation Authority (HCA) features provided under Data Licensing Agreement, November 19, 2021.
- All driveway crossings will allow for emergency services access.

Figure No.	Rev.
A-1	-

December 2021
110904556

Client/Project

Imperial Oil
Pipeline Relocation Project Environmental Report

Figure No.

A-1

Title

Environmental Alignment
Sheets - Map 1

**APPENDIX 2:
INDIGENOUS CONSULTATION
RECORDS AND SUPPORTING
DOCUMENTATION**

**APPENDIX 2:
INDIGENOUS CONSULTATION
RECORDS AND SUPPORTING
DOCUMENTATION**

IMPERIAL OIL LIMITED PIPELINE RELOCATION PROJECT

SUMMARY FOR THE MINISTRY OF ENERGY, NORTHERN DEVELOPMENT AND MINES

1. INTRODUCTION

This Summary Report has been provided to the Ministry of Energy, Northern Development and Mines (“MENDM”) with an overview of the Imperial Oil Limited (“IOL”) Pipeline Relocation Project (“Project”), to support the preparation of a contact list of indigenous communities that may have an interest in the Project.

1.1 Project Overview

Lafarge Canada is expanding their operations to the south side of Concession 4 West, Hamilton, ON and the 12” nominal pipe size (“NPS”) pipeline owned and operated by IOL will need to be relocated. The preference is to relocate the pipeline to the north side of Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be determined by the final route chosen but will be approximately 2 km. The study area within which the project will be evaluated is shown in Figure 1 (attached).

The following table provides the co-ordinates for the new tie-in points.

Proposed Locations*	Easting	Northing
TP-West	580212.00 m E	4795465.00 m N
TP-East	581783.00 m E	4795810.00 m N

*The proposed locations are located within Universal Transverse Mercator (UTM) Zone 17 T.

2. REGULATORY REQUIREMENTS AND APPROVALS

Ontario Energy Board (“OEB”) review and approval for Leave to Construct under section 90(1) of the *OEB Act* is required before this Project can proceed. As part of that application, an Environmental Review will be conducted in accordance with the OEB *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 7th Edition* (2016). The Environmental Review for this Project is anticipated to be completed and submitted to the OEB as early as summer 2021. Construction of the Project is planned to begin as early as Q1 2022 with an in-service date 3 months after construction starts. Other permits and authorizations for the Project will be determined and may be necessary at the Federal, Provincial and Municipal levels.

3. ENVIRONMENTAL PLANNING PROCESS

The environmental planning process for the Project will be initiated in the spring of 2021 by IOL with support provided through the process by consultant archaeologists, cultural heritage specialists, and other environmental specialists. The following provides a general overview of the environmental planning process for the Project:

- **Complete an Environmental Report (ER)**
 - Describe the proposed work necessary for the Project;
 - Complete a route evaluation study;
 - Describe the procedures that will be followed during construction of the facilities;
 - Identify potential environmental impacts and recommend measures to minimize those impacts and,
 - Describe consultation plans.
- **Complete all necessary studies and assessments**
 - An Archaeological Assessment will be conducted by a licensed archaeologist in accordance with the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) guidelines to identify known or potential archaeological resources within the Project area and will develop and appropriate mitigation plan if required.
 - A heritage specialist will review the main line for potential cultural heritage landscapes and built heritage resources and will develop an appropriate mitigation plan if required.
 - A qualified biologist will review the main line for potential species at risk and determine if any species will be impacted by construction activities and will develop and appropriate mitigation plan if required.
- **Obtain all necessary environmental permits and approvals**
 - IOL will work with all relevant governing agencies (e.g., City of Hamilton, Ministry of the Environment, Conservation and Parks (MECP), the Ministry of Natural Resources and Forestry (MNR), Conservation Halton (CH), and Hamilton Conservation Authority (HCA) to obtain any permits and/or approvals should it be necessary.

4. CONSULTATION

Consultation is an important part of the environmental planning process and may include discussions with the relevant federal and provincial agencies, the municipality, interested and potentially affected landowners, and interest groups, as well as indigenous communities identified by the MENDM. IOL will respond to any concerns raised as part of these discussions and will endeavor to minimize or mitigate any potential adverse impacts brought forward.

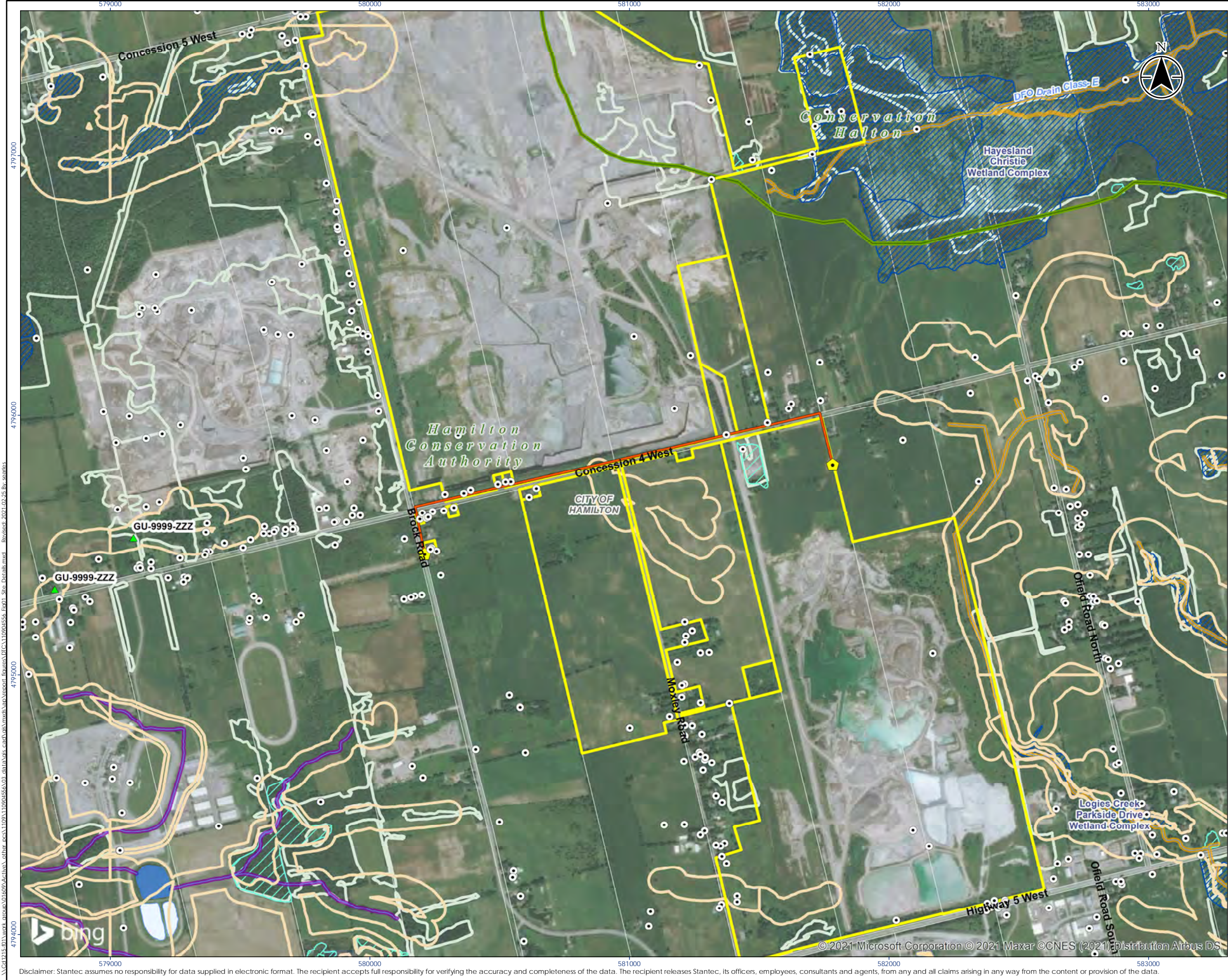
IOL will contact the City of Hamilton, MECP, MNR, CH, and HCA to discuss and review the Project. IOL will also contact landowners along the proposed route.


5. PROJECT ACTIVITIES

The construction and operation of the new pipe segment will comply with Technical Standards and Safety Authority (TSSA) regulations and Canadian Standards Association (CSA) Z662 standard. Major phases of this project include engineering design, environmental review, landowner/Indigenous engagement, approvals, contractor selection, construction and tie-in of new pipeline, and decommissioning of existing pipeline.

6. SUMMARY OF CONCLUSION

The purpose of this report is to provide MENDM preliminary information regarding the Project and acquire a list of Indigenous communities that may be interested in providing feedback during the Project planning processes. Data collection and field studies will be undertaken to determine the potential effects of the Project during the construction and operation phases. Mitigation measures to manage these potential effects will be identified and will include proposed monitoring and contingency plans which will be implemented to ensure effects are minimized.





Stantec

Legend

- Tie In Location
- Proposed Pipeline
- Water Well Location
- Regulation Area (HCA, Aug 30, 2013)
- Fish Survey Point (ARA)
- Constructed Drain
- Thermal Regime, Cold
- Thermal Regime, Warm
- Watercourse (Intermittent)
- Watercourse (Permanent)
- Conservation Area Administrative Boundary
- Lafarge Canada Inc. Property Boundary
- Lot
- Municipal Boundary, Lower
- Thermal Regime, Cold
- Thermal Regime, Warm
- Waterbody
- Wetland, Provincially Significant
- Wetland, Not evaluated per OWES
- Wooded Area

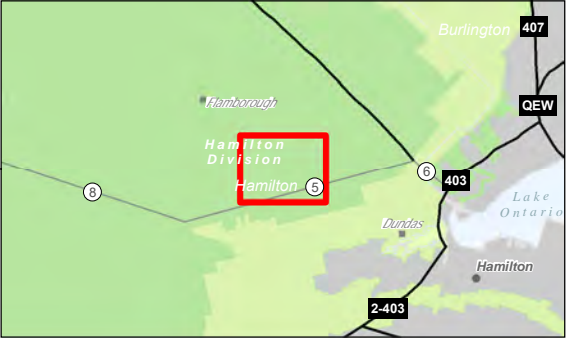
0 250 500 m

1:15,000 (At original document size of 11x17)

Notes

- Coordinate System: NAD 1983 UTM Zone 17N
- Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2021.
- MECP Water well locations are approximate and have been positioned based on published UTM coordinates © Queen's Printer for Ontario, 2021.

Niagara Escarpment Plan
Greenbelt Natural Heritage System



Project Location
City of Hamilton

110904556 REV4
Prepared by SPE on 2021-02-25
Technical Review by BCC on 2021-02-18/n

Client/Project
IMPERIAL OIL
IOL SPPL LAFARGE PIPELINE

Figure No.
1

Title
Site Details

VIA EMAIL

April 26, 2021

Mariell Leniuk
Environmental & Regulatory Advisor, Canada Fuels Operations
Imperial Oil Ltd.
505 Quarry Park Blvd SE
Calgary, AB T2P 3M9

Re: Imperial Oil Pipeline Relocation Project

Dear Ms. Leniuk:

Thank you for your email dated February 26, 2021 notifying the Ministry of Energy, Northern Development and Mines (ENDM) of Imperial Oil Ltd.'s (Imperial) intention to apply to the Ontario Energy Board (OEB) for Leave to Construct for the Imperial Oil Pipeline Relocation Project (the Project).

I understand that Imperial is planning to relocate an existing 12" nominal pipe size pipeline to the north side of Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be approximately 2 km.

Based on the information Imperial has provided to date, ENDM is of the view that the Project will not result in any appreciable adverse impact on the asserted or established rights of First Nation or Métis communities. Should new project information become available that indicates a potential to impact Aboriginal and Treaty rights (e.g. the result of the archeological assessment), I request that you notify ENDM as appropriate.

Given that the ENDM has determined, based on currently available information, that no duty to consult has been triggered it will not be necessary for ENDM to provide a letter of opinion regarding the sufficiency of consultation.

Also, ENDM recommends that Imperial continue to maintain a record of its interactions with Indigenous communities about the Project it has engaged on an interests-basis. In the event that an Indigenous community provides Imperial with information indicating a potential adverse impact of this project on its Aboriginal or Treaty rights, I request that you notify ENDM as appropriate.

Please contact Jason McCullough, Senior Advisor, Indigenous Energy Policy, Ministry of Energy, Northern Development and Mines at 416-426-2963 or jason.mccullough@ontario.ca if you have any questions or wish to discuss the matter in more detail.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dan Delaquis', with a stylized flourish at the end.

Dan Delaquis
Manager
Indigenous Energy Policy

From: [Williams, Kelly /C](#)
To: [REDACTED]
Cc: [Brian Doolittle](#); [Aaron Detlor](#); [HDI Tracy](#); [Cao, Thomas](#)
Subject: Lafarge Project-IOL-Notice of Study Commencement
Date: Monday, July 12, 2021 12:41:12 PM
Attachments: [Notification-HCCC-HDI-July 2021.pdf](#)
[ad_110904556_IOL-Lafarge_NoC_8x11_20210624_fnl.pdf](#)

Good afternoon [REDACTED]

I hope you are both well and are enjoying the summer so far. Imperial has a new project on the horizon near Hamilton, ON scheduled for Spring of 2022. Lafarge Canada has requested to relocate a section of pipeline currently located within the right of way. The details are in the attached letter from Thomas Cao, the Project Manager, along with the Notice of Study Commencement.

