Halton Municipalities’ Planning Opinion on EIS Sufficiency

Regional Municipality of Halton
Corporation of the City of Burlington
Corporation of the Town of Halton Hills
Corporation of the Town of Milton
Corporation of the Town of Oakville

CEAA Panel Review of the CN Milton Logistics Hub Project
CEAA Registry No. 80100
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1. QUALIFICATIONS

This report was prepared by Ron Glenn, MCIP, RPP. Ron has over 30 years of professional planning experience in Ontario. Ron’s practice includes significant work in the areas of land use planning, integrated growth management, environmental planning, sustainability, housing and the integration of growth, infrastructure and financial planning. Ron is a Member of the Canadian Institute of Planners (1994), a Registered Professional Planner in the Province of Ontario (1994) and a Member of the Lambda Alpha International—Society for the Advancement of Land Economics (2010). Ron has been in the role of the Director of Planning Services and Chief Planning Official for Halton Region since April 2009.

1. INTRODUCTION

The Review Panel for the Milton Logistics Hub Project is required by its Terms of Reference to determine whether the information in the Environmental Impact Statement is sufficient to proceed to a public hearing. This report provides my professional planning opinion on the sufficiency of the EIS. My review has applied panel guidance that sufficiency includes the “technical validity of the information, the methods and analysis used, and the conclusions regarding the significance of any environmental effects, proposed mitigation measures and plans for related follow-up programs”. To this panel guidance, I have added review of whether the EIS is sufficient to address the interests of the five Halton localities, as this question is part of the CEAA review and the future review of CN’s s.98 Canada Transportation Act application.

3. This report is organized to provide the Panel information about the land use planning Framework in Ontario and Halton Region, including an analysis of sufficiency from a planning perspective. My report also relies on the work of the different technical experts retained by the Region to evaluate this proposal.

1.1 Planning Framework in Ontario

The Planning Act governs land use across Ontario and has existed since the 1940s. Over the years the Province has enacted many important amendments to guide and structure municipal decisions. Under this Act, municipalities have exclusive power to designate and zone for land uses, approve the severance or subdivision of lands, and enact site plan controls.

All municipalities have the duty to enact and keep current official plans to guide the physical development of their municipalities with upper-tier municipal official plans having paramountcy over lower-tier municipal official plans in case of conflict.

The Province has also played a dominant role in land use planning by requiring that (1) municipal decisions be “consistent” with any provincial policy statement approved by Cabinet, and (2) municipal decisions “conform” with all designated provincial plans.

The Provincial Policy Statement first established in 1996, sets out the Province’s vision for land use across Ontario. It includes policies on how we settle our landscape, create our built environment, and manage our land and resources over the long term to achieve livable and resilient communities.

The Province approved a Greenbelt Plan in 2005 to create a permanent agricultural and natural area protection around the Greater Toronto Area. The Greenbelt Plan applies to nearly 800,000 hectares, and was created to limit the expansion of urban area and provide for the permanent protection of agriculture land and the natural environment.
9. The Province approved a Growth Plan for the Greater Golden Horseshoe (“Growth Plan”) in 2006. The Growth Plan establishes growth targets and policies to manage growth to the year 2041. Municipalities must plan to accommodate the targeted growth by considering the distribution of growth through intensification and greenfield development. Numerous policies provide direction on achieving these distributions in the development of complete communities.

1.2 Planning Framework in Halton

10. The Regional Municipality of Halton was created through the Regional Municipality of Halton Act, 1973. Among other things, this Act required the Region to prepare and implement an official plan for the Regional area. Other provisions of the Act gave the Region sole responsibility for a regional road system, the supply and distribution of water, and the collection and disposal of all wastewater in the Regional area.

11. The Region passed its first official plan in 1980 to guide development in the Region. The Region continues to maintain and provide updates to its Official Plan in accordance with Provincial legislation. The Region’s latest significant update to its Official Plan was in 2009 through “Sustainable Halton”.

12. The “Sustainable Halton” initiative, including Regional Official Plan Amendment No. 38 (“ROPA 38”), amended the Regional Official Plan (the “ROP”) to be consistent with the Provincial Policy Statement, 2005 (“PPS 2005”) and in conformity with provincial plans, including the Greenbelt Plan (2005) and the Growth Plan (2006). Through ROPA 38, the current ROP meets or exceeds standards established by the Province and customizes land use planning for the unique nature of Halton Region.

13. Summarizing the provincial framework of land use law and policy, the Regional Official Plan was approved by the Province for its conformity to all applicable provincial plans and policy statements. Equally, provincial law requires that this official plan direct and have paramountcy over local official plans. Thirdly, where a project requires a rezoning or zoning by-law amendment, provincial law requires that such amendment conform with the applicable official plan (i.e., the ROP). Beyond the ROP, the Region also has master plans that have status under Ontario’s Municipal Class Environmental Assessment. These master plans address the timing and delivery of infrastructure projects to align with the phased growth prescribed by the Official Plan, including:

   (a) Transportation Master Plan,

   (b) Active Transportation Master Plan,

   (c) Water and Wastewater Master Plan.

14. The Region has also published relevant interpretive policy guidance, including:

   (a) Halton Region Official Plan Guidelines,

   (b) Transportation Impact Study Guidelines

1.3 CN participation in ROPA 38

15. CN participated in the ROPA 38 exercise in providing planning reports and input in the development of the CN lands. In 2008 CN advanced, through a Planning report prepared by Bousfields Inc., a proposal for a rail based industrial park. CN stated in 2008 that there was no need for an intermodal
facilities. The Region advanced the ROPA 38 process and defining the future vision of these lands on that basis.

2. MUNICIPAL PERSPECTIVE ON EIS SUFFICIENCY

2.1 Municipal Interests In the CN Project

16. Building on the letter to the Panel from the Region CAO, Jane MacCaskill, on February 1, 2017, the interests of the five Halton localities include:

(a) Maintaining land use compatibility in the area having regard for nearby existing and approved residential communities and the new rail lines, facilities, and proposed 24/7 rail, handling, and truck operations;

(b) Maintaining municipal financial sustainability when this Project will add new infrastructure costs and reduce municipal revenues for the Project lands and nearby lands compared to the planned future land uses approved in ROPA 38;

(c) Adherence to municipal design standards;

(d) Compliance with Ontario and municipal environmental assessment requirements for changes to regional and local road infrastructure;

(e) Prevention of adverse effects to human health and the environment through adherence to Ontario and municipal standards for (i) air quality, (ii) noise emissions, (iii) stormwater discharge quality and quantity, (iv) water takings, (v) river improvements, and (vi) endangered species and their habitat;

(f) Protection of public safety and the environment arising from increased carriage, handling, and storage of toxic and other harmful substances and products;

(g) Protection to public health and safety arising from increased road and rail traffic associated with the Project; and

(h) Ensuring that, in light of the above, this Project design and location is the preferred means of meeting CN’s stated purpose for the Project in comparison to alternatives that also meet this purpose and have fewer and lower impacts.

2.2 Municipal Planning Issues not addressed in the CN EIS

17. The land uses associated with this Project are not in compliance with existing Town zoning. The proposed land uses also require a Regional Official Plan Amendment as they are not in conformity with the Regional Official Plan for the reasons set out below:

2.2.1. The Project is not recognized or planned for in the Regional Official Plan

18. A project of this size and magnitude will generate on-site and off-site impacts that will change the planned function of these lands, surrounding lands, and aspects of the surrounding community. The Regional Official Plan articulates the planning vision adopted by Regional Council and outlines the
community’s expectation for the long term land use of these lands. The project represents a departure from the current planning vision. This new vision would need to be recognized in the ROP.

2.2.2. **The Project is out of phase**

19. The project is within an Employment Area that is not scheduled to be developed until between 2021–2031 in accordance with Map 5 of the ROP. The ROP requires the local municipality to undertake Area Specific Plans for new growth areas such as these lands, in accordance with ROP Policy 77(5). The Area Specific Plan must consider a full range of policy matters that need to be studied before development proceeds. This project is proceeding without the benefit of an Area Specific Plan as required by Policy 77(5) and therefore is not in conformity with the Regional Official Plan.

2.2.3. **The Project encroaches into the Regional Natural Heritage System as designated in the Regional Official Plan.**

20. The ROP applies a systems-based approach to implementing the Regional Natural Heritage System. The ROP does not permit the alteration of any components of the Regional Natural Heritage System unless it has been demonstrated that there will be no negative impacts on the natural heritage features and areas or their ecological functions.

2.2.4. **The Project encroaches in lands designated Agricultural Area in the Regional Official Plan**

21. Implementing provincial policy, the ROP contains strict criteria that apply to any proposal to remove lands from the designated Agricultural Area. In particular, the Provincial Policy Statement authorizes Planning authorities such as the Region to remove land from prime agricultural areas only for municipally-initiated expansions of or identification of settlement areas.

2.2.5. **The Project is being proposed on private services.**

22. The project includes a new administration building and attached garage that will be serviced by a private well and private septic system. Consistent with provincial policy, the Region requires that all new development within the Urban Area be connected to Halton’s municipal water and wastewater systems unless the proposal can meet the criteria of the Urban Area on private services. The proposal does not meet the criteria for proceeding and private services, and therefore is not in conformity with the Regional Official Plan. An additional consideration will also be whether the proposal is consistent with the PPS, namely Policy 1.6.6.4 that states, “Where municipal sewage services and municipal water services or private communal sewage services and private communal water services are not provided, individual on-site sewage services and individual on-site water services may be used provided that site conditions are suitable for the long-term provision of such services with no negative impacts. In settlement areas, these services may only be used for infilling and minor rounding out of existing development.”

3. **SUFFICIENCY OF THE EIS UNDER THE CEAA FRAMEWORK**

3.1 **Purpose of the Project**

23. The CEAA 2012 and the EIS Guidelines require the CN EIS to describe the purpose of this project. The EIS Guidelines provide the following:
The EIS will describe the purpose of the project by providing the rationale for the project, explaining the background, the problems or opportunities that the project is intended to satisfy and the stated objectives from the perspective of the proponent. If the objectives of the project are related to broader private or public sector policies, plans or programs, this information will also be included. (p.13)

24. The purpose is relevant to other factors of assessment, particularly alternative methods of carrying out the project.

25. In response to the EIS Guidelines, the CN EIS describes the purpose of the project in several locations. In particular:

(a) The EIS (December 2015) provides in its Executive Summary that:

Canadian National Railway Company (CN) provides intermodal services to the region through its Brampton Intermodal Terminal (BIT) which connects the GTHA with its network of 20 domestic terminals and seven CN-served container ports across North America. BIT, which is Canada's largest inland intermodal terminal (by volume), handles approximately 1 million containers annually. With 50% of CN's intermodal volumes flowing through BIT, this facility is a key component of CN's rail distribution network. BIT is nearing capacity and in order for CN to meet customer demand and maintain its competitiveness, additional capacity is required. To address the need to support long-term growth, CN made a strategic decision to move forward with plans to develop a satellite intermodal terminal in the western portion of the GTHA, where CN's growing customer base is located.

(b) The EIS (December 2015) provides under s.2.1 “Purpose of the Project,” that:

The purpose of the Project is to construct and operate a satellite intermodal terminal to meet CN's growing operational and commercial needs. Given that the economy, including transportation and warehousing, has grown by 20% between 2001 and 2011 (Hemson Consulting Ltd. 2012), the Project positions CN to serve the growing demand for logistics support in the GTHA and western Ontario markets (Strategic Projections Inc. 2013).

... To protect its future obligation to support growing traffic volumes, CN made the strategic decision in 1999 to acquire approximately 1,000 acres of land in South Milton. Expansion projects and productivity initiatives at BIT deferred the immediate requirement to develop the land for intermodal use. After investing over $50 million to support the growing volumes at BIT, this facility is now approaching capacity with limited opportunities for significant expansion. A land review confirmed that sufficient and suitable land could not be acquired around BIT (Cushman & Wakefield 2015). Additional capacity is required to enable CN to continue to support the growing demand for intermodal services in the GTHA.

To address the need to support long-term growth, CN made a strategic decision to move forward with plans to develop a satellite intermodal terminal in the western portion of the GTHA, where CN's growing customer base is locating. Several sites in the area were evaluated, as outlined in the Milton Logistics Hub—Site Selection Study (Appendix F), with CN's South Milton property being the best available location to satisfy CN's operational and commercial needs.
26. These statements indicate that the CN Milton project purpose is tied closely to CN’s existing Brampton intermodal facility, the current capacity of that facility, and constraints on expanding this capacity. These statements also suggest that the major factor affecting capacity is available land. The Region seeks to better understand this conclusion since the available land in Milton is considerably larger than the existing land at the Brampton facility. If available land is the major factor, then the capacity of the Milton facility would be larger than the Brampton facility, not smaller.

27. To provide advice on intermodal design and capacity, the Region has retained an independent expert from the United States, John Vickerman. Mr. Vickerman has provided the Region with a detailed report that is part of the present Halton Municipalities Sufficiency Review. This expert has advised that available land is not the only major factor affecting intermodal design and capacity. In his experience that is based on other current existing and approved intermodal facilities across North America, technology constitutes a second major factor affecting design and capacity. Further, his experience leads him to believe that, compared to traditional technologies, current intermodal technologies have the potential to increase capacity by several multiples of existing capacity.

28. As referenced in the report from Mr. Vickerman, CN’s stated purpose of the current project puts in question whether a capacity assessment and improvements at the Brampton facility would better address this purpose than what is proposed in Milton.

29. Based on independent expert opinion, the Region seeks additional information from CN on three topics related to the purpose of the CN project:

(a) the factors considered by CN in its assessment of the future capacity of the Brampton facility, including technologies to increase capacity;

(b) the factors considered by CN in its assessment of the initial and ultimate capacity proposed for the Milton facility, including technologies that affect these capacities;

(c) the reasons, if any, for CN rejection of current technologies that could improve intermodal capacity at either facility.

30. Information requests on these topics are provided in Mr. Vickerman’s report in Appendix A at pp. 17–19 and in Table B under the Planning IRs.

