



Canadian National

**Darren Reynolds**  
Project Director

<contact information removed>

July 3, 2019

Lesley Griffiths  
Review Panel Chair  
160 Elgin St.  
Ottawa, ON K1A 0H3

By email

Dear Ms. Griffiths:

**RE: Milton Logistics Hub – Undertaking #8, Undertaking #13 & Undertaking #22**

I am writing in response to Undertaking #8 from June 25, Undertaking #13 from June 26, and Undertakings #22 from June 28.

With respect to Undertaking #8, we enclose a memo summarizing the report prepared by Martin Associates for CN regarding an independent forecast of the likely southern Ontario container demand on CN's network. Specifically, the summary memo outlines the basis for the information provided on slide 23 of CN's submission to the Review Panel filed on June 17, 2019 (CEAR #843).

With respect to Undertaking #13, enclosed is a figure outlining the working footprint of the Milton Logistics Hub as well as a table outlining the specific information on key physical characteristics requested by the Review Panel aligned with parameters in CN's previous submission on the Brampton Intermodal Terminal.

With respect to Undertaking #22, enclosed is a memo highlighting three examples where floodplain berms have been installed and their intended purpose.

Thank you for your consideration of these additional technical filings.

Sincerely,   
<Original signed by>

Darren Reynolds  
Project Director

Cc:

William G. McMurray, Review Panel Member (by email)  
Isobel Heathcote, Review Panel Member (by email)  
Joseph Ronzio, Review Panel Manager (by email)  
Mark Lerner, CN Vice President  
Luanne Patterson, CN Senior Systems Manager – Environmental Assessment

## **Panel Information Session:** June 25, 2019

### **Undertaking Request # 8**

#### **Undertaking:**

CN to provide a summary of the report Mr. Martin prepared regarding the Southern Ontario forecast.

#### **CN Response:**

Canadian National Railway Company (CN) retained Martin Associates (Martin) to develop an independent forecast of the volume of intermodal containers that are likely to be handled on CN's network in southern Ontario (the Demand Forecast).

This undertaking response provides a summary of the key inputs and methods used to generate the Demand Forecast. This undertaking also provides the results that were contained in the bar chart included in the slide deck filed by CN on June 17, 2019 (CEAR #843).

#### **Key Inputs into the Demand Forecast**

In order to establish the Demand Forecast, Martin compiled and analyzed data from a variety of sources.

Specifically, Martin considered projected population growth in the Greater Toronto Area (GTA) based on publicly available data from Statistics Canada, the World Bank, the United Nations, and the GeoNames database.

To determine the relevant trends in international container volumes, Martin also considered publicly available industry-specific data and confidential proprietary third-party data regarding container market assessments, historical container volumes, and forecasts for Canadian east and west coast ports served by CN, including the ports of Prince Rupert, Vancouver, Montreal, Halifax, and Saint John. These data included available information regarding future port expansion plans, as well as future port terminal capacity.

A third input was confidential (market-share sensitive) CN data regarding the origin and destination of CN container traffic linking the Brampton Intermodal Terminal (BIT) with the ports noted above, as well as other points on CN's network, and historical volumes of domestic and international containers handled at BIT.

#### **Method of Assessment and Assumptions**

Martin developed separate container volume projections for domestic and international containers, as the economic factors driving these two streams of traffic are different. To strengthen the forecast, Martin focused on the primary drivers – identified through regression analysis – that account for most of the domestic and international container volumes on CN's network, as described below.

##### *Domestic Forecast Methodology*

Martin determined that population forecast data were reliable and statistically significant, and are readily available from multiple public sources. Martin conducted a regression analysis to determine the correlation between historical population growth in the GTA and the historical level

of domestic container traffic at BIT. The analysis determined there is a strong correlation between population growth and increase in volume of domestic containers. To determine the margin of error in his regression analysis, Martin used historical population data to project historical domestic container volumes at BIT for the years 2008 to 2018 and compared the projections to actual container volumes: the error was less than 0.01%.

Martin then used population projections from the above-noted sources to project future domestic container volumes on CN's network in southern Ontario. The use of publicly available population data, vetted by government departments and agencies and economic experts from around the world, contributes to the robustness of the domestic Demand Forecast.

#### *International Forecast Methodology*

Martin developed regression models based on historical container volumes at each of four ports (Prince Rupert, Vancouver, Montreal, and Halifax) and the international container volume handled on CN's network between BIT and each of those four ports. Separate regression models were developed for each port, and these analyses again identified a strong correlation. The container traffic moving between BIT and these four ports accounted for the overwhelming percentage of total international inbound and outbound container traffic handled at BIT in 2018. Martin concluded that port container volume projections are appropriate to use to determine the future increase in international container traffic on CN's network in southern Ontario.

Next, the forecast container volume at each port was input into the regression model developed for that specific port to estimate international container volumes on CN's network to and from southern Ontario through 2040. The projected international container volumes to and from each of the four ports were then summed to estimate the future international container volumes on CN's network in southern Ontario. The remaining small percentage of the international container traffic handled by CN in southern Ontario that was not attributable to the four ports listed above was held constant at 2018 levels throughout the forecast period.

#### **Forecast Results**

Using population growth forecasts for the GTHA and international container volumes projected for the four Canadian ports, and leveraging CN's confidential origin and destination data, Martin determined the anticipated volume of container traffic on CN's network in southern Ontario would be about 1.7 million containers by 2040.

The actual volumes of domestic and international containers handled on CN's network in southern Ontario between 2008 and 2018, and the forecast volumes to be handled between 2025 and 2040 are shown in the figure below (which was also included in the slide deck filed by CN on June 17, 2019 (CEAR #843)).



