

**To:** Chair and Members, Board of Management  
Lake Huron Primary Water Supply System

**From:** Kelly Scherr, P.Eng., MBA, FEC  
Chief Administrative Officer

**Subject:** LH1408 Oneida Nation of the Thames Transmission Pipeline Municipal Class  
Environmental Assessment and Preliminary Design – Project Update

## RECOMMENDATION

That, on the recommendation of the Chief Administrative Officer, the Board of Management for the Lake Huron Primary Water Supply System **RECEIVE** this report for information regarding the Oneida Transmission Pipeline (LH1408) project Environmental Assessment and preliminary design.

## PREVIOUS AND RELATED REPORTS

March 3, 2022	Oneida Nation of the Thames Water Supply
June 2, 2022	Oneida Nation of the Thames Water Supply Agreement
June 2, 2022	Oneida Nation of the Thames Transmission Pipeline Municipal Class Environmental Assessment and Preliminary Design – Consultant Award

## BACKGROUND

At the March 3, 2022 meeting, the Board endorsed the request from Oneida Nation of the Thames to supply drinking water to the Oneida Nation of the Thames (Oneida Nation) settlement from the Lake Huron Water Supply System and authorized Board staff to negotiate a Water Supply Agreement with Oneida Nation.

Given the location of the Oneida Nation settlement, it is proposed that the existing transmission pipeline, which currently terminates near the community of Mount Brydges, be extended to a connection point located near Muncey Road and Jubilee Drive. Oneida Nation anticipates that it will be undertaking the planning and design of necessary modifications and upgrades to the Oneida Nation water distribution system starting in late-2022 upon the completion of a funding agreement with Indigenous Services Canada.

## DISCUSSION

### Environmental Assessment and Preliminary Design

In June 2022, Stantec Consulting Ltd. initiated the Municipal Class Environmental Assessment and preliminary design of the Oneida Nation transmission connection project. A key task in this assignment was the review of various routing alternatives for the transmission main from the existing termination point northeast of Mount Brydges, near Springwell Road and Falconbridge Drive, to the Oneida Nation settlement. Three potential routes were considered as part of the Environmental Assessment process and are illustrated in the attached figure (Appendix A).

A comparative evaluation of the routing alternatives was completed using the following criteria:

- Social environment
  - impacts to property owners including residences and businesses, community features, in both the short- and long-term
  - impacts to existing and future land use planning
  - protection of public health and safety
- Cultural environment
  - protects/conserves cultural heritage resources
  - protects/conserves archaeological resources
- Natural environment
  - protects environmental features
  - protects wildlife and Species at Risk
  - protects groundwater, streams, and rivers
  - minimizes climate change impacts
- Technical
  - minimizes land acquisition requirements
  - considerations related to operations and maintenance
  - complexity/ease of implementation and construction
  - meets current and future water supply needs
  - aligns with existing and planned infrastructure improvements
  - constructability
- Financial
  - considerations for overall lifecycle costs
  - consideration for capital costs, including property acquisition
  - consideration for operation and maintenance cost

An overall evaluation summary of the three routing alternatives, including the “Do Nothing” option, is presented in the table below noting that the “Do Nothing” alternative is typically considered for all Municipal Class Environmental Assessments undertaken.

<b>Criteria</b>	<b>Do Nothing</b>	<b>Route 1</b>	<b>Route 2</b>	<b>Route 3</b>
<b>Social Environment</b>	Least Preferred	Moderately Preferred	Most Preferred	Moderately Preferred
<b>Cultural Environment</b>	Most Preferred	Least Preferred	Moderately Preferred	Least Preferred
<b>Natural Environment</b>	Most Preferred	Moderately Preferred	Moderately Preferred	Moderately Preferred
<b>Technical</b>	Least Preferred	Moderately Preferred	Most Preferred	Moderately Preferred
<b>Financial</b>	Least Preferred	Moderately Preferred	Moderately Preferred	Moderately Preferred
<b>Summary</b>	Although this alternative provides the lowest capital cost with no change to the LHPWSS transmission system, costs would continue to be incurred by Oneida Nation to operate the existing system which poses several challenges	This alternative involves construction complexity due to utilities, water crossing, and coordination with other infrastructure improvements. This alternative also has operational challenges with potential for chambers being located with the travelled portion of the roadway.	This route best addresses the technical requirements. This route has moderate construction complexity relative to Routes 1 and 3, as well as reduced operational challenges relative to Routes 1 and 3.	This alternative involves construction complexity due to utilities, water crossing, and coordination with other infrastructure improvements. This alternative also has operational challenges with potential for chambers being located with the travelled portion of the roadway.
<b>Overall</b>	Not Carried Forward – Does NOT meet the problem/opportunity statement	Moderately Preferred	Most Preferred	Moderately Preferred

