

# **TRANSPORTATION ENVIRONMENTAL STUDY REPORT**

## **HIGHWAY 403 AND QUEEN ELIZABETH WAY FROM TRAFALGAR ROAD TO WINSTON CHURCHILL BOULEVARD**

### **PRELIMINARY DESIGN AND CLASS ENVIRONMENTAL ASSESSMENT STUDY**

#### **CLASS ENVIRONMENTAL ASSESSMENT FOR PROVINCIAL TRANSPORTATION FACILITIES (2000) GROUP 'B' PROJECT**

**W.O. 09-20007**

**June 2013**

## EXECUTIVE SUMMARY

### Project Overview

This Transportation Environmental Study Report (TESR) documents Preliminary Design Study and Class Environmental Assessment (EA) undertaken by the Ontario Ministry of Transportation (MTO) to determine the capacity, geometric and operational improvements to the QEW and Highway 403 from Trafalgar Road to Winston Churchill Boulevard. In particular, this study was initiated to:

- Address future capacity needs;
- Identify future operational and safety improvements;
- Review the provision of High Occupancy Vehicle (HOV) lanes;
- Review the provision of adding the 'north to east' and 'east to north' ramps at the QEW / Highway 403 interchange;
- Develop and evaluate alternatives;
- Recommend a plan to address the future needs to Year 2031; and
- Identify future property requirements.

The study followed the approved environmental planning process for Group "B" projects under the *Class Environmental Assessment for Provincial Transportation Facilities* (2000).

The study limits for the proposed improvements to the Queen Elizabeth Way (QEW) and Highway 403 are within the Town of Oakville, Halton Region and the City of Mississauga, Region of Peel in the following sections:

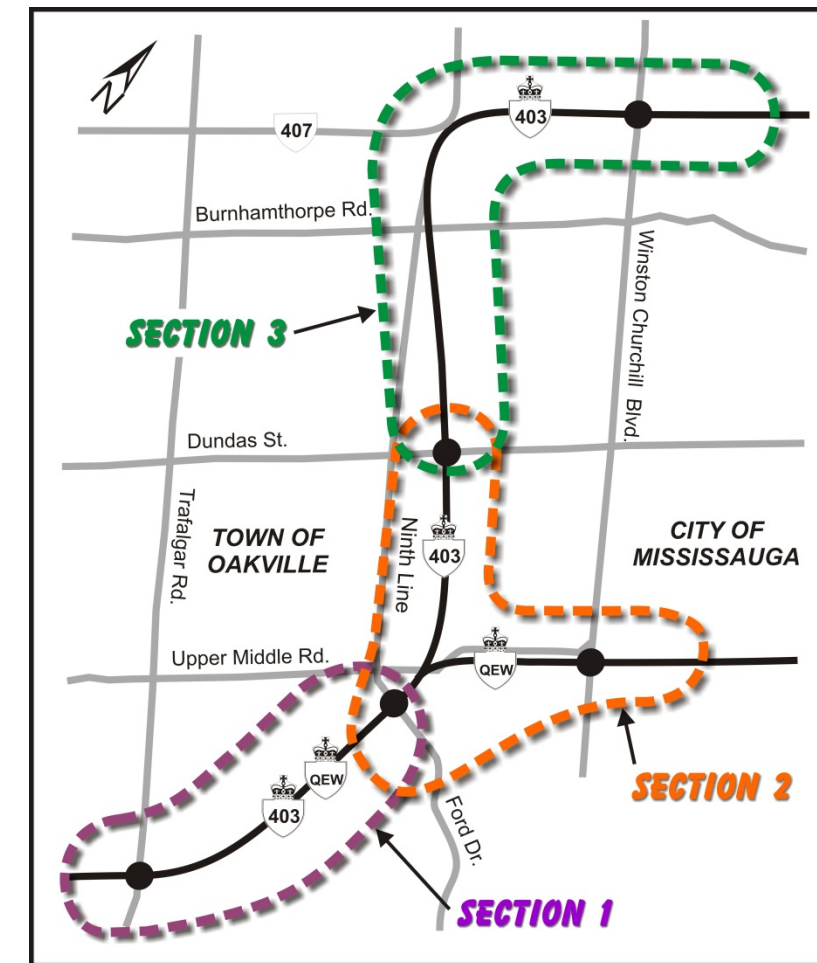
- QEW from Trafalgar Road easterly to east of Winston Churchill Boulevard; and
- Highway 403 from Trafalgar Road northerly to Highway 407 and beyond to Winston Churchill Boulevard.

