

5.0 PURPOSE AND RATIONALE FOR THE UNDERTAKING

The QEW is a major element in the provincial highway network that allows for the movement of people and goods. The QEW is one of Ontario's most important transportation facilities and links the Canada-United States border crossings at Niagara Falls and Fort Erie with Ontario's Golden Horseshoe and beyond. The QEW Garden City Skyway is a critical piece of infrastructure within the QEW network.

The existing QEW Garden City Skyway was constructed in 1963, originally designed as a 48-span, six-lane, high-level bridge. Normal maintenance has been performed on the QEW Garden City Skyway since it was opened. The bridge deck was rehabilitated in 2002, and substructure rehabilitation was completed between 2004 and 2011.

In 2011, the QEW leading up to the west end of the QEW Garden City Skyway was widened to six lanes. This was the last section of the highway between Toronto and Niagara Falls to be widened from four lanes to six general purpose lanes. Since its construction, the QEW Garden City Skyway has included six lanes, with the outside lanes functioning as truck-climbing lanes in each direction. The truck-climbing lanes were effectively converted into general purpose lanes with the QEW widening. The long, sustained grades on the QEW Garden City Skyway result in reduced speed for heavy vehicles. This can impede traffic and reduce safety performance.

To address the long-term structural, traffic safety and operational needs of the QEW crossing of the Welland Canal, the QEW Garden City Skyway will require rehabilitation to address its structural and operational needs. Though the bridge is not currently in poor condition, it will require more than routine maintenance in order to avoid continued deterioration of the deck and it is anticipated the deck will ultimately need replacement.

Recognizing the priority for provincial highways to facilitate the efficient movement of people and goods, MTO is addressing the QEW Garden City Skyway structural needs and the QEW operational needs through this Class EA Study.

5.1 Problems and Opportunities

An assessment of the existing bridge and roadway conditions within the study area identified the following structural and operational problems and opportunities:

Problems

- ▶ The bridge has been extensively rehabilitated in recent years and is not in poor condition. However, the bridge will require ongoing rehabilitation.
- ▶ Since the bridge was constructed in 1963, the bridge deck has never been replaced.
- ▶ The bridge will require rehabilitation, including potential deck replacement in the future.
- ▶ It is not possible to maintain the existing six lanes on the QEW Garden City Skyway while rehabilitating / replacing the existing bridge deck.
- ▶ The QEW Garden City Skyway has long, sustained grades that result in reduced speed for heavy vehicles, which can impede traffic and reduce safety performance. Recent widening of the QEW has eliminated the function of the truck-climbing lanes originally designed for the QEW Garden City Skyway, and this has reduced safety and operational performance.
- ▶ The narrow shoulders on the bridge are undesirable for the safe operation of traffic and emergency response. Also, the existing vertical crest curve 'K' value of 54 does not conform to current design guidelines (the minimum K value of 120 is recommended for a design speed of 120 km/h per the Geometric Design Standards for Ontario Highways).

Opportunities

- ▶ The Province recognizes the QEW as a key corridor to connect economic centres and international gateways.
- ▶ Widening of the QEW to six lanes from Highway 406 to the Garden City Skyway was completed in the summer of 2011.
- ▶ The Ministry of Transportation is undertaking the Niagara to GTA (NGTA) Corridor Planning and Environmental Assessment Study to examine transportation problems and opportunities, and consider alternative solutions in the Niagara, Hamilton and Halton areas. The QEW Garden City Skyway is located within the NGTA study area. NGTA project details are available at: <https://www.ontario.ca/page/niagara-greater-toronto-area-corridor>.
- ▶ The NGTA study has recommended a new highway connecting Highway 406 south of the Welland area to the QEW near Fort Erie, to address future transportation capacity demands.