The preferred transmission main route was identified as Route 2 based on the evaluation of alternatives reviewed in the Municipal Class Environmental Assessment process. This transmission main connection project is anticipated to be a Schedule A+ project in accordance with the Municipal Class of projects under Ontario's *Environmental Assessment Act (1990)*, and as outlined in the Municipal Engineers Association's *Municipal Class Environmental Assessment* document (2000, as amended in 2007, 2011, 2015, and 2019). The Schedule A+ project descriptions in Appendix 1 of the Municipal Class Environmental Assessment document include water projects that "establish, extend or enlarge a water distribution system and all works necessary to connect the system to an existing system or water source, provided all such facilities are in either an existing road allowance or an existing utility corridor, including the use of Trenchless Technology for water crossings."

Schedule A+ projects are considered to be pre-approved, and do not require completion of the full Municipal Class Environmental Assessment process; however, the public is to be notified prior to project implementation.

### **Project Delivery**

It is recognized that given the potentially variable timing needed for this project, subsequent phases of this project, including detailed design and construction, could generally follow two different types of project procurement and delivery methodologies, namely:

- "Traditional" procurement and delivery (design, bid/tender, and build); or,
- "Design-Build" delivery (one recognized form of alternate project delivery which procures a combined engineering and construction team).

Both models for procurement and delivery offer various advantages and disadvantages. As the funding agreement is finalized and critical dates are confirmed, Board staff will further consider the preferred delivery model in consultation with Oneida Nation in order to effectively manage project risks and ensure the timely completion of the project.

## **WATER SUPPLY AGREEMENT**

The proposed Water Supply Agreement with Oneida Nation of the Thames has been completed and the Board authorized its execution at the March 3, 2022 meeting of the Board. Notwithstanding, the corresponding funding agreement between Oneida Nation of the Thames and Indigenous Services Canada has yet to be finalized. Accordingly, the final execution of the Water Supply Agreement has been delayed until funding has been secured. In addition, Board staff will delay initiating the procurement for the detailed design and construction of the pipeline until such time that the Water Supply Agreement is fully executed.

## CONCLUSION

Board staff will proceed with the completion of the Oneida Transmission Main Municipal Class Environmental Assessment and preliminary design based on the preferred route presented in this report. Further, Board staff will confirm the preferred project procurement and delivery method for this project and proceed with issuing procurement documents once the Water Supply Agreement is fully executed and the funding arrangements with Indigenous Services is completed. Board staff will continue to update the Board regarding the status of this project, preferred project delivery model, and means of public notification of the project as the project progresses.