For the purposes of this report, the combined Highway 403/QEW section between Trafalgar Road and the QEW/Highway 403 interchange is referred to only as the QEW for the ease of describing the highway sections throughout the report. Thus, this report refers to the QEW as the QEW section between Trafalgar Road and east of Winston Churchill Boulevard, and refers to Highway 403 as the section from the QEW/Highway 403 interchange northerly to Highway 407 and beyond to east of Winston Churchill Boulevard.

The study limits were broken down further into three sections, based on their different characteristics, to facilitate the development of alternatives. The three sections are shown in **Exhibit E-1** and are as follows:

- **Section 1:** QEW from Trafalgar Road to Ford Drive
- **Section 2:** QEW from Ford Drive to east of Winston Churchill Boulevard and Highway 403 from the QEW to Dundas Street
- **Section 3:** Highway 403 from Dundas Street to Winston Churchill Boulevard

**Exhibit E-1: Highway 403/QEW Improvements Study Sections**



### Transportation Needs and Opportunities

The QEW is a critical element in the Greater Toronto Area (GTA) transportation network and is one of Ontario's most important transportation facilities for trade, commuter and tourism traffic. Dedicated by Queen Elizabeth in June 1939, the Queen Elizabeth Way (QEW) is also Ontario's oldest freeway and was the longest divided highway in Canada when it officially opened in 1940.

Highway 403 provides an essential commuter and business link serving the communities in the west and northwest areas of the GTA. Highway 403 provides an alternate freeway link to the QEW/Highway 427 to access the Lester B. Pearson International Airport and the Highway 401 corridor.

The QEW / Highway 403 interchange was constructed in the early 1980's as part of the Highway 403 implementation and to initially provide access to and from the west on the QEW.

Detailed traffic analysis was carried out as part of this study and identified the following capacity issues with existing traffic operations within the study limits:

- Afternoon and morning congestion on QEW westbound from the Highway 403 westbound ramp to Trafalgar Road;
- Morning congestion on QEW eastbound from Winston Churchill Boulevard easterly;

- Morning and afternoon congestion on Highway 403 eastbound from the QEW to Dundas Street, which is affected by the termination of the truck climbing lane in this area;
- Afternoon and morning congestion on Highway 403 westbound from Highway 407 to Upper Middle Road; and
- Morning congestion on Highway 403 eastbound from Dundas Street easterly.

Traffic analysis also determined projected future traffic volumes by reviewing ongoing and future initiatives and projects adjacent to the study area, and projected population and employment growth within and beyond the study area. Traffic projections to Year 2031 indicate a significant increase in traffic volumes on the QEW and Highway 403, which will continue to worsen existing congestion and lead to the deterioration of future traffic operations on the provincial highway road networks.

The existing configuration of the QEW/Highway 403 freeway-to-freeway interchange is missing the “east to north” and “north to east” moves. Provision of these moves would provide direct freeway connections for traffic travelling between north Oakville/Milton and south Mississauga/Toronto’s Central Business District. These moves would also alleviate traffic congestion on the municipal road network in the vicinity of the QEW / Highway 403 interchange, by keeping associated traffic on the freeway network rather than municipal roads.

The Province has a vision for managing traffic congestion on Provincial highways as future traffic volumes continue to grow. This vision includes Ontario’s High Occupancy Vehicle (HOV) Lane Network Plan, which seeks to manage traffic congestion by adding HOV lanes to many provincial highways to get people and goods to their destination safely and in less time. The plan identifies longer-term opportunities for HOV lanes on the QEW and Highway 403 within the study limits.

Structural investigations were undertaken as part of this study to assess the existing conditions of 25 bridges and 5 major culvert structures within the study limits. All structures were reviewed in terms of structural and functional needs. The investigations identified the need for rehabilitation/repairs as well as modifications (e.g. widening or replacement) to accommodate the improvements to the QEW and Highway 403.

### **Analysis & Evaluation**

The study undertook a comprehensive review and analysis of alternatives for the improvements to Highway 403 and the QEW within the study limits. The assessment and evaluation of alternatives consisted of the following key steps:

- Identification of the problems and opportunities within the study area;
- Identification of assessment factors and criteria to be used in evaluating the alternatives;
- Assessment of planning alternatives to establish the most appropriate approach to address the overall problem;
- Assessment of preliminary design alternatives; and
- Selection of an overall preferred plan.

### **Consultation**

An extensive stakeholder consultation program was undertaken to assist in the planning and impact assessment for this project. Throughout the duration of the study, those engaged included external agencies, municipalities, First Nations and Aboriginal groups and the public.