3.2 Alternatives

31. The CEAA 2012 and the EIS Guidelines require the CN EIS to identify and consider the alternative means of carrying out the project that are technically and economically feasible. The EIS Guidelines also specify that this factor shall address, at a minimum, five project components, namely:

- project site location;
- approved transportation corridors and routes for truck traffic for vehicles owned and operated by the proponent;
- access points to the project site;
- location of key project components; and
32. The EIS Guidelines also specify the methodology applicable to each component that is subject to this factor. In particular, the Guidelines require the EIS to complete a four-step process for addressing these alternatives, as follows:

- Identify the alternative means to carry out the project;
- Identify the effects of each technically and economically feasible alternative means;
- Select the approach for the analysis of alternative means (i.e., identify a preferred means or bring forward alternative means); and
- Assess the environmental effects of the alternative means. (p.14 of the EIS Guidelines).

33. In response to the EIS Guidelines, the CN EIS deals with alternative means of carrying out the project considering the technical and economic feasibility of two project components, namely:

- alternative project site location; and
- alternative transportation corridors (i.e., routes for truck traffic for vehicles owned and operated by CN);... (EIS, p.24).

34. As concerns other project components, the EIS provides “location and design considerations of key Project components of the preferred location.” It applied these considerations to the following project components:

- truck entrance location;
- gate location;
- Lower Base Line crossing;
- water supply;
- wastewater management;
- Storm Water Management;
- utilities; and
- Indian Creek realignment. (EIS, pp.24–25).

35. The EIS deals with alternative project site location in the main report and in Appendix F. The main report summarizes the results set out in Appendix F. The Region has reviewed the EIS and Appendix F. It believes that, for most project components, the EIS does not provide sufficient detail to demonstrate that CN followed the 4-step planning process for alternatives that is set out in the EIS Guidelines.

36. Specific information requests on these topics are provided in Mr. Vickerman’s report in Appendix A, at pp. 23–33).
3.3 Project Description

37. The EIS Guidelines require the EIS to describe the project by presenting the project components, associated and ancillary works, and other characteristics that will assist in understanding the environmental effects.

38. The CEAA provides that the scope of the “designated project” is broader than the physical activity or activities designated by regulation. For purposes of CEAA, the scope of the designated project includes “any physical activity that is incidental to those activities.”

39. This project involves more “physical activity” than construction and operation of a railway yard. A description of some of the works is included in the Table below.

<table>
<thead>
<tr>
<th>Description of Works associated with the Project</th>
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<tr>
<td>Construction of three 2 km work pads around three of the yard tracks</td>
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<td>Construction of new mainline rail to (1) double 4.2 km of the existing single line by constructing a new section of a second mainline rail, and (2) construct a new 1.5 km section of doubled mainline rail</td>
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<tr>
<td>Construction of new mainline tracks in the area of Lower Base Line to divert the mainline during municipal construction of a new Lower Base Line underpass</td>
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<tr>
<td>Construction of a proposed railway underpass for the Town’s Lower Base Line that is identified by CN to be carried out by the Town of Milton</td>
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<td>Construction and operation of three new rail line crossings of Britannia Road</td>
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<td>Construction and operation of five new pipeline crossings</td>
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<td>Construction and operation of new rail line crossings of an existing electricity transmission line</td>
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<td>Construction and operation of all-season paved roads on CN property</td>
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<td>Construction and operation of a new internal road crossing over six CN tracks</td>
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<td>Construction and operation of a new administration building, a new maintenance garage and two parking lots to serve these buildings</td>
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<td>Construction and operation of two new access points to municipal roads and intersection improvements</td>
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<td>Construction and operation of “drip trays” alongside the rail lines to allow fuel trucks to refuel trains</td>
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<td>Construction and operation of new storm water collection and treatment facilities with discharge to Indian Creek</td>
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<td>Construction of one “box culvert” underneath the rail tracks and a second box culvert underneath the proposed truck entrance road leading to a new stormwater facility</td>
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<tr>
<td>Construction and excavation of new culverts and/or drainage ditches to re-align Indian Creek Tributary A</td>
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Description of Works associated with the Project

<table>
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<tr>
<th>Description</th>
<th>Details</th>
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<tr>
<td>Construction and excavation of a new permanent stream to replace an existing permanent stream</td>
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<tr>
<td>Construction of new mainline and yard line crossings of Indian Creek Tributary B</td>
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<tr>
<td>Operation of new cranes (8–12), tractors (8–10), light vehicles, and maintenance vehicles</td>
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<td>The operational storage of CN containers on and off rail cars</td>
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<tr>
<td>The operation of trucks delivering and receiving railway freight</td>
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40. The EIS sets out details on the Project in Chapter 3. As set out in the attached expert report from Mr. Vickerman, the EIS lacks important information on the Project and its components. Key examples of missing information include:

   (a) Details on the maximum daily capacity of all Project components contributing to or limiting the maximum daily terminal capacity or throughput;

   (b) Details on the location and maximum daily capacity of container storage on-site, on and off-rail;

   (c) Details on Project construction including (1) timetable, (2) daily hours of activity, (3) erosion and sediment controls and plan, (4) equipment laydown areas; and

   (d) Details on Project operations including (1) truck movements and operations, (2) train operations, (3) lift operations, (4) anticipated volumes of special containers (anticipated quantities of hazardous materials passing through, handled, or stored at the site; and

   (e) Preliminary designs and layouts for the terminal and terminal components, including (1) terminal entrance and exit gate, (2) administration building, (3) bad order and escape tracks, (d) refrigerated container areas, (4) train and equipment refueling system, (5) road underpass, (6) pipeline crossings, and (7) transmission line crossing;

41. Specific information requests on these topics are provided in Mr. Vickerman’s report in Appendix A at pp. 34–47.

3.4 Effects

42. CEAA 2012 and the EIS Guidelines require the CN EIS to assess the “environmental effects” of the project. CEAA 2012 provides initial guidance on this topic through its definition of “environment,” its section on “environmental effects,” and list of “factors” to be taken into account in the environmental assessment (s.19), which includes requirements to address accidents and malfunctions, and cumulative effects.

43. The EIS Guidelines require CN to use best available information and methods in the environmental effects assessment (EIS Guidelines, Part 1, s. 4.2)
44. The EIS Guidelines provide detailed guidance on this topic in section 6, particularly subsections 6.2, 6.3, and 6.6. Subsection 6.2 deals with predicted “changes” to the environment. Subsection 6.3 deals with predicted “effects” on valued components (VCs).

45. The EIS Guidelines provide that the EIS will identify “government policies...pertinent to the project and/or EA and their implications”, as well as “any relevant land use plans.” Consistent with the EIG Guidelines, the Halton Municipalities Brief used an objective approach to identify VCs: each identified VC was within the scope of the EIS Guidelines and had recognized value to the Halton municipalities through incorporation into a relevant municipal policy and standard.

46. The CN EIS identifies the VCs it has addressed in section 6.1. It identifies three biophysical VCs, and four human VCs. The biophysical VCs are fish and fish habitat, migratory birds, and species at risk. The socio-economic VCs are traditional land and resource use by Aboriginal Peoples, human health, socio-economic conditions, and archaeological and heritage resources.

47. By comparison, the Halton Municipalities Brief identified eighteen biophysical VCs and thirteen human VCs. The different treatment of VCs is summarized in Tables 1 and 2 below.

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<td><strong>Coverage of Biophysical VCs Within the Sufficiency Review</strong></td>
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<td>A. Land VCs</td>
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<td>B. Water VCs</td>
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<td>C. Air VCs</td>
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### Table 1
Coverage of Biophysical VCs Within the Sufficiency Review

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<th>D. Fish and Fish Habitat VCs</th>
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<th>F. Species at Risk</th>
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</tr>
<tr>
<td>D.2 Fish or invertebrate species at risk</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.3 Fish habitat (locations and functions)</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.4 Suitable habitat for species at risk</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.5 Fish movement</td>
<td>Not clear</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E.1 Migratory bird species in area</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E.2 Migratory bird use of area across all seasons</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F.1 Species at risk (in project vicinity)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F.2 Critical habitat (in project vicinity)</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

### Table B
Coverage of Human VCs within the Sufficiency Review

<table>
<thead>
<tr>
<th>No.</th>
<th>VCs identified in the Halton Municipalities Brief</th>
<th>Addressed as VC in EIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>G.</td>
<td>Health and Socio-economic Conditions</td>
<td></td>
</tr>
<tr>
<td>G.1</td>
<td>Human health conditions</td>
<td>Yes</td>
</tr>
<tr>
<td>G.2</td>
<td>Human safety conditions</td>
<td>Unclear</td>
</tr>
<tr>
<td>G.3</td>
<td>Rural settings</td>
<td>No</td>
</tr>
<tr>
<td>G.5</td>
<td>Residential land use: current and future approved</td>
<td>No</td>
</tr>
<tr>
<td>G.6</td>
<td>Urban industrial, commercial and institutional land use: current and future approved</td>
<td>No</td>
</tr>
</tbody>
</table>
### Table B

**Coverage of Human VCs within the Sufficiency Review**

<table>
<thead>
<tr>
<th>No.</th>
<th>VCs identified in the Halton Municipalities Brief</th>
<th>Addressed as VC in EIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>G.7</td>
<td>Commercial resource harvesting land use</td>
<td>No</td>
</tr>
<tr>
<td>G.8</td>
<td>Recreational water use</td>
<td>Unclear</td>
</tr>
<tr>
<td>H.1</td>
<td>First Nation reserves</td>
<td>NA</td>
</tr>
<tr>
<td>H.2</td>
<td>First Nation traditional land use and territory</td>
<td>Yes</td>
</tr>
<tr>
<td>H.3</td>
<td>Traditional land use</td>
<td>No</td>
</tr>
<tr>
<td>I.1</td>
<td>Physical and cultural heritage</td>
<td>Yes</td>
</tr>
<tr>
<td>I.3</td>
<td>Structure, site, or thing of heritage significance (i.e., historical, archaeological, paleontological or architectural significance)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### 48. It is difficult to compare the details of these VC lists. My review suggests that the CN EIS addresses six of the eighteen biophysical VCs identified in the Halton Municipalities Brief, and four of the thirteen human VCs identified in the Halton Municipalities Brief. This means that the CN EIS addresses ten of the thirty-one VCs identified by the Halton Municipalities’ Brief. Since the Halton Municipalities list of VCs was developed to comply with the EIS Guidelines, it is my opinion that:

(a) the CN EIS is deficient in its current approach to VCs, and should be amended to clearly address each of the VCs identified in the Halton Municipalities Brief.

### 3.5 Cumulative effects

49. CEAA requires that each EA of a project take into account any cumulative environmental effects likely to result from the project in combination with the environmental effects of other activities that have been or will be carried out. The EIS Guidelines at Part 2 Section 6.6.3 specifically require that CN identify and assess the project’s cumulative effects using the Agency’s approach.

50. The CEA Agency guidance on cumulative effects is currently set out in a 2015 Operational Policy Statement. It describes a 5-step process: scoping, analysis, mitigation, significance, and follow-up. The key topic is scoping because it addresses what the cumulative effects assessment must consider. In the OPS, the scoping stage starts from the identification of VCs. A preliminary list of VCs was set out in the EIS Guidelines and summarized above. The assessment must then set out the spatial and temporal boundaries.
of the assessment on each VC. Thirdly, based on these boundaries, the assessment must consider physical activities that have been carried out or that are reasonably foreseeable in the future.

51. The CN EIS considers cumulative effects at sections 6.2.10 and 6.6.1. The CN EIS limits its assessment of cumulative effects to the VCs identified above, namely: fish and fish habitat, migratory birds, species at risk, traditional land and resource use by Aboriginal Peoples, human health, socio-economic conditions, and archaeological and heritage resources.

52. For reasons similar to those set out above regarding VCs, it is my opinion that the CN EIS is deficient in its current approach to cumulative effects assessment with respect to its approach to VCs, and the CN EIS should be amended to clearly address each of the VCs identified in the Halton Municipalities Brief.

53. A further issue is the EIS review of foreseeable activities. Since the filing of the EIS, the Halton Municipalities have learned that CN is in negotiations with the Province of Ontario over the establishment of a new rail link between the existing Brampton intermodal terminal and the proposed Milton terminal location. It is not clear that CN is proposing this railway line, so it may not be part of the CN Project; however, regardless of proponent, this new railway line is relevant to the assessment of cumulative environmental effects of the CN Project. I can find no consideration of this Project in the EIS or subsequent CN document filed on the CEA registry. It is my opinion that the EIS should be amended to include this future project and assess its environmental effects.

54. My third comment on the EIS approach to cumulative effects is its failure to consider the ROP as a framework to assess cumulative effects. As this topic is closely related to the assessment of the significance of effects, this topic is addressed in greater detail below.

3.6 Accidents and Malfunctions

55. As summarized above (para.16), the Halton Municipalities have expressed interest in the protection of public health and safety related to the increased carriage, handling and storage of toxic and other harmful substances and the increased road and rail traffic associated with the Project. These municipal interests align with CEAA requirements to take into account the risk of accidents and malfunctions and their effects.

56. CEAA addresses accidents and malfunctions as a factor of assessment. The EIS Guidelines address this topic through three sub-topics:

   (a) the analysis of risk of occurrences, including their probability and severity, and including worst-case scenarios from an occurrence,

   (b) the effects caused by an occurrence, including environmental effects defined by CEAA, and worst-case effects, and

   (c) safeguards put in place to protect against any occurrences, and the contingency and emergency response procedures that are in place should an occurrence take place.

57. As concerns each type of accident or malfunction, the EIS Guidelines require that the assessment identify the magnitude of the accident and/or malfunction, and include the “quantity, mechanism, rate, form, and characteristics” of the contaminants and other materials that are likely to be released into the environment during an occurrence.
58. In response to the EIS Guidelines, the CN EIS identifies four potential accidents or malfunctions: a hazardous materials spill on land or water, a spill of an intermodal shipping container on land, traffic accidents at the entry points of the terminal, and derailment. (p.289). The EIS then presents each of these risks in relation to each VC that could be impacted. CN determined that the VC, Traditional Land and Resource Use, could not be impacted by an accident or spill, so it assessed six VCs only.

3.6.1. Risk Analysis

59. In response to the EIS, the Halton Municipalities have retained Dr. Frank Bercha, a professional engineer and a specialist in risk analysis. Dr. Bercha has reviewed whether the EIS provided sufficient information to consider the risk connected to potential accidents or malfunctions during project construction and operation, on the project site and on the surrounding roads and public locations. His overall conclusions were that the information provided by CN was insufficient to (1) address the requirements of the EIS Guidelines in respect of accidents and malfunctions, and (2) do a quantitative analysis in respect of risks to the local residents in the area of the proposed terminal. Dr. Bercha set out 13 information requests for supplemental information relating to risk of potential accidents and malfunctions.