Let me know if you have any questions.

Kind regards,

kelly

Kelly Williams

Community Relations Officer Waterdown-Finch Project

Imperial

E kelly.williams@esso.ca

C 519.328.8681

imperialoil.ca | [Twitter](#) | [YouTube](#)



July 12, 2021

Haudenosaunee Confederacy Chiefs Council
Haudenosaunee Development Institute
16 Sunrise Court
Ohsweken, ON N0A 1M0

Imperial Oil Pipeline Relocation Project – Notice of Study Commencement via Email

Dear Chiefs and Staff,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated. The intent is to relocate the pipeline to either the north or south side of Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be determined by the final route chosen but will be approximately 2 km.

For more details on the location of the Project, please refer to the notice.

Due to the current government restrictions on public gatherings as a result of COVID-19, an information session will not take place.

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*". It is anticipated that the Environmental Report for the study will be completed by late summer / early fall 2021, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. If approved, construction is currently anticipated to begin in spring 2022.

As an Indigenous community with a potential interest in the Study Area, we are inviting the Haudenosaunee Confederacy Chiefs Council to provide comments and feedback regarding the Project. Stantec is presently compiling an environmental, socio-economic, and archaeological/cultural heritage inventory of the project location. We would welcome your feedback and comments regarding the proposed Project as we undertake the requisite environmental study.

Imperial Oil is committed to meaningful engagement with Indigenous communities. As such, we would be interested in holding a conference call with your consultation office staff to share project related information, should you wish. If you would be interested in setting up a briefing on this Project please reach out to Kelly Williams, and she will coordinate accordingly.

We kindly request that any initial input and comments regarding the Project are provided by **August 10, 2021**. Please let us know if you are unable to respond by this date but are interested in participating in the consultation and engagement process for the Project.

If you have any questions or want to discuss the Project, please feel free to contact Kelly Williams, Community Relations Officer at any time (kelly.williams@esso.ca; C: 519-328-8681). We look forward to engaging with you to ensure your community's interests are being considered and represented.

Respectfully,

Thomas Cao
Project Manager

Attachment: Notice of Study Commencement

cc. Thomas Cao, Imperial Oil
Emily Hartwig, Environmental Consultant, Stantec Consulting Ltd.

From: [Williams, Kelly /C](#)
To: [Lonny Bomberry](#)
Cc: [Tayler Hill](#); [Tanya Hill-Montour](#); [Dawn LaForme](#); [Cao, Thomas](#)
Subject: Lafarge Project-IOL-Notice of Study Commencement
Date: Monday, July 12, 2021 12:40:59 PM
Attachments: [Notification-SNGREC-July 2021.pdf](#)
[ad_110904556_IOL-Lafarge_NoC_8x11_20210624_fnl.pdf](#)

Good afternoon Lonny,

I hope you are well and looking forward to your retirement. Imperial has a new project on the horizon near Hamilton, ON for Spring of 2022. Lafarge Canada has requested to relocate a section of pipeline currently located within the right of way. The details are in the attached letter from Thomas Cao, the Project Manager, along with the Notice of Study Commencement.

Let me know if you have any questions.

Kind regards,

kelly

Kelly Williams

Community Relations Officer Waterdown-Finch Project

Imperial

E kelly.williams@esso.ca

C 519.328.8681

imperialoil.ca | [Twitter](#) | [YouTube](#)



July 12, 2021

Lonny Bomberry
Six Nations of the Grand River
Lands and Resources Department
2498 Chiefswood Road
Ohsweken, ON N0A1M0

Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Dear Mr. Bomberry,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated. The intent is to relocate the pipeline to either the north or south side of Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be determined by the final route chosen but will be approximately 2 km.

For more details on the location of the Project, please refer to the notice.

Due to the current government restrictions on public gatherings as a result of COVID-19, an information session will not take place.

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*". It is anticipated that the Environmental Report for the study will be completed by late summer / early fall 2021, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. If approved, construction is currently anticipated to begin in spring 2022.

As an Indigenous community with a potential interest in the Study Area, we are inviting Six Nations of the Grand River First Nation to provide comments and feedback regarding the Project. Stantec is presently compiling an environmental, socio-economic, and archaeological/cultural heritage inventory of the project location. We would welcome your feedback and comments regarding the proposed Project as we undertake the requisite environmental study.

Imperial Oil is committed to meaningful engagement with Indigenous communities. As such, we would be interested in holding a conference call with your consultation office staff to share project related information, should you wish. If you would be interested in setting up a briefing on this Project please reach out to Kelly Williams, and she will coordinate accordingly.

We kindly request that any initial input and comments regarding the Project are provided by **August 10, 2021**. Please let us know if you are unable to respond by this date but are interested in participating in the consultation and engagement process for the Project.

If you have any questions or want to discuss the Project, please feel free to contact Kelly Williams, Community Relations Officer at any time (kelly.williams@esso.ca; C: 519-328-8681). We look forward to engaging with you to ensure your community's interests are being considered and represented.

Respectfully,

Thomas Cao
Project Manager

Attachment: Notice of Study Commencement

c. Thomas Cao, Imperial Oil
Emily Hartwig, Environmental Consultant, Stantec Consulting Ltd.

From: [Williams, Kelly /C](#)
To: [Mark LaForme](#)
Cc: [Fawn Sault](#); [Megan DeVries](#); [Cao, Thomas](#)
Subject: Lafarge Project-IOL-Notice of Study Commencement
Date: Monday, July 12, 2021 12:41:19 PM
Attachments: [Notification-MCFN-July 2021.pdf](#)
[ad_110904556_IOL-Lafarge_NoC_8x11_20210624_fnl.pdf](#)

Dear Mark,

I hope you are well and are enjoying the summer so far. Imperial has a new project on the horizon near Hamilton, ON scheduled for Spring of 2022. Lafarge Canada has requested to relocate a section of pipeline currently located within the right of way. The details are in the attached letter from Thomas Cao, the Project Manager, along with the Notice of Study Commencement.

Let me know if you have any questions.

Kind regards,

kelly

Kelly Williams

Community Relations Officer Waterdown-Finch Project
Imperial

E kelly.williams@esso.ca

C 519.328.8681

imperialoil.ca | [Twitter](#) | [YouTube](#)



July 12, 2021

Mr. Mark LaForme
Director
Mississaugas of the Credit First Nation
Department of Consultation and Accommodation
4065 Hwy 6
Hagersville, ON N0A1H0

Imperial Oil Pipeline Relocation Project – Notice of Study Commencement via Email

Dear Mr. LaForme,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated. The intent is to relocate the pipeline to either the north or south side of Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be determined by the final route chosen but will be approximately 2 km.

For more details on the location of the Project, please refer to the notice.

Due to the current government restrictions on public gatherings as a result of COVID-19, an information session will not take place.

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)*". It is anticipated that the Environmental Report for the study will be completed by late summer / early fall 2021, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. If approved, construction is currently anticipated to begin in spring 2022.

As an Indigenous community with a potential interest in the Study Area, we are inviting Mississaugas of the Credit First Nation to provide comments and feedback regarding the Project. Stantec is presently compiling an environmental, socio-economic, and archaeological/cultural heritage inventory of the project location. We would welcome your feedback and comments regarding the proposed Project as we undertake the requisite environmental study.

Imperial Oil is committed to meaningful engagement with Indigenous communities. As such, we would be interested in holding a conference call with your consultation office staff to share project related information, should you wish. If you would be interested in setting up a briefing on this Project please reach out to Kelly Williams, and she will coordinate accordingly.

We kindly request that any initial input and comments regarding the Project are provided by **August 10, 2021**. Please let us know if you are unable to respond by this date but are interested in participating in the consultation and engagement process for the Project.

If you have any questions or want to discuss the Project, please feel free to contact Kelly Williams, Community Relations Officer at any time (kelly.williams@esso.ca; C: 519-328-8681). We look forward to engaging with you to ensure your community's interests are being considered and represented.

Respectfully,

Thomas Cao
Project Manager

Attachment: Notice of Study Commencement

cc. Thomas Cao, Imperial Oil
Emily Hartwig, Environmental Consultant, Stantec Consulting Ltd.

Georgopoulos, Rooly

From: Williams, Kelly /C <kelly.williams@esso.ca>
Sent: Thursday, October 21, 2021 12:34 PM
To: Liberman, Caryn A
Subject: FW: Lafarge Project-IOL-Notice of Study Commencement
Attachments: 110904556_NoC_Fig01_Site_Loc_20210929.pdf; ad_110904556_IOL-Lafarge_Update-Notice_20210929_fnl.pdf; let_110904556_Update-Notice_Landowner-Resident_20210929_fnl.pdf

From: Williams, Kelly /C
Sent: Thursday, October 21, 2021 12:34 PM
To: 'Todd Williams' <williams.todde@gmail.com>; 'Wayne Hill' <tworowarchaeology@gmail.com>
Cc: 'Brian Doolittle' <ganowa@me.com>; 'Aaron Detlor' <aarondetlor@gmail.com>; 'HDI Tracy' <traceyghdi@gmail.com>; Cao, Thomas <thomas.cao@esso.ca>
Subject: RE: Lafarge Project-IOL-Notice of Study Commencement

Good afternoon Todd and Wayne,

As a follow up to the July email below, I have attached the updated notices for the Lafarge Project. The scope of the project includes the relocation of a portion (2kms) of an IOL operated pipeline with a Lafarge right of way. The map is attached for your information.

The Stage 1 report is being drafted and will be distributed by Stantec Consulting Ltd. Stantec's licensed archaeologist assigned to the project is Colin Varley. He will be your project contact for archaeology and will be sending you the draft Stage 1 report for your information as soon as it is available. It is my understanding that the only Stage 2 work to be conducted is to determine the boundaries of a nearby Euro-Canadian cemetery. This work will likely take place sometime in November. Stantec can provide you with more details, if you have any questions. Here is Colin's contact information.

Colin Varley MA, RPA
Senior Archaeologist, Senior Associate

Direct: 613 738-6087
Mobile: 613 293-3035
Fax: 613 722-2799
colin.varley@stantec.com

My contract with Imperial ends this week and I will be moving on to another opportunity. If you have any questions about the project please reach out to Colin or Thomas Cao (cc'd) who is Imperial's Project Manager.

Kind regards,

kelly

Kelly Williams

Community Relations Officer Waterdown-Finch Project

Imperial

E kelly.williams@esso.ca

C 519.328.8681

imperialoil.ca | [Twitter](https://twitter.com) | [YouTube](https://www.youtube.com)

From: Williams, Kelly /C

Sent: Monday, July 12, 2021 12:41 PM

To: [REDACTED] [gmail.com](mailto:)>; [REDACTED] [gmail.com](mailto:)>

Cc: 'Brian Doolittle' <ganowa@me.com>; [REDACTED] [gmail.com](mailto:)>; [REDACTED] [gmail.com](mailto:)>; Cao, Thomas <thomas.cao@esso.ca>

Subject: Lafarge Project-IOL-Notice of Study Commencement

Good afternoon [REDACTED]

I hope you are both well and are enjoying the summer so far. Imperial has a new project on the horizon near Hamilton, ON scheduled for Spring of 2022. Lafarge Canada has requested to relocate a section of pipeline currently located within the right of way. The details are in the attached letter from Thomas Cao, the Project Manager, along with the Notice of Study Commencement.

Let me know if you have any questions.

Kind regards,

kelly

Kelly Williams

Community Relations Officer Waterdown-Finch Project

Imperial

E kelly.williams@esso.ca

C 519.328.8681

imperialoil.ca | [Twitter](https://twitter.com) | [YouTube](https://www.youtube.com)

Notice of Project Update

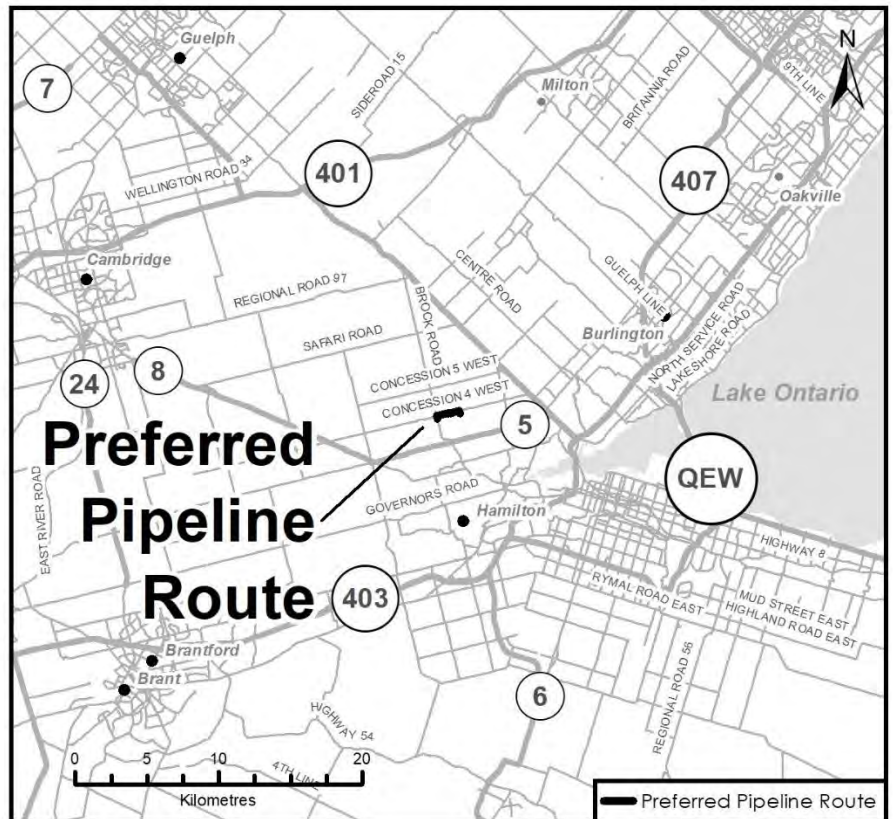
Imperial Oil – Pipeline Relocation Project

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated.