Numerous opportunities for input from these stakeholders were provided throughout the study, including two Public Information Centres (PICs) held at key points during the study process, stakeholder meetings, newspaper advertisements, notification mail outs, and direct contact with the Project Team via mail, email, phone or fax.

### **Preferred Plan**

Based on the comprehensive review and analysis of the alternatives and consultation throughout the study, the Preferred Plan involves the following:

#### **Section 1 - QEW from Trafalgar Road to Ford Drive**

- Add an HOV lane in each direction (plus 4 general purpose lanes through Royal Windsor Drive).

#### **Section 2 - QEW from Ford Drive to Winston Churchill Boulevard/Highway 403 from the QEW to Dundas Street**

- Add an HOV lane in each direction along the QEW and a general purpose lane in each direction along Highway 403;
- Add an auxiliary Highway 403 northbound lane to extend the northbound truck climbing lane to Dundas Street; and
- Add “North to East” and “East to North” ramps in the long term.

The preferred plan for Section 2 also includes the construction of a new loop ramp at Ford Drive to provide access to Highway 403 eastbound and QEW eastbound, which is anticipated to alleviate congestion on Upper Middle Road and Ford Drive. Following additional consultation between MTO and Halton Region, it was agreed to include the proposed loop ramp as part of this Class EA Study since it provides an overall benefit to the local road network. The implementation of the loop ramp is subject to future negotiations and a formal agreement between MTO and Halton Region.

#### **Section 3 - Highway 403 from Dundas Street to Winston Churchill Boulevard**

- Add a general purpose lane in each direction on Highway 403
- Add auxiliary Highway 403 northbound lane.
- Construct a new service road to provide southbound access (i.e. one-way) from the S-E/W exit ramp at the Highway 403/Dundas Street interchange to the Winston Park West development lands and Upper Middle Road. A new bridge crossing over Dundas Street would be provided for this new service road. Access to the Highway 403 off-ramp to Upper Middle Road would be closed once the service road is in place.

A Service Road from Dundas Street to Upper Middle Road provides the following benefits:

- Addresses potential highway operational and safety concerns with a three-point diverge at the QEW/Highway 403 interchange (the north to west ramp, the off-ramp to Upper Middle Road and the future north to east ramp) and the potential weaving of traffic entering from the Dundas Street west to south on-ramp, destined to the QEW;
- Eliminates the existing sight distance issue at the southbound off-ramp at Upper Middle Road; and
- Supports commercial development in the area (i.e. Winston Park West Development).

The overall preferred plan also includes:

- bridge rehabilitations / replacements;
- interchange re-configurations / modifications to accommodate improvements to the QEW and Highway 403 mainline;
- property acquisition,
- full illumination on the QEW and Highway 403;
- implementation of stormwater facilities and drainage provisions; and
- landscaping.

The Preferred Plan is shown in **Exhibits E-2a to E-2g**. **Section 7** of the Transportation Environmental Study Report (TESR) further describes and presents the technically preferred plan for the proposed improvements to Highway 403/QEW as listed above.

