

**HIGHWAY 401 IMPROVEMENTS
FROM TRAFALGAR ROAD TO REGIONAL ROAD 25**

**PRELIMINARY DESIGN AND
CLASS ENVIRONMENTAL ASSESSMENT STUDY
(GROUP B)**

W.O. 07-20024

TRANSPORTATION ENVIRONMENTAL STUDY REPORT

March 2013

TRANSPORTATION ENVIRONMENTAL STUDY REPORT

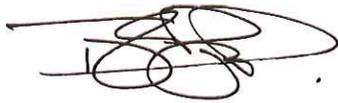
PRELIMINARY DESIGN AND CLASS ENVIRONMENTAL ASSESSMENT STUDY GROUP 'B'

W.O. 07-20024

Highway 401 Improvements From Trafalgar Road to Regional Road 25

Town of Milton, Town of Halton Hills
Halton Region

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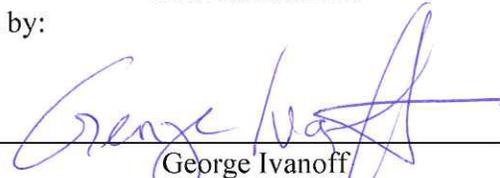


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March 2013

The Public Record

Copies of this document are available for public review at:

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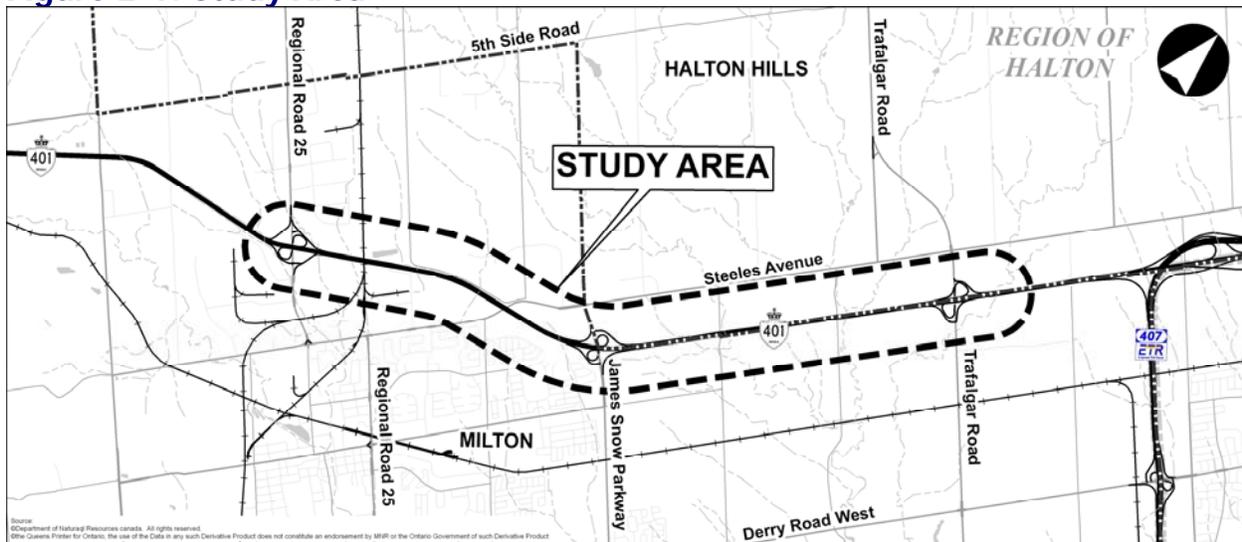
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Executive Summary

The Ministry of Transportation of Ontario (MTO) has undertaken a Preliminary Design and Class Environmental Assessment Study for the improvements to Highway 401 from Trafalgar Road to Regional Road 25 in the Towns of Milton and Halton Hills within Halton Region (**Figure E-1**).

Figure E-1: Study Area



The purpose of this study was to identify the interim and ultimate capacity and operational needs for this section of the Highway 401 corridor. The Recommended Plan (refer to **Chapter 8** and **Appendix C**) includes the following long-term (2031) improvements:

- Widen Highway 401 from a 6-lane core to a 12-lane Collector-Distributor (CD) System (two High Occupancy Vehicle (HOV) lanes and 10 General Purpose lanes) from Trafalgar Road to James Snow Parkway by building to the outside of existing lanes;
- Widen Highway 401 from a 6-lane core to a 10-lane core (two HOV lanes and eight General Purpose lanes) from James Snow Parkway to Regional Road 25 by building to the outside of existing lanes;
- Replace bridges (“like-for-like”) along Highway 401 at Trafalgar Road, Sixth Line, Oakville Creek West, Canadian National Railway (CNR) and Regional Road 25. Any additional provisions, including future municipal road widening, sidewalks, etc., will be subject to municipal funding;
- Bridge widening at Fifth Line and Oakville Creek East to accommodate the long-term improvements;
- Replacement of the Trafalgar Road and Regional Road 25 bridges (to the west of the existing alignment), including improvements to ramp geometry at these interchanges;
- Modification of the James Snow Parkway ramp entrances and exits to and from Highway 401;

- Realignment of Sixth Line to minimize encroachment into the floodplain to the east;
- The carpool lot located at the northeast quadrant of the Highway 401 / Trafalgar Road interchange will be relocated (and expanded) to the northwest quadrant of the interchange. A northbound left turn lane will be provided to the carpool lot on northbound Trafalgar Road;
- Installation of storm sewers eastbound approximately from west of Fifth Line to the eastern project limit and westbound approximately from east of the James Snow Parkway interchange to the eastern project limit in the median between CD lanes;
- Stormwater management (SWM) ponds west of Sixth Line and west of Fifth Line and two new culverts crossing Highway 401 to convey highway drainage to the ponds;
- Relocation of the outfall structure in the northeast quadrant of the Highway 401 / Regional Road 25 interchange;
- Relocation and extension of one Highway 401 culvert at the James Snow Parkway interchange and creek realignment at one Middle Branch tributary (C-08);
- Extension of 16 culverts to accommodate the long-term widening of Highway 401 and interchange improvements;
- Realignment of about 250 m of Hornby Creek east of Sixth Line, if deemed necessary in detail design;
- High mast illumination with poles in the Highway 401 centreline median, standard illumination at each interchange and at carpool parking lots;
- Intelligent Transportation System installation, including Variable Message Sign(s), Closed Circuit Television Cameras and Vehicle Detector Stations in various locations;
- Maintain or provide ramp gates at all Highway 401 ramps within the study area;
- Replacement of traffic signals at ramp terminals: Trafalgar Road (Ramps E-NS and W-NS) and Regional Road 25 (Ramps E-NS and W-NS);
- Utility relocation including gas pipes, water pipes, Bell cables, sanitary sewer pipes, storm sewer pipes and underground electrical cables to accommodate the ultimate design;
- Installation of highway signage, including overhead signs; and
- Other minor improvements as required.

Prior to implementing the above noted long-term (2031) improvements, short-term improvements to this section of the Highway 401 corridor may be designed and implemented to satisfy the identified 2021 capacity and operational requirements. Configuration of short-term widening and staging of HOV lanes for Highway 401 will be determined during detail design if required. Short-term cross-section requirements for 2021 may include:

- Widen Highway 401 from a 6-lane core to a 10-lane core or a 10-lane CD System from Trafalgar Road to James Snow Parkway by building to the outside of existing lanes; and
- Widen Highway 401 from a 6-lane core to an 8-lane core from the James Snow Parkway to Regional Road 25 by building to the outside of existing lanes.

Government agencies, Aboriginal Communities, municipalities, emergency services providers, interest groups and utility companies were notified at the beginning of the study by letter in January 2010. The general public was notified via newspaper advertisements, letters and distribution of brochures for the Public Information Centres (PICs), informing them of the study and to solicit their comments. Two PICs were held for this study in June 2010 (to present the need for improvements and alternatives under consideration) and March 2011 (to present the evaluation of alternatives, the recommended plan and proposed mitigation measures).

Meetings were held with Towns of Milton and Halton Hills, Halton Region, emergency services providers, Conservation Halton and the Ministry of Natural Resources at key milestones of the study.

The proposed widening and improvements will result in edge impacts to adjacent lands between Trafalgar Road and James Snow Parkway as well as in the vicinity of the Regional Road 25 interchange and the CNR crossing. The proposed widening and improvements will also result in bridge replacement / widening and culvert extensions at the Lower Middle, Middle, Middle East and East Branches of Sixteen Mile Creek and associated tributaries, as well as realignment of Hornby Creek (if deemed necessary in detail design). Standard mitigation measures will be employed during implementation of the recommended highway improvements to reduce or avoid environmental impacts.

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APPENDIX C – THE RECOMMENDED PLAN

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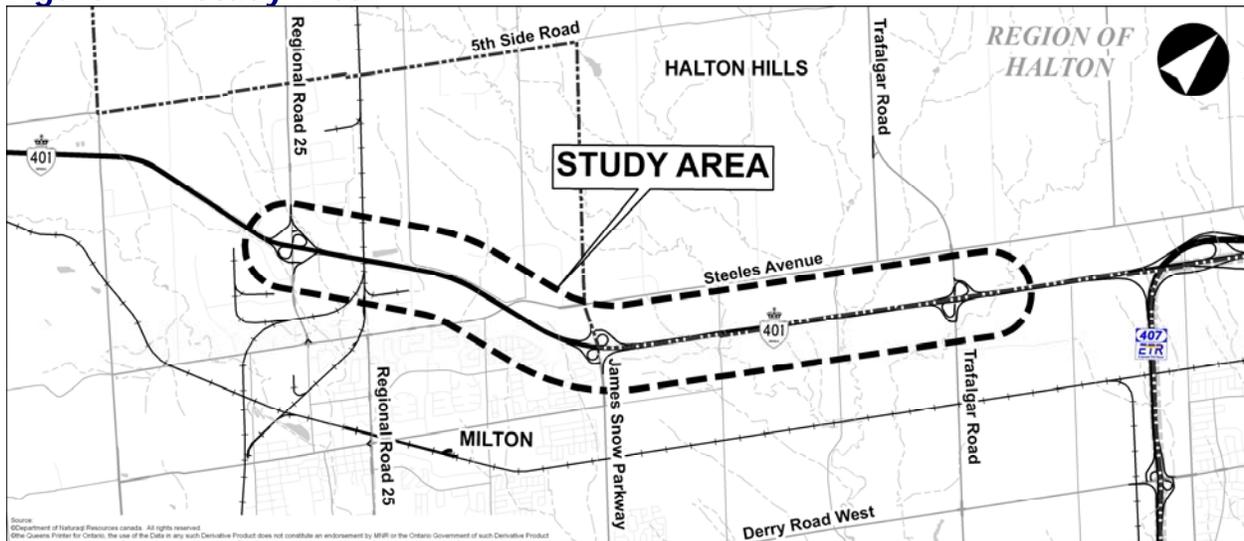
APPENDIX E – LANDSCAPE OPPORTUNITY PLAN

1. OVERVIEW OF THE PROJECT

1.1. Study Background and Location

URS Canada Inc. (URS) was retained by the Ministry of Transportation of Ontario (MTO) to undertake a Preliminary Design and Class Environmental Assessment Study for the widening and improvements to Highway 401 from Trafalgar Road to Regional Road 25 (approximately 9 km) in the Towns of Milton and Halton Hills within Halton Region (refer to **Figure 1-1**).

Figure 1-1: Study Area



Highway 401 (also known as the MacDonald-Cartier Freeway) is the primary through route across Southern, Central and Eastern Ontario. It is the longest 400-Series Highway in Ontario, beginning at Highway 3 in Windsor, 13 km from the Detroit River, and extends to the Quebec border, 818 km to the east.

Within the project limits, the existing Highway 401 is an urban 6-lane divided freeway with a concrete median barrier. It is a Controlled Access Highway with a design speed of 120 km/h and a posted speed of 100 km/h. There are three full-move interchanges within the project limits located at Trafalgar Road, James Snow Parkway and Regional Road 25.

Growth Plan for the Greater Golden Horseshoe

In June 2006 the Ministry of Infrastructure released the *Growth Plan for the Greater Golden Horseshoe* (Growth Plan). The Greater Golden Horseshoe extends around the west side of Lake Ontario from the Region of Niagara to the County of Northumberland, and includes the Region of Waterloo. The Growth Plan outlines a strategy for managing growth and development, and guiding planning decisions in the Greater Golden Horseshoe over the next 30 years. MTO is working to provide for the efficient movement of people and goods within the context of the province's Growth Plan. The improvements identified in this Transportation Environmental

Study Report (TESR) are consistent with the Growth Plan as improvements to Highway 401 form part of the infrastructure required to support growth.

1.2. Study Purpose, Objectives, and Scope

The purpose of this study was to identify short-term and long-term widening requirements for Highway 401 and to consider incorporation of initiatives that promote transit and car-pooling. Reconstruction of interchanges at Trafalgar Road, James Snow Parkway and Regional Road 25, as well as structural, illumination and drainage improvements were also investigated as part of this study.

This project involved:

- Identifying existing conditions within the study area;
- Developing alternatives to improve this section of the Highway 401 corridor;
- Analyzing and evaluating alternatives based on impacts to the natural, socio-economic and cultural environments, as well as technical and cost considerations;
- Selecting a Recommended Plan after considering input from stakeholders;
- Preparing the preliminary design of the Recommended Plan;
- Developing mitigation measures to minimize or avoid potential environmental impacts; and
- Defining commitments to future work to be initiated during detail design.

This study will form the basis for the follow-up detail design and preparation of a contract package for construction (timing to be determined).

1.3. Study Process

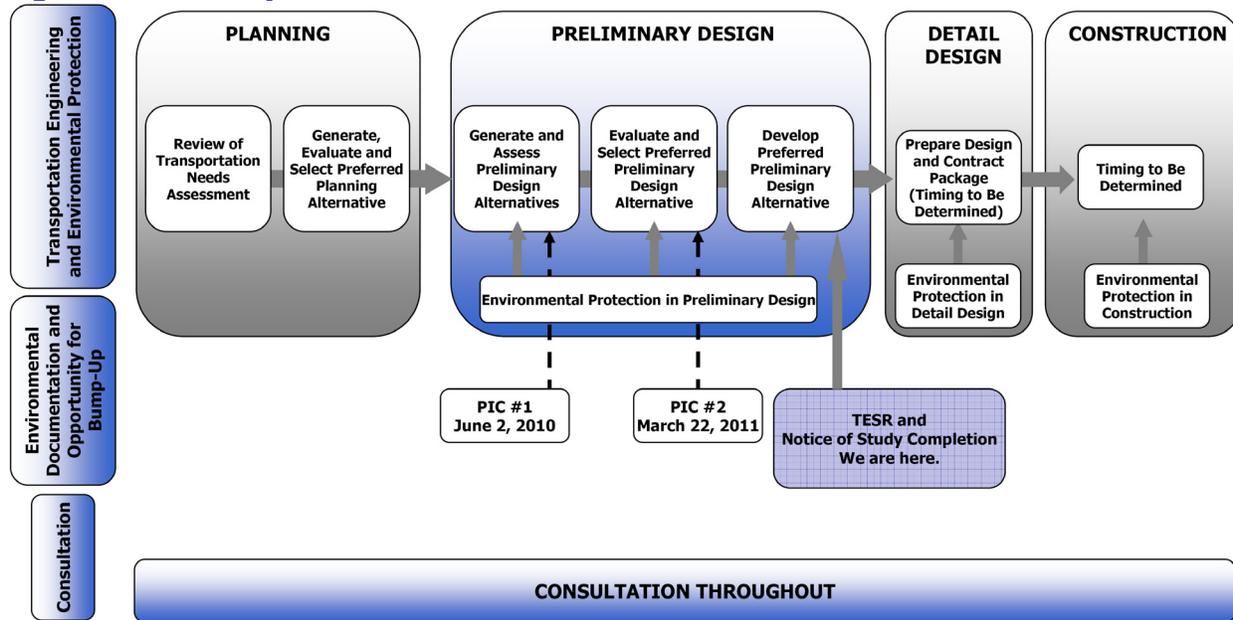
This study followed the approved planning process for a Group ‘B’ project under the *Class Environmental Assessment for Provincial Transportation Facilities (2000)* (Class EA). **Figure 1-2** shows an overview of the Class EA process for Group ‘B’ projects. The study process provided opportunities for public and external agency review at key project milestones, as well as for a continuous, evolving approach to the technical work involved.

“Study Commencement” involved notifying government agencies, Aboriginal Communities, municipalities, interest groups and members of the public that the study was commencing. This involved placing advertisement in local newspapers and mailing notification letters to inform potentially interested and affected stakeholders of the study. Interested parties were asked to contact the Project Team for further information and/or to be placed on the project mailing list.

After documenting the existing conditions within the study area, the Project Team developed alternatives for improvements to this section of the Highway 401 corridor. Alternatives under consideration were presented at the first Public Information Centre (PIC) in June 2010. The next stage of the study process involved assessing and evaluating the various alternatives to arrive at

the Recommended Plan. The assessment and evaluation of alternatives, the Recommended Plan and proposed mitigation measures were presented to the public and external agencies during the second and final PIC held in March 2011. Details of the Recommended Plan are documented in **Chapter 8** of this report.

Figure 1-2: Study Process



This TESR, which documents the process that was followed leading to the selection of the Recommended Plan, has been prepared and made available for a 30-day public review period. If there are no outstanding concerns after the 30-day review period, the project will be considered to have met the requirements of the Class EA and may proceed to subsequent steps in the process leading to construction tendering.

1.4. Related Projects

- **W.O. 07-20021 Highway 401 Improvements from East of the Credit River to Trafalgar Road:** The purpose of this Preliminary Design and Class Environmental Assessment Study is —to identify the interim and ultimate capacity and operational needs for this section of the Highway 401 corridor.
- **GTA West Corridor Environmental Assessment Study:** The purpose of this Individual EA Study is to examine interregional long-term transportation needs between Highway 400 in York to Region to Highway 401 in the Regions of Wellington and Halton to 2031, and consider alternative solutions to provide better linkages between Urban Growth Centres, including Downtown Guelph, Downtown Milton, Brampton City Centre and Vaughan Corporate Centre, as identified in the Growth Plan. The work undertaken as part of this Highway 401 improvements study has been coordinated with the GTA West Corridor Study. Future GTA West Corridor Study recommendations can be built upon the proposed

improvements to Highway 401 (as described in this report) and will follow approvals under the appropriate process under the Class EA for Provincial Transportation Facilities. The final Transportation Development Strategy Report was released in November 2012 (www.gta-west.com).

- **Tremaine Road:** To the west of the study area, Halton Region is undertaking a Detail Design and Contract Administration and Inspection for the four-lane widening of Tremaine Road from Main Street to Campbellville Road, including a new interchange at realigned Tremaine Road and Highway 401.

1.5. General Description of the Recommended Plan

The Recommended Plan (refer to **Chapter 8** and **Appendix C**) includes the following long-term (2031) improvements:

- Widen Highway 401 from a 6-lane core to a 12-lane Collector-Distributor (CD) System (two Highway Occupancy Vehicle (HOV) lanes and 10 General Purpose lanes) from Trafalgar Road to James Snow Parkway by building to the outside of existing lanes;
- Widen Highway 401 from a 6-lane core to a 10-lane core (two HOV lanes and eight General Purpose lanes) from James Snow Parkway to Regional Road 25 by building to the outside of existing lanes;
- Replace bridges (“like-for-like”) along Highway 401 at Trafalgar Road, Sixth Line, Oakville Creek West, Canadian National Railway (CNR) and Regional Road 25. Any additional provisions, including future municipal road widening, sidewalks, etc., will be subject to municipal funding;
- Bridge widening at Fifth Line and Oakville Creek East to accommodate the long-term improvements;
- Replacement of the Trafalgar Road and Regional Road 25 bridges (to the west of the existing alignment), including improvements to ramp geometry at these interchanges;
- Modification of the James Snow Parkway ramp entrances and exits to and from Highway 401;
- Realignment of Sixth Line to minimize encroachment into the floodplain to the east;
- The carpool lot located at the northeast quadrant of the Highway 401 / Trafalgar Road interchange will be relocated (and expanded) to the northwest quadrant of the interchange. A northbound left turn lane will be provided to the carpool lot on northbound Trafalgar Road;
- Installation of storm sewers eastbound approximately from west of Fifth Line to the eastern project limit and westbound approximately from east of the James Snow Parkway interchange to the eastern project limit in the median between CD lanes;
- Stormwater management (SWM) ponds west of Sixth Line and west of Fifth Line and two new culverts crossing Highway 401 to convey highway drainage to the ponds;
- Relocation of the outfall structure in the northeast quadrant of the Highway 401 / Regional Road 25 interchange;

- Relocation and extension of one Highway 401 culvert at the James Snow Parkway interchange and creek realignment at one Middle Branch tributary (C-08);
- Extension of 16 culverts to accommodate the long-term widening of Highway 401 and interchange improvements;
- Realignment of about 250 m of Hornby Creek east of Sixth Line, if deemed necessary in detail design;
- High mast illumination with poles in the Highway 401 centreline median, standard illumination at each interchange and at carpool parking lots;
- Intelligent Transportation System installation, including Variable Message Sign(s), Closed Circuit Television Cameras and Vehicle Detector Stations in various locations;
- Maintain or provide ramp gates at all Highway 401 ramps within the study area;
- Replacement of traffic signals at ramp terminals: Trafalgar Road (Ramps E-NS and W-NS) and Regional Road 25 (Ramps E-NS and W-NS);
- Utility relocation including gas pipes, water pipes, Bell cables, sanitary sewer pipes, storm sewer pipes and underground electrical cables to accommodate the ultimate design;
- Installation of highway signage, including overhead signs; and
- Other minor improvements as required.

Prior to implementing the above noted long-term (2031) improvements, short-term improvements to this section of the Highway 401 corridor may be designed and implemented to satisfy the identified 2021 capacity and operational requirements. Configuration of short-term widening and staging of HOV lanes for Highway 401 will be determined during detail design if required. Short-term cross-section requirements for 2021 may include:

- Widen Highway 401 from a 6-lane core to a 10-lane core or a 10-lane CD System from Trafalgar Road to James Snow Parkway by building to the outside of existing lanes; and
- Widen Highway 401 from a 6-lane core to an 8-lane core from the James Snow Parkway to Regional Road 25 by building to the outside of existing lanes.

2. ENVIRONMENTAL ASSESSMENT PROCESS

2.1. The Ontario Environmental Assessment Act

The purpose of Ontario's *Environmental Assessment (EA) Act* is to help protect and conserve Ontario's environment by ensuring that projects subject to the EA Act follow a planning process leading to environmentally sound decision-making.

For projects subject to the EA Act, an environmental assessment involves identifying and planning for environmental issues and effects prior to implementing a project. The process allows reasonable opportunities for public involvement in the decision-making process of the project. An EA document is prepared by the proponent of the project and is subject to review by the public and government agencies before project approval is given.

The Class EA is a planning document approved under the EA Act that provides a streamlined process for projects or activities within a defined "class" must follow. When the Class EA process is adhered to and its requirements met for a project, the requirements of the EA Act are also fulfilled and formal approval under the EA Act is not required.

The Class EA requirements must be met before a project can be implemented. Projects and activities that are defined within a "class" are generally ones that are recurring, carried out routinely and have predictable environmental effects that can be mitigated to some extent.

The word "environment" in this context is defined as any aspect of life that may be impacted by an undertaking. Therefore, the "environment" can include aspects of the natural, socio-economic and cultural environments depending on the project. The Class EA outlines the EA process to be followed for specific groups of provincial transportation projects. Project groupings within the Class EA were established for the purposes of consultation, documentation and formal EA challenge (bump-up).

The groups are as follows:

- Group "A" – projects involving new facilities;
- Group "B" – projects involving major improvements to existing facilities;
- Group "C" – projects involving minor improvements to existing facilities; and
- Group "D" – activities that involve operation, maintenance, administration and miscellaneous work for provincial transportation facilities. These activities are approved under the EA Act subject to compliance with applicable environmental legislation other than the EA Act.

This study has followed the process for a Group "B" project under the MTO Class EA.

Other aspects of the EA process applicable to these project types are contained in the Class EA. Readers interested in these matters are encouraged to refer to that document.

2.2. Federal Approvals and Permits

In July 2012, the Government of Canada released new regulations required to implement the *Canadian Environmental Assessment Act, 2012* (CEAA 2012). The CEAA 2012 establishes a federal environmental assessment process focused on major projects that have a greater potential to have significant adverse effects on areas within federal jurisdiction. The types of activities to which the new Act applies (“designated projects”) are identified in the regulations. The Act requires the proponent of a designated project to submit a description of the project to the Canadian Environmental Assessment Agency (the Agency). Upon receipt of a project description, the Agency has 45 days, including a 20-day public comment period, to determine whether a federal environmental assessment is required.

The proposed improvements to this section of the Highway 401 corridor are not listed as “designated projects” under the CEAA 2012 and therefore CEAA approvals are not required for this undertaking.

This project has been undertaken in accordance with the *2006 MTO / DFO* (Department of Fisheries and Oceans) / *MNR* (Ministry of Natural Resources) *Protocol for Protecting Fish and Fish Habitat on Provincial Transportation Undertakings* (the Protocol). DFO is responsible for reviewing MTO projects, determining whether the *Fisheries Act* applies and issuing a *Fisheries Act* authorization if required. Based on preliminary harmful alteration, disruption or destruction of fish habitat (HADD) determinations under the policies of the *Federal Fisheries Act*, the proposed realignment of Hornby Creek (Highway 401 east of Sixth Line) will require a DFO authorization. “No HADD / HADD” forms will be submitted to DFO during the detail design stage.

2.3. Purpose of the Transportation Environmental Study Report (TESR)

This TESR documents the transportation problems and opportunities, the generation, assessment and evaluation of alternatives, the Recommended Plan for improvements to this section of the Highway 401 corridor, a summary of potential environmental effects and proposed mitigation measures, and a summary of consultation undertaken throughout the study.

A “Notice of Transportation Environmental Study Report Submission” was placed in the *Milton Canadian Champion*, the *Globe and Mail*, and the *Georgetown Acton Independent* to notify interested parties of the opportunity to review this TESR (30-day period) and was made available on the Project Document Sharing site (www.highway401milton.com). Letters were also sent to individuals on the project mailing list.

During the 30-day review period, interested parties are encouraged to bring their concerns regarding the project to the attention of the project consultants (URS), and MTO. If, after consulting with MTO’s consultants and staff, serious unresolved concerns are identified, individuals have the right to request the Minister of the Environment (Ferguson Block, 11th Floor, 77 Wellesley Street West, Toronto, ON, M7A 2T5) to “bump-up” (i.e., make a Part II

Order) this project. A Part II Order may lead to preparation of an individual EA. Copies of the “bump-up” request are to be forwarded to MTO and URS, at the addresses indicated below. If there are no outstanding concerns after the completion of the 30-day review period, the project will be considered to have met the requirements of the Class EA.

Detailed background information, including supporting background study reports, is contained in the environmental study file. The Consultant Project Manager and Environmental Planner are available to discuss this information and can be contacted as follows:

Tim Sorochinsky, P.Eng.
Consultant Project Manager
URS Canada Inc.
4th Floor, 30 Leek Crescent
Richmond Hill, ON L4B 4N4
Tel: 905-882-3522
Fax: 905-882-4399
tim.sorochinsky@urs.com

Tyler Drygas
Consultant Senior Environmental Planner
URS Canada Inc.
4th Floor, 30 Leek Crescent
Richmond Hill, ON L4B 4N4
Tel: 905-747-1758
Fax: 905-882-4399
tyler.drygas@urs.com

You may also contact the following MTO representatives:

Rebecca Li, P.Eng.
Project Manager
Ontario Ministry of Transportation
Central Region
Building ‘D’, 4th Floor, 1201 Wilson Avenue
Downsview, ON M3M 1J8
Tel: 416-235-5271
Fax: 416-235-3576
rebecca.li@ontario.ca

George Ivanoff
Senior Environmental Planner
Ontario Ministry of Transportation
Central Region
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Downsview, ON M3M 1J8
Tel: 416-235-5548
Fax: 416-235-3446
george.ivanoff@ontario.ca

3. CONSULTATION

3.1. Public Consultation

3.1.1. Overview

Consultation was an integral part of the study process. Throughout the course of the study, opportunities for public, municipal, Aboriginal Communities and agency input were provided at key project milestones, as the Project Team recognized the important role that the input from all stakeholders plays in the successful completion of any highway study.

One of the primary objectives of this study was to ensure that, from the earliest planning stages, decisions were made only after considering all of the potential environmental impacts. Consultation with affected parties played an important role in this regard, in terms of identifying potential environmental impacts and the relative advantages and disadvantages associated with the improvement alternatives examined, and providing a medium to communicate the Project Team's findings to stakeholders.

There are five key features, which translate into a successful planning study. They are:

- Early consultation with affected parties;
- Consideration of all reasonable alternatives;
- Consideration of all aspects of the environment (i.e., natural, socio-economic, cultural and technical);
- Systematic evaluation of net environmental effects; and
- Clear and complete documentation of the planning process.

The consultation process developed for this study assisted in achieving each of these key features. With regard to the first feature, the study was organized such that affected parties were:

- Involved throughout the study at appropriate times;
- Provided access to information;
- Provided sufficient time to respond to questions and data requests; and
- Encouraged to participate in an issue identification / resolution process.

During this study, members of the public, municipalities, government agencies, Aboriginal Communities and other stakeholders were provided the opportunity to review and comment on the improvement alternatives identified, the evaluation methodology and the Recommended Plan, and to identify concerns and comment on the potential environmental impacts and proposed mitigation measures.

A mailing list of interested individuals was established and continuously updated throughout the study. The purpose of this list was to ensure that individuals who had an interest in the study were kept informed of upcoming events and the progress of the project. The list included property owners within the study area and individuals who signed the visitor's register at the PICs and/or contacted the Project Team directly by phone, fax or email.

The public was formally involved in the decision-making process through two rounds of PICs, which were held at project milestones. The PICs were informal drop-in centres. During the second and final PIC a brief presentation was given by the Project Team. The Project Document Sharing site (www.highway401milton.com) also provided PIC notices and displays, and the comment sheet distributed at each PIC.

The following sections outline the consultation process implemented for this undertaking.

3.1.2. Notice of Study Commencement

At the outset of the study, a "Notice of Study Commencement" was published in the Globe and Mail on Wednesday January 20, 2010, and in the Georgetown Acton Independent and the Milton Canadian Champion on Thursday January 21, 2010 to inform area residents of the project and invite them to contact the Project Team if they required information and/or to be placed on the project mailing list. Notification letters were distributed on January 18, 2010 to individuals on the project mailing list, including government agencies, Aboriginal Communities, municipalities, interest groups and members of the public. Notification letters sent to external agencies included a contact information form that provided an opportunity to express their concerns and comments on the study. Copies of the study commencement notification materials are provided in **Appendix A**.

3.1.3. Notice of Public Information Centres #1 and #2

Two PICs were held for this project. PIC #1 was held on Wednesday June 2, 2010 and PIC #2 was held on Tuesday March 22, 2011 at the Milton Lions Club Hall in the Milton Memorial Arena. A "Notice of Public Information Centre" for each PIC was published in the Globe and Mail, the Georgetown Acton Independent and the Milton Canadian Champion two weeks in advance of the particular event. The notices were also made available on the Project Document Sharing site (www.highway401milton.com). Brochures for PIC #2 were delivered via the Canada Post unaddressed admail service to area residents and businesses located adjacent to this section of the Highway 401 corridor during the week of March 7, 2011. In total, approximately 2,310 brochures were delivered.

3.1.4. Notice of Transportation Environmental Study Report Submission

Notification letters were mailed to individuals on the project mailing list to notify stakeholders of the 30-day public and agency review period for this TESR. In addition, a "Notice of Transportation Environmental Study Report Submission" was placed in the Globe and Mail, the Milton Canadian Champion and the Georgetown Acton Independent and was made available on

the Project Document Sharing site (www.highway401milton.com). A copy of the TESR was also made available on the Project Document Sharing site.

3.2. External Agency and Aboriginal Consultation

3.2.1. External Agency Consultation

The Project Team consulted with the following federal and provincial ministries and agencies, municipalities, emergency services providers and interest groups:

Provincial and Federal Government

Agencies

- Ministry of Tourism and Culture;
- Ministry of Municipal Affairs and Housing;
- Transport Canada;
- Ministry of Natural Resources;
- Ministry of the Environment; and
- Department of Fisheries and Oceans.

Elected Officials

- Hon. Lisa Raitt (MP – Halton);
- Hon. Michael Chong (MP – Wellington-Halton Hills);
- Ted Chudleigh (MPP – Halton); and
- Ted Arnott (MPP – Wellington-Halton Hills)

Municipalities and District School Boards

- Halton Region;
- Town of Milton;
- Milton Transit;
- Town of Halton Hills;
- Halton District School Board; and
- Halton Catholic District School Board.

Emergency Services Providers

- Ontario Provincial Police;
- Halton Regional Police Service;
- Halton Region EMS; and
- Milton Fire Department.

Utilities

- TransCanada Energy;
- Hydro One;
- Bell Canada;
- Cogeco;
- Prestige Telecom Inc.;
- Union Gas Ltd; and
- Enbridge Pipelines Inc.

Interest Groups

- Conservation Halton;
- Go Transit;
- CNR;
- The Bruce Trail Conservancy;
- Friends of the Greenbelt Foundation; and
- Niagara Escarpment Commission.

At the outset of the study, external agencies were contacted by mail and asked to provide input. Representatives from the external agencies listed above were invited to attend external agency meetings held on June 2, 2010 and March 22, 2011 for one hour prior to the official commencement of the PICs in order to provide external agencies the opportunity to review the PIC displays and discuss the project directly with the Project Team.

The Project Team met with municipalities within the study area, including Halton Region, Town of Milton and Town of Halton Hills, on May 26, 2010 and February 25, 2011 to obtain study area information, input on the generation, assessment and evaluation of alternatives and their potential impacts, and support for the Recommended Plan.

A meeting with emergency services providers was held on February 25, 2011 to present an overview of the project and receive input on how the delivery of their programs or services might be impacted by the project.

A meeting with MNR and Conservation Halton was held on July 19, 2011 and August 3, 2011 respectively to present the project overview, the existing natural values within the study area, the summary of the Recommended Plan and the next steps, as well as to receive input on the potential environmental impacts and the proposed natural mitigation strategies.

The meeting minutes of the above mentioned meetings can be found in **Appendix A**. Correspondence with external agencies is summarized in **Table 3-1** and documented in **Appendix A**.

3.2.2. Aboriginal Consultation

Notification letters were mailed to the following Aboriginal Communities and organizations:

- Mississauga of Scugog Island;
- Chippewas of Georgina Island First Nation;
- Chippewas of Mnjikaning First Nation;
- Hiawatha First Nation;
- Beausoleil First Nation;
- Alderville First Nation;
- Curve Lake First Nation;
- Mississauga of New Credit First Nation;
- Six Nations Confederacy;
- Six Nations of the Grand River;
- Métis Nation of Ontario;
- Haudenosaunee Confederacy Chiefs Council;
- Credit River Metis Council;
- Ministry of Aboriginal Affairs; and
- Aboriginal Affairs and Northern Development Canada.

Correspondence with Aboriginal Communities is summarized in Table 3-1 and documented in **Appendix A**.

During the detail design stage of this undertaking, the above noted external agencies and Aboriginal Communities will be contacted and consulted as necessary to identify and appropriately address outstanding project issues.

Table 3-1: Summary of Issues Raised by External Agencies and Aboriginal Communities

External Agency	Issues / Concerns	Response
Town of Milton	The limits of this EA and preliminary design assignment should be revised to include the future Tremaine Road interchange.	The Project Team is aware of Halton Region's plans for the realignment and widening of Tremaine Road and the construction of a new interchange west of Regional Road 25. Ongoing discussions between the Project Team, Halton Region and Town of Milton are occurring throughout the study. MTO has been working with Halton Region on the proposed works on Tremaine Road. Although these are two distinct environmental assessment studies, the potential increase in traffic volumes due to the widening of Tremaine Road and the construction of an interchange have been incorporated into the transportation planning analysis work for this section of the Highway 401 corridor.
Halton District School Board	Do not wish to participate in this study.	Removed from project mailing list.
Milton Transit Services	Yes to participate in this study and continue to receive notices of project activities and information as this study progresses.	Added to project mailing list.
Halton Region EMS	Please send us all notices of road / lane closures, as well as anything that would affect emergency response.	Added to project mailing list.
Hon. Michael Chong MP - Wellington-Halton Hills	As the Federal Government is often asked to contribute funding and is trying to work with other levels on the transportation issues of Southern Ontario, Michael would like to participate in the study.	Added to project mailing list.
Ontario Provincial Police	Yes to participate in this study and continue to receive notices of project activities and information as this study progresses.	Added to project mailing list.
Conservation Halton	Please find the attached Conservation Halton's preliminary comments: - Ontario Regulation 162/06 - Natural Heritage	Please refer to Appendix A for details.

External Agency	Issues / Concerns	Response
	<ul style="list-style-type: none"> - Fish Habitat - SWM / Drainage <p>Comments on PIC #1 materials.</p> <p>Comments on PIC #2 materials.</p>	
Halton Region	This project will affect: Tremaine Interchange and Derry Green Business Park.	Comment noted. Added to project mailing list.
Town of Halton Hills	Yes to participate in this study and continue to receive notices of project activities and information as this study progresses.	Added to project mailing list.
Ministry of the Environment	<p>Based on the information submitted, we have identified the following issues of concern with respect to the proposed undertaking:</p> <ul style="list-style-type: none"> - Ecosystem Protection and Restoration - Surface Water - Groundwater - Air Quality - Servicing and Facilities - Contaminated Soils - Mitigation and Monitoring - Planning and Policy - Class EA Process - First Nations Consultation <p>Comments on the draft Air Quality Assessment Report.</p>	<p>Comment noted.</p> <p>Please refer to Appendix A for details.</p>
Shawanaga First Nation	Please note our correct mailing address above and our new Chief's name is Dan Pawis.	Project mailing list updated.
CNR	Yes to participate in this study and continue to receive notices of project activities and information as this study progresses.	Added to project mailing list.
Milton Council Candidate for Ward 1	Request to be added to the project mailing list.	Added to project mailing list.
Niagara Escarpment Commission	<p>The extent of the proposed project is beyond the limits of the Niagara Escarpment Plan and Niagara Escarpment Development Control Areas.</p> <p>The NEC can also be taken off your circulation list for this particular</p>	Removed from project mailing list.

External Agency	Issues / Concerns	Response
	consultation.	
Ministry of Aboriginal Affairs	This project appears to be located in an area where Alderville, Curve Lake, Hiawatha, Mississauga of the New Credit First Nations and the Mississaugas of Scugog Island may have existing or asserted rights that could be impacted by this project.	Comment noted.
MNR	Currently MNR does not have any records of Northern Brook Lamprey or American Eel in this area. However, the watercourse that runs under the 401 west of RR 25 flows into an occupied Redside Dace reach. In addition, the tributary that runs under the 401 west of RR 25 is a historical Redside Dace reach.	Comment noted.
Transport Canada	Transport Canada officials have determined that the provisions of the <i>Navigable Waters Protection Act</i> do not apply to your project and, therefore, an Approval is not required.	Comment noted.
Chippewas of Rama First Nation	Acknowledges receipt of Notice.	Comment noted.
Ministry of Tourism and Culture	<p>The Ministry of Tourism, Culture and Sport (MTCS) has an interest in conserving cultural heritage resources including:</p> <ul style="list-style-type: none"> - Archaeological resources; - Built heritage resources; and - Cultural heritage landscapes. <p>MTCS would be interested in remaining on the circulation list and being informed of the project as it proceeds through the EA process.</p>	Comment noted. Added to project mailing list.
Curve Lake First Nation	Acknowledges receipt of Notice.	Comment noted.
Hiawatha First Nation	Acknowledges receipt of Notice.	Comment noted.
Metrolinx	The Trafalgar Road GO station as shown in the exhibit from the Halton-Peel BATS is also included in the OP's of both the Town of Milton and Halton Region. The Trafalgar Road station is subject to further review and approval by Metrolinx. Metrolinx has not looked into it in great	Comment noted.

External Agency	Issues / Concerns	Response
	detail yet and has no plans at this time to build a station there.	
GO Transit	<p>At the present time GO Transit sees no need or benefit to having a park-and-ride facility at the northeast quadrant of the Trafalgar Road interchange, and has no immediate intention of including this as a stop on existing GO services.</p> <p>However, should future growth and development in the area proceed then there may become a demand at some point in the future. The designs should therefore not preclude a future bus loop with two bays at this location.</p> <p>Please allow for that future possibility in any designs going forward. Typically this kind of facility would also attract demand that would require a further 50 to 60 parking spaces over and above the needs of the commuter parking lot.</p>	Comment noted.

3.3. Public Consultation

3.3.1. Public Information Centre #1

PIC #1 was held on Wednesday June 2, 2010 at the Milton Lions Club Hall in the Milton Memorial Arena from 4:00 p.m. to 7:00 p.m. An external agency meeting was held from 3:00 p.m. to 4:00 p.m. PIC #1 was an informal, “open house” style event with MTO and URS staff available to address questions and concerns. The purpose of PIC #1 was to present and receive input on the need for improvements to this section of the Highway 401 corridor, the alternatives under consideration and the proposed process and criteria for evaluating alternatives. Refer to **Appendix B** for material presented at this PIC.

The “Notice of Public Information Centre #1” was published in the Georgetown Acton Independent, the Milton Canadian Champion and the Globe and Mail on Thursday May 27, 2010. The PIC notice, display boards and a comment sheet were made available on the Project Document Sharing site on June 2, 2010 (www.highway401milton.com). Notification letters advertising PIC #1 were distributed to individuals on the project mailing list, including government agencies, Aboriginal Communities, municipalities, elected officials, interest groups and members of the public (i.e., area residents, local businesses, individuals who requested to be added to the project mailing list, etc.), on May 21, 2010. Refer to **Appendix B** for copies of the notice and notification letters.

A total of 31 individuals signed the visitor’s register for the PIC. Eleven (11) written comments were received at the PIC and three additional comments were received via emails in the weeks following. The following summarizes the key comments, issues and concerns raised from PIC #1.

Table 3-2: Summary of Issues Raised at PIC #1

Comment	Response
<p>Several attendees inquired as to how Halton Region’s proposed works on Tremaine Road have been considered and suggested that the study limits be extended westward to include the future Tremaine Road interchange.</p>	<p>The Project Team is aware of Halton Region’s plans for the realignment and widening of Tremaine Road and the construction of a new interchange west of Regional Road 25. Ongoing discussions between the Project Team, Halton Region and Town of Milton are occurring throughout the study. MTO has been working with Halton Region on the proposed works on Tremaine Road and consulting with the Town of Milton regarding MTO’s proposed improvements along Highway 401 between Trafalgar Road and Regional Road 25. Although these are two distinct environmental assessment studies, the potential increase in traffic volumes due to the widening of Tremaine Road and the construction of an interchange have been incorporated into the transportation planning analysis work for this section of the Highway 401 corridor. The Project Team will continue to consult with Halton Region and Town of Milton throughout the study.</p>
<p>Several attendees noted that Highway 401 improvements are currently needed and should be implemented as soon as possible.</p>	<p>Comment noted.</p>
<p>Attendees were pleased to see the potential provision of High Occupancy Vehicle lanes and bus bypass shoulder along the corridor.</p>	<p>Comment noted.</p>
<p>Concerns regarding potential increase in noise levels, light trespass associated with high mast lighting and access were raised.</p>	<p>In the coming months, alternatives presented at this PIC will be assessed and evaluated based on impacts to, and opportunities provided to the natural, socio-economic and cultural environments, with consideration given to transportation / engineering and cost. Potential environmental effects, including noise, light trespass and access, will be identified and proposed mitigation measures will be developed at that time.</p>
<p>It was noted that improvements to the James Snow Parkway interchange are needed to address queues on the local road network during rush hour periods and to support planned land developments in that area. A two-lane S-E ramp at the James Snow Parkway interchange was suggested.</p>	<p>The Project Team will examine opportunities to improve traffic access to Highway 401 from the James Snow Parkway interchange. While improvements to interchanges are being examined as part of this study, operational issues related to commercial development are within the jurisdiction of the Town of Milton and they are not being examined by MTO.</p>

Comment	Response
It was suggested that bicycle lanes be provided on local roads which cross Highway 401.	Opportunities to incorporate bikeways / sidewalks will be determined in consultation with local municipalities. These details will be addressed as the study progresses into preliminary design and will be presented at PIC #2.
Concerns regarding setback encroachments and property impacts associated with a 12-lane cross section were noted.	A preliminary examination of the footprint impacts of the highway widening alternatives has identified that fringe impacts to adjacent properties (a minor property taking adjacent to the existing Highway 401 Right-of-Way (ROW)) will be required to accommodate a 12-lane cross section. As the study develops the Project Team will have a better understanding of the full property impacts. Opportunities to minimize potential impacts to adjacent lands will be examined during the development of the preliminary design of the preferred alternative.
Some attendees were not able to make it to the PIC because it ended at 7:00 p.m.	PIC #1 was scheduled from 4:00 p.m. to 7:00 p.m. in order to accommodate the variety of stakeholders (residents and businesses) within the study area. For the second PIC, the Project Team extended the hours to 8:00 p.m. to enhance the opportunity for local residents to attend.

3.3.2. Public Information Centre #2

PIC #2 was held on Tuesday March 22, 2011 at the Milton Lions Club Hall in the Milton Memorial Arena from 4:00 p.m. to 8:00 p.m. An external agency meeting was held from 3:00 p.m. to 4:00 p.m. PIC #2 was an informal, “open house” style event with a brief presentation at 5:00 p.m. and 7:00 p.m. MTO and URS staff were available to address questions and concerns. The purpose of PIC #2 was to present and receive input on the preliminary design of the preferred alternatives and the proposed mitigation strategies to minimize potential environmental and community impacts.

The “Notice of Public Information Centre #2” was published in the Milton Canadian Champion on Tuesday March 8, 2011, in the Globe and Mail on Wednesday March 9, 2011, and in the Georgetown Acton Independent on Thursday March 10, 2011. PIC notice, display boards and a comment sheet were made available on the Project Document Sharing site on Wednesday March 23, 2011 (www.highway401milton.com). Notification letters advertising PIC #2 were distributed to individuals on the project mailing list, including government agencies, Aboriginal Communities, municipalities, elected officials, interest groups and members of the public (i.e., area residents, local businesses, individuals who requested to be added to the project mailing list, etc.) on March 4, 2011. Brochures were delivered via the Canada Post unaddressed admail service to area residents and businesses located adjacent to this section of the Highway 401 corridor the week of March 7, 2011. Refer to **Appendix B** for copies of the notice, notification letters and brochure.

A total of 30 individuals signed the visitor’s register for the PIC. Five written comments were received at the PIC and one additional comment was received via fax in the weeks following. The following summarizes the key comments, issues and concerns raised from PIC #2.

Table 3-3: Summary of Issues Raised at PIC #2

Comment	Response
Concerns regarding lane closures on Trafalgar Road and Highway 401 IC ramps during construction.	There will be temporary and localized disruptions to traffic during construction. Access modifications during construction will be addressed through construction staging plans that will be developed at the detail design stage of this project.
Concerns regarding drainage, water runoff and erosion.	A Groundwater study was prepared as part of this project to document existing conditions within the study area, potential impacts from the recommended highway improvements and proposed mitigation measures. The proposed SWM ponds have been designed to provide water quality and quantity treatment to existing untreated and uncontrolled area, and would reduce erosion potential along the East Sixteen Mile Creek.
Concerns regarding noise impacts.	The noise study prepared as part of the environmental impact assessment for this project used MOE (Ministry of the Environment) and MTO guidelines, includes protocols for modeling future noise levels at Outdoor Living Areas only (i.e., backyards). If future noise levels result in a 5 dBA increase (over the future without the undertaking scenario) or exceed a threshold of 65 dBA, then the feasibility of applying noise mitigation (such as noise walls or berms) will be investigated. The noise study did not identified impacts to Outdoor Living Areas (i.e., backyards), therefore, no mitigation measures are recommended.
The property bounded by Highway 401 / James Snow Parkway / Steeles Avenue has a site application with the Town of Milton for an outlet mall, which is anticipated to open around the same time as Smart Centre at Steeles Avenue and Trafalgar Road. The application includes an entrance from James Snow Parkway.	Comment noted.
Noted the proposed Third Line crossing over Highway 401 (as per Halton Region’s draft Transportation Master Plan) and the associated proposed closing of the Esquesing Line / Steeles Avenue intersection.	The Project Team has met with the Halton Region Transportation Master Plan Project Team regarding the Highway 401 overpass between Harrop Drive and Boston Church Road. The Project Team will continue to consult with municipal staff to obtain study area information, input, comments on the Recommended Plan and its potential impacts, and support for the proposed improvements for this section of the Highway 401 corridor.
Inquiries regarding the relationship between this study and GTA West.	This Project is looking at the medium to long-term infrastructure needs to the year 2031 for Highway 401 within

Comment	Response
	the study limit. The purpose of GTA West, a concurrent study, is to plan for the long-term infrastructure needs in the GTA from Highway 400 westerly to the Guelph area to the year 2031. The two teams have kept each other informed of their work.
Inquired if the section of the Highway 401 east of the study area has been considered in this study.	Yes.
More details of the study were requested.	The Project Team provided drawings and plans upon request.
Inquiries regarding the timing for construction.	The scope of this study includes a preliminary design phase and obtaining environmental clearance for the improvements to this section of the Highway 401 corridor. The project will then proceed into the detail design phase to further develop the details of the preferred alternative(s) and to develop a contract package for construction. The timing for the detail design phase has yet to be determined. Additionally, timelines and the process are subject to environmental approvals and availability of funding.
Did not receive the brochure on time to attend PIC #2	Due to unforeseen factors, the delivery of brochures was delayed. In addition to distributing brochures, our public notification plan includes publishing the “Notice of Public Information Centre #2” in the local newspapers and on the Project Document Sharing site (www.highway401milton.com) and mailing notification letters to members of the public on the project mailing list.
This study should include the findings of the GTA West Corridor Study.	The work undertaken as part of this Highway 401 improvements study has been coordinated with the GTA West Corridor Study, which is looking at longer term and interregional transportation needs for an area between Highway 400 in York to Region to Highway 401 in the Regions of Wellington and Halton. Future GTA West Corridor Study recommendations can be built upon the proposed improvements to Highway 401 (as described in this report) and will follow approvals under the appropriate process under the Class EA for Provincial Transportation Facilities. This Highway 401 improvements Class EA study will not preclude the addition of Highway 401 lanes recommended as part of the GTA West study.

4. OVERVIEW OF EXISTING CONDITIONS

To support the examination of a reasonable range of alternatives, all significant features within the study area were identified to determine their sensitivity and potential for impacts associated with the proposed Highway 401 improvement alternatives. Identifying significant features involved the collection of primary and secondary source data derived from surveys, field investigation, published and unpublished literature, government sources and consultation with agencies and the public. The data collected was grouped in the following categories:

- Natural Environment;
- Socio-Economic Environment;
- Cultural Environment; and
- Transportation.

Information about the existing environmental features within the study area was collected from the following sources:

- Observations recorded during site visits;
- Aerial photos of the study area;
- Town of Milton's Official Plan;
- Town of Halton Hills' Official Plan;
- Halton Region's Official Plan;
- MNR Natural Heritage Information Centre (NHIC) database for significant species and designated nature features within, adjacent to, or in the vicinity of the study area; and
- Consultation with the MNR District Office and Conservation Halton to obtain any additional information about significant species, designated natural features and fisheries.

The following sections provide an overview of the existing environmental conditions within the study area.

4.1. Natural Environment

4.1.1. Topography and Drainage

According to the topographic map for the area (Brampton, 1989, published in 1994), the land in the vicinity of the study area is generally flat with a slight downward slope from the two ends (east and west) toward the area where two creeks (Middle Sixteen Mile Creek and East Sixteen Mile Creek) and their tributaries cross Highway 401. The average elevation within the study area ranges from approximately 215 m Above Mean Sea Level (amsl) at the west and east ends, to 190 m amsl along the middle portion. Halton Highs is located southeast of the study area, at an approximate distance of 1 km, further east of which lies the Niagara Escarpment. The Hamlet

of Campbellville sits on the brow of the Niagara Escarpment, immediately west of Halton Highs. A significant buried-valley cuts through the Hamlet and extends eastwards from Campbellville to the vicinity of Steeles Avenue and Fourth Line. The valley is partially infilled with coarse grained sand and gravel.

Regionally, the study area is located within the Sixteen Mile Creek watershed, which discharges south and east to Lake Ontario. Middle Sixteen Mile Creek and East Sixteen Mile Creek, two of the three main branches of the Sixteen Mile Creek watershed, and their tributaries cross Highway 401 at several locations within the study area.

4.1.2. Physiography

According to the *Physiography of Southern Ontario* (Chapman & Putnam, 1984) and the *Map 2226-Physiography of South Central Southern Ontario* (MNR, 1972), Halton Region is located between the Oak Ridges Moraine and Lake Ontario, and overlies within portions of three physiographic regions: the Iroquois Plain, the Peel Plain and the South Slope. The Iroquois Plain occupies the south portion along the Lake Ontario shoreline. The Peel Plain occupies a central portion of Halton Region and is separated from the Iroquois Plain by the Trafalgar Moraine. The South Slope is the southern slope of the Oak Ridges Moraine, but includes the strip south of Peel Plain. The study area is primarily located within the Peel Plain with a small portion of the east side located within the South Slope.

4.1.3. Geology

4.1.3.1. Quaternary Geology

According to the MNR *Ontario Geological Survey Preliminary Map P. 2204, Geological Series, Quaternary Geology, Toronto and Surrounding Area, Southern Ontario* (1980), the quaternary (surficial) geology of the study area consists predominantly of deposits of glacial, glaciofluvial, and glaciolacustrine origin, namely the Halton Till which is composed of clay and till matrix with minor amount of sand. According to the well records, the thickness of the overburden soil ranged from approximately 6 m up to greater than 30 m across the study area.

4.1.3.2. Bedrock Geology

According to *Map 2544-Bedrock Geology of Southern Ontario* (Ontario Geological Survey, 1991), the Palaeozoic (bedrock) geology of the study area consists of Queenston Formation of Upper Ordovician age. The most common deposit associated with the bedrock unit in the area is shale. According to the well records, the bedrock elevation in Halton Region ranged from approximately 180 m to 195 m amsl. A notable bedrock valley, which has less bedrock elevation, is located in the vicinity of the Sixteen Mile Creek watershed.

4.1.4. Hydrogeology

The Niagara Escarpment, which is located west of the study area, acts as a regional topographic and groundwater flow divide. Above the Escarpment, groundwater flow is directed

predominantly towards Lake Erie through discharge (base flow) to rivers and creeks. Below the Escarpment, groundwater flow is directed towards Lake Ontario. The shallow groundwater within the study area is influenced by the surface topography; likely flowing from the west and east ends into the area where the Sixteen Mile Creek watershed system crosses Highway 401. Regionally, the ground water is flowing southeast towards Lake Ontario. According to the well record, there are two main groundwater systems existing in the study area: the bedrock groundwater system and the overburden groundwater system. Based on the well record information, the static groundwater level in the overburden wells ranged from 0 m Below Ground Surface (bgs) to 9 m bgs, while the static groundwater level in the bedrock wells ranged from 15 m to 9 m bgs.