4. SIGNIFICANCE OF ADVERSE ENVIRONMENTAL EFFECTS

60. The EIS Guidelines are explicit that the EIS identify relevant land use plans and government policy to assess this Project. As set out in the Halton Municipalities Brief (p.13), the CEA Agency has provided similar guidance in its current Operational Policy Statement on how to determine whether a designated project is likely to cause significant adverse environmental effects.

61. Based on this Guidance, the Halton Municipalities Brief provides an objective framework to assess the significance of adverse effects on six key topics: water, natural heritage, transportation, agriculture, residential, and employment. Each of these topics aligns with the CEAA framework, but also addresses concerns common to all levels of government—federal, municipal and provincial. These topics also provide the organizing framework for numerous effects-based standards of general application identified in the Brief. I note that the ROP approach to effects is suitable for assessing both project effects and cumulative effects under CEAA. Thus, in relation to my earlier opinions about the deficiencies of the EIS with regards to VCs used to assess project effects and cumulative effects, it is my opinion that each of the Halton Standards can be applied to the projects and activities identified in the EIS in its cumulative effects assessment. As this has not been done, it is a further deficiency of the EIS.

62. Using the provincial framework of land use law and policy, together with the Regional Official Plan, I am now providing my opinion on sufficiency of the CN EIS and related documents across each of the six key topics summarized above.

63. For each of the six topics, my opinion incorporates tables on municipal standards from Appendices A & B to the Halton Municipalities Brief, including information relating to the following questions:

- Does CN’s assessment of significance consider this standard?
- Does CN propose mitigation relevant to this standard? (if yes, comments on sufficiency)
- Does CN propose any follow-up relevant to this standard? (if yes, comments on sufficiency)
64. The information in these tables relies on the analysis and advice of the different experts retained by the Region to evaluate this proposal.

65. For ease of reference, the Halton Municipalities have prepared a consolidated table (Table A) to address the EIS treatment of all standards set out in the Halton Municipalities Brief. This consolidated table is organized to accord with the six key topics of the Brief.

4.1 Water

66. The Project is proposed on lands that include or abut water features. The project is proposing to alter drainage patterns and relocate a watercourse. In addition, the Project proposes to meet its water supply needs through one or more private wells drawing groundwater from aquifers, and its wastewater discharge needs through one or more private sewage works.

67. Since 2005, the PPS has required planning authorities to protect, improve, or restore the quality and quantity of water. Among other things, Ontario requires authorities, such as the Region, to use the watershed as the ecologically meaningful scale for integrated and long-term planning and to identify the water resource features and functions necessary for the ecological and hydrological integrity of the watershed (PPS 2005 2.2.1a & c)). The required water resource features and functions consist of groundwater and surface water features, natural heritage features and areas, and hydrologic functions.

68. The Halton Municipalities Brief identified four effects-based water standards of general application. In coordination with the relevant experts, I have worked with Region staff to address whether and how the EIS addresses each of the four water standards, as well as relevant mitigation and follow-up monitoring.

69. Within Table A, Table A-1 reviews the EIS for each of the municipal standards relating to water. It also contains all information requests related to obtaining from CN the information necessary to apply each water standard to this Project.

4.2 Natural Heritage

70. The ROP gives express recognition to natural heritage through a region-wide system known as the Regional Natural Heritage System ("RNHS"). ROP standards protect natural features, linkages and enhancement areas and their ecological functions from any negative impacts due to development or site alteration. The Project is proposed for lands that include and abuts the RNHS.

71. Natural heritage protection has been a central component of Provincial Policy Statements since 1994. Since 2005, the Greenbelt Plan has provided permanent protection to features within the provincial natural heritage system, which includes features within the Region. Also since 2005, the PPS has demanded that the ecological function and biodiversity of all natural heritage systems be maintained and that natural features and areas be protected for the long term. Provincial standards govern and protect significant wetlands, woodlands, valleylands, wildlife habitat, and areas of natural and scientific interest. The PPS also recognizes provincial standards to protect the habitat of endangered species and federal standards to protect fish habitat.

72. The systems approach to natural heritage adopted in the ROP includes all provincially-protected features, and adds protection judged important to the Region’s ecological system. This protection relies on current science that a natural heritage system is essential to protect and preserve individual natural heritage features within an area of concern.
73. The Halton Municipalities Brief identified two effects-based natural heritage standards of general application. In coordination with the relevant experts, I have worked with Region staff to address whether and how the EIS addresses each of the two natural heritage standards, as well as relevant mitigation and follow-up monitoring. As explained above (para.65), Table A within this Volume of the Sufficiency Review addresses the EIS treatment of all standards set out in the Halton Municipalities Brief.

74. Within Table A, Table A-2 reviews the EIS for each of the municipal standards relating to natural heritage. It also contains all information requests related to obtaining from CN the information necessary to apply each natural heritage standard to this Project.

4.2.1. Water and Natural Heritage

75. For water and natural heritage, because of inter-related expertise, the expert review of the EIS was carried out as a single coordinated review of water and natural heritage. The Water/Natural Heritage Team (W/NH Team), comprised of 8 specialist experts in surface and ground water, stream morphology, fisheries, and terrestrial natural heritage, concluded that the EIS does not have sufficient information to meet the EIS Guidelines information requirements on how to assess whether the project is likely to result in adverse effects in respect of water and natural heritage components. The most significant shortcoming was the failure to use or consider an ecosystem approach in examining the interrelated and interdependent elements that comprise the local natural heritage systems. Such an approach is fundamental to considering the natural heritage system in connection with Region requirements.

76. These experts also found other issues with respect to EIS compliance with the EIS Guidelines. These issues include issues with the framework and methods selected by CN, insufficient data and unsupportable conclusions, insufficient disclosure of study conditions and rationale, and an inability to assess the validity of the stated results. Table B in this Volume of the Sufficiency Review consolidates all of the information requests related to sufficiency of the EIS on water and natural heritage matters.

4.3 Transportation

77. The Regional Official Plan, together with the Transportation Master Plan provide for a regional transportation system that promotes options to vehicular travel and seeks to carefully calibrate major transportation facilities to present and future needs.

78. The trucking aspect of the Project is relevant to the ROP and the Region’s transportation system because the Project location abuts two regional roads, including Britannia Road to the north which is approved for a major future expansion. This Project location also raises issues for active transportation (e.g., walking and cycling) because it is across the street from existing and planned residential communities north of Britannia Road.

79. The 2005 PPS initiated provincial standards for transportation systems and their relationship to sensitive land uses. The 2006 GGH Growth Plan covers all transportation modes and purposes and offers an integrated vision of transportation growth and transportation management. The Growth Plan gives priority to the development of complete communities by intensifying residential and employment uses within urban boundaries. Key transportation priorities include the safe movement of people and goods. As concerns the movement of people, provincial policy seeks to limit the expansion of roads in favour of moving people within and across urban areas by transit and active transportation (e.g., walking, cycling).
80. The 2014 PPS introduces the terms, “Major goods movement facilities and corridors” and “Multimodal transportation system.” For the former, the 2014 PPS demands the protection of major goods movement facilities and corridors for the long term. For the latter, the new PPS demands connectivity within and among transportation systems and modes. Like the 2005 PPS, the new PPS demands that transportation and land use considerations be integrated at all stages of the planning process. Consistent with provincial policy, the ROP identifies the Region’s transportation system. It also promotes safety, accessibility, efficiency, and a balance of transportation options to promote public transit and active transportation, while reducing both dependency on vehicular travel and environmental impacts.

81. The Halton Municipalities retained outside expertise to review the EIS for transportation issues related to road safety, traffic flow, and the cost and financing of required transportation infrastructure.

82. The Halton Municipalities Brief identified three effects-based transportation standards of general application. In coordination with the relevant experts, I have worked with Region staff to address whether and how the EIS addresses each of the three transportation standards, as well as relevant mitigation and follow-up monitoring. As explained above (para.65), Table A within this Volume of the Sufficiency Review addresses the EIS treatment of all standards set out in the Halton Municipalities Brief.

83. Within Table A, Table A-3 reviews the EIS for each of the municipal standards relating to transportation. It also contains all information requests related to obtaining from CN the information necessary to apply each natural heritage standard to this Project.

4.3.1. Road Safety and Traffic Flow

84. Hart Solomon and Dr. Ali Hadayeghi are licensed professional transportation engineers and specialists in traffic operations and road safety. They concluded that the CN EIS lacked sufficient information and detail to determine the significance of any environmental effects in respect of traffic safety and traffic operations. Further, CN’s traffic and transportation assessment was based on assumptions regarding number of truck trips, yard capacity, traffic flow, road safety, rail safety and traffic congestion, but lacked sufficient (or in some cases, any) data, information, and rationales to allow review of the assumptions. For example, Mr. Solomon and Dr. Hadayeghi found no support for CN’s assumption that the project would introduce 800 truck trips each way (1600 total) per day. They also found CN’s assessment of the impact of the additional truck trips on road capacity to be problematic, in part because the EIS failed to convert the truck trips into passenger trips for the purposes of the traffic analysis. In addition, they found that the CN EIS failed to discuss several safety issues including overall collision effects of the additional truck trips, the effects on pedestrian and cyclist collisions and the effects of additional hazardous goods movements.

85. Mr. Solomon and Dr. Hadayeghi requested that CN prepare a Transportation Impact Study for the proposed development in accordance with the Region’s Transportation Impact Study Guidelines. Additionally, Table B in this Volume of the Sufficiency Review consolidates all of the technical information requests related to the sufficiency of the EIS on transportation matters.

4.3.2. Transportation & Municipal Finance

86. Alvaro Almuina is a licensed professional engineer and a specialist in transportation planning who reviewed the CN EIS for sufficiency related to the impacts of the proposed development on the Regional and Provincial transportation infrastructure. Mr. Almuina found no reference in the CN EIS to the cost of
the road infrastructure projects required by the proposed development, the source of the funding or the cost allocation for any such infrastructure. He further found that an assessment of the full impact of traffic generation from the site and the effect of this site on the area roadway networks and intersections was not undertaken by CN in accordance with industry standards or in accordance with Halton Region guidelines for traffic impact studies.

87. Mr. Almuina requested that CN prepare an infrastructure, staging and costing plan for the proposed development, as well as a traffic assessment in accordance with Halton Region’s Transportation Impact Study Guidelines. His report also includes information requests to address insufficient information in the EIS with regards to municipal finance and transportation.

88. Table B in this Volume of the Sufficiency Review consolidates all of the technical information requests related to the sufficiency of the EIS on transportation matters.

4.4 Agriculture

89. Some of the physical activities and future works related to the project are within, and adjacent to, lands that are designated Agricultural Area in the Regional Official Plan. Policy 101(1.6) of the Regional Official Plan states that it is the policy of the Region to, “Recognize and protect lands within the Agricultural System as an important natural resource to the economic viability of agriculture and to this end:

(a) Direct non-farm uses to the Urban Area, Hamlets and Rural Clusters unless specifically permitted by policies of this Plan.”

90. The Halton Municipalities Brief identified two effects-based agriculture standards of general application. I have worked with Region staff to address whether and how the EIS addresses each of these two agriculture standards, as well as relevant mitigation and follow-up monitoring. As explained above (para.65), Table A within this Volume of the Sufficiency Review addresses the EIS treatment of all standards set out in the Halton Municipalities Brief.

91. Within Table A, Table A-4 reviews the EIS for each of the municipal standards relating to agriculture. It also contains all information requests related to obtaining from CN the information necessary to apply each natural heritage standard to this Project.

4.5 Impacts on Residents and Residential Land Uses

92. The Regional Official Plan, together with the Local Official Plan and related standards and guidelines contain policy and guidance related to residential communities and residential lands. These are relevant to the Project because the Project neighbourhood includes existing and planned residential communities north of Britannia Road.

93. Provincial law requires attention to avoid adverse effects related to air and noise emissions. The PPS provides broader guidance to promote healthy communities. It seeks to ensure land use compatibility between sensitive land uses like homes, schools, and hospitals, and major facilities such as transportation works. It covers noise and air quality effects and, in general, addresses a broader range of adverse effects than do the current numeric standards published by the Province. Additional effects include night-time lighting levels and the cumulative effects of existing and proposed emission sources.
94. The ROP provides systematic treatment of residential lands in order to support provincial policy promoting complete and healthy communities. It also does so to conform to binding provincial policy to accommodate major growth in urban populations across the Greater Golden Horseshoe. This policy targets urban areas and imposes numerical targets on municipalities to intensify their residential land use and promote mixed land use with residential and other compatible land uses.

95. The Halton Municipalities retained outside expertise to review the EIS for issues related to impacts on nearby residences and residential communities. Experts were retained to address impacts from nighttime lighting, noise, vibration, and air emissions. This outside expertise also includes an expert on the health impacts of air emissions from the Project in combination with ambient air quality.

96. The Halton Municipalities Brief identified three effects-based standards of general application to impacts on residents and residential land uses. In coordination with the relevant experts, I have worked with Region staff to address whether and how the EIS addresses each of the three relevant standards, as well as relevant mitigation and follow-up monitoring. As explained above (para.65), Table A within this Volume of the Sufficiency Review addresses the EIS treatment of all standards set out in the Halton Municipalities Brief.

97. Within Table A, Table A-5 reviews the EIS for each of the municipal standards relating to impacts on residents and residential uses. It also contains all information requests related to obtaining from CN the information necessary to apply each natural heritage standard to this Project.

4.5.1. Night-time Lighting Impacts

98. Dr. Donald R. Davis and Christian B. Luginbuhl collectively have over 50 year of experience in the field of light pollution assessment and mitigation. They reviewed the CN EIS and, in particular, the Milton Logistics Hub - Technical Data Report Light (Appendix E.8), with respect to the environmental impacts of the night-time lighting due to the proposed CN Milton Logistics Hub. Dr. Davis and Mr. Luginbuhl found the EIS contains a number of deficiencies that preclude a quantitative assessment of the effects of the outdoor lighting for the proposed CN Project on light trespass, glare and sky glow. Concerns include the boundaries of the assessment area, absent or insufficient quantitative assessment of the existing, glare and sky glow baseline conditions, and the lack of quantitative assessment of the predicted future glare or sky glow impact. Other concerns were the use of dated assessment criteria for light trespass and glare, and the lack of quantitative assessment of the effectiveness of suggested mitigation strategies.

99. Table B in this Volume of the Sufficiency Review consolidates all of the technical information requests related to the insufficiency of the EIS assessment of night-time lighting impacts.