The intent is to relocate the pipeline along Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be approximately 2 km.

Environmental Study process

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)". It is anticipated that the Environmental Report for the study will be completed in late fall / early winter 2022, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. It is anticipated that the Environmental Report will be available for public viewing by spring 2022. If approved, construction is currently anticipated to begin in summer 2022.



Public consultation

Engagement with Indigenous communities, landowners, government agencies, the general public and other interested parties is an integral component of the environmental study process. As a result of the physical distancing requirements set out by the Province of Ontario due to COVID-19, no in-person Open House will take place.

Please send comments or questions regarding the Environmental Study or the proposed Imperial Oil Pipeline Relocation Project to:

Telephone: (519) 585-3849
Email: IOLRelocation@stantec.com

Georgopoulos, Rooly

From: Williams, Kelly /C <kelly.williams@esso.ca>
Sent: Thursday, October 21, 2021 12:35 PM
To: Liberman, Caryn A
Subject: FW: Lafarge Project-IOL-Notice of Study Commencement
Attachments: 110904556_NoC_Fig01_Site_Loc_20210929.pdf; ad_110904556_IOL-Lafarge_Update-Notice_20210929_fnl.pdf; let_110904556_Update-Notice_Landowner-Resident_20210929_fnl.pdf

From: Williams, Kelly /C
Sent: Thursday, October 21, 2021 12:34 PM
To: 'Fawn Sault' <Fawn.Sault@mncfn.ca>
Cc: Adrian Blake <Adrian.Blake@mncfn.ca>; Cao, Thomas <thomas.cao@esso.ca>; 'Mark LaForme' <Mark.LaForme@mncfn.ca>
Subject: RE: Lafarge Project-IOL-Notice of Study Commencement

Good afternoon Fawn,

As a follow up to the July email below, I have attached the updated notices for the Lafarge Project. The scope of the project includes the relocation of a portion (2kms) of an IOL operated pipeline with a Lafarge right of way. The map is attached for your information.

The Stage 1 report is being drafted and will be distributed by Stantec Consulting Ltd. Stantec's licensed archaeologist assigned to the project is Colin Varley. He will be your project contact for archaeology and will be sending you the draft Stage 1 report for your information as soon as it is available. It is my understanding that the only Stage 2 work to be conducted is to determine the boundaries of a nearby Euro-Canadian cemetery. This work will likely take place sometime in November. Stantec can provide you with more details, if you have any questions. Here is Colin's contact information.

Colin Varley MA, RPA
Senior Archaeologist, Senior Associate

Direct: 613 738-6087
Mobile: 613 293-3035
Fax: 613 722-2799
colin.varley@stantec.com

My contract with Imperial ends this week and I will be moving on to another opportunity. If you have any questions about the project please reach out to Colin or Thomas Cao (cc'd) who is Imperial's Project Manager.

Kind regards,

kelly

Kelly Williams

Community Relations Officer Waterdown-Finch Project

Imperial

E kelly.williams@esso.ca

C 519.328.8681

imperialoil.ca | [Twitter](#) | [YouTube](#)

From: Williams, Kelly /C

Sent: Monday, July 12, 2021 12:41 PM

To: 'Mark LaForme' <Mark.LaForme@mncfn.ca>

Cc: 'Fawn Sault' <Fawn.Sault@mncfn.ca>; 'Megan DeVries' <Megan.DeVries@mncfn.ca>; Cao, Thomas <thomas.cao@esso.ca>

Subject: Lafarge Project-IOL-Notice of Study Commencement

Dear Mark,

I hope you are well and are enjoying the summer so far. Imperial has a new project on the horizon near Hamilton, ON scheduled for Spring of 2022. Lafarge Canada has requested to relocate a section of pipeline currently located within the right of way. The details are in the attached letter from Thomas Cao, the Project Manager, along with the Notice of Study Commencement.

Let me know if you have any questions.

Kind regards,

kelly

Kelly Williams

Community Relations Officer Waterdown-Finch Project

Imperial

E kelly.williams@esso.ca

C 519.328.8681

imperialoil.ca | [Twitter](#) | [YouTube](#)

Notice of Project Update

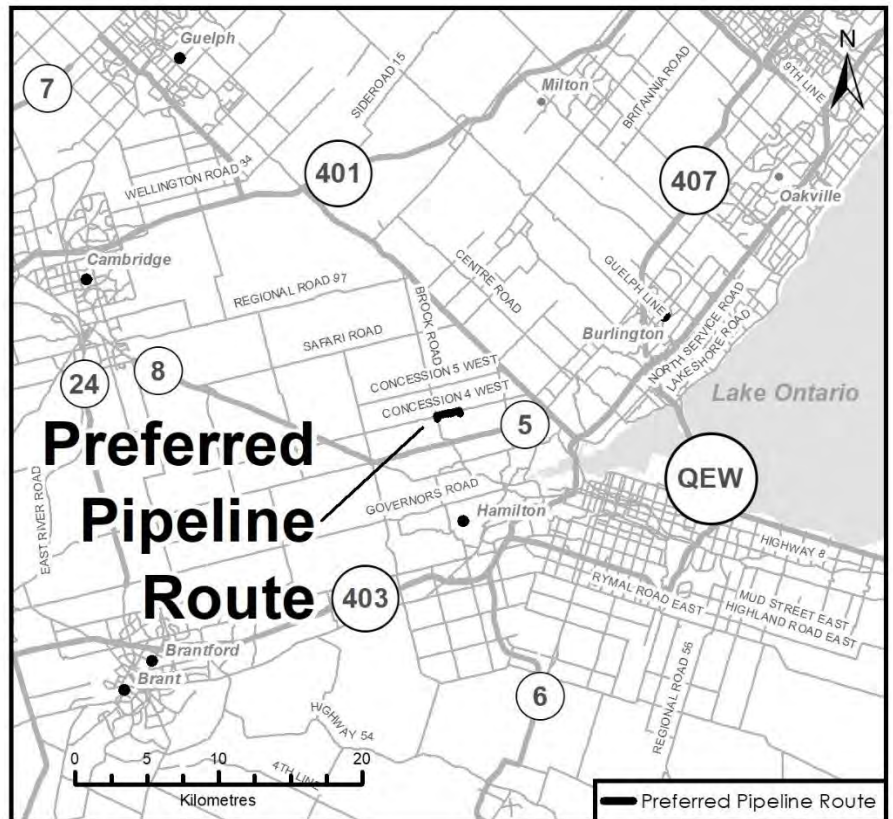
Imperial Oil – Pipeline Relocation Project

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated.

The intent is to relocate the pipeline along Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be approximately 2 km.

Environmental Study process

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)". It is anticipated that the Environmental Report for the study will be completed in late fall / early winter 2022, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. It is anticipated that the Environmental Report will be available for public viewing by spring 2022. If approved, construction is currently anticipated to begin in summer 2022.



Public consultation

Engagement with Indigenous communities, landowners, government agencies, the general public and other interested parties is an integral component of the environmental study process. As a result of the physical distancing requirements set out by the Province of Ontario due to COVID-19, no in-person Open House will take place.

Please send comments or questions regarding the Environmental Study or the proposed Imperial Oil Pipeline Relocation Project to:

Telephone: (519) 585-3849
Email: IOLRelocation@stantec.com

Georgopoulos, Rooly

From: Williams, Kelly /C <kelly.williams@esso.ca>
Sent: Thursday, October 21, 2021 12:34 PM
To: Liberman, Caryn A
Subject: FW: Lafarge Project-IOL-Notice of Study Commencement
Attachments: let_110904556_Update-Notice_Landowner-Resident_20210929_fnl.pdf; ad_110904556_IOL-Lafarge_Update-Notice_20210929_fnl.pdf; 110904556_NoC_Fig01_Site_Loc_20210929.pdf

From: Williams, Kelly /C
Sent: Thursday, October 21, 2021 12:34 PM
To: 'Lonny Bomberry' <lonnybomberry@sixnations.ca>
Cc: 'Tayler Hill' <tayler.hill@sixnations.ca>; 'Tanya Hill-Montour' <tanyahill-montour@sixnations.ca>; 'Dawn LaForme' <dlaforme@sixnations.ca>; Cao, Thomas <thomas.cao@esso.ca>
Subject: RE: Lafarge Project-IOL-Notice of Study Commencement

Good afternoon Lonny,

As a follow up to the July email below, I have attached the updated notices for the Lafarge Project. The scope of the project includes the relocation of a portion (2kms) of an IOL operated pipeline with a Lafarge right of way. The map is attached for your information.

The Stage 1 report is being drafted and will be distributed by Stantec Consulting Ltd. Stantec's licensed archaeologist assigned to the project is Colin Varley. He will be your project contact for archaeology and will be sending you the draft Stage 1 report for your information as soon as it is available. It is my understanding that the only Stage 2 work to be conducted is to determine the boundaries of a nearby Euro-Canadian cemetery. This work will likely take place sometime in November. Stantec can provide you with more details, if you have any questions. Here is Colin's contact information.

Colin Varley MA, RPA
Senior Archaeologist, Senior Associate

Direct: 613 738-6087
Mobile: 613 293-3035
Fax: 613 722-2799
colin.varley@stantec.com

My contract with Imperial ends this week and I will be moving on to another opportunity. If you have any questions about the project please reach out to Colin or Thomas Cao (cc'd) who is Imperial's Project Manager.

Kind regards,

kelly

Kelly Williams

Community Relations Officer Waterdown-Finch Project

Imperial

E kelly.williams@esso.ca

C 519.328.8681

imperialoil.ca | [Twitter](#) | [YouTube](#)

From: Williams, Kelly /C

Sent: Monday, July 12, 2021 12:41 PM

To: Lonny Bomberry <lonnybomberry@sixnations.ca>

Cc: Tayler Hill <tayler.hill@sixnations.ca>; 'Tanya Hill-Montour' <tanyahill-montour@sixnations.ca>; Dawn LaForme <dlaforme@sixnations.ca>; Cao, Thomas <thomas.cao@esso.ca>

Subject: Lafarge Project-IOL-Notice of Study Commencement

Good afternoon Lonny,

I hope you are well and looking forward to your retirement. Imperial has a new project on the horizon near Hamilton, ON for Spring of 2022. Lafarge Canada has requested to relocate a section of pipeline currently located within the right of way. The details are in the attached letter from Thomas Cao, the Project Manager, along with the Notice of Study Commencement.

Let me know if you have any questions.

Kind regards,

kelly

Kelly Williams

Community Relations Officer Waterdown-Finch Project

Imperial

E kelly.williams@esso.ca

C 519.328.8681

imperialoil.ca | [Twitter](#) | [YouTube](#)

Notice of Project Update

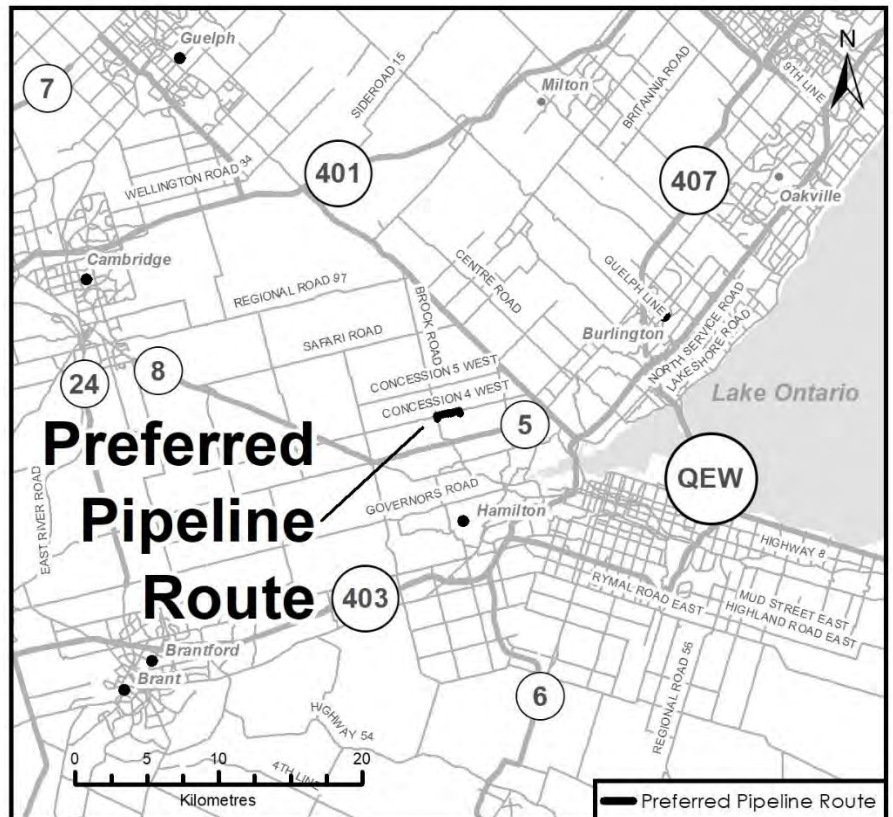
Imperial Oil – Pipeline Relocation Project

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated.