4.1.5. Fisheries and Aquatic Habitat

Sensitivity rankings assist in directing planning, design and construction considerations with respect to the potential Harmful Alteration, Disruption and Destruction (HADD) of fish habitat under the policies of the *Fisheries Act*. Crossings with high sensitivities have a greater possibility of resulting in a HADD. The proposed crossings (refer to **Figure 4-1**) along the study area have a range of sensitivities from low to high and are provided in **Table 4-1**. A summary of fish and fish habitat for the drainage features in the study area are provided in **Table 4-2**.

The study area for the proposed works is entirely located within the Sixteen Mile Creek watershed. The watershed drains a combined area of approximately 372 km² with headwaters located in the Niagara Escarpment and ultimately drains into Lake Ontario within the City of Oakville (Trillium, 2005). The study area is located within the upper half of the watershed.

Within the study area, the watershed is divided into five principal sub-watersheds (starting from the west), which include:

- West Branch;
- Lower Middle Branch;
- Middle Branch;
- Middle East Branch; and
- East Branch.

The crossings include three major tributaries of Sixteen Mile Creek and 17 minor drainage systems (three systems are crossed more than once) in the study area. There are 22 crossing locations of which nine represent direct fish habitat, five represent indirect fish habitat, and eight are not fish habitat.

Figure 4-1: Watercourse Crossing Locations

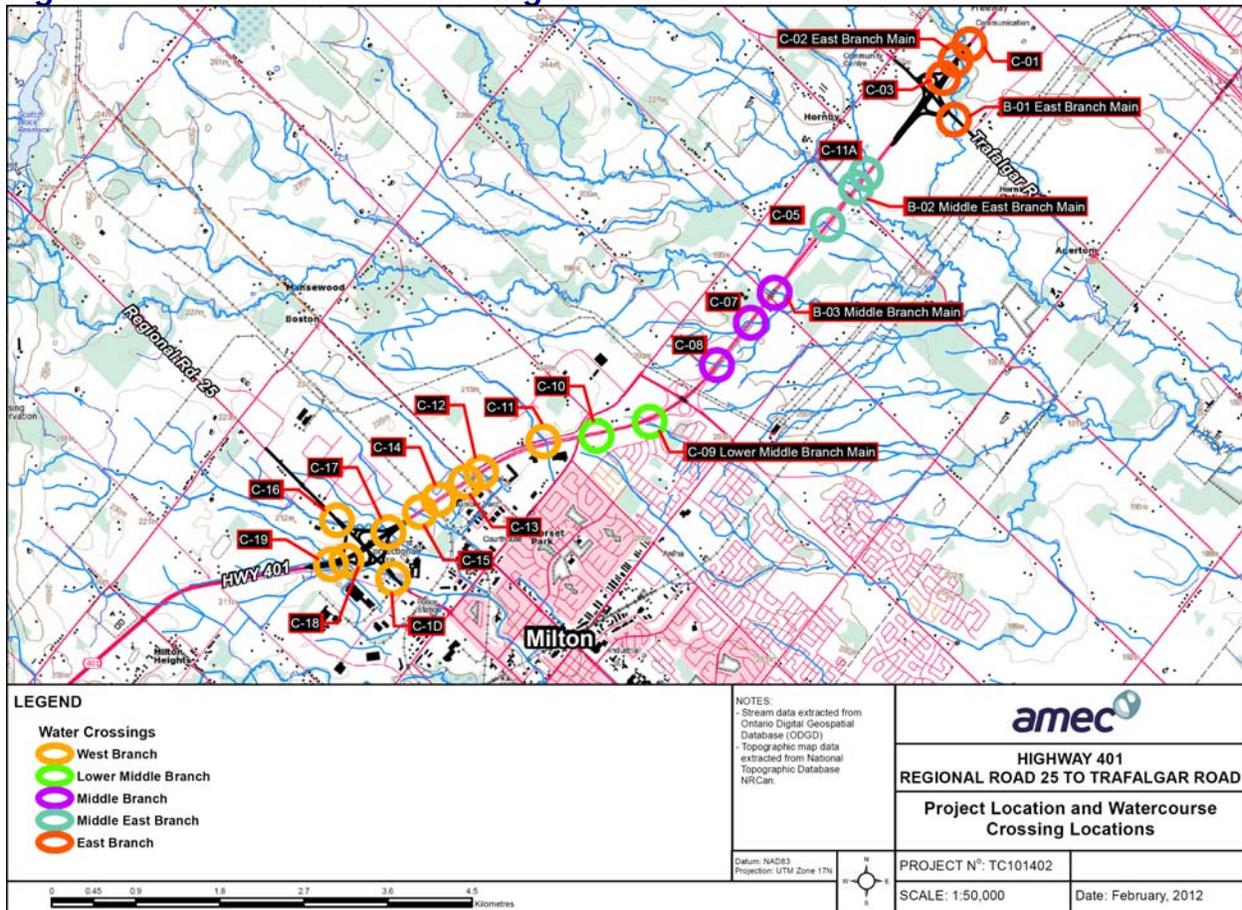


Table 4-1: Crossing Sensitivities

Waterbody	Interim Sensitivity
C-17	Moderate
C-16	Moderate
C-19	High
C-18	High
C-1D (adjacent to ROW)	High
C-15	Low
C-14 (dry)	Not fish habitat
C-13	Low
C-12	Not fish habitat
C-11	Low
C-10	Not fish habitat
C-09	Not fish habitat
C-08	Not fish habitat
C-07	Low
B-03	High
C-05	Not fish habitat
B-02	High

Waterbody	Interim Sensitivity
C-11A (adjacent to ROW)	Moderate to High
B-01	Moderate
C-03	Not fish habitat
C-02	Moderate
C-01	Not fish habitat

Table 4-2: Existing Fish and Fish Habitat Conditions Summary

Watercourse	Crossing #	Flow	*Thermal Regime	Supports Fishery
West Branch	C-17 and C-16	Permanent	Potential coldwater	Direct
	C-19	Drainage swale	Drainage swale	Indirect
	C-18	Drainage swale	Drainage swale	Indirect
	C1D	Permanent	Potential coldwater	Direct
	C-15	Intermittent	Warmwater	Indirect
	C-14	Drainage swale	Not fish habitat	
	C-13	Permanent	Warmwater	Direct
Lower Middle Branch	C-11	Permanent	Warmwater	Direct
	C-10 (Dry)	Drainage swale	Non direct fish habitat	
	C-09	Drainage swale	Non direct fish habitat	
	C-08 (Dry)	Drainage swale	Not fish habitat	
	C-07	Intermittent	Warmwater	Direct
Middle East Branch	B-03	Permanent	Coldwater	Direct
	C-05 (Dry)	Drainage swale	Not fish habitat	
	B-02	Permanent	Coldwater	Direct
East Branch	C-11A (Adjacent to ROW)	Permanent	Warmwater	Direct
	B-01 and C-02	Permanent	Warmwater	Direct

Although a number of the sub-watersheds are in contact with areas regulated within the Niagara Escarpment Plan, none of the actual crossing locations fall within the Niagara Escarpment boundaries and are therefore not restricted under their policies. The Sixteen Mile Creek watershed is also located southwest of the Oak Ridges Moraine but is not regulated by the *Oak Ridges Moraine Conservation Act*. Crossings C1B, C1D, C1-C4, C6 and C8-13 are regulated by Conservation Halton.

The headwaters of the system are capable of supporting coldwater species, with temperatures typically warmer as the creeks flow southward through agricultural and urban areas (Halton, 2008). A total of 54 different species of fish have been recorded in the watershed including sport and baitfish, as well as resident and migratory species (Trillium, 2005). At the location of the crossings, the watercourses are primarily designated as warmwater sportfish / baitfish, however, there are a number of crossings designated potential coldwater and as coldwater habitat (Halton, 2008). **Table 4-3** presents a list of fish species present in the study area.

Table 4-3: Fish Species Present in the Study Area

Common Name	Scientific Name	Common Name	Scientific Name
Blackchin Shiner	<i>Notropis heterodon</i>	Longnose Dace	<i>Rhinichthys cataractae</i>
Blacknose Dace	<i>Rhinichthys atratulus</i>	Migratory Salmonids	
Bluegill	<i>Lepomis macrochirus</i>	Northern Hog Sucker	<i>Hypentelium nigricans</i>
Bluntnose Minnow	<i>Pimephales notatus</i>	Northern Redbelly Dace	<i>Chrosomus eos</i>
Brook Stickleback	<i>Culaea inconstans</i>	Pumpkinseed	<i>Lepomis gibbosus</i>
Brook Trout	<i>Salvelinus fontinalis</i>	Rainbow Darter	<i>Etheostoma caeruleum</i>
Brown Bullhead	<i>Ameiurus nebulosus</i>	Redside Dace	<i>Clinostomus elongatus</i>
Common Shiner	<i>Notropis cornutus</i>	River Chub	<i>Nocomis micropogon</i>
Creek Chub	<i>Semolitus atromaculatus</i>	Rock Bass	<i>Ambloplites rupestris</i>
Fathead Minnow	<i>Pimephales promelas</i>	Rosyface Shiner	<i>Notropis rubellus</i>
Finescale Dace	<i>Phoxinus neogaeus</i>	Smallmouth Bass	<i>Micropterus dolomieu</i>
Fantail Darter	<i>Etheostoma flabellare</i>	Spottail Shiner	<i>Notropis hudsonius</i>
Iowa Darter	<i>Etheostoma exile</i>	White Sucker	<i>Catostomus commersonii</i>
Johnny Darter	<i>Etheostoma nigrum</i>	Yellow Bullhead	<i>Ameiurus natalis</i>
Largemouth Bass	<i>Micropterus salmoides</i>		

4.1.6. Terrestrial Habitat and Ecosystems Environment

The study area is predominantly agricultural with a few landscaped residential and commercial private properties. Most habitats in the area are cultural (i.e., have experienced anthropogenic disturbances) and have high numbers of non-native species of plants. Those habitats which are classified as ‘natural’ habitats still have high numbers of introduced species. Terrestrial natural heritage features include recently disturbed cultural habitats such as cultural woodlands, thickets and meadows, as well as mature lowland forest in and along Sixteen Mile Creek and other drainage courses.

The most significant existing natural features are located in the riparian corridors along Sixteen Mile Creek. This north-south corridor acts as an important regional linkage for wildlife in the area. The entire Sixteen Mile Creek watershed is considered to be a regional valley corridor, linking Lake Ontario to the Niagara Escarpment. Due to past and present land use practices, forest cover within the watershed has been reduced; as a result, regional valley corridors such as Sixteen Mile Creek provide the last remaining ecological linkages between remnant natural areas.

4.1.6.1. Designated Significant Natural Areas

There are no provincially or federally significant natural heritage features within the study area. Niagara Escarpment Biosphere Reserve, a World Biosphere Reserve designated by the United Nations Educational, Scientific and Cultural Organization (UNESCO) is located in the broader region, approximately 2 km away from the study area.

4.1.7. Species at Risk

Species at Risk (SAR) that have been previously recorded within 10 km of the study area, that exhibit tolerance to human disturbance and have some level of suitable habitat available to them within the study area have been identified as potential SAR for this Project, including Chimney Swift, Bobolink, Monarch Butterfly and Redside Dace:

- Chimney Swift (*Chaetura pelagic*)

Designated federally and provincially as Threatened. This species was detected within one of the 10 km² breeding bird atlas survey squares that encompass the study area (Cadman et al., 2007) during the last Breeding Bird Atlas Survey from 2001-2005. This species nests in chimneys and is tolerant of urban environments and has a moderate probability of occurrence within the study area.

- Bobolink (*Dolichonyx oryzivorus*)

Designated provincially and federally (by the Committee on the Status of Endangered Wildlife in Canada) as Threatened (*Species at Risk Act* schedule and status pending). During the last Breeding Bird Survey from 2001-2005, this species was detected within one of the 10 km² breeding bird atlas survey squares that encompass the study area (Cadman et al., 2007). This species prefers open grassland habitats and will utilize agricultural fields (Environment Canada, 2010) and as such has a moderate probability of occurrence within the study area.

- Monarch Butterfly (*Danaus plexippus*)

Designated federally and provincially as Special Concern and is known to occur in several locations in Halton Region (Dwyer, 2006). This species prefers open old field meadow habitats with abundant milkweed. This habitat was available in some areas including the highway ROW and as a result, this species has a moderate probability of occurrence within the study area.

- Redside Dace (*Clinostomus elongates*)

Redside Dace is known to occur in crossings within the study area. This species is protected as Endangered and federally as Schedule 3-Special Concern, and has habitat protection regulation under Ontario's *Endangered Species Act*. Watercourse crossings that are occupied reaches for SAR will require an *Endangered Species Act* 17C SAR permit for the construction phase of this project.

4.2. Socio-Economic Environment

The study area is located in the Towns of Milton and Halton Hills within Halton Region. **Tables 4-4** and **4-5** summarize the population and total private dwellings (based on 2011 Statistics Canada data) and the place of work status, mode of transportation to work, and the breakdown of industry within the study area (based on 2006 Statistics Canada data), respectively.

Table 4-4: Population Numbers and Dwellings

Municipality	Population	Total Private Dwellings
Town of Milton	84,362	28,049
Town of Halton Hills	59,008	20,548

Table 4-5: Place of Work Status, Industry, and Mode of Transportation to Work

Municipality	Place of Work Status	Industry	Mode of Transportation to Work
Town of Milton	Worked at home: 2,440	Agriculture & Other Resource-based Industries: 835	Car, truck, van as driver: 24,150
		Construction: 2,020	
	Work outside Canada: 135	Manufacturing: 4,425	Car, truck, van, as passenger: 2,140
		Wholesale Trade: 2,955	
	No fixed workplace address: 2,750	Retail Trade: 3,365	Public transit: 1,415
		Finance & Real Estate: 2,380	
	Worked at usual place: 26,315	Health Care and Social Services: 2,320	Walked or bicycled: 1,035
		Educational Services: 2,080	
		Business Services: 6,785	
		Other Services: 5,435	
Town of Halton Hills	Worked at home: 2,335	Agriculture & Other Resource-based Industries: 965	Car, truck, van as driver: 23,785
		Construction: 2,155	
	Work outside Canada: 110	Manufacturing: 5,490	Car, truck, van, as passenger: 2,060
		Wholesale Trade: 2,595	
	No fixed workplace address: 2,845	Retail Trade: 3,520	Public transit: 905
		Finance & Real Estate: 1,785	
	Worked at usual place: 25,440	Health Care and Social Services: 2,080	Walked or bicycled: 1,285
		Educational Services: 1,945	
		Business Services: 6,290	
		Other Services: 4,885	

4.2.1. Existing Land Use

The land use in the area north of Highway 401 is primarily agricultural and rural residential. The land use immediately south of Highway 401 is residential within the Town of Milton (west portion of study area) and agricultural in the east portion of the study area.

Downtown Milton is identified in the Growth Plan as an Urban Growth Centre (refer to **Figure 4-2**). Other intensification areas are also identified in the Town of Milton, one of which

(residential intensification) is located on Steeles Avenue, south of Highway 401 at Thompson Road North. Town of Halton Hills, although not identified in the Growth Plan as an Urban Growth Centre, has also experienced rapid growth over the last few years; the population increased by 14.7% between 2001 and 2006.

Refer to **Figures 4-3a** and **4-3b** for all land uses within the project limits.

Figure 4-2: Location of Urban Growth Centre



Source: Milton Intensification Strategy Final Report, 2010

Figure 4-3a: Land Use within Study Area

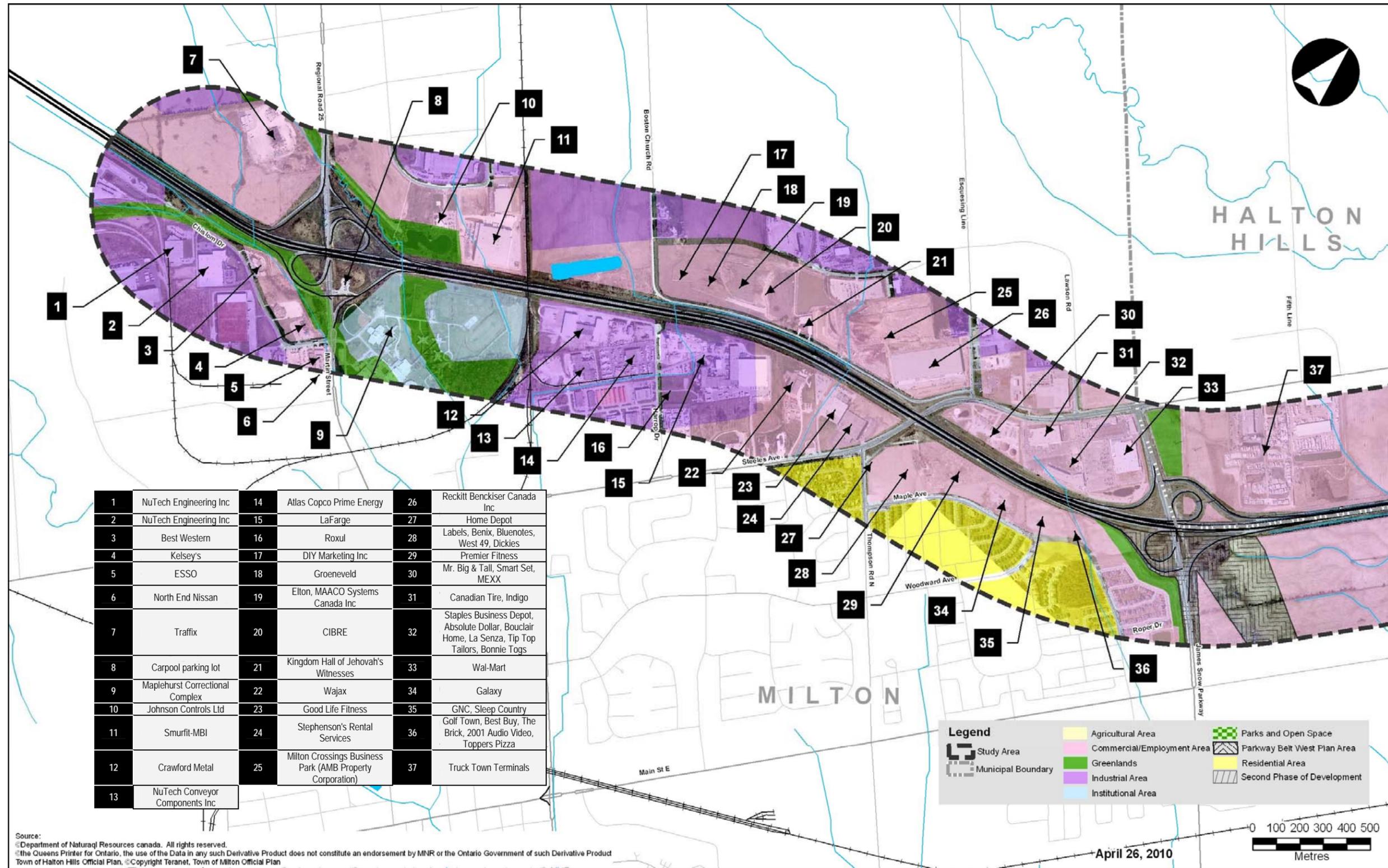
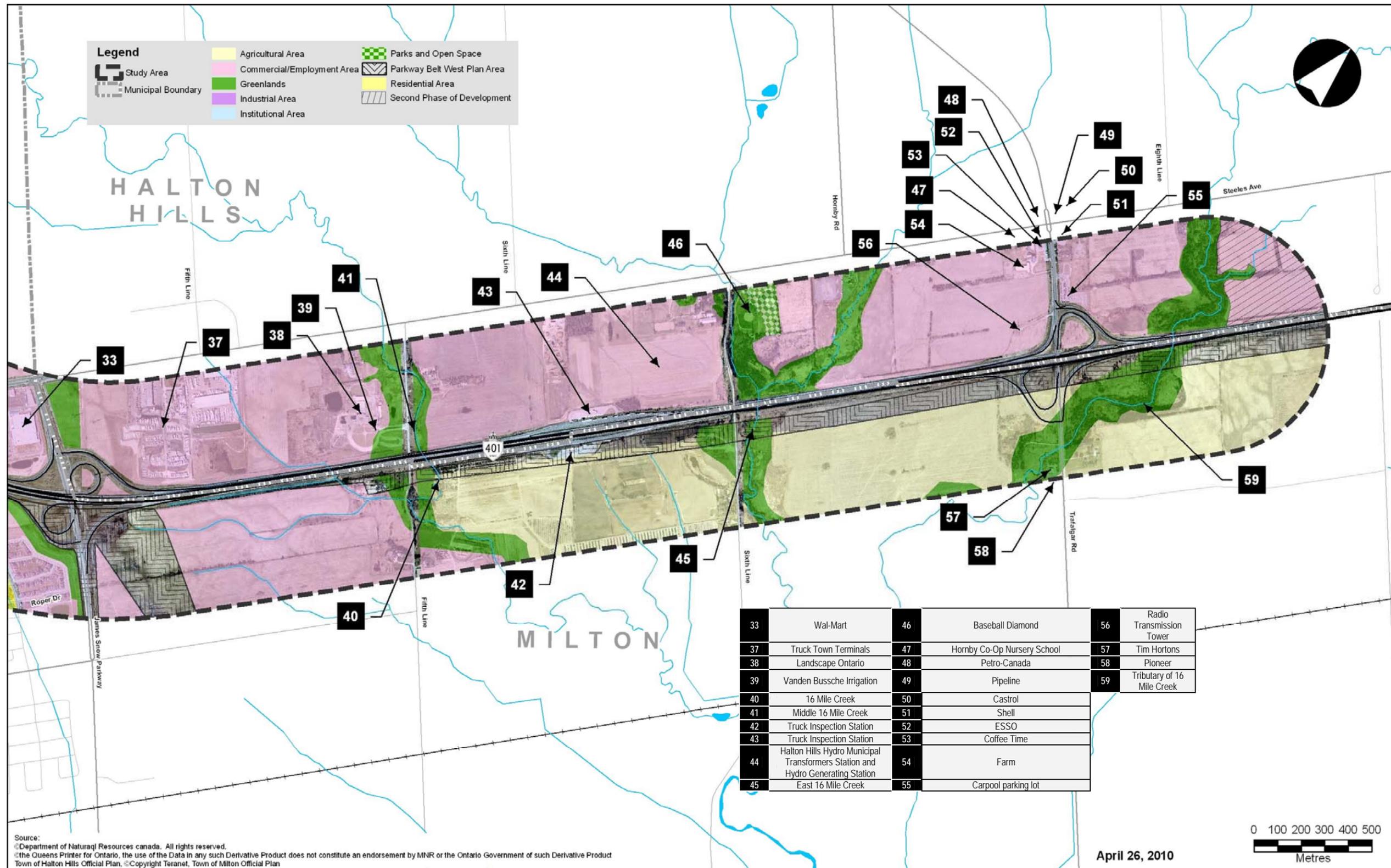


Figure 4-3b: Land Use within Study Area



4.2.2. Agricultural

Agricultural lands are located adjacent to the Highway 401 corridor from Trafalgar Road to west of Fifth Line within the study area. The primary crops in the area include soybeans, corn for grain, alfalfa and alfalfa mixtures, all other tame hay and fodder crops, and winter wheat. Dairy and beef farming is also a popular agricultural activity in the area.

4.2.3. Residential

Residential areas within the study area are located along the south side of the Highway 401 corridor and west of James Snow Parkway. The residents in this subdivision that are closest to the Highway 401 corridor have been built in the last five years and include municipally required noise walls. Rural residences are scattered within the east section of the study area, particularly in the area of Fifth Line and Sixth Line.

4.2.4. Commercial and Industrial

The major commercial / industrial activities in the study area include automotive, advanced manufacturing, distribution, food production, and service sectors. The study area encompasses three major commercial / industrial areas, including Derry Green Industrial / Business Park (south of Highway 401, west of Sixth Line), the 401 Industrial / Business Park Secondary Plan area (north of Steeles Avenue, roughly from Peru Road to James Snow Parkway), and 401 / 407 Employment Corridor Area (north of Highway 401 from Winston Churchill Boulevard to Fourth Line).

4.2.5. Community / Recreational / Institutional

Schools

Three schools are located in close proximity to the study area:

- Chris Hadfield Public School (south of Highway 401, east of Thompson Road);
- Hornby Co-Operative Nursery School (north of Highway 401, west of Trafalgar Road); and
- St. Peter Catholic School (south of Highway 401, east of Thompson Road).

Parks

Three parks are located in close proximity to the study area:

- Fitzgerald Park (south of Highway 401, east of Thompson Road);
- Dempsey Neighbourhood Park (south of Highway 401, west of James Snow Parkway); and
- Knight Trail Park (south of Highway 401, west of James Snow Parkway).

Cemetery

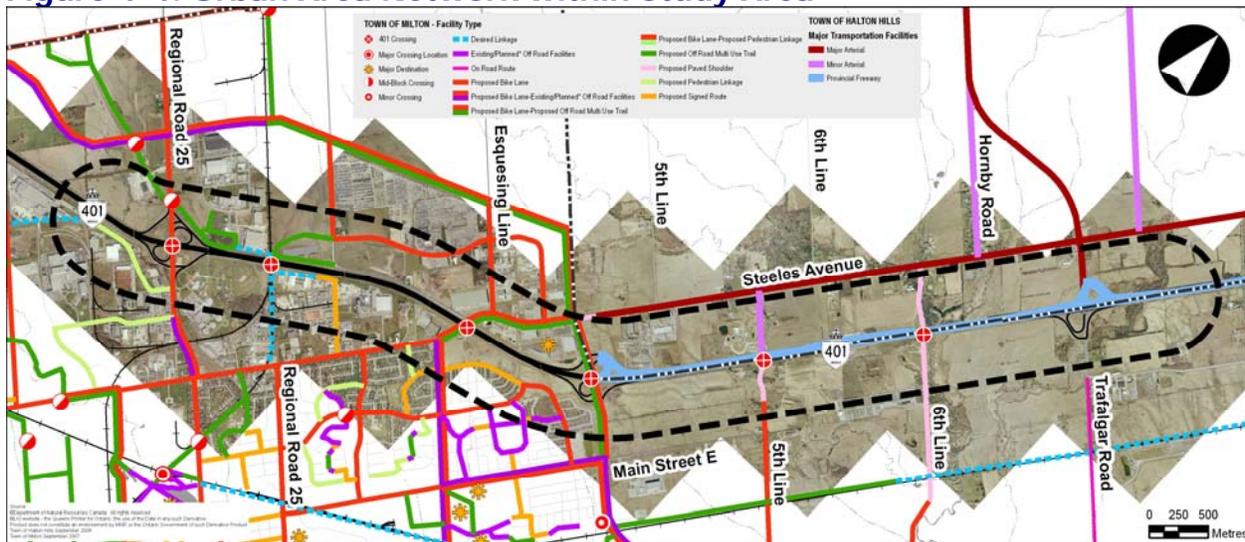
One cemetery is found in close proximity to the study area:

- Bloomfield Pioneer Cemetery (on Sixth Line, south of Highway 401).

Trails and Bike Lanes

The Town of Milton's Official Plan has identified a number of off-road / multi-use trails, pedestrian linkages and bike lanes within the study area. No designated trails / bike lanes were identified in the Town of Halton Hills within the study area. Refer to **Figure 4-4** for the urban area network within the study area.

Figure 4-4: Urban Area Network within Study Area



Correctional Complex

Maplehurst Correctional Complex (refer to **Figure 4-5**) is located south of the Highway 401 corridor on the east side of Regional Road 25. Run by the Ontario Ministry of Community Safety and Correctional Services, it is a medium to maximum security correctional facility for adult males 18 years of age and over sentenced to less than two-year incarceration and for those remanded in custody pending appearance in court.

Figure 4-5: Maplehurst Correctional Complex



4.2.6. Future Planned Development

Derry Green Corporate Business Park Secondary Plan

The area referred to as Derry Green Corporate Business Park (Business Park II) within the Town of Milton, is the second of two planned employment areas being implemented as part of the Halton Urban Structure Plan. The Town of Milton is currently proceeding to prepare for the development of the Business Park II lands, which will accommodate the majority of the Town's future employment land growth, through the preparation of a secondary plan and supporting studies.

Milton 401 Industrial / Business Park Secondary Plan

Milton 401 Industrial / Business Park Secondary Plan proposes a Highway 401 interchange in vicinity of Peru Road (west of Regional Road 25). It also suggests that the Town of Milton shall work with Halton Region and landowners in the 401 Industrial / Business Park to complete the James Snow Parkway through the Park from Highway 401 to Dublin Line / Highway 401. The road shall also be designed as a potential transit corridor including provision for such features as bus shelters / stations, HOV lanes and transit lanes.

10862 Steeles Avenue (north of Highway 401, east of James Snow Parkway)

North American Property Group submitted a zoning by-law amendment application for the proposal of a Home Improvement Centre at 10862 Steeles Avenue.

Tremaine Road Transportation Corridor Improvements Class EA Study

To the west of the study area, Halton Region has plans in place for the realignment and widening of Tremaine Road and the construction of a new interchange approximately 1.8 km west of Regional Road 25. Tremaine Road will become a significant transportation corridor (as many as six lanes) in the future and is the proposed location for the new satellite campus of Sir Wilfred Laurier University, as well as being considered for a future GO Station location.

13722 Steeles Ave West

Calloway REIT (Halton) Inc. is proposing a Smart Centre in the northeast quadrant of Highway 401 and Trafalgar Road.

Municipal Initiative for New Crossings of Highway 401

The proposed municipal initiative for a new crossing of Highway 401 west of Sixth Line (included in the 2011 Halton Region Official Plan) will not be impacted by this project.

The future municipal initiative for a crossing of Highway 401 at Fourth Line will not be impacted by this project.

4.3. Cultural Environment

4.3.1. Archaeological Resources

The character of the study area is a mixture of commercial and industrial development with agricultural and rural land uses. The existing Highway 401 ROW between the west side of Trafalgar Road and Halton Region’s boundary was assessed in 2004. The results of the 2004 Stage 1 Archaeological Assessment document that the stretch of Highway 401 between Trafalgar Road and Regional Road 25 in the existing ROW is disturbed and does not require further archaeological assessment. The sections of the study area which seem undisturbed remain primarily agricultural landscapes with some woodlots that buffer the creeks and streams that intersect the Highway 401 corridor. These undisturbed areas will require Stage 2 Archaeological Assessment in areas where the proposed improvements to Highway 401 extend beyond the ROW.

Background research conducted in 2004 determined that archaeological sites have been registered in close proximity to the study area. According to the Ontario Archaeological Sites Database, there are 36 previously registered sites within the 2-km radius. Of these, 24 sites have been registered since 2005 (**Table 4-6**).

Table 4-6: Previously Registered Sites in a 2-km Radius

Borden	Site Name	Cultural Affiliation	Site Type	Researcher	Comments
AjGx-164	–	Pre-Contact Aboriginal	Findspot	2005, Kim Slocki	–
AjGx-74	David A.	Pre-Contact Aboriginal	Scatter	1992, Bill Finlayson	–
AjGw-474	Hornby Village	Euro-Canadian	Homestead	2007, Robert Pihl	–
AjGw-471	Eighth Line Methodist Church	Euro-Canadian	Homestead	2007, Robert Pihl	–
AjGw-477	FS1.001	Pre-Contact Aboriginal	Findspot	2007, Andrew Murray	–

Borden	Site Name	Cultural Affiliation	Site Type	Researcher	Comments
AjGw-476	FS1.001	Pre-Contact Aboriginal	Findspot	2007, Andrew Murray	–
AjGw-478	FS1.001	Pre-Contact Aboriginal	Findspot	2007, Andrew Murray	–
AjGx-179	Halton 1	Pre-Contact Aboriginal	Findspot	2007, Mayer Heritage	–
AjGx-173	–	Pre-Contact Aboriginal, Nettling	Findspot	2006, Shaun Austin	Directly adjacent (north) of Highway 401, no further work recommended.
AjGw-397	–	Pre-Contact Aboriginal	Scatter	2006, Adam Hossack	–
AjGw-20	Bradley	Pre-Contact Aboriginal, Archaic, Paleo-Indian?	Campsite	1976, Bradley Farm	–
AjGx-102	Graywood #2	Pre-Contact Aboriginal	Campsite	1999, Rick Sutton	–
AjGx-116	Shipp #4	Pre-Contact Aboriginal, Middle Archaic	Findspot	1999, Rick Sutton	–
AjGx-110	Clements	Euro-Canadian	Homestead	1999, Rick Sutton	–
AjGx-161	Chingua	Pre-Contact Aboriginal	Findspot	2005, Robert I. MacDonald	–
AjGx-109	Brush	Euro-Canadian	Homestead	1999, Rick Sutton	–
AjGx-106	Shipp #2	Pre-Contact Aboriginal	Campsite	1999, Rick Sutton	–
AjGx-105	Shipp #1	Pre-Contact Aboriginal	Campsite	1999, Rick Sutton	–
AjGx-154	–	Euro-Canadian	Scatter	2005, Jim Wilson	–
AjGx-155	–	Pre-Contact Aboriginal, Archaic	Findspot	2005, Jim Wilson	–
AjGx-149	MGM	Pre-Contact Aboriginal	Campsite	2004, Rick Sutton	–
AjGx-148	Cooper	Pre-Contact Aboriginal	Campsite	2004, Rick Sutton	–
AjGx-151	Bestpipe	Pre-Contact Aboriginal	Campsite	2004, Rick Sutton	–
AjGx-150	John White	Euro-Canadian	Homestead	2004, Rick Sutton	–

4.3.2. Built Heritage and Culture Resources

Two Built Heritage Features (BHF) were identified within the study area: the John Dolmage House and the Joseph Cunningham House. The John Dolmage House (**Figure 4-6**) is a single-storey brick house with a high basement, stone foundation and a hipped roof located west of

Trafalgar Road and south of Highway 401. It is a very good example of Vernacular British Classicism, and retains a very high level of integrity. In particular, the hipped roof, symmetrical five-bay façade, central entrance with transom and sidelights, large ground floor windows and original basement windows are characteristic features of the style. The John Dolmage House has very high architectural value, and qualifies under the Criteria outlined in Ontario Regulation 9/06 of the *Ontario Heritage Act* to be considered for Heritage Designation. It is currently listed on the Milton Heritage Inventory.

Figure 4-6: The John Dolmage House, East (Main) Façade



The Joseph Cunningham House (**Figure 4-7**) is a one-and-a-half storey brick house on a stone foundation with a side gable roof and end chimneys located west of Fifth Line and south of Highway 401. It is a good example of the mid-19th century vernacular Ontario farmhouse, and retains a very high level of integrity. In particular, the symmetrical five-bay façade, central entrance with transom and sidelights, double chimneys and large ground floor windows are characteristic features of the style. The Joseph Cunningham House has very high architectural value and qualifies under the Criteria outlined in Ontario Regulation 9/06 of the *Ontario Heritage Act* to be considered for Heritage Designation. It is currently listed on the Milton Heritage Inventory.

Figure 4-7: The Joseph Cunningham House



4.4. Transportation Infrastructure

4.4.1. Interchanges

Three full-move interchanges are located within the project limits as follows:

Trafalgar Road

The Trafalgar Road interchange has a Parclo A-4 configuration. Trafalgar Road is a four-lane north-south urban arterial road with a posted speed of 70 km/h.

James Snow Parkway

The James Snow Parkway interchange has a Parclo A-4 configuration. James Snow Parkway is a four-lane north-south urban arterial road with a posted speed of 80 km/h north of the interchange and 70 km/h south of the interchange.

Regional Road 25

The Regional Road 25 (formerly Highway 25) interchange has a Parclo A-4 configuration. Regional Road 25 is a four-lane north-south urban arterial road with a posted speed of 50 km/h from south of the interchange to approximately 340 m north of Highway 401, where the posted speed changes to 80 km/h.

4.4.2. Crossing Roads and Railways

Within the project limits, crossing roads and railways are listed as follows:

Sixth Line

Sixth Line is a two-lane north-south rural road with a posted speed of 60 km/h in the northbound direction and a posted speed of 50 km/h in the southbound direction in the vicinity of Highway 401.

Fifth Line

Fifth Line is a two-lane north-south rural road located east of James Snow Parkway, crossing under Highway 401. Fifth Line has a posted speed of 60 km/h north of the interchange to approximately 350 m south of Highway 401, where the posted speed changes to 80 km/h.

Steeles Avenue

Steeles Avenue is a four-lane east-west urban arterial road with a posted speed of 60 km/h.

Canadian National Railway (CNR)

Two mainline CNR tracks cross under Highway 401 through an overhead structure located east of Regional Road 25. The subdivision is the CNR Halton Subdivision which runs from the Burlington West Station to the Halwest Station.

4.4.3. Utilities

Highway 401 includes both aerial and underground utilities within the study area. Existing utilities are summarized in **Table 4-7**.

Table 4-7: Existing Utilities within Study Area

UTILITIES WITHIN STUDY AREA			
Utility	Item	Quantity	Location
Bell Canada	Poles	9	- Interchange and crossing road locations; shared poles
	Conduit	8	- Crossing Highway 401 at Regional Road 25, Boston Church Road, Fifth Line, west of Sixth Line and east of Trafalgar Road - Within structures at Steeles Avenue and Trafalgar Road
	Buried Cable	1	- East of Steeles Avenue on the northerly edge of pavement of Highway 401
Hydro	Poles	91 (100 including shared)	- Interchange and crossing road locations; some shared poles - Within the Highway 401 ROW (north side) from Fifth Line east to truck inspection station
	Towers	4	- East of James Snow Parkway
	Buried Cable	76	- At the Halton Hills Generating Facility
Cogeco	Poles	--	- Crossing Highway 401 at Regional Road 25 and Trafalgar Road on Hydro owned poles
Illumination	Poles	198	- Near interchange, crossing roads and truck inspections station locations
Gas	Pipe	5	- Crossing Highway 401 at Regional Road 25, Boston Church Road and Steeles Avenue
Municipal Water	Fire Hydrants	3	-Near the Regional Road 25 and James Snow Parkway interchanges
	Watermain	5	- Crossing Highway 401 at Regional Road 25 and Boston Church Road - Along structure east of Steeles Avenue and along Boston Church Road parallel to Highway 401
Sewer	Manhole	46	- Near interchange, crossing roads and truck inspections station locations
	Pipe		- Crossing Highway 401 east of Regional Road 25 interchange
Other	Poles	10	- West of Steeles Avenue and at truck inspection station
	Buried Cable	1	- Communication cable at Halton Hills Generating Facility

4.4.4. Carpool Parking Lots

Two Carpool Parking Lots are located within the project limits at the Trafalgar Road and Regional Road 25 Road interchanges. The Carpool Parking Lot at Trafalgar Road (refer to **Figure 4-8**) is located in the northeast quadrant outside of the interchange. The lot contains 214 spaces, eight barrier-free spaces, illumination and a transit loop. The Carpool Parking Lot at Regional Road 25 (refer to **Figure 4-9**) is located in the southeast quadrant between Highway 401 and Ramp S-E. A significant expansion of this Carpool Parking Lot was completed in 2009, and the lot now includes 192 spaces, eight barrier-free spaces, illumination and a transit loop. From the Carpool Parking Lot, cars can exit through the signalized intersection at Regional Road 25 or directly to Ramp S-E.

Figure 4-8: Trafalgar Carpool Parking Lot



Figure 4-9: Regional Road 25 Carpool Parking Lot



4.4.5. Truck Inspection Stations

There are two truck inspection stations within the study area located west of Trafalgar Road between Fifth Line and Sixth Line.

4.4.6. Transit Service

The study area is served by Milton Transit, Halton Hills ActiVan and GO Transit. Milton Transit runs five transit lines within the urban area of the Town of Milton. Transit routes 1, 3 and 5 run in close proximity to the study area with Route 5 crossing Highway 401 via James Snow Parkway. Halton Hills ActiVan provides public transportation within the Town for any person with a physical, medical or cognitive disability and for all seniors 65 or older. GO Transit provides both rail and bus service between Milton and the City of Toronto. The GO Transit Milton Line runs six trains in the AM and PM peak periods each with headways between 20 and 50 minutes. In terms of ridership, the Milton Line is the third busiest GO Transit line, with over six million passenger trips in 2007. The Milton GO Station is located in the southwest quadrant of the Main Street / Thompson Road intersection.

Future transit service expansions, potentially including all-day and off-peak direction rail service to Milton and possibly two new stations under discussion for the longer term at Trafalgar Road

and Tremaine Road identified in GO Transit's Strategic Plan – GO 2020 will have the potential to increase the proportion of Milton residents using the GO train station over the next 25 years.

5. NEED FOR HIGHWAY 401 IMPROVEMENTS

Commuter traffic on Highway 401 through Milton is currently experiencing delays during weekday peak periods. With population and employment forecasts for the surrounding municipalities and the GTA in general, traffic volumes on Highway 401 are expected to continue to grow even with the implementation of transit initiatives currently being pursued by the Province, and planned and committed road improvements by local municipalities.

With the existing cross section of Highway 401 in place, an analysis of traffic operations demonstrated further deterioration in the level of operations along the studied corridor. There is a need to provide additional capacity to accommodate the anticipated increase in demand.

The following sections summarize the key elements of the traffic analysis undertaken to existing and future conditions and needs for this section of the Highway 401 corridor.

5.1. Peak Hour Traffic

According to the 2006 Transportation Tomorrow Survey (TTS), residents of Halton Region made approximately one million trips in a given 24-hour period in 2006 (compared to approximately 900,000 trips in 2001). Approximately 23% of all daily trips occurred within the AM peak period between 6:00 a.m. and 9:00 a.m. and approximately 22% of all trips made by Halton residents were home-based discretionary trips.

Modes of travel in Halton Region include automobiles, regional transit, GO transit services (rail and bus), private bus companies and taxicabs. The 2006 TTS data provides the basis of the current modal share for Halton Region as shown in **Figure 5-1**.

Figure 5-1: Trip Mode Distribution

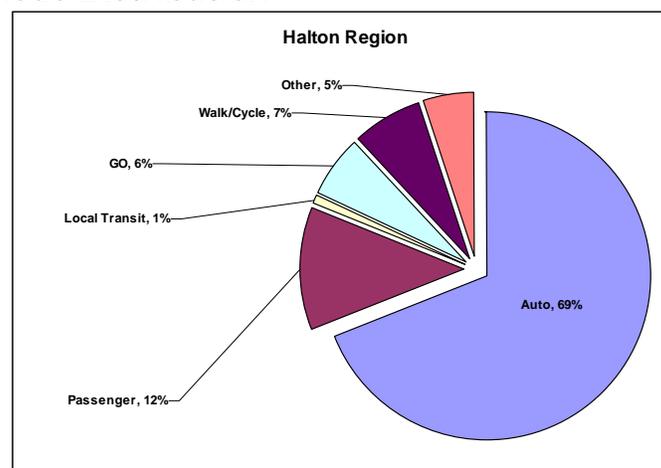


Figure 5-2 summarizes the 2006 work trip origins and destinations for Halton Region. **Table 5-1** summarizes auto travel demands between major municipalities in the GTA for the AM peak period.

Figure 5-2: 2006 TTS A.M. Peak Trip Distribution (Halton)¹

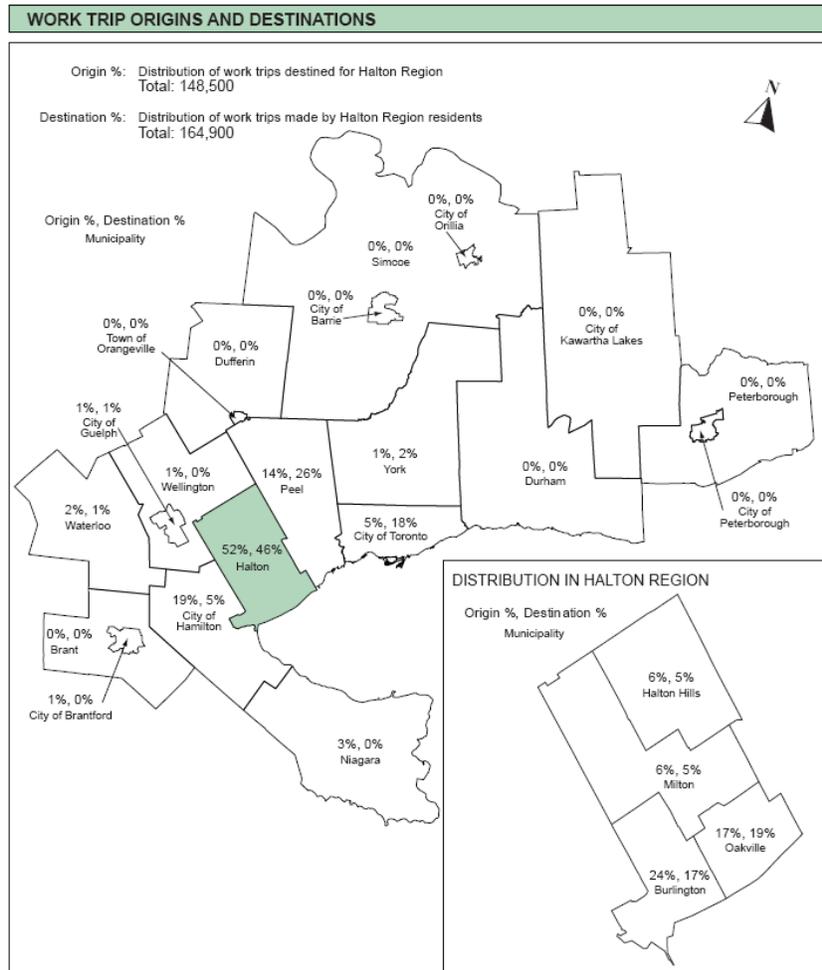


Table 5-1: 2006 TTS AM Peak Period (three hours)² Auto Trip

	Municipality	To							Total
		Toronto	Durham	York	Peel	Halton	Hamilton	External to GTA	
From	Toronto	486,700	7,200	62,800	48,000	4,500	800	2,800	612,800
	Durham	46,500	72,400	15,200	2,800	300	100	1,600	138,900
	York	108,900	2,800	109,300	17,100	1,400	300	3,500	243,300
	Peel	87,900	800	17,000	181,200	14,600	1,500	3,600	306,600
	Halton	22,400	100	2,400	32,900	51,200	3,600	3,000	118,300
	Hamilton	3,700	100	400	5,100	19,700	72,600	5,900	107,500
	External to GTA	11,400	4,400	12,800	15,800	7,700	10,900	361,400	424,400
Total		767,500	87,800	219,900	302,900	99,400	92,500	381,800	1,951,800

¹ 2006 TTS Report

² AM Peak Period – 6:00a.m. to 9:00a.m.

5.2. Population and Employment Forecast

Population and employment forecasts for municipalities within Halton Region were obtained from the Region. The Town of Milton is expected to experience the most growth amongst all of the municipalities in Halton Region in the next 20 years. In fact, population in Milton is expected to increase by 325% (2006 to 2031). An increase in employment is also significant at just over 300%. No other municipality in Halton Region is expected to experience similar growth in either employment or population. Growth in population in Milton accounts for 56% of the total growth in Halton Region.

5.3. Transportation Network Improvements in Halton Region

Cross roads are also expected to carry additional traffic volumes prompting improvements by Halton Region and local municipalities. Some of the committed improvements include widening of Trafalgar Road, James Snow Parkway and Regional Road 25, as well as realignment of Tremaine Road with a future interchange with Highway 401 (Halton Region initiative), to name a few.

From the transit perspective, Metrolinx identified the existing GO Milton terminus as an anchor hub location for GO and local transit, which incorporates full-day regional rail service to and from Milton (GO Transit), and the terminus is expected to accommodate some of the future growth in inter / intra-regional trip making.

5.4. High Occupancy Vehicle (HOV) Traffic

MTO has undertaken a number of corridor planning studies to assess opportunities for HOV lanes on freeways within the GTA. Highway 403, Highway 404 and Highway 400 have all been reviewed for HOV suitability, and corridor level forecasts of HOV demand have been completed using traditional corridor based models of diversion of traffic to HOV lanes. In addition, MTO's HOV Lanes Plan 2007 identifies HOV lanes on this section of the Highway 401 corridor in the long-term (2017 and beyond).

The existing proportion of HOVs (two or more persons in a car) in the traffic stream on Highway 401 through the study area was found to vary between 7% and 12%. The amount of HOV traffic on Highway 401 decreases westward from Trafalgar Road to approximately 400 vehicles in the peak direction/hour. The model predicts HOV traffic in the 800-1,200 vehicle/hour/direction range east of Regional Road 25 by the 2021 horizon year. By 2031, the amount of HOV traffic further increases to up to 1,400 vehicles/hour/direction on some sections of the Highway 401 corridor within the study area.

5.5. Future Traffic Demand

A transportation modeling approach was developed that was based on accepted land uses in Halton Region, transportation network improvements assumptions (Transportation Master Plans and Capital Programs), and peak hour traffic / vehicle occupancy data. The analysis revealed a need to widen Highway 401 to 10 lanes between Trafalgar Road and James Snow Parkway by 2021. The section of Highway 401 between James Snow Parkway and Regional Road 25 will require eight lanes to meet the demand. The 2031 forecast reveals a need to widen Highway 401 to 12 lanes between Trafalgar Road and James Snow Parkway, and to 10 lanes between James Snow Parkway and Regional Road 25.

5.6. Collisions

The collision history review included a comprehensive assessment of all reported collisions that occurred between 2005 and 2007 (3-year history). The collision history review included an assessment of Highway 401 mainline, as well as ramps and ramp terminal intersections, while identifying collision-prone locations and potential contributing factors, as well as possible improvements to alleviate deficiencies.

Over the three-year period between 2005 and 2007, there were 575 collisions recorded on Highway 401 between Trafalgar Road and Regional Road 25 (approximately 192 collisions per year). Of these, 499 collisions were determined to be mainline-related, which were used to calculate Highway 401 collision rates. The overall collision rate for the section of Highway 401 within the study limits was calculated at 0.51 collisions per million vehicle kilometres (MVK) over three years. Annual sectional collision rates varied between 0.06 MVK and 2.37 MVK. It should be noted that most figures are lower than the provincial average of 0.5 MVK for all provincial freeways. Spikes in collision frequency were identified in close proximity to the interchanges at Regional Road 25, James Snow Parkway, and Trafalgar Road.

The Trafalgar Road interchange showed a high count of turning collisions. It is likely that the high number of turning collisions at this location is a result of motorists misjudging or otherwise ignoring the proper turning radius required for adjacent motorists to simultaneously make a safe turn. Turning collisions accounted for 10 out of 19 collisions (53%) at the E-N/S ramp. The James Snow Parkway interchange has showed an increased level of collisions due to the unsignalized ramp terminal intersection, largely caused by “Failure to Yield” and “Improper Turns.” These collisions account for six out of 12 collisions (50%) at the W-N/S ramp. This ramp terminal intersection has been recently signalized. The Regional Road 25 interchange showed a high number of single vehicle collisions. Eighteen (18) of these 24 single vehicle collisions occurred in wet conditions, leading to the conclusion that motorists are approaching the horizontal curve leading in to Regional Road 25 northbound at a high rate of speed for the road surface conditions.

5.7. Problems and Opportunities

Highway 401 is currently a six-lane controlled access freeway within the study area. Traffic volumes along this section of Highway 401 have been growing at a fast rate. Over the last 10 years, daily traffic volumes increased by an average of 2.7% per year. Being an important corridor for goods movement, the number of trucks on Highway 401 is also increasing (trucks account for 20% of the annual average daily traffic volume). Traffic on this section of Highway 401 currently experiences stop-and-go conditions during peak hour periods.

Traffic volumes along this section of Highway 401 corridor will continue to increase. As traffic volumes increase, congestion may lead to operational issues, driver frustration, and potential for collisions and trip delays.

This section of Highway 401 has an inability to meet the current and future traffic demand. Transportation improvements are required along Highway 401 from Trafalgar Road to Regional Road 25 to support the projected growth in the area and address transportation network deficiencies associated with current and forecasted travel needs.

In recognition of increased traffic and transportation needs along this section of the Highway 401 corridor, this area was assessed to define and designate the property / highway ROW that may be required to accommodate the required transportation improvements.

6. ASSESSMENT OF ALTERNATIVES TO THE UNDERTAKING

Consistent with the Class EA, Alternatives to the Undertaking were examined to determine which alternatives were considered reasonable in addressing the identified problem. Alternatives to the Undertaking are broad-based alternatives that represent functionally different ways of addressing the identified transportation problems and opportunities.

6.1. Alternatives to the Undertaking

The purpose of the undertaking was to resolve the identified operational concerns and to address existing and future capacity needs in this section of the Highway 401 corridor. Specific objectives were:

- The ability to address existing operational issues;
- The ability to address future capacity needs; and
- To reduce or minimize impacts to the natural, socio-economic and cultural environments.

Consistent with the EA Act, Alternatives to the Undertaking were examined to determine which alternatives were considered reasonable. For this study, the judgment of reasonableness was based on the degree to which an alternative resolves the transportation problem identified, or to take advantage of a transportation opportunity. Alternatives to the Undertaking were assessed based on the advantages and disadvantages of each alternative. The assessments of the Alternatives to the Undertaking are provided below.

6.1.1. Do Nothing

The “Do Nothing” alternative maintains the status quo of the transportation infrastructure and services, with no significant changes or actions being taken to either manage demand, expand infrastructure or improve operations. Traffic volumes in this section of the Highway 401 corridor are expected to continue to increase. To do nothing would result in further deterioration of level of service, resulting in an increase in travel time, congestion, potential for collisions, driver frustration and increased fuel consumption. Although the “Do Nothing” alternative does not address the objectives of this study, it was carried forward and used as a baseline for comparison with the Highway 401 improvement alternatives.

6.1.2. Transit Expansion / Improvements

Transit expansion / improvements would provide a more competitive choice of travel modes for some users of Highway 401 and thus reduce the traffic volumes somewhat on Highway 401. Metrolinx / GO Transit recently initiated all-day regional rail transit service to downtown Milton. In the long-term, Metrolinx’s 25-year plan identifies that additional rapid transit service will be added in Halton connecting both Burlington and downtown Milton to the rapid transit service on

Dundas Street. While expansion / improvements to existing transit services may lead to increased capacity of transit networks, the capacity of overall transportation network in the Highway 401 corridor will not be increased sufficiently to eliminate the need for road-way based improvements. This alternative only partially addresses the study objectives and was carried forward for further consideration in this study.

6.1.3. Transportation Demand Management

Managing transportation demand includes the implementation of measures to sufficiently reduce, shift or eliminate transportation demand, such that improved transportation infrastructure within the project limits is not required. Examples of Transportation Demand Management (TDM) measures are carpooling, transit, walking, cycling and alternative work arrangements. Both the Town of Milton and the Town of Halton Hills are participating in the Smart Commute Program, a carpool program under Metrolinx.

Such measures would be difficult to implement effectively over such a large road network. In addition, managing transportation demand would likely not reduce demand sufficiently or eliminate the need to improve any of the identified deficiencies in this section of Highway 401 corridor. MTO recognizes the benefits of implementing TDM measures and thus this alternative was carried forward for further study in concert with Highway 401 improvements.

6.1.4. Transportation System Management

Transportation System Management (TSM) (i.e., HOV lanes, ramp metering, transit priority at intersections, enhanced signage, etc.) is the use of relatively low-cost measures to increase capacity and/or provide safety and operational improvements to an existing transportation system. HOV lanes offer users a faster, more reliable commute, while also increase the service life of the lane by moving more people in fewer vehicles. HOV lanes as well as carpool parking lots along this section of the Highway 401 corridor were investigated and carried forward for consideration with improvements to this section of Highway 401 corridor.