4.5.2. Noise and Vibration Impacts

100. Mr. Scott Penton and Mr. Marcus Li are professional engineers who specialize in acoustics, noise, and vibration. They reviewed the EIS to determine if the information provided is sufficient to assess the effects of the proposed terminal on local residents in the neighbouring municipalities. In their opinion, the information provided was not sufficient to determine these impacts.

101. Their review of the sufficiency of the EIS identified a number of deficiencies, including the failure to adequately distinguish between transportation noise associated with increased locomotive and truck traffic, and stationary noise associated with operation of the terminal. These different categories of noise need to be assessed against different sets of standards and guidelines, which was not done. Additional
concerns relate to predicted noise impacts of the facility, and the potential for these impacts to be underestimated due to the approach taken to determining baseline ambient levels, and the manner in which monitoring locations and receptor points were incorporated into the EIS analysis.

102. Table B in this Volume of the Sufficiency Review consolidates all of the technical information requests related to the insufficiency of the EIS assessment of noise and vibration impacts.

### 4.5.3. Air Quality

103. The EIS and the Greenhouse Gases report, as well as related earlier responses from CN to information requests, were examined by Dr. Franco DiGiovanni, an expert in air quality and pollution. Dr. DiGiovanni focused on the increased emissions relating to the future operating scenario for the terminal.

104. Dr. DiGiovanni’s review of the sufficiency of the EIS identified concern that the EIS modeling for air quality impacts may have materially underestimated impacts as the modeling did not generally apply a conservative, worst-case scenario approach to calculating baselines or future pollutant levels. As well, the EIS did not assess all activities for all expected sources of air emissions, nor assess all chemicals of potential concern from all relevant activities. A further concern was that the EIS contained insufficient information to review use of dispersion modelling. Overall, these concerns led Dr. DiGiovanni to advise that the review of health impacts related to air quality would not have sufficient information.

105. Table B in this Volume of the Sufficiency Review consolidates all of the technical information requests related to the insufficiency of the EIS assessment of air quality impacts.

### 4.5.4. Human Health

106. Dr. George Thurston is an expert in human health impacts associated with changes in air quality. He considered the Technical Data Report—Air Quality (Appendix E.1) from this perspective. His review identified two deficiencies with the EIS: first, in order to determine the health impacts of the proposed facility, the EIS needed to include modeling of air quality impacts (particularly increases in Diesel Particulate Matter) from all pollution sources associated with the proposed facility. Second, the EIS needed to use Census subdistricts to properly assess health impacts for persons residing in the local municipalities.

107. Table B in this Volume of the Sufficiency Review consolidates all of the technical information requests related to the insufficiency of the EIS assessment of human health impacts due to changes in air quality.

### 4.6 Employment and On-site Impacts

108. Employment and employment land use standards are relevant to the Project because the majority of the physical activities proposed for the Project take place on lands that are designated for employment use and subject to minimum employment density targets.

109. Provincial policy targets urban areas and imposes numerical targets on municipalities to intensify their employment land use and promote mixed land use with residential and other compatible land uses. Based on provincial law and policy, a municipality may expand its urban boundary into a rural area only where it has no realistic alternative.

110. The ROP provides systematic treatment of employment lands. It does so:
to support provincial policy which promotes complete and healthy communities and seeks to stop or reduce urban sprawl into rural areas; and

- to conform to binding provincial policy to accommodate major growth in urban populations across the Greater Golden Horseshoe.

111. The approved 2014 Regional Official Plan represents the result of an eight-year process undertaken by the Region to address employment growth targets with minimal intrusion into rural areas. The ROP sets out clear urban boundaries across the Region to the year 2031 and requires that each lower-tier municipality provide its future employment within these boundaries. The Province has also established employment density targets to be met by all municipalities, including the Region and the Town of Milton. All of the lands designated as employment lands within the ROP represent the Region’s response to provincial targets.

112. Ontario provides municipalities with a range of financial tools to facilitate growth in a fiscally sustainable way. The ROP also represents the Region’s solution to growth in a sustainable way. Sustainable financing of growth involves substantial contributions from developers, with preference to infill over greenfield development.

113. The Halton Municipalities retained outside expertise to review the EIS for on-site impacts. These impacts include impacts on designated greenfield areas, employment use and density, urban services, municipal finance, and archaeology.

114. The Halton Municipalities Brief identified six effects-based standards of general application to impacts on residents and residential land uses. In coordination with the relevant experts, I have worked with Region staff to address whether and how the EIS addresses each of the six relevant standards, as well as relevant mitigation and follow-up monitoring. As explained above (para.65), Table A within this Volume of the Sufficiency Review addresses the EIS treatment of all standards set out in the Halton Municipalities Brief.

115. Within Table A, Table A-6 reviews the EIS for each of the six municipal standards relating to the CN site and designated employment uses. It also contains all information requests related to obtaining from CN the information necessary to apply each natural heritage standard to this Project.

4.6.1. Employment Lands

116. Russell Matthews, a professional planner, land economist and demographer with particular experience in growth management and long-range planning, reviewed the CN EIS with respect to employment lands in the Region. Mr. Matthews found that the EIS only briefly addressed matters related to employment and failed to identify any adverse impacts from the Project on employment lands such as anticipated employment density compared to ROP employment densities. Equally, the EIS did not provide details regarding direct onsite employment or indirect off-site employment. Mr. Matthews noted that a number of reports cited in the EIS were not provided. Further, the EIS provides no conclusions as to the significance or mitigation of any effects.

117. Table B in this Volume of the Sufficiency Review consolidates all of the technical information requests related to the insufficiency of the EIS assessment of impacts on designated employment lands and land uses.
4.6.2. Municipal Finance and Water Services

118. Gary Scandlan, a professional land economist with experience preparing development charge and other municipal financial studies, and Chris Hamel, a professional engineer with expertise in infrastructure planning and asset management primarily for water and wastewater infrastructure, together reviewed the CN EIS in respect of municipal finance and infrastructure servicing for water and wastewater.

119. Mr. Scandlan found that the CN EIS provide a limited level of financial evaluation of the development. He also found that the EIS referred to reports that it did not provide. Based on concern that financial benefits identified in the EIS were based on “induced” economic benefit and not the “direct” benefits of the Project, Mr. Scandlan requests that CN conduct a fiscal impact study to identify the potential long term capital and operating costs. He also seeks information on the potential property taxes and user fee related revenues to assess the net financial impacts of the Project on the Region. As well, Mr. Scandlan has requested an assessment of the impact of the Project on the property value and correspondingly property taxes for surrounding residences and businesses.

120. Table B in this Volume of the Sufficiency Review consolidates all of the technical information requests related to the insufficiency of the EIS assessment of impacts of the Project on municipal finance.

121. Mr. Hamel found that the EIS and background studies contained in the EIS have limited information regarding water and wastewater servicing requirements of the Project. While the EIS provided that the proposed site will address servicing through private systems and not connect to municipal infrastructure, it also contains background information which indicates future consideration of connection to municipal systems. Most significantly, the EIS provides no comprehensive documentation on the water needs and wastewater generated by the Project’s land use. Nor does it provide any information on what conditions would merit future consideration for municipal servicing for the Project lands. The EIS also lacks information on the approach, process or coordination required to consider and implement future connection of the Project lands to the municipal systems. A further concern with the EIS was its failure to address the potential “halo effect” of additional related development and the servicing requirements for this surrounding development.

122. Table B in this Volume of the Sufficiency Review consolidates all of the technical information requests related to the insufficiency of the EIS assessment of impacts of the Project on municipal water services.

4.6.3. Archaeology

123. Lisa Merritt, a senior archaeologist, considered whether or not the CN EIS provided sufficient information to allow the Joint Panel to assess whether the Project is likely to result in Significant Adverse Environmental Effects with respect to archaeological resources. Ms. Merritt concludes that EIS is deficient because it does not provide Stage 3 archaeological assessment reports, despite advising that Stage 3 field investigations were required. The Stage 3 work is required to assess impacts and requirements for Stage 4 work on mitigation.

124. Table B in this Volume of the Sufficiency Review consolidates all of the technical information requests related to the insufficiency of the EIS assessment of impacts of the Project on archaeology.

4.7 Geotechnical
125. The Halton Municipalities have also sought outside expertise to review geotechnical issues related to this Project. Mr. Mostakhdemi and Mr. Dimitriu are geotechnical engineers who reviewed the EIS for sufficiency relating to the geotechnical work done in the area of the proposed project site. They identified several aspects of the geotechnical work which required further work or follow-up. Their concerns include the limited size of the study area: the EIS geotechnical analysis was limited to the Proposed Development Area (PDA); these expert believe that the increased volume of heavy truck traffic on the roads around the PDA should have been considered for geotechnical and pavement-related impacts. As well, due to the proposed grade separation at Lower Baseline Road, installation of culverts, replacement watercourses and storm management ponds, these experts believe that further characterization work is required to address risks associated with deep excavations in the local terrain, such as the risk of hitting confined aquifers and pervious lenses.

126. Table B in this Volume of the Sufficiency Review consolidates all of the technical information requests related to the insufficiency of the EIS assessment of geotechnical issues relevant to the Project.

5. SUFFICIENCY OF THE CN APPLICATION AND EIS UNDER SECTION 98 OF THE CTA

127. The agreement between the Minister of the Environment and Climate Change and the Chair of the Canadian Transportation Agency provides the terms of this special joint panel review involving CEAA and CTA matters. A topic common to both the CEAA and CTA is the requirements of s.98 of the CTA.

128. Earlier in my report, I have identified the concerns of the five Halton localities in this Project. I have also identified key issues related to various CEAA factors of assessment, project components, and cumulative effects. These issues also have relevance to the two statutory considerations set out in s.98 of the CTA regarding the reasonableness of the location of a proposed railway line, namely requirements for railway operations and services, and the interests of localities that will be affected by the line.

5.1 Requirements for railway operations and services

129. In this part of Ontario, rail lines can serve two purposes: freight rail and commuter rail. The province has made commitments to provide increased commuter rail service using numerous existing lines that tie into Toronto Union Station.

130. On this basis, it is therefore likely that any proposal to increase freight rail use on an existing rail line in this area will have implications for commuter rail operations and service.

131. The CN information does not address this implication of its s.98 application.

132. Similarly, as set out above (para.54), the CN application does not address the implications of its current negotiations with the Province of Ontario regarding a new rail line between CN’s existing Brampton facility and the existing Milton rail lines.

133. In my opinion, these deficiencies with the CN s.98 application also count as deficiencies in relation to the CEAA assessment. I also request that this joint panel obtain current information from CN on these two topics so that this panel and the Halton Municipalities may better understand these important issues for railway operations and services, and also understand their environmental effects in relation to this Project and its cumulative effects.
5.2 Consultation on the interests of the localities

134. Through s. 98, the CTA requires that the “interests of the localities,” as identified in Section 2.1, be taken into account in considering whether to approve new railway lines. According to the CTA website, the Agency adopted the following approach, indicating that railway companies will:

- undertake consultations with the localities with a view to developing collaborative measures to address the relevant issues raised;
- consult with municipalities, adjacent landowners and Aboriginal groups, when and as applicable;
- provide information to allow an adequate understanding of the project and to ensure that consultations are meaningful;
- provide the Agency with a detailed account of these consultations and any agreements put in place to address objections that may have been raised; and
- identify issues where no agreement was reached and that must be dealt with by the Agency.

135. As a part of the project, I am aware of no evidence or documentation to show that CN consultations have sought to develop collaborative measures to address the interests and issues relevant to the Halton Municipalities.

136. Additionally, the EIS fails to provide sufficient details on Project design and operations. In Mr. Vickerman’s report, he lists several design and operations items that are of interest to the Halton Municipalities. These are referenced in Mr. Vickerman’s information request, at p. 34–35. These include, Site Plan, Site Alteration, Lower Base line, Entrance permits, Road improvements, and Truck versus residential interface.

5.3 Conclusions

137. On behalf of the five Halton Municipalities, I have reviewed the CN EIS in coordination with municipal staff and identified external experts.

138. The purpose of this review has been to assess whether the EIS contains sufficient information to (a) proceed to a full evaluation of this Project and its likelihood of causing significant adverse environmental effects under CEAA, and (b) assess the merits of the CN application for railway line approval under s.98 of the CTA.

139. It is my opinion that the EIS does not contain sufficient information to proceed further under CEAA or the CTA.

140. It is also my opinion that extensive information is required to proceed further under either regime, but particularly CEAA.

141. In Volume 1 of this Sufficiency Review, the Halton Municipalities have included two consolidated tables.
142. The first consolidated table, Table A, focuses on the sufficiency of the EIS in relation to the EIS Guidelines and the Standards identified by the Halton Municipalities in the Halton Municipalities Brief filed with the panel in December 2016 and now listed on the public registry for this panel review. These standards directly concern the question whether this Project is likely to cause significant adverse environmental effects for the key topics of water, natural heritage, transportation, agriculture, residential, and employment impacts. Table A also consolidates the information requested by the Halton Municipalities to address deficiencies in the EIS with respect to assessing whether the Project complies with each of these standards.

143. The second consolidated table, Table B, focuses on the sufficiency of the EIS from the standpoint of the technical experts retained by the Halton Municipalities, based on their review of the EIS Guidelines. Table B also identifies all information requested by these experts to permit future review of this Project in compliance with the EIS Guidelines.

144. I would be pleased to discuss any aspects of my opinion with the Panel; otherwise, I look forward to receiving the information requested by and on behalf of the Halton Municipalities to participate fully in this joint panel review.