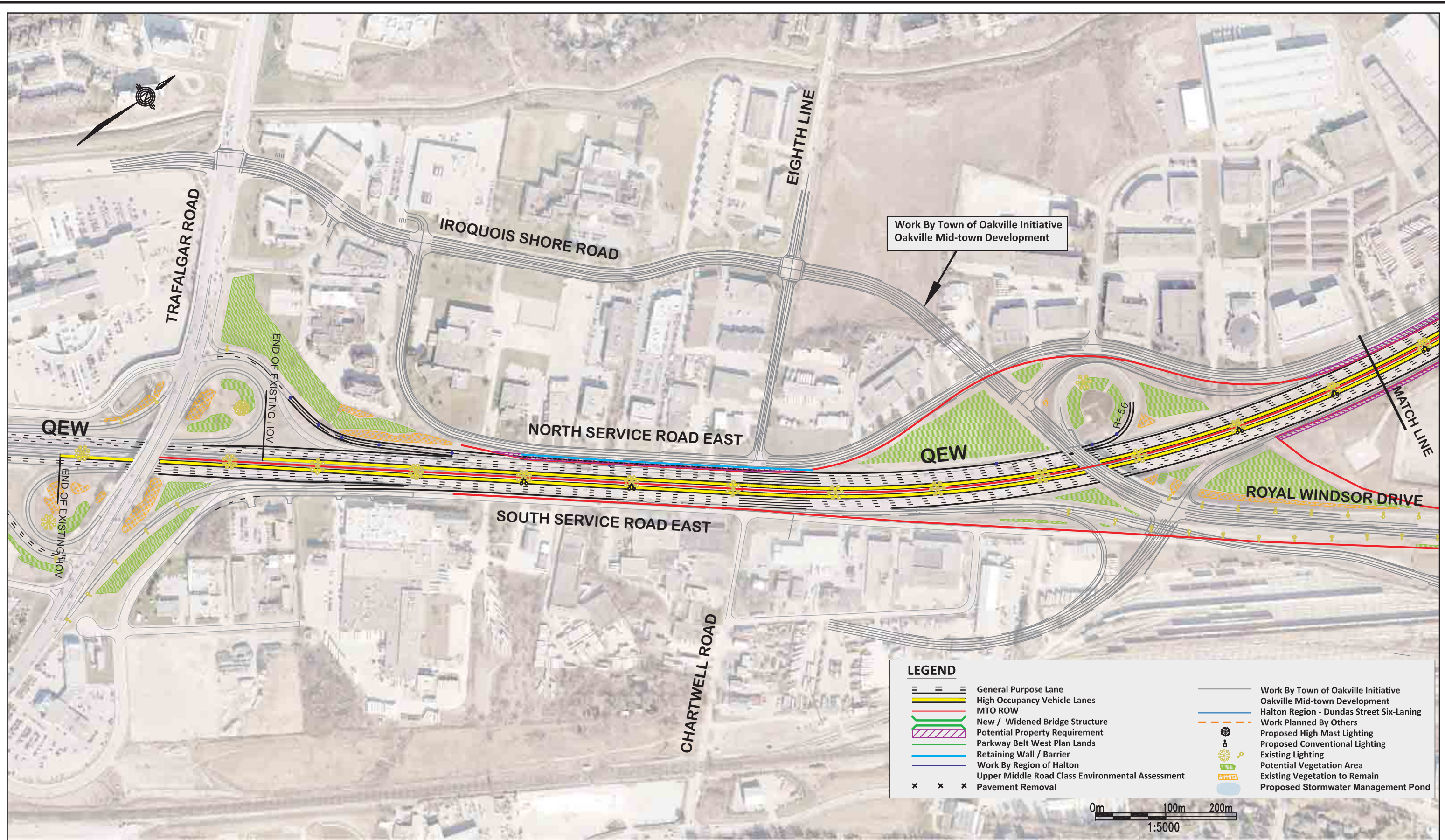
The timing of the proposed Highway 403 and QEW improvements will be subject to the outcome of the Environmental Assessment and Preliminary Design Study. Upon receiving environmental approval for the developed improvement plans, MTO will then commence protecting property needs as identified in the study and consider placing the proposed improvement plans into MTO's capital program. For a project of this scope, the work will likely be phased in over a number of years. Short to mid-term improvements, such as rehabilitating the existing bridges at the QEW/Ford Drive interchange and extending the truck-climbing lane on Highway 403 (as identified on the preferred plan in **Exhibits E-2a to E-2g**), are being considered to be staged earlier than the ultimate improvements (i.e. the new freeway-to-freeway ramps at the QEW/Highway 403 interchange), but remain dependent on the necessary funding to be in place.