6.1.5. Adjacent Road System Improvements

Improvements to the adjacent road system would not adequately solve the problems along this section of the Highway 401 corridor. The adjacent road system (municipal roads) within the project limits are generally arterial roads designed to provide local access, and are not suitable for carrying highway speed, long distance traffic. As such, these roads would provide limited diversion for Highway 401 through-traffic. Improving the arterial road network to serve long distance travel needs is not a desirable solution and was not considered further.

6.1.6. Highway 401 Improvements

This alternative, in combination with transit expansion / improvements and TDM / TSM would address the projected mid- and long-term capacity and operational needs, and have a manageable effect on the natural, socio-economic and cultural environments. Therefore, this alternative was recommended as the preferred planning alternative and carried forward for future consideration.

6.1.7. Construction of a New Highway Corridor

New corridor alternatives are being addressed as part of the GTA West Corridor Planning and EA Study’s Transportation Development Strategy. The purpose of this study is to examine the interregional long-term transportation needs to the year 2031 and consider alternative solutions to provide better linkages between Urban Growth Centres identified in the Growth Plan, including Downtown Guelph, Downtown Milton, Brampton City Centre, and Vaughan Corporate Centre. Considering the anticipated timeframe for approvals and construction, a new highway corridor would not address the immediate and medium term capacity deficiencies of this section of the Highway 401 corridor.

6.2. Assessment of Alternatives to the Undertaking

Table 6-1 summarizes the assessment of the Alternatives to the Undertaking.

Table 6-1: Assessment of Alternatives to the Undertaking

ALTERNATIVES TO THE UNDERTAKING	STUDY OBJECTIVES			Alternative Carried Forward for Future Study
	1	2	3	
	Ability to Address Existing Operational Issues	Ability to Address Future Capacity Needs	Reduce or Minimize Impacts to the Natural, Social, Economic and Cultural Environments	
Do Nothing	○	○	N/A	✗
Transit Expansion / Improvements	◐	◐	◑	✓
TDM / TSM	◐	◑	◑	✓
Adjacent Road System Improvements	○	◐	◑	✗
Highway 401 Improvements	●	●	◑	✓
Construction of a New Highway Corridor	◑	●	○	Addressed as part of the GTA West TDS

Legend	
○	◐ ◑ ◒ ◓
Least Preferred	→ Most Preferred
✗	Do not carry forward
✓	Carry Forward

The benefits of transit expansion / improvements and TDM / TSM measures from a traffic operation and capacity perspective were recognized. However the implementation of these alternatives (individually or as a combination alternative) will not fully address the projected future capacity needs on this section of Highway 401. Transit Expansion/Improvements and TDM / TSM were carried forward for further study.

Improvements to this section of Highway 401 in combination with transit expansion / improvements and TDM / TSM measures is the only alternative that can fully address the objectives of this study on its own, and was therefore carried forward for further study.

7. GENERATION, ASSESSMENT AND EVALUATION OF HIGHWAY 401 IMPROVEMENT ALTERNATIVES

Specific improvement alternatives corresponding to the Alternatives to the Undertaking that were carried forward from **Chapter 6** were developed. Based on the existing traffic conditions and projected traffic volume growth, mainline widening requirements were examined. Interchange alternatives to accommodate the proposed mainline widening were then generated at Trafalgar Road, James Snow Parkway and Regional Road 25.

7.1. Highway 401 Widening

Based on the existing traffic conditions and projected traffic volume growth, this section of the Highway 401 corridor requires widening to a 12-lane cross-section between Trafalgar Road and James Snow Parkway and to a 10-lane cross-section between James Snow Parkway and Regional Road 25 in order to meet the projected 2031 travel demand.

For the proposed widening to 12 lanes between Trafalgar Road and James Snow Parkway, a core-collector system and a core cross-section were examined. A core-collector system in this area was determined to provide superior traffic operations as it minimized weaving conflicts. Given these substantial benefits and the minor differences in environmental impacts, a 12-lane core cross-section was screened out from further consideration.

A screening level examination of widening Highway 401 to the north, south or about the centreline throughout the study area was also undertaken. Widening all to the north or south were not carried forward as they would result in greater impacts to the natural environment and adjacent properties, introduce consideration shifts in the alignment of Highway 401 and require the replacement of the James Snow Parkway structure over Highway 401. As such, widening about the centreline was carried forward.

7.2. Interchange Alternatives

7.2.1. Trafalgar Road Interchange

The existing bridge at the Trafalgar Road interchange cannot accommodate the recommended Highway 401 widening, thus a bridge replacement is required at this interchange. Three alternatives were developed for this interchange:

- Replacement to the West (**Figure 7-1**);
- Replacement on the Existing Alignment (**Figure 7-2**); and
- Replacement to the East (**Figure 7-3**).

7.2.2. James Snow Parkway Interchange

Three alternatives were developed for this interchange:

- Replacement to the West (**Figure 7-4**);
- Maintaining Existing Bridge / Existing Alignment (**Figure 7-5**); and
- Replacement to the East (**Figure 7-6**).

7.2.3. Regional Road 25 Interchange

The existing bridge at the Regional Road 25 interchange cannot accommodate the recommended Highway 401 widening, thus a bridge replacement is required at this interchange. Three alternatives were developed for this interchange:

- Replacement to the West (**Figure 7-7**);
- Replacement on the Existing Alignment (**Figure 7-8**); and
- Replacement to the East (**Figure 7-9**).

7.3. Assessment and Evaluation of Alternatives

7.3.1. Evaluation Methodology / Criteria

The evaluation method used in this study was the Reasoned Argument Method (Trade-Off Method). The Reasoned Argument Method considered the advantages and disadvantages of each alternative and the relative significance of the impacts. Both the professional opinions of the Project Team (which includes a diverse range of environmental and technical experts), as well as the input from stakeholders were used to determine the significance of impacts. The Reasoned Argument Method then presented a clear and thorough evaluation of the trade-offs between various categories / factors / indicators, and the reasons why one alternative was preferred over another.

Alternatives under consideration were assessed and evaluated based on natural, socio-economic, cultural, transportation and cost considerations using the criteria listed in **Table 7-1**:

Figure 7-1: Trafalgar Road – Replacement to the West

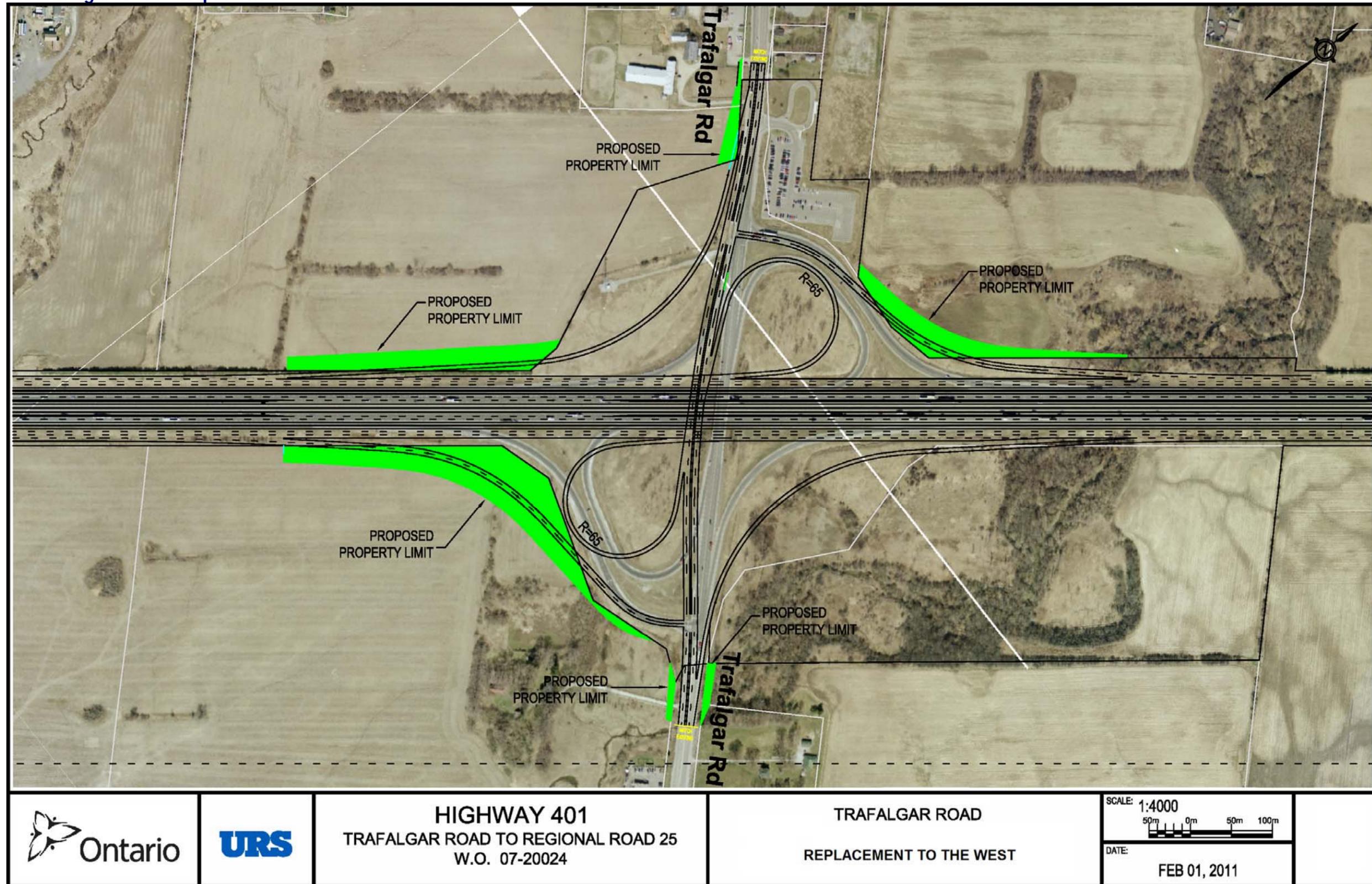
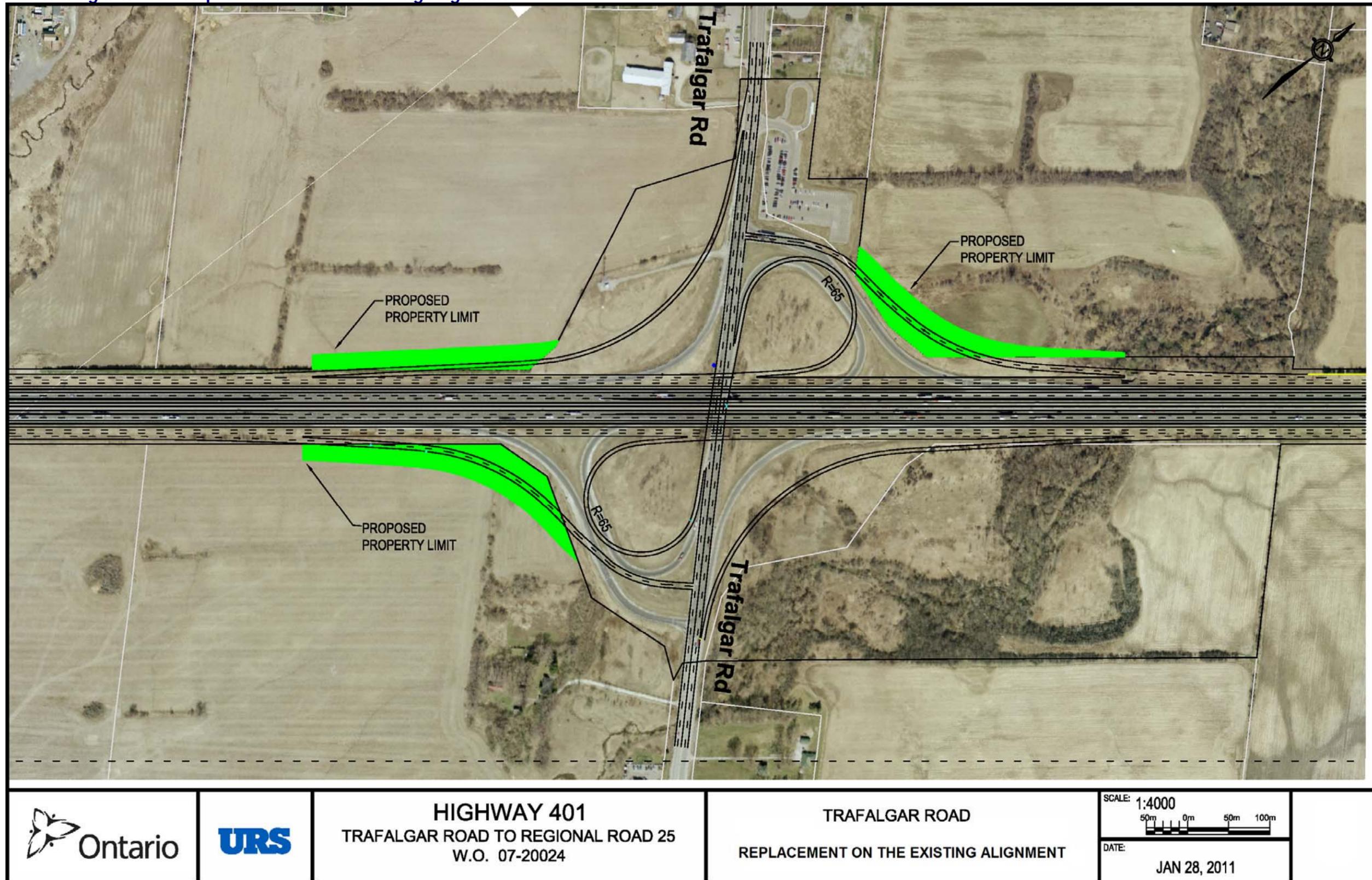


Figure 7-2: Trafalgar Road – Replacement on the Existing Alignment



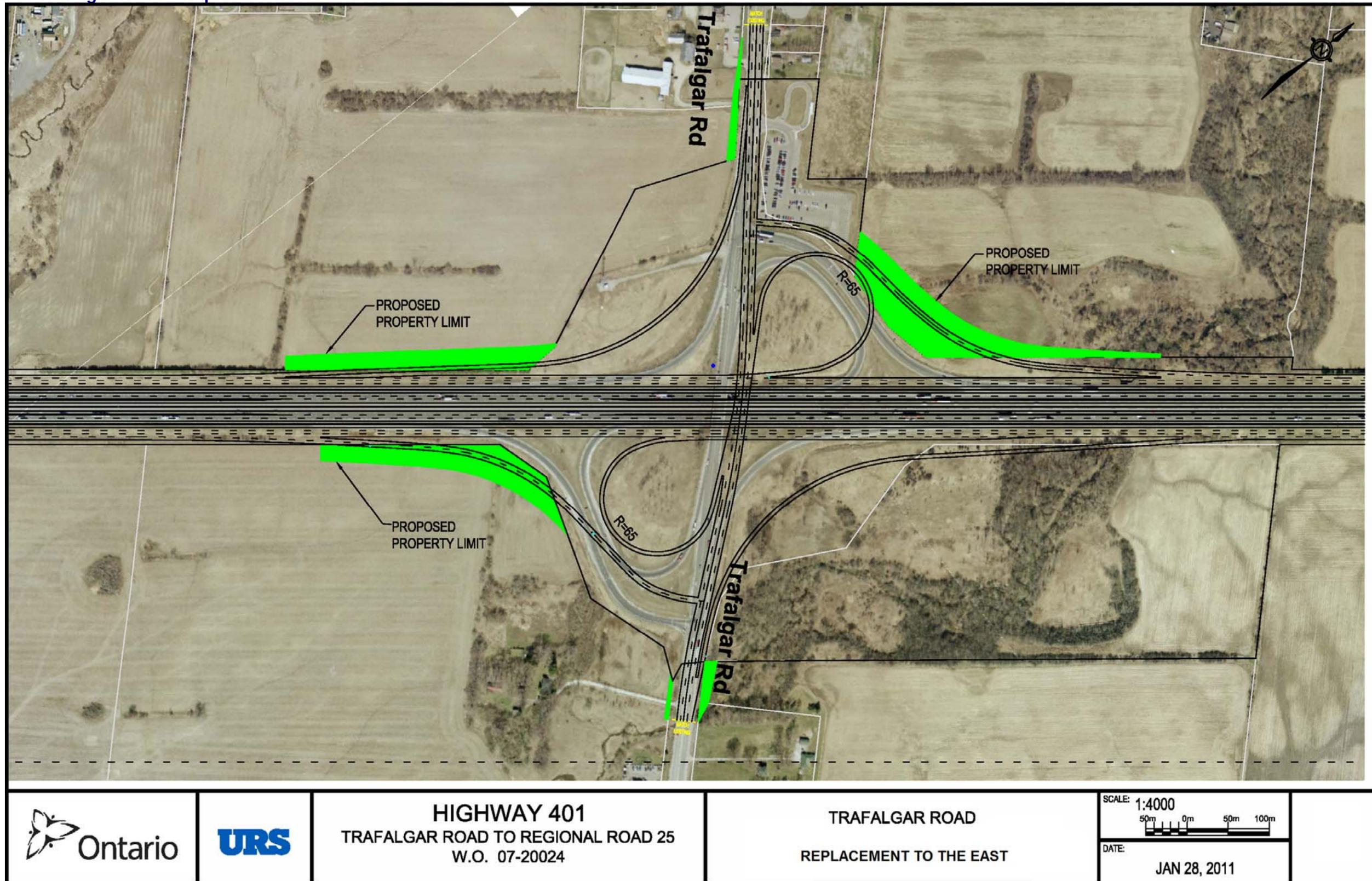
HIGHWAY 401
TRAFALGAR ROAD TO REGIONAL ROAD 25
W.O. 07-20024

TRAFALGAR ROAD
REPLACEMENT ON THE EXISTING ALIGNMENT

SCALE: 1:4000
50m 0m 50m 100m

DATE:
JAN 28, 2011

Figure 7-3: Trafalgar Road – Replacement to the East



HIGHWAY 401
TRAFALGAR ROAD TO REGIONAL ROAD 25
W.O. 07-20024

TRAFALGAR ROAD
REPLACEMENT TO THE EAST

SCALE: 1:4000
50m 0m 50m 100m

DATE:
JAN 28, 2011

Figure 7-4: James Snow Parkway – Replacement to the West

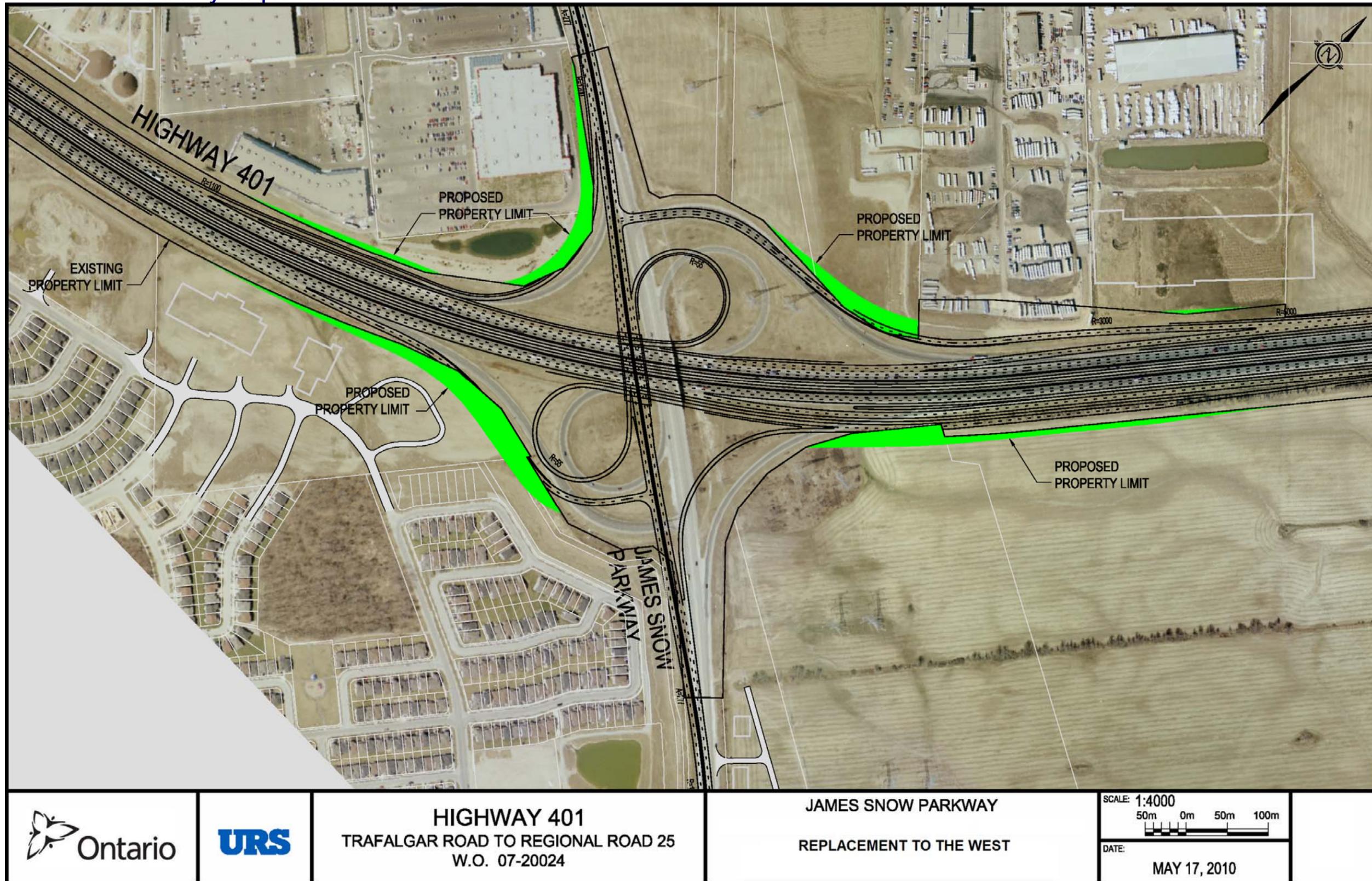


Figure 7-5: James Snow Parkway – Maintaining the Existing Bridge / Existing Alignment

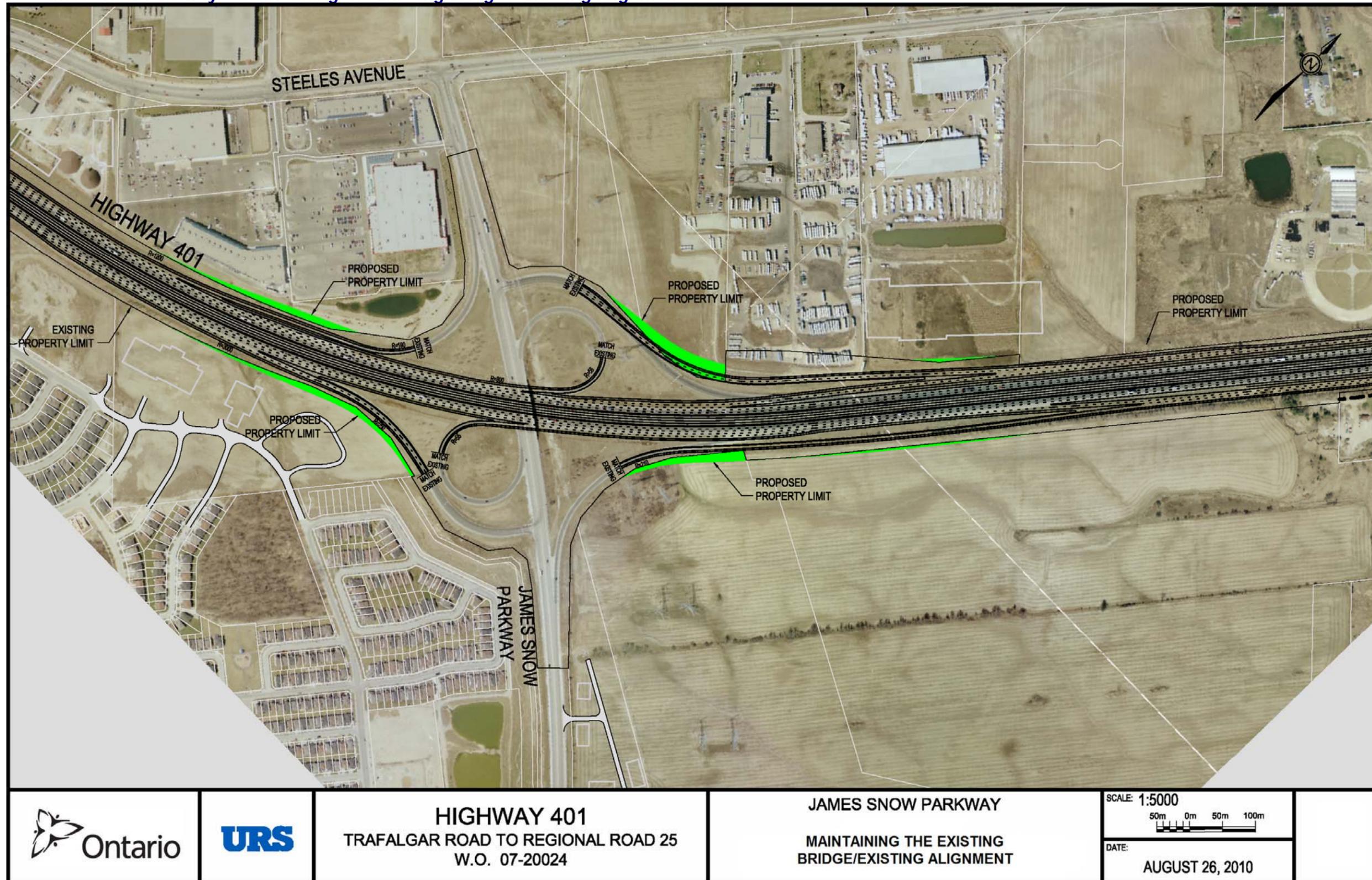


Figure 7-6: James Snow Parkway – Replacement to the East

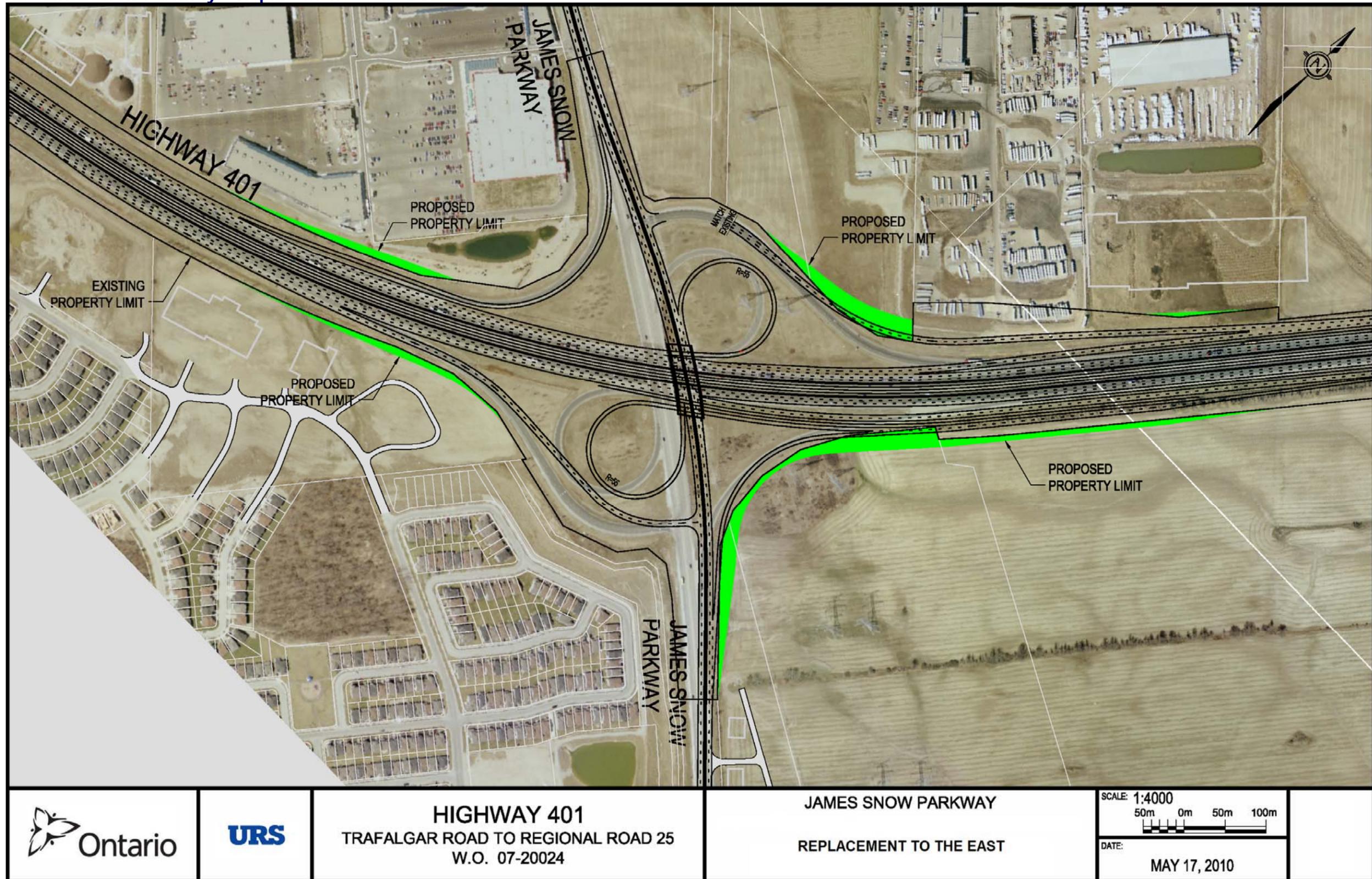


Figure 7-7: Regional Road 25 – Replacement to the West

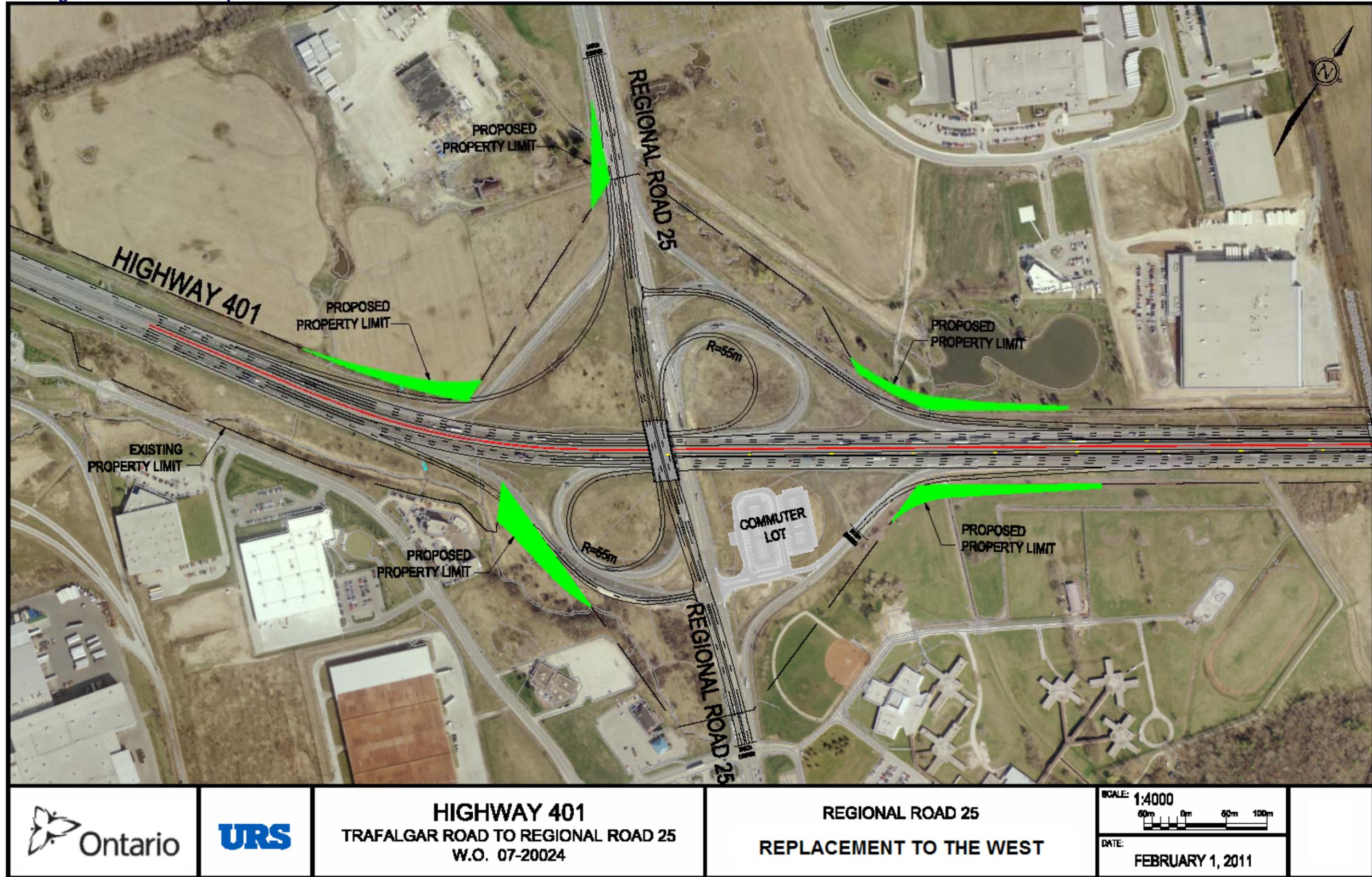


Figure 7-8: Regional Road 25 – Replacement on the Existing Alignment

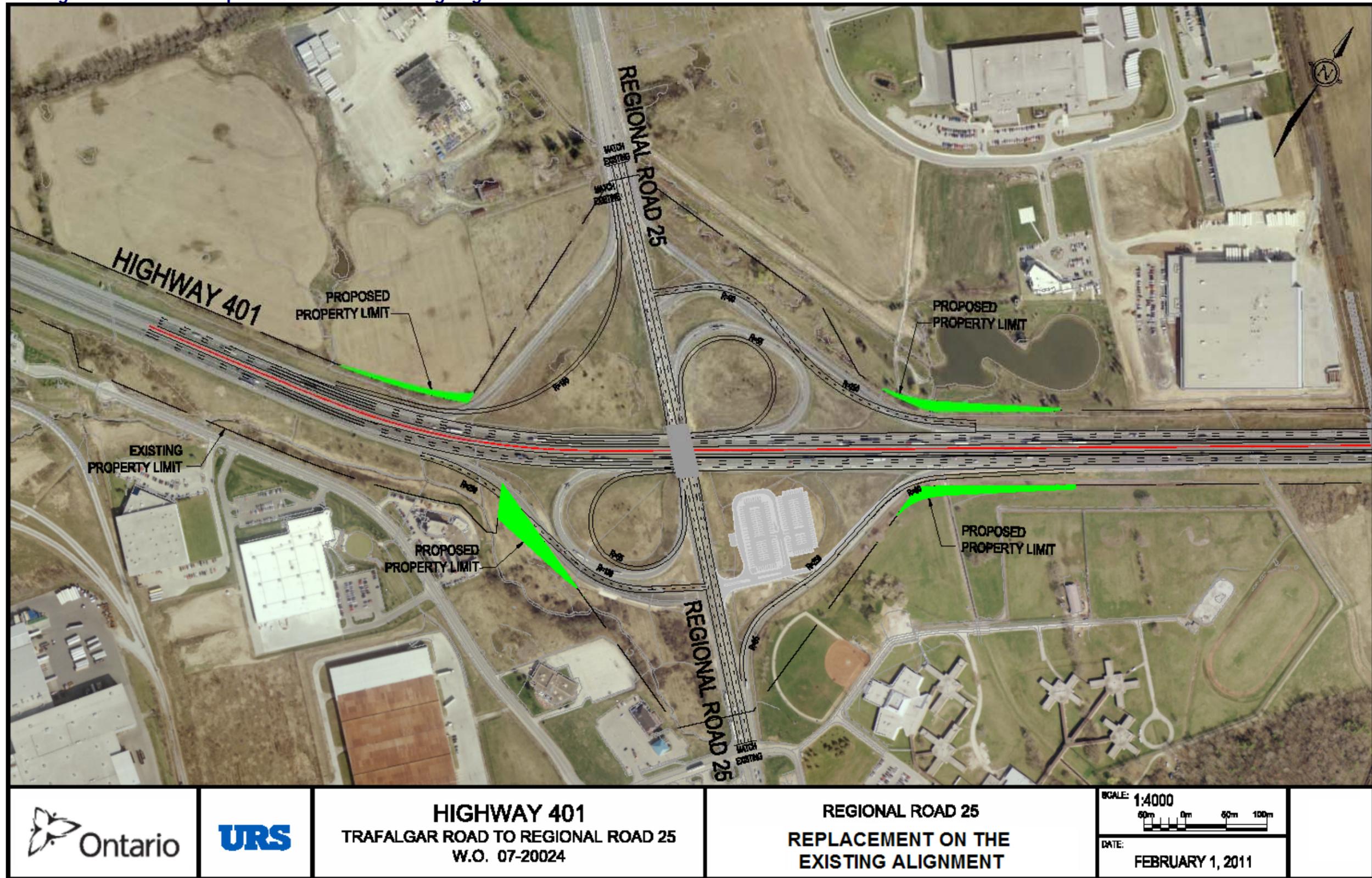


Figure 7-9: Regional Road 25 – Replacement to the East

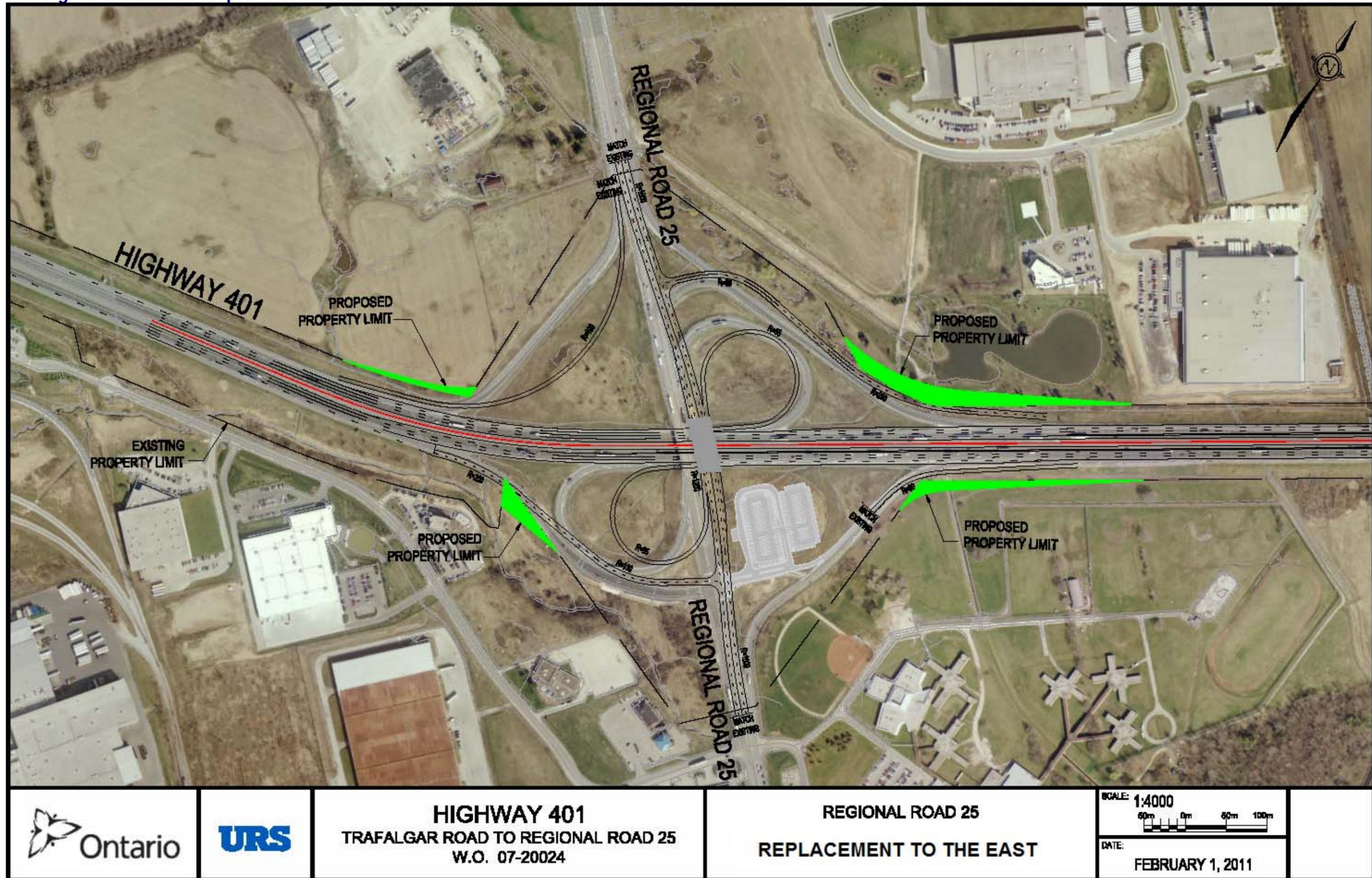


Table 7-1: Evaluation Criteria

Category	Factor	Indicator
Technical Considerations	Highway Capacity and Operations	Ability to Address Projected Highway Capacity Needs
		Ability to Address Identified Operational Issues
	Constructability	Ability to Stage Construction
	Utilities	# of Utilities Impacted / Relocated
	Cost	Total Construction Cost of Alternative
Area of Property Required		
Natural Environment	Fisheries and Aquatic Habitat	Area of Fisheries and Aquatic Habitat Impacted (Associated with Culvert / Bridge Extension)
	Terrestrial Habitat	Impact to Terrestrial Vegetation Communities
	Wetlands	Impact to Regionally / Provincially Wetlands
	Designated Natural Areas	Potential Impact to Designated Areas
	Surface Water and Groundwater	# of Surface Water and Groundwater Resources Impacted
	Species at Risk	Potential Impact to Species at Risk
Socio-Economic Environment	Aesthetics	Extent of Changes to Existing Views and Vista
	Noise	Potential Impact to Noise Sensitive Receivers
	Agricultural	Area of Class 1-6 Agricultural Land Displaced
		# of Farming Operations Disrupted
	Contamination and Waste	# of Impacted Properties that have a Moderate-High Potential for Waste / Contamination
	Future Planned Land Use	Impacts to and Ability to Support Planned / Approved Development
	Community Effects	Impact to Residential Areas (displacement, disruption, access impacts)
		Impact to Commercial / Industrial Areas (displacement, disruption, access impacts)
Impact to Institutional, Recreational, or Community Features (displacement, disruption, access impacts)		
Cultural Environment	Archaeological Resources	Area of Archaeological Potential Displaced
	Built Heritage and Cultural Landscapes	# of Built Heritage and Cultural Landscapes Impacted

7.3.2. Summary of the Trafalgar Road Interchange Evaluation

Three alternatives (Replacement to the West, Replacement on the Existing Alignment and Replacement to the East) were evaluated based on the criteria listed in **Table 7-1**.

Although Replacement on the Existing Alignment results in the least impact to adjacent properties, these impacts are marginally less than Replacement to the East or West. In addition, Replacement on the Existing Alignment is approximately 20% more expensive to construct than the other alternatives and would result in greater traffic disruptions during construction as it would take twice as long to construct. As such, Replacement on the Existing Alignment is the

least preferred alternative. Replacement to the East results in the greatest impact to the Carpool Parking Lot at the northeast quadrant of the interchange (displacing approximately 130 parking stalls) and would require either the relocation or expansion of the facility (and the associated impacts / acquisition of private property), whereas Replacement to the West only has minor impacts to the entrance of the Carpool Parking Lot. Given the adverse impacts to the Carpool Parking Lot associated with Replacement to the East and that Replacement to the West maximizes the separation distance between the Trafalgar Road interchange and the 407ETR ramps, which provides more flexibility for future transportation improvements in the area and therefore is desirable from a traffic operations perspective, Replacement to the West is preferred.

The evaluation was presented for public review and comment at the second PIC held in March 2011 and is provided in **Table 7-2**.

7.3.3. Summary of the James Snow Parkway Interchange Evaluation

Three alternatives (Replacement to the West, Replacement on the Existing Alignment and Replacement to the East) were evaluated based on the criteria listed in **Table 7-1**.

Both Replacement to the West and Replacement to the East result in the greatest impact to agricultural and future development lands, and the shifting of the existing alignment of James Snow Parkway and the associated reconstruction of the bridge approaches. In addition, Replacement to the West is the most expensive alternative to construct and results in the greatest impact in terms of displacement of vegetated areas at the southwest quadrant of the interchange and areas of archaeological potential. Replacement to the East also encroaches into the horizontal clearance required for utility tower maintenance at the northeast quadrant of the interchange. Maintaining the Existing Bridge / Existing Alignment is significantly less expensive to construct relative to the other alternatives, results in the least footprint impacts and maintains the existing bridge and alignment of James Snow Parkway. Therefore, Maintaining the Existing Bridge / Existing Alignment is the preferred alternative.

The existing bridge at the James Snow Parkway interchange can accommodate the recommended Highway 401 widening. During the detail design stage of this project the feasibility of constructing retaining walls near the abutments will be confirmed.

The evaluation was presented for public review and comment at the second PIC held in March 2011 and is provided in **Table 7-3**.

7.3.4. Summary of the Regional Road 25 Interchange Evaluation

Three alternatives (Replacement to the West, Replacement on the Existing Alignment and Replacement to the East) were evaluated based on the criteria listed in **Table 7-1**.

Although Replacement to the East results in the least impact to existing and future planned commercial lands, it results in the greatest impact to the Carpool Parking Lot at the southeast quadrant (displacing approximately 0.2 ha and approximately 20 parking stalls). Given that this alternative is similar to Replacement to the West from a transportation / engineering perspective, but has higher impacts, it is less preferred. Relative to Replacement to the West, Replacement on the Existing Alignment results in slightly less impact to existing and future planned commercial lands. However, Replacement on the Existing Alignment is 25% more expensive to construct, and has a significantly longer construction duration (two seasons) relative to Replacement to the West (which can be constructed in one season). As such, Replacement to the West is the preferred alternative.

The evaluation was presented for public review and comment at the second PIC held in March 2011 and is provided in **Table 7-4**.

Table 7-2: Evaluation of Trafalgar Road Interchange Alternatives

Factor	Relative Level of Significance (High, Medium, Low)	Replacement to the West	Replacement on the Existing Alignment (Staged Construction, Detour to the West of Existing)	Replacement to the East	Comments
Technical Considerations	High	●	◐	◑	In summary, Replacement on the Existing Alignment is the least preferred alternative from a transportation / engineering perspective because it is the most expensive alternative to construct (approximately 20% more expensive than Replacement to the West and East), results in either lane reductions on Trafalgar Road and Highway 401 or construction of a two-lane temporary bridge, and requires a longer construction duration. Replacement to the West and East are very similar in terms of constructability issues, utility impacts and construction costs. Replacement to the West maximizes the separation distance between the Trafalgar Road interchange and the 407ETR ramps, which provides more flexibility for future transportation improvements in the area and is therefore desirable from a traffic operations perspective. As such, Replacement to the West is preferred from a transportation / engineering perspective.
Natural Environment	Medium	●	●	◑	Replacement to the East results in the greatest impact to the vegetated areas at the northeast and southeast quadrants of the interchange. As such, it is not preferred from a natural environment perspective. Both Replacement to the West and Replacement on the Existing Alignment result in similar impacts to the natural environment and are therefore equally preferred from a natural environment perspective.
Socio-Economic Environment	Medium	◑	●	◐	Replacement to the East results in the greatest impact to the carpool parking lot at the northeast quadrant of the interchange (displacing approximately 130 parking stalls) and would require either the relocation or expansion of the facility and the associated acquisition of private property. As such, it is not preferred from a socio-economic environment perspective. Both Replacement to the West and Replacement on the Existing Alignment avoid impacts to the carpool parking lot. Given that Replacement on the Existing Alignment results in less impact to properties that have potential for waste and contamination, Replacement on the Existing Alignment is slightly preferred from a socio-economic environment perspective.
Cultural Environment	Low	●	●	●	All alternatives result in similar potential for the recovery of archaeological resources given the nature of the proposed improvements and type of lands impacted. As such, all alternatives are equally preferred from a cultural environment perspective.
Summary		●	◑	◐	

Summary
 Although Replacement on the Existing Alignment results in the least impact to adjacent properties, these impacts are marginally less than Replacement to the East or West. In addition, Replacement on the Existing Alignment is approximately 20% more expensive to construct than the other alternatives and would result in greater traffic disruptions during construction as it would take twice as long to construct. As such, Replacement on the Existing Alignment is the least preferred alternative. Replacement to the East results in the greatest impact to the carpool parking lot at the northeast quadrant of the interchange (displacing approximately 130 parking stalls) and would require either the relocation or expansion of the facility (and the associated impacts / acquisition of private property), whereas Replacement to the West only has minor impacts to the entrance of the carpool parking lot. Given the adverse impacts to the carpool parking lot associated with Replacement to the East and that Replacement to the West maximizes the separation distance between the Trafalgar Road interchange and the 407ETR ramps, which provides more flexibility for future transportation improvements in the area and therefore is desirable from a traffic operations perspective, **Replacement to the West is preferred.**

Ranking of Alternatives



Table 7-3: Evaluation of James Snow Parkway Interchange Alternatives

Factor	Relative Level of Significance (High, Medium, Low)	Replacement to the West	Maintaining the Existing Bridge / Existing Alignment	Replacement to the East	Comments
Technical Considerations	High	◐	●	◐	Although both Replacement to the West and Replacement to the East impact the same length of utilities and result in changes to the existing alignment of James Snow Parkway, Replacement to the East results in the most significant encroachment on the 15-m clearance zone of the hydro tower located at the northeast quadrant of the interchange. In addition, both alternatives are more expensive to construct than Maintaining the Existing Bridge / Existing Alignment (Replacement to the West is nearly three times more expensive and Replacement to the East is approximately 2.5 times more expensive). As such, Replacement to the East and West are less preferred from a transportation / engineering perspective. Maintaining the Existing Bridge / Existing Alignment results in the least impact to utilities, maintains the existing alignment of James Snow Parkway, requires less traffic staging during construction due to the preservation of the existing bridge, and is significantly less expensive to construct. Therefore, Maintaining the Existing Bridge / Existing Alignment is preferred from a transportation / engineering perspective.
Natural Environment	Medium	◐	◑	●	Replacement to the West results in the greatest impact in terms of displacement of vegetated areas at the southwest quadrant of the interchange (approximately 0.5 ha), displacing more area of vegetation than Maintaining the Existing Bridge / Existing Alignment (approximately 0.017 ha) and Replacement to the East (approximately 0.005 ha). The impacts to vegetated areas associated with all three alternatives are considered edge in nature and can be addressed through general mitigation strategies (i.e., landscape plans). Therefore, from a natural environment perspective, Replacement to the East is preferred because it results in the least impact to the terrestrial vegetation communities in the area.
Socio-Economic Environment	Medium	◐	●	◑	In summary, all three alternatives result in minor socio-economic impacts. Replacement to the East and Replacement to the West result in the greater footprint impacts on adjacent properties (agricultural lands and future planned land use). Maintaining the Existing Bridge / Existing Alignment results in the least overall property requirement and therefore results in the least impact in terms of displacement of agricultural lands and future planned land use. As a result, Maintaining the Existing Bridge / Existing Alignment is preferred from a socio-economic environment perspective.
Cultural Environment	Low	◑	●	●	Replacement to the West results in the greatest impact to areas of archaeological potential (approximately two ha), displacing more areas of archaeological potential than Maintaining the Existing Bridge / Existing Alignment (approximately 1.6 ha) and Replacement to the East (approximately 1.75 ha). Maintaining the Existing Bridge / Existing Alignment results in the least impact in terms of displacement of areas of archaeological potential and is therefore the preferred alternative from a cultural environment perspective.
Summary		◐	●	◑	

Summary
Both Replacement to the West and Replacement to the East result in the greatest impact to agricultural and future development lands, and the shifting of the existing alignment of James Snow Parkway and the associated reconstruction of the bridge approaches. In addition, Replacement to the West is the most expensive alternative to construct and results in the greatest impact in terms of displacement of vegetated areas at the southwest quadrant of the interchange and areas of archaeological potential. Replacement to the East also encroaches into the horizontal clearance required for utility tower maintenance at the northeast quadrant of the interchange. Maintaining the Existing Bridge / Existing Alignment is significantly less expensive to construct relative to the other alternatives, results in the least footprint impacts and maintains the existing bridge and alignment of James Snow Parkway. Therefore, Maintaining the Existing Bridge / Existing Alignment is the preferred alternative.

Ranking of Alternatives



Least Preferred

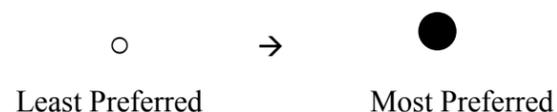
Most Preferred

Table 7-4: Evaluation of Regional Road 25 Interchange Alternatives

Factor	Relative Level of Significance (High, Medium, Low)	Replacement to the West	Replacement on the Existing Alignment (Staged Construction, Detour to the West of Existing or Detour to the East of Existing)	Replacement to the East	Comments
Technical Considerations	High	●	◐	●	Replacement on the Existing Alignment is the least preferred alternative from a transportation / engineering perspective because it has the highest construction cost, would take twice as long to construct, results in the greatest impact to utilities and traffic during construction due to lane reductions on Highway 401, and requires the construction of a two-lane temporary bridge. Replacement to the West and Replacement to the East are similar in terms of highway capacity and operations, contractibility and cost. Given that Replacement to the East results in significant less impact to utilities, it is preferred from a transportation / engineering perspective.
Natural Environment	Medium	◐	●	◐	In summary, although Replacement to the East avoids the displacement of vegetated areas, it results in the greatest impact to the SWM pond at the northeast quadrant of the interchange. Both Replacement to the West and on the Existing Alignment result in similar impacts to the natural environment, however Replacement to the West results in slightly greater displacement of vegetation. These impacts are considered edge in nature and can be minimized through mitigation strategies (i.e., landscape plans). As such, Replacement on the Existing Alignment is slightly preferred from a natural environment perspective.
Socio-Economic Environment	Medium	◐	●	◐	Although Replacement to the East has the least impact on the future planned land use and commercial / industrial areas on the west side of Region Road 25, it results in substantial impacts to the carpool parking lot at the southeast quadrant of the interchange (displacing approximately 0.2 ha of the carpool parking lot and approximately 20 parking stalls). As such, Replacement to the East is not preferred from a socio-economic environment perspective. Replacement to the West results in slightly greater impacts to the future planned land use, commercial / industrial areas and properties that have potential for waste and contamination. As such, it is also not preferred from a socio-economic environment perspective. Replacement on the Existing Alignment results in minor impacts to the future planned land use, commercial / industrial areas and properties that have potential for waste and contamination. As such, Replacement on the Existing Alignment is preferred from a socio-economic environment perspective.
Cultural Environment	Low	●	●	●	All alternatives result in similar impacts to lands identified as having archaeological potential. As such, all alternatives are equally preferred from a cultural environment perspective.
Summary		●	◐	◐	

Summary
Although Replacement to the East results in the least impact to existing and future planned commercial lands, it results in the greatest impact to the carpool parking lot at the southeast quadrant (displacing approximately 0.2 ha and approximately 20 parking stalls). Given that this alternative is similar to Replacement to the West from a transportation / engineering perspective, but has higher impacts, it is less preferred. Relative to Replacement to the West, Replacement on the Existing Alignment results in slightly less impact to existing and future planned commercial lands. However, Replacement on the Existing Alignment is 25% more expensive to construct, and has a significantly longer construction duration (two seasons) relative to Replacement to the West (which can be constructed in one season). **As such, Replacement to the West is the preferred alternative.**

Ranking of Alternatives



8. THE RECOMMENDED PLAN

8.1. Changes Made to the Recommended Plan after PIC #2

Following PIC #2, the Project Team refined the design of the Recommended Plan and the following changes were identified:

- Relocate / construct a new carpool parking lot at the northwest quadrant of the Trafalgar Road interchange;
- Replace bridges at CNR and Middle Branch of the Sixteen Mile Creek (C9) due to consideration given to life cycle cost; and
- Additional property required in the vicinity of CNR for improvement to the profile of Highway 401 in the area.