The intent is to relocate the pipeline along Concession 4 West on a new easement on lands owned by Lafarge Canada. The length of the pipeline will be approximately 2 km.

Environmental Study process

Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)". It is anticipated that the Environmental Report for the study will be completed in late fall / early winter 2022, after which Imperial Oil will file an application for the Project to the OEB. The OEB's review and approval is required before the proposed Project can proceed. It is anticipated that the Environmental Report will be available for public viewing by spring 2022. If approved, construction is currently anticipated to begin in summer 2022.



Public consultation

Engagement with Indigenous communities, landowners, government agencies, the general public and other interested parties is an integral component of the environmental study process. As a result of the physical distancing requirements set out by the Province of Ontario due to COVID-19, no in-person Open House will take place.

Please send comments or questions regarding the Environmental Study or the proposed Imperial Oil Pipeline Relocation Project to:

Telephone: (519) 585-3849
Email: IOLRelocation@stantec.com

From: [Hartwig, Emily](#)
To: Adam.LaForme@mncfn.ca; mark.laforme@mncfn.ca
Cc: [IOLRelocation; Cao, Thomas](#)
Subject: IOL Relocation Project - Environmental Report
Date: Wednesday, April 13, 2022 10:31:00 AM
Attachments: [RE Lafarge Project-IOL-Notice of Study Commencement.msg](#)
[image001.png](#)

Good morning Adam and Mark,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON. As a result, the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated. The intent is to relocate the pipeline along Concession 4 West primarily within the municipal road Right-of-Way, including two road crossings of Concession 4 West. The replacement pipeline will be approximately 2 km in length.

Imperial Oil retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study, in the form of an Environmental Report, of the construction and operation of the Project, in accordance with the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition* (2016)".

The Environmental Report is available for your review and comment in the link noted below.

 [rpt_110904556_IOL-Relocation_ER_20220323_fnl.pdf](#)

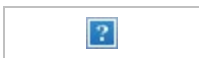
If you have any issues with the link or questions about the report, please do not hesitate to contact me and I will work to have your inquiry resolved.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: lonnybomberry@sixnations.ca
Cc: [IOLRelocation; Cao, Thomas](#)
Subject: IOL Relocation Project - Environmental Report
Date: Wednesday, April 13, 2022 10:31:00 AM
Attachments: [RE Lafarge Project-IOL-Notice of Study Commencement.msg](#)
[image001.png](#)

Good morning Lonny,

As you may recall, Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON. As a result, the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated. The intent is to relocate the pipeline along Concession 4 West primarily within the municipal road Right-of-Way, including two road crossings of Concession 4 West. The replacement pipeline will be approximately 2 km in length.

Imperial Oil retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study, in the form of an Environmental Report, of the construction and operation of the Project, in accordance with the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition* (2016)".

The Environmental Report is available for your review and comment in the link noted below.

 [rpt_110904556_IOL-Relocation_ER_20220323_fnl.pdf](#)

If you have any issues with the link or questions about the report, please do not hesitate to contact me and I will work to have your inquiry resolved.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: [REDACTED]@gmail.com
CC: [IOLRelocation; Cao, Thomas](#)
Subject: IOL Relocation Project - Environmental Report
Date: Wednesday, April 13, 2022 10:31:00 AM
Attachments: [RE Lafarge Project-IOL-Notice of Study Commencement.msg](#)
[image001.png](#)

Good morning Todd,

As you may recall, Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON. As a result, the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated. The intent is to relocate the pipeline along Concession 4 West primarily within the municipal road Right-of-Way, including two road crossings of Concession 4 West. The replacement pipeline will be approximately 2 km in length.

Imperial Oil retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study, in the form of an Environmental Report, of the construction and operation of the Project, in accordance with the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition* (2016)".

The Environmental Report is available for your review and comment in the link noted below.

 [rpt_110904556_IOL-Relocation_ER_20220323_fnl.pdf](#)

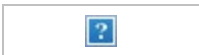
If you have any issues with the link or questions about the report, please do not hesitate to contact me and I will work to have your inquiry resolved.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

**APPENDIX 3:
RECORD OF CONSULTATION –
SUPPORTING DOCUMENTS**

**APPENDIX 3:
RECORD OF CONSULTATION –
SUPPORTING DOCUMENTS**

From: [Office of the Mayor](#)
To: [Naylor, Carol](#); [Office of the Mayor](#)
Cc: [IOLRelocation](#)
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Tuesday, June 29, 2021 1:53:25 PM
Attachments: [image008.png](#)
[image015.png](#)
[image002.png](#)
[image001.png](#)
[image007.png](#)
[image009.png](#)

Good afternoon Carol,

Thank you for reaching out the Office of Mayor Eisenberger!

I have forwarded your correspondence to our staff team on your behalf.

Should you have any further comments or concerns, please feel free to reach out!

Best regards,

Paulena Yousif

Constituency Assistant
Office of the Mayor
City of Hamilton
(905) 546-4200



From: Naylor, Carol <carol.naylor@stantec.com>
Sent: June 28, 2021 5:02 PM
To: Office of the Mayor <mayor@hamilton.ca>
Cc: IOLRelocation <IOLRelocation@stantec.com>
Subject: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Good afternoon Fred,

Please find attached a Notice of Study Commencement in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact:

Emily Hartwig B.Sc., EP
Environmental Consultant, Assessment and Permitting
Phone: (519) 780-8186
IOLRelocation@stantec.com

Sincerely,

Carol Naylor

Team Leader, Administration Services, Environmental Services

Direct: 519 820-7559

Fax: 519 836-2493

Carol.Naylor@stantec.com

Stantec

1-70 Southgate Drive

Guelph ON N1G 4P5



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

From: [Naylor, Carol](#)
To: [IOLRelocation](#)
Subject: FW: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Tuesday, June 29, 2021 2:28:20 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image006.png](#)
[Instructions for Providing Class EA Notices to the Ministry of the Environment, Conservation and Parks.pdf](#)

From: Del Villar Cuicas, Joan (MECP) <Joan.DelVillarCuicas@ontario.ca>
Sent: Tuesday, June 29, 2021 2:14 PM
To: Naylor, Carol <carol.naylor@stantec.com>
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Thank you for your email.

As of May 1, 2018, the MECP has a new mandatory notification procedure for providing Class EA notices to the MECP. Per our notification procedures: Notices of Commencement, Completion, Addendum and Statements of Completion when applicable are required to be sent to the appropriate MECP regional email address, and other notices such as notices of public information centres can either be sent to the regional email address or directly to the Regional Environmental Assessment Coordinator who is assigned to your project. Please review the attached document and re-submit your notice to the appropriate MECP Regional Email address. Instructions on how to determine the appropriate email address are included in the document.

Thank you,

Joan Del Villar Cuicas

Regional Environmental Planner

Project Review Unit | Environmental Assessment Branch

Ontario Ministry of the Environment, Conservation and Parks

Joan.delvillarcuicas@ontario.ca | Phone: 365-889-1180

From: Naylor, Carol <carol.naylor@stantec.com>
Sent: June 28, 2021 4:29 PM
To: Malcolmson, Heather (MECP) <Heather.Malcolmson@ontario.ca>
Cc: IOLRelocation <IOLRelocation@stantec.com>
Subject: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good afternoon Heather,

Please find attached a Notice of Study Commencement in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact:

Emily Hartwig B.Sc., EP
Environmental Consultant, Assessment and Permitting
Phone: (519) 780-8186
IOLRelocation@stantec.com

Sincerely,

Carol Naylor
Team Leader, Administration Services, Environmental Services
Direct: 519 820-7559
Fax: 519 836-2493
Carol.Naylor@stantec.com

Stantec
1-70 Southgate Drive
Guelph ON N1G 4P5



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

From: [Cassandra Connolly](#)
To: [Naylor, Carol](#)
Cc: [IOLRelocation](#)
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Wednesday, June 30, 2021 3:09:29 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)

Hi Carol,

Thank you for this information. Based on the Notice of Study Commencement, and our Approximate Regulation Limit (ARL) mapping, it appears that the proposed works will be occurring within the jurisdiction of the Hamilton Conservation Authority.

Conservation Halton will defer the review of this project to the HCA.

I trust this information is of assistance.

Cassandra Connolly

Regulations Officer

Conservation Halton

2596 Britannia Road West, Burlington, ON L7P 0G3

905-336-1158 ext. 2301 | cconnolly@hrca.on.ca

Conservation Halton's Administration Office is currently closed to the public due to COVID-19. During this time, we are accessing email and phone messages, responding to messages, and processing planning and permit applications remotely. For more information and updates on Conservation Halton's planning and permitting services, please visit <https://conservationhalton.ca/planning-permits>. We are providing the best service we can during these uncertain times and appreciate your patience and understanding.

This message, including any attachments, is intended only for the person(s) named above and may contain confidential and/or privileged information. Any use, distribution, copying or disclosure by anyone other than the intended recipient is strictly prohibited. If you are not the intended recipient, please notify us immediately by telephone or e-mail and permanently delete the original transmission from us, including any attachments, without making a copy.

From: Naylor, Carol <carol.naylor@stantec.com>

Sent: June 28, 2021 4:41 PM

To: Cassandra Connolly <cconnolly@hrca.on.ca>

Cc: IOLRelocation <IOLRelocation@stantec.com>

Subject: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Good afternoon Cassandra,

Please find attached a Notice of Study Commencement in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact:

Emily Hartwig B.Sc., EP

Environmental Consultant, Assessment and Permitting

Phone: (519) 780-8186

IOLRelocation@stantec.com

Sincerely,

Carol Naylor

Team Leader, Administration Services, Environmental Services

Direct: 519 820-7559

Fax: 519 836-2493

Carol.Naylor@stantec.com

Stantec

1-70 Southgate Drive

Guelph ON N1G 4P5



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

From: [Mike Stone](#)
To: [Naylor, Carol](#)
Cc: [IOLRelocation](#)
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Wednesday, July 7, 2021 11:38:41 AM
Attachments: [image011.png](#)
[image018.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

Good morning,

Thank you for providing the Notice of Commencement for the note project. HCA would appreciate receiving updates and new information as the study progresses. In general, our interest would relate to natural heritage features such as wetlands and watercourses and any potential impacts to such features as a result of the project. HCA regulates watercourses and wetlands, and a future permit may be required for project construction depending on the determined pipeline alignment.

Kind regards,
Mike

**Mike Stone MA, MCIP, RPP | Manager, Watershed Planning Services | Hamilton
Conservation Authority**

838 Mineral Springs Road, P.O. Box 81067, Ancaster (Hamilton), Ontario L9G 4X1

T: 905.525.2181 ext. 133 | E: mike.stone@conservationhamilton.ca | W:

www.conservationhamilton.ca

The contents of this e-mail and any attachments are intended for the named recipient(s). This e-mail may contain information that is privileged and confidential. If you have received this message in error or are not the named recipient(s), please notify the sender and permanently delete this message without reviewing, copying, forwarding, disclosing or otherwise using it or any part of it in any form whatsoever.

From: Naylor, Carol <carol.naylor@stantec.com>
Sent: Monday, June 28, 2021 4:38 PM
To: Mike Stone <Mike.Stone@conservationhamilton.ca>
Cc: IOLRelocation <IOLRelocation@stantec.com>
Subject: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Good afternoon Mike,

Please find attached a Notice of Study Commencement in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact:

Emily Hartwig B.Sc., EP
Environmental Consultant, Assessment and Permitting
Phone: (519) 780-8186

IOLRelocation@stantec.com

Sincerely,

Carol Naylor

Team Leader, Administration Services, Environmental Services

Direct: 519 820-7559

Fax: 519 836-2493

Carol.Naylor@stantec.com

Stantec

1-70 Southgate Drive

Guelph ON N1G 4P5



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

From: [MNRF Ayl Planners \(MNRF\)](#)
To: [IOL Relocation](#)
Cc: [Naylor, Carol](#)
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Thursday, July 8, 2021 10:04:25 AM
Attachments: [image002.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)
[image001.emz](#)
[image003.png](#)
[image004.png](#)
[let_110904556_NoC-OPCC_20210628_fin_renwick.pdf](#)
[NHGuide_MNRF_2019-04-01.pdf](#)

Ministry of Northern Development,
Mines, Natural Resources
and Forestry

Ministère du Développement du Nord,
des Mines, des Richesses naturelles
et des Forêts

July 8, 2021

Subject: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

The Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF) received the notice for the Imperial Oil Pipeline Relocation Project. Thank you for circulating this information to our office, however, please note that we have not completed a screening of natural heritage or other resource values for the project at this time. Please also note that it is your responsibility to be aware of and comply with all relevant federal or provincial legislation, municipal by-laws or other agency approvals.

This response provides information to guide you in identifying and assessing natural features and resources as required by applicable policies and legislation, and engaging with the Ministry for advice as needed.

