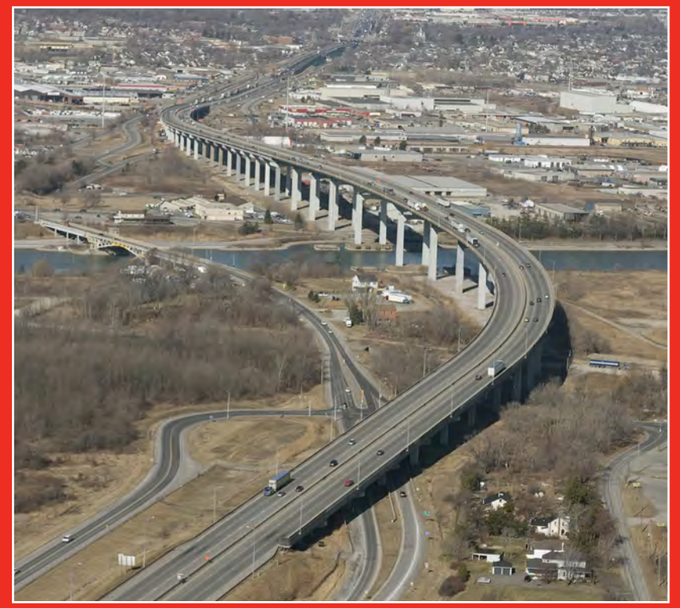
Ontario



# QEW Garden City Skyway

## From Niagara Street to Glendale Avenue

City of St. Catharines and
Town of Niagara-on-the-Lake

W.O. 08-2009

Preliminary Design and
Class Environmental Assessment

**Transporation Environmental Study Report**

**FINAL**

wsp

September 2017

COMMUNITIES

TRANSPORTATION

BUILDINGS

INFRASTRUCTURE

# QEW GARDEN CITY SKYWAY

## PRELIMINARY DESIGN AND CLASS ENVIRONMENTAL ASSESSMENT STUDY

## TRANSPORTATION ENVIRONMENTAL STUDY REPORT

## W.O. 08-2009

**Prepared for: Ontario Ministry of Transportation, Central Region**
**Prepared by: WSP Canada Group Limited**

**Prepared By:**


**Sandy Nairn, MCIP RPP**
National Manager of Environmental Planning
WSP Canada Group Limited

**Brent Gotts, P.Eng.**
Project Engineer
WSP Canada Group Limited


**Reviewed By:**


**Chris Barber**
Senior Environmental Planner
Ontario Ministry of Transportation

**Bill Cung, P.Eng.**
Senior Project Engineer
Ontario Ministry of Transportation


**Approved By:**


**Linda Fischer**
Head – Environmental Planning
Ontario Ministry of Transportation

**Jason White, P.Eng.**
Manager – Engineering Office
Ontario Ministry of Transportation


**September 2017**

# THE PUBLIC RECORD

A copy of this document has been submitted to the following office of the Ministry of the Environment and Climate Change to be placed in the Public Record:

**Ministry of the Environment and Climate Change**
Niagara District Office
301 St. Paul Street
St. Catharines, ON  L2R 3M8

This Transportation Environmental Study Report is also available for a 30-day public review period starting September 14, 2017, during regular business hours, at the public review locations listed below. The report will also be available on the study website at **www.qewgcs.ca**.

Ministry of Transportation
Central Region Environmental Section
3rd Floor, 159 Sir William Hearst Avenue
Toronto, ON  M3M 0B7

Niagara Region
Office of the Regional Clerk
1815 Sir Isaac Brock Way, P.O. Box 1042
Thorold, ON  L2V 4T7

City of St. Catharines
Office of the City Clerk
50 Church Street, P.O. Box 3012
St. Catharines, ON  L2R 7C2

Town of Niagara-on-the-Lake
Clerk's Department
1593 Four Mile Creek Road, P.O. Box 100
Virgil, ON  L0S 1T0

St. Catharines Public Library
Dr. Huq Family Library Branch
425 Carlton Street
St. Catharines, ON  L2M 4W8

Niagara-on-the-Lake Public Library
10 Anderson Lane
Niagara-on-the-Lake, ON  L0S 1J0

If you have any accessibility requirements in order to participate in this project, please contact one of the project team members listed in **Section 2.4**.