8.2. Summary of the Recommended Plan

The Recommended Plan (refer to **Appendix C**) includes the following long-term (2031) improvements:

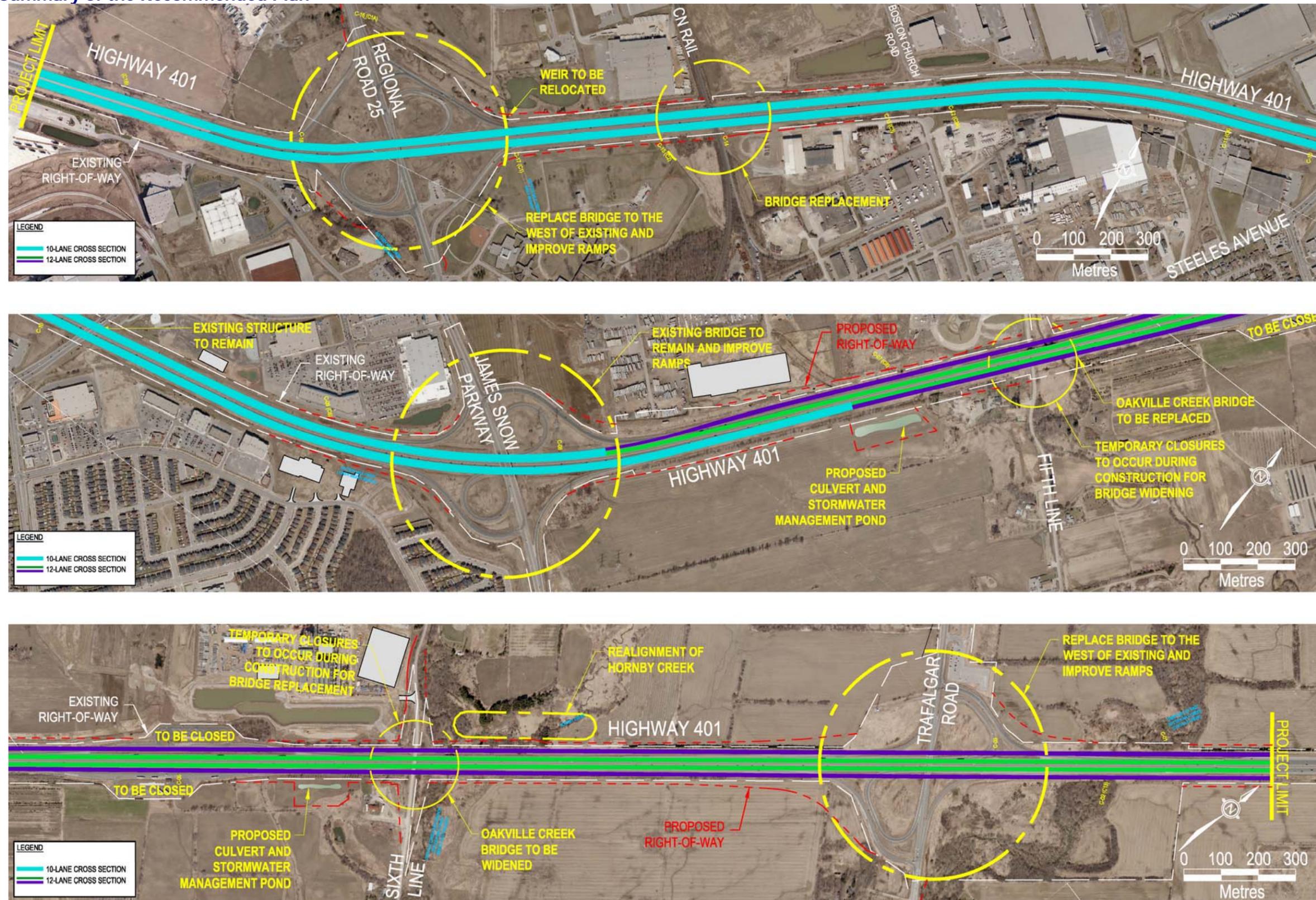
- Widen Highway 401 from a 6-lane core to a 12-lane Collector-Distributor System (two HOV lanes and 10 General Purpose lanes) from Trafalgar Road to James Snow Parkway by building to the outside of existing lanes;
- Widen Highway 401 from a 6-lane core to a 10-lane core (two HOV lanes and eight General Purpose lanes) from James Snow Parkway to Regional Road 25 by building to the outside of existing lanes;
- Replace bridges (“like-for-like”) along Highway 401 at Trafalgar Road, Sixth Line, Oakville Creek West, CNR and Regional Road 25. Any additional provisions, including future municipal road widening, sidewalks, etc., will be subject to municipal funding;
- Bridge widening at Fifth Line and Oakville Creek East to accommodate the long-term improvements;
- Replacement of the Trafalgar Road and Regional Road 25 bridges (to the west of the existing alignment), including improvements to ramp geometry at these interchanges;
- Modification of the James Snow Parkway ramp entrances and exits to and from Highway 401;
- Realignment of Sixth Line to minimize encroachment into the floodplain to the east;
- The carpool lot located at the northeast quadrant of the Highway 401 / Trafalgar Road interchange will be relocated (and expanded) to the northwest quadrant of the interchange. A northbound left turn lane will be provided to the carpool lot on northbound Trafalgar Road;

- Installation of storm sewers eastbound approximately from west of Fifth Line to the eastern project limit and westbound approximately from east of the James Snow Parkway interchange to the eastern project limit in the median between CD lanes;
- SWM ponds west of Sixth Line and west of Fifth Line and two new culverts crossing Highway 401 to convey highway drainage to the ponds;
- Relocation of the outfall structure in the northeast quadrant of the Highway 401 / Regional Road 25 interchange;
- Relocation and extension of one Highway 401 culvert at the James Snow Parkway interchange and creek realignment at one Middle Branch tributary (C-08);
- Extension of 16 culverts to accommodate the long-term widening of Highway 401 and interchange improvements;
- Realignment of about 250 m of Hornby Creek east of Sixth Line, if deemed necessary in detail design;
- High mast illumination with poles in the Highway 401 centreline median, standard illumination at each interchange and at carpool parking lots;
- Intelligent Transportation System installation, including Variable Message Sign(s), Closed Circuit Television Cameras and Vehicle Detector Stations in various locations;
- Maintain or provide ramp gates at all Highway 401 ramps within the study area;
- Replacement of traffic signals at ramp terminals: Trafalgar Road (Ramps E-NS and W-NS) and Regional Road 25 (Ramps E-NS and W-NS);
- Utility relocation including gas pipes, water pipes, Bell cables, sanitary sewer pipes, storm sewer pipes and underground electrical cables to accommodate the ultimate design;
- Installation of highway signage, including overhead signs; and
- Other minor improvements as required.

Prior to implementing the above noted long-term (2031) improvements, short-term improvements to this section of the Highway 401 corridor may be designed and implemented to satisfy the identified 2021 capacity and operational requirements. Configuration of short-term widening and staging of HOV lanes for Highway 401 will be determined during detail design if required. Short-term cross-section requirements for 2021 may include:

- Widen Highway 401 from a 6-lane core to a 10 lane core or a 10-lane CD System from Trafalgar Road to James Snow Parkway by building to the outside of existing lanes; and
- Widen Highway 401 from a 6-lane core to an 8-lane core from the James Snow Parkway to Regional Road 25 by building to the outside of existing lanes.

Figure 8-1: Summary of the Recommended Plan



9. ENVIRONMENTAL ISSUES, EFFECTS, MITIGATION MEASURES AND COMMITMENTS

This section focuses on the direct and indirect environmental (natural, socio-economic and cultural) effects, as well as transportation effects, associated with the project. It also describes the mitigation measures that will be implemented to avoid or minimize the potential effects associated with the Recommended Plan. Mitigation includes planning decisions, design features, construction requirements and construction constraints. The mitigation measures and commitments outlined in this report will be refined in greater detail as the detail design is developed and assessed in a subsequent phase of the project. Specific environmental controls based on these detailed mitigation measures will then be included in the contract documents to address specific environmental and operational concerns during the preparation of the contract documents in the detail design phase.

9.1. Natural Environment

9.1.1. Fisheries and Aquatic Habitat

The proposed works primarily related to the extension of existing culverts and bridges will have potential impacts on the watercourses including the following:

- The extension of the culverts will result in a decrease in exposed natural channel;
- Closed bottom culverts can result in decreasing groundwater input in the system;
- Culverts could potentially create migratory barriers to fish;
- Staging construction outside of timing window(s) could result in greater disturbance to critical life stages of resident fish populations;
- Straightening of a creek channel could result in the net loss of fish habitat;
- Removal of riparian vegetation could result in increased water temperatures and instability in channel banks;
- Construction activity can have potential negative impacts to Redside Dace, which can include; increased siltation, changes in stream channel structure and water clarity, increase in stream temperatures as a result in the removal of riparian vegetation, and roadside drainage could increase input of pollutants (MNR, 2005). Any Project activities within 30 m of a designated Redside Dace occupied reach will require a review to determine the need for approvals under Section 17 of the *Endangered Species Act* (ESA) and development of appropriate mitigation in consultation with MNR; and
- Widening of the highway may result in the required realignment of the unnamed tributary at Crossing C-1D and watercourse at Crossing C-11A, resulting in a net loss of fish habitat.

The proposed works scheduled within 30 m of drainage system that has been defined as providing direct or indirect fish habitat are provided in **Table 9-1**.

Table 9-1: Summary of Proposed Works for Watercourse Crossings

Crossing	Watercourse Related to Crossing	Eastbound			Westbound		
		Width (m)	Extension Length (m)	Area (m ²)	Width (m)	Extension Length (m)	Area (m ²)
C-19	West Branch	1.9	16.2	30.6	1.9	18	33.9
C-18	West Branch	1.1	18.7	20	1.1	14.3	15.3
C-17	West Branch	4.1	15.2	61.8	4.1	10.2	41.5
C-16	West Branch	3.6	0	0	3.6	0	0
C-15	West Branch	2.2	10.8	23.5	2.2	6.5	14.2
C-13	West Branch	2.2	5.8	12.5	2.2	6.9	14.9
C-12	West Branch	2.1	7.5	15.9	2.1	7.5	16.1
C-11	West Branch	2.9	3.7	10.9	2.9	4.8	14
C-09*	Lower Middle Branch	1.8	14.3	25.3	1.8	15.6	27.6
C-07	Middle Branch	3.6	25.4	90	3.6	23	81.6
B-03 (Bridge)	Middle Branch	23.3**	20.7	724	23.3*	20.7	724
Bridge replacement and extension							
B-02 (Bridge)	Middle East Branch	30.5	20.9	637.9	30.5	20.4	620.9
C-11A Adjacent to ROW	Middle East Branch	230 of channel realignment x 1.79 average wetted width (448 m ²)					
B-01 (Bridge)	East Branch	28.1	0	0	28.1	0	0
C-02	East Branch	12.6	24.7	310.1	12.6	24.6	308.8

* bridge replacement

** widened to 35 m

The proposed works planned for the Highway 401 improvements will result in variable levels of impact to fish habitat, however, through mitigation efforts, the impacts will be temporary and should result in minimal long-term negative effects. Recommended design considerations including general mitigation measures are as follows:

- All materials and equipment used shall be operated and stored in such a manner that prevents any deleterious substance from entering the water;
- Consider construction staging such that spills and leaks into the watercourse will be avoided or minimized;
- Apply standard Erosion and Sediment Control (ESC) measures (e.g., silt fence, silt curtain, sedimentation basins, etc.) consistent with Ontario Provincial Standards and Specifications (OPSS) to ensure no effects to the surface waters. The control measures shall be implemented prior to work and be maintained during construction and until disturbed areas have been effectively stabilized with permanent vegetation cover;

- All disturbed areas of the work site shall be stabilized and re-vegetated promptly, and/or treated with appropriate erosion protection materials. In riparian and aquatic habitats, all temporarily disturbed areas will be reinstated to original condition, or better, upon completion of works;
- Minimize the disturbance or removal of riparian vegetation (MNR, 2010);
- Any stockpiled materials shall be stored and stabilized away from the water;
- Opportunities for enhancing shading of the watercourse by planting native species in areas of overhanging / riparian vegetation loss will be examined during detail design;
- Construction timing considerations will be required for each of the crossings which entail inwater works or working within 30 m of the meander belt. The majority of the crossings are listed as warmwater Low sensitivity fish habitat, with the exception of drainage systems C-1D, C-11A, and crossings B-03 and B-02, which are listed as High sensitivity, and Crossings C-17, C-16, B-01 and B-02 which are listed as Moderate sensitivities;
- The warmwater systems require that all inwater construction will be completed from July 1 to March 31. To take advantage of typical dryer weather and lower water levels, opportunities to complete inwater work by October 31 will be considered; and
- The coldwater systems containing Brook Trout (High sensitivity) require a construction period from June 1 to September 30.

Hornby Creek Channel Realignment

- The watercourse at C-11A is classified as warmwater, however, the presence of young of the year rainbow trout suggest the watercourse should be managed for migratory salmonids and hence have a construction period of June 16 to March 14;
- The project works entail realignment of approximately 230 m of channel. The realignment works should follow the principles of natural channel design to be used during the detail design phase of the project;
- The channel realignment will be conducted in “the dry” and utilize standard ESC measures. Inwater works will follow the more restrictive warm and coldwater timing windows in order to minimize impacts to the fisheries. The realignment will result in a channel providing more stable banks and potential reduction in sedimentation, and hence net improvement at the site;
- Incorporate habitat diversity into the final design (i.e., bank diversity of plantings and substrate placement associated with any scour protection requirements);
- Crossings are designed to minimize loss of functional channel bed and maintain groundwater discharge (open footed culvert, spanning structure);
- Consider integrating deeper water habitat into any inlet or outlet treatments, and incorporate overhead cover into channel designs;
- Using appropriate techniques, capture any fish trapped within the construction area and release them downstream of the site;
- Maintenance measures are not to interfere with fish passage;

- Consider installing water treatment catchment basins at sources with potentially higher contaminants; and
- Review the option to direct highway drainage to the channel (following SWM treatment) to assist in periodic flow augmentation to downstream areas.

Preliminary investigations determine the potential impacts associated with the proposed works at each watercourse crossing site and assess these impacts to determine potential HADDs. Project works that will result in no residual effects are determined based on the preliminary Rationale for No HADD Decision criteria. Watercourse crossings that may potentially result in residual effects are further investigated following a Comprehensive Fisheries Assessment, using MTO methods termed “Pathways of Effects” (POE). Based on preliminary HADD determinations under the policies of the *Fisheries Act*, the proposed realignment of Hornby Creek (north of Highway 401 east of Sixth Line) is likely the only crossing within the study area that will require a DFO authorization. “No HADD / HADD” forms will be submitted to DFO during the detail design stage. A summary of the No HADD and HADD determinations for each of the watercourses which provide direct or indirect habitat are provided in **Table 9-2**.

Table 9-2: Summary of No HADD and HADD Determinations

Crossing	Not fish Habitat	Preliminary Decision	RMF Comprehensive Assessment	
		Potential No HADD	Potential No HADD	Potential HADD
C-14 (dry)	C-14 (dry)			
C-12	C-12			
C-10	C-10			
C-09	C-09			
C-08	C-08			
C-06	C-06			
C-03	C-03			
C-01	C-01			
B-01		B-01		
C-02		C-02		
C-19			C-19	
C-18			C-18	
C-17			C-17	
C-16			C-16	
C-1D (adjacent to ROW)			C-1D (adjacent to ROW)	
C-15			C-15	
C-13			C-13	
C-11			C-11	
C-07			C-07	
B-03			B-03	
B-02			B-02	
C-11A (adjacent to ROW)				C-11A (adjacent to ROW)

Redside Dace is known to occur in crossings within the study area. This species is protected as Endangered and federally as Schedule 3-Special Concern, and has habitat protection regulation under ESA. Refer to **Section 9.1.6** for the proposed mitigation measures for watercourse that are occupied reaches for Redside Dace.

9.1.2. Erosion and Sediment

Based on the erosion and sedimentation risk assessment undertaken, there are no major crossings or sedimentation, however, localized erosion along watercourse banks has been identified. Potential impacts to watercourses include short-term water quality deterioration. These impacts will be mitigated by employing standard approved techniques, including the following:

- Install temporary ESC measures (i.e., silt fences) prior to construction and maintain throughout construction, as required;
- Install flow checks and ground stabilization as necessary; and
- Routinely inspect ESC structures, including after storms, and repair as required.

9.1.3. Groundwater

There are several water supply wells within close proximity to the proposed Highway 401 ROW, particularly in the vicinity of Sixth Line, Fifth Line, James Snow Parkway and Regional Road 25. In addition, several areas of the study area have been identified as having a high potential susceptibility to groundwater contamination. These areas are associated with each of the branches (subwatersheds) of Sixteen Mile Creek.

The following mitigation measures will be considered to manage the potential impacts:

- Minimize the need for dewatering during construction, particularly in areas designated as having a high potential for groundwater impact;
- Conduct dewatering activities in accordance with approved control procedures;
- Minimize disturbance to existing vegetation and grassed slopes where re-grading is required (disturbed areas will be re-vegetated as quickly as possible after completion of construction activities);
- Prepare and implement a SWM plan and include spill prevention and control measures in the contract documents (to be determined in detail design);
- Protect water quality that may infiltrate groundwater resources; and
- Undertake an existing well monitoring program, including the monitoring of potentially affected wells by highway construction or blasting, prior to, during and after the construction / blasting activities (to be determined in detail design).

9.1.4. Drainage and Hydrology

The total increase in pavement area associated with the Recommended Plan is approximately 23.1 ha with an increase of 51% over the existing pavement area. The preliminary SWM

strategy was developed to meet water quality and quantity control criteria set by Conservation Halton, MTO, MOE, MNR and DFO, and included the following:

- Extension of 16 culverts and two bridges;
- The outfall structure for the existing SWM pond at the northeast quadrant of the Regional Road 25 interchange will have to be relocated to the north. This SWM pond is owned by the Town of Milton;
- SWM Practices, where required and feasible;
- Realignment of Hornby Creek along north side of embankment of Highway 401, east of Sixth Line, if the realignment is deemed necessary in detail design. Natural channel design (including a meander analysis) will be undertaken during detail design; and
- Realignment of a Middle Branch tributary at James Snow Parkway.

The location of the culverts and bridges are shown in the preliminary design plates (**Appendix C**).

Stormwater Management (SWM)

The proposed SWM strategy consists of two SWM wet pond facilities and utilizing flat bottom water quality ditches at all locations to provide quality and quantity control to runoff. The two SWM ponds along the Highway 401 (refer to **Figure 8-1 and Appendix C** for their location) will provide Enhanced Protection Level treatment to approximately 22 ha of the paved area, comprising of 16.4 ha of existing pavement area and 5.6 ha of new pavement area. This provides an opportunity to treat the excess existing pavement area and improve the existing conditions, and compensate for other areas within the study limits where stormwater quality objectives of Enhanced Protection Level treatment cannot be met. The remaining 17.4 ha of new pavement area will be treated by flat-bed and vegetative ditches / swales.

Flows from the newly proposed storm sewers are directed to the two SWM ponds for treatment. In other areas, the new storm sewers will outlet to a water quality ditch before outfall to a receiving watercourse for filtration and settlement of sediments.

9.1.5. Terrestrial Ecosystems

An assessment of the preliminary design indicates that the majority of the proposed works is within the existing Highway 401 ROW and requires minimal removal of woody vegetation. The majority of impacts are associated with ROW enlargements, in particular near the on-ramp and off-ramp improvements. Tree cutting and vegetation removal is more prominent in these areas. Potential general effects to vegetation and associated habitat that may occur during the construction period include:

- Release of construction-generated sediment to vegetation areas;
- Vegetation clearing / damage beyond the working area;
- Damage to off ROW vegetation from tree felling and/or grubbing; and
- Spills of contaminants, fuels and other materials that may reach natural areas.

Table 9-3 summarizes the potential impacts to the terrestrial ecosystems associated with the recommended plan. Details of these impacts are shown in **Appendix D**.

Table 9-3: Summary of Terrestrial Impacts

Section of Highway 401	Approximate Area (Ha)	Ecological Land Classification
East of Trafalgar Road to Sixth Line	0.03	Black Walnut Lowland Deciduous Forest
	0.008	Cattail Shallow Marsh
	0.032	Cultural Woodland
	0.11	Cultural Plantation / Hedgerow
Sixth Line to Fifth Line	0.67	Cultural Plantation / Hedgerow
	0.07	Old Field Meadow
	0.54	Black Walnut Lowland Deciduous Forest
Fifth Line to James Snow Parkway	0.11	Cultural Thicket
	0.75	Old Field Meadow
James Snow Parkway to West of Regional Road 25	0.022	Cultural Woodland
	0.25	Old Field Meadow
	0.14	Cultural Thicket

General management and mitigation measures are proposed to reduce direct and indirect effects associated with vegetation removal. The standard mitigation strategies for dealing with potential construction effects include the following:

- Re-stabilize and re-vegetate exposed surfaces as soon as possible, using vegetation seed mixes, where feasible, and plantings, where possible;
- Clearly delineate ROW vegetation clearing zones and vegetation retention zones on construction drawings and confirm in the field with the Contractor prior to clearing and grading. Equipment, materials and other construction activities will not be permitted in these zones;
- Conduct vegetation removal and protection measures in accordance with OPSS 201 (tree clearing) and OPSS 565 (tree protection). Vegetation that does not require removal for purposes of the construction will be protected through the installation and maintenance of temporary vegetation protection measures (e.g., temporary fencing);
- Wherever possible, wood chip material will be considered as part of any edge plantings to help retain soil moisture and prevent weed spread;
- Although there is little likelihood of wildlife encounters, in the event that wildlife encountered during construction does not move from the construction zone, the Contract Administrator will be notified;

- Implement environmental inspection during construction to make sure that protection measures are implemented, maintained and repaired and to make sure remedial measures are implemented where warranted;
- Landscaping will be considered to protect / enhance roadside vegetated areas. A landscaping plan will be developed during detail design, which will include consideration of snow hedge requirements;
- All migratory bird species and their nests are protected under the *Migratory Bird Convention Act* (MBCA 1994) and therefore, vegetation clearing efforts must be avoided during their breeding season (April 15 to July 15). The songbird breeding season extends from mid-May until late July (Cadman et al., 2007);
- Opportunities to undertake vegetation removal (including trees, shrubs and grasslands) in the late summer, fall and winter months will be considered to avoid disrupting any species during their nesting season (MBCA 1994; *Fish and Wildlife Coordination Act* 1997). If removal of vegetation must occur during the breeding season, a nest search of the area to be affected will be done to ensure that no birds or their nests are destroyed during construction;
- The Sixteen Mile Creek corridor is recognized as an important regional linkage for wildlife in the area in addition to providing connection between various ecological functions. Efforts will be made to identify and avoid / protect critical components of wildlife habitat (e.g., vernal pools, migration staging areas, etc.). Where this is not possible the loss of vegetation will be minimized, particularly in edge habitat, and will be re-vegetated with native species after construction where appropriate;
- The design of the Middle Branch of Sixteen Mile Creek bridge (B-03) is proposed to be substantially wider than the existing structure and therefore provides enhanced opportunities for wildlife passage;
- The Fresh-Moist Black Walnut Lowland Deciduous Forest area located immediately east of Sixth Line, is a provincially rare vegetation community. Potential project works involve impact on approximately 5,685 m² of this zone. Efforts will be made to relocate impacted Black Walnut trees where possible. A tree protection and restoration plan will be developed during detail design;
- Vegetation removal in the southeast quadrant of Highway 401 and Sixth Line might be required, if the realignment of Hornby Creek is deemed necessary in detail design. Relocation / realignment of the watercourse will be undertaken in a manner which minimizes the number of trees impacted in this area; and
- Appropriate ESC methods will be implemented prior to the removal of vegetation near any watercourse. The disturbance or removal of riparian vegetation will be minimized in order to maintain shading on the watercourse. Restoration plantings at watercourses will include appropriate native species.

9.1.6. Species at Risk

SAR that have been previously recorded within 10 km of the study area, that exhibit tolerance to human disturbance and have some level of suitable habitat available to them within the study

area have been identified as potential SAR for this Project, including Chimney Swift, Bobolink, Monarch Butterfly and Redside Dace:

- Chimney Swifts use chimneys in houses and other infrastructure for nesting. There are no plans to demolish buildings as part of Project activities, there are currently no anticipated effects to this Species at Risk (SAR).
- Bobolinks prefer grassland habitat and nest on the ground. Vegetation clearing will be kept outside of the breeding bird season (April 15 to July 15) to address these potential effects. All areas will be surveyed for nests prior to any vegetation clearing (including trees, shrubs and grasslands).
- Monarch Butterflies prefer open grasslands with abundant milkweed. It currently does not have habitat protection under Ontario's *Endangered Species Act* (ESA); however it is considered a specially protected invertebrate under the *Fish and Wildlife Coordination Act* (FWCA 1997) and efforts will be made to avoid any inadvertent injury to this species.
- The presence of Redside Dace and impacts to their habitat will be confirmed in consultation with MNR during detail design. The mitigation strategy to address impacts to Redside Dace will be consistent with the *Guidance for Development Activities in Redside Dace Protected Habitat* (February 2011). During detail design, additional consultation will be undertaken with MNR to develop the mitigation and watercourse enhancement strategy and to identify the need for ESA approvals.

9.2. Socio-Economic Environment

9.2.1. Property Impacts

Approximately 18.1 ha may be impacted and/or acquired to accommodate the Recommended Plan. The majority are small portions / slivers of property parcels.

Efforts have been made to minimize the properties required. MTO will negotiate the transfer of all necessary properties prior to or during detail design. Affected owners will be consulted when the plans are being finalized. Potentially impacted property owners were contacted as part of this study. Compensation will be based on the fair market value of the proposed required.

9.2.2. Waste Management and Contamination

Although the Contamination Overview Study did not reveal evidence of environmental site contamination within the study area, high potential for environmental site contamination was identified for 58 properties along the Highway 401 corridor given the industrial and commercial nature of the properties. Furthermore, following MTO's contaminated property process, a broad review of individual properties including a site visit and interview, and completion of Preliminary Site Screening Forms (PSSFs) is recommended (to be conducted in detail design).

Based on the industrial land use, it is expected that Phase I Environmental Site Assessments may be required for selected industrial and/or commercial properties (to be determined during detail design).

In addition, should any contaminated materials be encountered during the undertaking, caution will be exercised while handling and disposing of contaminated materials. Excess materials will be managed in accordance with standard MTO practices (as governed by OPSS 180).

9.2.3. Navigable Waters Protection Act

Transport Canada has determined that the provisions of the *Navigable Waters Protection Act* do not apply to this project and therefore an Approval is not required (refer to **Appendix A**).

9.2.4. Air Quality

The air quality assessment undertaken as part of this study examined criteria air contaminants (nitrogen dioxide, carbon monoxide and particulate matter) and key volatile organic compounds (benzene, 1, 3-Butadiene, formaldehyde, acetaldehyde and acrolein). The results of the analysis indicated that, for most contaminants, the predicted maximum emissions at sensitive receptors near Highway 401 are within applicable air quality thresholds. The exceptions are PM10 and benzene.

PM10

By 2031 PM10 levels are projected to exceed threshold levels (within approximately 100 m of the ROW by a small margin – $1\mu\text{g}/\text{m}^3$, 2% of the criterion) within close proximity to the Highway 401 ROW. Tree plantings can be beneficial in areas where there is risk of sensitive receptors being affected by PM10 concentrations above threshold levels. In order for the maximum benefits to be yielded from tree plantings, trees would have to reach a significant level of maturity, be planted as close as possible to the roadway, and would need to be more than a few rows deep. Opportunities for tree planting will be examined to reduce roadway particulate matter at nearby receptors in the detail design stage of this project.

Benzene

Background levels of benzene are slightly above MOE's criteria. The predicted increase in annual emissions associated with future traffic growth and the proposed highway improvements, is only 3% at the worst-affected receptor and 1% or less at most receptors.

9.2.4.1. Air Quality During Construction

Construction activities will involve heavy equipment that generates air pollutants and dust, however, these impacts are temporary in nature. The emissions are highly variable and difficult to predict, depending on the specific activities that are taking place and the effectiveness of the mitigation measures. The best manner to deal with these emissions is through the implementation of operating procedures such as application of dust suppressants, reduced travel speeds for heavy vehicles, efficient staging of activities and minimization of haul distances, covering stockpiles, etc. In order to minimize potential air quality impacts during construction, the contract package will include requirements for implementing best management practices for control of dust and other emissions.

9.2.5. Noise

9.2.5.1. Future Traffic Operation Noise

A total of nine Noise Sensitive Areas (NSAs) were identified to represent the study area, containing a total of approximately 180 dwelling units. A total of five NSAs within the study area were found to have receptors with noise impacts. Each NSA with impacted receptors was assessed for mitigation using MTO guidelines for feasibility. These impacts fall under two categories:

- The relative change in sound level at a given receptor of greater than or equal to five dBA over the predicted future ambient level.
- The absolute sound level at a given receptor of greater than or equal to 65 dBA for the predicted future with undertaking condition.

Table 9-4 contains a list of impacted NSAs and their impacted receptors, along with the recommendation for mitigation associated with the NSA. **Figures 9-1a** and **9-1b** show the locations of NSAs and receptors within the study area.

Figure 9-1a: Locations of NSAs and Receptors within Study Area

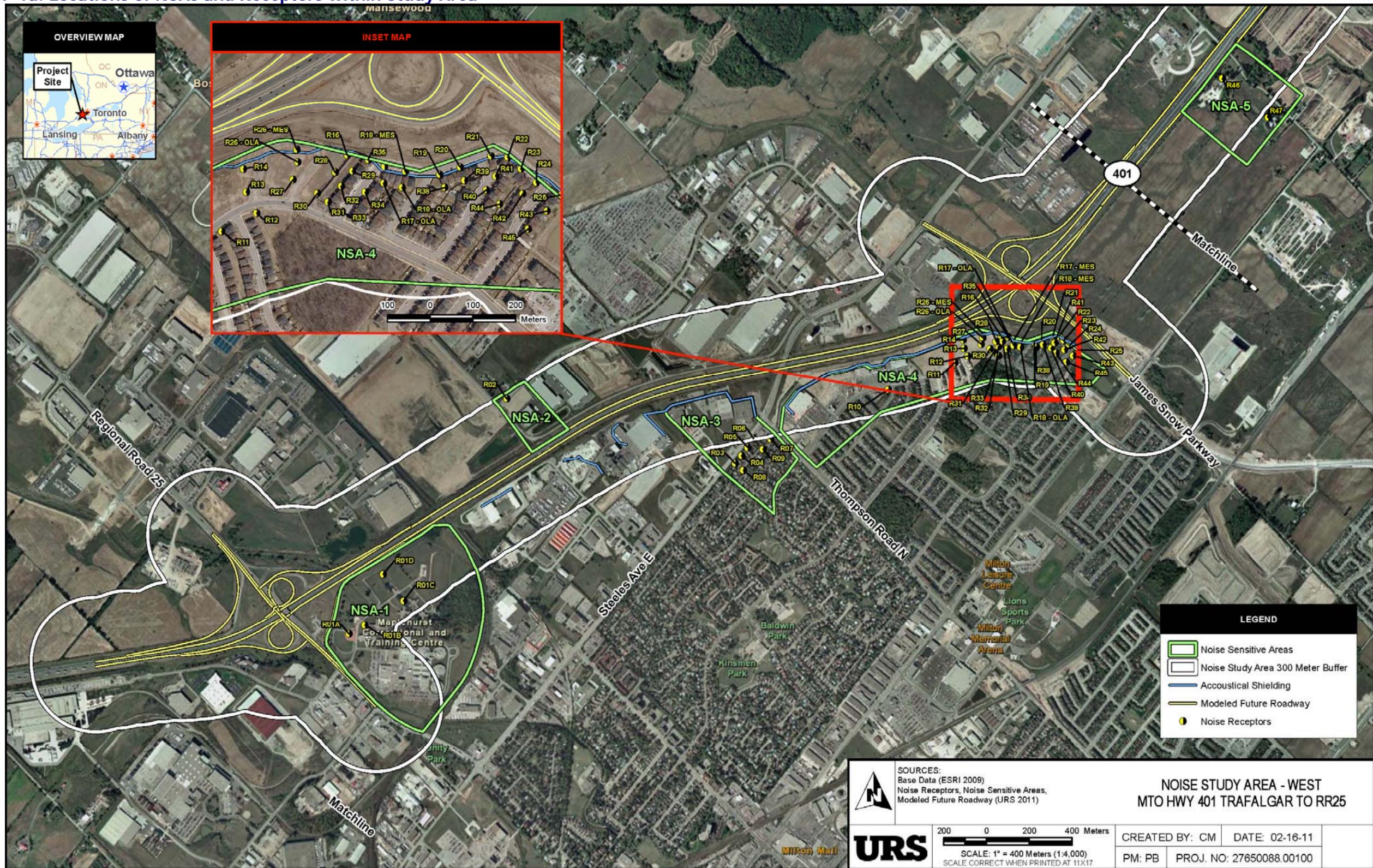


Figure 9-1b: Locations of NSAs and Receptors within Study Area

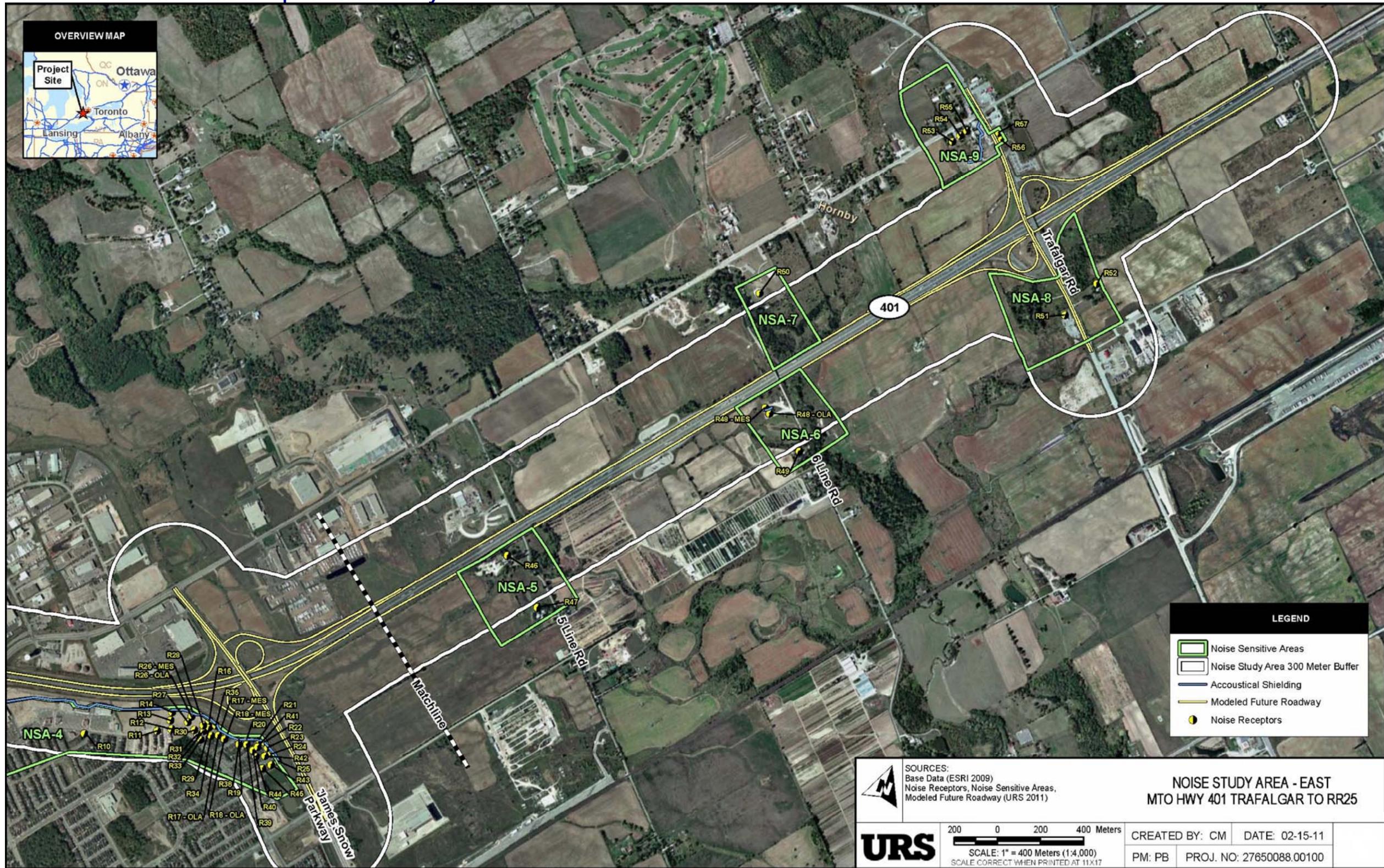


Table 9-4: Noise Impact and Mitigation Summary

NSA #	Impacted Receptors	Total Impacted Units	Impact Type	Mitigation Recommendation
1	R01A through R01D	0	Absolute (≥ 65 dBA)	None (Correctional Facility)
4	R17, R18, R26	12	Absolute (≥ 65 dBA)	None (No Impacts at OLAs)
6	R48	1	Absolute (≥ 65 dBA)	None (not technically feasible)
8	R51	1	Absolute (≥ 65 dBA)	None (not technically feasible)
9	R56, R57	2	Absolute (≥ 65 dBA)	None (not technically feasible)

NSA 1

This NSA represents the Maplehurst Correctional Facility at the southeast corner of the interchange at Highway 401 and Regional Road 25. Predicted noise levels for all of the receptor locations in this area are greater than or equal to 65 dBA for the future with undertaking condition and are therefore absolute impacts according to MTO policy. However, MTO policy does not require the consideration of mitigation for correctional facilities. Therefore, mitigation for NSA 1 is not recommended.

NSA 4

This NSA represents the residential neighbourhood of single-family homes south of Highway 401. The neighbourhood is bounded on the north by Highway 401 and Maple Avenue, on the northeast by James Snow Parkway, and on the southwest by Thompson Road. Homes within this NSA are part of residential subdivisions that have planned or existing noise walls in order to mitigate potential noise impacts. Three receptors experience sound levels greater than 65 dBA at the most exposed side of the dwelling unit, and are considered absolute impacts according to MTO policy. However, the Outdoor Living Area (OLA) representative locations for these receptors were below 65 dBA for the predicted future with undertaking condition. Therefore, mitigation for NSA 4 is not required or recommended.

NSA 6

This NSA represents a pair of single-family homes to the south of Highway 401 along Sixth Line. One receptor represents the northern residence in the area, and is considered an absolute impact under MTO policy at both the most exposed side of the dwelling as well as the OLA. A noise wall barrier was modeled at the MTO ROW and was unable to achieve the five dBA average mitigation required by the MTO policy to be considered technically feasible. Further, a barrier for a single impacted receptor approximately 100 m from the main noise source was not considered to be economically feasible even if the minimum noise reduction could be achieved. Therefore, mitigation for NSA 6 is not recommended.

NSA 8

This NSA represents a pair of single-family homes to the south of Highway 401 along Trafalgar Road. One receptor is considered an absolute impact under MTO policy. However, because the receptor is impacted under the future ambient condition and because it is primarily impacted by

future ambient traffic along Trafalgar Road, a noise barrier between the receptor and Highway 401 would not be technically feasible. Furthermore, a noise barrier erected along Trafalgar Road would prevent access to the dwelling. Therefore, mitigation at NSA 8 is not recommended.

NSA 9

This NSA represents a group of single-family homes and one church to the north of Highway 401 along Trafalgar Road. Two receptors are considered absolute impacts under MTO policy. However, because the receptors are impacted under the future ambient condition and because they are primarily impacted by future ambient traffic along Trafalgar Road, a noise barrier between the receptor and Highway 401 would not be technically feasible. Furthermore, a noise barrier erected along Trafalgar Road would prevent access to the dwelling units. Mitigation at NSA 9 is therefore not recommended.

9.2.5.2. Noise During Construction

In addition to traffic noise produced by the operation of vehicles on the proposed highway, noise during the construction phase of the study needs to be considered. Unlike operational traffic noise, construction noise is temporary, lasting from a few weeks to several months at any particular location, and is dependent upon the type of construction equipment and processes used, and the time of day that the construction will take place.

During construction, the Contractor will be required to abide by any municipal noise control by-laws, keep idling of construction equipment to a minimum, maintain equipment in good working order to reduce noise from construction activities and be available to address any concerns that may arise with respect to noise during construction. Furthermore, complaints will be investigated according to the provisions of the MTO *Environmental Guide for Noise (October 2006)*. Any initial complaint from the public requires verification by MTO that the general noise control measures agreed to are in effect. If not, MTO will advise the Contractor of any problems, and enforce its contract.

9.2.6. Utilities

All potentially affected utility companies (i.e. Bell, Cogeco Cable and Towns of Milton and Halton Hills) will be contacted to develop a utility relocation plan prior to construction during detail design. Furthermore, all utility relocations will be completed before construction of this project is initiated. If it is necessary to complete utility relocations during construction, the Contractor will be required to coordinate the timing of each operation to ensure that they are carried out independently. Special provisions will be included in the contract to address this, and to ensure that care and precautions are taken to safeguard existing utilities from damage.

9.3. Cultural Environment

9.3.1. Archaeological

Background research conducted by New Directions Archaeology Ltd. (2004) determined that archaeological sites have been registered in close proximity to the study corridor. Additionally, a review of the general physiography and local nineteenth century land uses of the study area suggests that the additional parcels in the 2009 proposed widening may exhibit archaeological site potential.

The field review completed on December 23, 2009 established that the study area has archaeological potential, undisturbed areas that have not yet undergone development or previously completed archaeological assessments, requiring the need for further archaeological investigations within the Highway 401 study corridor. The areas that have not yet undergone development or previously completed archaeological assessments require Stage 2 Archaeological Assessments because they have archaeological potential.

In light of these results, the following recommendations are made:

- Should the proposed improvements to Highway 401 result in the encroachment upon previously undisturbed lands determined to have archaeological site potential, a Stage 2 Archaeological Assessment will be conducted in accordance with the Ministry of Tourism, Culture and Sport's (MTCS) Draft Standards and Guidelines for Consultant Archaeologists (2009), prior to any land disturbing activities. The purpose of this work would be to identify and assess any archaeological remains that may be present.
- No additional archaeological assessment is required within the remainder of the study corridor, and those areas that do not exhibit archaeological site potential may be considered clear of further archaeological concern.
- No grading or other activities that may result in the destruction or disturbance of an archaeological site are permitted until notice of MTCS approval has been received.
- Should deeply buried archaeological remains be found during construction activities, the Heritage Operations Unit, MTCS will be notified immediately.

In the event that human remains are encountered during construction, the proponent will immediately contact both MTCS and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit, Ontario Ministry of Government Services, (416) 326-8392.

Documentation related to the archaeological assessment of this project will be curated by URS Canada until such time that arrangements for their ultimate transfer to Her Majesty the Queen in right of Ontario, or other public institution, can be made to the satisfaction of the project owner, MTCS, and any other legitimate interest groups.

9.3.2. Heritage Resources

Two BHF's were identified within the study area: the John Dolmage House and the Joseph Cunningham House.

John Dolmage House, 7548 Trafalgar Road

This property has substantial Architectural Significance and meets the criteria for Designation under Ontario Regulation 9/06 and is listed on the Milton Heritage Inventory. The edge of the property will be affected by the proposed widening and interchange improvements (no impacts to buildings). Impacts to the property include minor removal of trees and a portion of a vegetated hedgerow. During detail design a Heritage Impact Assessment (HIA) will be undertaken to assess the specific details of the impacts to this heritage resource and develop appropriate mitigation (i.e. replacement of vegetated hedgerows).

Joseph Cunningham House, 7622 Fifth Line Road

This property has substantial Architectural Significance, meets the criteria for Designation under Ontario Regulation 9/06 and is listed on the Milton Heritage Inventory. The north edge of the property will be affected by the proposed changes to the highway (no impacts to the buildings). Impacts to the property include the removal of a hedgerow of trees along the existing property line. During detail design a HIA will be undertaken to assess the specific details of the impacts to this heritage resource and develop appropriate mitigation (i.e. replacement of vegetated hedgerows).

9.4. Transportation

9.4.1. Traffic Disruption and Construction Staging

A construction staging plan will be developed during detail design. The opportunity to maintain one of Fifth Line or Sixth Line open during construction of these bridge works will be investigated during detail design in consultation with municipalities.

9.4.2. Trafalgar Carpool Parking Lot

The carpool parking lot located in the northeast quadrant of the Trafalgar Road interchange will be relocated (and expanded) to the northwest quadrant, including northbound left turn lane to the carpool lot. The need for and design details of transit provisions such as a bus loop or bus bay will be addressed during detail design in consultation with GO Transit.

9.4.3. Truck Inspection Stations

The recommended Highway 401 widening will significantly impact the truck inspection stations (the edge of pavement would be offset approx. 20.5 m). The introduction of a core-distributor system will make enforcement of the truck inspection station impractical. In addition, the expansion of the westbound truck inspection station is constrained by the adjacent Halton Hills

Hydro Transporter Station. As such, the truck inspection stations will need to be closed or relocated prior to construction. The closure / relocation of the truck inspection station will be subject of a separate future study.

9.4.4. Canadian National Railway (CNR)

The bridge along Highway 401 at the CNR crossing (east of Regional Road 25) requires replacement. Agreements regarding the proposed bridge design will be sought with CNR during detail design.

9.5. Summary of Environmental Effects, Mitigation and Commitments to Future Work

The proposed mitigation measures and commitments to future work to address specific concerns associated with the Recommended Plan are listed in **Table 9-5**.

Table 9-5: Summary of Environmental Concerns, Mitigating Measures and Commitments to Future Work

Legend	
DFO: Fisheries and Oceans Canada	MUN: Municipalities
MNR: Ministry of Natural Resources	RES / BUS: Area residents and/or businesses
MTO: Ministry of Transportation	UTIL: Utilities
CA: Conservation Authority	MTCS: Ministry of Tourism, Culture and Sport
MOE: Ministry of the Environment	CNR: Canadian National Railway

ID#	ENVIRONMENTAL CONCERN AND POTENTIAL IMPACT	CONCERNED AGENCIES	MITIGATION / COMMITMENT TO FUTURE WORK
1	<p>Fisheries and Aquatic Habitat</p> <p>(Bridge replacement / widening and culvert extensions for Lower Middle, Middle, Middle East and East Branches of Sixteen Mile Creek and associated tributaries, Hornby Creek realignment)</p>	<p>DFO MNR MTO CA</p>	<ul style="list-style-type: none"> All materials and equipment used shall be operated and stored in such a manner that prevents any deleterious substance from entering the water; Consider construction staging such that spills and leaks into the watercourse will be avoided or minimized; Apply standard Erosion and Sediment Control (ESC) measures (e.g., silt fence, silt curtain, sedimentation basins, etc.) consistent with Ontario Provincial Standards and Specifications (OPSS) to ensure no effects to the surface waters. The control measures shall be implemented prior to work and be maintained during construction and until disturbed areas have been effectively stabilized with permanent vegetation cover; All disturbed areas of the work site shall be stabilized and re-vegetated promptly, and/or treated with appropriate erosion protection materials. In riparian and aquatic habitats, all temporarily disturbed areas will be reinstated to original condition, or better, upon completion of works; Minimize the disturbance or removal of riparian vegetation (MNR, 2010); Any stockpiled materials shall be stored and stabilized away from the water; Opportunities for enhancing shading of the watercourse by planting native species in areas of overhanging / riparian vegetation loss will be examined during detail design; and Construction timing considerations will be required for each of the crossings which entail inwater works or working within 30 m of the meander belt. The majority of the crossings are listed as warmwater Low sensitivity fish habitat, with the exception of drainage systems C-1D, C-11A, and crossings B-03 and B-02, which are listed as High sensitivity, and Crossings C-17, C-16, B-01 and B-02 which are listed as Moderate sensitivities. <ul style="list-style-type: none"> The warmwater systems require that all inwater construction will be completed from July 1 to March 31. To take advantage of typical dryer weather and lower water levels, opportunities to complete these works by October 31 will be examined. The coldwater systems containing Brook Trout (High sensitivity) require a construction period from June 1 to September 30. <p><i>Hornby Creek Channel Realignment</i></p> <ul style="list-style-type: none"> The watercourse at C-11A is classified as warmwater, however, the presence of young of the year rainbow trout suggest the watercourse should be managed for migratory salmonids and hence have a construction period of June 16 to March 14; The project works entail realignment of approximately 230 m of channel. The realignment works will follow the principles of natural channel design to be used during the detail design phase of the project; The channel realignment will be conducted in “the dry” and utilize standard ESC measures. Inwater works will follow the more restrictive warm and coldwater timing windows in order to minimize impacts to the fisheries. The realignment will result in a channel providing more stable banks and potential reduction in sedimentation, and hence net improvement at the site; Incorporate habitat diversity into the final design (i.e., bank diversity of plantings and substrate placement associated with any scour protection requirements); Crossings are designed to minimize loss of functional channel bed and maintain groundwater discharge (open footed culvert, spanning structure); Consider integrating deeper water habitat into any inlet or outlet treatments, and incorporate overhead cover into channel designs; Using appropriate techniques, capture any fish trapped within the construction area and release them downstream of the site; Maintenance measures are not to interfere with fish passage; Consider installing water treatment catchment basins at sources with potentially higher contaminants; and Review the option to direct highway drainage to the channel (following SWM treatment) to assist in periodic flow augmentation to downstream areas. The proposed realignment of Hornby Creek may require a DFO authorization. No HADD / HADD forms will be submitted to DFO during the detail design stage of this project.
2	<p>Erosion and Sediment</p> <p>(Potential impacts to watercourses)</p>	<p>MOE MNR</p>	<p>Impacts will be mitigated by employing standard approved techniques, including the following:</p> <ul style="list-style-type: none"> Install temporary Erosion and Sediment Control (ESC) measures (i.e. silt fences) prior to construction and maintain throughout construction, as required;

ID#	ENVIRONMENTAL CONCERN AND POTENTIAL IMPACT	CONCERNED AGENCIES	MITIGATION / COMMITMENT TO FUTURE WORK
	include short-term water quality deterioration)	MTO MUN	<ul style="list-style-type: none"> • Install flow checks and ground stabilization as necessary; and • Routinely inspect ESC structures, including after storms, and repair as required.
3	Groundwater	MOE MNR MTO MUN	<ul style="list-style-type: none"> • Minimize the need for dewatering during construction, particularly in areas designated as having a high potential for groundwater impact; • Conduct dewatering activities in accordance with approved control procedures; • Minimize disturbance to existing vegetation and grassed slopes where re-grading is required (disturbed areas should be re-vegetated as quickly as possible after completion of construction activities); • Prepare and implement a SWM plan and include spill prevention and control measures in the contract documents (to be determined in detail design); and • Undertake an existing well monitoring program, including the monitoring of potentially affected wells by highway construction or blasting, prior to, during and after the construction / blasting activities (to be determined in detail design).
4	Drainage and Hydrology	MNR MTO CA MUN	<ul style="list-style-type: none"> • Install smooth transitions at the upstream entrance and downstream of culverts; • During the detail design stage of this project, opportunities for minimizing the lengthening of culverts (i.e. C-09, C-10, C-13 and C-18) by stabilizing the existing slopes and installing retaining and head walls and stabilized steeper slopes will be explored where applicable; • A fluvial geomorphological assessment will be completed at the detail design stage of this project for realignment of Hornby Creek, if it is deemed necessary in detail design; • During subsequent design phases, SWM facilities will be designed to provide quality and quantity treatment to the extent possible; and • A hydrologic and hydrogeological assessment will be undertaken at the detail design stage of this project to evaluate any potential impact of SWM Pond 02 (south of Highway 401, west of Fifth Line) on the adjacent wetland feature located to the south.
5	Terrestrial Ecosystems (Removal of edge vegetation within forest communities and ornamental vegetation / hedgerows)	MNR MTO MUN CA	<ul style="list-style-type: none"> • Re-stabilize and re-vegetate exposed surfaces as soon as possible, using vegetation seed mixes, where feasible, and plantings, where possible; • Clearly delineate Right-of-Way (ROW) vegetation clearing zones and vegetation retention zones on construction drawings and confirm in the field with the Contractor prior to clearing and grading. Equipment, materials and other construction activities will not be permitted in these zones; • Conduct vegetation removal and protection measures in accordance with OPSS 201 (tree clearing) and OPSS 565 (tree protection). Vegetation that does not require removal for purposes of the construction will be protected through the installation and maintenance of temporary vegetation protection measures (e.g. temporary fencing); • Cut and grubbed material may be disposed of through chipping. Wherever possible, wood chip material will be considered as part of any edge plantings to help retain soil moisture and prevent weed spread; • Although there is little likelihood of wildlife encounters, in the event that wildlife encountered during construction does not move from the construction zone, the Contract Administrator will be notified; • Implement environmental inspection during construction to make sure that protection measures are implemented, maintained and repaired and to make sure remedial measures are implemented where warranted; • Landscaping will be considered to protect / enhance roadside vegetated areas. A landscaping plan will be developed during detail design, which will include consideration of snow hedge requirements; • All migratory bird species and their nests are protected under the Migratory Bird Convention Act (MBCA 1994) and therefore, vegetation clearing efforts must be avoided during their breeding season (April 15 to July 15). The songbird breeding season extends from mid-May until late July (Cadman et al., 2007); • Opportunities to undertake vegetation removal (including trees, shrubs and grasslands) in the late summer, fall and winter months will be considered in the late summer, fall and winter months to avoid disrupting any species during their nesting season (MBCA 1994; <i>Fish and Wildlife Coordination Act</i> 1997). If removal of vegetation must occur during the breeding season, a nest search of the area to be affected will be done to ensure that no birds or their nests are destroyed during construction; • The Sixteen Mile Creek corridor is recognized as an important regional linkage for wildlife in the area in addition to providing connection between various ecological functions. Efforts will be made to identify and avoid / protect critical components of wildlife habitat (e.g., vernal pools, migration staging areas, etc.). Where this is not possible the loss of vegetation will be minimized, particularly in edge habitat, and will be re-vegetated with native species after construction where appropriate; • The Fresh-Moist Black Walnut Lowland Deciduous Forest area located immediately east of Sixth Line, is a provincially rare vegetation community. Potential project works involve impact on approximately 5,685 m² of this zone. Efforts will be made to relocate impacted Black Walnut trees where possible. A tree protection and restoration plan will be developed during detail design. Relocation / realignment of the watercourse will be undertaken in a manner which minimizes the number of trees impacted in this area; and • Appropriate ESC methods will be implemented prior to the removal of vegetation near any watercourse. The disturbance or removal of riparian vegetation will be minimized in order to maintain shading on the watercourse and restoration plantings will include appropriate native species.