Natural Heritage & Endangered Species Act

-
In order to provide the most efficient service possible, the attached Natural Heritage Information Request Guide has been developed to assist you with accessing natural heritage data and values from convenient online sources.

It remains the proponent's responsibility to complete a preliminary screening for each project, to obtain available information from multiple sources, to conduct any necessary field studies, and to consider any potential environmental impacts that may result from an activity. We wish to emphasize the need for the proponents of development activities to complete screenings prior to contacting the Ministry or other agencies for more detailed technical information and advice.

The Ministry continues to work on updating data housed by Land Information Ontario and the Natural Heritage Information Centre, and ensuring this information is accessible through online resources. Species at risk data is regularly being updated. To ensure access to reliable and up to date information, please contact the Ministry of the Environment, Conservation and Parks at SAROntario@ontario.ca.

Petroleum Wells & Oil, Gas and Salt Resource Act

- There may be petroleum wells within the proposed project area. Please consult the Ontario Oil, Gas and Salt Resources Library website (www.ogsrlibrary.com) for the best known data on any wells recorded by NDMNRF. Please reference the 'Definitions and Terminology Guide' listed in the publications on the Library website in order to better understand the well information available. Any oil and gas wells in your project area are regulated by the *Oil, Gas and Salt Resource Act*, and the supporting regulations and operating standards. If any unanticipated wells are encountered during development of the project, or if the proponent has questions regarding petroleum operations, the proponent should contact the Petroleum Operations Section at POSRecords@ontario.ca or 519-873-4634.

Public Lands Act & Lakes and Rivers Improvement Act

Some projects may be subject to the provisions of the *Public Lands Act* or the *Lakes and Rivers Improvement Act*. Please review the information on NDMNRF's web pages provided below regarding when an approval is required or not. Please note that many of the authorizations issued under the *Lakes and Rivers Improvement Act* are administered by the local Conservation Authority.

- For more information about the *Public Lands Act*: <https://www.ontario.ca/page/crown-land-work-permits>
- For more information about the *Lakes and Rivers Improvement Act*: <https://www.ontario.ca/document/lakes-and-rivers-improvement-act-administrative-guide>

After reviewing the information provided, if you have not identified any of NDMNRF's interests stated above, there is no need to circulate any subsequent notices to our office.

If you have any questions or concerns, please feel free to contact me.

Sincerely,
Karina

Karina Černiavskaja | District Planner

Ministry of Northern Development, Mines, Natural Resources and Forestry

Email: MNRF.Ayl.Planners@ontario.ca



As part of providing [accessible customer service](#), please let me know if you have any accommodation needs or require communication supports or alternate formats.

From: Naylor, Carol <carol.naylor@stantec.com>

Sent: June 28, 2021 4:57 PM

To: Renwick, Sally (MECP) <Sally.Renwick@ontario.ca>

Cc: IOLRelocation <IOLRelocation@stantec.com>

Subject: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good afternoon Sally,

Please find attached a Notice of Study Commencement in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact:

Emily Hartwig B.Sc., EP
Environmental Consultant, Assessment and Permitting
Phone: (519) 780-8186
IOLRelocation@stantec.com

Sincerely,

Carol Naylor
Team Leader, Administration Services, Environmental Services
Direct: 519 820-7559
Fax: 519 836-2493
Carol.Naylor@stantec.com

Stantec
1-70 Southgate Drive
Guelph ON N1G 4P5



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

From: [Naylor, Carol](#)
To: [IOLRelocation](#)
Cc: [Hartwig, Emily](#)
Subject: FW: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Monday, July 19, 2021 10:00:57 AM
Attachments: [image007.png](#)
[image008.png](#)
[image010.png](#)
[image012.png](#)
[image015.png](#)
[Letter - IAAC to Hartwig - Stantec - Imperial Oil Pipeline Relocation Project 2020-07-02.pdf](#)

From: Ontario Region / Region d'Ontario (IAAC/AEIC) <ontarioregion-regiondontario@iaac-aeic.gc.ca>

Sent: Thursday, July 15, 2021 2:56 PM

To: Naylor, Carol <carol.naylor@stantec.com>

Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Hello Carol,

Please see attached letter in response to your June 28th correspondence regarding the Imperial Oil Pipeline Relocation Project.

Kind regards,

Kim Valentine

(she/her|elle)

Administrative Clerk, Ontario Region

Impact Assessment Agency of Canada / Government of Canada

Kimberly.Valentine@iaac-aeic.gc.ca / Tel: 647-617-5960

Commis administrative, Bureau régional de l'Ontario

Agence d'évaluation d'impact du Canada / Gouvernement du Canada

Kimberly.Valentine@iaac-aeic.gc.ca / Tél. : 647-617-5960

From: Naylor, Carol <carol.naylor@stantec.com>

Sent: June 28, 2021 4:25 PM

To: Puvananathan, Anjala (ECCC) <Anjala.Puvananathan@ec.gc.ca>

Cc: IOLRelocation <IOLRelocation@stantec.com>

Subject: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Good afternoon Anjala,

Please find attached a Notice of Study Commencement in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact:

Emily Hartwig B.Sc., EP

Environmental Consultant, Assessment and Permitting

Phone: (519) 780-8186

IOLRelocation@stantec.com

Sincerely,

Carol Naylor

Team Leader, Administration Services, Environmental Services

Direct: 519 820-7559

Fax: 519 836-2493

Carol.Naylor@stantec.com

Stantec

1-70 Southgate Drive

Guelph ON N1G 4P5



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

From: [Naylor, Carol](#)
To: [IOLRelocation; Hartwig, Emily](#)
Subject: FW: City Council - July 9, 2021
Date: Monday, July 19, 2021 12:55:23 PM

FYI

From: Vernem, Christine <Christine.Vernem@hamilton.ca>
Sent: Monday, July 19, 2021 11:49 AM
To: Naylor, Carol <carol.naylor@stantec.com>
Cc: McKinnon, Dan <Dan.McKinnon@hamilton.ca>
Subject: City Council - July 9, 2021

Emily Hartwig,

Re: Correspondence from Stantec Consulting Ltd. respecting Imperial Oil Pipeline Relocation Project - Notice of Study Commencement.

At the meeting of July 9, 2021, Hamilton City Council received your correspondence respecting the above and referred it to the General Manager of Public Works for appropriate action.

Regards,

*Christine Vernem,
Legislative Secretary*

on behalf of
Janet Pilon,
Deputy Clerk

21-012
(4.6)

From: [Harvey, Joseph \(MHSTCI\)](#)
To: [IOLRelocation](#)
Cc: [Barboza, Karla \(MHSTCI\)](#); [Hatcher, Laura \(MHSTCI\)](#); [Naylor, Carol](#)
Subject: File 0014554: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Wednesday, July 28, 2021 5:11:11 PM
Attachments: [2021-07-28_ImpOilRelocation-MSHTCI-Ltr.pdf](#)

Emily Hartwig,

Please find attached MHSTCI's comments on the above referenced undertaking. Unfortunately, we are unable to provide additional information regarding other proposed developments within the Study Area. The Ministry of Environment, Conservation and Parks and City of Hamilton should be able assist you further. Please do not hesitate to contact us with any other questions or concerns.

Kind Regards,

Joseph Harvey

On behalf of

Laura Hatcher
Heritage Planner
Heritage Planning Unit
laura.e.hatcher@ontario.ca

From: [Kourosh Manouchehri](#)
To: [Naylor, Carol](#)
Cc: [IOLRelocation](#)
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Thursday, September 30, 2021 3:02:06 PM
Attachments: [image008.png](#)
[image009.png](#)
[image010.png](#)
[image011.png](#)
[image012.png](#)
[image013.png](#)
[image014.png](#)
[image015.png](#)
[image016.png](#)
[image017.png](#)

Hi Naylor,

Thank you for the provided information about this project. I don't know if the LTC application is submitted to OEB by now or not. An application needs to be filled and submitted for the review of this project by TSSA as part of Ontario Pipeline Coordinating Committee. Please fill or ask the operator to fill [Application for Review of Pipeline Project](#) and send it to the email address provided on the form.

If you have any question, please contact me.

Regards,



Kourosh Manouchehri, P.Eng., PMP | Engineer, Fuels

Engineering

345 Carlingview Drive

Toronto, Ontario M9W 6N9

Tel: +1 416-734-3539 || Fax: +1 416-231-7525 | E-Mail: kmanouchehri@tssa.org

www.tssa.org



From: Naylor, Carol <carol.naylor@stantec.com>

Sent: June 28, 2021 4:56 PM

To: Kourosh Manouchehri <KManouchehri@tssa.org>

Cc: IOLRelocation <IOLRelocation@stantec.com>

Subject: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

[CAUTION]: This email originated outside the organisation.

Please do not click links or open attachments unless you recognise the source of this email and know the content is safe.

Good afternoon Kourosh,

Please find attached a Notice of Study Commencement in regards to the Imperial Oil Pipeline Relocation

Project. If you have any questions or comments, please contact:

Emily Hartwig B.Sc., EP
Environmental Consultant, Assessment and Permitting
Phone: (519) 780-8186
IOLRelocation@stantec.com

Sincerely,

Carol Naylor
Team Leader, Administration Services, Environmental Services
Direct: 519 820-7559
Fax: 519 836-2493
Carol.Naylor@stantec.com

Stantec
1-70 Southgate Drive
Guelph ON N1G 4P5



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

This electronic message and any attached documents are intended only for the named recipients. This communication from the Technical Standards and Safety Authority may contain information that is privileged, confidential or otherwise protected from disclosure and it must not be disclosed, copied, forwarded or distributed without authorization. If you have received this message in error, please notify the sender immediately and delete the original message.

From: [Hartwig, Emily](#)
To: [IOLRelocation](#)
Bcc: [zora.crnjacki@oeb.ca](#); [Helma.Geerts@ontario.ca](#); [dan.minkin@ontario.ca](#); [tony.difabio@ontario.ca](#); [kmanouchehri@tssa.org](#); [sally.renwick@ontario.ca](#); [maya.harris@ontario.ca](#); [jason.mccullough@ontario.ca](#); [Barbara.Slatery@ontario.ca](#); [cory.ostrowka@infrastructureontario.ca](#)
Subject: Imperial Oil Pipeline Relocation Project - Notice of Project Update
Date: Wednesday, October 20, 2021 3:44:00 PM
Attachments: [Notice_20211008.pdf](#)
[110904556_NoC_Fig01_Site_Loc_20210929.pdf](#)

Please find attached a Notice of Project Update and Map in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact the undersigned.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: [IOLRelocation](#)
Bcc: [donna.skelly@pc.ola.org](#); [david.sweet@parl.gc.ca](#); [sandro.leonardelli@canada.ca](#); [anjala.puvananathan@canada.ca](#); [Karla.barboza@ontario.ca](#); [trevor.fleck@ontario.ca](#); [heather.malcolmson@ontario.ca](#); [stephen.burt@ontario.ca](#); [michael.falconi@ontario.ca](#); [omafra.eanotices@ontario.ca](#); [sourceprotectionscreening@ontario.ca](#); [david.marriott@ontario.ca](#); [mike.stone@conservationhamilton.ca](#); [cconnolly@hrca.on.ca](#); [dan.dobrin@ontario.ca](#)
Subject: Imperial Oil Pipeline Relocation Project - Notice of Project Update
Date: Wednesday, October 20, 2021 3:47:00 PM
Attachments: [Notice_20211008.pdf](#)
[110904556_NoC_Fig01_Site_Loc_20210929.pdf](#)

Please find attached a Notice of Project Update and Map in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact the undersigned.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: [IOLRelocation](#)
Bcc: [mayor@hamilton.ca](#); [arlene.vanderbeek@hamilton.ca](#); [clerk@hamilton.ca](#); [steve.robichaud@hamilton.ca](#)
Subject: Imperial Oil Pipeline Relocation Project - Notice of Project Update
Date: Wednesday, October 20, 2021 3:50:00 PM
Attachments: [Notice_20211008.pdf](#)
[110904556_NoC_Fig01_Site_Loc_20210929.pdf](#)

Please find attached a Notice of Project Update and Map in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact the undersigned.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: [IOLRelocation](#)
Bcc: roman.dorfman@hydroone.com
Subject: Imperial Oil Pipeline Relocation Project - Notice of Project Update
Date: Wednesday, October 20, 2021 3:51:00 PM
Attachments: [Notice_20211008.pdf](#)
[110904556 NoC Fig01 Site Loc 20210929.pdf](#)

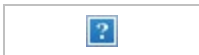
Please find attached a Notice of Project Update and Map in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact the undersigned.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Cassandra Connolly](#)
To: [Hartwig, Emily](#); [IOLRelocation](#)
Subject: RE: Imperial Oil Pipeline Relocation Project - Notice of Project Update
Date: Thursday, October 21, 2021 10:53:01 AM

Hi Emily,

While there may be a small portion of the project which is within our watershed, the works would be located outside of lands which are considered to be regulated by Conservation Halton. Therefore, we have no comments on the project and would defer review to the Hamilton Conservation Authority.

