

CN Milton Logistics Hub – Ambient Light Mitigation Measures (Condition 4.3)

The purpose of this memorandum is to document the mitigation measures to control the direction, timing, and intensity of lighting during the construction phase of the Project in accordance with Condition 4.3 of the Decision Statement issued by the Minister of the Environment on January 21, 2021, which states:

The Proponent shall develop, prior to construction, mitigation measures to control the direction, timing and intensity of lighting within the Designated Project Development Area to mitigate adverse environmental effects of the Designated Project (including on migratory birds), while meeting engineering requirements for safe railway and facility operation. The Proponent shall implement these measures during all phases of the Designated Project. The Proponent shall submit these measures to the Agency prior to implementing them. As part of these measures, the Proponent shall:

4.3.1 direct light fixtures toward active construction areas during construction and toward the terminal during operation;

4.3.2 use down-cast light fixtures during operation;

4.3.3 install glare reduction technologies on individual light fixtures; and

4.3.4 require that all motor vehicles use low-beam headlights within the Designated Project Development Area.

Through the environmental assessment process, CN identified various mitigation measures to be implemented to manage light during construction and operation of the Project. Such measures have been identified through the detailed design and tender process for implementation by the contractor during construction and to be incorporated into the final designs of the Project for implementation during operations. While the detailed design process is on-going, specifically in regard to the design of the light fixtures to illuminate the terminal during operations, several mitigation measures have been identified through the tender process and incorporated into the Environmental Protection Plan to be implemented by the contractor during construction.

The mitigation measures for lighting to be implemented by the contractor during construction to control the direction, timing and intensity of lighting within the Project Development Area include the following:

- Construction activities will be confined to daytime hours (between 07:00 and 22:00) to reduce the need for staging lights, with the following exceptions:
 - activities associated with the pouring of workpads (i.e., concrete plant operation and continuous pour requirements)
 - isolated night-time activities associated with Lower Base Line
 - in circumstances where work is not technically feasible before 22:00
 - other limited activities subject to approval by CN.
- If night-time work is required, the Contractor is to provide advanced notice to CN in accordance with the CN Communication Protocol, including an explanation for why such work is not technically feasible to complete during daytime hours.
- Construction lighting will be directed at the specific construction location (night-time construction).
- Lighting will be reduced in areas not being used for construction activities.



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- Additional mitigation measures during construction will include:
 - Using down-cast light fixtures
 - Installing glare reduction technologies on individual light fixtures
 - Positioning lights to illuminate the immediate work area and avoiding directing lights off CN property, onto a public roadway that is open for public use, or towards a private residence
 - Requiring all motor vehicles to use low-beam headlights within the project site
- CN has developed a Communication Protocol for receiving complaints from the public. Complaints pertaining to light will be rectified within 24 hours of receiving the complaint.
- The contractor will be required to follow CN's Communication Protocol for scheduling construction activities that generate light trespass, including notification requirements and complaint resolution.
- A restricted activity period has been developed, whereby the use of night-time flood lighting will be restricted from April 1 to May 31 and from August 15 to October 31 to reduce impacts during the migratory bird breeding window.

These measures were included in the tender package and Environmental Protection Plan and form the requirements that the contractor has agreed to implement during construction. CN will have an Environmental Monitor on site during construction to independently observe and record on the implementation of the conditions (pursuant to Condition 13.1).

Additional measures will be developed for implementation during operations, and may also be refined through subsequent phases of construction. Light Design Plans for the terminal lighting, as well as operational protocols within the Terminal, are in progress, and are being developed in accordance with Condition 4.3 and commitments made by CN during the EA process, requiring:

- perimeter lighting to be directed inward towards the Terminal to minimize light trespass to the environment and surrounding areas
- use of down-cast light fixtures during operation
- installation of glare reduction technologies on individual light fixtures
- that all motor vehicles use low-beam headlights within the Project Development Area

Such measures will be provided to the Agency prior to construction of the light infrastructure and prior to implementing such measures during operations.