ID#	ENVIRONMENTAL CONCERN AND POTENTIAL IMPACT	CONCERNED AGENCIES	MITIGATION / COMMITMENT TO FUTURE WORK
6	Species at Risk	MTO MNR CA	<ul style="list-style-type: none"> Chimney Swifts use chimneys in houses and other infrastructure for nesting. There are no plans to demolish buildings as part of Project activities; there are currently no anticipated effects to this Species at Risk (SAR); Bobolinks prefer grassland habitat and nest on the ground. Vegetation clearing will be kept outside of the breeding bird season (April 15 to July 15) to address these potential effects. All areas will be surveyed for nests prior to any vegetation clearing (including trees, shrubs and grasslands); Monarch Butterflies prefer open grasslands with abundant milkweed. It currently does not have habitat protection under Ontario's ESA; however it is considered a specially protected invertebrate under the FWCA 1997 and efforts will be made to avoid any inadvertent injury to this species; The presence of Redside Dace and impacts to their habitat will be confirmed in consultation with MNR during detail design. The mitigation strategy to address impacts to Redside Dace will be consistent with the Guidance for Development Activities in Redside Dace Protected Habitat (February 2011) or other guidance as provided by MNR. During detail design, additional consultation will be undertaken with MNR to develop the mitigation and watercourse enhancement strategy and to identify the need for ESA approvals
7	Property Impacts	MTO Impacted Property Owners MUN	<ul style="list-style-type: none"> Efforts have been made to minimize property requirements. MTO will negotiate the transfer of all necessary properties prior to or during detail design. Affected owners will be consulted when the plans are being finalized. Compensation will be based on fair market value of properties required.
8	Waste Management and Contamination	MTO MOE	<ul style="list-style-type: none"> Following MTO's contaminated property process, a broad review of individual properties including a site visit and interview, and completion of Preliminary Site Screening Forms (PSSFs) is recommended (to be conducted in detail design); Based on the industrial land use, it is expected that Phase I Environmental Site Assessments will be required for selected industrial and/or commercial properties (to be determined during detail design). The need to conduct Phase II ESAs will be identified at that time; and In addition, should any contaminated materials be encountered during the undertaking, caution will be exercised while handling and disposing of contaminated materials. Excess materials will be managed in accordance with standard MTO practices (as governed by OPSS 180).
9	Air Quality	MTO MOE RES / BUS	<ul style="list-style-type: none"> Opportunities for tree planting will be examined to reduce roadway particulate matter at nearby receptors during the detail design stage of this project. Construction related emissions will be addressed is through diligent implementation of best management practices for operating procedures such as application of dust suppressants, reduced travel speeds for heavy vehicles, efficient staging of activities and minimization of haul distances, covering stockpiles, etc.
10	Noise During Construction	MTO MOE RES / BUS	<p>During construction, the Contractor will be required to:</p> <ul style="list-style-type: none"> Abide by any municipal noise control by-laws; Keep idling of construction equipment to a minimum; Maintain equipment in good working order to reduce noise from construction activities; and Be available to address any concerns that may arise with respect to noise during construction. <p>Furthermore, complaints will be investigated according to the provisions of the MTO Environmental Guide for Noise (October 2006). Any initial complaint from the public requires verification by MTO that the general noise control measures agreed to are in effect. If not, MTO will advise the Contractor of any problems, and enforce its contract.</p>
11	Sidewalks and Bicycle Lanes on Structures	MTO MUN	<ul style="list-style-type: none"> MTO will explore municipal requests for construction of sidewalks and bicycle lanes on selected structures (subject to municipal funding) during detail design.
12	Utilities	MTO UTIL	<ul style="list-style-type: none"> All potentially affected utility companies will be contacted to develop a utility relocation plan prior to construction during detail design. Furthermore, all utility relocations will be completed before construction of this project is initiated. If it is necessary to complete utility relocations during construction, the Contractor will be required to coordinate the timing of each operation to ensure that they are carried out independently. Special provisions will be included in the contract to address this, and to ensure that care and precautions are taken to safeguard existing utilities from damage.
13	Archaeological	MTO MTCS	<ul style="list-style-type: none"> Should the proposed improvements to Highway 401 result in the encroachment upon previously undisturbed lands determined to have archaeological site potential, a Stage 2 Archaeological Assessment will be conducted in accordance with MTCS' Standards and Guidelines for Consultant Archaeologists (2011), prior to any land disturbing activities; No grading or other activities that may result in the destruction or disturbance of an archaeological site are permitted until notice of MTCS approval has been received; Should deeply buried archaeological remains be found during construction activities, the Heritage Operations Unit, MTCS will be notified immediately; and In the event that human remains are encountered during construction, the proponent will immediately contact both MTCS and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit, Ministry of Government Services, (416) 326-8392. The appropriate Police Services will also be advised of any discoveries.
14	Heritage Resources	MTO	<ul style="list-style-type: none"> During detail design a Heritage Impact Assessment (HIA) will be undertaken for two heritage properties impacted by the proposed highway improvements

ID#	ENVIRONMENTAL CONCERN AND POTENTIAL IMPACT	CONCERNED AGENCIES	MITIGATION / COMMITMENT TO FUTURE WORK
		MTCS MUN	(John Dolmage House, 7548 Trafalgar Road and Joseph Cunningham House, 7622 Fifth Line Road) to assess the specific details of the impacts to these heritage resources and develop appropriate mitigation (i.e. replacement of vegetated hedgerows).
15	Aboriginal Community Consultation	MTO Aboriginal Communities	<ul style="list-style-type: none"> Continued consultation and interaction with identified Aboriginal Communities during detail design.
16	Traffic Disruption and Construction Staging	MUN MTO	<ul style="list-style-type: none"> A construction staging plan will be developed during detail design; and The opportunity to maintain one of Fifth Line or Sixth Line open during construction of these bridge works will be investigated during detail design in consultation with municipalities.
17	CNR (bridge replacement)	MTO CNR	<ul style="list-style-type: none"> Agreements regarding the proposed bridge design will be sought with CNR during detail design.

9.6. Monitoring

9.6.1. Project Specific Monitoring

During construction, MTO or its agent will ensure that the implementation of the mitigation measures and key design features are consistent with the contract. In addition, MTO or its agent will assess the effectiveness of its environmental mitigation measures to ensure the following:

- Individual mitigation measures are providing the expected control and/or protection;
- Composite control and/or protection provided by mitigation measure is adequate;
- Additional mitigation measures are provided as required for any unanticipated environmental conditions which may develop during construction; and
- Information is available for the overview assessment of mitigation measures.

Environmental monitoring, after a project is completed, may involve follow-up monitoring of significant measures and/or significant concerns.

9.6.2. Project Specific Class EA Monitoring

During the planning and design stage, MTO or its agent ensures compliance with the Class EA process before MTO or its agent issues an “environmental clearance” for project implementation.

During construction, MTO or its agent ensures that external notification and consultations are consistent with any commitments that may have been made earlier. Following construction, monitoring will ensure that any follow-up information is provided to external agencies as per any outstanding environmental commitments.

9.6.3. Implementation of Environmental Monitoring Framework

Construction is subject daily to general on-site inspection to ensure the execution of the environmental component of the work and to deal with environmental problems that develop during construction. This is the primary method for compliance monitoring. Inspection by Construction Administration staff will occur during construction and will be part of commitments during detail design.

Construction projects with mitigation measures / concerns are subject to periodic site visits by Construction Administration environmental staff. The timing and frequency of such site visits are determined by the schedule of construction operations, the sensitivity of environmental concerns and the development of any unforeseen environmental problems during construction. MTO staff will be available should difficulties arise.

APPENDIX A

Correspondence and Minutes of Meetings

ONTARIO GOVERNMENT NOTICE

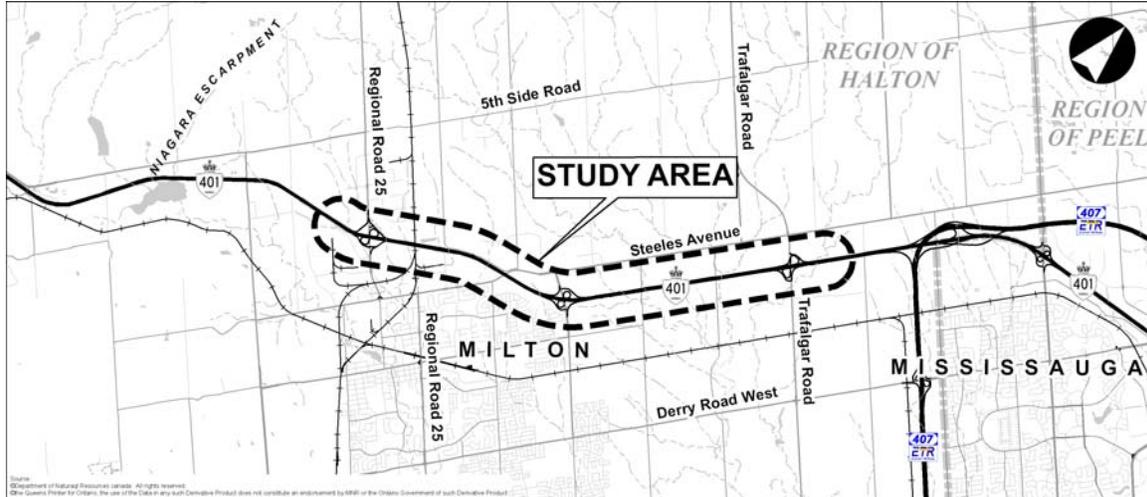
NOTICE OF STUDY COMMENCEMENT

HIGHWAY 401 IMPROVEMENTS

FROM TRAFALGAR ROAD TO REGIONAL ROAD 25
WO. 07-20024

THE STUDY:

URS Canada Inc. has been retained by the Ontario Ministry of Transportation (MTO) to undertake Preliminary Design and Class Environmental Assessment for the widening and improvements to Highway 401 from Trafalgar Road to Regional Road 25 (9km) in the Town of Milton, Halton Region.



The purpose of this study is to identify interim and ultimate widening requirements for Highway 401 and to consider incorporation of initiatives that promote transit and car-pooling, such as high occupancy vehicle (HOV) lanes and commuter parking lots. Reconstruction of interchanges at Trafalgar Road, James Snow Parkway, and Regional Road 25, as well as structural, illumination and drainage improvements will also be investigated as part of this study.

THE PROCESS:

This study will follow the approved environmental planning process for Group "B" projects under the *Class Environmental Assessment for Provincial Transportation Facilities* (2000), with the opportunity for public input throughout the study. Upon completion of the study, a Transportation Environmental Study Report (TESR) will be completed and made available for a 30 day public review period. The TESR public review period will be announced in this newspaper.

Public Consultation

Two Public Information Centres (PICs) will be arranged for the public to discuss the project and provide input to the project team. The first PIC will provide the opportunity to review and comment on existing environmental and transportation conditions, the identified problems and opportunities, the alternatives to be considered and the criteria proposed to evaluate alternatives. The second PIC will present the evaluation of alternatives and the preliminary design of the preferred alternatives, potential refinements to the design and proposed measures to minimize potential environmental and community impacts.

Notification, advertising the time and location of the PICs, will be published in this newspaper.

COMMENTS:

We are interested in hearing any comments you have about this study. Comments and information regarding this project are being collected to assist the Ministry of Transportation in meeting the requirements of the Environmental Assessment Act. This material will be maintained on file for use during the project and may be included in project documentation. Information collected will be used in accordance with the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.

For further information, or to be added to the mailing list, please contact:

<p>Mr. Tim Sorochinsky, P.Eng. Project Manager URS Canada Inc. 75 Commerce Valley Drive East, Markham, Ontario, L3T 7N9 Tel: (905) 882-4401 ext. 522 Fax: (905) 882-4399 e-mail: tim_sorochinsky@urscorp.com</p>	<p>Olga Garces, P. Eng. Project Manager Ontario Ministry of Transportation, Central Region Bldg 'D', 4th Flr. 1201 Wilson Ave Downsview ON, M3M1J8 Tel: (416) 235-4952 Fax: (416) 235-3576 e-mail: Olga.Garces@ontario.ca</p>	<p>Mr. Tyler Drygas Senior Environmental Planner URS Canada Inc. 75 Commerce Valley Drive East, Markham, Ontario, L3T 7N9 Tel: (905) 882-4401 ext. 147 Fax: (905) 882-4399 e-mail: tyler_drygas@urscorp.com</p>
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**Ministry of
Transportation**

Highway Engineering –
Peel & Halton
Central Region

4th Floor, Bldg. D
1201 Wilson Avenue
Downsview, ON M3M 1J8
Tel.: 416-235-4952
Fax: 416-235-3576

ABORIGINAL COMMUNITY LETTER

**Ministère des
Transports**

Génie Routier –
Peel et Halton
Région du Centre

4e étage, édifice D
1201, avenue Wilson
Downsview, ON M3M 1J8
Tél.: 416-235-4952
Télééc.: 416-235-3576



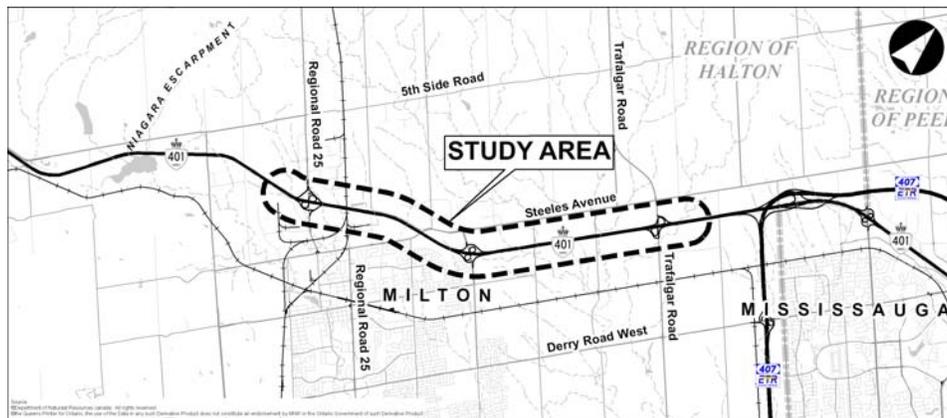
January 18, 2010

«Contact»
«First_Nation_CommunityContact»
«Address»

Dear «Contact»:

**RE: Notice of Study Commencement
Highway 401 Improvements from Trafalgar Road to Regional Road 25
Town of Milton, Town of Halton Hills, Halton Region
W.O. 07-20024**

The Ontario Ministry of Transportation (MTO) has retained URS Canada, Inc. to undertake the Preliminary Design and Class Environmental Assessment for the widening and improvements to Highway 401 from Trafalgar Road to Regional Road 25 (9 km) in the Town of Milton, Halton Region.



The purpose of this study is to identify interim and ultimate widening requirements for Highway 401 and to consider incorporation of initiatives that promote transit and car-pooling. Reconstruction of interchanges at Trafalgar Road, James Snow Parkway, and Regional Road 25, as well as structural, illumination and drainage improvements will also be investigated as part of this study.

The purpose of this letter is to notify you of project start-up and inquire if your community has an interest in this study. We would also ask that you please confirm who will act as the main contact for your community. This individual's name will be added to our project mailing list, and as such, will be notified of key project milestones. We also welcome the opportunity to meet with you to discuss this project.

ABORIGINAL COMMUNITY LETTER

As part of this study, a Stage 1 Archaeological Assessment will be undertaken, and an inventory of built heritage and cultural landscapes within the study area will be completed to inform the planning process for the examination of alternatives and to help to identify potential impacts. A Stage 1 Archaeological Assessment Report will be prepared to document the results of all background research and fieldwork, and will contain all necessary photographic and cartographic documentation, including recommendations for Stage 2 work, should it be required. A Built Heritage and Cultural Landscapes Summary Report will also be prepared to document the survey findings, potential impacts of the various alternatives developed, and recommendations for further assessment, should it be required.

The Project Team will also be conducting a natural sciences review of the study area. Background information relating to natural heritage features will be collected to characterize the vegetation communities, fish and fish habitat, as well as wildlife and wildlife habitat. Aquatic and Terrestrial Ecosystems Reports will be prepared to support the examination of alternatives.

This study will follow the approved environmental planning process for Group “B” projects under the *Class Environmental Assessment for Provincial Facilities* (2000), with the opportunity for public input throughout the study. Upon completion of the study, a Transportation Environmental Report (TESR) will be completed and made available for a 30 day public review period. The TESR public review period will be announced in local newspapers.

Two Public Information Centres (PICs) will be arranged for the public to discuss the project and provide input to the project team. The first PIC will provide the opportunity to review and comment on existing environmental and transportation conditions, the identified problems and opportunities, the alternatives to be considered and the criteria proposed to evaluate alternatives. The second PIC will present evaluation of alternatives and the preliminary design of the preferred alternatives, potential refinements to the design and proposed measures to minimize potential environmental and community impacts. You will be notified in advance to inform you of the time and location of the PICs, which will be published in local newspapers. If you cannot attend the PICs, written, email, or telephone comments are welcomed at any time.

We are interested in hearing any comments you have about this study and any potential impacts to the features of interest to your community. Your input will be addressed as the study progresses and will be maintained on file for use during the project and may be included in project documentation. Information collected will be used in accordance with the Freedom of Information and Projection of Privacy Act. With the exception of personal information, all comments will become part of the public record.

Thank you for your cooperation and assistance.

Yours truly,

Rebecca Li, P. Eng.
MTO Project Manager

cc. T. Sorochinsky - URS Project Manager
T. Drygas - URS Environmental Planner
S. Merriam - MTO Environmental Planner

Encl.



HIGHWAY 401 IMPROVEMENTS
TRAFALGAR ROAD TO REGIONAL ROAD 25
TOWN OF MILTON, TOWN OF HALTON HILLS, HALTON REGION
W.O. 07-20024



CONTACT INFORMATION FORM

PLEASE FAX BACK BY FEBRUARY 26TH TO: (905) 882-4399

1.) Does your organization wish to participate in this study and continue to receive notices of project activities and information as this study progresses? Yes No

2.) If your organization wishes to participate in this study, please specify who will act as the Project Team's contact.

NAME: _____

TITLE: _____

DEPARTMENT: _____

ORGANIZATION: _____

MAILING ADDRESS: _____

PHONE NUMBER: _____

FAX: _____

E-MAIL ADDRESS: _____

3.) Please indicate if the above noted project will affect the delivery of your organization's programs or services, and/or any other relevant information in this regard.

Your information and comments will be kept on file for use during the study. Please submit this form to:

Submitted By: _____

Rebecca Li, P. Eng.
Project Manager
Ministry of Transportation
4th Floor, Bldg. D, 1201 Wilson Avenue
Downsview, ON M3M 1J8
Fax: (416) 235-3576
Email: rebecca.li@ontario.ca



EXTERNAL LETTER

January 18, 2010

«Contact_Name»

«Organization»

«Address»

Dear «Greeting»:

**RE: Highway 401 Improvements from Trafalgar Road to Regional Road 25
Town of Milton, Town of Halton Hills, Halton Region
W.O. 07-20024**

URS Canada Inc. has been retained by the Ontario Ministry of Transportation (MTO) to undertake the Preliminary Design and Class Environmental Assessment for the widening and improvements to Highway 401 from Trafalgar Road to Regional Road 25 (9km) in the Town of Milton and Town of Halton Hills, Halton Region.

The purpose of this study is to identify interim and ultimate widening requirements for Highway 401 and to consider incorporation of initiatives that promote transit and car-pooling. Reconstruction of interchanges at Trafalgar Road, James Snow Parkway, and Regional Road 25, as well as structural, illumination and drainage improvements will also be investigated as part of this study.

This study will follow the approved environmental planning process for Group “B” project under the *Class Environmental Assessment for Provincial Transportation Facilities* (2000), with the opportunity for public input throughout the study. Upon completion of the study, a Transportation Environmental Study Report (TESR) will be completed and made available for a 30 day public review period.

Two Public Information Centres (PICs) will be arranged for the public to discuss the project and provide input to the project team. The first PIC will provide the opportunity to review and comment on the existing environmental and transportation conditions, the identified problems and opportunities, the alternatives to be considered and the criteria proposed to evaluate the alternatives. The second PIC will present the evaluation of alternatives and the preliminary design of the preferred alternatives, potential refinements to the design and proposed measures to minimize potential environmental and community impacts. Notification, advertising the time and location of the PICs and the availability of the TERS will be published in Milton Canadian Champion and Globe and Mail.

The purpose of this letter is to notify your office of the start-up of the project. On the attached *Stakeholder Contact Information Form*, please indicate whether your organization has an interest

URS Canada Inc.
75 Commerce Valley Drive East
Markham, ON Canada L3T 7N9
Tel: 905.882.4401
Fax: 905.882.4399
www.urs.ca

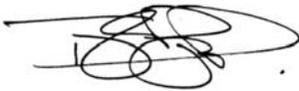
in this project and who will act as your agency's contact for this project. In order to assist us with our planning process, would you also please indicate if the above noted project will affect the delivery of your organization's programs or services.

A **reply by February 26, 2010** would be appreciated. Should you require further information regarding this request, please feel free to contact the undersigned at 905-882-4401 ext.147.

Thank you for your cooperation and assistance.

Yours truly,

URS Canada Inc.



Tyler Drygas
Senior Environmental Planner

cc. T. Sorochinsky - URS Project Manager
R. Li - MTO Project Manager
S. Merriam - MTO Environmental Planner

Encl.



January 27, 2011

Donna Patterson, Information Management Supervisor
Navigable Waters Protection, Transport Canada
100 Front Street South, 2nd Floor
Sarnia, ON
N7T 2M4

Dear Ms. Patterson:

RE: **Highway 401 Improvements from Trafalgar Road to Regional Road 25
Town of Milton, Town of Halton Hills, Region of Halton
W.O. 07-20024**

URS Canada Inc. has been retained by the Ontario Ministry of Transportation (MTO) to undertake a Preliminary Design and Class Environmental Assessment Study for improvements to Highway 401 from Trafalgar Road to Regional Road 25 (9 km) in the Towns of Milton and Halton Hills, Region of Halton.

The purpose of this study is to identify the interim and ultimate capacity and operational needs for this section of the Highway 401 corridor and to consider incorporation of initiatives, such as high occupancy vehicle (HOV) lanes and commuter parking lots. Possible improvements that will be investigated as part of this study include structural, illumination, drainage and interchange modifications.

This study will follow the approved environmental planning process for Group "B" projects under the *Class Environmental Assessment for Provincial Transportation Facilities (2000)*. A Transportation Environmental Study Report (TESR) will be prepared and made available for a 30-day public review period at the completion of the study.

Three (3) major tributaries of the Sixteen Mile Creek are located within the limits of the proposed study area. To provide area context, several photos of the study area and a key map have been enclosed with this letter. **To assist our planning process, we kindly request Transport Canada to confirm the navigability and the associated navigable clearance requirements for the following watercourses:**

- **Middle Branch of the Sixteen Mile Creek (Crossing C9, at Fifth Line);**
- **Middle East Branch of the Sixteen Mile Creek (Crossing C11, at Sixth Line); and**
- **East Branch of the Sixteen Mile Creek (Crossings C12 and C13, at Trafalgar Road).**

A reply by **February 27, 2011** would be appreciated.

If you require further information regarding this study, please feel free to contact me at 905-882-4401 ext. 147.

URS Canada Inc.
75 Commerce Valley Drive East
Markham, ON Canada L3T 7N9
Tel: 905.882.4401
Fax: 905.882.4399
www.urs.ca

Thank you for your cooperation and assistance.

Yours truly,
URS Canada Inc.

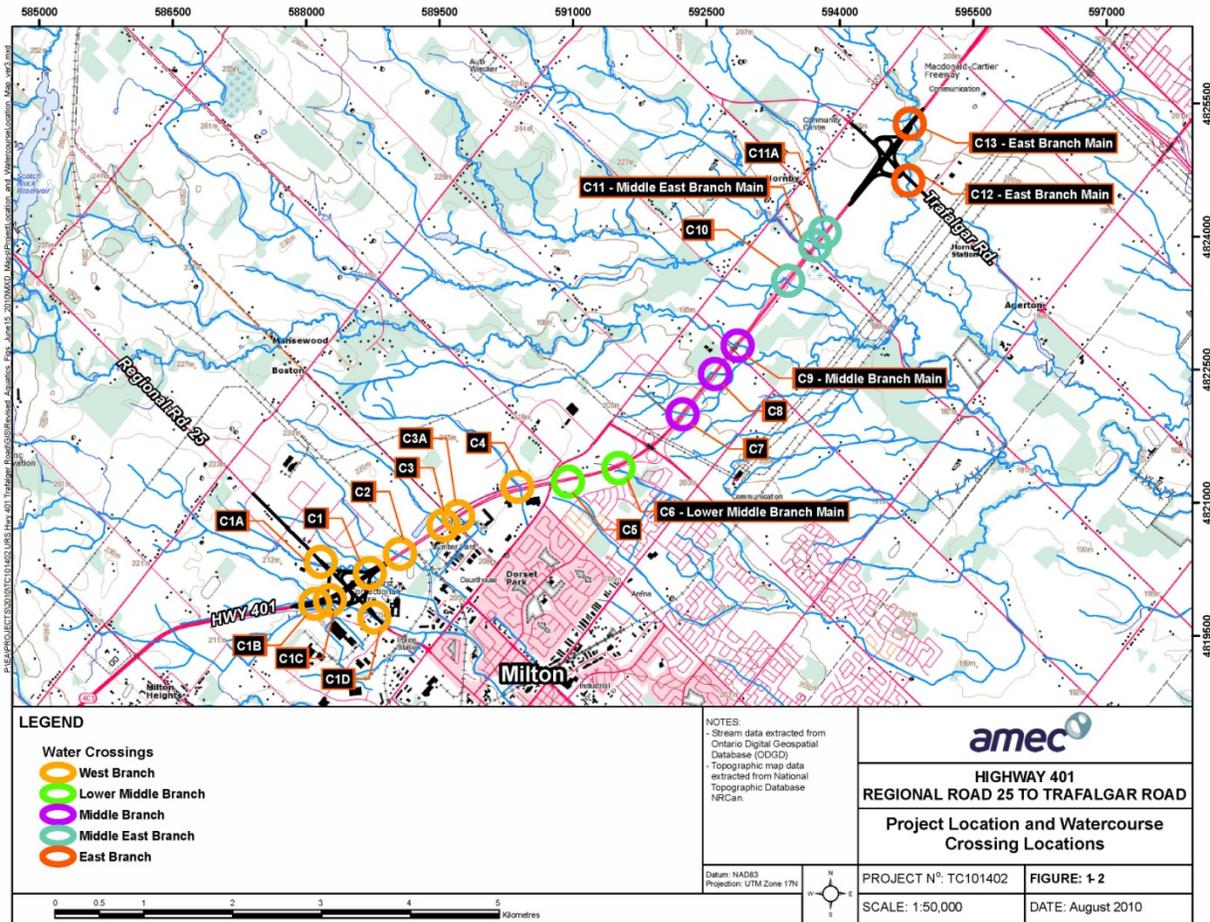
A handwritten signature in black ink, appearing to read 'Tyler Drygas', with a horizontal line extending to the left.

Tyler Drygas
Senior Consultant Environmental Planner

Cc. R. Li - MTO Project Engineer
 S. Merriam - MTO Environmental Planner
 S. Sorochinsky - URS Project Manager

Encl. Study Area Map
 Photos of Study Area

Map of the Study Area



Middle Branch of the Sixteen Mile Creek (Crossing C9)



Middle East Branch of the Sixteen Mile Creek (Crossing C11)



East Branch of the Sixteen Mile Creek (Crossings C12 and C13)





HIGHWAY 401 IMPROVEMENTS
TRAFALGAR ROAD TO REGIONAL ROAD 25
TOWN OF MILTON, TOWN OF HALTON HILLS, HALTON REGION
W.O. 07-20024



CONTACT INFORMATION FORM

PLEASE FAX BACK BY FEBRUARY 26TH TO: (905) 882-4399

1.) Does your organization wish to participate in this study and continue to receive notices of project activities and information as this study progresses? Yes No

2.) If your organization wishes to participate in this study, please specify who will act as the Project Team's contact.

NAME: _____

TITLE: _____

DEPARTMENT: _____

ORGANIZATION: _____

MAILING ADDRESS: _____

PHONE NUMBER: _____

FAX: _____

E-MAIL ADDRESS: _____

3.) Please indicate if the above noted project will affect the delivery of your organization's programs or services, and/or any other relevant information in this regard.

Your information and comments will be kept on file for use during the study. Please submit this form to:

Submitted By: _____

Tyler Drygas
Senior Environmental Planner
URS Canada Inc.
75 Commerce Valley Drive East
Markham, Ontario, L3T 7N9
Fax: (905) 882-4399
E-mail: tyler_drygas@urscorp.com

Group	Organization	Contact Name
Aboriginal Community	Mississauga of Scugog Island	Chief Tracy Gauthier / Rhonda Coppaway
Aboriginal Community	Chippewas of Georgina Island First Nation	Chief Donna Big Canoe
Aboriginal Community	Chippewas of Mnjikaning First Nation	Kary Sandy-McKenzie Barrister & Solicitor, Coordinator
Aboriginal Community	Hiawatha First Nation	Chief Laurie Carr / Councillor Lorne Paudash
Aboriginal Community	Beausoleil First Nation	Chief Rodney Monague Jr.
Aboriginal Community	Alderville First Nation	Chief James (JimBob) Marsden
Aboriginal Community	Curve Lake First Nation	Councillor Ted Coppaway / Chief Keith Knott
Aboriginal Community	Mississauga of New Credit First Nation	Chief Bryan Laforme / Margaret Sault
Aboriginal Community	Six Nations Confederacy	Leroy Hill
Aboriginal Community	Six Nations of the Grand River	Chief William K. Montour
Aboriginal Community	Métis Consultation Unit	Sir/Madam
Aboriginal Community	Aboriginal and Ministry Relationships Branch Ministry of Aboriginal Affairs	Pam Wheaton Director
Aboriginal Community	Aboriginal and Ministry Relationships Branch Ministry of Aboriginal Affairs	Francois Lachance Senior Policy Advisor
Aboriginal Community	Haudenosaunee Confederacy Chiefs Council	Chief Allen MacNaughton
Aboriginal Community	Credit River Metis Council	Debbie Alves President
External	Ministry of Culture	Karla Barboza Heritage Advisor
External	Ministry of Culture	Chris Junker-Andersen Heritage Planner
External	Ministry of Municipal Affairs and Housing	Darryl Lyons Senior Planner
External	Ministry of Municipal Affairs and Housing	Barbara Konyi Manager
External	Ministry of Natural Resources Aurora District Office	Debbie Pella Keen District Manager
External	Ministry of Natural Resources Aurora District Office	Theresa Fancy District Planner
External	Ministry of Natural Resources Aurora District Office	Ron Allen Area Supervisor, York/Durham (Acting)
External	Ministry of Natural Resources Aurora District Office	Jean Enneson Area Biologist, York Durham
External	Ministry of the Environment	Tina Dufresne, District Manager
External	Ministry of the Environment	Daniel Delaquis Environmental Resource Planner & EA Coordinator
External	Ministry of the Environment	Nick Fowler Senior Environmental Officer
External	Ontario Provincial Police	Luis Mendoza
External	Ministry of Aboriginal Affairs Land Claims and Negotiations Branch	David Didluck Director
External	Conservation Halton	Jennifer Lawrence Manager, Environmental Planning
External	GO Transit	Mike Wolczyk
External	CN Rail - Engineering Services	Marissa Crawford
External	The Bruce Trail Conservancy	Beth Kümmling Executive Director
External	Halton Catholic District School Board	Heather Palmquist, Manager of Transportation
External	Milton Transit Services	Tony D'Alessandro, Coordinator, Transit
External	Ministry of Transportation	Geddes Mahabir Area Engineer – MTO PLANNING AND DESIGN
Municipal	Halton Region	Alicia Jakaitis Transportation Coordinator
Municipal	Halton Region	Ron Glenn Director of Planning Services & Chief Planning Official
Municipal	Halton Region	Gina van den Burg Deputy Clerk and Supervisor of Council & Committee Services
Municipal	Halton Region	Jeffrey Reid Senior Transportation Planner

Group	Organization	Contact Name
Municipal	Halton Region	Dave Collum, P. Eng Design Engineer
Municipal	Halton Region	Brian Hudson Senior Planner
Municipal	Region of Peel	Brian Lakeman Planner
Municipal	Town of Milton	William Mann Director
Municipal	Town of Milton	Paul Cripps Director
Municipal	Town of Milton	Troy McHarg Town Clerk
Municipal	Town of Milton	Tony Lambert Local & Regional Councillor
Municipal	Town of Milton	Colin Best Local & Regional Councillor
Municipal	Town of Milton	Sharon Barkley Local Councillor
Municipal	Town of Milton	Greg Nelson Local Councillor
Municipal	Town of Milton	Stephanie Jarvis Environmental Planner
Municipal	Town of Milton	Rick Malboeuf Local Councillor
Municipal	Town of Halton Hills	John Linhardt Director of Planning, Development & Sustainability
Municipal	Town of Halton Hills	Chris Mills Director of Infrastructure Services & Town Engineer
Municipal	Town of Halton Hills	Debbie Edmonds Acting Town Clerk
Municipal	Town of Halton Hills	Doug Penrice Economic Development Officer
Municipal	Town of Halton Hills	Clark Somerville Councillor
Municipal	Town of Halton Hills	Ted Drewlo Manager of Engineering Services
Municipal	Town of Halton Hills	David Kentner Ward 3 Councillor
Emergency Services	Halton Regional Police Service	Chief Gary Crowell
Emergency Services	Halton Regional Police Service	Superintendent Signy Pittman
Emergency Services	Halton Region EMS	Christine Barber Deputy Chief, Operations
Emergency Services	Milton Fire Department	Brian Ellsworth Fire Chief
MP and MPP	MP - Halton	Hon. Lisa Raitt
MP and MPP	MP - Wellington-Halton Hills	Hon. Michael Chong
MP and MPP	MPP - Halton	Ted Chudleigh
MP and MPP	MPP - Wellington-Halton Hills	Ted Arnott
Utilities	TransCanada Energy	Jacques Otis Plant Manager
Utilities	TransCanada Energy	Gerry Cote
Utilities		David Small
Utilities	Hydro One Networks Inc Assessment & Taxation Real	Sir/Madam



**HIGHWAY 401 IMPROVEMENTS
TRAFALGAR ROAD TO REGIONAL ROAD 25
TOWN OF MILTON, TOWN OF HALTON HILLS, HALTON REGION
W.O. 07-20024**



CONTACT INFORMATION FORM

PLEASE FAX BACK BY FEBRUARY 26TH TO: (905) 882-4399

1.) Does your organization wish to participate in this study and continue to receive notices of project activities and information as this study progresses? Yes No

2.) If your organization wishes to participate in this study, please specify who will act as the Project Team's contact.

NAME: TONY D'ALESSANDRO

TITLE: COORDINATOR, TRANSIT

DEPARTMENT: COMMUNITY SERVICES

ORGANIZATION: TOWN OF MILTON

MAILING ADDRESS: 150 MARY STREET

MILTON, ON. L9T6Z5

PHONE NUMBER: 905-879-7252 ext 2549

FAX: 905-864-3222

E-MAIL ADDRESS: tony.dalessandro@milton.ca

3.) Please indicate if the above noted project will affect the delivery of your organization's programs or services, and/or any other relevant information in this regard.

- POTENTIAL IMPACT / OPPORTUNITY WITH
MUNICIPAL TRANSIT PROVISION

Your information and comments will be kept on file for use during the study. Please submit this form to:

Submitted By: _____

Tyler Drygas
Senior Environmental Planner
URS Canada Inc.
75 Commerce Valley Drive East
Markham, Ontario, L3T 7N9
Fax: (905) 882-4399
E-mail: tyler_drygas@urscorp.com



HIGHWAY 401 IMPROVEMENTS
TRAFALGAR ROAD TO REGIONAL ROAD 25
TOWN OF MILTON, TOWN OF HALTON HILLS, HALTON REGION
W.O. 07-20024



CONTACT INFORMATION FORM

PLEASE FAX BACK BY FEBRUARY 26TH TO: (905) 882-4399

1.) Does your organization wish to participate in this study and continue to receive notices of project activities and information as this study progresses? Yes No

2.) If your organization wishes to participate in this study, please specify who will act as the Project Team's contact.

NAME: John Pereira

TITLE: Manager, Operations

DEPARTMENT: Halton Region EMS

ORGANIZATION: _____

MAILING ADDRESS: 1179 Bronte Rd

Oakville, ON L6M 4G3

PHONE NUMBER: 905-825-6000 x 7001

FAX: 905-825-9061

E-MAIL ADDRESS: john.pereira@halton.ca

3.) Please indicate if the above noted project will affect the delivery of your organization's programs or services, and/or any other relevant information in this regard.

please send us all notices of road/
lane closures, as well as anything
that would affect emergency response.

Your information and comments will be kept on file for use during the study. Please submit this form to:

Submitted By: _____

Tyler Drygas
Senior Environmental Planner
URS Canada Inc.
75 Commerce Valley Drive East
Markham, Ontario, L3T 7N9
Fax: (905) 882-4399
E-mail: tyler_drygas@urscorp.com



HIGHWAY 401 IMPROVEMENTS
TRAFALGAR ROAD TO REGIONAL ROAD 25
TOWN OF MILTON, TOWN OF HALTON HILLS, HALTON REGION
W.O. 07-20024



CONTACT INFORMATION FORM

PLEASE FAX BACK BY FEBRUARY 26TH TO: (905) 882-4399

1.) Does your organization wish to participate in this study and continue to receive notices of project activities and information as this study progresses? Yes No

2.) If your organization wishes to participate in this study, please specify who will act as the Project Team's contact.

NAME: LUIS MENDOZA
 TITLE: STAR SERGEANT - OPERATIONS MANAGER
 DEPARTMENT: ONTARIO PROVINCIAL POLICE - PORT CREDIT DET
 ORGANIZATION: ONTARIO PROVINCIAL POLICE
 MAILING ADDRESS: 49 SOUTH SERVICE RD
MISSISSAUGA, ON, L5G 2R8
 PHONE NUMBER: 905-278-6131
 FAX: 905-278-5486
 E-MAIL ADDRESS: LUIS.MENDOZA@ONTARIO.CA

3.) Please indicate if the above noted project will affect the delivery of your organization's programs or services, and/or any other relevant information in this regard.

YES, RE RESPONSE TO CALL FOR SERVICES AND
TRAFFIC IMPROVEMENTS

Your information and comments will be kept on file for use during the study. Please submit this form to:

Submitted By: INSP A.M. PHELPS
DEPARTMENT COMMANDER
PORT CREDIT O.P.P.

Tyler Drygas
 Senior Environmental Planner
 URS Canada Inc.
 75 Commerce Valley Drive East
 Markham, Ontario, L3T 7N9
 Fax: (905) 882-4399
 E-mail: tyler_drygas@urscorp.com



HIGHWAY 401 IMPROVEMENTS
TRAFALGAR ROAD TO REGIONAL ROAD 25
TOWN OF MILTON, TOWN OF HALTON HILLS, HALTON REGION
W.O. 07-20024



CONTACT INFORMATION FORM

PLEASE FAX BACK BY FEBRUARY 26TH TO: (905) 882-4399

1.) Does your organization wish to participate in this study and continue to receive notices of project activities and information as this study progresses? Yes No

2.) If your organization wishes to participate in this study, please specify who will act as the Project Team's contact.

NAME: HON. MICHAEL CHONG
TITLE: MEMBER OF PARLIAMENT - WELLINGTON-HALTON HILLS

DEPARTMENT: _____

ORGANIZATION: GOVERNMENT OF CANADA

MAILING ADDRESS: 5-200 ST PATRICK ST E.
FERGUS ON N1M 1M4

PHONE NUMBER: 1-866-878-5556-905-802-2597

FAX: 519-843-~~111~~ 3760

E-MAIL ADDRESS: chongm@parl.gc.ca

3.) Please indicate if the above noted project will affect the delivery of your organization's programs or services, and/or any other relevant information in this regard.

As the Federal government is often asked to contribute funding and is try to work with other levels on the transportation issues of southern Ontario, Michael would like to participate in the study

Your information and comments will be kept on file for use during the study. Please submit this form to:

Submitted By: _____

Tyler Drygas
Senior Environmental Planner
URS Canada Inc.
75 Commerce Valley Drive East
Markham, Ontario, L3T 7N9
Fax: (905) 882-4399
E-mail: tyler_drygas@urscorp.com



HIGHWAY 401 IMPROVEMENTS
TRAFALGAR ROAD TO REGIONAL ROAD 25
TOWN OF MILTON, TOWN OF HALTON HILLS, HALTON REGION
W.O. 07-20024



CONTACT INFORMATION FORM

PLEASE FAX BACK BY FEBRUARY 26TH TO: (905) 882-4399

1.) Does your organization wish to participate in this study and continue to receive notices of project activities and information as this study progresses? Yes No

2.) If your organization wishes to participate in this study, please specify who will act as the Project Team's contact.

NAME: Ted Drewlo

TITLE: Manager of Engineering Services

DEPARTMENT: Infrastructure Services

ORGANIZATION: Town of Halton Hills

MAILING ADDRESS: 1 Halton Hills Drive

Halton Hills ON L7G 5G2

PHONE NUMBER: 905-873-2601 ext 2313

FAX: 905-873-3036

E-MAIL ADDRESS: tedd@haltonhills.ca

3.) Please indicate if the above noted project will affect the delivery of your organization's programs or services, and/or any other relevant information in this regard.

Your information and comments will be kept on file for use during the study. Please submit this form to:

Submitted By: _____

Tyler Drygas
Senior Environmental Planner
URS Canada Inc.
75 Commerce Valley Drive East
Markham, Ontario, L3T 7N9
Fax: (905) 882-4399
E-mail: tyler_drygas@urscorp.com

page 1 of 2



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1.) Does your organization wish to participate in this study and continue to receive notices of project activities and information as this study progresses? Yes No

2.) If your organization wishes to participate in this study, please specify who will act as the Project Team's contact.

NAME: M. Paul Cripps, D.Eng.

TITLE: Director, Engineering Services

DEPARTMENT: Engineering

ORGANIZATION: Town of Milton

MAILING ADDRESS: 150 Mary St.

Milton, ON L9T 6Z5

PHONE NUMBER: 905-878-7252 ext. 2501

FAX: 905-876-0542

E-MAIL ADDRESS: paul.cripps@milton.ca

3.) Please indicate if the above noted project will affect the delivery of your organization's programs or services, and/or any other relevant information in this regard.

Please see attached email.

Your information and comments will be kept on file for use during the study. Please submit this form to:

Submitted By: Paul Cripps

Tyler Drygas
Senior Environmental Planner
URS Canada Inc.
75 Commerce Valley Drive East
Markham, Ontario, L3T 7N9
Fax: (905) 882-4399
E-mail: tyler_drygas@urscorp.com



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2.) If your organization wishes to participate in this study, please specify who will act as the Project Team's contact.

NAME: David Lukezic

TITLE: Transportation Planner

DEPARTMENT: Public Works

ORGANIZATION: Halton Region

MAILING ADDRESS: 1151 Bronte Road Oakville, Ontario L6M 3L1

PHONE NUMBER: 905 825-6000 x 7213

FAX: 905 825-8822

E-MAIL ADDRESS: david.lukezic@halton.ca

3.) Please indicate if the above noted project will affect the delivery of your organization's programs or services, and/or any other relevant information in this regard.

- Tremaine Interchange
- Derry/Green Business Park

Your information and comments will be kept on file for use during the study. Please submit this form to:

Submitted By: Alicia Jakaitis

Tyler Drygas
 Senior Environmental Planner
 URS Canada Inc.
 75 Commerce Valley Drive East
 Markham, Ontario, L3T 7N9
 Fax: (905) 882-4399
 E-mail: tyler_drygas@urscorp.com



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NAME:

TITLE:

DEPARTMENT:

ORGANIZATION:

MAILING ADDRESS:



Town of Milton
150 Mary Street
Milton, ON L9T 6Z5
www.milton.ca

STEPHANIE JARVIS, OALA, CSLA
Environmental Planner

Planning & Development Department
150 Mary Street, Milton Ontario L9T 6Z5
Telephone: (905) 878-7252 Ext. 2567
Fax: (905) 876-5024
Email: stephanie.jarvis@milton.ca

PHONE NUMBER:

FAX:

E-MAIL ADDRESS:

3.) Please indicate if the above noted project will affect the delivery of your organization's programs or services, and/or any other relevant information in this regard.

Your information and comments will be kept on file for use during the study. Please submit this form to:

Submitted By: Stephanie Jarvis

Tyler Drygas
Senior Environmental Planner
URS Canada Inc.
75 Commerce Valley Drive East
Markham, Ontario, L3T 7N9
Fax: (905) 882-4399
E-mail: tyler_drygas@urscorp.com



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2) If your organization wishes to participate in this study, please specify who will act as the Project Team's contact.

NAME: JACQUES OTIS

TITLE: PLANT MANAGER

DEPARTMENT: CANADIAN POWER - Halton Hills

ORGANIZATION: TRANSCANADA ENERGY

MAILING ADDRESS: 12200 STREELS AVENUE

Halton Hills, ON

PHONE NUMBER: 905 864 7726

FAX: 905 864 7737

E-MAIL ADDRESS: jack.otis@transcanada.com

3) Please indicate if the above noted project will affect the delivery of your organization's programs or services, and/or any other relevant information in this regard.

NO

Your information and comments will be kept on file for use during the study. Please submit this form to:

Submitted By: _____

Tyler Drygas
Senior Environmental Planner
URS Canada Inc.
75 Commerce Valley Drive East
Markham, Ontario, L3T 7N9
Fax: (905) 882-4399
E-mail: tyler_drygas@utscorp.com



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1.) Does your organization wish to participate in this study and continue to receive notices of project activities and information as this study progresses? Yes No

2.) If your organization wishes to participate in this study, please specify who will act as the Project Team's contact.

NAME:

[Redacted Name]

TITLE:

SENIOR MANAGER

DEPARTMENT:

ORGANIZATION:

HIGGINS DEVELOPMENT PARTNERS

MAILING ADDRESS:

[Redacted Mailing Address]

PHONE NUMBER:

FAX:

E-MAIL ADDRESS:

3.) Please indicate if the above noted project will affect the delivery of your organization's programs or services, and/or any other relevant information in this regard.

Active in development of lands adjacent to Hwy 401.

Your information and comments will be kept on file for use during the study. Please submit this form to:

Submitted By: _____

Tyler Drygas
Senior Environmental Planner
URS Canada Inc.
75 Commerce Valley Drive East
Markham, Ontario, L3T 7N9
Fax: (905) 882-4399
E-mail: tyler_drygas@urscorp.com



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1.) Does your organization wish to participate in this study and continue to receive notices of project activities and information as this study progresses? Yes No

2.) If your organization wishes to participate in this study, please specify who will act as the Project Team's contact.

NAME: John MacTaggart

TITLE: Senior Engineering Services Officer

DEPARTMENT: Engineering Services

ORGANIZATION: CN Rail

MAILING ADDRESS: 4 Welding Way, P.O. Box 1000
Concord, Ont., L4K 1B9

PHONE NUMBER: 905-669-3155

FAX: 905-760-3406

E-MAIL ADDRESS: john.mactaggart@cn.ca

3.) Please indicate if the above noted project will affect the delivery of your organization's programs or services, and/or any other relevant information in this regard.

Your information and comments will be kept on file for use during the study. Please submit this form to:

Submitted By: John MacTaggart

Tyler Drygas
Senior Environmental Planner
URS Canada Inc.
75 Commerce Valley Drive East
Markham, Ontario, L3T 7N9
Fax: (905) 882-4399
E-mail: tyler_drygas@urscorp.com



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NAME: _____

TITLE: _____

DEPARTMENT: _____

ORGANIZATION: _____

MAILING ADDRESS: _____

PHONE NUMBER: _____

FAX: _____

E-MAIL ADDRESS: _____

3.) Please indicate if the above noted project will affect the delivery of your organization's programs or services, and/or any other relevant information in this regard.

Your information and comments will be kept on file for use during the study. Please submit this form to:

Submitted By: Domenico Fenella
Manager of Planning
Halton District School Board

Tyler Drygas
 Senior Environmental Planner
 URS Canada Inc.
 75 Commerce Valley Drive East
 Markham, Ontario, L3T 7N9
 Fax: (905) 882-4399
 E-mail: tyler_drygas@urscorp.com



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2.) If your organization wishes to participate in this study, please specify who will act as the Project Team's contact.

NAME:

[Redacted Name]

TITLE:

Director of Project Management

DEPARTMENT:

ORGANIZATION:

[Redacted Organization Name]

MAILING ADDRESS:

PHONE NUMBER:

FAX:

E-MAIL ADDRESS:

3.) Please indicate if the above noted project will affect the delivery of your organization's programs or services, and/or any other relevant information in this regard.

We own the property at the corner of Trafalgar & Steeles. We'd like to know and provide input in to the interchange at Trafalgar & 401.

Your information and comments will be kept on file for use during the study. Please submit this form to:

[Redacted Contact Information]

Tyler Drygas
 Senior Environmental Planner
 URS Canada Inc.
 75 Commerce Valley Drive East
 Markham, Ontario, L3T 7N9
 Fax: (905) 882-4399
 E-mail: tyler_drygas@urscorp.com



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NAME:

BRIAN W. HUDSON

TITLE:

Senior Planner

DEPARTMENT:

Current Planning / Legislative Services

ORGANIZATION:

Region of Halton

MAILING ADDRESS:

1075 North Service Road Unit 27

Oakville ON L6M 3L1

PHONE NUMBER:

905-825-6000 ext 7209

FAX:

905-825-8822

E-MAIL ADDRESS:

brian.hudson@halton.ca

3.) Please indicate if the above noted project will affect the delivery of your organization's programs or services, and/or any other relevant information in this regard.

The Region is undertaking a major re-alignment of Tremaine Road with a proposed 401 interchange

The outcome of the above EA will determine and improve a major north-south arterial road (RR 25) through Milton's urban area.

Your information and comments will be kept on file for use during the study. Please submit this form to:

Submitted By:

Brian Hudson
Senior Planner

Tyler Drygas
 Senior Environmental Planner
 URS Canada Inc.
 75 Commerce Valley Drive East
 Markham, Ontario, L3T 7N9
 Fax: (905) 882-4399

E-mail: tyler_drygas@urscorp.com



"Paul Cripps" <paul.cripps@milton.ca>

01/19/2010 05:03 PM

To <tyler_drygas@urscorp.com>

cc "Bill Mann" <bill.mann@milton.ca>, <Tim.Dennis@halton.ca>, <mitch.zamojc@halton.ca>, "Mario Belvedere" <mario.belvedere@milton.ca>

bcc

Subject Highway 401 Improvements from Trafalgar to Regional Road 25

Tyler,

We have received your notice of study commencement for the widening of the 401 from Trafalgar Road to Regional Road 25 here in Milton and wish to thank you for same. In regards to the project limits, I think it is important for you and the MTO to recognize that plans are in place for the realignment and widening of Tremaine Road by Halton Region and the construction of new interchange approximately 1.8km west of Regional Road 25. Tremaine will become a significant transportation corridor in the future (as many as 6 lanes) and is the proposed location for the new satellite campus of Sir Wilfred Laurier University as well as being considered for a future GO Station location. As such, it is our position that the limits of your EA and preliminary design assignment should be revised to include the future Tremaine Road interchange. We would be more than will to discuss these matters at your convenience.

Paul Cripps

Director, Engineering Services

Town of Milton

Town of Milton Address Change Notice

The Town of Milton street and mailing address has changed to 150 Mary Street, Milton, Ontario, L9T 6Z5.

Kindly update your records.

Town of Milton Notice

This message is intended for use only by the individual(s) to whom it is specifically addressed above and should not be read by, or delivered to any other person. Such material may contain privileged and confidential information. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. No rights or privilege have been waived. If you have received in error, please reply to the sender by e-mail and delete or destroy all copies of this message.

Ministry of the Environment

Central Region
Technical Support Section

5775 Yonge Street, 8th Floor
North York, Ontario M2M 4J1

Tel.: (416) 326-6700
Fax: (416) 325-6347

Ministère de l'Environnement

Région du Centre
Section d'appui technique

5775, rue Yonge, 8^{ième} étage
North York, Ontario M2M 4J1

Tél. : (416) 326-6700
Télec. : (416) 325-6347



January 27, 2010

File: EA 03-03-05

Tyler Drygas
Senior Environmental Planner
URS Canada Inc.
75 Commerce Valley Dr. E.
Markham, ON L3T 7N9

**RE: TSS Comments:
Highway 401 Improvements from Trafalgar Road to Regional Road 25
Ministry of Transportation
Preliminary Design and Class Environmental Assessment
Response to Notice of Commencement**

Dear Mr. Drygas:

This letter is our response to your Notice of Study Commencement for the above noted project. This response acknowledges that Ministry of Transportation has indicated that its study is following the approved environmental planning process for a Group B project under the *Class Environmental Assessment (Class EA) for Provincial Transportation Facilities (2000)*.

Based on the information submitted, we have identified the following issues of concern with respect to the proposed undertaking:

- Ecosystem Protection and Restoration
- Surface Water
- Groundwater
- Air Quality
- Servicing and Facilities
- Contaminated Soils
- Mitigation and Monitoring
- Planning and Policy
- Class EA Process
- First Nations Consultation

We are providing the following general comments to assist you and your project team members in effectively addressing these issues:

Ecosystem Protection and Restoration

- Any impacts to ecosystem form and function must be avoided where possible. The TESR should describe any proposed mitigation measures and how project planning will protect and enhance the local ecosystem.
- All natural heritage features should be identified and described in detail to assess potential impacts and to develop appropriate mitigation measures. Our records confirm that the following sensitive environmental features are located within or adjacent to the Study Area:
 - Rare Species of flora or fauna
 - Watercourses
 - Wetlands
 - Woodlots

We recommend consulting with the Ministry of Natural Resources (MNR), Fisheries and Oceans Canada (DFO) and your local conservation authority to determine if special measures or additional study will be necessary to preserve and protect these sensitive features.

Surface Water

- The TESR must include a sufficient level of information to demonstrate that there will be no negative impacts on the natural features or ecological functions of any watercourses within the Study Area. Measures should be included in the planning and design process to ensure that any impacts to watercourses from construction or operational activities (e.g. spills, erosion, pollution) are mitigated as part of the proposed undertaking. The MOE Guideline B-6, *Evaluating Construction Activities Impacting on Water Resources* should be used to plan and construct this project.
- Additional stormwater runoff from new pavement can impact receiving watercourses and flood conditions. Quality and quantity control measures to treat stormwater runoff should be considered for all new impervious areas and, where possible, existing surfaces. MOE's *Stormwater Management Planning and Design Manual* (2003) should be referenced in the TESR and utilized when designing stormwater control methods. We recommend that a Stormwater Management Plan should be prepared as part of the Class EA process that includes:
 - Strategies to address potential water quantity and erosion impacts related to stormwater draining into streams or other sensitive environmental features, and to ensure that adequate (enhanced) water quality is maintained
 - Watershed information, drainage conditions, and other relevant background information
 - Future drainage conditions, stormwater management options, information on erosion and sediment control during construction, and other details of the proposed works
 - Information on maintenance and monitoring commitments

Groundwater

- The status of, and potential impacts to any well water supplies should be addressed. If the project involves groundwater takings or changes to drainage patterns, the quantity and quality of groundwater may be affected due to drawdown effects or the redirection of existing contamination flows. In addition, project activities may infringe on existing wells such that they must be reconstructed or sealed and abandoned. Appropriate information to define existing groundwater conditions should be included in the TESR.
- If the potential construction or decommissioning of water wells is identified as an issue, the TESR should refer to Ontario Regulation 903, Wells, under the *Ontario Water Resources Act*.
- Potential impacts to groundwater-dependent natural features should be addressed. Any changes to groundwater flow or quality from groundwater taking may interfere with the ecological processes of streams, wetlands or other surficial features. In addition, discharging contaminated or high volumes of groundwater to these features may have direct impacts on their function. Any potential effects should be identified, and appropriate mitigation measures should be recommended. The level of detail required will be dependent on the significance of the potential impacts.
- Any potential approval requirements for groundwater taking or discharge should be identified in the TESR. In particular, a Permit to Take Water (PTTW) under the *Ontario Water Resources Act* will be required for any water takings that exceed 50,000 litres per day. A PTTW application

must be accompanied by an assessment of potential effects as noted above, and may require a higher level of detail than what is provided in the TESR. Please note that when significant long-term water taking is proposed, the maximum rate identified in the TESR must not be exceeded in any subsequent PTTW applications. For more information on the application and approval process, we suggest you refer to the MOE *Permit to Take Water Manual* (April 2005).