Have a great day,

Cassandra Connolly

Regulations Officer

Conservation Halton

2596 Britannia Road West, Burlington, ON L7P 0G3
905-336-1158 ext. 2301 | cconnolly@hrca.on.ca

Conservation Halton's Administration Office is currently closed to the public due to COVID-19. During this time, we are accessing email and phone messages, responding to messages, and processing planning and permit applications remotely. For more information and updates on Conservation Halton's planning and permitting services, please visit <https://conservationhalton.ca/planning-permits>. We are providing the best service we can during these uncertain times and appreciate your patience and understanding.

This message, including any attachments, is intended only for the person(s) named above and may contain confidential and/or privileged information. Any use, distribution, copying or disclosure by anyone other than the intended recipient is strictly prohibited. If you are not the intended recipient, please notify us immediately by telephone or e-mail and permanently delete the original transmission from us, including any attachments, without making a copy.

X: 581497.39251
Y: 4796000.79818

Near 701 Concession 4 W

From: Hartwig, Emily <Emily.Hartwig@stantec.com>
Sent: October 20, 2021 3:48 PM
To: IOLRelocation <IOLRelocation@stantec.com>
Subject: Imperial Oil Pipeline Relocation Project - Notice of Project Update

Please find attached a Notice of Project Update and Map in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact the undersigned.

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

From: [Kourosh Manouchehri](#)
To: [Hartwig, Emily](#); [IOLRelocation](#)
Subject: RE: Imperial Oil Pipeline Relocation Project - Notice of Project Update
Date: Thursday, October 21, 2021 1:57:33 PM
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)

Hi Emily,

Thank you for the provided information about this project. An application needs to be filled and submitted for the review of this project by TSSA as part of Ontario Pipeline Coordinating Committee. Please fill [Application for Review of Pipeline Project](#) and send it to the email address provided on the form.

If you have any question, please contact me.

Regards,



Kourosh Manouchehri, P.Eng., PMP | Engineer, Fuels

Engineering

345 Carlingview Drive

Toronto, Ontario M9W 6N9

Tel: +1 416-734-3539 | Fax: +1 416-231-7525 | E-Mail: kmanouchehri@tssa.org

www.tssa.org



From: Hartwig, Emily <Emily.Hartwig@stantec.com>

Sent: October 20, 2021 3:45 PM

To: IOLRelocation <IOLRelocation@stantec.com>

Subject: Imperial Oil Pipeline Relocation Project - Notice of Project Update

[CAUTION]: This email originated outside the organisation.

Please do not click links or open attachments unless you recognise the source of this email and know the content is safe.

Please find attached a Notice of Project Update and Map in regards to the Imperial Oil Pipeline Relocation Project. If you have any questions or comments, please contact the undersigned.

Regards,

Emily Hartwig B.Sc., EP.

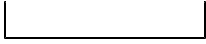
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849

Mobile: (226) 979-4457

Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

This electronic message and any attached documents are intended only for the named recipients. This communication from the Technical Standards and Safety Authority may contain information that is privileged, confidential or otherwise protected from disclosure and it must not be disclosed, copied, forwarded or distributed without authorization. If you have received this message in error, please notify the sender immediately and delete the original message.

From: [Earles, Sean](#)
To: [Rick Woodworth](#)
Cc: [Hartwig, Emily](#); [Georgopoulos, Rooly](#)
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Date: Thursday, November 25, 2021 2:16:35 PM
Attachments: [DLA 2021-0016 Stantec \(002\).pdf](#)
[image001.png](#)
[image011.png](#)
[image012.png](#)
[image013.png](#)
[image014.png](#)
[image016.png](#)

Hi Rick!

We finally heard back from our legal team and the only change they requested was changing “Stantec” to “Stantec Consulting Ltd” – so we made that change. Please let us know if this is an issue.

Cheers,
Sean
He/Him/His

From: Earles, Sean
Sent: Friday, November 19, 2021 12:31 PM
To: Rick Woodworth <Richard.Woodworth@conservationhamilton.ca>
Cc: Hartwig, Emily <Emily.Hartwig@stantec.com>; Georgopoulos, Rooly <Rooly.Georgopoulos@stantec.com>
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Thanks Rick! I've send off the DLA to our legal team and await their response (fyi – we need there approval before we can sign).

Cheers,
Sean
He/Him/His

From: Rick Woodworth <Richard.Woodworth@conservationhamilton.ca>
Sent: Friday, November 19, 2021 9:49 AM
To: Earles, Sean <Sean.Earles@stantec.com>
Subject: RE: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement

Hi Sean,

Please see attached dataset and DLA. Kindly sign and return the latter at your earliest convenience. Thank you.

Regards,

Rick

Richard Woodworth

G.I.S. Specialist
Hamilton Conservation Authority
838 Mineral Springs Road, P.O. Box 81067
Ancaster, ON L9G 4X1
Office Phone: 905-525-2181 Ext. 161
Remote Phone: 289-527-6724
Email: Richard.Woodworth@conservationhamilton.ca



A Healthy Watershed for Everyone

The contents of this e-mail and any attachments are intended for the named recipient(s). This e-mail may contain information that is privileged and confidential. If you have received this message in error or are not the named recipient(s), please notify the sender and permanently delete this message without reviewing, copying, forwarding, disclosing or otherwise using it or any part of it in any form whatsoever.

From: Earles, Sean <Sean.Earles@stantec.com>
Sent: November 12, 2021 9:53 AM
To: Mike Stone <Mike.Stone@conservationhamilton.ca>; Rick Woodworth <Richard.Woodworth@conservationhamilton.ca>
Cc: Hartwig, Emily <Emily.Hartwig@stantec.com>; Georgopoulos, Rooly <Rooly.Georgopoulos@stantec.com>
Subject: FW: Imperial Oil Pipeline Relocation Project – Notice of Study Commencement
Importance: High

Good morning!

We are working on the above mentioned project and would like to request the regulation data for use in our environmental report. We are attaching our study area, is it possible to obtain the regulated data?

Cheers,
Sean
He/Him/His

From: [Hartwig, Emily](#)
To: [Slattery, Barbara \(MECP\)](#)
Cc: [IOLRelocation; zora.crnojacki@oeb.ca](#)
Subject: Imperial Oil Limited - Pipeline Relocation Project OPCC Review
Date: Wednesday, January 12, 2022 12:32:39 PM
Attachments: [image001.png](#)

Good afternoon,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and therefore the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated.

The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 7th Edition 2016 (Guidelines) recommend that a project proponent provide a copy of the Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

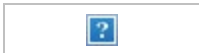
Pursuant to the Guidelines, please provide any comments on the ER to Ms. Zora Crnojacki (Zora.Crnojacki@oeb.ca) by no later than **February 23, 2022**. The ER is available for review and download in the link below.

 [Imperial Oil – Pipeline Relocation Project Environmental Report](#)

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: jonathon.wilkinson@ontario.ca
Cc: [IOLRelocation](#); zora.crnojacki@oeb.ca
Subject: Imperial Oil Limited - Pipeline Relocation Project OPCC Review
Date: Wednesday, January 12, 2022 12:32:46 PM
Attachments: [image001.png](#)

Good afternoon,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and therefore the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated.

The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 7th Edition 2016 (Guidelines) recommend that a project proponent provide a copy of the Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

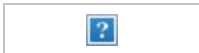
Pursuant to the Guidelines, please provide any comments on the ER to Ms. Zora Crnojacki (Zora.Crnojacki@oeb.ca) by no later than **February 23, 2022**. The ER is available for review and download in the link below.

 [Imperial Oil – Pipeline Relocation Project Environmental Report](#)

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: maya.harris@ontario.ca
Cc: [IOLRelocation](#); zora.crnojacki@oeb.ca
Subject: Imperial Oil Limited - Pipeline Relocation Project OPCC Review
Date: Wednesday, January 12, 2022 12:32:50 PM
Attachments: [image001.png](#)

Good afternoon,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and therefore the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated.

The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 7th Edition 2016 (Guidelines) recommend that a project proponent provide a copy of the Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

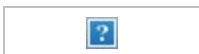
Pursuant to the Guidelines, please provide any comments on the ER to Ms. Zora Crnojacki (Zora.Crnojacki@oeb.ca) by no later than **February 23, 2022**. The ER is available for review and download in the link below.

 [Imperial Oil – Pipeline Relocation Project Environmental Report](#)

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: [Renwick, Sally \(MNRF\)](#)
Cc: [IOLRelocation; zora.crnojacki@oeb.ca](#)
Subject: Imperial Oil Limited - Pipeline Relocation Project OPCC Review
Date: Wednesday, January 12, 2022 12:32:53 PM
Attachments: [image001.png](#)

Good afternoon,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and therefore the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated.

The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 7th Edition 2016 (Guidelines) recommend that a project proponent provide a copy of the Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

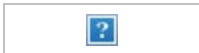
Pursuant to the Guidelines, please provide any comments on the ER to Ms. Zora Crnojacki (Zora.Crnojacki@oeb.ca) by no later than **February 23, 2022**. The ER is available for review and download in the link below.

 [Imperial Oil – Pipeline Relocation Project Environmental Report](#)

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: kmanouchehri@tssa.org
Cc: [IOLRelocation; zora.crnojacki@oeb.ca](mailto:zora.crnojacki@oeb.ca)
Subject: Imperial Oil Limited - Pipeline Relocation Project OPCC Review
Date: Wednesday, January 12, 2022 12:32:57 PM
Attachments: [image001.png](#)

Good afternoon,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and therefore the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated.

The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 7th Edition 2016 (Guidelines) recommend that a project proponent provide a copy of the Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

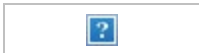
Pursuant to the Guidelines, please provide any comments on the ER to Ms. Zora Crnojacki (Zora.Crnojacki@oeb.ca) by no later than **February 23, 2022**. The ER is available for review and download in the link below.

 [Imperial Oil – Pipeline Relocation Project Environmental Report](#)

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: tony.difabio@ontario.ca
Cc: [IOLRelocation; zora.crnojacki@oeb.ca](mailto:IOLRelocation;zora.crnojacki@oeb.ca)
Subject: Imperial Oil Limited - Pipeline Relocation Project OPCC Review
Date: Wednesday, January 12, 2022 12:33:01 PM
Attachments: [image001.png](#)

Good afternoon,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and therefore the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated.

The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 7th Edition 2016 (Guidelines) recommend that a project proponent provide a copy of the Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

Pursuant to the Guidelines, please provide any comments on the ER to Ms. Zora Crnojacki (Zora.Crnojacki@oeb.ca) by no later than **February 23, 2022**. The ER is available for review and download in the link below.

 [Imperial Oil – Pipeline Relocation Project Environmental Report](#)

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: james.hamilton@ontario.ca
Cc: [IOLRelocation; zora.crnojacki@oeb.ca](mailto:IOLRelocation;zora.crnojacki@oeb.ca)
Subject: Imperial Oil Limited - Pipeline Relocation Project OPCC Review
Date: Wednesday, January 12, 2022 12:33:08 PM
Attachments: [image001.png](#)

Good afternoon,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and therefore the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated.

The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 7th Edition 2016 (Guidelines) recommend that a project proponent provide a copy of the Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

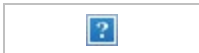
Pursuant to the Guidelines, please provide any comments on the ER to Ms. Zora Crnojacki (Zora.Crnojacki@oeb.ca) by no later than **February 23, 2022**. The ER is available for review and download in the link below.

 [Imperial Oil – Pipeline Relocation Project Environmental Report](#)

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: Helma.Geerts@ontario.ca
Cc: [IOLRelocation](#); zora.crnojacki@oeb.ca
Subject: Imperial Oil Limited - Pipeline Relocation Project OPCC Review
Date: Wednesday, January 12, 2022 12:33:28 PM
Attachments: [image001.png](#)

Good afternoon,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and therefore the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated.

The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 7th Edition 2016 (Guidelines) recommend that a project proponent provide a copy of the Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

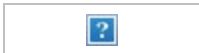
Pursuant to the Guidelines, please provide any comments on the ER to Ms. Zora Crnojacki (Zora.Crnojacki@oeb.ca) by no later than **February 23, 2022**. The ER is available for review and download in the link below.

 [Imperial Oil – Pipeline Relocation Project Environmental Report](#)

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: cory.ostrowka@infrastructureontario.ca
Cc: [IOLRelocation](#); zora.crnojacki@oeb.ca
Subject: Imperial Oil Limited - Pipeline Relocation Project OPCC Review
Date: Wednesday, January 12, 2022 12:32:37 PM
Attachments: [image001.png](#)

Good afternoon,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and therefore the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated.

The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 7th Edition 2016 (Guidelines) recommend that a project proponent provide a copy of the Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

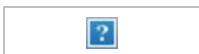
Pursuant to the Guidelines, please provide any comments on the ER to Ms. Zora Crnojacki (Zora.Crnojacki@oeb.ca) by no later than **February 23, 2022**. The ER is available for review and download in the link below.

 [Imperial Oil – Pipeline Relocation Project Environmental Report](#)

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Kourosh Manouchehri](#)
To: [Hartwig, Emily](#)
Cc: [IOLRelocation](#); zora.crnojacki@oeb.ca
Subject: RE: Imperial Oil Limited - Pipeline Relocation Project OPCC Review
Date: Wednesday, January 12, 2022 1:12:28 PM
Attachments: [image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)

Hi Emily,

Thank you for the provided information about this project. An application needs to be filled and submitted for the review of this project by TSSA as part of Ontario Pipeline Coordinating Committee. Please fill [Application for Review of Pipeline Project](#) and send it to the email address provided on the form.