Ron Glenn, MCIP, RPP
Chief Planning Official, Halton Region
Table A: Information requests (IRs) related to Municipal Standards

Table A-1: Municipal Standards for SAEEs—Water

<table>
<thead>
<tr>
<th>Municipal standard with references to Halton Brief and Appendices A, B and C</th>
<th>Additional information required to apply the standard</th>
<th>CN Consideration of Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitive Surface Water and Groundwater</td>
<td>• Delineation of watershed boundaries using most recent and accurate mapping, adequate stream flow measurements for consecutive seasons to establish water quantity baseline, establishment of water budget using continuous simulation technology, and further impact assessment. See IR WNH1, WNH2, WNH5, WNH7</td>
<td>1. Does CN’s assessment of significance consider this standard? No</td>
</tr>
<tr>
<td>To restrict <em>development</em>¹ and <em>site alteration</em>² in or near <em>sensitive surface water or groundwater features</em>³ to protect, improve or restore such features</td>
<td>• Configuration of stormwater management ponds that complies with drawdown parameters for the Town of Milton. See IR WNH3</td>
<td>2. Does CN propose mitigation relevant to this standard? Yes, but more information is required to review whether the mitigation is sufficient.</td>
</tr>
<tr>
<td>(ROP Reference 145(23)) Halton Brief, Table D.3</td>
<td>• Measures to protect sensitive surface and ground water by containing contaminated runoff. See IR WNH4, WNH15</td>
<td>In respect of surface water features, there has been no impact assessment to consider which valued components may be disrupted and therefore require mitigation.</td>
</tr>
<tr>
<td>Halton Brief, App. B, Part A.3.1</td>
<td></td>
<td>As well, other mitigation measures including stormwater management ponds and permeability measures have not been appropriately documented or rationalized.</td>
</tr>
<tr>
<td>Halton Brief, App. A, fig. 9: Sensitive Surface Water Features</td>
<td></td>
<td>It has not been clarified whether anti-seepage collars would form part of the mitigation strategy to prevent contamination.</td>
</tr>
<tr>
<td>Halton Brief, App. A., fig. 10: Study Areas for</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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¹ *Development (ROP):* The creation of a new lot, a change in land use, or the construction of buildings and structures, any of which requires approval under the *Planning Act*, or that are subject to the Environmental Assessment Act, but does not include: 226(1) activities that create or maintain infrastructure authorized under an environmental assessment process, 226(2) works subject to the Drainage Act, or 226(3) within the Greenbelt Plan Area, the carrying out of agricultural practices on land that was being used for agricultural uses on the date the Greenbelt Plan 2005 came into effect. *Development (PPS):* The creation of a new lot, a change in land use, or the construction of buildings and structures requiring approval under the Planning Act, but does not include: a) activities that create or maintain infrastructure authorized under an environmental assessment process; b) works subject to the Drainage Act; or c) for the purposes of policy 2.1.4(a), underground or surface mining of minerals or advanced exploration on mining lands in significant areas of mineral potential in Ecoregion 5E, where advanced exploration has the same meaning as under the Mining Act. Instead, those matters shall be subject to policy 2.1.5(a).

² *Site alteration (ROP):* Activities, such as grading, excavation and the placement of fill that would change the landform and natural vegetative characteristics of a site but does not include normal farm practices unless such practices involve the removal of fill off the property or the introduction of fill from off-site locations. *Site alteration (PPS):* Activities, such as grading, excavation and the placement of fill that would change the landform and natural vegetative characteristics of a site. For the purposes of policy 2.1.4(a), site alteration does not include underground or surface mining of minerals or advanced exploration on mining lands in significant areas of mineral potential in Ecoregion 5E, where advanced exploration has the same meaning as in the Mining Act. Instead, those matters shall be subject to policy 2.1.5(a).

³ *Sensitive Surface Water or Ground Water features (PPS):* Areas that are particularly susceptible to impacts from activities or events including, but not limited to, water withdrawals, and additions of pollutants.
<table>
<thead>
<tr>
<th>Municipal standard with references to Halton Brief and Appendices A, B and C</th>
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</thead>
</table>
| **Sensitive Surface Water Features** | • Measurement of further parameters to assess water quality, explanation of measurement conditions, sediment measurements, and validation of water quality baseline. See IR WNH9, WNH10, WNH11, WNH12  
• Construction and post-construction groundwater monitoring program to assess and monitor water quality. See IR WNH16 | Ref: Water/Natural Heritage Expert Report, p. 11–14, 18–19, 21 [Volume 2, Tab D at 97–100, 104–105, 107]. |
| **Urban Water quality and quantity**  
To permit *development*[^1] in the Urban Area on private wells and/or private sewage disposal systems only on an interim basis until urban service[^2] is available.  
Halton Brief, Table D.3, (ROP reference 89(4).  
Halton Brief, App. B, Part A.3.3  
Halton Brief, App. A, fig 26: Agricultural Area and Urban Area | • Information regarding servicing requirements and capacity analysis including daily water use and wastewater generation, fire flow requirements, and detailed specifications of the proposed private systems. See IR EW4  
• Servicing risk analysis including overall water and wastewater servicing risk analysis, water and wastewater system protection and mitigation measures and private system contingency plan. See IR EW5  
As well, there has been no information submitted to outline how site servicing will be consistent with the Provincial Policy Statement, or conform to the Regional Official Plan and/or related guidelines. At a minimum the following information is required: | 1. Does CN’s assessment of significance consider this standard?  
No.  
  
2. Does CN propose mitigation relevant to this standard?  
No.  
  
Ref: Municipal Finance and Infrastructure Report, p. 9 [Volume 2, Tab L at 366].  
  
3. Does CN propose follow-up relevant to this standard?  
No.  
  
Ref: Municipal Finance and Infrastructure Report, p. 9 [Volume 2, Tab L at 366] |

[^1]: See footnote 1  
[^2]: Urban services (ROP): Municipal water and/or wastewater systems or components thereof which are contained within or extended from Urban Area designations or from municipalities abutting Halton Region.
### Table A: Information requests (IRs) related to Municipal Standards

<table>
<thead>
<tr>
<th>Municipal standard with references to Halton Brief and Appendices A, B and C</th>
<th>Additional information required to apply the standard</th>
<th>CN Consideration of Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>• P1. Full details of proposed private water servicing. A full description of the proposal, with details of water use, maximum water use, ranges of daily use, range of annual use, and wastewater generated.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• P2. Private Servicing—Compliance with Region Requirements. A statement on whether and how the proposal complies with ROP 89(3), 89(4) and the Region’s Urban Services Guidelines. As well, section 3.1.1 of the Region’s Urban Services Guidelines contains criteria to assess whether proposals can proceed on private services.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groundwater quality</td>
<td>• Construction and post-construction groundwater monitoring program to assess and monitor water quality. See IR WNH16</td>
<td>1. Does CN’s assessment of significance consider this standard?</td>
</tr>
<tr>
<td>To consider approval of development proposals only when the site complies with Provincial guidelines, Regional standards and other requirements regarding groundwater quality. Halton Brief, Table D.3 (ROP Reference 147(18)) Halton Brief, App. B, Part A.3.3</td>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>• P3. Groundwater quality—Compliance with Region Requirements. A statement of whether and how the proposal complies with the Region’s Hydrogeological Studies &amp; Best Management Practices for Groundwater Protection Guidelines in respect of groundwater quality is required. Other Provincial requirements that relate to Groundwater quality should also be reviewed and referenced. For example, MOE documents titled, “Technical Guideline for</td>
<td>2. Does CN propose mitigation relevant to this standard?</td>
<td>Yes, but the mitigation strategy specific to groundwater quality may not be sufficient. It is clear in the EIS whether anti-seepage collars would form part of the mitigation strategy to prevent contamination.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ref: Water/Natural Heritage Expert Report, p. 21 [Volume 2, Tab D at 107].</td>
</tr>
<tr>
<td></td>
<td>3. Does CN propose follow-up relevant to this standard?</td>
<td>No.</td>
</tr>
</tbody>
</table>

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6 See footnote 1
Table A: Information requests (IRs) related to Municipal Standards

<table>
<thead>
<tr>
<th>Municipal standard with references to Halton Brief and Appendices A, B and C</th>
<th>Additional information required to apply the standard</th>
<th>CN Consideration of Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual On-Site Sewage Systems: Water Quality Impact Risk Assessment (Procedure D-5-4)” and “Technical Guideline for Private Wells: Water Supply Assessment (Procedure D-5-5).” Other legislation, such as the Ontario Water Resources Act (OWRA), the Safe Drinking Water Act (SDWA), the Clean Water Act (CWA) as well as Provincial documents such as the Ontario Building Code (OBC).</td>
<td>1. Does CN’s assessment of significance consider this standard? No</td>
<td></td>
</tr>
<tr>
<td>Watercourses</td>
<td>• Use of a natural heritage systems approach in assessing components of the natural heritage system. This would require the following: an evaluation of the watercourse and impacts to the features and ecological functions of the Regional Natural Heritage System associated with the watercourse (linkages, wetlands and</td>
<td>2. Does CN propose mitigation relevant to this standard? Yes, in that mitigation has been proposed to replace riparian buffer zones which would be lost with the elimination of a significant portion of Indian Creek. However, the EIS characterization of the current riparian habitats is insufficient in details so it is</td>
</tr>
</tbody>
</table>

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7 Enhancements to Key Features (ROP): Ecologically supporting areas adjacent to Key Features and/or measures internal to the Key Features that increase the ecological resilience and function of individual Key Features or groups of Key Features.

8 Watercourses (ROP): An identifiable depression in the ground in which a flow of water regularly or continuously occurs.

9 Conservation Authority (ROP): Conservation Halton, Credit Valley Conservation, or Grand River Conservation Authority.

10 Linkage (ROP): An area intended to provide connectivity supporting a range of community and ecosystem processes enabling plants and animals to move between Key Features over multiple generations. Linkages are preferably associated with the presence of existing natural areas and functions and they are to be established where they will provide an important contribution to the long term sustainability of the Regional natural heritage System. They are not meant to interfere with normal farm practice. The extent and location of the linkages can be assessed in the context of both the scale of the proposed development or site alteration, and the ecological functions they contribute to the Regional Natural Heritage System.

11 Wetland (ROP): Lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case, the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic or water tolerant plants. The four major types of wetlands are swamps, marshes, bogs, and fens. Periodically soaked or wet lands being used for agricultural purposes which no longer exhibit wetland characteristics are not considered to be wetlands for the purposes of this definition. Within the Greenbelt Plan Area, wetlands include only those that have been identified by the Ministry of Natural Resources or by any other person, according to evaluation procedures established by the Ministry of Natural Resources, as amended from time to time.
### Table A: Information requests (IRs) related to Municipal Standards

<table>
<thead>
<tr>
<th>Municipal standard with references to Halton Brief and Appendices A, B and C</th>
<th>Additional information required to apply the standard</th>
<th>CN Consideration of Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>woodland</strong>[^12], are protected (ROP Reference 115.3, 101(1.9)) Halton Brief, Table D.3 Halton Brief, App. B, Part A.3.4 Halton Brief, App. A., fig. 9: Sensitive Surface Water Features; fig. 10: Study Areas for Sensitive Surface Water Features; fig. 11: Water features: lakes &amp; streams; fig. 12: Water Features: Wetlands; fig. 17: Key Features &amp; Components; fig. 18: Woodlands</td>
<td>woodlands) both individually and in the context of the overall system. See IR WNH32, WNH33 • <strong>P4. Regional Policies and EIA Guidelines.</strong> The EIS should use the Regional policies and Region’s <em>Environmental Impact Assessment Guidelines</em> to assess whether the Project conforms with the Regional Official Plan policy to provide permanent protection of certain landscapes. • Provide stream flow measurements for consecutive seasons to establish water quantity baseline for the site and, establish a of water budget using continuous simulation technology. See IR WNH5, WNH7 • Identify proposed measures to protect sensitive surface and ground water by containing contaminated runoff. See IR WNH4, WNH15 • Measure further parameters to assess water quality, explanation of measurement conditions, sediment measurements, and validation of water quality</td>
<td>uncertain whether the replacement riparian habitat would be an adequate replacement for the existing habitat. <em>Ref: Water/Natural Heritage Expert Report</em>, p. 33–34 [Volume 2, Tab D at 119–120].</td>
</tr>
</tbody>
</table>

[^12]: Significant Woodland (ROP): A woodland 0.5 ha or larger determined through a Watershed Plan, a Sub-watershed Study or a site-specific Environmental Impact Assessment to meet one or more of the following four criteria: 277(1) the Woodland contains forest patches over 99 years old, 277(2) the patch size of the Woodland is 2 ha or larger if it is located in the Urban Area, or 4 ha or larger if it is located outside the Urban Area but below the Escarpment Brow, or 10 ha or larger if it is located outside the Urban Area but above the Escarpment Brow, 277(2) the Woodland has an interior core area of 4 ha or larger, measured 100m from the edge, or 277(4) the Woodland is wholly or partially within 50 m of a major creek or certain headwater creek or within 150 m of the Escarpment Brow.

Significant Woodlands (PPS): b) In regard to woodlands, an area which is ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history. These are to be identified using criteria established by the Ontario Ministry of Natural Resources...
<table>
<thead>
<tr>
<th>Municipal standard with references to Halton Brief and Appendices A, B and C</th>
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<th>CN Consideration of Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>baseline. See IR WNH9, WNH10, WNH11, WNH12</td>
<td>• Provide construction and post-construction groundwater monitoring program to assess and monitor water quality. See IR WNH16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Provide characterization of all reaches of Indian Creek and Tributaries A, B, and C, and characterization of downstream receiving watercourses. See IR WNH17 and WNH19</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Provide historical channel alteration and migration information for Indian Creek. See IR WNH18</td>
<td></td>
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<tr>
<td></td>
<td>• Provide channel stability and hydraulics for the newly designed and replacement watercourses. See IR WNH21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• In areas where culverts will be installed, outline mitigation measures to prevent scour and to compensate for increase lateral compaction of the earth. See IR GT3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• In areas where cuts will be made into the terrain to create new sections of watercourses and storm management ponds, performs geotechnical analysis in light of the risk of impacting pervious lenses or developing artesian conditions. See IR GT4</td>
<td></td>
</tr>
</tbody>
</table>
### Municipal Standards for SAEs—Natural Heritage

<table>
<thead>
<tr>
<th>Municipal standard with references to Halton Brief Appendices A, B, and C</th>
<th>Additional information required to apply the standard</th>
<th>CN Consideration of Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components of the Regional Natural Heritage System</td>
<td>• Use of a natural heritage systems approach in assessing components of the natural heritage system. This would require the following: an evaluation of the watercourse and impacts to the features and ecological functions of the Regional Natural Heritage System associated with the watercourse (linkages, wetlands and woodlands) both individually and in the context of the overall system. A review of all of the Key Features should be completed using a systems approach which considers impacts on a federal, provincial, and regional scale. See IR WNH32, WNH33, WNH38</td>
<td>1. Does CN's assessment of significance consider this standard? No.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Does CN propose mitigation relevant to this standard? Yes, in that mitigation has been proposed to replace riparian buffer zones which would be lost with the elimination of a significant portion of Indian Creek. However, insufficient characterization of the current riparian habitats has been done, so it cannot be determined whether the replacement riparian habitat would be an adequate replacement for the existing habitat. Ref: Water/Natural Heritage Report, p. 33–34 [Volume 2, Tab D at 119–120].</td>
</tr>
</tbody>
</table>

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13 **Natural Heritage Systems (PPS):** A system made up of natural heritage features and areas, and linkages intended to provide connectivity (at the regional or site level) and support natural processes which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species, and ecosystems. These systems can include natural heritage features and areas, federal and provincial parks and conservation reserves, other natural heritage features, lands that have been restored or have the potential to be restored to a natural state, areas that support hydrologic functions, and working landscapes that enable ecological functions to continue. The Province has a recommended approach for identifying natural heritage systems, but municipal approaches that achieve or exceed the same objective may also be used.