Air Quality

- An air quality or odour impact assessment may be required for this project to evaluate alternatives, determine impacts and identify appropriate mitigation measures. The scope of the assessment should be determined based on the potential effects of the proposed alternatives, and typically includes source and receptor characterization, a quantification of air quality impacts by determining emission rates and conducting dispersion modelling, and an assessment of effects. This assessment should compare to all available standards for any contaminants of concern. We recommend that you contact this office during the scoping process to confirm the appropriate level of assessment.

Dust and Noise

- Dust and noise control measures should be addressed and included in the construction plans to ensure that nearby residential and other sensitive land uses within the Study Area are not adversely affected during construction activities. If dust suppressants are proposed to be used, we recommend the use of non-chloride based compounds to protect water quality.
- The TESR should consider the potential impacts of increased noise levels during the operation of the undertaking and potentially higher traffic volumes resulting from this project. The proponent should explore all potential measures to mitigate significant noise impacts during the assessment of alternatives.

Contaminated Soils

- Since the removal or movement of soils may be required, appropriate tests to determine contaminant levels from previous land uses or dumping should be undertaken. If the soils are contaminated, you must determine how and where they are to be disposed of, consistent with *Part XV.1 of the Environmental Protection Act (EPA)* and Ontario Regulation 153/04, Records of Site Condition, which details the new requirements related to site assessment and clean up. We recommend contacting the MOE Halton Peel District Office in Burlington for further consultation if contaminated sites are present.
- The location of any underground storage tanks should be included in the TESR. Measures should be identified to ensure the integrity of these tanks and to ensure an appropriate response in the event of a spill. The MOE Spills Action Centre must be contacted in such an event.
- Any current or historical waste disposal sites should be identified in the TESR. The status of these sites should be determined to confirm whether approval pursuant to Section 46 of the *Environmental Protection Act* may be required for land uses on former disposal sites.
- The TESR should identify any underground transmission lines in the Study Area. The owners should be consulted to avoid impacts to this infrastructure, including potential spills.

Mitigation and Monitoring

- Design and construction reports and plans should be based on a best management approach

that centres on the prevention of impacts, protection of the existing environment, and opportunities for rehabilitation and enhancement of any impacted areas.

- All waste generated during construction must be disposed of in accordance with MOE requirements.
- Contractors must be made aware of all environmental considerations so that all environmental standards and commitments for both construction and operation are met. Mitigation measures should be clearly referenced in the TESR and regularly monitored during the construction stage of the project. In addition, we encourage proponents to conduct post-construction monitoring to ensure all mitigation measures have been effective and are functioning properly. The proponent's construction and post-construction monitoring plans should be documented in the TESR.

Planning and Policy

- The *Greenbelt Plan* contains policies that protect the Greenbelt's agricultural land base and the ecological features and functions occurring on this landscape. Since the Study Area is within the Greenbelt planning area, the TESR should demonstrate how the project adheres to the relevant sections of the *Greenbelt Plan*, including Section 4.2.1 - General Infrastructure Policies. A description of measures that prevent and minimize potential impacts should also be included. You may wish to consider consulting with the Ministry of Municipal Affairs & Housing in this matter.
- The 2005 *Provincial Policy Statement* contains policies that protect Ontario's Natural Heritage. Applicable policies should be referenced in the TESR, and the proponent should demonstrate how this proposed project is consistent with these policies. You may wish to consider consulting with the Ministry of Municipal Affairs & Housing in this matter.
- The *Places to Grow Plan* contains policies which guide decisions on a range of issues such as infrastructure planning and land-use planning to ensure that stronger and more prosperous communities are built in the Greater Golden Horseshoe. The TESR should demonstrate how this project adheres to the relevant policies of the *Places to Grow Plan*, including Section 3, which contain policies for Infrastructure to Support Growth.

Class EA Process

- The TESR should provide clear and complete documentation of the planning process in order to allow traceability of decision-making. It must also demonstrate how the consultation provisions of the Class EA have been fulfilled, including documentation of all public consultation efforts undertaken during the planning process. Additionally, it should identify all concerns that were raised and how they have been addressed throughout the planning process. The Class EA also directs proponents to include copies of comments submitted on the project by interested stakeholders, and the proponent's responses to these comments.
- The Class EA requires the consideration of the effects of each alternative on all aspects of the environment. The TESR should include a level of detail (e.g. hydrogeological investigations, terrestrial and aquatic assessments) such that all potential impacts can be identified and appropriate mitigation measures can be developed. Any supporting studies conducted during the Class EA process should be referenced and included as part of the TESR.
- Please include in the TESR a list of all subsequent permits or other approvals that may be required for the implementation of the preferred alternative, including Permits to Take Water, Certificates of Approval or other ministerial approvals, approval under the *Canadian*

Environmental Assessment Act (CEAA), and conservation authority permits.

- Please note that MOE guidelines and other information related to the issues noted above are available at www.ene.gov.on.ca under the publications link. We encourage the proponent to review all the available guides and to reference any relevant information in the TESR.

First Nations Consultation

- Please note that as part of the required stakeholder and agency consultation, proponents are advised to contact the Ministry of Aboriginal Affairs and the Department of Indian and Northern Affairs to determine potentially affected Aboriginal peoples in the project area. Please refer to the website <http://www.ene.gov.on.ca/en/eaab/aboriginal-resources.php> for a list of appropriate government contacts.
- Once identified, you are advised to provide notification directly to the Aboriginal peoples who may be affected by the project and provide them with an opportunity to participate in any planned public consultation sessions and comment on the project.

Thank you for the opportunity to comment on this project. Please ensure that Daniel Delaquis, MOE Central Region **EA and Planning Coordinator**, is placed on the project mailing list. We recommend a draft copy of the TESR be circulated to this office prior to the filing of the final draft, allowing approximately 30-days review time for the ministry's technical reviewers to provide comments. Please also forward our office the Notice of Completion and TESR when completed. Should you or any members of your project team have any questions regarding the above, please feel free to contact me at (416) 326-3525; I would be pleased to assist you.

Yours sincerely,



Daniel Delaquis
Environmental Resource Planner and EA Coordinator
Air, Pesticides and Environmental Planning

- c. T. Dufresne, Halton Peel District Office, MOE
Central Region EA File
A & P File



2596 Britannia Road West
RR2, Milton, Ontario L9T 2X6
905.336.1158 Fax 905.336.7014
www.conservationhalton.on.ca

BY MAIL AND EMAIL

March 23, 2010

Mr. Tim Sorochinsky
URS Canada Inc.
75 Commerce Valley Drive East
Markham, ON L3T 7N9

and

Ms. Rebecca Li
Ontario Ministry of Transportation, Central Region
Building D, 4th Floor, 1201 Wilson Ave.
Downsview, ON M3M 1J8

Dear Ms. Li and Mr. Sorochinsky:

**Re: Highway 401 Improvements from Trafalgar Road to Regional Road 25
Class Environmental Assessment
Ministry of Transportation Ontario
CH File: PPR 141**

Conservation Halton staff has received a Notice of Commencement for the above-noted Class Environmental Assessment. Outlined below is an overview of the items that Conservation Halton believes warrant consideration in the study process. (N.B. this is not an exhaustive list of items for consideration, but rather those items that staff is aware of at this time.)

Ontario Regulation 162/06

1. Included with this letter are maps of Conservation Halton's regulated lands within the study area. Please note that Conservation Halton regulates, pursuant to Ontario Regulation 162/06, all lands containing hazards (e.g., watercourses, valley lands, top of bank, meander belt allowances, floodplain and wetlands) within its watershed. Within the study area, there are nine regulated crossings of Highway 401 and Sixteen Mile Creek and its tributaries, with an additional crossing associated with the westbound on and off ramps for Highway 401 to the north and southbound lanes of Regional Road 25. While the MTO will not require a permit from Conservation Halton, we request that the design of any proposed re-grading/drainage works consider potential flooding and erosion implications. The evaluation matrix should assess alternatives with respect to whether infrastructure is placed within the applicable natural hazards associated with flooding, unstable slope and/or meander belt, and determine the associated long term implications.
2. Conservation Halton staff would be pleased to offer comments on any proposed EA alternatives, and review the impacts as assessed. We note, however, that staff would not be supportive of alternatives that increase the flooding and/or erosion hazard on upstream or downstream landowners.

3. Please be aware that the Regional Storm floodplain extends across:
 - the southbound Regional Road 25 on-ramp to the westbound 401, with spills flowing across the westbound lanes of Highway 401, and
 - the westbound lanes of Highway 401 at the regulated crossing approximately 100 metres east of Sixth Line.
4. Additionally, we note that due to watercourse alignment, the regulated floodplain extends adjacent to:
 - the eastbound off-ramp to southbound Regional Road 25,
 - the eastbound on-ramp from northbound Regional Road 25,
 - the westbound off-ramp to northbound Regional Road 25, and
 - immediately adjacent to the east and westbound lanes and all other watercourse crossings.
5. Conservation Halton would be supportive of modifications to the crossing structures to eliminate flooding across Highway 401, and bring the roadway into compliance with the Ministry of Transportation's Directive B-100. Where possible, new crossings should be designed to span the meander belt width of the channel.
6. Staff requests that the Transportation Environmental Study Report also include an assessment of the fluvial geomorphology of each crossing. This assessment should consider the erosion potential associated with the current and future geomorphologic regime, and identify improvements as needed.
7. A Data Request Form for all digital information requests can be obtained on Conservation Halton's website at: <http://www.conservationhalton.ca/ShowCategory.cfm?subCatID=1321>.

Natural Heritage

8. Highway 401 is a major barrier to the north-south movement of terrestrial wildlife. As such, any rehabilitation or replacement of structures should investigate the feasibility of improving wildlife passage.
9. Staff suggests that the study area encompass a minimum of 120 metres around the potential works area to reflect direction regarding adjacent lands in the updated draft Natural Heritage Reference Manual, prepared by MNR.
10. All field work should be conducted at the appropriate time of year. Staff recommends that you consult Conservation Halton's Environmental Impact Study Guidelines. The guidelines are available on CH's website at <http://www.conservationhalton.ca/ShowCategory.cfm?subCatID=1168>.
11. The Environmental Study Report should include a table in the methodology section showing staff, date, time, weather conditions and purpose of all fieldwork. All ELC data sheets should be included as an appendix in the document.
12. The impacts of any utility relocation on natural heritage features and/or functions should be considered when evaluating alternatives.

Fish Habitat

13. Several of the Sixteen Mile Creek tributaries in the study area provide habitat for Redside Dace (*Clinostomous elongates*). The MNR has upgraded the status of this fish species from Threatened to Endangered under the Endangered Species Act (ESA). Although staff will notify MNR of the commencement of the EA, we encourage the proponent to direct inquiries regarding the ESA screening process to Melinda Thompson-Black, Species at Risk Biologist, at 905-713-7425 or by email at Melinda.thompson-black@ontario.ca.
14. Conservation Halton has a Level II Agreement with Fisheries and Oceans Canada (DFO) to administer the review of projects under section 35(1) of the *Fisheries Act*; however, staff recognizes that Conservation Halton's agreement with DFO is not applicable for Provincial projects. Nonetheless, staff would still appreciate the opportunity to review the alternatives to assess the impacts within Conservation Halton's watershed.
15. Staff notes that the watercourses immediately east of Regional Road 25, Fifth Line, and Sixth Line and immediately west of Regional Road 25 are coldwater watercourses. According to the Aurora District MNR, no in-water works should be undertaken between September 15 and June 30 to protect fish during their sensitive spawning times.
16. The Town of Halton Hill's *Highway 401 Corridor Integrated Planning Project Scoped Subwatershed Study* (Dillon Consulting, 2000) recommends a 15-metre riparian buffer for moderate to low-quality Type 2 habitats, and a 30-metre riparian buffer for Type 1 and high-quality Type 2 habitats for the protection, maintenance and enhancement of fish and aquatic habitats.
17. Fish Habitat should be mapped as per MTO Protocol "Environmental Guide for Fish and Fish Habitat, 2006". This mapping should be undertaken for a distance of 40 metres upstream and downstream along the subject water crossings.
18. Staff recommends the remediation and removal of any fish barriers where feasible and the use of naturalized channel design principles to aid in increasing fish habitat and fish passage.
19. If culvert replacements are proposed, the use of open bottom crossing structures is requested on any tributaries of Sixteen Mile Creek to maintain or enhance groundwater seepage into subject watercourses. It is also requested that any replacement culverts pass a 25-year flow event to ensure optimal fish passage and optimal conveyance of sediment.
20. If culvert replacements are proposed, it is requested that they span at a minimum the bankfull channel width of the creek. It is also requested that any lengthening of culverts be kept to a minimum to minimize cumulative effects of transportation crossings on the subject watercourses.
21. Please ensure that the need for new water crossings or creek realignments is examined as a component of the EA Study.
22. Please consider stormwater management as it applies to fish habitat, both the treatment level and potential direct impacts from construction.

Stormwater Management/Drainage

23. The Environmental Assessment should evaluate the potential impacts of the proposed changes with respect to increased stormwater quantity and erosion potential, and decreased stormwater quality.
24. Please be advised that existing drainage catchments are to be maintained.
25. Consideration should be given to the potential to provide stormwater management controls where feasible, for instance the roadside ditches may be designed as enhanced swales to improve water quality and allow for infiltration. The proponent should strive to achieve post-to pre-quantity control, enhanced level quality control (as per MoE's 2003 Stormwater Management Planning and Design Manual), and maintain the natural water balance.

Staff of Conservation Halton welcomes the opportunity to work with the study team throughout the Class EA process. If you require additional information please contact the undersigned at extension 225.

Yours truly,



Kim Peters
Environmental Planner

KPa

cc: Stephanie Jarvis, Town of Milton (email)
Matt Krusto, Region of Halton (fax)
John Lindhardt, Town of Halton Hills (fax)
John Pisapio, MNR Aurora District (email)
Emily Morton, Department of Fisheries and Oceans (email)

Encl.



May 4, 2010
Our Ref.: 33016168

Conservation Halton
2596 Britannia Road West, RR2
Milton, Ontario
L9T 2X6

**Attention: Kim Peters
Environmental Planner**

Dear Ms. Peters:

**Re: Highway 401 Improvements from Trafalgar Road to Regional Road 25
Class Environmental Assessment Study
Town of Milton, Town of Halton Hills, Halton Region
WO. 07-20024**

On behalf of the Highway 401 Improvements from Trafalgar Road to Regional Road 25 Project Team, thank you for providing Conservation Halton's preliminary comments regarding this study. The following outlines our response to each of the points raised in your letter dated March, 23, 2010.

Ontario Regulation 162/60

1. The *Environmental* component of this study will co-ordinate with *Highway Engineering, Drainage and Hydrology Engineering*, and *Bridge Engineering* components for optimum integration of recommendations. Issues regarding drainage and hydrology, erosion and watercourse crossing design considerations, and potential impacts within the study area will be examined as part of this study.
2. Opportunities for ongoing communication with the Project Team will be provided throughout the study. Conservation Halton will have the opportunity to provide input on the generation and evaluation of alternatives as well as proposed mitigation strategies at the agency portion of the planned Public Information Centres (PICs) for the project.
- 3/4. Thank you for providing the Regional Storm floodplain information for the study area. As the study progresses, floodplain boundaries will be taken into consideration at the preliminary design phase of the study.
5. Bridge spans at watercourse crossings will be examined during the generation of alternatives and developed to a greater level of detail during the preliminary design stage of the study.
6. The need for a fluvial geomorphology assessment will be determined subsequent to the evaluation of alternatives, in view of the drainage assessment and structural analysis of each of the crossings within the study area.

URS Canada Inc.
75 Commerce Valley Drive East
Markham, ON Canada L3T 7N9
Tel: 905.882.4401
Fax: 905.882.4399
www.urs.ca



7. Thank you for providing the link to the Data Request Form.

Natural Heritage

8. The identification of wildlife corridors will be undertaken as part of the terrestrial ecosystem assessment work. The need to enhance opportunities for wildlife passage along this section of the Highway 401 corridor will be investigated during study, in consultation with MNR and Conservation Halton.
9. Consistent with the *MTO Environmental Reference for Highway Design (2006)*, the study area for the inventory of existing conditions and assessment of impacts will include the existing highway right-of-way and adjacent lands within 120m of the corridor.
10. Thank you for providing the link to Conservation Halton's Environmental Impact Study Guidelines. Fieldwork will be undertaken as per *MTO Environmental Standards and Practices (2007)* and the *Environmental Reference for Highway Design (2006)*.
11. Information outlining staff, date, time, weather conditions and purpose of all fieldwork will be included in the Natural Heritage Report (prepared under separate cover) to support this study. The Transportation Environmental Study Report will provide an overview and key findings of the natural heritage assessment work for this study.
12. Impacts to the natural environment associated with design alternatives will be assessed. However, details of utility relocations will not be determined for design alternatives. Potential impacts associated with the preferred alternative(s) will be examined and appropriate mitigation strategies will be developed as necessary to avoid and minimize potential effects on the natural environment. Issues related to utility relocations will be addressed at the detail design stage of the study.

Fish Habitat

13. Thank you for providing the contact information for Ms. Thompson-Black at MNR. The Project Team is aware of the potential for Redside Dace within the Sixteen Mile Creek watershed, and we will contact MNR regarding the ESA screening process during study.
14. As this study progresses, Conservation Halton will have the opportunity to provide input on the generation and assessment of preliminary design alternatives, and evaluation and selection of the preferred preliminary design alternatives and the development of mitigation measures to reduce or avoid environmental impacts at the agency portion of the planned PICs for the project.
15. / 16. Thank you for providing information on inwater work timing restrictions. Mitigation measures will be confirmed as part of the fisheries and aquatic ecosystem assessment undertaken for this study.
17. Fishers mapping will be undertaken as per the *Environmental Guide for Fish and Fish Habitat (2006)*.



18. The Project Team will identify and develop appropriate mitigation measures to address identified potential effect on fisheries and aquatic habitat features and surface water quality. Naturalized channel design principles may be incorporated if required.
19. / 20. The design details of culvert replacements will be addressed during the preliminary design phase of the study (where required).
21. The Project Team will examine impacts to watercourse crossings and the need for realignments as a component of this study.
22. Concerns regarding stormwater management and the protection of fisheries and aquatic habitat will be addressed during the preliminary design phase of the study.

Stormwater Management / Drainage

23. This study will examine issues related to stormwater quantity, erosion potential and stormwater quality associated with the preferred alternative for improvements to this section of the Highway 401 corridor. Appropriate mitigation strategies will be developed to address any identified potential adverse effects on stormwater quality as well as quantity control.
24. Issues regarding drainage catchments will be addressed during the preliminary design phase of the study.
25. A stormwater management plan will be developed during the preliminary design phase consistent with current government regulations and guidelines.

Should you have additional comments regarding the study or require more information, please feel free to contact me at extension 147.

Yours very truly,

URS Canada Inc.

Tyler Drygas
Senior Environmental Planner

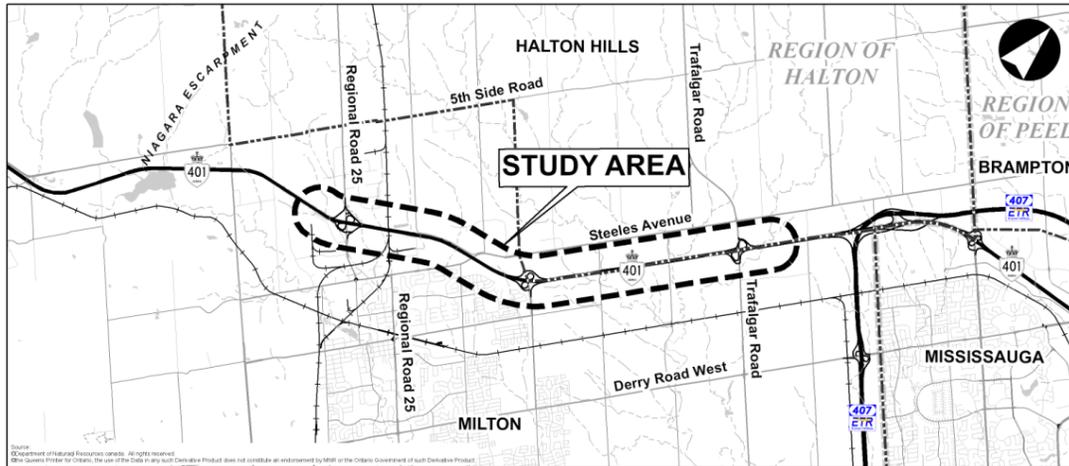
cc. T. Sorochinsky - URS Project Manager
R. Li - MTO Project Manager
S. Merriam - MTO Environmental Planner

ONTARIO GOVERNMENT NOTICE NOTICE OF PUBLIC INFORMATION CENTRE #1

HIGHWAY 401 IMPROVEMENTS FROM TRAFALGAR ROAD TO REGIONAL ROAD 25 WO. 07-20024

THE PROJECT

URS Canada Inc. has been retained by the Ontario Ministry of Transportation (MTO) to undertake a Preliminary Design and Class Environmental Assessment Study for improvements to Highway 401 from Trafalgar Road to Regional Road 25 (9 km) in the Towns of Milton and Halton Hills, Region of Halton.



The purpose of this study is to identify the interim and ultimate capacity and operational needs for this section of the Highway 401 corridor and to consider incorporation of initiatives, such as high occupancy vehicle (HOV) lanes and commuter parking lots. Possible improvements that will be investigated as part of this study include structural, illumination, drainage and interchange modifications.

THE PROCESS

This study will follow the approved environmental planning process for Group "B" projects under the *Class Environmental Assessment for Provincial Transportation Facilities (2000)*. A Transportation Environmental Study Report (TESR) will be prepared and made available for a 30-day public review period at the completion of the study which will document the transportation opportunities, the generation, assessment and evaluation of alternatives, the recommended plan, a summary of environmental issues and potential mitigation measures, and a summary of consultation undertaken throughout the study. Notice of TESR submission and public review period will be advertised in this newspaper and mailed to those on the project mailing list.

PUBLIC INFORMATION CENTRE

The public is invited to attend the first of two rounds of Public Information Centres (PICs) for this study. The purpose of PIC#1 is to present and receive input on the need for improvements to this section of the Highway 401 corridor, the alternatives under consideration, and the proposed process and criteria for evaluating alternatives. **PIC#1 will be held on:**

**Wednesday June 2, 2010
4:00 p.m. to 7:00 p.m.
Milton Memorial Arena – Milton Lions Club Hall
77 Thompson Road South, Milton**

This PIC will be an informal drop-in centre. Representatives from the MTO and the project's consultant team will be available to answer questions, receive comments and discuss the next steps in this study.

COMMENTS

To obtain additional information, provide comments, or to be placed on the study mailing list please contact the Project Team as follows:

Rebecca Li, P.Eng.
Project Manager
Ontario Ministry of Transportation
Central Region
Bldg 'D', 4th Flr, 1201 Wilson Ave
Downsview, ON M3M 1J8
Tel: 416-235-5271
Fax: 416-235-3576
rebecca.li@ontario.ca

Tim Sorochinsky, P.Eng.
Project Manager
URS Canada Inc.
75 Commerce Valley Dr E
Markham, ON L3T 7N9
Tel: 905-882-4401 ext. 522
Fax: 905-882-4399
tim_sorochinsky@urscorp.com

Tyler Drygas
Senior Environmental Planner
URS Canada Inc.
75 Commerce Valley Dr E
Markham, ON L3T 7N9
Tel: 905-882-4401 ext. 147
Fax: 905-882-4399
tyler_drygas@urscorp.com

Or visit the Project FTP site to access study documents: <http://www.highway401milton.com>

There is an opportunity at any time during the study for interested persons to provide input to the Project Team including comments and information regarding the study. Comments are being collected to assist MTO in meeting the requirements of the *Environmental Assessment Act*. This material will be maintained on file for use during the study and may be included in project documentation. Information collected will be used in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

Aboriginal Community Letter

**Ministry of
Transportation**

Highway Engineering
Peel / Halton
4th Floor, Bldg. D
1201 Wilson Avenue
Downsview, Ontario M3M 1J8
Tel: (416) 235-5271
Fax: (416) 235-3576
Email: rebecca.li@ontario.ca

**Ministère des
Transports**

Génie Routier
Peel et Halton
4e étage, édifice D
1201 avenue Wilson
Downsview, Ontario M3M 1J8
Tél: (416) 235-5271
Téléec: (416) 235-3576
Émail: rebecca.li@ontario.ca



May 21, 2010

<<Contact>>

<<First_Nation_CommunityContact>>

<<Address>>

Dear <<Contact>>:

**RE: Notice of Public Information Centre #1
Highway 401 Improvements from Trafalgar Road to Regional Road 25
Town of Milton, Town of Halton Hills, Halton Region
W.O. 07-20024**

URS Canada Inc. has been retained by the Ontario Ministry of Transportation (MTO) to undertake a Preliminary Design and Class Environmental Assessment Study for the improvements to Highway 401 from Trafalgar Road to Regional Road 25 (9 km) in the Towns of Milton and Halton Hills, Halton Region (refer to the enclosed "Notice of Public Information Centre #1").

The purpose of this study is to identify the interim and ultimate capacity and operational needs for this section of the Highway 401 corridor and to consider incorporation of initiatives, such as high occupancy vehicle (HOV) lanes and commuter parking lots. Possible improvements that will be investigated as part of this study include structural, illumination, drainage and interchange modifications.

This study will follow the approved environmental planning process for Group "B" projects under the *Class Environmental Assessment for Provincial Transportation Facilities (2000)*. A Transportation Environmental Study Report (TESR) will be prepared and made available for a 30-day public review period at the completion of the study. Notice of TESR submission will be advertised in the local newspapers and mailed to those on the project mailing list.

The purpose of this letter is to notify you that the first of two rounds of Public Information Centres (PICs) has now been scheduled for this study. The purpose of PIC#1 is to present and receive input on the need for improvements to this section of the Highway 401 corridor, the alternatives under consideration, and the proposed process and evaluation criteria for evaluating alternatives.

Aboriginal Community Letter

This PIC will be an informal drop-in centre. We are interested in your thoughts regarding this project and would like to invite you and the Council to view the plans prior to the commencement of the formal PIC#1 as part of our External Team. You are invited to attend the session on:

Wednesday June 2, 2010
3:00 p.m. to 4:00 p.m.
Milton Memorial Arena – Milton Lions Club Hall
77 Thompson Road South, Milton

Following the External Team session, PIC#1 will be held from 4:00 p.m. to 7:00 p.m. (refer to the enclosed "Notice of Public Information Centre #1).

We would appreciate your posting of the attached brochure for members of your community to view.

If you would like to provide comments, or if you require further information regarding this study, please feel free to contact myself at 416-235-5271 or visit the Project FTP site to access study documents: <http://www.highway401milton.com>. In addition, if you are interested in meeting as a result of receiving this letter, please contact myself to arrange for a meeting at your earliest convenience.

Thank you for your cooperation and assistance.

Yours truly,

Ministry of Transportation



Rebecca Li, P. Eng
MTO Project Manager

cc. S. Merriam - MTO Environmental Planner
T. Sorochinsky - URS Project Manager
T. Drygas - URS Environmental Planner

Encl. Notice of Public Information Centre #1

EXTERNAL LETTER

May 21, 2010

«Name»

«Organization»

«Address»

Dear «Greeting»:

**RE: Notice of Public Information Centre #1
Highway 401 Improvements from Trafalgar Road to Regional Road 25
Town of Milton, Town of Halton Hills, Halton Region
W.O. 07-20024**

URS Canada Inc. has been retained by the Ontario Ministry of Transportation (MTO) to undertake a Preliminary Design and Class Environmental Assessment Study for the improvements to Highway 401 from Trafalgar Road to Regional Road 25 (9 km) in the Towns of Milton and Halton Hills, Halton Region (refer to the enclosed “Notice of Public Information Centre #1”).

The purpose of this study is to identify the interim and ultimate capacity and operational needs for this section of the Highway 401 corridor and to consider incorporation of initiatives, such as high occupancy vehicle (HOV) lanes and commuter parking lots. Possible improvements that will be investigated as part of this study include structural, illumination, drainage and interchange modifications.

This study will follow the approved environmental planning process for Group “B” projects under the *Class Environmental Assessment for Provincial Transportation Facilities (2000)*. A Transportation Environmental Study Report (TESR) will be prepared and made available for a 30-day public review period at the completion of the study. Notice of TESR submission will be advertised in the local newspapers and mailed to those on the project mailing list.

The purpose of this letter is to notify you that the first of two rounds of Public Information Centres (PICs) has now been scheduled for this study. The purpose of PIC#1 is to present and receive input on the need for improvements to this section of the Highway 401 corridor, the alternatives under consideration, and the proposed process and criteria for evaluating alternatives.

This PIC will be an informal drop-in centre. Representatives from the MTO and the project’s consultant team will be available to answer questions, receive comments and discuss the next steps in this study.

Prior to the official commencement of this PIC, the Project Team has made arrangements for members of the External Team to view the displays. Your organization is invited to attend the session on:

**Wednesday June 2, 2010
3:00 p.m. to 4:00 p.m.
Milton Memorial Arena – Milton Lions Club Hall
77 Thompson Road South, Milton**

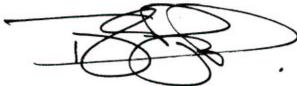
You are encouraged to attend the External Team Meeting and to provide us with your views and concerns so that they can be addressed in the study. Following the External Team session, PIC#1 will be held from 4:00 p.m. to 7:00 p.m. (refer to the enclosed "Notice of Public Information Centre #1).

Comments are being collected to assist MTO in meeting the requirements of the *Environmental Assessment Act*. This material will be maintained on file for use during the study and may be included in project documentation. Information collected will be used in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

If you would like to provide comments, or if you require further information regarding this study, please feel free to contact the undersigned at 905-882-4401 ext. 147 or visit the Project FTP site to access study documents: <http://highway401milton.com>.

Thank you for your cooperation and assistance.

Yours truly,
URS Canada Inc.



Tyler Drygas
Consultant Senior Environmental Planner

cc. R. Li - Ministry of Transportation Project Manager
S. Merriam - Ministry of Transportation Environmental Planner
T. Sorochinsky - URS Project Manager

Encl. Notice of Public Information Centre #1

PUBLIC LETTER

May 21, 2010

«Name»

«Organization»

«Address»

Dear «Greeting»:

**RE: Notice of Public Information Centre #1
Highway 401 Improvements from Trafalgar Road to Regional Road 25
Town of Milton, Town of Halton Hills, Halton Region
W.O. 07-20024**

URS Canada Inc. has been retained by the Ontario Ministry of Transportation (MTO) to undertake a Preliminary Design and Class Environmental Assessment Study for the improvements to Highway 401 from Trafalgar Road to Regional Road 25 (9 km) in the Towns of Milton and Halton Hills, Halton Region (refer to the enclosed "Notice of Public Information Centre #1").

The purpose of this study is to identify the interim and ultimate capacity and operational needs for this section of the Highway 401 corridor and to consider incorporation of initiatives, such as high occupancy vehicle (HOV) lanes and commuter parking lots. Possible improvements that will be investigated as part of this study include structural, illumination, drainage and interchange modifications.

This study will follow the approved environmental planning process for Group "B" projects under the *Class Environmental Assessment for Provincial Transportation Facilities (2000)*. A Transportation Environmental Study Report (TESR) will be prepared and made available for a 30-day public review period at the completion of the study. Notice of TESR submission will be advertised in the local newspapers and mailed to those on the project mailing list.

The purpose of this letter is to notify you that the first of two rounds of Public Information Centres (PICs) has now been scheduled for this study. The purpose of PIC#1 is to present and receive input on the need for improvements to this section of the Highway 401 corridor, the alternatives under consideration, and the proposed process and criteria for evaluating alternatives. **PIC#1 will be held on:**

**June 2, 2010
4:00 p.m. to 7:00 p.m.
Milton Memorial Arena – Milton Lions Club Hall
77 Thompson Road South, Milton**

This PIC will be an informal drop-in centre. Representatives from the MTO and the project's consultant team will be available to answer questions, receive comments and discuss the next steps in this study.

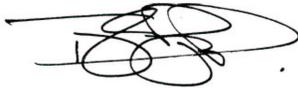
There is an opportunity at any time during the study for interested persons to provide input to the Project Team including comments and information regarding the study. Comments are being collected to assist MTO in meeting the requirements of the *Environmental Assessment Act*. This material will be maintained

on file for use during the study and may be included in project documentation. Information collected will be used in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

If you would like to provide comments, or if you require further information regarding this study, please feel free to contact the undersigned at 905-882-4401 ext. 147 or visit the Project FTP site to access study documents: <http://www.highway401milton.com>.

Thank you for your cooperation and assistance.

Yours truly,
URS Canada Inc.

A handwritten signature in black ink, appearing to read 'TD', with a horizontal line above it.

Tyler Drygas
Consultant Senior Environmental Planner

cc. R. Li - Ministry of Transportation Project Manager
S. Merriam - Ministry of Transportation Environmental Planner
T. Soroichinsky - URS Project Manager

Encl. Notice of Public Information Centre #1

Niagara Escarpment Commission

232 Guelph St.
Georgetown, ON L7G 4B1
Tel: 905-877-5191
Fax: 905-873-7452
www.escarpment.org

Commission de l'escarpment du Niagara

232, rue Guelph
Georgetown ON L7G 4B1
No de tel. 905-877-5191
Télocopieur 905-873-7452
www.escarpment.org



Ontario's Niagara Escarpment
A World Biosphere Reserve

May 26, 2010

Tyler Drygas
Consultant Senior Environmental Planner
URS Canada Inc.
75 Commerce Valley Drive East
Markham, ON L3T 7N9

Dear Mr. Drygas

RE: NOTICE OF PUBLIC INFORMATION CENTRE #1
(Highway 401 Improvements from Trafalgar Rd. to Regional Road 25)
Town of Milton and Town of Halton Hills Region of Halton
Your File No: W.O. 07-20024

Thank you for your circulation dated May 21, 2010.

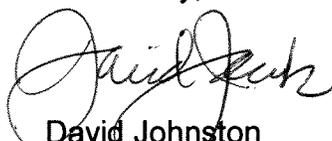
The extent of the proposed project is beyond the limits of the Niagara Escarpment Plan and Niagara Escarpment Development Control Areas.

Accordingly, the Niagara Escarpment Commission (NEC) will not be attending the Public Information Centre or providing any comments on this or future requests.

The NEC can also be taken off your circulation list for this particular consultation.

Any questions and/or comments can be directed to me at (905) 877-7815.

Yours truly,


David Johnston
Planner

DJ:gdc

Project: Highway 401 – Trafalgar Road to RR25 Meeting No. 1

Project No. WO 07-20024 Date: May 26, 2010

Location: Town of Milton, 150 Mary St., 2nd Fl. Esquensing Room Time: 1:00 pm

Purpose: Municipal Meeting

Present:

<p><i>Municipal Representatives</i> Andrew Head – Region of Halton Haiqing Xu – Region of Halton David Collum – Region of Halton Paul Cripps – Town of Milton Stephanie Jarvis – Town of Milton Doug Penrice – Town of Halton Hills Chris Mills – Town of Halton Hills Bruce Maclean – Town of Halton Hills</p>	<p><i>Project Team</i> Rebecca Li - MTO Planning & Design Sarah Merriam - MTO Environmental Tim Sorochinsky - URS Project Manager Tyler Drygas - URS Environmental</p>
--	---

<u>Items</u>	<u>Description</u>	<u>Action by:</u>
---------------------	---------------------------	--------------------------

1 Introduction

R. Li introduced the Project Team and provided a brief overview of the scope of this planning and preliminary design study.

R. Li noted that the first of two Public Information Centres for this study is scheduled for June 2nd at the Milton Memorial Arena.

2 Project Overview

T. Sorochinsky provided an overview of the study area, project scope, study schedule, existing conditions in the study area, existing and projected future traffic conditions, the assessment of alternatives to the undertaking, the Highway 401 improvement alternatives under consideration, criteria for assessing alternatives and next steps in the study (refer to the attached presentation).

PLEASE NOTE: If your records of this meeting do not agree with this document, or if there are any omissions, please advise the URS Canada Inc. writer at once, otherwise the contents of this document shall be assumed accurate and correct.

3 **Summary of the Discussion**

Study Area

- P. Cripps questioned whether the Ministry would consider expanding the study area to the west to include the proposed Tremaine Rd. interchange?

R) T. Sorochinsky noted that the Tremaine Rd. interchange has been considered in the demand forecasting / modeling exercise. R. Li noted that the Ministry is working with the Region on the detail design for the Tremaine interchange. At this time, the Ministry does not envision extending the project limits west of RR 25.

Land Development Issues

- The Town of Milton provided the Project Team with the Derry Green Draft Secondary Plan.
- Halton Hills to provide the Project Team with the Scope Sub Watershed Study.
- Attendees noted the need to understand the extent of potential impacts to lands dedicated for future development (i.e. change in set back distances if the MTO property line changes, loss of tax base etc.).

Halton Hills

Traffic Forecasting and Analysis Work

- T. Sorochinsky noted that the road network assumptions within Halton Region were determined in consultation with David Lukezic (Transportation Planner, Halton Region).
- T. Sorochinsky noted that a collision review has been undertaken and that the number of collisions within the study area is below the provincial average and that no collision hot spots along Highway 401 mainline have been identified.
- The following traffic conditions / issues were noted by attendees:
 - The N-E ramp at the Trafalgar Rd. interchange backs up, impacting the local road network when incidents on the highway occur.
 - Highway 401 eastbound queues currently extend to Main Street due to the congestion at the S-E ramp of the James Snow Parkway interchange.
 - There is a short merge distance under the bridge at the RR 25

interchange.

- Attendees questioned if MTO is examining the demand of the commuter parking lots (CPL) within the project limits.

R) T. Sorochinsky noted that the demands of the CPLs are not part of the study scope; however, URS will identify any potential new carpool sites within the project limits.

Mainline and Interchange Alternatives

- Attendees expressed concern associated with replacing the James Snow Parkway Bridge on existing due to the potential impacts on local traffic conditions.
- Attendees questioned whether bike paths would be examined as part of this study and what design standard would be used.

R) T. Sorochinsky noted that bike lane considerations would be addressed at the preliminary design stage in consultation with municipal staff. It was noted that 1.5 metres is the TAC standard width for bike lanes.

Other Questions / Comments

- C. Mills questioned how this study aligns with the GTA West Study.

R) T. Sorochinsky noted that the URS is involved in the GTA West study. The Project Team is working to coordinate the findings of the GTA West study, as appropriate, in the transportation planning working for this project. All transportation corridor options identified in the GTA West study identified the need for widening this section of Highway 401 to a minimum of 10 lanes.

- C. Mills noted that Council has approved the Halton–Peel BATS study. T. Sorochinsky noted that the H-P BATS corridor has been assumed in the transportation system planning work undertaken as part of this assignment.
- Attendees questioned if additional property will be required for the MTO truck inspection station.

R) The Project Team is working with MTO operations to determine the future plans for the truck inspection stations. MTO is currently undertaking a review of various truck inspection facilities and will provide direction in terms of whether these facilities should be expanded at their current general location or relocated elsewhere.

- It was noted that the Town of Milton is considering a new 5th Line crossing over Highway 401 (a Class EA study has not commenced at this time).
- Attendees questioned the timing for constructing the improvements identified as part of this study.

R) The Project Team noted that improvements to this section of the Highway 401 corridor are not presently identified in the Ministry's 5-year capitol program. The implementation of Highway improvements is subject to environmental approvals as well as the availability of funding and provincial priorities.

The meeting adjourned at 3:00pm

Submitted by: Tyler Drygas

Distribution: Project Team



Chippewas of RAMA
First Nation

A Proud Progressive First Nation Community

5884 Rama Road, Suite 200
Rama, Ontario L0K 1T0
T 705.325.3611 F 705.325.0879

June 3, 2010

Ministry of Transportation
Highway Engineering—Peel/Halton
4th Floor, Bldg. D
1201 Wilson Avenue
Downsview, ON M3M 1J8

Attention: Rebecca Li, MTO Project Manager

**Re: Notice of Public Information Centre #1
Highway 401 Improvements from Trafalgar Road to Regional Road 25
Town of Milton, Town of Halton Hills, Halton Region
W.O. 07-20024**

Dear Ms. Li:

As a member of the Williams Treaties First Nations, Rama First Nation acknowledges receipt of your letter of May 21, 2010, which was received on May 25, 2010.

A copy of your letter has been forwarded to Karry Sandy-McKenzie, Barrister & Solicitor, Coordinator for Williams Treaties First Nations for further review and response directly to you. Ms. Sandy's address is 8 Creswick Court, Barrie, ON L4M 2J7 and her telephone number is (705) 792-5087.

We appreciate your taking the time to share this important information with us.

Sincerely,

Chief Sharon Stinson Henry

c: Council, Rama First Nation
Jeff Hewitt, General Counsel
Karry Sandy-McKenzie, Coordinator Williams Treaties Nations
Chief Rodney Monague Jr., Portfolio Chief for Williams Treaties Nations

SSH/sw

RECEIVED

JUN 11 2010

MTO-CENTRAL REGION
ENGINEERING OFFICE



Town of Milton
150 Mary Street
Milton, Ontario
L9T 6Z5

Phone 905-878-7252
Fax 905-878-6995
www.milton.ca

Planning and Development
Tel: 905-878-7252, ext. 2301
Fax: 905-876-5024
Email: bill.mann@milton.ca

June 4, 2010

Mr. Tyler Drygas
Consultant Senior Environmental Planner
URS Canada Inc.
75 Commerce Valley Drive East
Markham, ON L3T 7N9

Dear Mr. Drygas,

RE: Highway 401 Improvements from Trafalgar Road to Regional Road 25

Following the meeting with Town of Milton staff on May 26, 2010, and the subsequent Public Information Meeting on June 2, 2010, I would like to take the opportunity to provide preliminary comments.

It has been indicated on a couple of occasions that the Province of Ontario (Ministry of Transportation) is not considering formally extending the study area of the 401 improvements through Milton to include the planned Tremaine interchange. While it is my understanding that the area is included in the modelling, I feel that this is an important aspect that should be more publically represented. The GTA-West Transportation Corridor Study places one of the corridor alternatives terminating at or near the future interchange location. With the conclusion of the GTA-West Study scheduled for 2010, investigations for 401 improvements between Regional Road 25 and Tremaine Road should be public to provide further information for those following the studies and to ensure transparency.

At this point in time, this is the only concern that I feel needs to be addressed. I trust that the above will be helpful and will be forwarded on to the Project Manager, Rebecca Li.

Should you have any questions or comments, please do not hesitate to contact Stephanie Jarvis at 905-878-7252 ext. 2567, or by email at stephanie.jarvis@milton.ca.

Yours truly,

W. F. Mann, MCIP, RPP, OALA, RPF
Director, Planning & Development



2596 Britannia Road West
RR2, Milton, Ontario L9T 2X6
905.336.1158 Fax 905.336.7014
www.conservationhalton.on.ca

July 23, 2010

Mr. Tim Sorochinsky
URS Canada Inc.
75 Commerce Valley Drive East
Markham, ON L3T 7N9

and

Ms. Rebecca Li
Ontario Ministry of Transportation, Central Region
Building D, 4th Floor, 1201 Wilson Ave.
Downsview, ON M3M 1J8

Dear Ms. Li and Mr. Sorochinsky:

**Re: Highway 401 Improvements from Trafalgar Road to Regional Road 25
Class Environmental Assessment
Public Information Centre #1 Materials
CH File: PPR 141**

Thank you for providing Conservation Halton with the materials from the first Public Information Centre for the above-noted EA. Staff has reviewed these materials, and offers the following comments:

1. Staff requests that the approach for evaluating alternatives includes consideration of whether proposed infrastructure will be placed within an area of natural hazard (i.e., floodplain, unstable slopes, or meanderbelt), and the associated long term implications of such infrastructure placement.
2. Based upon a quick review of the three interchange alternatives, staff noted the following:
 - All three alternative interchange configurations considered for Regional Road 25 would impact a regulated watercourse located at the northwest quadrant. Culvert extensions may also be required for the crossings located immediately to the East and West of the interchange.
 - It appears a culvert extension will be required for a regulated watercourse immediately west of the existing crossing location at the James Snow Interchange.
 - Immediately east of the Trafalgar Road interchange the existing Sixteen Mile Creek crossing will likely need to be extended. Additionally it appears that a regulated watercourse feature will be impacted by shifts to the ramps at the southeast quadrant of the Trafalgar Road interchange.

3. The watercourses affected by the proposed widening are sensitive in terms of their water quality, thermal regime and the fish communities they support. Please ensure that impacts to fish communities, fish habitat and water quality (including temperature) are not adversely affected by the proposed work.
4. Please avoid realignments of watercourses containing sensitive fish species (e.g., Redside Dace, Brook Trout, Fantail Darter and Rainbow Darter).
5. All fish species in all watercourses and tributaries in the vicinity of the study area should be clearly documented.
6. Staff request that temperature, channel morphology and benthic invertebrate monitoring data be collected both pre and post construction for watercourses that may require realignment. This data is requested to examine if the road construction has had an effect on physical habitat and water quality in the affected watercourses.
7. Staff requests that stormwater management criteria for this project be designed to exceed MoE Enhanced Level criteria in an effort to provide water quality that can support Brook Trout, Redside Dace, Rainbow Darter, Fantail Darter and Rainbow Trout; all of which have been documented to occur in the study area.
8. Crossing replacements are preferred over crossing extensions with an objective of improving fish passage and enhancing effective sediment transport. Staff would like to see all crossing structures designed with an open bottom and an appropriate low-flow channel to facilitate fish passage during minimal flow periods.
9. Previous comments from Conservation Halton have indicated that any new culverts are requested to accommodate a 25 year flow. Please note that this sizing of culvert is considered to be a minimum flow conveyance capacity and staff prefers that the meanderbelt width of the watercourse be accommodated in a new crossing structure.

We trust that the comments provided will be of assistance. If you require additional information please contact the undersigned at extension 225.

Yours truly,



Kim Peters
Environmental Planner

KP



OCT 25 2010

Reference: 416

Tyler Drygas
 URS Canada Inc.
 75 Commerce Valley Dr. E
 Markham, ON L3T 7N9

Re: Highway 401 Improvements from Trafalgar Road to Regional Road 25

Dear Mr. Drygas:

Thank you for your inquiry dated May 21, 2010 regarding the above noted project.

The responsibilities of the Ministry of Aboriginal Affairs (MAA) include conducting land claim and related negotiations on behalf of the Province. MAA can provide you with information about land claims that have been submitted to the Ministry, are currently in active negotiations, or are being implemented. We can also advise as to whether there is any litigation with an Aboriginal community that may be relevant to your project.

You should also be aware that many First Nations and Métis communities either have or assert rights to hunt and fish in their traditional territories. These territories often include lands and waters outside of a First Nation reserve. As well, in some instances project work may affect archaeological and burial sites. Aboriginal communities with an interest in such sites may include communities other than those in the vicinity of the proposed project.

With respect to your project, we have reviewed the brief materials you have provided, and can advise that the project appears to be located in an area where Alderville, Curve Lake, Hiawatha, Mississaugas of the New Credit First Nations and the Mississaugas of Scugog Island may have existing or asserted rights that could be impacted by your project. Contact information is below:

Six Nations of the Grand River Territory P.O. Box 5000 OHSWEKEN, Ontario N0A 1M0	Chief William K. Montour (519) 445-2201 (Fax) 445-4208 wkm@sixnations.ca arleenmaracle@sixnations.ca
Haudenosaunee Confederacy Chiefs Council 2634 6th Line Road RR 2 Ohsweken ON N0A 1M0	Chief Allen MacNaughton (519) 755-2769

For your information, MAA notes that the following First Nations or Métis communities may be interested in your project given the potential impacts of your project on the environment: and the location of their reserve lands or areas of interest:

Credit River Metis Council 1515 Matheson Blvd. E. #103 Mississauga, ON, L4W 2P5	Debbie Alves, <i>President</i> Tel: (905) 629-9644 debbie.alves@sympatico.ca
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MAA is not the approval or regulatory authority for this project. To determine what consultation with Aboriginal communities may be required, please consider the information provided in this letter in light of the legislative, regulatory and policy framework for your project. Should you have any questions, please contact the appropriate ministry.

The Government of Canada sometimes receives claims that Ontario does not receive, or with which Ontario does not become involved. For information about possible claims in the area, MAA recommends the proponent contact the following federal contacts:

Ms. Janet Townson
Claims Analyst, Ontario Team
Specific Claims Branch
Indian and Northern Affairs Canada
1310-10 Wellington St.
Gatineau, QC K1A 0H4
Tel: (819) 953-4667
Fax: (819) 997-9873

Mr. Sean Darcy
Manager
Assessment and Historical Research
Indian and Northern Affairs Canada
10 Wellington St.
Gatineau, QC K1A 0H4
Tel: (819) 997-8155
Fax: (819) 997-1366

For federal information on litigation contact:

Mr. Marc-André Millaire
Litigation Team Leader for Ontario
Litigation Management and Resolutions Branch
Indian and Northern Affairs Canada
10 Wellington St.
Gatineau, QC K1A 0H4
Tel: (819) 994-1947
Fax: (819) 953-1139

Additional details about your project or changes to it that suggest impacts beyond what you have provided to date may necessitate further consideration of which aboriginal communities should be contacted. If you think that further consideration may be required, please bring your inquiry to whatever government body oversees the regulatory process for your project.

You should also be aware that information upon which the above comments are based is subject to change. First Nation or Métis communities can make assertions at any time, and other developments can occur that might require additional communities to be notified.

Yours truly,

A handwritten signature in black ink, appearing to read 'Heather Levecque', written in a cursive style.

Heather Levecque
Manager, Consultation Unit
Aboriginal Relations and Ministry Partnerships Division



100 S. Front Street
Sarnia, Ontario
N7T 2M4

Your file Votre référence
W.O. 07-20024
Our file Notre référence
Please See Below

February 1, 2011

Ministry of Transportation
c/o URS Canada Inc.
75 Commerce Valley Drive East
Markham, ON L3T 7N9

Attention: Tyler Drygas

Dear Sir:

Re: Navigability Request, Sixteen Mile Creek, Highway 401, Trafalgar Road to Regional Road 25, Town of Milton, Town of Halton Hills, Regional Municipality of Halton, Province of Ontario

Receipt is acknowledged of your correspondence dated January 27, 2011 in connection with the above noted work.

NWP File Number	Crossing Number	Location
2011-400045	C9	Middle branch of Sixteen Mile Creek at Fifth Line
2011-400046	C11	Middle East branch of Sixteen Mile Creek at Sixth Line
2011-400047	C12 and C13	East branch of Sixteen Mile Creek at Trafalgar Road

Should our review disclose the need for additional information, you will be notified. For a status of our review of this project, please contact our office at 866-821-6631 or by facsimile transmission at 519-383-1989 or by e-mail at NWPontario-PENontario@tc.gc.ca.

Please refer to our file number with any future correspondence.

Sincerely,

Donna Patterson
Donna Patterson
Information Management Supervisor
Navigable Waters Protection

DP/km



Transport Canada

Transports Canada

Marine

Maritime

Navigable Waters Protection Program
Programme de protection des eaux navigables
100 Front Street South
Sarnia, Ontario N7T 2M4

Your File Votre référence

Our File Notre référence
Please See Below

February 23, 2011

Ministry of Transportation
c/o URS Canadas Inc.
75 Commerce Valley Drive East
Markham, ON L3T 7N9

Attention: Tyler Drygas

Dear Sir:

Re.: Review under the *Navigable Waters Protection Act* for the Bridges located at approximately Highway 401, Trafalgar Road to Regional Road 25, Town of Milton, Town of Halton Hills, Sixteen Mile Creek, Regional Municipality of Halton, in the Province of Ontario

Reference is made to your correspondence received on February 1, 2011.

NWP File Number	Crossing Number	Location
2011-400045	C9	Middle branch of Sixteen Mile Creek at Fifth Line
2011-400046	C11	Middle East branch of Sixteen Mile Creek at Sixth Line
2011-400047	C12 and C13	East branch of Sixteen Mile Creek at Trafalgar Road

Transport Canada officials have determined that the provisions of the *Navigable Waters Protection Act (NWPA)* **do not apply** to your project and, therefore, an Approval is not required.

This determination relates to navigation only and does not relieve you of your responsibility to obtain any other forms of approval under any applicable laws.

Should you have any questions, please do not hesitate to contact our office at (866) 821-6631 or by facsimile transmission at (519) 383-1989 or by e-mail at NWPontario-PENontario@tc.gc.ca.

Sincerely,

Barry Putt
Manager
Navigable Waters Protection Program
Marine Safety
Transport Canada
Ontario

BP/km



Minutes of Meeting

Project: Highway 401 – Trafalgar Road to the Credit River Meeting No. 1
 Highway 401 – Trafalgar Road to RR25

Project No. WO 07-20021 and WO 07-20024 Date: February 25, 2011

Location: Town of Milton, 150 Mary St., 2nd Fl. Esquesing Room Time: 1:00 pm

Purpose: EMS Meeting

Present: ***EMS Representatives*** ***Project Team***
 Al Frost –Halton Police Rebecca Li – MTO Planning & Design
 Mike Timbers – Milton Fire Department Sarah Merriam – MTO Environmental
 Shawn Gaffney – Mississauga Fire Department Tim Sorochinsky – URS Project Manager
 Department Karen Cooper – URS Deputy Project
 Garry Coram – Peel EMS Manager
 Tyler Drygas – URS Environmental

<u>Items</u>	<u>Description</u>	<u>Action by:</u>
1	<p><u>Introduction</u></p> <p>Following brief introductions, T. Sorochinsky presented a series of powerpoint slides.</p>	
2	<p><u>Observed Deficiencies</u></p> <p><u>Milton/Halton Hills</u></p> <p>T. Sorochinsky noted that collision data indicates spikes in collisions at the interchanges. Most of these are rear-end or side-swipe collisions. This was confirmed by M. Timbers. M. Timbers noted that collisions are up within the study area but the severity is less. Further west, between the Kelso Conservation Area and Guelph, highway closures due to high speed collisions are more prevalent.</p> <p>M. Timber noted that the speed survey data appears out of date. The slowdown is from RR 25 to the Kelso Conservation Area. There are approximately 35,000 to 40,000 new residences in adjacent neighbourhoods, resulting in increased traffic volumes. Construction in the area worsens the situation.</p>	

PLEASE NOTE: If your records of this meeting do not agree with this document, or if there are any omissions, please advise the URS Canada Inc. writer at once, otherwise the contents of this document shall be assumed accurate and correct.

<u>Items</u>	<u>Description</u>	<u>Action by:</u>
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RR 25

M Timbers noted that the RR 25 Loop Ramp S-W (northbound to westbound) includes a short speed change lane. The Loop Ramp N-E (southbound to eastbound) speed change lane is not a problem.