If you have any question, please contact me.

Regards,



Kourosh Manouchehri, P.Eng., PMP | Engineer, Fuels

Engineering

345 Carlingview Drive

Toronto, Ontario M9W 6N9

Tel: +1 416-734-3539 | Fax: +1 416-231-7525 | E-Mail: kmanouchehri@tssa.org

www.tssa.org



From: Hartwig, Emily <Emily.Hartwig@stantec.com>
Sent: January 12, 2022 12:33 PM
To: Kourosh Manouchehri <KManouchehri@tssa.org>
Cc: IOLRelocation <IOLRelocation@stantec.com>; zora.crnojacki@oeb.ca
Subject: Imperial Oil Limited - Pipeline Relocation Project OPCC Review

[CAUTION]: This email originated outside the organisation.
Please do not click links or open attachments unless you recognise the source of this email and know the content is safe.

Good afternoon,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and therefore the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated.

The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 7th Edition 2016 (Guidelines) recommend that a project proponent provide a copy of the Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

Pursuant to the Guidelines, please provide any comments on the ER to Ms. Zora Crnojacki (Zora.Crnojacki@oeb.ca) by no later than **February 23, 2022**. The ER is available for review and download in the link below.



[Imperial Oil – Pipeline Relocation Project Environmental Report](#)

Emily Hartwig B.Sc., EP.

Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849

Mobile: (226) 979-4457

Emily.Hartwig@stantec.com

Stantec

100-300 Hagey Blvd.

Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

This electronic message and any attached documents are intended only for the named recipients. This communication from the Technical Standards and Safety Authority may contain information that is privileged, confidential or otherwise protected from disclosure and it must not be disclosed, copied, forwarded or distributed without authorization. If you have received this message in error, please notify the sender immediately and delete the original message.

From: [Renwick, Sally \(MECP\)](#)
To: [Hartwig, Emily](#)
Cc: [IOLRelocation; Johnston, Keith \(NDMNRF\)](#)
Subject: FW: Imperial Oil Limited - Pipeline Relocation Project OPCC Review
Date: Wednesday, January 12, 2022 1:17:12 PM
Attachments: [image001.png](#)

Hi Emily,

I'm forwarding this notice to Keith Johnston, the Natural Resources and Forestry contact for the OPPC. He can advise on who to share the file with, if needed.

Thanks,
Sally

From: Hartwig, Emily <Emily.Hartwig@stantec.com>
Sent: January 12, 2022 12:33 PM
To: Renwick, Sally (MECP) <Sally.Renwick@ontario.ca>
Cc: IOLRelocation <IOLRelocation@stantec.com>; zora.crnojacki@oeb.ca
Subject: Imperial Oil Limited - Pipeline Relocation Project OPCC Review

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good afternoon,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and therefore the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated.

The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 7th Edition 2016 (Guidelines) recommend that a project proponent provide a copy of the Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

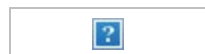
Pursuant to the Guidelines, please provide any comments on the ER to Ms. Zora Crnojacki (Zora.Crnojacki@oeb.ca) by no later than **February 23, 2022**. The ER is available for review and download in the link below.

 [Imperial Oil – Pipeline Relocation Project Environmental Report](#)

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4





The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: David.Marriott@ontario.ca
Cc: [IOLRelocation; Zora Crnojacki](#)
Subject: Imperial Oil Limited - Pipeline Relocation Project OPCC Review
Date: Wednesday, January 12, 2022 1:53:18 PM
Attachments: [image001.png](#)

Good afternoon,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and therefore the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated.

The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 7th Edition 2016 (Guidelines) recommend that a project proponent provide a copy of the Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

Pursuant to the Guidelines, please provide any comments on the ER to Ms. Zora Crnojacki (Zora.Crnojacki@oeb.ca) by no later than **February 23, 2022**. The ER is available for review and download in the link below.

 [Imperial Oil – Pipeline Relocation Project Environmental Report](#)

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hatcher, Laura \(MHSTCI\)](#)
To: Zora.Crnojacki@oeb.ca
Cc: [Hartwig, Emily; IOLRelocation](#)
Subject: RE: Imperial Oil Limited - Pipeline Relocation Project OPCC Review
Date: Wednesday, February 23, 2022 9:33:07 AM
Attachments: [image001.png](#)
[2021-07-28_ImpOilRelocation-MSHTCI-Ltr.pdf](#)

Good day,

MHSTCI has reviewed the Environmental Report for this project as part of the Ontario Pipeline Coordinating Committee. Our interest in this project relates to the conservation of cultural heritage resources (archaeological resources, built heritage resources and cultural heritage landscapes). We provided preliminary advice and comments on July 28, 2021 (attached here).

Overall, the Environmental Report needs to provide more information to support its findings about impacts to cultural heritage resources.

Archaeological Resources

Our comments from July 2021 advise that, at a minimum, a Stage 1 archaeological assessment should be prepared during the project planning phase, and the findings incorporated into the Environmental Report. Section 3.4.8 *Archaeological Resources* of the Environmental Report states that a Stage 1 archaeological assessment was prepared for the project. Our records show that the report has not yet been submitted to the ministry by the licensed archaeologist for review. It is only once the report has been screened or reviewed by MHSTCI and entered onto the *Ontario Public Register of Archaeological Reports* that it can be considered finalized. At this point in time, this component of the project reporting is incomplete.

We also note that the draft archaeological assessment makes more detailed recommendations than are presented in the body of the Environmental Report (e.g. recommendation regarding Stage 3 Cemetery Investigations due to the project's close proximity to the Glenwood Cemetery). It is our standard advice that the recommendations within the Executive Summary of the archaeological assessment, containing project specific details and recommendations, are incorporated into the body of the Environmental Report.

Built Heritage Resources and Cultural Heritage Landscapes

Section 3.4.9 *Cultural Heritage Resources* identifies cultural heritage resources within the study area, but states that the Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment will be completed prior to construction. MHSTCI recommends that the Cultural Heritage Report is prepared now, so that it can inform the Environmental Report and make preliminary recommendations for the conservation of known and potential cultural heritage resources.

These are all of our comments on the Environmental Report. Thank you for the opportunity to review and comment on the document.

Sincerely,
Laura

Laura Hatcher, MCIP, RPP

Heritage Planner

Heritage Planning Unit | Programs and Services Branch | Heritage, Tourism and Culture Division

Ministry of Heritage, Sport, Tourism and Culture Industries

Tel. 437-239-3404 **New** | email: laura.e.hatcher@ontario.ca

From: Hartwig, Emily <Emily.Hartwig@stantec.com>

Sent: Wednesday, January 12, 2022 12:33 PM

To: Hamilton, James (MHSTCI) <James.Hamilton@ontario.ca>

Cc: IOLRelocation <IOLRelocation@stantec.com>; zora.crnojacki@oeb.ca <zora.crnojacki@oeb.ca>

Subject: Imperial Oil Limited - Pipeline Relocation Project OPCC Review

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Good afternoon,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and therefore the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated.

The Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario 7th Edition 2016 (Guidelines) recommend that a project proponent provide a copy of the Environmental Report (ER) for a project to the Ontario Pipeline Coordinating Committee for review and comment.

Pursuant to the Guidelines, please provide any comments on the ER to Ms. Zora Crnojacki (Zora.Crnojacki@oeb.ca) by no later than **February 23, 2022**. The ER is available for review and download in the link below.



[Imperial Oil – Pipeline Relocation Project Environmental Report](#)

Emily Hartwig B.Sc., EP.

Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849

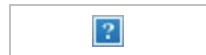
Mobile: (226) 979-4457

Emily.Hartwig@stantec.com

Stantec

100-300 Hagey Blvd.

Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

**Ministry of Heritage, Sport,
Tourism and Culture Industries**

Programs and Services Branch
401 Bay Street, Suite 1700
Toronto, ON M7A 0A7
Tel: 437-239-3404

**Ministère des Industries du Patrimoine,
du Sport, du Tourisme et de la Culture**

Direction des programmes et des services
401, rue Bay, Bureau 1700
Toronto, ON M7A 0A7
Tél: 437-239-3404



July 28, 2021

EMAIL ONLY

Emily Hartwig B.Sc.,
EP Environmental Consultant
Assessment and Permitting
Stantec Consulting Ltd.
1-70 Southgate Drive,
Guelph ON N1G 4P5
IOLRelocation@stantec.com

MTCS File # : 0014554
Proponent : Imperial Oil
Project : Imperial Oil Pipeline Relocation Project
Location : City of Hamilton

Dear Emily Hartwig:

Thank you for contacting the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) about the above-referenced project, which requires Ontario Energy Board (OEB)'s leave to construction under the Ontario Energy Board Act.

Please note that the OEB issued the [Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition](#) to assist applicants how to identify, manage and document environmental impacts. The Guidelines encourage applicants to consult with the Ontario Pipeline Coordinating Committee (which MHSTCI is a member) and other agencies. MHSTCI's interest in this process relates to its mandate of conserving Ontario's cultural heritage, which includes:

- Archaeological resources, including land and marine;
- Built heritage resources, including bridges and monuments; and,
- Cultural heritage landscapes.

Among the planning activities outlined in Chapter 2 of the Guidelines, an applicant is advised to:

- describe the rationale for study area delineation (including construction staging, land requirements);
- identify existing baseline environmental conditions;
- identify potential environmental impacts expected to occur during construction and operation of the project, including cumulative impacts;
- describe proposed measures to mitigate potential negative impacts.

This letter provides advice on how to incorporate consideration of cultural heritage in the above-mentioned planning activities and expands on sections 4.3 and 5.3 of the Guidelines by outlining the technical cultural heritage studies and level of detail required to address cultural heritage in pipeline and facilities projects. The outcomes and recommendations of the studies will be reported in the Environmental Report and form the basis for any future commitments.

Project Summary

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON and the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil will need to be relocated. Imperial Oil has retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project. The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016).

Identifying Cultural Heritage Resources

While some cultural heritage resources may have already been formally identified, others may be identified through assessment.

Archaeological Resources (Land and Marine, if applicable)

MHSTCI recommends that, as a best practice, a combined Stage 1-2 (AA) be completed for the study area during the planning phase.

At a minimum, a Stage 1 AA will be undertaken for the entire study area during the planning phase. The results of the Stage 1 AA will inform the OEB and will be summarized in the Environmental Report. If the Stage 1 AA recommends further AA(s), then MHSTCI recommends that further stages of AA be completed as early as possible during the design phase of the project, and prior to the completion of detailed design.

Archaeological assessments are required to be undertaken by an archaeologist licenced under the *Ontario Heritage Act*, who is responsible for submitting the report directly to MHSTCI for review.

The Environmental Report must include specific information from the AA report(s). The Executive Summary of each AA report provides a brief summary of the work completed and the recommendations for next steps, whether for further archaeological assessment, in which case the report will include a map that identifies those areas, or for no further assessment. The Environmental Report must also include clear commitments to undertake any further AA stages recommended, and a timeline for their completion.

We appreciate your interest in obtaining additional background information on archaeological resources within the study area. For lands south of Fourth Concession Road at Brock Road a Stage 1-2 AA and Stage 3 AA (Project information Form Numbers: P340-013-2012 and P058-1914-2020) have been entered into the Ontario Public Register of Archaeological Reports.

Built Heritage Resources and Cultural Heritage Landscapes

A Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment will be undertaken for the study area during the planning phase to inform the OEB and will be summarized in the Environmental Report. This study will:

1. Identify existing baseline cultural heritage conditions within the study area.
 - Study Area: The consultants preparing the Cultural Heritage Report will need to define a study area and explain their rationale. The common practice has been to define a study area as including the right-of-way (ROW) and a 50-metre buffer (construction zone) on either side of the ROW.
 - The report will include a historical summary of the study area and will identify all known or potential built heritage resources and cultural heritage landscapes in the study area. MHSTCI has developed screening criteria that may assist with this

exercise: [Criteria for Evaluating for Potential Built Heritage Resources and Cultural Heritage Landscapes](#).

2. Identify preliminary potential project-specific impacts on the known and potential built heritage resources and cultural heritage landscapes that have been identified. The report should include a description of the anticipated impact to each known or potential built heritage resource or cultural heritage landscape that has been identified.
3. Recommend measures to avoid or mitigate potential negative impacts to known or potential built heritage resources and cultural heritage landscapes. The proposed mitigation measures are to inform the next steps of project planning and design.

Where a known or potential built heritage resource or cultural heritage landscape may be directly and adversely impacted¹, and where it has not yet been evaluated for Cultural Heritage Value or Interest (CHVI), completion of a Cultural Heritage Evaluation Report (CHER) is required to fully understand its CHVI and level of significance. The CHER must be completed as part of the Environmental Report. If a potential resource is found to be of CHVI, then a Heritage Impact Assessment (HIA) will be undertaken by a qualified person. The HIA will be completed in consultation with MHSTCI and the proponent as early as possible during detail design, following the OEB's Leave to Construct.

While some cultural heritage landscapes are contained within individual property boundaries, others span across multiple properties. For certain cultural heritage landscapes, it will be more appropriate for the CHER and HIA to include multiple properties, in order to reflect the extent of that cultural heritage landscape in its entirety.