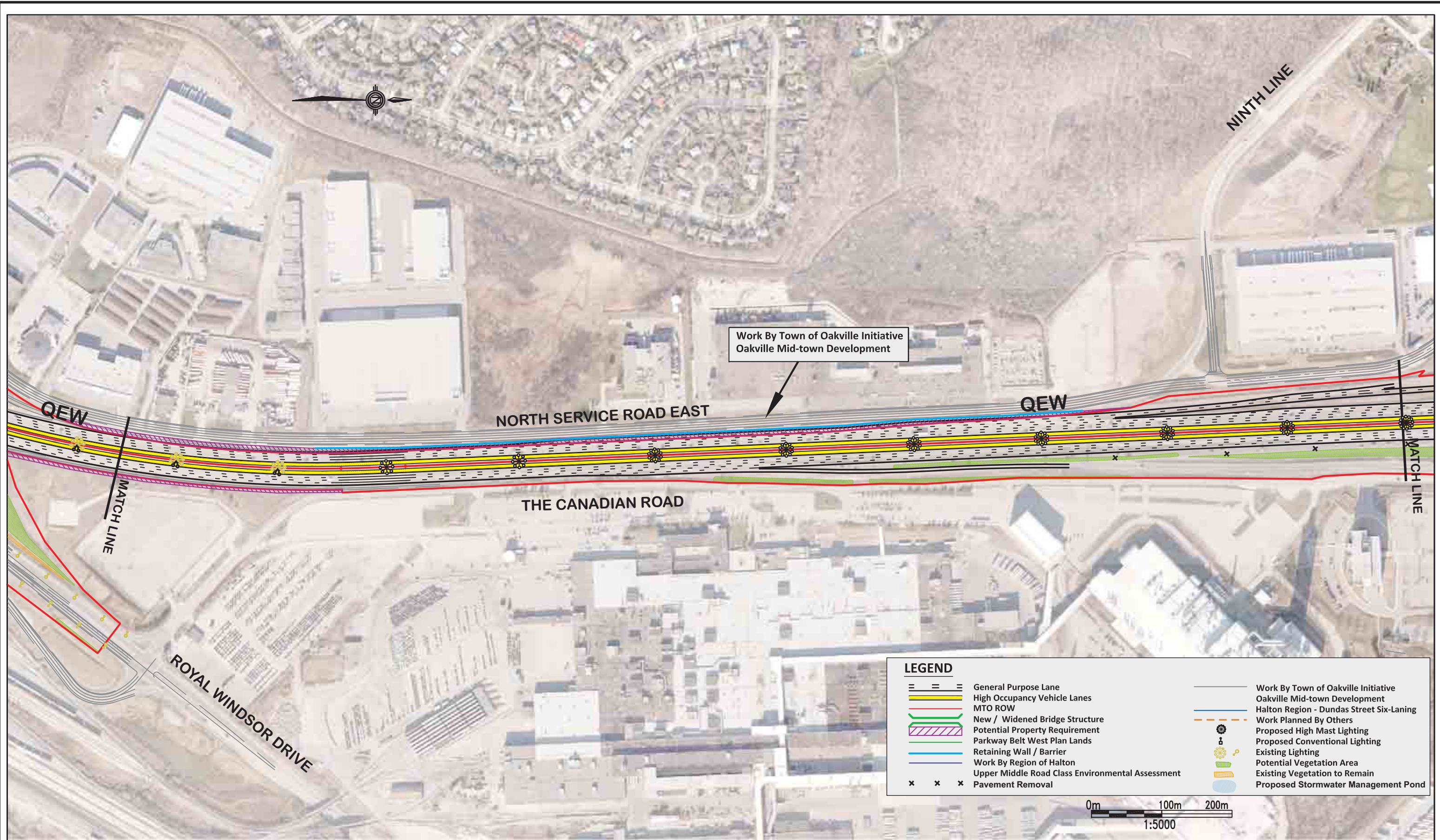
An issue that will affect the timing for the proposed improvements is the present condition of the structures at Ford Drive and at the Highway 403 west to north ramp under the QEW. Investigations undertaken as part of this study have identified that these structures should either be rehabilitated or replaced in the short term (i.e. 1 to 5 years). As a consequence, the Ministry is in the process of initiating the detail design for the rehabilitation/replacement of these structures.

Maintenance of traffic during these structural rehabilitations/replacements will require some alignment shifts on the QEW. Therefore, as part of the structural rehabilitations/replacements, the QEW westbound lanes would be realigned to their long term location as shown on the preferred plan.