14 **Negative Impacts (ROP):** 260.2(1) In regard to water, degradation to the quality and quantity of water, sensitive surface water features and sensitive groundwater features, and their related hydrologic functions, due to single, multiple or successive development or site alteration activities 260.2(2) in regard to fish habitat, any permanent alteration to, or destruction of fish habitat, except where, in conjunction with the appropriate authorities, it has been authorized under the Fisheries Act components of the Natural Heritage System, degradation that threatens; and 260.2(3) in regard to other components of the Regional Natural Heritage System, degradation that threatens the health and integrity of the natural features or ecological functions for which an area is identified due to single, multiple, or successive development or site alteration activities. **Negative Impacts (PPS):** a) In regard to policy . . . 1.6.6.5, degradation to the quality and quantity of water, sensitive surface water features and sensitive ground water features, and their related hydrologic functions, due to single, multiple, or successive development. Negative impacts should be assessed through environmental studies including hydrogeological or water quality impact assessments, in accordance with provincial standards.


Table A: Information requests (IRs) related to Municipal Standards

<table>
<thead>
<tr>
<th>Municipal standard with references to Halton Brief Appendices A, B, and C</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>areas</strong> or their <strong>ecological functions</strong>. The Regional Natural Heritage System is a systems approach to protecting and enhancing natural features and functions and is scientifically structured on the basis of the following components: <strong>Key Features</strong>, which include: a) <strong>significant</strong> habitat of endangered and threatened species, b) <strong>significant wetlands</strong>,</td>
<td>• <strong>P5. Regional Policies and EIA Guidelines.</strong> Please use the Regional policies and Region’s Environmental Impact Assessment Guidelines for permanent protection of certain landscapes as one of the tests for impacts. • <strong>P6. ANSI mapping and buffers.</strong> A mapping of the Trafalgar Moraine Provincially Significant Earth Science Area of Natural and Scientific Interest (ANSI) in the study area is needed, showing any features of the proposed project that will be built in proximity to this ANSI, and any proposed buffer zone around this ANSI. • Characterization of all reaches of Indian Creek and Tributaries A,</td>
<td>3. Does CN propose follow-up relevant to this standard? No.</td>
</tr>
</tbody>
</table>

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15 Natural heritage features and areas (PPS): Features and areas, including significant wetlands, significant coastal wetlands, another coastal wetlands in Ecoregions 5E, 6E and 7E, fish habitat, significant woodlands and significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River), habitat of endangered species and threatened species, significant wildlife habitat, and significant areas of natural and scientific interest, which are important for their environmental and social values as a legacy of the natural landscapes of an area.

16 Ecological functions (ROP): The natural processes, products or services that living and non-living environments provide or perform within or between species, ecosystems and landscapes. These may include biological, physical and socio-economic interactions. Ecological functions (PPS): The natural processes, products or services that living and non-living environments provide or perform within or between species, ecosystems and landscapes. These may include biological, physical and socio-economic interactions.

17 Key Features (ROP): Ecologically supporting areas adjacent to Key Features and/or measures internal to the Key Features that increase the ecological resilience and function of individual Key Features or groups of Key Features.

18 Significant (ROP): 276.4(1) in regard to wetlands, an area as defined under section 276.5 of this Plan; 276.4(2) in regard to coastal wetlands and areas of natural and scientific interest, an area identified as provincially significant by the Ontario Ministry of Natural Resources using evaluation procedures established by the Province, as amended from time to time; 276.4(3) in regard to the habitat of endangered species and threatened species, the habitat, as approved by the Ontario Ministry of Natural Resources, that is necessary for the maintenance, survival, and/or the recovery of naturally occurring or reintroduced populations of endangered species or threatened species, and where those areas of occurrence are occupied or habitually occupied by the species during all or any part(s) of its life cycle; 276.4(4) in regard to woodlands, an area as defined by Section 277 of this Plan; and 276.4(5) in regard to other components of the Regional Natural Heritage System, ecologically important in terms of features, functions, representation or amount, and contributing to the quality and diversity of an identifiable geographic area or natural heritage system.

19 Significant Wetlands (ROP): 276.5(1) for lands within the Regional Natural Heritage System but outside the Greenbelt Plan Area, Provincially Significant Wetlands and wetlands that make an important ecological contribution to the Regional Natural
Table A: Information requests (IRs) related to Municipal Standards

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>c) significant coastal wetlands, d) significant woodlands, e) significant valleylands, f) significant wildlife habitat, g) significant areas of natural and scientific interest, h) fish habitat, (2) enhancements to the Key Features</td>
<td>B, and C, and characterization of downstream receiving watercourses. See IR WNH17 and WNH19 • A full characterization, both quantitative and qualitative, of the riparian habitat currently associated with Indian Creek, which is proposed to be eliminated. Also required is a full description of features of the newly constructed “enhanced” riparian habitat proposed to replace the eliminated habitat for Indian Creek. See IR WNH28 • Consideration of all Valued Components in the area. Consultations with local</td>
<td></td>
</tr>
</tbody>
</table>

Heritage System; 276.5(2) for lands within the Greenbelt Plan Area but outside the Niagara Escarpment Area, Provincially Significant Wetlands and wetlands as defined in the Greenbelt Plan; 276.5(3) for lands within the Regional Natural Heritage System but outside the Greenbelt Plan area, Provincially Significant Wetlands and wetlands that make an important ecological contribution to the Regional Natural Heritage system; and 276.5(4) ; Significant Wetlands (PPS): a) In regard to wetlands, coastal wetlands and areas of natural and scientific interest, an area identified as provincially significant by the Ontario Ministry of Natural Resources using evaluation procedures established by the Province, as amended from time to time...

20 Significant Woodland (ROP): A woodland 0.5 ha or larger determined through a Watershed Plan, a Sub-watershed Study or a site-specific Environmental Impact Assessment to meet one or more of the following four criteria: 277(1) the Woodland contains forest patches over 99 years old, 277(2) the patch size of the Woodland is 2 ha or larger if it is located in the Urban Area, or 4 ha or larger if it is located outside the Urban Area but below the Escarpment Brow, or 10 ha or larger if it is located outside the Urban Area but above the Escarpment Brow, 2773(3) the Woodland has an interior core area of 4 ha or larger, measured 100 m from the edge, or 277(4) the Woodland is wholly or partially within 50 m of a major creek or certain headwater creek or within 150 m of the Escarpment Brow; Significant Woodlands (PPS): (b) in regard to woodlands, an area which is ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history. These are to be identified using criteria established by the Ontario Ministry of Natural Resources . . .

21 Significant Valleylands (PPS): A natural area that occurs in a valley or other landform depression that has water flowing through or standing for some period of the year.

22 Significant Areas of Natural and Scientific Interest (PPS): Areas of land and water containing natural landscapes or features that have been identified as having life science or earth science values related to protection, scientific study, or education.

23 Fish Habitat (ROP): Spawning grounds and nursery, rearing food supply, and migration areas on which fish depend directly or indirectly in order to carry out their life processes. Fish Habitat (PPS): As defined in the Fisheries Act, means spawning grounds and any other areas, including nursery, rearing, food supply, and migration areas on which fish depend directly or indirectly in order to carry out their life processes.
Table A: Information requests (IRs) related to Municipal Standards

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>including Centres for Biodiversity,(^{24}) (3) linkages,(^{25}) (4) buffers,(^{26}) (5) watercourses that are within a Conservation Authority Regulation Limit or that provide a linkage to a wetland or a significant woodland, and (6) wetlands(^{27}) other than those considered significant. (ROP Reference 118(2))Halton Brief, Table D.4 Halton Brief, App. A, fig. 11: Water Features:</td>
<td>authorities including Conservation Halton and Halton Region, including their ongoing subwatershed studies, should be undertaken so that a complete understanding of the locally Valued Components can be obtained at the outset. See IR WNH35, WNH36</td>
<td></td>
</tr>
</tbody>
</table>

\(^{24}\) **Centre for Biodiversity (ROP):** An area identified through a ROP amendment that encompasses existing natural heritage features and associated enhancements to the Key Features and is of sufficient size, quality and diversity that it can support a wide range of native species and ecological functions, accommodate periodic local extinctions, natural patterns of disturbance and renewal and those species that are area sensitive, and provide sufficient habitat to support populations of native plants and animals in perpetuity. Any such amendment would be initiated after the day of adoption of this Plan (December 16, 2009) and shall include a detailed and precise justification supporting the identification of the area, based on current principles of conservation biology.

\(^{25}\) **Linkage (ROP):** An area intended to provide connectivity supporting a range of community and ecosystem processes enabling plants and animals to move between Key Features over multiple generations. Linkages are preferably associated with the presence of existing natural areas and functions and they are to be established where they will provide an important contribution to the long term sustainability of the Regional natural heritage System. They are not meant to interfere with normal farm practice. The extent and location of the linkages can be assessed in the context of both the scale of the proposed development or site alteration, and the ecological functions they contribute to the Regional Natural Heritage System.

\(^{26}\) **Buffer (ROP):** An area of land located adjacent to Key Features or watercourses and usually bordering lands that are subject to development or site alteration. The purpose of the buffer is to protect the features and ecological functions of the Regional Natural Heritage System by mitigating impacts of the proposed development or site alteration. The extent of the buffer and activities that may be permitted within it shall be based on the sensitivity and significance of the Key Features and watercourses and their contribution to the long term ecological functions of the Regional Natural Heritage System as determined through a Subwatershed Study, an Environmental Impact Assessment or similar studies that examine a sufficiently large area.

\(^{27}\) **Wetland (ROP):** Lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case, the presence of abundant water has caused the formation of hydric soils.
Table A: Information requests (IRs) related to Municipal Standards

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</table>
| Lakes and Streams; fig. 12: Water Features: Wetlands; fig. 15: Natural Heritage System; fig. 16: Natural Heritage System Study Area; fig. 17: Natural Heritage System: Key Features & Components; fig. 18: Woodlands fig. 19: Species at Risk and Suitable Habitat; fig. 20: Bobolink/Eastern Meadowlark Breeding Habitat; fig. 21: Barn Swallow and Suitable Habitat; fig. 22: Snapping Turtle & Suitable Habitat Halton Brief, App. B, parts A.3.4, B.1, B.2, B.3.1 | habitats of both species at risk and other significant species with the habitats; See IR WNH 43-57  
• Mapping showing all woodlands, wetlands, surface water features, showing areas of biodiversity concentration in terms of both flora and fauna. Please include a description of any significant movement corridors for wildlife in the site area, and an identification of areas of Significant Wildlife Habitat as defined by the OMRF publication Significant Wildlife Technical Guide (2000). See IR WNH39, 40 |  
1. Does CN’s assessment of significance consider this standard?  
No.  
2. Does CN propose mitigation relevant to this standard?  
CN proposes to provide enhanced wetlands to provide better breeding opportunities for birds. However, the mitigation proposal is not sufficiently defined or explained. In particular, it is not understood what enhancements are proposed as a mitigation strategy. |
| Migratory bird habitat which is not currently included within the Regional Natural Heritage System, but should be  
To ensure that Key Features28 that may exist outside the Regional Natural Heritage System29 are protected. (ROP Reference 101 (1.9)) | • A listing of all bird species that are listed as species at risk on federal, provincial, and regional schedules is required, along with a correlation to their key habitats for nesting, mating and feeding at all points in their life cycles. The extent to which the constructions and operations will disrupt any sensitive species should be addressed. See WNH41. |  
1. Does CN’s assessment of significance consider this standard?  
No.  
2. Does CN propose mitigation relevant to this standard?  
CN proposes to provide enhanced wetlands to provide better breeding opportunities for birds. However, the mitigation proposal is not sufficiently defined or explained. In particular, it is not understood what enhancements are proposed as a mitigation strategy. |

---

28 See Footnote 5  
29 See Footnote 1
Table A: Information requests (IRs) related to Municipal Standards

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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Ref: Water/Natural Heritage Report, p. 46 [Volume 2, Tab D at 132].</td>
</tr>
<tr>
<td>3. Does CN propose follow-up relevant to this standard?</td>
<td>No.</td>
<td></td>
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</tbody>
</table>

Table A-3: Municipal Standards for SAEEs—Transportation

<table>
<thead>
<tr>
<th>Municipal Standard with references to Halton Brief Appendices A, B, and C</th>
<th>Additional Information Required to Apply the Standard</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Major Transportation Facilities</td>
<td>• Complete assessment of all effects, safety (collisions, impacts on cycling and walking, rail crossings, hazardous goods movement) and congestion, predicted to occur as a result of the proposed development, conducted as per the Region’s Transportation Impact Study</td>
<td>1. Does CN’s assessment of significance consider this standard?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>2. Does CN propose mitigation relevant to this standard?</td>
<td>Yes, but it is not possible to determine if the mitigation proposed is sufficient.</td>
<td></td>
</tr>
</tbody>
</table>