Cultural Heritage Reports will be undertaken by a qualified person who has expertise, recent experience, and knowledge relevant to the type of cultural heritage resources being considered and the nature of the activity being proposed.

Community input should be sought to identify locally recognized and potential cultural heritage resources. Sources include, but are not limited to, municipal heritage committees, historical societies and other local heritage organizations.

Cultural heritage resources are often of critical importance to Indigenous communities. Indigenous communities may have knowledge that can contribute to the identification of cultural heritage resources, and we suggest that any engagement with Indigenous communities includes a discussion about known or potential cultural heritage resources that are of value to them.

In response to your request for additional background information regarding the study area please note that a Cultural Heritage Impact Assessment Report (CHIA) has been undertaken for lands south of Fourth Concession Road. The report was prepared by MHBC Planning (dated August 20, 2013), Urban Design & Landscape Architecture. Three properties were identified as having CHVI within the area. MHSTCI's comments on February 25, 2014 note that the structures at all three properties of CHVI, excluding a residence at 565 Moxley Road, have been demolished.

¹ A direct adverse impact would have a permanent and irreversible negative effect on the cultural heritage value or interest of a property or result in the loss of a heritage attribute on all or part of the property. Examples include, but are not limited to: removal or demolition of a heritage attribute, land disturbance, alterations that are not sympathetic to the CHVI of the property, introduction of new elements that diminish the integrity of the property, changing the character of the property, intensification of the property without conservation of heritage attributes.

Environmental Reporting

The findings of the above-mentioned studies should be summarized as part of the Environmental Report discussion of existing conditions, impact assessment, mitigation, and future commitments. Commitments for further studies should clearly state what is to be done, who is responsible for implementation, and when. Recommendations from the technical cultural heritage studies described above should be reflected as commitments in the Environmental Report.

MHSTCI welcomes the opportunity to review and comment upon relevant sections of the draft Environmental Report, before the final draft Environmental Report is submitted to the OPCC for review.

Thank you for consulting MHSTCI on this project and please continue to do so throughout the OEB process. If you have any questions, require clarification, or would like additional examples to assist with project reporting, do not hesitate to contact Laura Hatcher.

Sincerely,

Joseph Harvey

On behalf of

Laura Hatcher

Heritage Planner

Heritage Planning Unit

laura.e.hatcher@ontario.ca

Copied to: Carol Naylor, Environmental Services, Stantec

It is the sole responsibility of proponents to ensure that any information and documentation submitted as part of their EA report or file is accurate. MHSTCI makes no representation or warranty as to the completeness, accuracy or quality of the any checklists, reports or supporting documentation submitted as part of the EA process, and in no way shall MHSTCI be liable for any harm, damages, costs, expenses, losses, claims or actions that may result if any checklists, reports or supporting documents are discovered to be inaccurate, incomplete, misleading or fraudulent.

Please notify MHSTCI if archaeological resources are impacted by EA project work. All activities impacting archaeological resources must cease immediately, and a licensed archaeologist is required to carry out an archaeological assessment in accordance with the *Ontario Heritage Act* and the *Standards and Guidelines for Consultant Archaeologists*.

If human remains are encountered, all activities must cease immediately and the local police as well as the Registrar, Burials of the Ministry of Government and Consumer Services must be contacted. In situations where human remains are associated with archaeological resources, MHSTCI should also be notified to ensure that the site is not subject to unlicensed alterations which would be a contravention of the *Ontario Heritage Act*.

From: [Hartwig, Emily](#)
To: [Hatcher, Laura \(MHSTCI\)](#)
Cc: [IOLRelocation; Zora.Crnojacki](#)
Subject: RE: Imperial Oil Limited - Pipeline Relocation Project OPCC Review
Date: Tuesday, March 1, 2022 9:16:16 AM
Attachments: [image001.png](#)

Good morning Laura,

Thank-you for your response regarding the IOL Pipeline Relocation Project. Please find below our responses to the comments provided in your email.

Archaeological Resources

The Stage 1 Archaeological Assessment (AA) is expected to be submitted to the MHSTCI this week (Feb 28. – Mar. 4). The Environmental Report will be updated to include the detailed recommendations that are noted in the draft Stage 1 AA (e.g. recommendation regarding Stage 3 Cemetery Investigations due to the project's close proximity to the Glenwood Cemetery.

Built Heritage Resources and Cultural Heritage Landscapes

The MHSTCI Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes checklist was prepared for the IOL Pipeline Relocation Project. The checklist included a 50-meter study area buffer around the alternative pipeline route and the preferred pipeline route. The Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment (CHECPA) will be completed prior to construction. All reports and findings will be submitted to the MHSTCI for review.

Emily Hartwig B.Sc., EP.

Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849

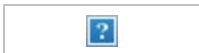
Mobile: (226) 979-4457

Emily.Hartwig@stantec.com

Stantec

100-300 Hagey Blvd.

Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: Hatcher, Laura (MHSTCI) <Laura.E.Hatcher@ontario.ca>

Sent: Wednesday, February 23, 2022 9:31 AM

To: Zora.Crnojacki@oeb.ca

Cc: Hartwig, Emily <Emily.Hartwig@stantec.com>; IOLRelocation <IOLRelocation@stantec.com>

Subject: RE: Imperial Oil Limited - Pipeline Relocation Project OPCC Review

Good day,

MHSTCI has reviewed the Environmental Report for this project as part of the Ontario Pipeline

Coordinating Committee. Our interest in this project relates to the conservation of cultural heritage resources (archaeological resources, built heritage resources and cultural heritage landscapes). We provided preliminary advice and comments on July 28, 2021 (attached here).

Overall, the Environmental Report needs to provide more information to support its findings about impacts to cultural heritage resources.

Archaeological Resources

Our comments from July 2021 advise that, at a minimum, a Stage 1 archaeological assessment should be prepared during the project planning phase, and the findings incorporated into the Environmental Report. Section 3.4.8 *Archaeological Resources* of the Environmental Report states that a Stage 1 archaeological assessment was prepared for the project. Our records show that the report has not yet been submitted to the ministry by the licensed archaeologist for review. It is only once the report has been screened or reviewed by MHSTCI and entered onto the *Ontario Public Register of Archaeological Reports* that it can be considered finalized. At this point in time, this component of the project reporting is incomplete.

We also note that the draft archaeological assessment makes more detailed recommendations than are presented in the body of the Environmental Report (e.g. recommendation regarding Stage 3 Cemetery Investigations due to the project's close proximity to the Glenwood Cemetery). It is our standard advice that the recommendations within the Executive Summary of the archaeological assessment, containing project specific details and recommendations, are incorporated into the body of the Environmental Report.

Built Heritage Resources and Cultural Heritage Landscapes

Section 3.4.9 *Cultural Heritage Resources* identifies cultural heritage resources within the study area, but states that the Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment will be completed prior to construction. MHSTCI recommends that the Cultural Heritage Report is prepared now, so that it can inform the Environmental Report and make preliminary recommendations for the conservation of known and potential cultural heritage resources.

These are all of our comments on the Environmental Report. Thank you for the opportunity to review and comment on the document.

Sincerely,
Laura

Laura Hatcher, MCIP, RPP

Heritage Planner

Heritage Planning Unit | Programs and Services Branch | Heritage, Tourism and Culture Division

Ministry of Heritage, Sport, Tourism and Culture Industries

Tel. 437-239-3404 **New** | email: laura.e.hatcher@ontario.ca

From: [Zora Crnojacki \(She/Her\)](#)
To: [Hartwig, Emily](#)
Cc: [IOLRelocation](#)
Subject: RE: IOL - Pipeline Relocation: OPCC Review
Date: Tuesday, March 1, 2022 1:37:59 PM

Thank you Emily.

From: Hartwig, Emily <Emily.Hartwig@stantec.com>
Sent: March 1, 2022 12:07 PM
To: Zora Crnojacki (She/Her) <Zora.Crnojacki@oeb.ca>
Cc: IOLRelocation <IOLRelocation@stantec.com>
Subject: IOL - Pipeline Relocation: OPCC Review

Good afternoon Zora,

Please be advised that the 42-day review period for OPCC comments ended on **February 23, 2022** for the Imperial Oil Limited – Pipeline Relocation Project (circulated on January 12, 2022, attached for your reference). To date we have received comments from the MHSTCI representative (Laura Hatcher) and no other OPCC members.

The following individuals received the link to the ER:

- Barbara Slattery (MECP)
- Jonathon Wilkinson (Energy)
- Cory Ostrowka (IO)
- Maya Harris (MMAH)
- Keith Johnston via Sally Renwick (NDMNRF)
- Karoush Manouchehri (TSSA)
- Tony DiFabio (MTO)
- David Marriot via Helma Geerts (OMAFRA)
- Laura Hatcher via James Hamilton (MHSTCI)

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: [IOLRelocation](#)
Bcc: [donna.skelly@pc.ola.org](#); [david.sweet@parl.gc.ca](#); [sandro.leonardelli@canada.ca](#); [anjala.puvananathan@canada.ca](#); [Barboza, Karla \(MHSTCI\)](#); [trevor.fleck@ontario.ca](#); [Malcolmson, Heather \(MECP\)](#); [dan.dobrin@ontario.ca](#); [stephen.burt@ontario.ca](#); [michael.falconi@ontario.ca](#); [omafra.eanotices@ontario.ca](#); [Source Protection Screening \(MECP\)](#); [david.marriott@ontario.ca](#); [mike.stone@conservationhamilton.ca](#); [cconnolly@hrca.on.ca](#); [mayor@hamilton.ca](#); [arlene.vanderbeek@hamilton.ca](#); [clerk@hamilton.ca](#); [DORFMAN Roman](#)
Subject: Imperial Oil Limited Pipeline Relocation Project: Environmental Report
Date: Tuesday, April 5, 2022 3:34:00 PM
Attachments: [image001.png](#)

Good afternoon,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON. As a result, the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated. The intent is to relocate the pipeline along Concession 4 West primarily within the municipal road Right-of-Way, including two road crossings of Concession 4 West. The replacement pipeline will be approximately 2 km in length.

Imperial Oil retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project, in accordance with the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition* (2016)".

The Environmental Report for the study is available for review and download from the link provided below.

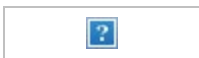
 [rpt_110904556_IOL-Relocation_ER_20220323_fnl.pdf](#)

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hartwig, Emily](#)
To: dan.muys@parl.gc.ca
Cc: [IOLRelocation](#)
Subject: Imperial Oil Limited Pipeline Relocation Project: Environmental Report
Date: Tuesday, April 5, 2022 3:39:00 PM

Good afternoon,

Lafarge Canada will be mining their approved South Quarry Extension lands on the south side of Concession 4 West, Hamilton, ON. As a result, the existing 12" nominal pipe size (NPS) pipeline owned and operated by Imperial Oil Limited (Imperial Oil) will need to be relocated. The intent is to relocate the pipeline along Concession 4 West primarily within the municipal road Right-of-Way, including two road crossings of Concession 4 West. The replacement pipeline will be approximately 2 km in length.

Imperial Oil retained Stantec Consulting Ltd. (Stantec) to undertake an Environmental Study of the construction and operation of the Project, in accordance with the Ontario Energy Board's (OEB) *"Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)"*.

The Environmental Report for the study is available for review and download from the link provided below.

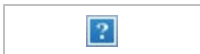
[rpt_110904556_IOL-Relocation_ER_20220323_fnl.pdf](#)

Regards,

Emily Hartwig B.Sc., EP.
Environmental Consultant, Assessment and Permitting

Direct: (519) 585-3849
Mobile: (226) 979-4457
Emily.Hartwig@stantec.com

Stantec
100-300 Hagey Blvd.
Waterloo, ON N2L 0A4



The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Le contenu de ce courriel est la propriété confidentielle de Stantec et ne devrait pas être reproduit, modifié, distribué ou utilisé sans l'autorisation écrite de Stantec. Si vous avez reçu ce message par erreur veuillez supprimer sans délai toutes ses copies et nous en aviser immédiatement.

From: [Hatcher, Laura \(MHSTCI\)](#)
To: [Hartwig, Emily](#)
Cc: [IOLRelocation; Zora Crnojacki](#)
Subject: RE: Imperial Oil Limited - Pipeline Relocation Project OPCC Review
Date: Wednesday, April 6, 2022 10:50:54 AM
Attachments: [image001.png](#)

Hi Emily,

Thank you for the responses. I have taken an initial look at the Environmental Report that was sent to our office yesterday. I see that the detailed recommendations from the stage 1 AA have not yet been incorporated into the body of the Environmental Report. I also note that the archaeological assessment was resubmitted on March 15, 2022 and is currently under review, and so it can not yet be considered final.

Thank you for the information on the timing of the Cultural Heritage Report. It continues to be our advice that this reporting should be completed during the Environmental Reporting phase so it can inform the report. It is my understanding that this used to be common practice for Stantec's OEB files, but this has changed recently. I have spoken to my Team Lead, Karla Barboza, about this and she let me know she had been in touch with Stantec to suggest a meeting about this but I don't think anything has been set up yet.

Sincerely,
Laura

Laura Hatcher, MCIP, RPP

Heritage Planner

Heritage Planning Unit | Programs and Services Branch | Heritage, Tourism and Culture Division

Ministry of Heritage, Sport, Tourism and Culture Industries

Tel. 437-239-3404 **New** | email: laura.e.hatcher@ontario.ca