### **Potential Environmental Effects / Proposed Mitigation Measures**

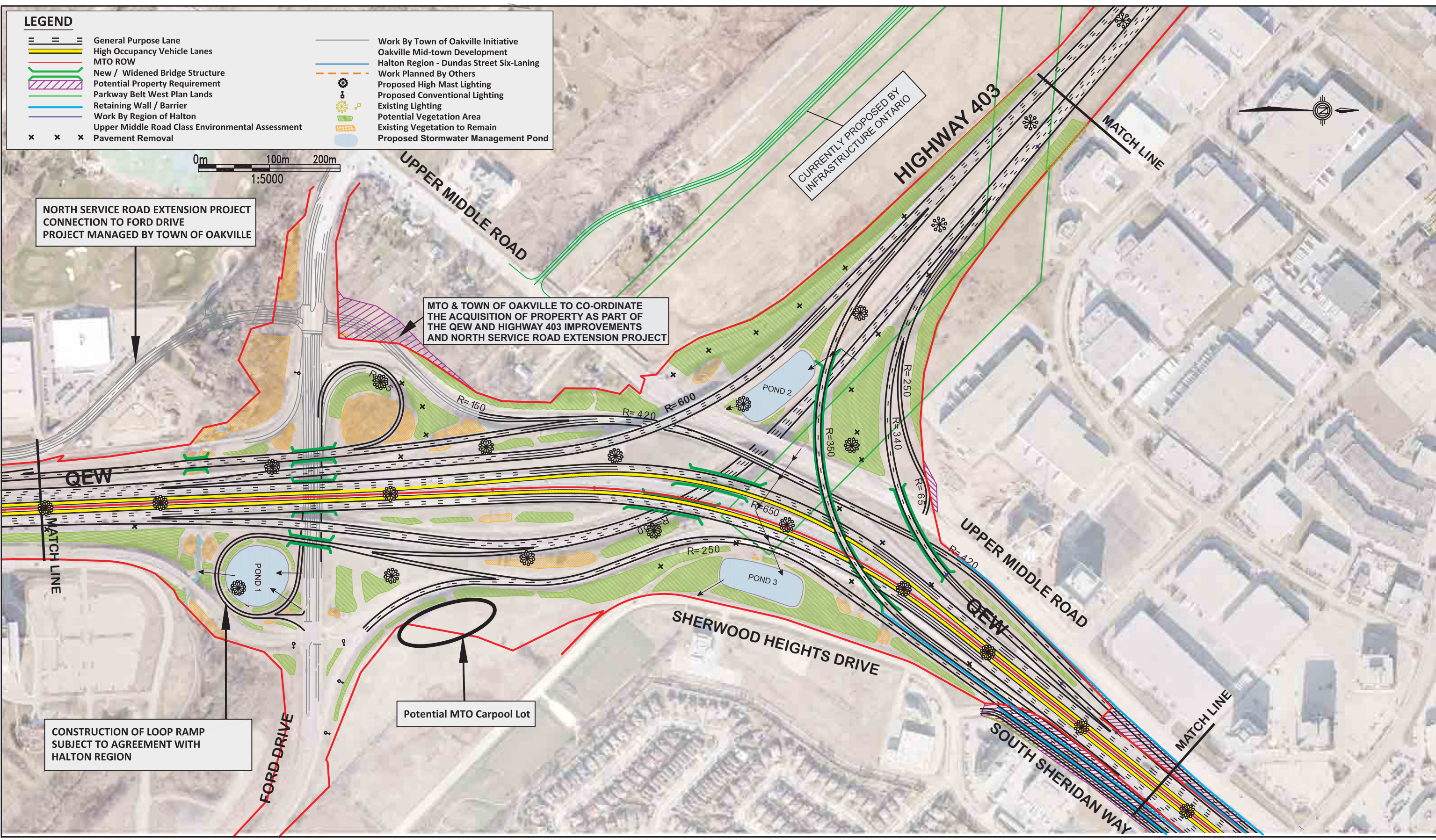
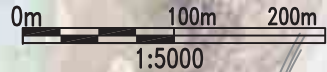
**Section 8** of the TESR outlines the potential environmental effects associated with the selected design, proposed mitigation measures and commitments to future work. Identified Concerns, Proposed Mitigation Measures and Future Commitments are summarized in **Exhibit 8-4**.





**LEGEND**

- |  |  |  |  |
|--|--|--|--|
|  | General Purpose Lane                             |  | Work By Town of Oakville Initiative      |
|  | High Occupancy Vehicle Lanes                     |  | Oakville Mid-town Development            |
|  | MTO ROW  |  | Halton Region - Dundas Street Six-Laning |
|  | New / Widened Bridge Structure                   |  | Work Planned By Others                   |
|  | Potential Property Requirement                   |  | Proposed High Mast Lighting              |
|  | Parkway Belt West Plan Lands                     |  | Proposed Conventional Lighting           |
|  | Retaining Wall / Barrier                         |  | Existing Lighting                        |
|  | Work By Region of Halton                         |  | Potential Vegetation Area                |
|  | Upper Middle Road Class Environmental Assessment |  | Existing Vegetation to Remain            |
|  | Pavement Removal                                 |  | Proposed Stormwater Management Pond      |



NORTH SERVICE ROAD EXTENSION PROJECT  
CONNECTION TO FORD DRIVE  
PROJECT MANAGED BY TOWN OF OAKVILLE

MTO & TOWN OF OAKVILLE TO CO-ORDINATE  
THE ACQUISITION OF PROPERTY AS PART OF  
THE QEW AND HIGHWAY 403 IMPROVEMENTS  
AND NORTH SERVICE ROAD EXTENSION PROJECT