30 Major facilities (PPS): Facilities which may require separation from sensitive land uses, including but not limited to airports, transportation infrastructure and corridors, rail facilities, marine facilities, sewage treatment facilities, waste management systems, oil and gas pipelines, industries, energy generation facilities and transmission systems, and resource extraction activities. Major goods movement facilities and corridors (PPS): Transportation facilities and corridors associated with the inter- and intra-provincial movement of goods. Examples include: intermodal facilities, ports, airports, rail facilities, truck terminals, freight corridors, freight facilities, and haul routes and primary transportation corridors used for the movement of goods. Approaches that are freight-supportive may be recommended in guidelines development by the Province or based on municipal approaches that achieve the same objectives.
<table>
<thead>
<tr>
<th>Municipal Standard with references to Halton Brief Appendices A, B, and C</th>
<th>Additional Information Required to Apply the Standard</th>
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</tr>
</thead>
</table>
| 2021 as well as protecting key components of the future transportation system<sup>31</sup> to meet travel demands beyond year 2021 (ROP Reference 173(1)) Halton Brief, Table D.5 Halton Brief, App. B, Part C.3.1 Halton Brief, App. A, fig 23: Major Transportation Facilities | Guidelines. See IRs T1, T5, T6, T7 – T11, T12 – T15, ET3, IT37 - 39  
- Address the following (all based on a horizon year where appropriate, with supporting data): a) truck operations information (including on-site logistics and traffic plan, non-CN Truck operations, anticipated quantities of transported materials by type, anticipated daily, monthly and seasonal schedules for rail transport) ; b) projection of seasonal variations in truck flow; c) yard ultimate capacity; d) traffic controls and traffic improvements in specific terms; e) number of employees and transportation of employees; f) information regarding container types and lengths; g) information regarding addition of two new trains to volume forecasts; h) effect of additional freight on passenger services, See IRs T1 – T4, ET3, IT14, ET4, IT 28 – IT 34  
- Support for assumptions regarding the origin/destination of truck trips. See IRs T6, IT16,  
- Brampton Intermodal Termination information and data in support of the assumptions regarding truck and train volumes and capacity, hourly flow of trucks, and origin/destination of truck trips. | • No mitigation of safety impacts and road congestion is proposed beyond the immediate area of Tremaine and Britannia Roads.  
*Ref: Road Safety and Traffic Flow Report, p. 21 [Volume 2, Tab E at 168]*  
• The mitigation measures proposed have not been adequately documented, supported or justified.  
*Ref: Road Safety and Traffic Flow Report, p. 20 [Volume 2, Tab E at 167]*  
• Professional judgment was used in lieu of available guidelines.  
*Ref: Transportation & Municipal Finances Report, p. 13 [Volume 2, Tab F at 203]*  
• The EIS did not follow the Region’s Guidelines for the undertaking of a Traffic Impact Study and there was insufficient analysis conducted to conclude whether there are significant impacts. *Ref: Transportation & Municipal Finances Report, p. 13 [Volume 2, Tab F at 203]*  
• Much of the mitigation proposed is deferred to local authorities.  
*Ref: Road Safety and Traffic Flow Report, Section 3, pp. 19-21 [Volume 2, Tab E at 166-168].* |

3. Does CN propose any follow-up relevant to this standard? No.

*Refs: Road Safety and Traffic Flow Report, p.19 [Volume 2, Tab E at 166]; Transportation & Municipal Finances Report, p. 13 [Volume 2, Tab F at 203].*  
CN deferred follow-up to local authorities after the Project is built.

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<sup>31</sup> Transportation system (GP): A system consisting of corridors and rights-of-way for the movement of people and goods, and associated transportation facilities including transit stops and stations, cycle lanes, bus lanes, high occupancy vehicle lanes, rail facilities, park-and-ride lots, service centres, rest stops, vehicle inspection stations, inter-modal terminals, harbours, and associated facilities such as storage and maintenance (Provincial Policy Statement, 2005).
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>See IRs T3, T5, T6, IT11, IT12, IT15, IT17</td>
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<tr>
<td>• Information re Brampton-Milton Freight Corridor and description of anticipated volumes. See IRs IT18 and IT45</td>
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<tr>
<td>• Effects identified should not only be immediate to the site (see IRs T7, T9, T13), but Region-wide (see IRs T8, T10, T11, T14), as appropriate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Identify and validate mitigation based on a thorough understanding of the expected impacts. See IRs T7, T11, T8, T13 and T14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ref: Road Safety and Traffic Flow Report, p.19 [Volume 2, Tab E at 166].</td>
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</tr>
</tbody>
</table>

**Planned Transportation Corridors**

To plan for and protect *planned corridors*32 and rights-of-way for transportation and transport *facilities*33 to meet current and projected needs (ROP Reference 173(1.1))

Halton Brief, Table D.5

Halton Brief, App. B, Part C.3.2

See above, plus:

• Information into whether and how the traffic volume forecasts have been incorporated into the transportation corridors analysis. See IR IT13

| 1. Does CN’s assessment of significance consider this standard? |
| No |

2. Does CN propose mitigation relevant to this standard?

No.

*Ref: Transportation & Municipal Finances Report, p. 14 [Volume 2, Tab F at 204].*

3. Does CN propose any follow-up relevant to this standard?

No.

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32 **Planned corridors (ROP):** Corridors identified through Provincial Plans, this Plan, or preferred alignment(s) determined through the *Environmental Assessment Act* process which are requires to meet projected needs.

33 **Facility (D-1-3):** A transportational, commercial, industrial, agricultural, intensive recreational or utilities/services building or structure and/or associated lands (e.g. abattoir, airport, railway, manufacturing plant, generation stations, sports/concerts stadium, etc.) which produce(s) one or more ‘adverse effect(s)’ on a neighbouring property or properties. For specific details on some of these facilities, see Procedure D-1-2.
**Table A: Information requests (IRs) related to Municipal Standards**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Railway Networks and Crossings</strong>&lt;br&gt;To support the provision of a safe and efficient railway network by securing grade separations of railways and arterial roads(^{34}) where warranted, supporting the monitoring and necessary actions to improve the safety of the movement of dangerous goods by rail, and ensuring where possible compatible uses adjacent or in proximity to railway corridors(^{35}) and terminal facilities including railway yards and intermodal facilities (ROP Reference 147(18))&lt;br&gt;Halton Brief, Table D.5&lt;br&gt;Halton Brief, App. B, Part C.3.3&lt;br&gt;Halton Brief, App. A, fig 24: Train Lengths North; fig 25: Train Lengths South</td>
<td>• Safety impacts of increased road and rail traffic on at-grade crossings across the Region, compared to Transport Canada standards for crossing protection. Impacts to pavement wear and deterioration should also be considered. See IR T15, GT5.&lt;br&gt;• Train volumes, speeds, movement in facility, specifications. See IR RA1, RA2.&lt;br&gt;• Details of transfer operations of containers containing dangerous goods between trains and trucks, including information on equipment lifespan. See IR RA3, RA4.&lt;br&gt;• Truck specifications, tonnage limitations, permitted cargos, driver certifications, routes, speed limits, and Average Annual Daily Traffic projections. See IR RA5, RA6, RA7.&lt;br&gt;• Detail on the specific types and quantities of dangerous goods projected to pass through the terminal, including form, containment characteristics, release parameters, annual variations, and projected changes</td>
<td>1. Does CN’s assessment of significance consider this standard?&lt;br&gt;No.&lt;br&gt;2. Does CN propose mitigation relevant to this standard?&lt;br&gt;Yes, but limited to proposed grade separations on Lower Base Line and Britannia Road.&lt;br&gt;<em>Ref: Road Safety and Traffic Flow Report, p. 21 [Volume 2, Tab E at 168].</em>&lt;br&gt;Yes, in that CN mentions having emergency response plans that it will use to mitigate risk of accidents and malfunctions. However, the plans are not provided so their effectiveness cannot be considered.&lt;br&gt;<em>Ref: Risk Report, p. 8 [Volume 2, Tab B at 71].</em>&lt;br&gt;3. Does CN propose any follow-up relevant to this standard?&lt;br&gt;None discussed.&lt;br&gt;<em>Ref: Road Safety and Traffic Flow Report, p. 21 [Volume 2, Tab E at 168].</em></td>
</tr>
</tbody>
</table>

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\(^{34}\) **Arterial roads (ROP):** A Major Arterial, a Multi-Purpose Arterial, or a Minor Arterial as shown on Map 3 of this Plan (the ROP).

\(^{35}\) **Transportation corridors (GP):** A thoroughfare and its associated buffer zone for passage or conveyance of vehicles or people. A transportation corridor includes any or all of the following: a) Major roads, arterial roads, and highways for moving people and goods; b) Rail lines/railways for moving people and goods; c) Transit rights-of-way/transitways including buses and light rail for moving people.
Table A: Information requests (IRs) related to Municipal Standards

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| over facility lifespan. See IR RA9, RA10, RA11.  
- Full details of emergency response plans, both strategic and tactical, and confirmation that such plans comply with local municipal requirements. See IR RA12.  
- A geotechnical analysis of subsurface conditions at the proposed grade separation at Lower Baseline road should be conducted. See IR GT2. | | |

Table A-4: Municipal Standards for SAEEs—Agriculture

<table>
<thead>
<tr>
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</thead>
</table>
| Agriculture  
To recognize and protect lands within the agricultural system and direct non-farm uses to the urban area unless specifically permitted by this plan (ROP Reference 101(1.6)) Halton Brief, Table D.6  
Information and analysis is required to outline how the proposed project satisfies Policy 2.3.6.1 of the Provincial Policy Statement. This policy states: “Planning authorities may only permit non-agricultural uses in prime agricultural areas for: ...limited nonresidential uses, provided that all of the following are demonstrated: | 1. Does CN’s assessment of significance consider this standard?  
No  
2. Does CN propose mitigation relevant to this standard?  
It is noted that Appendix G of the EIS entitled “Mitigation Measures and Commitments” does state: “to mitigate the loss of agricultural land as a result of Terminal activities, CN will work with local farmers for agricultural lease opportunities where they may exist.” However, this is not sufficient to deal with the permanent loss of productive agricultural land. |

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36 *Agricultural (ROP):* The growth of crops, including nursery and horticultural crops (but not horticultural trade use); raising of livestock; raising of other animals for food, fur or fibre, including poultry and fish; aquaculture; apiaries; agro-forestry; maple syrup production; and associated on-farm buildings and structures, including accommodation for full-time farm labour when the size and nature of the operation requires additional employment.
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Halton Brief, App. A, fig 26: Agricultural Area and Urban Area; fig 27: Prime Agricultural Area; fig 28: Prime Agricultural Area: Project Detail; fig 29: Prime Agricultural Area Soils; fig 30: Soils; fig 31: Greenbelt Plan Area: Protected Countryside</td>
<td>1. the land does not comprise a specialty crop area; 2. the proposed use complies with the minimum distance separation formulae; 3. there is an identified need within the planning horizon provided for in policy 1.1.2 for additional land to be designated to accommodate the proposed use; and 4. alternative locations have been evaluated, and i. there are no reasonable alternative locations which avoid prime agricultural areas; and ii. there are no reasonable alternative locations in prime agricultural areas with lower priority agricultural lands”</td>
<td>3. Does CN propose any follow-up relevant to this standard? No.</td>
</tr>
</tbody>
</table>

### Agricultural lands

To recognize, encourage and protect agriculture as the primary long-term activity and land use throughout the agricultural system, and preserve the agricultural land base by protecting prime agricultural lands\(^{37}\) (ROP Reference 101(2)) Halton Brief, Table D.6

Halton Brief, App. B, Part D.3.2

### P8. Agricultural Impact Assessment

An Agricultural Impact Assessment (AIA) should be prepared by a qualified professional in accordance with the Region’s Agricultural Impact Assessment Guidelines. This is required where development is proposed and is located in or in close proximity to designations permitting agricultural uses in the Regional Official Plan. As a guide, the use of a 1 kilometre zone of influence is suggested for any analysis.

| 1. Does CN’s assessment of significance consider this standard? | No |
| 2. Does CN propose mitigation relevant to this standard? | No |
| 3. Does CN propose any follow-up relevant to this standard? | No |

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\(^{37}\) **Prime agricultural lands (ROP):** Specialty crop lands and those lands of agricultural soils classes 1, 2 and 3 (and combination equivalents thereof), as defined in the Canada Land Inventory of Soil Capability for Agriculture, in this order of priority for protection. **Prime agricultural lands (PPS):** Specialty crop areas and/or Canada Land Inventory Class 1, 2, and 3 lands, as amended from time to time, in this order of priority for protection.
Table A: Information requests (IRs) related to Municipal Standards

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| Halton Brief, App. A, fig 27: Prime Agricultural Area; fig 28: Prime Agricultural Area: Project Detail | The scope of the AIA should be confirmed through discussions with Regional staff, and would normally include:  
- Identification of possible adverse impacts on agriculture;  
- Identification of additional restrictions that may impact abutting agricultural operations as a result of the development (e.g. changes in Minimum Distance Separation that would restrict expansion of an abutting agricultural operation);  
- Identification and evaluation of locational options for the proposed development and demonstrate that the proposed location is the preferred option in terms of minimizing the impact on agriculture;  
- Identification of methods of removing or reducing any adverse impacts resulting from the development; and,  
- Addressing whether or not it is appropriate to provide “warning clauses” for the development, noting the presence of surrounding agricultural operations and if so, to make recommendations in that regard. |  |
Table A: Information requests (IRs) related to Municipal Standards

Table A-5: Municipal Standards for SAEEs—Residential

<table>
<thead>
<tr>
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</table>
| Healthy Communities | • Identify all project-related air emission sources. See IR AQ1-3  
• Identify all contaminants that could be emitted from those air emission sources. See IR AQ4-9  
• Estimate the maximum levels of emissions of contaminants from all sources. See IR AQ10-28  
• Model dispersion of all contaminants from both on-site and off-site project sources. See IR AQ29-41  
• Analyze of baseline air quality levels, including in local spatial and temporal hotspots. See IR AQ42-48  
• Analyze of projected air quality impacts correlated with existing and future baseline levels. See IR AQ49-50  
• Perform a Human Health Risk Assessment in respect of Diesel Particulate Matter and off-site | 1. Does CN’s assessment of significance consider this standard?  
No  
2. Does CN propose mitigation relevant to this standard?  
Some mitigation measures have been proposed, but without any indication as to their efficacy. Further information is therefore needed.  
Ref: Air Quality Report, p. 40–41 [Volume 2, Tab I at 324–325].  
3. Does CN propose follow-up relevant to this standard?  
Only one minor aspect has been suggested as a followup measure, in respect of the Project Site Air Monitoring Program Purposes. However, the technical goals of the monitoring program have not been explained, and the parameters of the monitoring have not been outlined.  
Ref: Air Quality Report, p. 31–34 [Volume 2, Tab I at 315–318]. |

38 Development (ROP): The creation of a new lot, a change in land use, or the construction of buildings and structures, any of which requires approval under the Planning Act, or that are subject to the Environmental Assessment Act, but does not include: 226(1) activities that create or maintain infrastructure authorized under an environmental assessment process, 226(2) works subject to the Drainage Act, or 226(3) within the Greenbelt Plan Area, the carrying out of agricultural practices on land that was being used for agricultural uses on the date the Greenbelt Plan 2005 came into effect. Development (PPS): The creation of a new lot, a change in land use, or the construction of buildings and structures requiring approval under the Planning Act, but does not include: a) activities that create or maintain infrastructure authorized under an environmental assessment process; b) works subject to the Drainage Act; or c) for the purposes of policy 2.1.4(a), underground or surface mining of minerals or advanced exploration on mining lands in significant areas of mineral potential in Ecoregion 5E, where advanced exploration has the same meaning as under the Mining Act. Instead, those matters shall be subject to policy 2.1.5(a).