With the exception of personal information, all comments will become part of the public record in accordance with the *Freedom of Information and Protection of Privacy Act* R.S.O., 1990, c.F.31

Ce document hautement spécialisé n'est disponible qu'en anglais en vertue du règlement 411/97, qui en exempte l'application de la Loi sur les services en français. Pour de l'aide en français, veuillez communiquer avec le ministère des Transports, Bureau des services en français au: 905-704-2045 ou 905-704-2046.

# EXECUTIVE SUMMARY

## Project Overview

This report documents the Planning / Preliminary Design and Class Environmental Assessment (EA) Study undertaken by the Ontario Ministry of Transportation (MTO) to address the long-term structural, traffic safety and operational needs of the QEW Garden City Skyway.

The study has followed the approved environmental planning process for Group 'B' projects under the *Class Environmental Assessment for Provincial Transportation Facilities* (2000). This project addresses the Planning / Preliminary Design phase and includes submission of this Transportation Environmental Study Report (TESR).

The study area extends along the Queen Elizabeth Way (QEW) from Niagara Street, in the City of St. Catharines, to Glendale Avenue, in the Town of Niagara-on-the-Lake, within Niagara Region. The existing QEW Garden City Skyway is a 48-span, high-level bridge that is 2.2 km long, 28 m wide and carries the QEW over the Welland Canal, connecting the City of St. Catharines and the Town of Niagara-on-the-Lake. At the crossing of the Welland Canal, the bridge is approximately 40 m high.

The purpose of this report is to document the environmentally significant aspects of the planning and preliminary design of the Recommended Plan. The study reviewed various bridge alternatives, resulting in the identification of a Recommended Plan. Engineering, environmental and property requirements were established, along with the identification of mitigation measures to reduce or negate environmental effects. The Class EA planning process included consideration of the cultural, natural, and socio-economic environments.

## Consultation

A stakeholder consultation program was undertaken to assist in the planning and impact assessment for this project. Throughout the duration of the study, those consulted included external agencies (including federal and provincial ministries and the local Conservation Authority), municipalities, potentially interested Indigenous communities, and the public (including affected property owners, community / interest groups, and the general public).

Numerous opportunities for input with stakeholders were provided, including three Public Information Centres held at key points during the study process, stakeholder meetings, newspaper advertisements inviting stakeholder participation and comments, access to a project website (**www.qewgcs.ca**) with up-to-date study information, and direct contact with the Project Team via mail, email, phone or fax. An overview of the consultation process as well as a summary of consultation events and activities undertaken at key study milestones is provided in **Section 3.0**.

## 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 and is a 48-span, six-lane, high-level bridge. Normal maintenance has been performed on the bridge since it was opened. Full deck rehabilitation was completed in 2002, and extensive substructure rehabilitation was completed between 2004 and 2011. A full deck replacement is anticipated to be required in the future.

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.

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.

## Alternatives and Evaluation

The assessment and evaluation of alternatives consisted of the following steps:

- Identification of the problems and opportunities within the study area (see **Section 5.1**);
- Assessment of alternatives to the undertaking, to establish an approach most appropriate to address the overall problem (see **Section 6.2**);
- Development of a long list of alternative methods (see **Section 6.3**);
- Identification of assessment factors and sub-factors to be used in evaluating the alternatives (see **Table 6-3**);
- Assessment and evaluation of short-listed alternative methods (see **Section 6.4**);
- Supplementary Evaluation and Risk Identification (see **Section 6.5**);
- Value Engineering and Cost Risk Assessment (see **Section 6.6**); and,
- Establishment of a technically preferred alternative (see **Section 6.7**).

## Description of the Recommended Plan

The Recommended Plan involves the following:

- Construction of a new QEW Garden City Skyway twin bridge to the north (bridge type to be determined during Detail Design);
- Rehabilitation of the existing QEW Garden City Skyway (the extent of rehabilitation will be confirmed during Detail Design);
- Realignment of local roads including portions of Dieppe Road, Queenston Street, York Road, Niagara Stone Road, Coon Road, Taylor Road, Queenston Road and the Welland Canals Parkway Trail to accommodate the new highway right-of-way and bridge structure;
- Minor changes to the easterly Niagara Street interchange ramps and speed-change lanes, and minor changes to the Glendale Avenue interchange westerly speed-change lanes.;
- Full or partial acquisition of private properties, federally-owned land (St. Lawrence Seaway Management Corporation), provincially-owned land, Niagara Region-owned properties, City of St. Catharines-owned properties and also property owned by the Town of Niagara-on-the-Lake.;
- Relocation of affected utilities; and,
- Construction of three stormwater management ponds.