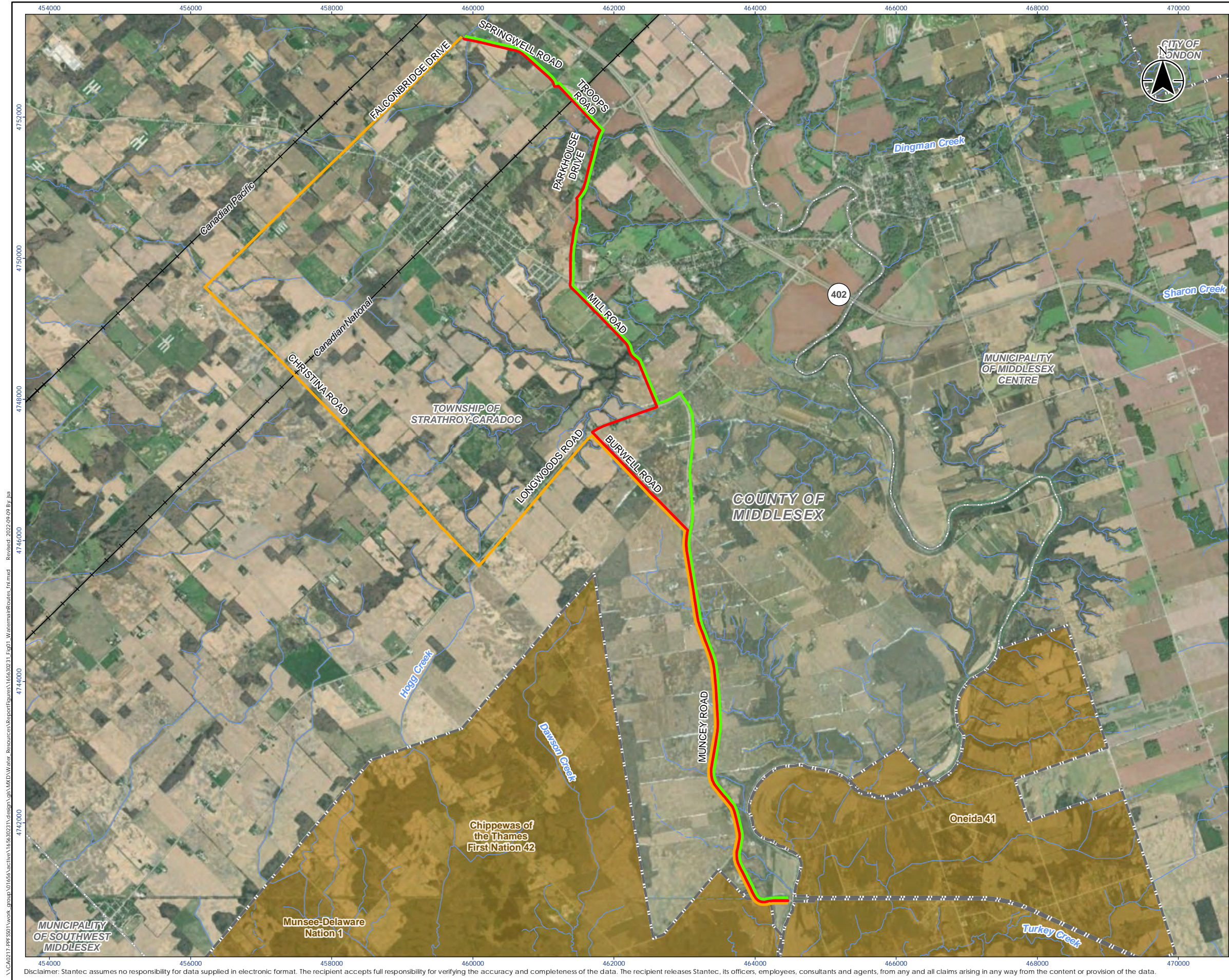
**Prepared by:** Marcy McKillop, P.Eng.,  
Environmental Services Engineer

**Submitted by:** Billy Haklander, P.Eng., LL.M  
Capital Programs Manager

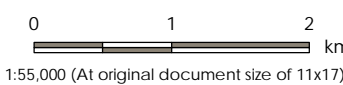
**Recommended by:** Kelly Scherr, P.Eng., MBA, FEC  
Chief Administrative Officer

**Attachments:** Appendix A – Transmission Main Alternative Routes

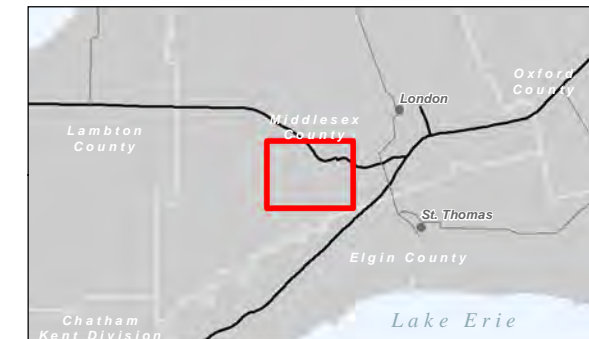




- Legend
- Railway
  - Watercourse (Intermittent)
  - Watercourse (Permanent)
  - First Nation Reserve
  - Municipal Boundary, Upper
  - Municipal Boundary, Lower
- Transmission Main Route ID**
- Route 1
  - Route 2
  - Route 3



- 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, 2022.
  - Imagery Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Project Location: Municipality of Strathroy-Caradoc  
Prepared by JSA on 2022-09-09  
Technical Review by ABC on yyyy-mm-dd  
Independent Review by ABC on yyyy-mm-dd

Client/Project: LAKE HURON PRIMARY WATER SUPPLY SYSTEM  
ONEIDA NATION OF THE THAMES TRANSMISSION PIPELINE MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT AND PRELIMINARY DESIGN  
RFP-2022-100

Figure No. 1  
Title: Transmission Main Alternative Routes

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Revised: 2022-09-09 By: jia

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