39 Designated greenfield areas (GP): The area within a settlement area that is not built-up area. Where a settlement area does not have a built boundary, the entire settlement area is considered designated greenfield area. Designated greenfield areas (ROP): The area within the Urban Area that is not Built-Up Area.
### Table A: Information requests (IRs) related to Municipal Standards

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<td></td>
<td>Traffic exposure to pollutants. See IR AQ51-52, RHH1-2, NV40</td>
<td>1. Does CN’s assessment of significance consider this standard? No</td>
</tr>
<tr>
<td>Noise on Residential Sensitive Land Uses</td>
<td>• Noise impacts should be considered in light of existing municipal and regional land use planning. See IR RNV1, RNV26</td>
<td>2. Does CN propose mitigation relevant to this standard? Yes, but the mitigation measures have not been quantified, so it is unknown how effective they could be. As well, there were technical insufficiencies in the preliminary work defining the impacts that require mitigation. Therefore mitigation should be considered after the insufficiencies have been addressed. Ref: Noise and Vibration Report, p.7, 26–28, 52–53 [Volume 2, Tab H at 234, 253–255, 279–280].</td>
</tr>
<tr>
<td></td>
<td>• Ambient noise measurements should be taken from a sufficient number of monitoring locations placed in appropriate locations at the site to produce representative data, with necessary adjustments for factors such as insect noise, weather, and distance to roadways and railways. See IR RNV2-7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Representative points of reception should be used in the noise modelling, including from residences and vacant lots on nearby land owned by CN. See IR RNV8-11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Assessment of transportation noise from railway and roads assuming worst case scenarios for numbers of locomotives and vehicles. See IR RNV12. RMV25/100</td>
<td>3. Does CN propose follow-up relevant to this standard? No.</td>
</tr>
<tr>
<td></td>
<td>• Assessment of stationery noise from facility including impulsive noises from machinery and on-site vehicles. See IR RNV13-21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Assessment of projected noise from construction based on separate day time and night time impacts. See IR RNV29-36</td>
<td></td>
</tr>
</tbody>
</table>

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40 See footnote 1.
### Table A: Information requests (IRs) related to Municipal Standards

<table>
<thead>
<tr>
<th>Municipal Standard with references to Halton Brief Appendices A, B, and C</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Ref: Noise and Vibration Expert Report, S. Penton and M. Li, dated March 11, 2017 (each bullet to be pinpointed once page numbers finalized)</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **Night-Time Light on Residential Sensitive Land Uses** | • Re-evaluation of the LAA and RAA boundaries based on estimates of the geographical extent of significant lighting impacts. See IR RL1 | 1. Does CN’s assessment of significance consider this standard?  
No |
| | • Assess lighting impacts relative to “rural” and “low district brightness” or CIE E2. See IR RL2 | 2. Does CN propose mitigation relevant to this standard?  
Yes. However, the CN proposed mitigation is vaguely described and not quantified.  
*Ref: Light Impacts Report, p. 13 [Volume 2, Tab G at 223]*. | |
| | • Assess the baseline sky glow over entire sky, current glare conditions and all sky-brightness measures to evaluate baseline light trespass based on modern technology. See IRs RL3 to RL5 | 3. Does CN propose follow-up relevant to this standard?  
No.  
| | • Provide design criteria and lighting plan details including for roadway lighting in the Region and locations of planned future lighting. See IRs RL6 and RL7 | |
| | • Assess future sky glow, future glare, predicted light trespass, and spectral impacts on sky glow. See IRs RL8 – RL 11 | |
| | • Provide mitigation strategies for the Project lighting plan | |

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41 See footnote 1.
### Table A: Information requests (IRs) related to Municipal Standards

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<tbody>
<tr>
<td></td>
<td>including quantitative assessment. See IR RL12</td>
<td></td>
</tr>
</tbody>
</table>

### Table A-6: Municipal Standards for SAEEs—Employment

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Designated Greenfield Areas</td>
<td>• The direct onsite employment and indirect employment offsite by type. See IRs E1 and E2</td>
<td>1. Does CN’s assessment of significance consider this standard?</td>
</tr>
<tr>
<td>To require <em>development</em> in <em>designated Greenfield areas</em> to contribute towards achieving the development <em>density target</em> of Table 2 and the regional phasing of Table 2A, and provide a diverse mix of land uses to support vibrant neighbourhoods. (ROP)</td>
<td>• Clarification of what CN defines as indirect employment and how CN calculated the indirect employment. See IRs E3 and E4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Identification of how much of the indirect employment is on CN lands outside of the project site and what proportion of the indirect employment is within</td>
<td></td>
</tr>
</tbody>
</table>

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42 Development (ROP): the creation of a new lot, a change in land use, or the construction of buildings and structures, any of which requires approval under the Planning Act, or that are subject to the Environmental Assessment Act, but does not include: 226(1) activities that create or maintain infrastructure authorized under an environmental assessment process, 226(2) works subject to the Drainage Act, or 226(3) within the Greenbelt Plan Area, the carrying out of agricultural practices on land that was being used for agricultural uses on the date the Greenbelt Plan 2005 came into effect. Development (PPS): the creation of a new lot, a change in land use, or the construction of buildings and structures requiring approval under the Planning Act, but does not include: a) activities that create or maintain infrastructure authorized under an environmental assessment process; b) works subject to the Drainage Act; or c) for the purposes of policy 2.1.4(a), underground or surface mining of minerals or advanced exploration on mining lands in significant areas of mineral potential in Ecoregion SE, where advanced exploration has the same meaning as under the Mining Act. Instead, those matters shall be subject to policy 2.1.5(a).

43 Designated Greenfield areas (GP): The area within a settlement area that is not built-up area. Where a settlement area does not have a built boundary, the entire settlement area is considered designated greenfield area. Designated Greenfield areas (ROP): The area within the Urban Area that is not Built-Up Area.

44 Density targets (GP): The density target for urban growth centres is defined in Policies 2.2.4.5 and 2.2.4.6. The density target for designated greenfield areas is defined in Policies 2.2.7.2, 2.2.7.3 and 2.2.7.5.
### Table A: Information requests (IRs) related to Municipal Standards

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</table>
| Reference 77(2.4)) Halton Brief, Table D.8 Halton Brief, App. B, Part F.3.1 | approximately 2 km of the project site. See IRs E5 and E6  
- Confirmation of what jobs are identified for lands that are not part of the Region’s urban area but are within the project site and outside of the project site. See IR E7  
- Prepare A timeframe for development on CN lands. See IR E8  
- Copies of reports that were referenced in the EIS. See IR E9 | 3. Does CN propose any follow-up relevant to this standard?  
No.  
*Ref: Employment Lands Report, p. 7 [Volume 2, Tab K at 351].* |
| Employment Use and Density  
To plan for, protect and preserve the employment areas\(^45\) for current and future use (ROP Reference 77.4(2)) Halton Brief, Table D.8 Halton Brief, App. B, Part F.3.2 Halton Brief, App. A, fig 32: All Sensitive Land Uses; fig 38: Employment Areas: Regional; fig 39: Employment Areas: Project Detail; fig 40: Employment Areas and Future Strategic Employment Area |  
- Prepare a fiscal impact study that addresses information regarding the CN Project (including direct capital cost impacts, operating expenditures, operating revenue recoveries and other impacts) and the induced intermodal oriented development (including capital cost impacts, operating expenditure impacts, and direct operating revenue recoveries). See IR EW1  
- The direct onsite employment and indirect employment offsite by type. See IRs E1 and E2  
- Clarification of what CN defines as indirect employment and how CN calculated the indirect employment. See IRs E3 and E4 | 1. Does CN’s assessment of significance consider this standard?  
No.  
2. Does CN propose mitigation relevant to this standard?  
No.  
*Refs: Employment Lands Report, p. 8 [Volume 2, Tab K at 352]; and Municipal Finance and Infrastructure Report, p. 9-10 [Volume 2, Tab L at 366-367].*  
3. Does CN propose any follow-up relevant to this standard?  
No.  
*Refs: Employment Lands Report, p. 8; [Volume 2, Tab K at 352]; Municipal Finance and Infrastructure Report, p. 9-10 [Volume 2, Tab L at 366–367].* |

\(^{45}\) **Employment areas (ROP):** Areas designated in an official plan for clusters of business and economic activities including, but not limited to, manufacturing, warehousing, offices and associated retails and ancillary facilities.  
**Employment areas (PPS):** Those areas designated in an official plan for clusters of business and economic activities including, but not limited to, manufacturing, warehousing, offices, and associated retail and ancillary facilities.
Table A: Information requests (IRs) related to Municipal Standards

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|  | • Identification of how much of the indirect employment is on CN lands outside of the project site and what proportion of the indirect employment is within approximately 2 km of the project site. See IRs E5 and E6  
• Confirmation of what jobs are identified for lands that are not part of the Region’s urban area but are within the project site and outside of the project site. See IR E7  
• A timeframe for development on CN lands. See IR E8  
• Copies of reports that were referenced in the EIS. See IR E9 |  | 1. Does CN’s assessment of significance consider this standard?  
No.  
2. Does CN propose mitigation relevant to this standard?  
Yes, on an interim basis. However, over the long term, water and wastewater servicing will be provided in close proximity to the Project. CN does not propose mitigation relevant to this standard if the Project lands are connected to municipal services.  
Ref: Municipal Finance and Infrastructure Report, p. 10 [Volume 2, Tab L at 367].  
3. Does CN propose any follow-up relevant to this standard? |

Urban Services for Employment Areas

The urban area consists of areas designated on Map 1 where urban services are or will be made available (ROP Reference 74) Halton Brief, Table D.8  
Halton Brief, App. B, Part F.3.4  
Halton Brief, App. A, fig 26: Agricultural Area and Urban Area; fig 27: Prime Agricultural Areas (Map 1); fig 38: Employment Areas: Regional; fig 39: Employment Areas:  

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46 Urban services: Municipal water and/or wastewater systems or components thereof which are contained within or extended from Urban Area designations or from municipalities abutting Halton Region.
<table>
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| Project Detail; fig 40: Employment Areas and Future Strategic Employment Area | • The direct onsite employment and indirect employment offsite by type. See IRs E1 and E2  
• Clarification of what CN defines as indirect employment and how CN calculated the indirect employment. See IRs E3 and E4  
• Identification of how much of the indirect employment is on CN lands outside of the project site and what proportion of the indirect employment is within approximately 2 km of the project site. See IRs E5 and E6  
• Confirmation of what jobs are identified for lands that are not part of the Region’s urban area but are within the project site and outside of the project site. See IR E7  
• Prepare a timeframe for development on CN lands. See IR E8  
• Copies of reports that were referenced in the EIS. See IR E9 | Yes, CN proposes follow up in the EIS 2.2.3.4 and 2.2.3.5. However, the follow up is insufficient because it does not propose any specific follow up if the Project lands are connected to municipal services.  
*Ref: Municipal Finance and Infrastructure Report, p. 10 [Volume 2, Tab L at 367].* |

**Urban Employment Lands & Transportation Facilities**  
Designate land in the vicinity of existing or planned major highway\(^4\) interchanges, ports, rail yards, and airports for employment purposes, once these lands are included in the urban area (ROP Reference 77.4(6))  
Halton Brief, Table D.8  
Halton Brief, App. B, Part F.3.3  
Halton Brief, App. A, fig 23: Major Transportation Facilities; fig 26: Agricultural Area and Urban Area  

1. **Does CN’s assessment of significance consider this standard?**  
No.  
*Referenced in appendix E. 11(Bousfields report), but does not address it adequately nor does it consider this standard in the assessment of significance.*  

2. **Does CN propose mitigation relevant to this standard?**  
No.  
*Ref: Employment Lands Report, p. 9-10 [Volume 2, Tab K at 353–354].*  

3. **Does CN propose any follow-up relevant to this standard?**  
No.  
*Ref: Employment Lands Report, p. 9-10 [Volume 2, Tab K at 353–354].*  

**Municipal Finances**  
• Detailed information about the transportation infrastructure  

1. **Does CN’s assessment of significance consider this standard?**  

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\(^4\) **Major highway**: A Provincial Highway, A Major Arterial, a MultiPurpose Arterial, or a Minor Arterial as shown on Map 3 of this Plan [the ROP].
### Table A: Information requests (IRs) related to Municipal Standards

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| Ensure that the development *industry*\(^{48}\) absorbs the cost of providing services to new *development*\(^{49}\) or *redevelopment*\(^{50}\) and that any financial impact be based on a financing plan (ROP Reference 210(6)) Halton Brief, Table D.8 Halton Brief, App. B, Part F.3.5 | required to support CN’s development, the cost to implement this infrastructure and the funding source, based on the undertaking of a transportation impact study in accordance with the Region’s guidelines. See IRs ET1 and ET3  
- Prepare an assessment of the significance and mitigation effects on Municipal Finance the CN development will have. See IR ET2  
  - Prepare a fiscal impact study that addresses information regarding the CN Project (including direct capital cost impacts, operating expenditures, operating revenue recoveries and other impacts) and the induced intermodal oriented development (including capital cost impacts, operating expenditure impacts, and direct operating revenue recoveries). See IR EW1  
  - Prepare an assessment of the impact of the Project on the property value and correspondingly property taxes for surrounding residences and businesses. See IR EW3 | No.  
2. Does CN propose mitigation relevant to this standard?  
No.  
*Refs: Transportation & Municipal Finances Report, p. 15 [Volume 2, Tab F at 205]; Municipal Finance and Infrastructure Report, p. 11 [Volume 2, Tab L at 368]*. |

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48 *Industry, Industrial Land Use or Industrial Facility (D-1-3):* A facility or activity relating to: the assemblage and storage of substances/goods/raw materials; their processing and manufacturing; and/or the packaging and shipping of finished products.

49 See footnote 1.

50 *Redevelopment (PPS):* The creation of new units, uses or lots on previously developed land in existing communities, including brownfield sites.
Table A: Information requests (IRs) related to Municipal Standards