**Section 7.0** of this report further describes and presents the details of the Recommended Plan (see **Exhibit 7-1**).

## Potential Environmental Effects, Mitigation Measures, and Commitments to Future Work

**Section 8.0** of this report outlines the potential environmental effects associated with the recommended plan, proposed mitigation measures and commitments to future work. Identified concerns, proposed mitigation measures, and future commitments are summarized in **Table 8-4.**

**Class EA Principles**

A detailed summary of how the principles of the Class EA were addressed in this study is included in **Section 10.0**.

**Next Steps**

Following completion of the 30-day public review period for this TESR, if no Part II Order requests are outstanding or granted, the project will then be eligible for Environmental Clearance for right-of-way designation and property acquisition, and MTO may proceed to Detail Design as outlined in the MTO's *Class Environmental Assessment for Provincial Transportation Facilities* (2000).

A Design and Construction Report (DCR) will be prepared during Detail Design to document the design to an implementation level of detail and the corresponding impacts, mitigation measures and commitments. The DCR will be filed for a 30 day public review period prior to the project being eligible for Environmental Clearance – Construction Start.

**References**

A complete list of reference documents used in the preparation of this TESR, including project-specific reports, is included in **Section 12.0**.

# TABLE OF CONTENTS

# EXHIBITS

## TABLES



## APPENDICES

# GLOSSARY

| | |
|---|---|
| AOI | Area of Investigation |
| APEC | Area of Potential Environmental Concern |
| AZR | Airport Zoning Regulation |
| BHR | Built Heritage Resource |
| CEAA 2012 | Canadian Environmental Assessment Act, 2012 |
| CHL | Cultural Heritage Landscape |
| COS | Contamination Overview Study |
| COSEWIC | Committee on the Status of Endangered Wildlife in Canada |
| COSSARO | Committee on the Status of Species at Risk in Ontario |
| CSP | Corrugated Steel Pipe |
| Decibel (dB) | Logarithmic unit of measure used for expressing level of sound |
| dBA | Decibels (A-weighted). 'A-weighting' or 'A-scale' are considered to be an accurate approximation of noise perceived by the average human. |
| DCR | Design and Construction Report |
| DFO | Fisheries and Oceans Canada |
| EA Act | Ontario Environmental Assessment Act |
| EASR | Environmental Activity and Sector Registry |
| ESA | Environmentally Sensitive Area |
| ESA | Environmental Site Assessment |
| FTA | United States Federal Transit Administration |
| GHG | Greenhouse Gas |
| GTA | Greater Toronto Area |
| G.W.P. | Group Work Project |
| MDA | Minimum Descent Altitude |
| MNRF | Ontario Ministry of Natural Resources and Forestry |
| MOECC | Ontario Ministry of the Environment and Climate Change |
| MTCS | Ontario Ministry of Tourism, Culture and Sport |
| MTO | Ontario Ministry of Transportation |
| NHIC | Natural Heritage Information Centre |
| NPCA | Niagara Peninsula Conservation Authority |
| NPSP Area | Niagara Peninsula Source Protection Area |
| NSA | Noise Sensitive Area |
| OLA | Outdoor Living Area |
| OLS | Obstacle Limitation Surfaces |
| OPSS | Ontario Provincial Standard Specification |
| OPSD | Ontario Provincial Standard Drawing |
| OWRA | Ontario Water Resources Act |
| PIC | Public Information Centre |
| PPS | Provincial Policy Statement |
| PSS | Preliminary Site Screening |
| PSW | Provincially Significant Wetland |
| PTE | Permission to Enter |
| PTTW | Permit To Take Water |
| QEW | Queen Elizabeth Way |
| ROW | Right-of-Way |
| RSS | Retained Soil System |
| SAR | Species at Risk |
| SARA | Species at Risk Act |
| SWH | Significant Wildlife Habitat |
| SWM | Stormwater Management |
| TESR | Transportation Environmental Study Report |
| TPZ | Tree Protection Zone |
| WSU | Wildlife Survey Unit |
| WTP | Water Treatment Plant |