CURRENTLY PROPOSED BY  
INFRASTRUCTURE ONTARIO

CONSTRUCTION OF LOOP RAMP  
SUBJECT TO AGREEMENT WITH  
HALTON REGION

Potential MTO Carpool Lot

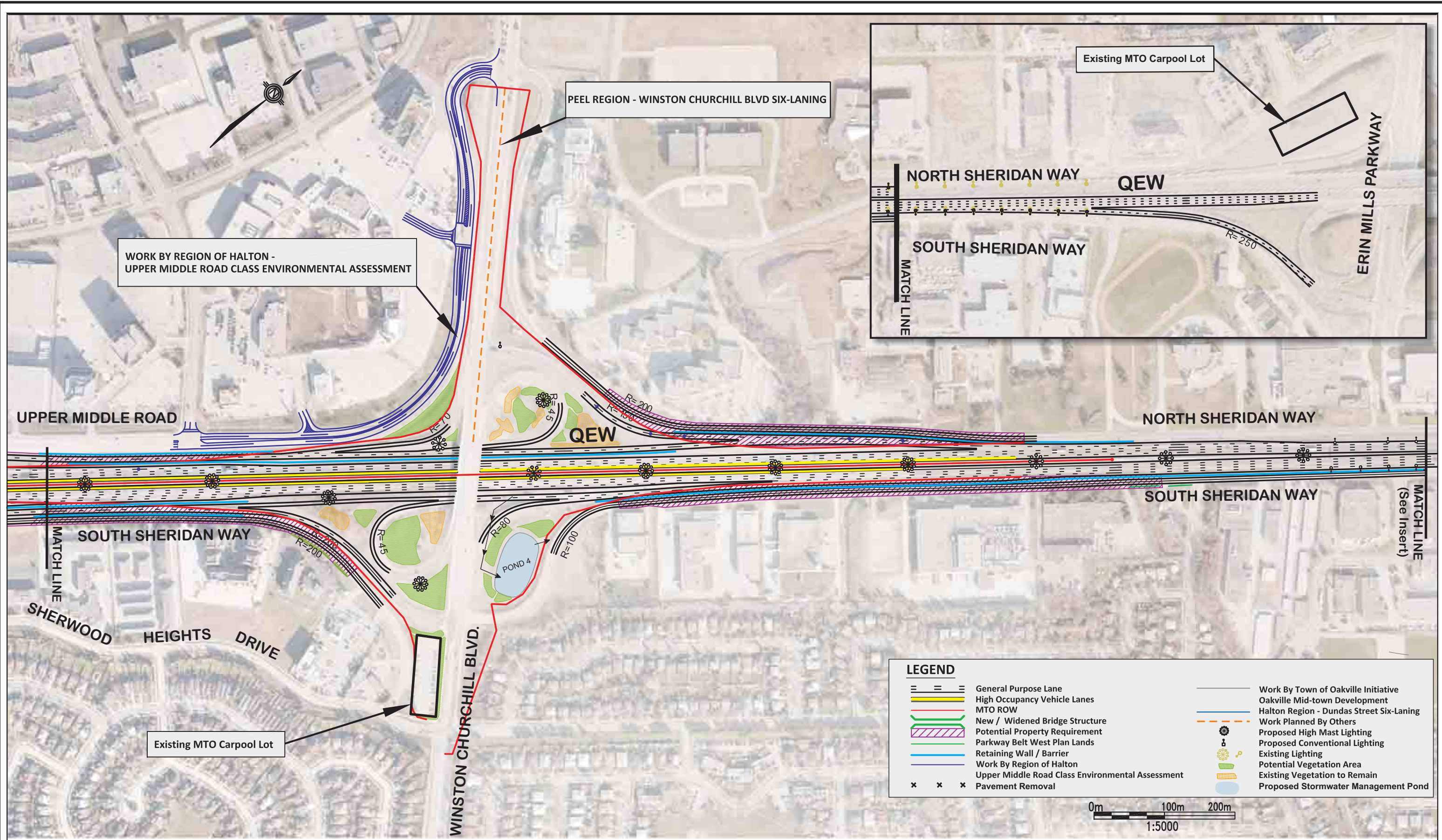


W.O. 09-20007: Highway 403 / QEW Improvements  
from Trafalgar Road to Winston Churchill Boulevard  
Preliminary Design and Class Environmental Assessment Study