A. Frost noted that there is queuing at Ramp W-N/S (eastbound) which occasionally extends onto Highway 401.

M. Timbers noted that westbound Highway 401 traffic flows well, except for seasonal sun glare resulting in collisions, particularly for traffic approaching the RR 25 bridge and the horizontal curve west of RR 25.

At RR 25 Ramp E-N/S, there are fewer collisions, but more queuing. A dangerous situation occurs when the gravel trucks fail to stop. A double right and double left may be a solution to reduce the queues. Also, the JSP is extension may reduce the gravel truck usage of RR 25.

No problems regarding access to the carpool lot were noted.

CNR Crossing Crest Curve

M. Timbers noted that the bridge is narrower at the peak in the eastbound direction. It would be better to provide an extended speed change lane (SCL) over the bridge for the Ramp S-E. It was noted that the EMS vehicles have better sightlines, since the driver's seat is higher than typical vehicle seats.

Steeles Avenue

No issues were noted at the Steeles Avenue crossing, but when there is significant slowdown on Highway 401, some traffic diverts to Steeles Avenue or south. Milton mobile enforcement units on Steeles have noted trucks diverting to Steeles Avenue to avoid Highway 401 congestion.

JSP

M. Timbers noted queuing at the Ramp W-N/S (eastbound). When signals are installed, it is anticipated that this queuing will be mitigated.

M. Timbers anticipates that there will be increased gravel truck traffic when JSP is extended to the north and west, causing a traffic bottleneck at the Loop Ramp N-E (southbound to eastbound).

Fifth Line

Due to the narrow shoulders along Highway 401 at Fifth Line, emergency vehicles traveling on the shoulder must merge back into traffic, causing slowdowns and increasing the risk of collisions.

<u>Items</u>	<u>Description</u>	<u>Action by:</u>
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Truck Inspection Stations

M. Timbers and A. Frost have noted only minor slowdowns in the vicinity, but traffic sometimes diverts into the stations.

It was noted that when the TISs are in operation, regional roads seem to have higher truck traffic volumes, particularly along Derry Road, where increased truck traffic interferes with access to properties. Members of the public have commented on this situation. It is believed that the trucks are attempting to avoid the Highway 401 Truck Inspection Stations.

Sixth Line

It was noted that closure of Sixth Line during the bridge rehabilitation last summer caused some minor traffic issues, but if there is significant future development in the area, the road closure could have a larger impact on local traffic.

Trafalgar Road

Queue hopping is noted at the 407 ETR/Highway 401 Ramp E-W. Drivers wishing to exit Highway 401 at Trafalgar Road have difficulty merging into the off-ramp due to the weave condition. The Highway 401/Trafalgar Road Ramp E-N/S (westbound to north and southbound) occasionally backs up onto Highway 401.

407ETR

Emergency services are exempt from ETR tolls.

Turnarounds within the interchanges are time-consuming and require additional navigation distance.

Mississauga

Winston Churchill Boulevard

The loop ramp radii are minimal. If possible, these radii should be enlarged. It was noted that truck overturns are more common on the tighter radius curves.

A.M. eastbound traffic experiences seasonal glare, causing slowdowns and queuing. There was an instance of a truck entering the freeway and the truck driver was not able to see the backed up traffic. As a result, the truck drove over cars and flipped.

Service Centre

No issues were noted at the service centre along eastbound Highway 401 east of Winston Churchill Boulevard when it was in operation.

<u>Items</u>	<u>Description</u>	<u>Action by:</u>
	<p><u>Derry Road</u></p> <p>No issues were noted.</p>	
	<p><u>Mississauga Road</u></p> <p>The speed change lanes are too short and should be reviewed.</p>	
	<p><u>CP Rail</u></p> <p>No issues were noted.</p>	
3	<p><u>Proposal Improvements</u></p>	
	<p><u>Core-Collector Access</u></p> <p>For the core-collector system, transfers between core and collector lanes will be provided at intervals averaging every two interchanges. URS will provide a digital copy of the plan which shows location of all planned transfers between JSP and Hwy 410/403. The Milton Fire Department will provide comments regarding the locations of the transfers by the end of March 2011. In particular, easy access to both core and collector lanes from the fire station is desirable.</p>	<p>URS</p> <p>MFD</p>
	<p><u>Median Barrier</u></p> <p>It is sometimes necessary to lift accident victims over the median barrier, which is difficult with a tall wall concrete barrier. Tall wall barrier does provide better protection. Shorter barrier is more problematic in higher speed free flow areas (i.e. west of Guelph Line). For shorter median barriers, at certain speeds and angles, the front of the vehicle can sometimes clear the barrier, but the rear tires do not.</p>	
	<p><u>HOV</u></p> <p>HOV lanes are new to Halton Region, having been recently constructed along the QEW. Regarding enforcement, there have been complaints of single occupant vehicles in the HOV lanes. S. Gaffney noted that it is difficult to enforce the rules, since stopping these vehicles impacts traffic flow. A benefit of enforcement is that it sends a message to other potential lawbreakers. Access for EMS is good via the HOV lanes, and it benefits EMS vehicles by avoiding any debris that might be in the shoulder.</p>	
	<p><u>Proposed Interchange Improvements</u></p> <p>The recommended plan at JSP includes ramps S-E access to Collector lanes only. This could be problematic to EMS vehicles stationed at JSP, south of Highway 401 since they would not be able to access emergencies in the eastbound express lanes.</p>	

<u>Items</u>	<u>Description</u>	<u>Action by:</u>
	T. Sorochinsky suggested that a left turn onto the JSP Loop Ramp N-E would be considered for emergency vehicles only.	
	<u>Other Improvements</u>	
	S. Gaffney inquired if the MTO changeable message signs could be used to notify road users when fire drills at the Ninth Line Training Centre are in progress, since there are typically a large number of 911 calls from the public during these exercises. MTO noted that for consistency, ATMS only displays freeway-related messages. Smaller portable message signs could be a solution. R. Li recommended that the Mississauga Fire Department request discussion with the MTO working group that deals with this issue. S. Gaffney to contact R. Li regarding message sign requirements.	MFD/MTO
4	<u>Discussion / Other Business</u>	
	Staging details are usually confirmed during detail design.	
	G. Corram inquired if shoulders will be maintained during construction. T. Soroshinsky noted that 2.5 m shoulders are typically maintained, which could be used by emergency vehicles if the horizontal clearance is sufficient. M. Timbers will provide the dimension from side mirror to side mirror for the fire truck.	MFD
	The Highway 401 widening from Highway 410 to west of Hurontario is scheduled for completion in approximately two years.	
	<u>EMS Infrastructure and Operations</u>	
	<u>Response Locations</u>	
	Milton fire station locations are:	
	<ul style="list-style-type: none"> • 405 Steeles Avenue West; and • JSP between Main Street and Derry Road. 	
	Mississauga fire station locations are:	
	<ul style="list-style-type: none"> • Northeast quadrant of Highway 401 and Mavis Road, serving Mississauga Road to the Credit River; and • Derry Road east of Winston Churchill Boulevard, serving Winston Churchill to Mississauga Road. 	
	The area between Winston Churchill Boulevard and JSP is currently split between the Milton and Mississauga Fire Departments. A new Halton Hills station is planned.	
	G. Corram noted that for police services, the responders are mobile. Milton has a communication centre.	

<u>Items</u>	<u>Description</u>	<u>Action by:</u>
	<p>For collisions, Highway 401 in the vicinity of the scene is usually closed to traffic. When Highway 401 is closed, there is a cost to the Ontario economy. This applies to closure for collisions and for highway construction/rehabilitation.</p>	
	<p>Accident vehicles on Highway 401 in the vicinity of the truck inspection stations are moved to the truck inspection stations to reduce Highway 401 lane closure durations.</p>	
	<p>For the Trafalgar Road to the Credit River project, the first Public Information Centre is scheduled for March 21, 2011.</p>	
	<p>For the Trafalgar Road to RR 25 project, the second Public Information Centre is scheduled for March 22, 2011.</p>	

Submitted by: Karen Cooper

Distribution: Project Team



Minutes of Meeting

Project: Highway 401 – Trafalgar Road to RR25 Meeting No. 2
 Project No. WO 07-20024 Date: February 25, 2011
 Location: Town of Milton, 150 Mary St., 2nd Fl. Esquensing Room Time: 10:00 am
 Purpose: Municipal Meeting

Present:

<p><i>Municipal Representatives</i> Brian Hudson – Region of Halton Maureen VanRavens – Region of Halton Melissa Green-Battiston – Region of Halton Jeffrey Reid – Region of Halton Paul Cripps – Town of Milton Stephanie Jarvis – Town of Milton Ted Drewlo – Town of Halton Hills</p>	<p><i>Project Team</i> Rebecca Li - MTO Planning & Design Sarah Merriam - MTO Environmental Tim Sorochinsky - URS Project Manager Karen Cooper – URS Deputy Project Manager Tyler Drygas - URS Environmental</p>
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<u>Items</u>	<u>Description</u>	<u>Action by:</u>
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1 Introduction

Following brief introductions, T. Sorochinsky presented a series of powerpoint slides.

The second and final Public Information Centre for this study is scheduled for March 22, 2011 at the Milton Memorial Arena.

A correction was made to the meeting minutes for the meeting held on May 26th, 2010. On page 3 the fifth bullet should read, "...the H-P BATS corridor has not been assumed in the transportation system planning work undertaken as part of this assignment."

2 Summary of the Discussion

Transit

Milton Transit does not use Highway 401. S. Jarvis noted that a potential agreement between Mohawk Transit and Milton Transit for service between Guelph and RR 25 may be confirmed in the future.

R. Li inquired if the bus loop at the Trafalgar Road/Highway 401 interchange carpool lot is being used. Milton noted that when the GO

PLEASE NOTE: If your records of this meeting do not agree with this document, or if there are any omissions, please advise the URS Canada Inc. writer at once, otherwise the contents of this document shall be assumed accurate and correct.

<u>Items</u>	<u>Description</u>	<u>Action by:</u>
	<p>Transit station approximately south of Highway 401 on Trafalgar Road is constructed, the bus loop would likely be used by GO Transit, but not by Milton Transit.</p>	
	<p><i>Carpool Lots</i></p> <p>URS is currently confirming the future need to expand the carpool lots at the Trafalgar Road and RR25 interchanges.</p> <p>According to the 2007 MTO Carpool Lot study, the current number of spaces at the RR 25/Highway 401 and Trafalgar Road/Highway 401 carpool lots meet the future requirements to 2031. This study was completed prior to the approval of “Places to Grow”. T. Sorochinsky noted that limited expansion of the RR 25 carpool lot may be feasible, but since it is located inside the loop ramp, the number of additional spaces would be small (less than 50 spaces). The Trafalgar Road carpool lot could be expanded if additional property was acquired from the adjacent properties. MTO/URS will determine if there is justification for expansion of the lot, and will acquire the necessary property as part of this project.</p>	MTO/URS
	<p><i>Tremaine Interchange</i></p> <p>Construction of the Tremaine interchange is projected for completion in 2015-2016. This would be in advance of construction of the Highway 401 widening improvements, which have not yet been programmed for construction.</p> <p>T. Sorochinsky noted that the Highway 401 traffic analysis included a future interchange at Tremaine Road.</p> <p>Halton Region inquired why the Highway 401 study does not extend west of the Tremaine interchange. R. Li noted that the Tremaine interchange project is a separate undertaking by Halton Region, but MTO supports this project.</p> <p>J. Reid inquired if MTO would reconsider the Highway 401 lane configuration west of RR25 if the consultant for the Region established a need for more lanes. R. Li noted that this could be considered. The existing MTO ROW can accommodate a 10-lane Highway 401 cross section.</p>	
	<p><i>Proposed Cross Sections</i></p> <p>S. Jarvis noted that the GTA West project shows a 10-lane Highway 401 cross section through Milton. MTO noted that the Highway 401 team is coordinating with the GTA West team to produce a set of matching recommendations.</p> <p>Halton Region noted that regional planning currently underway includes six-lane cross sections at RR 25, Steeles Avenue, JSP and Trafalgar Road in the vicinity of Highway 401 for 2031. MTO will determine the property</p>	

<u>Items</u>	<u>Description</u>	<u>Action by:</u>
	<p>requirements to accommodate six lanes for RR 25 and Trafalgar Road. No improvements to the Steeles Avenue and JSP bridges are recommended as part of this project.</p> <p>T. Sorochinsky noted that the 4-lane bridge cross sections include speed change lanes for the loop ramps. In the future, these lanes can be converted to general purpose lanes, and the loop ramps could be accessed via direct tapers pending future traffic operation revisions. Halton Region noted that they would prefer 8-lane bridges (6 through lanes plus 2 SCLs) to preserve the speed change lane access to the loop ramps. T. Sorochinsky noted that this is not a common design, since it results in a very large bridge deck.</p> <p><i>Bike Lanes and Sidewalks</i></p> <p>Halton Region has a new mandate to promote active transportation.</p> <p>MTO requested municipal input regarding bridge cross sections. It was noted that there are no sidewalks or bike lanes on the existing RR 25, Sixth Line and Trafalgar Road bridges. Provisions for bike lanes and sidewalks on cross-section alternatives presented included the replacement bridges but it was noted that this would be subject to cost-sharing arrangements with the municipalities.</p> <p>Halton Region indicated that 1.8 m sidewalks and 1.8 m side clearances on both sides of the RR 25 and Trafalgar Road bridges are desirable to provide flexibility for the future sidewalks and bike lanes. Halton Region would like to see a 3 m wide multi-use trail along the Trafalgar Road. T. Sorochinsky noted that the standard MTO sidewalk width is 1.5 m. Halton Region indicated that this width should be increased to 1.8 m as per the Disabilities Act.</p> <p>Milton is not considering bike lanes on Sixth Line.</p> <p><i>Halton Region's Draft Transportation Master Plan</i></p> <p>Halton Region provided a map of the Transportation Master Plan, which is expected to be endorsed by Council in late May or early June 2011. The final PICs for this plan will be held in March 2011 (the Milton PIC is scheduled for March 7, 2011). The current approved Halton Region planning document (ROPA) was approved in 2009.</p> <p>A new mid-block crossing of Highway 401 (unofficially referred to as 5 ½ Line) and interchange between Fifth and Sixth Lines is identified in the Draft Plan. R. Li expressed concern regarding the interchange, since it has not been reviewed / approved by MTO. Halton Region noted that it has not completed any feasibility studies for this interchange. A TAC meeting to develop the rationale has been held. The meeting included MTO representatives. R. Li will obtain further information from these MTO participants. R. Li noted that MTO is still considering maintaining the</p>	<p>MTO MTO/Halton</p>

<u>Items</u>	<u>Description</u>	<u>Action by:</u>
	existing truck inspection stations within the study area, which are located in the area highlighted on the TMP for the mid-block crossing with interchange.	
	There is a potential need for a Highway 401 crossing at Third Line shown on the TMP.	
	Milton noted that the planned future cross section of Sixth line includes 4 lanes. This is not shown on the OP. URS will determine the ROW requirement to accommodate a 4-lane bridge and approaches.	URS
	It was noted that future planning for Trafalgar Road includes transit / HOV lanes in a 4+2 configuration. Various cross sections have been developed, but are not yet approved.	
	The Steeles Avenue widening to 4 lanes from Winston Churchill Blvd to JSP is in Detail Design. The design is approximately 60-80% complete. Halton Region will forward the design to URS when it is complete.	Halton
	P. Cripps noted that Milton is discussing a widening of Sixth Line to four lanes, but this is not approved yet.	
	<i>Review of Rollplan</i>	
	T. Sorochinsky presented a pdf of the study area rollplan on screen, with a focus on property requirements for the study.	
	T. Sorochinsky noted a requirement to relocate the weir in the northeast quadrant of the RR 25 interchange to accommodate the ultimate 10-lane widening.	
	P. Cripps noted that the property owners in the northwest quadrant may not be supportive of roadway improvements that encroach on their property.	
	T. Sorochinsky noted that the core-collector system will begin east of the JSP bridge, allowing the existing bridge to remain.	
	M. VanRavens noted that showing a dashed line for the proposed mid-block crossing on the rollplan is appropriate, as it recognizes municipal planning.	
	T. Sorochinsky noted that URS is developing refinements to the Sixth Line Crossing over Highway 401. It is anticipated that the bridge would be replaced at the same location.	
	<i>Drainage</i>	
	K. Cooper noted that planning for the future commercial developments adjacent to Highway 401 within Halton Hills includes a series of stormwater management ponds. The preliminary stormwater management ponds for the Highway 401 expansion are tentatively located south of Highway 401 in the vicinity of Fifth and Sixth Lines. The Halton Hills proposed stormwater management ponds are shown north of Highway 401, also in the vicinity of	

<u>Items</u>	<u>Description</u>	<u>Action by:</u>
	Fifth and Sixth Lines.	

Submitted by: Karen Cooper

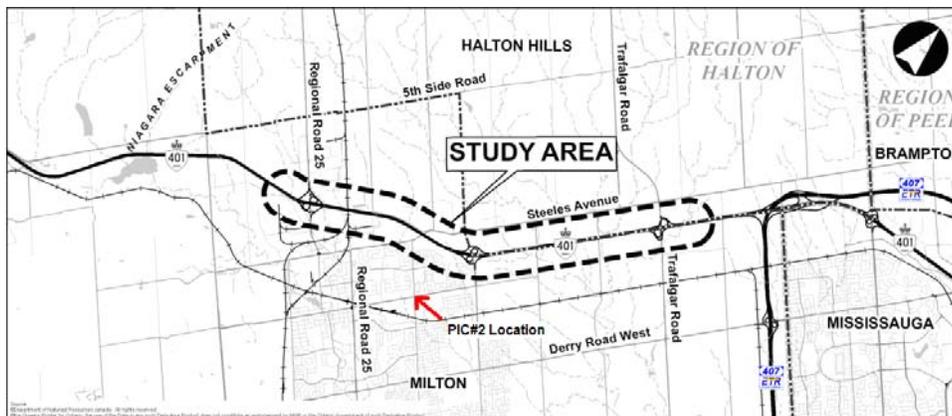
Distribution: Project Team

ONTARIO GOVERNMENT NOTICE NOTICE OF PUBLIC INFORMATION CENTRE #2

HIGHWAY 401 IMPROVEMENTS FROM TRAFALGAR ROAD TO REGIONAL ROAD 25 W.O. 07-20024

THE PROJECT

URS Canada Inc. was retained by the Ontario Ministry of Transportation (MTO) to undertake a Preliminary Design and Class Environmental Assessment Study for improvements to Highway 401 from Trafalgar Road to Regional Road 25 (9 km) in the Towns of Milton and Halton Hills, Region of Halton.



The purpose of this study has been to identify the interim and ultimate capacity and operational needs for this section of the Highway 401 corridor. The recommended improvements include widening this section of the Highway 401 corridor, incorporation of high occupancy vehicle (HOV) lanes and improvements to existing commuter parking lots. Structural, illumination, drainage and interchange modifications are also proposed as part of the recommended highway improvements.

THE PROCESS

This study has followed the approved environmental planning process for Group "B" projects under the *Class Environmental Assessment for Provincial Transportation Facilities (2000)*. A Transportation Environmental Study Report (TESR) will be prepared and made available for a 30-day public review period at the completion of the study which will document the transportation opportunities, the generation, assessment and evaluation of alternatives, the recommended plan, a summary of environmental issues and potential mitigation measures, and a summary of consultation undertaken throughout the study. Notice of TESR submission and public review period will be advertised in this newspaper and mailed to those on the project mailing list.

PUBLIC INFORMATION CENTRE

The public is invited to attend the second and the final round of Public Information Centres (PICs) for this study. The purpose of PIC#2 is to present and receive input on the preliminary design of the preferred alternatives and the proposed mitigation strategies to minimize potential environmental and community impacts. **PIC#2 will be held on:**

**Tuesday March 22, 2011
4:00 p.m. to 8:00 p.m.
A brief presentation will be given at 5:00 p.m. and 7:00 p.m.
Milton Memorial Arena – Milton Lions Club Hall
77 Thompson Road South, Milton**

This PIC will be an informal drop-in centre with a short presentation at 5:00 p.m. and 7:00 p.m. Representatives from the MTO and the project's consultant team will be available to answer questions, receive comments and discuss the next steps in this study. You are encouraged to attend the PIC and provide the Project Team with your views and comments on the recommended highway improvements so that they can be considered prior to study completion.

COMMENTS

To obtain additional information, provide comments, or to be placed on the study mailing list please contact the Project Team as follows:

Rebecca Li, P.Eng.
Project Manager
Ontario Ministry of Transportation
Central Region
Bldg 'D', 4th Flr, 1201 Wilson Ave
Downsview, ON M3M 1J8
Tel: 416-235-5271
Fax: 416-235-3576
rebecca.li@ontario.ca

Tim Sorochinsky, P.Eng.
Project Manager
URS Canada Inc.
75 Commerce Valley Dr E
Markham, ON L3T 7N9
Tel: 905-882-4401 ext. 522
Fax: 905-882-4399
tim_sorochinsky@urscorp.com

Tyler Drygas
Senior Environmental Planner
URS Canada Inc.
75 Commerce Valley Dr E
Markham, ON L3T 7N9
Tel: 905-882-4401 ext. 147
Fax: 905-882-4399
tyler_drygas@urscorp.com

The Project Document Sharing site which contains study documents is: <http://www.highway401milton.com>
The displays for PIC#2 will be available on the Project Document Sharing site after March 22, 2011.

There is an opportunity at any time during the study for interested persons to provide input to the Project Team including comments and information regarding the study. Comments are being collected to assist MTO in meeting the requirements of the *Environmental Assessment Act*. This material will be maintained on file for use during the study and may be included in project documentation. Information collected will be used in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

ABORIGINAL COMMUNITIES LETTER

**Ministry of
Transportation**

Highway Engineering
Peel / Halton
4th Floor, Bldg. D
1201 Wilson Avenue
Downsview, Ontario M3M 1J8
Tel: (416) 235-5271
Fax: (416) 235-3576
Email: rebecca.li@ontario.ca

**Ministère des
Transports**

Génie Routier
Peel et Halton
4e étage, édifice D
1201 avenue Wilson
Downsview, Ontario M3M 1J8
Tél: (416) 235-5271
Téléec: (416) 235-3576
E-mail: rebecca.li@ontario.ca



March 4, 2011

«Name»

«Organization»

«Address»

Dear «Greeting»:

**RE: Notice of Public Information Centre #2
Highway 401 Improvements from Trafalgar Road to Regional Road 25
Town of Milton, Town of Halton Hills, Region of Halton
W.O. 07-20024**

The Ontario Ministry of Transportation (MTO) retained URS Canada Inc. to undertake a Preliminary Design and Class Environmental Assessment Study for improvements to Highway 401 from Trafalgar Road to Regional Road 25 (9 km) in the Towns of Milton and Halton Hills, Region of Halton.

The purpose of this study has been to identify the interim and ultimate capacity and operational needs for this section of the Highway 401 corridor. The recommended improvements include widening this section of the Highway 401 corridor, incorporation of high occupancy vehicle (HOV) lanes and improvements to existing commuter parking lots. Structural, illumination, drainage and interchange modifications are also proposed as part of the recommended highway improvements.

This study has followed the approved environmental planning process for Group “B” projects under the *Class Environmental Assessment for Provincial Transportation Facilities (2000)*. A Transportation Environmental Study Report (TESR) will be prepared and made available for a 30-day public review period at the completion of the study. Notice of TESR submission will be advertised in the local newspapers and mailed to those on the project mailing list.

The purpose of this letter is to notify you that the second and the final round of Public Information Centres (PICs) has been scheduled. The purpose of PIC#2 is to present and receive input on the preliminary design of the preferred alternatives and the proposed mitigation strategies to minimize potential environmental and community impacts.

ABORIGINAL COMMUNITIES LETTER

This PIC will be an informal drop-in centre with a short presentation at 5:00 p.m. and 7:00 p.m. We are interested in any comments your community may have regarding the recommended highway improvements and would like to invite representatives from your community to view the plans prior to the commencement of the formal PIC#2 as part of our External Team on:

Tuesday March 22, 2011
3:00 p.m. to 4:00 p.m.
Milton Memorial Arena – Milton Lions Club Hall
77 Thompson Road South, Milton

Following the External Team session, PIC#2 will be held from 4:00 p.m. to 8:00 p.m. for members of the public. A brief presentation will be given by the Project Team at 5:00 p.m. and 7:00 p.m. to provide a study overview (refer to the enclosed “Notice of Public Information Centre #2”).

We would appreciate your posting of the attached brochure for members of your community to view.

If you would like to provide comments, or if you require further information regarding this study, please feel free to contact myself at 416-235-5271 or visit the Project Document Sharing site to access study documents: <http://www.highway401milton.com>. The displays for PIC#2 will be available on the Project Document Sharing site after March 22, 2011. In addition, if you are interested in meeting as a result of receiving this letter, please contact myself to arrange for a meeting at your earliest convenience.

Thank you for your cooperation and assistance.

Yours truly,

Ministry of Transportation



Rebecca Li, P. Eng
MTO Project Manager

Cc. G. Ivanoff - MTO Environmental Planner
S. DeDecker - MTO Regional Archaeologist
T. Sorochinsky - URS Project Manager
T. Drygas - URS Environmental Planner

Encl. Notice of Public Information Centre #2

EXTERNAL LETTER

March 4, 2011

«Name»
«Organization»
«Address»

Dear «Greeting»:

**RE: Notice of Public Information Centre #2
Highway 401 Improvements from Trafalgar Road to Regional Road 25
Town of Milton, Town of Halton Hills, Region of Halton
W.O. 07-20024**

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This study has followed the approved environmental planning process for Group “B” projects under the *Class Environmental Assessment for Provincial Transportation Facilities (2000)*. A Transportation Environmental Study Report (TESR) will be prepared and made available for a 30-day public review period at the completion of the study. Notice of TESR submission will be advertised in the local newspapers and mailed to those on the project mailing list.

The purpose of this letter is to notify you that the second and the final round of Public Information Centres (PICs) has been scheduled. The purpose of PIC#2 is to present and receive input on the preliminary design of the preferred alternatives and the proposed mitigation strategies to minimize potential environmental and community impacts.

This PIC will be an informal drop-in centre with a short presentation at 5:00 p.m. and 7:00 p.m. Representatives from the MTO and the project’s consultant team will be available to answer questions, receive comments and discuss the next steps in this study.

Prior to the official commencement of this PIC, the Project Team has made arrangements for members of the External Team to view the displays. Your organization is invited to attend the session on:

**Tuesday March 22, 2011
3:00 p.m. to 4:00 p.m.
Milton Memorial Arena – Milton Lions Club Hall
77 Thompson Road South, Milton**

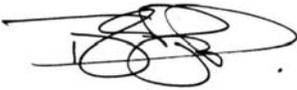
You are encouraged to attend the External Team Meeting and to provide us with your views and comments on the recommended highway improvements so that they can be considered prior to study completion. Following the External Team session, PIC#2 will be held from 4:00 p.m. to 8:00 p.m. A brief presentation will be given by the Project Team at 5:00 p.m. and 7:00 p.m. to provide a study overview (refer to the enclosed "Notice of Public Information Centre #2").

Comments are being collected to assist MTO in meeting the requirements of the *Environmental Assessment Act*. This material will be maintained on file for use during the study and may be included in project documentation. Information collected will be used in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

If you would like to provide comments, or if you require further information regarding this study, please feel free to contact the undersigned at 905-882-4401 ext. 147 or visit the Project Document Sharing site to access study documents: <http://highway401milton.com>. The displays for PIC#2 will be available on the Project Document Sharing site after March 22, 2011.

Thank you for your cooperation and assistance.

Yours truly,
URS Canada Inc.



Tyler Drygas
Consultant Senior Environmental Planner

Cc. R. Li - Ministry of Transportation Project Manager
G. Ivanoff - Ministry of Transportation Environmental Planner
T. Sorochinsky - URS Project Manager

Encl. Notice of Public Information Centre #2

PUBLIC LETTER

March 4, 2011

«Name»

«Organization»

«Address»

Dear «Greeting»:

**RE: Notice of Public Information Centre #2
Highway 401 Improvements from Trafalgar Road to Regional Road 25
Town of Milton, Town of Halton Hills, Region of Halton
W.O. 07-20024**

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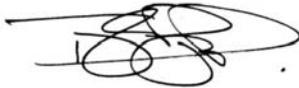
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Thank you for your cooperation and assistance.

Yours truly,
URS Canada Inc.



Tyler Drygas
Consultant Senior Environmental Planner

Cc. R. Li - Ministry of Transportation Project Manager
G. Ivanoff - Ministry of Transportation Environmental Planner
T. Sorochinsky - URS Project Manager

Encl. Notice of Public Information Centre #2

URS

Attn: Tyler Drygas

March 4, 2011

~~John Pereira~~

Christine Barber
Manager, Operations
Halton Region EMS
1179 Bronte Road
Oakville, ON L6M 4G3

Would you please
update your
mailing list.
Thank-you.

Dear ~~Mr. Pereira~~:

**RE: Notice of Public Information Centre #2
Highway 401 Improvements from Trafalgar Road to Regional Road 25
Town of Milton, Town of Halton Hills, Region of Halton
W.O. 07-20024**

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URS Canada Inc.
75 Commerce Valley Drive East
Markham, ON Canada L3T 7N9
Tel: 905.882.4401
Fax: 905.882.4399
www.urs.ca



Chippewas of RAMA
First Nation

5884 Rama Road, Suite 200

Rama, Ontario L0K 1T0

T 705.325.3611 F 705.325.0879

A Proud Progressive First Nation Community

March 14, 2011

RECEIVED

Ministry of Transportation
Highway Engineering
Peel/Halton
4th Floor, Bldg. D
1201 Wilson Avenue
Downsview, ON M3M 1J8

MAR 23 2011

MTO-CENTRAL REGION
PLANNING & DESIGN
ENGINEERING SECTION

Attention: Rebecca Li, MTO Project Manager

**Re: Notice of Public Information Centre #2
Highway 401 Improvements from Trafalgar Road to Regional Road 25
Town of Milton, Town of Halton Hills, Region of Halton
W.O. 07-20024 and W.O. 07-20021**

Dear Ms. Li:

As a member of the Williams Treaties First Nations, Rama First Nation acknowledges receipt of your letters of March 4, 2011, which was received on March 10, 2011.

A copy of your letter has been forwarded to Karry Sandy-McKenzie, Barrister & Solicitor, Coordinator for Williams Treaties First Nations for further review and response directly to you. Please direct all future correspondence and inquiries, with a copy to Rama First Nation, to Ms. Sandy-McKenzie at 8 Creswick Court, Barrie, ON L4M 2J7 or her e-mail address at k.a.sandy-mckenzie@rogers.com. Her telephone number is (705) 792-5087.

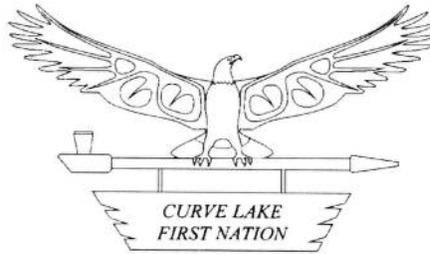
We appreciate your taking the time to share this important information with us.

Sincerely,

Chief Sharon Stinson Henry

c: Council, Rama First Nation
Jeff Hewitt, General Counsel
Karry Sandy-McKenzie, Coordinator Williams Treaties First Nations
Chief Roland Monague Portfolio Chief for Williams Treaties Nations

GOVERNMENT SERVICES BUILDING
AND CULTURAL CENTRE



PHONE (705) 657-8045
FAX (705) 657-8708

RECEIVED

APR 15 2011

CURVE LAKE, ONTARIO K0L 1R0

April 12, 2011
MTO-CENTRAL
PLANNING & DESIGN
ENGINEERING SECTION
Rebecca Li
Ministry of Transportation
1201 Wilson Avenue
Downsview Ontario M3M 1J8

Dear Rebecca Li,

Re: Notice of Study Commencement - Hwy 401 Improvements - Trafalgar Road to RR. 25 (W.O.07-20024)

We would like to acknowledge receipt of your correspondence dated January 18th, 2010 regarding the above noted project.

As you may be aware, the area in which your project is proposed is situated within the Traditional Territory of Curve Lake First Nation. Our First Nation's Territory is incorporated within the Williams Treaty Territory and is the subject of a claim under Canada's Specific Claims Policy. We strongly suggest that you provide Karry Sandy-Mackenzie, Williams Treaty First Nation Claims Coordinator with a copy of your proposal as your obligation to consult to also extend to the other First Nations of the Williams Treaty.

Although we have not conducted exhaustive research nor have we the resources to do so, Curve Lake First Nation Council is not currently aware of any issues that would cause concern with respect to our Traditional, Aboriginal and Treaty rights.

Please note that we have particular concern for the remains of our ancestors. Should excavation unearth bones, remains or other such evidence of a native burial site or any Archaeological findings, we must be notified without delay. In the case of a burial site, Council reminds you of your obligations under the *Cemeteries Act* to notify the nearest First Nation Government or other community of Aboriginal people which is willing to act as a representative and whose members have a close cultural affinity to the interred person. As I am sure you are aware, the regulations further state that the representative is needed before the remains and associated artifacts can be removed. Should such a find occur, we request that you contact our First Nation immediately.

If any new, undisclosed or unforeseen issues should arise, that has potential for anticipated negative environmental impacts or anticipated impacts on our Treaty and Aboriginal rights we require that we be notified regarding these as well.

Thank you for recognizing the importance of consultation and respecting your duty to consult obligations as determined by the Supreme Court of Canada.

Should you have further questions, please feel free to contact me.

Yours sincerely,

Chief Keith Knott
Curve Lake First Nation
(705)657-8045



PROTECTING THE NATURAL ENVIRONMENT FROM LAKE TO ESCARPMENT

2596 Britannia Road West
Burlington ON L7P 0G3
905.336.1158 Fax 905.336.7014
conservationhalton.ca



April 29, 2011

Mr. Tim Sorochinsky
URS Canada Inc.
75 Commerce Valley Drive East
Markham, ON
L3T 7N9

Dear Mr. Sorochinsky:

Re: Highway 401 Improvements from Trafalgar Road to Regional Road 25
Class EA
Public Information Centre #2 Materials
CH File: PPR 141

Staff of Conservation Halton were not able to attend the second PIC however, we have had an opportunity to review the PIC materials. Please note that the comments in our letters of March 23, 2010 and July 23, 2010 remain valid and should be reviewed in conjunction with the following comments.

It would be helpful if additional detail on the decisions behind the rankings were provided. Staff note for instance, that the alternative ranking evaluation for Regional Road 25, which included alternatives that would require substantial modifications to sensitive environmental areas, including the known habitat of an endangered fish species (reidside dace), did not provide any reference to how the 'natural environment' had been ranked.

In addition to the noted crossings of the West, Middle, and East Branches of Sixteen Mile Creek (at the Regional Road 25 interchange, east of Fifth and Sixth Lines, and Trafalgar Road respectively), there are also three regulated watercourse crossings between Regional Road 25 and James Snow Parkway, and one other crossing immediately west of 5th Line. Please ensure that the Transportation Environmental Study Report evaluates and discusses the flooding and erosion impacts that will result from proposed road widening, bridge replacement, and culvert lengthening in these areas.

The proposed road widening will fill in approximately 200 m of existing channel for a regulated tributary of Sixth Line, which flows along the base of the existing embankment on the northern side of the highway for approximately 200 m before it's confluence with the Middle Branch of Sixteen Mile Creek. Please include a hydraulic, hydrogeologic and geomorphologic review of this stretch of existing channel, and present this information along with the revised design in the TESR. Please note that Conservation Halton would not be supportive of piping this watercourse, and request that it remain an open feature on the landscape.



Staff offer the following guidance, both with respect to the above identified channel relocation, as well as for channel adjustments required to accommodate interchange modifications (anticipated for both the Trafalgar Road and Regional Road 25 interchanges), bridge/culvert replacements and lengthening:

- A review/update of hydrologic conditions should be undertaken to ensure consideration of accurate flows under all design storms, including regulatory conditions.
- A geomorphologic assessment should be completed for the existing watercourse, documenting bankfull width, planform, profile, thalweg, meanderbelt width, geomorphic regime, 100 year erosion rate, and in-stream habitat through photos, measurements and calculations.
- The geomorphic impacts of the proposed design must also be evaluated, to confirm that the proposed design will maintain/improve geomorphic functions. The geomorphic review should minimally ensure that:
 - the design will not cause scour and erosion downstream, or result in excessive backwater and aggregation upstream,
 - channel morphology and substrate are appropriately sized, and
 - any required channel erosion protection measures are appropriate.
- The TSER and detailed design should provide a statement from the geomorphologist identifying that these issues were considered and that the design is suitable from a geomorphologic perspective. New crossings should be designed to minimally span the bankfull channel, however consideration of the 100 year erosion rate should also be considered, and where feasible staff encourage structures be designed to span the meanderbelt width.
- A hydraulic analysis of the proposed channel should be provided, demonstrating that the proposed/modified structures will not negatively impact flooding and erosion on up and downstream properties under the full range of design storms, (i.e. 1:2 year through to 1:100 year), and the Regional Storm (Hurricane Hazel). Ideally, the analysis should demonstrate no loss of natural floodplain storage under the regulatory storm (i.e. the greater of the 1:100 year or Regional storm event), however it is recognized that this is not feasible when widening a road within the floodplain, and so we ask that efforts be made to minimize the loss of floodplain storage within the regulatory floodplain. Particular attention should be paid to floodplain impacts at the east branch crossing, as it appears that the southerly east-bound on-ramp from Trafalgar Road will require substantial filling of the valley feature. Efforts should be made to minimize the amount of filling through the use of retaining walls.
- A hydrogeologic evaluation should be included as a component of the geotechnical evaluation. For channel modifications, the hydrogeologic evaluation should identify whether groundwater is currently being discharged or recharged along the impacted reach, and should the reach be a 'gaining' reach, design recommendations should be provided to ensure equivalent groundwater discharge into the re-aligned channel will be maintained. For other construction projects, the TESR should evaluate whether or not the proposed construction will have a temporary or permanent impact on groundwater levels and discharges. Please note that the Halton Region's "Aquifer Management Plan" has identified a thick buried sand and gravel layer that generally runs immediately north of

Highway 401. This layer was found to be under substantial artesian pressure in the Hornby area (Steeles Avenue and Trafalgar Road) and may impact construction. The TESR report should include a hydro-geotechnical component for all works along the Highway 401 corridor, however particular consideration should be given to works at the Regional Road 25 interchange, as well as immediately east of the crossing of the Middle Branch of the Sixteen Mile Creek (where Hornby Road would cross Highway 401, if the road were extended). The "Aquifer Management Plan" has identified the sand and gravel layer as extending to the highway in these areas.

- A geotechnical review of proposed works on the long term stable slopes associated with the valley features for the West, Middle and East Branches of Sixteen Mile Creek should be included, however particular attention should be given to works at the East Branch, where the proposed alignment for the southerly east bound on-ramp from Trafalgar Road appears to cut through a ravine feature and the valley wall.

Please give consideration to floodplain issues when redesigning the Fifth and Sixth Line Structures, as both of these structures lie within the regulatory floodplain associated with Sixteen Mile Creek.

Staff appreciate the MTO's inclusion of stormwater management ponds to limit flooding and erosion potential due to the increased pavement and provide opportunities for water quality improvements. Staff offer the following comments on the proposed siting of the stormwater management ponds:

The pond west of Fifth Line appears to be located within close proximity to a regulated wetland feature. Please incorporate a hydrologic/hydrogeologic investigation as part of the TSER material to confirm that the proposed stormwater management pond location will not have a negative impact on either the wetland or adjacent watercourse. Also please complete a geomorphologic assessment of the adjacent watercourse to ensure that the stormwater management pond has been sited appropriately back from the unconfined reach of the adjacent watercourse.

With respect to the proposed stormwater management pond west of Sixth Line, please review Regulatory floodplain mapping (available from Conservation Halton) prior to finalizing the preliminary design for this facility to ensure that the pond is located outside of the regulatory floodplain.

As per Conservation Halton's March 23, 2010 letter, we continue to highlight that Highway 401 is a major barrier to the north-south movement of plants and terrestrial wildlife. As such, any rehabilitation or replacement of structures should investigate the feasibility of improving wildlife passage. North-south migration routes are particularly important to plants and wildlife in the face of climate change. This is consistent with Section 5: Wildlife Habitats and Movement, Table 5.2.1 of the MTO Environmental Standards and Practices User Guide (2006). We recommend that this be considered when developing the EA study and the feasibility of such investigated prior to the subsequent detailed design so that budgets can be adjusted accordingly.

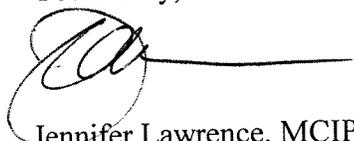
Section 4: Woodlands, Table 5.1.1 of the MTO Environmental Standards and Practices User Guide (2006), recommends that “any restoration of terrestrial ecological features shall utilize ecological restoration principles where the right-of-way crosses or is adjacent to significant wildlife habitats, woodlots, woodlands and /or valley lands (as per the Environmental Protection Requirements)”. In addition the associated checklist for this section indicates that an Environmental Protection Requirement includes “Maintain the diversity of native vegetation in an area and natural connections between them” (VEG-3). Based on the above, staff continue to recommend that only locally native, non-invasive species suitable for the site’s conditions be proposed in areas adjacent to or within the Natural Heritage System. We request that this be a commitment of the EA especially for lands adjacent to the Sixteen Mile Creek Valley. Conservation Halton’s Landscaping and Tree Preservation Plan guidelines and associated appendices (available online at: <http://www.conservationhalton.on.ca/ShowCategory.cfm?subCatID=898>) should be consulted for further assistance in this regard.

Staff request that all field data sheets be included for review as an appendix of the EA document.

Finally, staff will provide further comments relating to the natural environment once the draft EA document is submitted for review. Conservation Halton requests the opportunity to review and comment on the TESR.

We trust the above is of assistance. If you require additional information, please contact the undersigned at extension 266.

Yours truly,



Jennifer Lawrence, MCIP, RPP
Manager, Environmental Planning

cc: Mr. Chris Mills, Town of Halton Hills, email
Mr. Paul Cripps, Town of Milton, email
Mr. Brian Hudson, Region of Halton, email
Mr. Geza Gaspardy, Region of Halton, email
Ms Shelley Partridge, Region of Halton, email
Ms Rebecca Li, MTO, Building D, 4th Floor, 1201 Wilson Ave., Downsview
M3M 1J8



July 18, 2011

Jennifer Lawrence, MCIP, RPP
Conservation Halton
2596 Britannia Road West
Burlington, ON L7P 0G3

Dear Ms. Lawrence:

**RE: Highway 401 Improvements from Trafalgar Road to Regional Road 25
Town of Milton, Town of Halton Hills, Halton Region
W.O. 07-20024**

On behalf of the Highway 401 Improvements from Trafalgar Road to Regional Road 25 Project Team, thank you for taking the time to provide your input regarding the above noted project.

The Project Team has prepared a comment response matrix based on your letter dated April 29, 2011. Please see below for the comment response matrix.

Comment	Response
It would be helpful if additional detail on the decisions behind the rankings were provided.	<p>With respect to Conservation Halton's question regarding how the natural environment was ranked, the Project Team developed a set of evaluation criteria to assess the potential impacts each alternative has on the natural environment, including terrestrial habitat, fisheries and aquatic habitat, wetlands, designated natural areas, surface water and groundwater, and Species At Risk. The ranking for each category was determined based on input received during and subsequent to PIC #1 and the Project Team's expertise.</p> <p>The Project Team acknowledges that an unnamed tributary of the West Branch of Sixteen Mile Creek (south of Highway 401 at Regional Road 25) is an occupied reach for Redside Dace. All three alternatives at this interchange would have no direct impacts to this tributary. However, highway widening will require culvert extensions at these watercourses.</p>

URS Canada Inc.
75 Commerce Valley Drive East
Markham, ON Canada L3T 7N9
Tel: 905.882.4401
Fax: 905.882.4399
www.urs.ca

Comment	Response
Please ensure that the TESR evaluates and discusses the flooding and erosion impacts that will result from proposed road widening, bridge replacement, and culver lengthening within the study area.	The results of the assessment of flooding and erosion impacts associated with the recommended plan will be documented in the TESR.
<p>Please include a hydraulic, hydrogeologic and geomorphologic review of this stretch of existing channel, and present this information along with the revised design in the TESR.</p> <p>Please note that Conservation Halton would not be supportive of piping a regulated tributary of Sixth Line, which flows along the base of the existing embankment on the northern side of the highway for approximately 200 m before it is confluence with the Middle Branch of Sixteen Mile Creek.</p>	<p>A hydraulic and geomorphologic review and design for the relocation of Hornby Creek will be completed and documented in the TESR, and will include commitments to future work (if necessary) during Detail Design.</p> <p>It is noted that the proposed realigned watercourse will be based on a natural channel design.</p>
A review / update of hydrologic conditions should be undertaken to ensure consideration of accurate flows under all design storms, including regulatory conditions.	The available information has been reviewed and flows for culverts updated. A request was sent to Conservation Halton to confirm the flows of HEC-2 models provided for the Hornby Creek and Middle Branch of Sixteen Mile Creek and their confluence at the Hwy 401 bridge crossing.
A geomorphologic assessment should be completed for the existing watercourse, documenting bankfull width, planform, profile, thalweg, meanderbelt width, geomorphic regime, 100 year erosion rate, and in-stream habitat through photos, measurements and calculations.	MTO will commit to a geomorphologic assessment during the Detail Design stage of this project.
<p>The geomorphic impacts of the proposed design must also be evaluated, to confirm that the proposed design will maintain / improve geomorphic functions. The geomorphic review should minimally ensure that:</p> <ul style="list-style-type: none"> • The design will not cause scour and erosion downstream, or result in excessive backwater and aggregation upstream; • Channel morphology and substrate are appropriately sized; and • Any required channel erosion protection measures are appropriate. 	<p>MTO will commit to a geomorphologic assessment during the Detail Design stage of this project. It is noted that the geomorphic and hydraulic design of the watercourse will be focused on maintaining the existing characteristics of the stream system.</p> <p>The level of work regarding fluvial geomorphology (at Preliminary Design) will be of sufficient accuracy to confirm the amount of land required to accommodate the proposed roadway improvements. Specific details of the channel would be established at the Detail Design stage.</p>
The TESR and detailed design should provide a statement from the geomorphologist identifying that these issues were considered and that the design is suitable from a geomorphologic	The only issue identified at present is the relocation of Hornby Creek and the requirement for a fluvial geomorphologist to assist with the design. It is expected that no other modifications will require

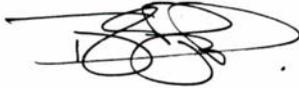
Comment	Response
<p>perspective.</p> <p>New crossings should be designed to minimally span the bankfull channel, however consideration of the 100 year erosion rate should also be considered, and where feasible staff encourage structures be designed to span the meanderbelt width.</p>	<p>input of a fluvial geomorphologist. MTO will commit to a geomorphologic assessment during the Detail Design stage of this project.</p>
<p>A hydraulic analysis of the proposed channel should be provided, demonstrating that the proposed / modified structures will not negatively impact flooding and erosion on up and downstream properties under the full range of design storms and the Regional Storm.</p> <p>Conservation Halton asks that efforts be made to minimize the loss of floodplain storage within the regulatory floodplain and the amount of filling through the use of retaining walls.</p> <p>Particular attention should be paid to floodplain impacts at the east branch crossing, as it appears that the southerly EB on-ramp from Trafalgar Road will require substantial filling of the valley feature.</p>	<p>A hydraulic analysis will be provided to assess the impacts of realignment of Hornby Creek on water levels and velocities; and extension / modification of the existing crossings. CH has been requested to provide full range of flows at the Hornby Creek and crossing under the Hwy 401.</p> <p>The analysis will also consider maintaining riparian storage under existing and proposed conditions for the Hornby Creek realignment.</p> <p>URS is looking into re-adjusting the curve of the EB on-ramp at the Trafalgar Road interchange to minimize the impact on the adjacent valley feature.</p>
<p>A hydrogeologic evaluation should be included as a component of the geotechnical evaluation.</p> <p>For channel modifications, the hydrogeologic evaluation should identify whether groundwater is currently being discharged or recharged along the impacted reach, and should the reach be a ‘gaining’ reach, design recommendations should be provided to ensure equivalent groundwater discharge into the re-aligned channel will be maintained.</p> <p>For other construction projects, the TESR should evaluate whether or not the proposed construction will have a temporary or permanent impact on groundwater levels and discharges.</p> <p>Please note that the Halton Region’s “Aquifer Management Plan” has identified a thick buried sand and gravel layer that generally runs immediately north of Highway 401.</p>	<p>The Project Team had conducted a groundwater conditions overview study. Further groundwater investigations will be undertaken in concert with geotechnical investigations during Detail Design based on any commitments outlined in the TESR.</p> <p>As mentioned earlier, the TESR will document the transportation opportunities, the generation, assessment and evaluation of alternatives, the recommended plan, a summary of environmental issues and potential mitigation measures, and a summary of consultation undertaken throughout the study.</p>

Comment	Response
<p>The TESR should include a hydro-geotechnical component for all works along the Highway 401 corridor. Particular consideration should be given to works at the Regional Road 25 interchange, as well as immediately east of the crossing of the Middle Branch of the Sixteen Mile Creek.</p>	
<p>Please give consideration to floodplain issues when redesigning the Fifth and Sixth Line structures, as both of these structures lie within the regulatory floodplain associated with Sixteen Mile Creek.</p>	<p>URS structural design team will take the floodplain issues into consideration when designing the Fifth and Sixth Line structures and carefully design the size and elevation of new foundations in consideration of floodplain conditions.</p>
<p>The stormwater management pond west of Fifth Line appears to be located within close proximity to a regulated wetland feature. Please incorporate a hydrologic / hydrogeologic investigation as part of the TESR material to confirm that the proposed stormwater management pond location will not have a negative impact on either the wetland or adjacent watercourse.</p> <p>Please complete a geomorphologic assessment of the adjacent watercourse to ensure that the stormwater management has been sited appropriately back from the unconfined reach of the adjacent watercourse.</p>	<p>The property limit for stormwater management pond west of Fifth Line includes a 15m buffer from the grading and the property limit is 30m away in the east and 40m in the south from the regulated wetland feature. A hydrologic / hydrogeologic investigation will be completed at the Detail Design stage.</p> <p>The location of top of stable slope is shown on the new drainage plans. The property limit setback from the top of stable slope is approximately 60m.</p>
<p>With respect to the proposed stormwater management pond west of Sixth Line, please review Regulatory floodplain mapping prior to finalizing the preliminary design for this facility to ensure that the pond is located outside of the regulatory floodplain.</p>	<p>The new drainage plan shows the floodplain and top of stable slope. The property limit of the pond is 10m setback from the top of stable slope of the Branch of Middle Sixteen Mile Creek Tributary.</p>
<p>To investigate the feasibility of improving wildlife passage.</p>	<p>The Project Team recognizes the importance of Sixteen Mile Creek as a regional linkage for wildlife in the area. Wildlife crossing will be maintained by bridge / culvert widening and opportunities for enhanced wildlife crossings at these locations will be examined further as we further develop the preliminary design of the recommended plan.</p>
<p>Conservation Halton recommends that only local native, non-invasive species suitable for the site's conditions be proposed in areas adjacent to or within the Natural Heritage System.</p>	<p>The Project Team has noted Conservation Halton's request. A detailed re-vegetation plan will be developed at the detail design stage to rehabilitate the disturbed area.</p>

Comment	Response
Conservation Halton requests that this be a commitment of the EA especially for lands adjacent to the Sixteen Mile Creek Valley.	
Conservation Halton requests the opportunity to review and comment on the TESR.	Conservation Halton will have an opportunity to review the TESR.

Should you have any questions or require further information regarding this study, please feel free to contact me at 905-882-4401 ext. 147.

Yours truly,
URS Canada Inc.



Tyler Drygas
 Consultant Senior Environmental Planner

Cc. R. Li - Ministry of Transportation Project Manager
 G. Ivanoff - Ministry of Transportation Environmental Planner
 T. Sorochinsky - URS Project Manager



HIAWATHA FIRST NATION
123 Paudash Street
Hiawatha On. K0L2G0

Chief:	Sandra Moore
Councillor:	Jill Smith
Councillor:	Duane Cowie
Councillor:	Lorne Paudash
Councillor:	Donald Paudash

Date: May 2, 2011

Ontario Ministry of Transportation

Dear Rebecca Li:

Thank you for your consultation request to Hiawatha First Nation regarding the "improvement to Highway 401" which is being proposed within Hiawatha First Nations' Traditional and Treaty Territories. Hiawatha First Nation appreciates the fact that The Ministry of Transportation recognizes the importance of First Nations Consultation and that your office is conforming to the requirements within the Duty to Consult Process.

As per the Hiawatha First Nation Consultation Protocol, your proposed project is deemed, having minimal potential to impact Hiawatha First Nations' rights at this time, however, please keep us apprised of any updates, archaeological findings, and/ or of any environmental impacts, should any occur. We can be contacted at the mailing address above or electronically via email, at the email address below.

In good faith and respect,

Lori Ritter and Diane Sheridan
Land Resource Workers
Hiawatha First Nation

hfnconsultation@nexicom.net
Tele: (705) 295 4421
Fax: (705) 295-7144

RECEIVED

MAY 13 2011

**MTO-CENTRAL REGION
PLANNING & DESIGN
ENGINEERING SECTION**

Ministry of the Environment

Central Region
Technical Support Section

5775 Yonge Street, 8th Floor
North York, Ontario M2M 4J1

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Ministère de l'Environnement

Région du Centre
Section d'appui technique

5775, rue Yonge, 8^{ième} étage
North York, Ontario M2M 4J1

Tél. : (416) 326-6700
Télééc. : (416) 325-6347



June 24, 2011

File: EA 02-03-05

Joanne Wang, Environmental Planner
URS Canada Inc.
75 Commerce Valley Drive East
Markham, ON L3T 7N9

**RE: Technical Support Section Comments
Highway 401 Widening from Trafalgar Road to Regional Road 25
Class Environmental Assessment
Halton Region
Air Quality Assessment**

Dear Ms. Wang,

The Air Quality Assessment Report for the Highway 401 Widening from Trafalgar Road to Regional Road 25 project has been reviewed. The Air Quality Assessment Report has been provided in support of the Preliminary Design and Class Environmental Assessment Study for the above-mentioned project.