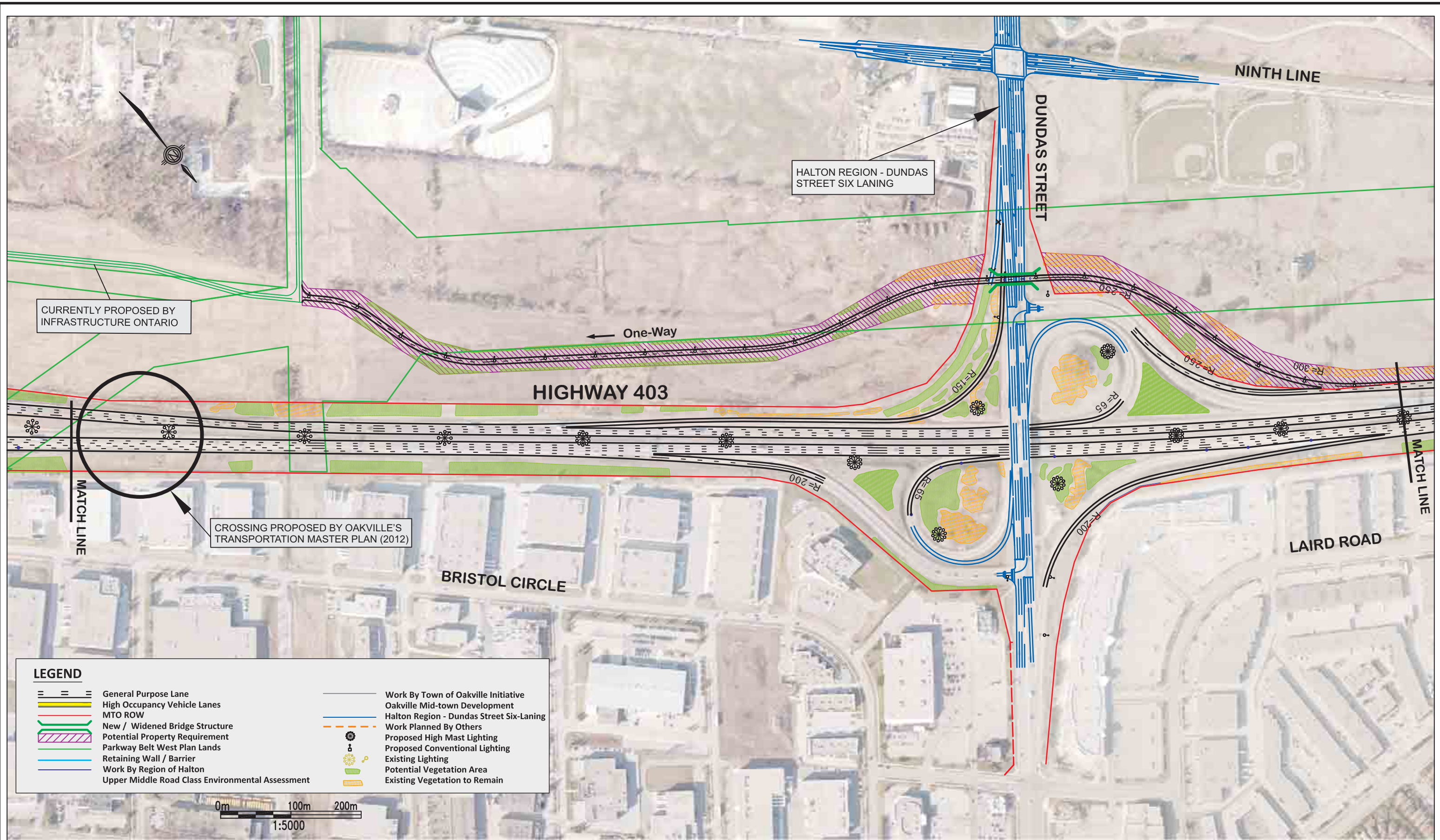
QUEEN ELIZABETH WAY  
From Ford Drive to East of Highway 403

PREFERRED PLAN

Exhibit  
**E-2c**





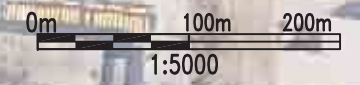


CURRENTLY PROPOSED BY INFRASTRUCTURE ONTARIO

HALTON REGION - DUNDAS STREET SIX LANING

CROSSING PROPOSED BY OAKVILLE'S TRANSPORTATION MASTER PLAN (2012)

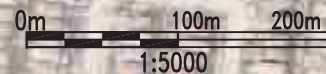
LEGEND	
	General Purpose Lane
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	New / Widened Bridge Structure
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**LEGEND**

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W.O. 09-20007: Highway 403 / QEW Improvements  
 from Trafalgar Road to Winston Churchill Boulevard  
 Preliminary Design and Class Environmental Assessment Study

**HIGHWAY 403**  
 From North of Dundas Street to North of Burnhamthorpe Road

**PREFERRED PLAN**

Exhibit  
**E-2f**