We offer the following comments to assist your project team at this time:

- The cumulative PM₁₀ impacts at the most impacted receptors (R1, R8, R11 and R32) will be exceeding the criteria of 50 ug/m³. It is recommended that a commitment be made in the Environmental Assessment document that coniferous trees will be planted to act as a barrier for particulate emissions as discussed in Section 8.5.
- The Executive Summary and Section 1, "Introduction", should be revised to include the existing total number of lanes for the study area along the Highway 401.
- It is recommended that current conditions (Base Case) are assessed in relation to future build in order to address public concerns about air quality impacts for the future build scenario.
- The air quality impacts at sensitive receptors included a total of 33 discrete receptors. Based on a cursory review of the study area, it is recommended that impacts at the following sensitive receptors be addressed:

1. Residential house South Highway 401 and 6th line (approximately 100 m away)
 2. Maplehurst Correctional Centre (South of Highway 401 and Regional Road 25)
- In Section 2, please explain why the perpendicular lines were set at the two specific locations; that is, one was set north from Highway 401 towards the hamlet of Hornby and the second was set south from Highway 401 at James Snow Parkway in the Town of Milton. In addition, please clarify why the second perpendicular set of receptors was not situated closer to the intersection of James Snow Parkway and Highway 401.
 - Information to support the statement that the emissions from the 2 commuter parking lots and 2 MTO truck inspection stations are negligible should be included in Section 3 of the Air Quality Assessment Report.
 - In Ontario, the average heavy duty vehicles distribution in roads is approximately 8%. In this study, the average vehicle emission rates (2021 & 2031) presented in Table 3.1 was based on 6.3% Heavy Duty Vehicles (HDV) distribution. Please provide explanation as to why such low percentage was used when URS data for the study data presented in Appendix B (Table B2) shows 8.7% HDV distribution.
 - In Section 7.1, the following statement should be revised: "Highway 401 widening project would be considered as a rural unrestricted roadway with speeds of 60-100 km/hr". Please revise this statement to indicate that a portion of the corridor, located in Milton, is more of a sub-urban setting than rural. It is also likely that future development in the area will result in conversion of the rural portion of the corridor (agricultural lands around Trafalgar Road and Highway 401) to sub-urban portions by 2021/2031.
 - In Section 7.2, please explain why the rural dispersion coefficient as noted in Table B-4 was used in this study versus the urban dispersion coefficient. In addition, please clarify why the surface roughness was set at 75 cm, and whether this was based on a weighted average for the different land uses present. It is recommended that the proponent use aersurface parameters for future transportation studies, as these are the most recent guidance from USEPA (Table A-3, EPA-454/B-08-001, and January 2008).
 - It is recommended that the proponent clarify in Note 2 under Table 8.2 if the 8-hour CO is based on a running average.
 - The CD which includes the modeling input and output files in Appendix D was not attached.
 - In addition to the list provided in Section 8.6, "Emissions During the Construction Phase", proper maintenance for construction vehicle equipment should be added.

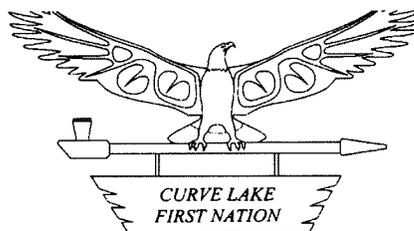
- Section 7.1 explains the source of traffic mix data used in the estimation of tailpipe emissions. However, based on Table B2 in Appendix B, it is not clear how the RWDI distribution was developed. Please provide an explanation in Section 7.1 and add a note to Table B2 to clarify which distribution was used in this study.
- It is not clear why 0.015 g/m² silt loading (limited access) was selected for Index no. 1,2,4 and 8. It is recommended that the proponent provide the description for the Index column on Table B7c. The same applies to Table B7a.
- It is recommended that a note be added to Table B7c to explain why a silt loading for limited access road (0.015 g/m²) was selected for certain segments.
- PM_{2.5} emission factors on Table B8 for both 2021 and 2031 scenarios are larger than PM₁₀. Please revise Table B8 to correct this error.

The above clarifications and comments should be addressed in an addendum or a response table. Should you or any members of your project team have any questions regarding the above, please contact Marinha Antunes at 416-326-3526.

Yours sincerely,

Dan Minkin
Environmental Resource Planner and EA Coordinator
Air, Pesticides and Environmental Planning

- c. Tina Dufresne, Halton Peel District Office, MOE
Central Region EA File
A & P File



CURVE LAKE, ONTARIO K0L 1R0

July 6th, 2011

Rebecca Li
Building D, 4th Floor, 1201 Wilson Ave.
Downsview, Ontario M3M 1J8

Dear Rebecca Li,

RE: Notice Of Public Information Centre #2 W.O. 07-20024

We would like to acknowledge receipt of your correspondence dated 3/4/2011 regarding the above noted project.

As you may be aware, the area in which your project is proposed is situated within the Traditional Territory of Curve Lake First Nation. Our First Nation's Territory is incorporated within the Williams Treaty Territory and is the subject of a claim under Canada's Specific Claims Policy. We strongly suggest that you provide Karry Sandy-Mackenzie, Williams Treaty First Nation Claims Coordinator, 8 Creswick Court, Barrie, ON L4M 2S7, with a copy of your proposal as your obligation to consult to also extend to the other First Nations of the Williams Treaty.

Although we have not conducted exhaustive research nor have we the resources to do so, Curve Lake First Nation Council is not currently aware of any issues that would cause concern with respect to our Traditional, Aboriginal and Treaty rights.

Please note that we have particular concern for the remains of our ancestors. Should excavation unearth bones, remains or other such evidence of a native burial site or any Archaeological findings, we must be notified without delay. In the case of a burial site, Council reminds you of your obligations under the *Cemeteries Act* to notify the nearest First Nation Government or other community of Aboriginal people which is willing to act as a representative and whose members have a close cultural affinity to the interred person. As I am sure you are aware, the regulations further state that the representative is needed before the remains and associated artifacts can be removed. Should such a find occur, we request that you contact our First Nation immediately.

If any new, undisclosed or unforeseen issues should arise, that has potential for anticipated negative environmental impacts or anticipated impacts on our Treaty and Aboriginal rights we require that we be notified regarding these as well.

Thank you for recognizing the importance of consultation and respecting your duty to consult obligations as determined by the Supreme Court of Canada.

Should you have further questions, please feel free to contact me.

Yours sincerely,



Chief Keith Knott
Curve Lake First Nation

C.C. Tim Sorochinsky Project Manager, URS



Meeting Minutes

Client:	MTO Central Region	Meeting No.	1
Project Name:	Highway 401 Improvements from Trafalgar Road to Regional Road 25	Date:	July 19, 2011
Project No.	W.O. 07-20024	Time:	2:00 p.m.
Location:	50 Bloomingston Road West, Aurora		
Purpose:	Meeting with MNR		
Present:	John Pisapio, MNR (Area Biologist)	Karen Cooper, URS (Deputy PM)	
	Rebecca Li, MTO (Overall PM)	Tyler Drygas, URS (Env)	
	George Ivanoff, MTO (Env)	Joanne Wang, URS (Env)	
	Andrea Hibbert, MTO (Env – Fisheries)	Daryl Rideout, AMEC (Biologist)	

Action By:

1. Project Overview

- R. Li gave a brief introduction to the project. This is a Preliminary Design and Class EA Study for improvements to Highway 401 from Trafalgar Road to Regional Road 25. The Project Team presented the recommended plan for this section of the Highway 401 corridor to the public during the second and final Public Information Centre. The purpose of this meeting is to discuss existing conditions, potential natural environment impacts (including Species at Risk) and potential mitigation measures with MNR.
- Comments related to mitigation measures proposed by MNR will be addressed and appropriately documented in the TESR as commitments to future work and will set the groundwork for the Detail Design stage (a future, separate study) of this project.

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2. Existing Natural Values within Study Area

- T. Drygas provided an overview of existing natural conditions within the study area. D. Rideout provided additional details of conditions at each of the watercourse crossing locations, including thermal regimes, fish communities and approximate SAR locations within the study area.
- J. Pisapio pointed out that MNR has finalized the Redside Dace habitat regulations in July 2011 and the Project Team should refer to that document going forward.
- J. Pisapio confirmed that crossing C1D is an occupied reach for Redside Dace. MNR recognized that crossings C1B and C1C are drainage culverts, however these contribute flow to a watercourse identified as Redside Dace habitat (C1D). MNR will review these conditions relative to the proposed works and provide the study team with advice on potential impacts, mitigation and permit requirements related to Redside Dace.
- Crossing C1 has been identified as a historical reach for Redside Dace. MNR recognized the crossing barrier associated with the weir structure and confirmed that this reach is located north of this barrier through crossing C1A.

URS

MNR

- AMEC will conduct further field investigations in all watercourses between east of crossing C1 and JSP to confirm watercourse sensitivity and fish community. AMEC
 - J. Pisapio confirmed that crossing C9 is not an occupied reach for Redside Dace however the Project Team still needs to consider fish-friendly designs at this location. URS
 - Although crossing C11 is considered warm water habitat, it supports a large number of fish. URS to send MNR a detailed plan at this crossing for MNR to examine the potential for Redside Dace in closer detail. URS / MNR
 - Crossing C13 provides warm water habitat but also supports cold migratory fish species. It has a historical record for Redside Dace. URS to send MNR a detailed plan at this crossing for MNR to examine the potential for Redside Dace in closer detail. URS
- 3. Summary of Recommended Plan**
- T. Drygas presented the recommended plan.
 - J. Pisapio pointed out that a SAR permit has been sought by a developer for the northeast quadrant of the Regional Road 25 interchange and that mitigation measures including natural channel design are proposed in this area. J. Pisapio noted support for the recommended interchange alternative (Replacement to the West) at the Regional Road 25 interchange.
 - J. Pisapio questioned if stormwater management measures are being considered at the Regional Road 25 interchange to improve the quality of water entering the watercourse. T. Drygas noted that stormwater management measures are currently being examined and URS to follow up with MNR regarding the proposed treatments in this area. URS
- 4. Potential Environmental Impacts**
- J. Pisapio requested that the evaluation of alternatives regarding SAR be documented in the final report. T. Drygas confirmed that the evaluation has considered potential SAR impacts and that this documentation will be included in the TESR. URS
 - J. Pisapio advised that the Project Team to consult Conservation Halton regarding potential impacts to watercourses that fall outside of the MNR jurisdiction. T. Drygas noted that a meeting with Conservation Halton has been arranged in early August. URS
- 5. Proposed Natural Mitigation Strategies and ESA Approvals**
- All potential environmental impacts need to be mitigated to the extent possible relative to the existing conditions.
 - T. Drygas noted that the study team is familiar with MNR's "Guidance for Development Activities in Redside Dace Protected Habitat" and that this will provided a starting point related to mitigation strategies. URS
 - J. Pisapio suggested the Project Team become familiar with the applicability of the Ontario Regulation 293/11 regarding Redside Dace habitat regulation exemption. MNR will provide advice on which crossings within the study area this regulation applies to. URS
 - All permits will be sought during the Detail Design stage (a future, separate study) of this project.



6. Next Steps

- The Project Team will meet with Conservation Halton on August 3. MNR will be in contact with Conservation Halton (Ms. Jennifer Lawrence) to discuss potential environmental impacts and proposed mitigation measures. URS/MTO/MNR
- Mitigation measures will be finalized in summer/fall 2011. URS
- Prepare Preliminary Design in summer/fall 2011. URS
- TESR review in December 2011. URS

7. Other Businesses

- Fish collection permit was granted by MNR. AMEC can proceed with electrofishing. No electrofishing is allowed in crossings that have been confirmed to be occupied reach for Redside Dace. AMEC
- D. Rideout to recirculate the table summarizing thermal regimes of the crossings within the study area to MNR (to Ms. Karen Colby, cc J. Pisapio) and the Project Team and to circulate the memo from MNR regarding Jefferson Salamander within the study area to J. Pisapio and the Project Team. AMEC
- MNR to provide comments / confirmation of watercourse sensitivity designations further to the information request submitted by AMEC. MNR

Submitted by: J. Wang

Distribution: Attendees

Meeting Minutes

Client:	MTO Central Region	Meeting No.	1
Project Name:	Highway 401 Improvements from Trafalgar Road to Regional Road 25	Date:	August 3, 2011
Project No.	W.O. 07-20024	Time:	9:30 a.m.
Location:	2596 Britannia Road West, Burlington		
Purpose:	Meeting with Conservation Halton		
Present:	Jennifer Lawrence, CH (Env Planning) Amy Mayes, CH (Watershed Eng) Samantha Mason CH (Aquatic) Rebecca Li, MTO (Overall PM) George Ivanoff, MTO (Env) Andrea Hibbert, MTO (Env – Fisheries)	Karen Cooper, URS (Deputy PM) Joanne Wang, URS (Env) Dan Hipple, URS (Drainage) Shahbaz Asif, URS (Drainage)	

Action By:

1. Project Overview

- K. Cooper gave a brief introduction to the project. This is a Highway 401 widening project from Regional Road 25 to Trafalgar Road. From Regional Road 25 to James Snow Parkway the Project Team is recommending a 10-lane cross section and from James Snow Parkway to Trafalgar Road a 12-lane cross section based on traffic modeling for 2021 and 2031. Other improvements to this section of the Highway 401 corridor are also included in the recommended plan, such as bridge/culvert widening, stormwater management ponds, ITS, etc. The Project Team has presented the recommended plan to the public during the second and final Public Information Centre in June, 2011. Construction is subject to the availability of funding and provincial priorities. Currently there is no funding for this project.

2. Existing Natural Values within Study Area

- J. Wang summarized the existing natural values within the study area. The study area is entirely located within the Sixteen Mile Creek watershed. There are numerous water crossings within the study area; most notably are the Sixteen Mile Creek Middle Branch at Fifth Line, Sixteen Mile Creek Middle East Branch at Sixth Line and Sixteen Mile Creek East Branch at Trafalgar Road. Significant vegetation communities are located in the riparian corridor along Middle, Middle East and East Branches of Sixteen Mile Creek.
- MNR has confirmed that crossing C1D is an occupied reach for Redside Dace. CH pointed out that crossings C1 and C11 are also occupied reaches for Redside Daces based on their recent correspondence with MNR.
- J. Lawrence requested a digital copy of the "Existing Natural Values Within Study Area" mapping be sent to CH.
- J. Lawrence pointed out that the deciduous forest east of the truck inspection centre, north of Highway 401, is supposed to be a wetland. Both CH and URS will exchange data regarding

URS

ELC to update the information at hand.

CH/URS

3. Summary of Recommended Plan

- D. Hipple gave an overview of the drainage works to date. Discussions with the Town of Milton regarding the stormwater management pond at the NE quadrant of the Regional Road 25 interchange are ongoing. The recommended plan might result in relocation of the weir that feeds into the pond. CH provided a contact at the Town of Milton – Mr. Paul Cripps, who is the director of the Engineering Services at the Town.
- A. Mayes brought to the Project Team's attention that there have been discussions regarding upgrading the existing stormwater management pond at the NE quadrant of the Regional Road 25 interchange to a quality-control pond (currently it is only a quantity-control pond). The recommended plan would eliminate this opportunity. She inquired if the Project Team had considered upgrading the pond as part of the recommended plan. D. Hipple advised that it is MTO's policy to replace what is currently there. As such, pond upgrade is not included in the recommended plan.
- J. Lawrence noted that it would be helpful if the Project Team can provide information on the section of the highway that will drain into the proposed stormwater management ponds and what will directly go into the creeks with minimal treatment. URS
- S. Asif mentioned that URS has not been able to locate the drainage culvert at the truck inspection station. CH to check their plans and get back to URS. CH
- A. Mayes brought up the need to conduct a fluvial assessment at this stage of the project to ensure that enough property is being protected for the realignment of Hornby Creek. R. Li advised that given the uncertainty of the design, it is not recommended at this stage. However, if the need to acquire more property than protected is identified at Detail Design, MTO will be willing to acquire more property at that time.
- CH noted that the proposed stormwater management pond at Sixth Line, south of Highway 401 is located in close proximity to a regulated wetland (within the 30 m setback). CH advised the Project Team to take that into consideration however acknowledged that MTO does not need to obtain a permit from CH. CH
- S. Mason inquired if the extended culvert will be open bottom box. D. Hipple noted that it is MTO's policy to replace what is currently there. S. Mason suggested making it a commitment in the TESR that all new culverts be designed to be open bottom box. URS

4. Potential Environmental Impacts

- J. Wang presented potential impacts to fisheries and aquatic habitat (associated with culver/bridge widening), and vegetation communities associated with the recommended plan within the study area.
- CH pointed out the watercourses within the study area that are regulated by CH, namely, crossings C1B, C6 (downstream), C8 and C10.
- CH will provide additional comments on the potential impacts to vegetation communities within the study area. CH
- CH requested URS to consider fish friendly designs at water crossings and wildlife passages. URS



- CH noted that the Project Team should have a contingency plan in place if dewatering is required during construction. URS

5. Proposed Natural Mitigation Strategies

- S. Mason inquired if the *Greater Golden Horseshoe Area Conservation Authorities Erosion and Sediment Control Guideline for Urban Construction* has been considered by the Project Team. D. Hipple advised that the Project Team will consult with MTO's *Environmental Guide for Erosion and Sediment Control during Construction of Highway Projects* first but also consider the erosion and sediment control guideline prepared by the conservation authorities.
- CH inquired if an environmental inspector will be on site during construction to make sure all proposed erosion and sediment control measures will be properly employed. G. Ivanoff noted that it is a requirement in MTO's contracts.
- CH suggested enhancing erosion and sediment control measures in the TESR to ensure that impacts are mitigated to the extent possible. URS

6. Next Steps

- Mitigation measures will be finalized in summer/fall 2011. URS
- Prepare Preliminary Design in summer/fall 2011. URS
- TESR review in December 2011. URS

7. Other Businesses

- S. Mason requested a copy of the Erosion and Sediment Risk Assessment Report, Culvert Inspection Report and Transportation Environmental Study Report be circulated to CH for review. URS

Submitted by: J. Wang

Distribution: Attendees



2596 Britannia Road West
Burlington ON L7P 0G3
905.336.1158 Fax 905.336.7014
conservationhalton.ca

September 9, 2011

Mr. Tyler Drygas
URS Canada Inc.
75 Commerce Valley Drive East
Markham, ON
L3T 7N9

Dear Mr. Drygas:

**Re: Highway 401 Improvements from Trafalgar Road to Regional Road 25
Class EA
Town of Milton and Town of Halton Hills
CH File: PPR 141**

Thank you for providing a response to our letter of April 29, 2011. Staff have reviewed your response letter, dated July 18, 2011 and offer the following comments.

Based on the response matrix within the letter, staff wish to clarify whether the level of work incorporated at the preliminary level of design will be sufficient to include the required meanderbelt and floodplain widths into the determination of lands for acquisition. Staff are uncertain of the level of work considered as part of the preliminary stage, as the wording of the current response states: "The level of work regarding fluvial geomorphology (at Preliminary Design) will be of sufficient accuracy to confirm the amount of land required to accommodate the proposed roadway improvements." Please specify what level of fluvial geomorphology work will be undertaken.

Per the "W.O.07-20024 Highway 401 Improvements From Trafalgar Road to Regional Road 25 Preliminary Design and Class Environmental Assessment Study (Group B) Conservation Halton Meeting, August 3, 2011", provided during the August Meeting, staff confirm that the following crossings represent crossings of watercourses that are regulated by Conservation Halton: Crossings C1B, C1D, C1, C2, C3, C4, C6, C8, C9, C10, C11, C12 and C13. These crossings should be identified as regulated crossings on all figures and referenced as such within the text of the report.

Staff noted that the proposed natural mitigation strategies do not include discussion of maintaining existing riparian storage, channel length, sinuosity, etc. for any channel re-alignments, and commitments to maintain or exceed existing floodplain capacities and stable geomorphic conditions for all new crossings. Staff recognize that these items were not included as mitigation as the maintenance of baseline conditions was likely viewed as the minimum

requirement. For new crossings however, current geomorphic principles might result in the recommendation to widen replacement culverts as compared to current conditions.

The response table makes reference to a request that was made to Conservation Halton to confirm the flows of HEC-2 models provided for Hornby Creek and the Middle Branch of Sixteen Mile Creek. Please confirm that you have received this data.

In addition to the response letter, staff have also reviewed the *MTO Highway 401 from Trafalgar Road to Regional Road 25, Halton Region- Preliminary Design and Detail Design – 2008-E-0027 Terrestrial Existing Conditions Report*, prepared by AMEC Earth & Environmental and dated January 2011. The following comments pertain to that report:

- It is acknowledged in the Discussion that the entire Sixteen Mile Creek watershed is considered to be a regional valley corridor, linking Lake Ontario to the Niagara Escarpment. As such, the report should include recommendations to strengthen this linkage wherever possible, through enhanced wildlife crossing structures and/or habitat.
- It should be recognized that the FOD7-4 (Fresh-Moist Black Walnut Lowland Deciduous Forest Type) vegetation communities are provincially rare (S2S3). Please describe potential impacts and mitigation for these features.
- Staff would like to see a recommendation to reduce the project footprint within natural and semi-natural vegetation communities to the extent possible through the use of retaining walls, shifting alignment of the expansion, etc.
- Staff suggest the following deviations from the current preliminary design (symmetrical widening):
 - Shift north at Fifth Line to reduce impacts on wetland (Reed Canary Grass Meadow Marsh) and provincially rare vegetation community (FOD7-4)
 - Shift south at Sixth Line to reduce impacts on provincially rare vegetation community (FOD7-4)
- SWM Pond 2 appears to be located within the regulated setback associated with a wetland feature that may not have been picked up in the vegetation community distribution. Staff appreciates that a hydrologic/hydrogeologic assessment will be done for the pond at detailed design, and ask that this assessment include evaluation of the pond's potential impact on the wetland feature to ensure that the proposed pond will not adversely impact the adjacent wetland to the south.

We trust the above is of assistance. If you require additional information, please contact the undersigned at extension 266.

Yours truly,



Jennifer Lawrence, MCIP, RPP
Manager, Environmental Planning

APPENDIX B

Public Information Centre Summary Report

Highway 401 Improvements from Trafalgar Road to Regional Road 25

**Town of Milton, Town of Halton Hills, Halton Region
(W.O. 07-20024)**

Public Information Centre # 1 Summary Report

June 2010

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1.0 INTRODUCTION

URS Canada Inc. has been retained by the Ontario Ministry of Transportation (MTO) to undertake a Preliminary Design and Class Environmental Assessment Study for the improvements to Highway 401 from Trafalgar Road to Regional Road 25 (9 km) in the Towns of Milton and Halton Hills, Halton Region.

The purpose of this study is to identify the interim and ultimate capacity and operational needs for this section of the Highway 401 corridor and to consider incorporation of initiatives, such as high occupancy vehicle (HOV) lanes and commuter parking lots. Possible improvements that will be investigated as part of this study include structural, illumination, drainage and interchange modifications.

The first of two rounds of Public Information Centres (PICs) was held on:

Wednesday June 2, 2010
4:00 p.m. to 7:00 p.m.
Milton Memorial Arena – Milton Lions Club Hall
77 Thompson Road South, Milton

PIC#1 was an informal, “open house” style event. Information boards were clustered throughout the meeting room, with MTO and consultant staff available to address questions and concerns. A hardcopy of the PIC display boards was provided to each attendee, as well as a comment sheet.

2.0 PURPOSE

The primary purpose of this PIC was to present and receive input on the need for improvements to this section of the Highway 401 corridor, the alternatives under consideration, and the proposed process and criteria for evaluating alternatives.

3.0 PUBLIC AND AGENCY NOTIFICATION

Primary notification of PIC#1 was delivered by means of newspaper ads, mailings (regular and electronic) and the project FTP site. Details are described below:

3.1 Newspaper Ads

An Ontario Government Notice (Notice of Public Information Centre #1) was placed in the English newspapers – the Georgetown Independent, the Milton Canadian Champion, and the Globe and Mail on Thursday May 27, 2010.

3.2 Mailings

314 individuals on the study mailing list (including adjacent property owners to the Highway 401 corridor throughout the study area), 51 external agency representatives, and 14 aboriginal communities/organizations were notified of the PIC via regular mail and/or email.

3.3 Project FTP Site

The Notice of PIC#1, the PIC display boards and the comment sheet were posted on the project FTP site on the day of the PIC (www.highway401milton.com).

4.0 DISPLAY MATERIAL

The information presented at the PIC was presented in the following order:

- ❑ Freedom of Information and Privacy Act
- ❑ Welcome to PIC#1
- ❑ Study Area and Scope
- ❑ Overall Study Process
- ❑ Existing Conditions
- ❑ Existing Traffic Conditions
- ❑ Policy Context – Growth Plan for the Greater Golden Horseshoe
- ❑ Future Traffic Conditions
- ❑ Alternatives to the Undertaking
- ❑ Assessment of Alternatives to the Undertaking
- ❑ Highway 401 Improvement Alternatives – Mainline Widening and Interchange Alternatives (Regional Road 25, James Snow Parkway, and Trafalgar Road)
- ❑ Examples of Other Highway Improvements
- ❑ Approach for Evaluating Alternatives
- ❑ Timing of Study
- ❑ Next Steps

A hardcopy of the PIC display boards was provided to all attendees.

5.0 ATTENDANCE AT THE PIC / COMMENTS

5.1 Attendance

A total of 31 members of the public chose to sign the visitor's register for the PIC. Several additional members of the public attended, but declined to sign in.

Two elected officials attended the PIC:

- ❑ Colin Best (Wards 2 and 4 – Town of Milton and Halton Region); and
- ❑ Wendy Schau (Ward 4 – Town of Milton).

Two reporters also attended the PIC:

- ❑ Tim Foran of the Milton Canadian Champion; and
- ❑ Laura Steiner of the Halton Compass.

5.2 Comments

In addition to verbal comments, the Project Team encouraged visitors to express, in writing, all suggestions, comments or concerns regarding the study and/or the information presented at the PIC. A comment sheet was made available for this purpose. A total of 11 written comments were submitted at the PIC and four additional comments were received via e-mail and mail in the weeks following.

The key comments received during this PIC included:

- ❑ Several attendees inquired as to how Halton Region's proposed works on Tremaine Road have been considered and suggested that the study limits be extended westward to include the future Tremaine Rd. interchange.

- ❑ Attendees recognized the need for widening and improvements to this section of the Highway 401 corridor.
- ❑ Several attendees noted that Highway 401 improvements are currently needed and should be implemented as soon as possible
- ❑ Attendees were please to see the potential provision of HOV lanes and bus bypass shoulder along the corridor.
- ❑ Concerns regarding potential increase in noise levels, light trespass associated with high mast lighting, and access were raised.
- ❑ It was noted that improvements to the James Snow Parkway interchange are need to address queues on the local road network during rush hour periods and to support planned land developments in that area. A two-lane S-E ramp at the James Snow Parkway interchange was suggested.
- ❑ It was suggested that bicycle lanes be provided on local roads which cross Highway 401.
- ❑ Concerns regarding setback encroachments and property impacts associated with a 12-lane cross-section were noted.

6.0 PRE-PIC MEETINGS

A Municipal Meeting was arranged with the Town of Milton, the Town of Halton Hills, and Halton Region in advance of the PIC. A total of eight representatives from the three municipalities attended the meeting, held on:

Wednesday May 26, 2010
1:00 p.m. to 3:00 p.m.
Town of Milton – Esquesing Room
150 Marry Street, Milton

The purpose of this meeting was to present the findings of the transportation system planning analysis and to seek municipal input on the alternatives generated to address the future capacity and operational needs of this section of the Highway 401 corridor.

Prior to the official commencement of the PIC#1 the Project Team made arrangements for members of the External Team (representatives of municipalities, external agencies, and interest groups) to view the displays and provide the Project Team with their views and concerns so that they can be addressed in the study. The External Team Meeting was held on:

Wednesday June 2, 2010
3:00 p.m. to 4:00 p.m.
Milton Memorial Arena – Milton Lions Club Hall
77 Thompson Road South, Milton

Representatives from the Town of Milton, Town of Halton Hills, Region of Halton and Halton Hills Hydro attended the External Team session.

Highway 401 Improvements from Trafalgar Road to Regional Road 25

Town of Milton, Town of Halton Hills, Halton Region
(W.O. 07-20024)

Public Information Centre # 2 Summary Report

April 2011

URS



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1.0 INTRODUCTION

URS Canada Inc. was retained by the Ontario Ministry of Transportation (MTO) to undertake a Preliminary Design and Class Environmental Assessment Study for improvements to Highway 401 from Trafalgar Road to Regional Road 25 (9 km) in the Town of Milton and Town of Halton Hills, Halton Region.

The purpose of this study is to identify the interim and ultimate capacity and operational needs for this section of the Highway 401 corridor. The recommended improvements include widening this section of the Highway 401 corridor, incorporation of high occupancy vehicle (HOV) lanes and improvements to existing commuter parking lots. Structural, illumination, drainage and interchange modifications are also proposed as part of the recommended highway improvements.

The second and final Public Information Centre (PIC) was held on:

Tuesday March 22, 2011
4:00 p.m. to 8:00 p.m.
Milton Memorial Arena – Milton Lions Club Hall
77 Thompson Road South, Milton

PIC #2 was an informal, “open house” style event with brief presentations at 5:00 p.m. and 7:00 p.m. Information boards were clustered throughout the meeting room, with MTO and consultant staff available to address questions and concerns. A hard copy of the PIC display boards and a comment sheet were provided to each attendee.

2.0 PURPOSE

The primary purpose of PIC #2 was to present and receive input on the preliminary design of the preferred alternatives and the proposed mitigation strategies to minimize potential environmental and community impacts.

3.0 PUBLIC AND AGENCY NOTIFICATION

Primary notification of PIC #2 was delivered by means of newspaper ads, mailings, the Project Document Sharing Site and brochures. Details are described below.

3.1 Newspaper Ads

An Ontario Government Notice (Notice of Public Information Centre #2) was placed in the following English newspapers:

- ❑ Milton Canadian Champion on Tuesday March 8, 2011;
- ❑ The Globe and Mail on Wednesday March 9, 2011; and
- ❑ Georgetown Acton Independent on Thursday March 10, 2011.

3.2 Mailings

Eight hundred and thirty one (831) individuals on the project mailing list (including adjacent property owners to the Highway 401 corridor throughout the study area), 55 external agency representatives and 15 Aboriginal Communities / organizations were notified of the PIC via regular mail.

3.3 Project Document Sharing Site

The Notice of PIC #2, the PIC display boards and the comment sheet were posted on the Project Document Sharing Site (www.highway401milton.com) on Wednesday March 23, 2011.

3.4 Brochures

English brochures were delivered via Canada Post's unaddressed admail service to area residents and businesses located adjacent to this section of the Highway 401 corridor the week of March 7th, 2011 within the following postal routes:

- ❑ Milton STN Main L9T (LC 0003, LC0005, SS0102 and SS0121); and
- ❑ Hornby PO L0P 1E0 (RR0001 and RR0002).

In total, approximately 2,310 brochures were delivered.

4.0 DISPLAY MATERIAL

The information presented at the PIC was presented in the following order:

- ❑ Welcome to PIC #2
- ❑ Freedom of Information and Privacy Act
- ❑ Study Overview
- ❑ Study Process
- ❑ Timing of Study Activities
- ❑ Overview of PIC #1
- ❑ Key Issues and Comments Raised at PIC #1
- ❑ Development and Evaluation of Alternatives
- ❑ Approach for Evaluating Alternatives
- ❑ Recommended Highway 401 Widening
- ❑ Regional Road 25 Interchange Alternatives
- ❑ Evaluation of Regional Road 25 Interchange Alternatives
- ❑ Regional Road 25 Typical Bridge Cross Sections
- ❑ James Snow Parkway Interchange Alternatives
- ❑ Evaluation of James Snow Parkway Interchange Alternatives
- ❑ Trafalgar Road Interchange Alternatives
- ❑ Evaluation of Trafalgar Road Interchange Alternatives
- ❑ Trafalgar Road Typical Bridge Cross Sections
- ❑ Summary of the Recommended Plan
- ❑ Recommended Plan
- ❑ Transit Supportive Initiatives
- ❑ Proposed Mitigation Strategies
- ❑ Light Trespass
- ❑ Noise Assessment
- ❑ Air Quality Assessment
- ❑ What's Next

A hard copy of the PIC display boards was provided to all attendees.

5.0 ATTENDANCE AT THE PIC / COMMENTS

5.1 Attendance

A total of 30 individuals chose to sign the visitor's register for the PIC. Several additional members of the public attended, but declined to sign in.

Three elected officials attended the PIC:

- ❑ Colin Best (Wards 2, 3, 4 and 5 – Town of Milton and Halton Region);
- ❑ Sharon Barkley (Ward 1 – Town of Milton); and
- ❑ David Kentner (Ward 3 – Town of Halton Hills).

5.2 Comments

In addition to verbal comments, the Project Team encouraged attendees to express, in writing, all suggestions, comments or concerns regarding the study and / or the information presented at the PIC. A comment sheet was made available for this purpose. A total of five written comments were submitted at the PIC and one additional comment was received via facsimile in the weeks following.

Key comments received at the PIC included:

- ❑ This section of the Highway 401 corridor needs improvements now.
- ❑ Concerns and inquiries regarding property requirements and impacts associated with the proposed highway improvements.
- ❑ Concerns regarding lane closures on Trafalgar Road and Highway 401 IC ramps during construction.
- ❑ Concerns regarding drainage, water runoff and erosion.
- ❑ Concerns regarding noise impacts.
- ❑ An attendee noted that the property bounded by Highway 401 / James Snow Parkway / Steeles Avenue has a site application with the Town of Milton for an outlet mall, which is anticipated to open around the same time as Smart Centre at Steeles Avenue and Trafalgar Road. The application includes an entrance from James Snow Parkway.
- ❑ Some attendees suggested that the MTO to work closely with developers to determine the ultimate needs of the area.
- ❑ The James Snow Parkway Ramp South to East has large queues and the traffic condition is getting worse.
- ❑ An attendee noted the proposed 3rd Line crossing over Highway 401 (as per Halton Region's draft Transportation Master Plan) and the associated proposed closing of the Esquesing Line / Steeles Avenue intersection.
- ❑ Inquiries regarding the relationship between this study and GTA West / NGTA.
- ❑ Several attendees inquired as to how Halton Region's proposed works on Tremaine Road have been considered.
- ❑ Some attendees inquired if the section of the Highway 401 east of the study area has been considered in this study.
- ❑ Inquiries regarding the mid-block crossing.
- ❑ Inquiries regarding the timing for construction.

- More details of the study were requested, such as digital copies of the PIC material and the draft noise study report.

6.0 PRE-PIC MEETINGS

A Municipal Meeting was arranged with the Town of Milton, the Town of Halton Hills and Halton Region in advance of the PIC. A total of seven representatives from the three municipalities attended the meeting, held on:

Friday February 25, 2011
10:00 a.m. to 12:00 p.m.
Town of Milton – Esquesing Room
150 Mary Street, Milton

The purpose of this meeting was to present the evaluation of alternatives and to seek municipal input on the recommended plan and the proposed mitigation strategies.

A joint Emergency Service Providers Meeting with the adjacent study (W.O. 07-20021 Highway 401 Improvements from East of the Credit River to Trafalgar Road) was arranged with Halton Region Emergency Medical Services, Peel Regional Paramedic Services, Ontario Provincial Police, Halton Regional Police Services, Peel Regional Police, Milton Fire Department and Mississauga Fire and Emergency Services in advance of the PIC. A total of four representatives from four emergency service providers (Halton Regional Police Services, Milton Fire Department, Mississauga Fire Department and Peel Regional Paramedic Services) attended the meeting, held on:

Friday February 25, 2011
1:00 p.m. to 2:30 p.m.
Town of Milton – Esquesing Room
150 Mary Street, Milton

The purpose of this meeting was to present the recommended plan for this study to emergency service providers and seek their input on the potential impacts to the delivery of their services associated with the proposed improvements to this section of the Highway 401 corridor.

A number of meetings with impacted property owners adjacent to the Highway 401 corridor within the study area were also arranged in advance of the PIC.

Prior to the official commencement of PIC #2, the Project Team made arrangements for members of the External Team (representatives of municipalities, external agencies and interest groups) to view the displays and provide the Project Team with their views and concerns so that they can be addressed as the study progresses. The External Team Meeting was held on:

Tuesday March 22, 2011
3:00 p.m. to 4:00 p.m.
Milton Memorial Arena – Milton Lions Club Hall
77 Thompson Road South, Milton

Representatives from the Town of Milton, the Town of Halton Hills, Halton Region and the Region of Peel attended the External Team session.

APPENDIX C

The Recommended Plan

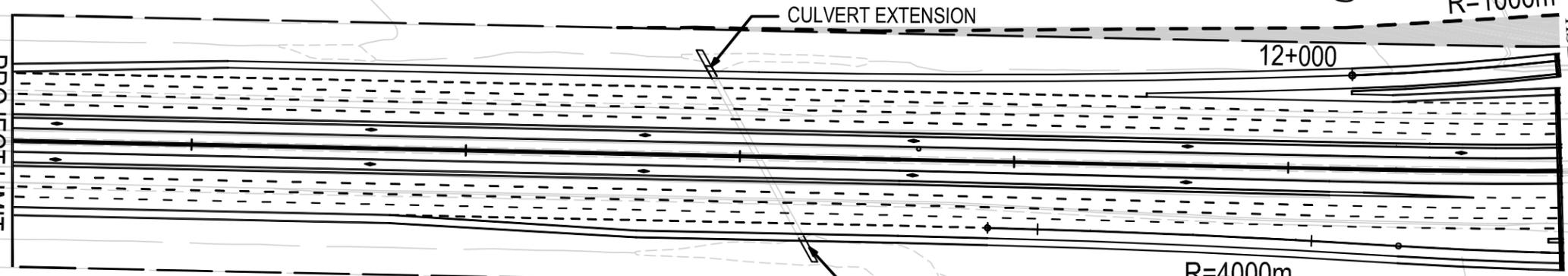
TOWN OF MILTON

CON 2
LOT 3



SUBJECT OF
FUTURE STUDY

PROJECT LIMIT
STA 11+530



HIGHWAY 401

CHISHOLM DR

CON 2
LOT 3

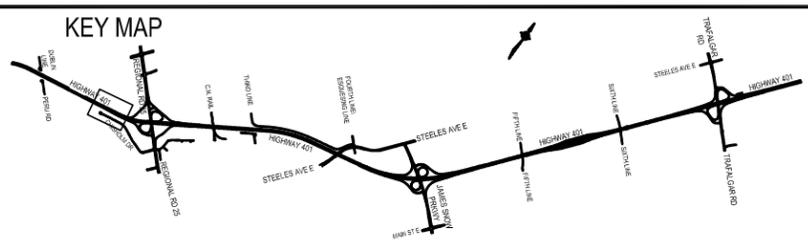
LEGEND

- EXISTING ROW
- PROPOSED ROW
- ADDITIONAL ROW AREA
- HOV LANE

PRELIMINARY



HIGHWAY 401 IMPROVEMENTS
PRELIMINARY DESIGN
TRAFALGAR ROAD TO REGIONAL ROAD 25
W.O. 07-20024



MILTON AND HALTON HILLS
RECOMMENDED PLAN
PROJECT LIMIT 11+530 TO
STATION 12+100

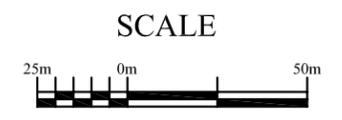
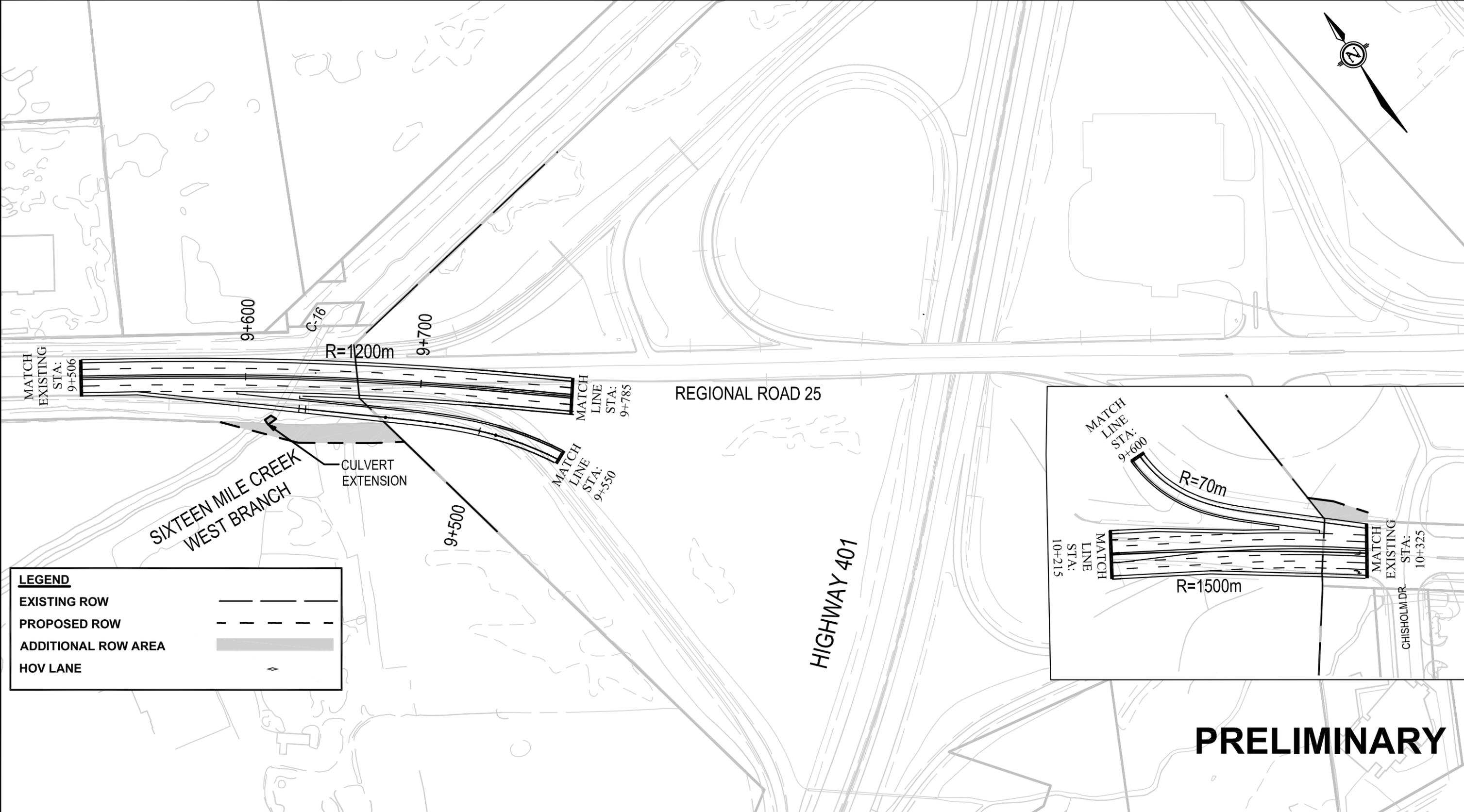
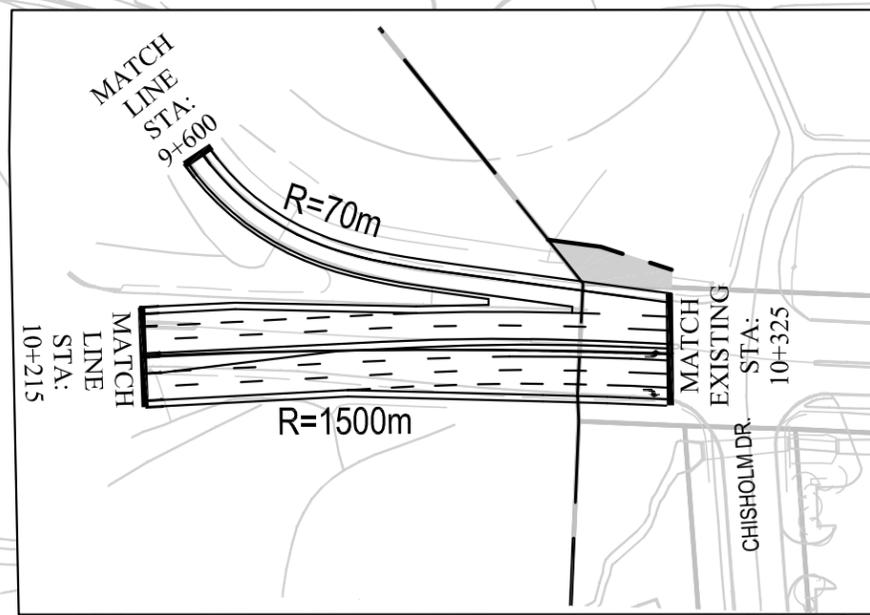


PLATE
1



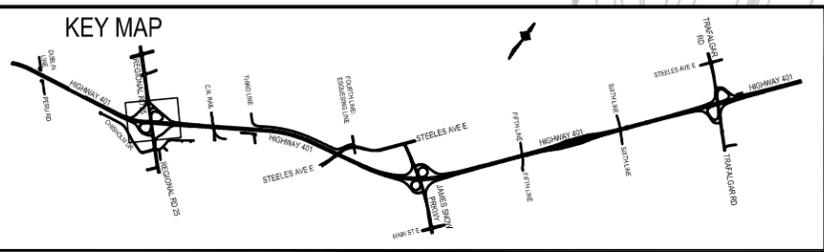
LEGEND	
EXISTING ROW	
PROPOSED ROW	
ADDITIONAL ROW AREA	
HOV LANE	



PRELIMINARY



HIGHWAY 401 IMPROVEMENTS
 PRELIMINARY DESIGN
 TRAFALGAR ROAD TO REGIONAL ROAD 25
 W.O. 07-20024



MILTON AND HALTON HILLS
 REGIONAL ROAD 25
 RECOMMENDED PLAN
 REGIONAL ROAD 25
 STATION 9+506 TO STATION 10+325

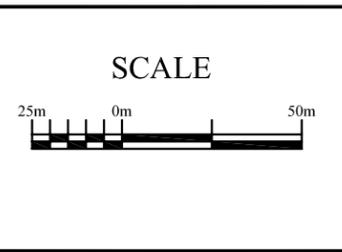
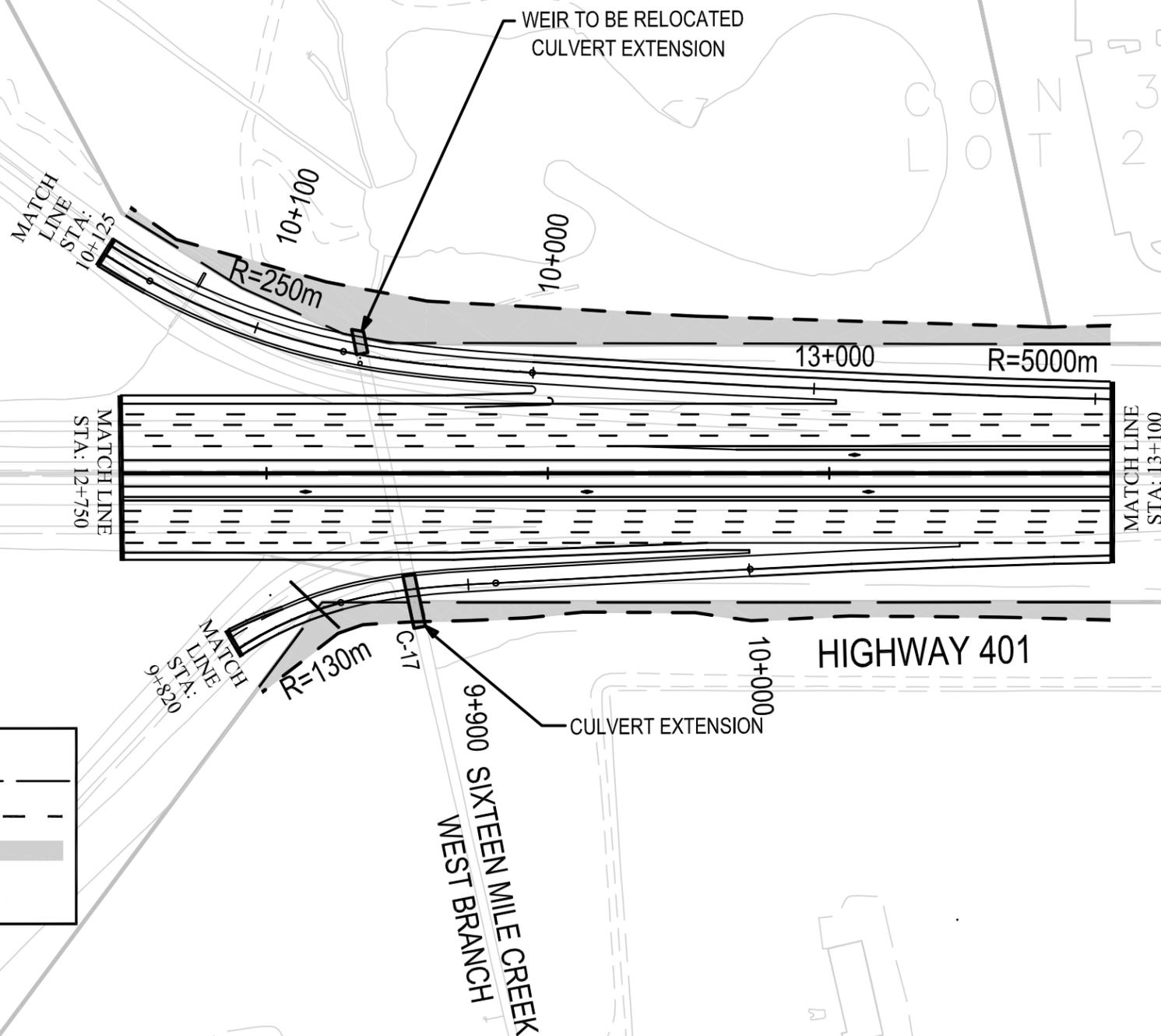


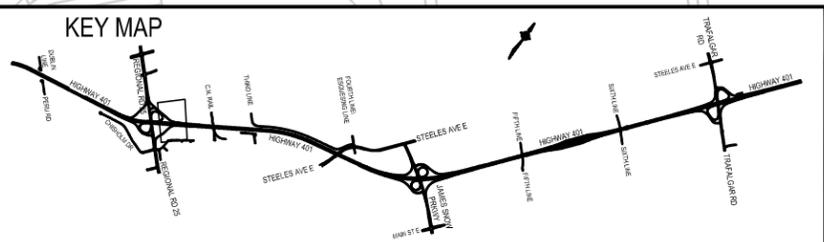
PLATE
 3



LEGEND	
EXISTING ROW	— — — — —
PROPOSED ROW	- - - - -
ADDITIONAL ROW AREA	▬
HOV LANE	◇

PRELIMINARY

HIGHWAY 401 IMPROVEMENTS
 PRELIMINARY DESIGN
 TRAFALGAR ROAD TO REGIONAL ROAD 25
 W.O. 07-20024



MILTON AND HALTON HILLS
 RECOMMENDED PLAN
 STATION 12+750 TO STATION 13+100

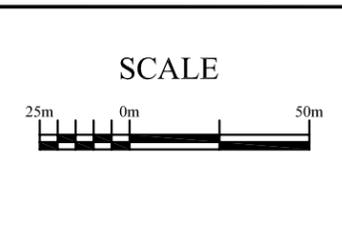
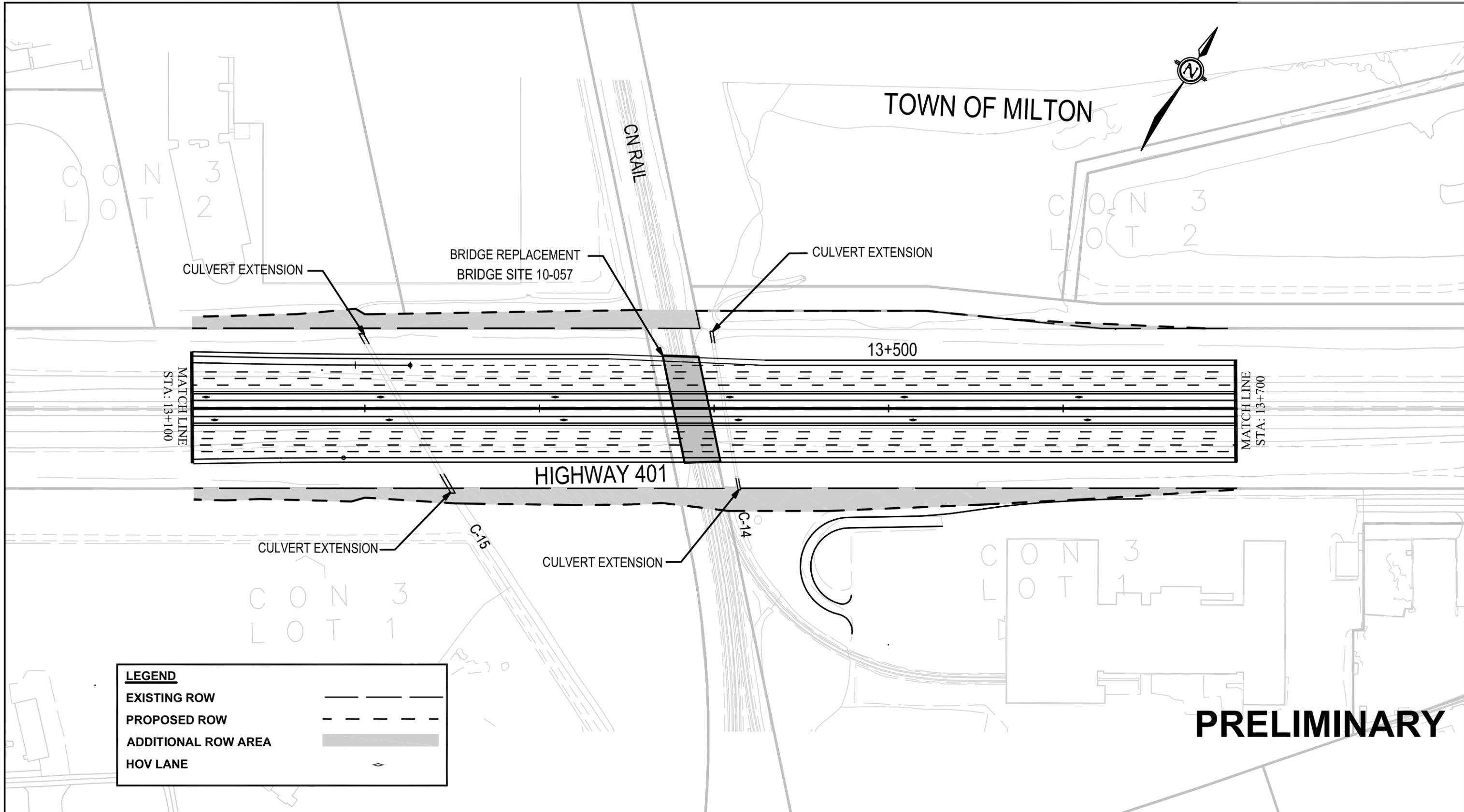


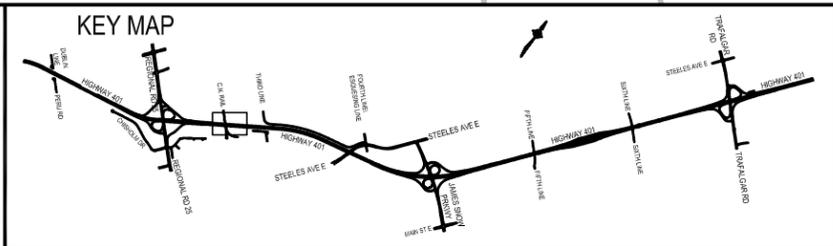
PLATE
 4



PRELIMINARY

LEGEND	
EXISTING ROW	— — — — —
PROPOSED ROW	- - - - -
ADDITIONAL ROW AREA	▬
HOV LANE	◇

HIGHWAY 401 IMPROVEMENTS
 PRELIMINARY DESIGN
 TRAFALGAR ROAD TO REGIONAL ROAD 25
 W.O. 07-20024



MILTON AND HALTON HILLS
 RECOMMENDED PLAN
 STATION 13+100 TO STATION 13+700

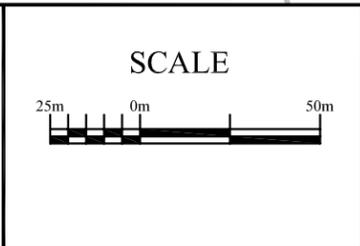
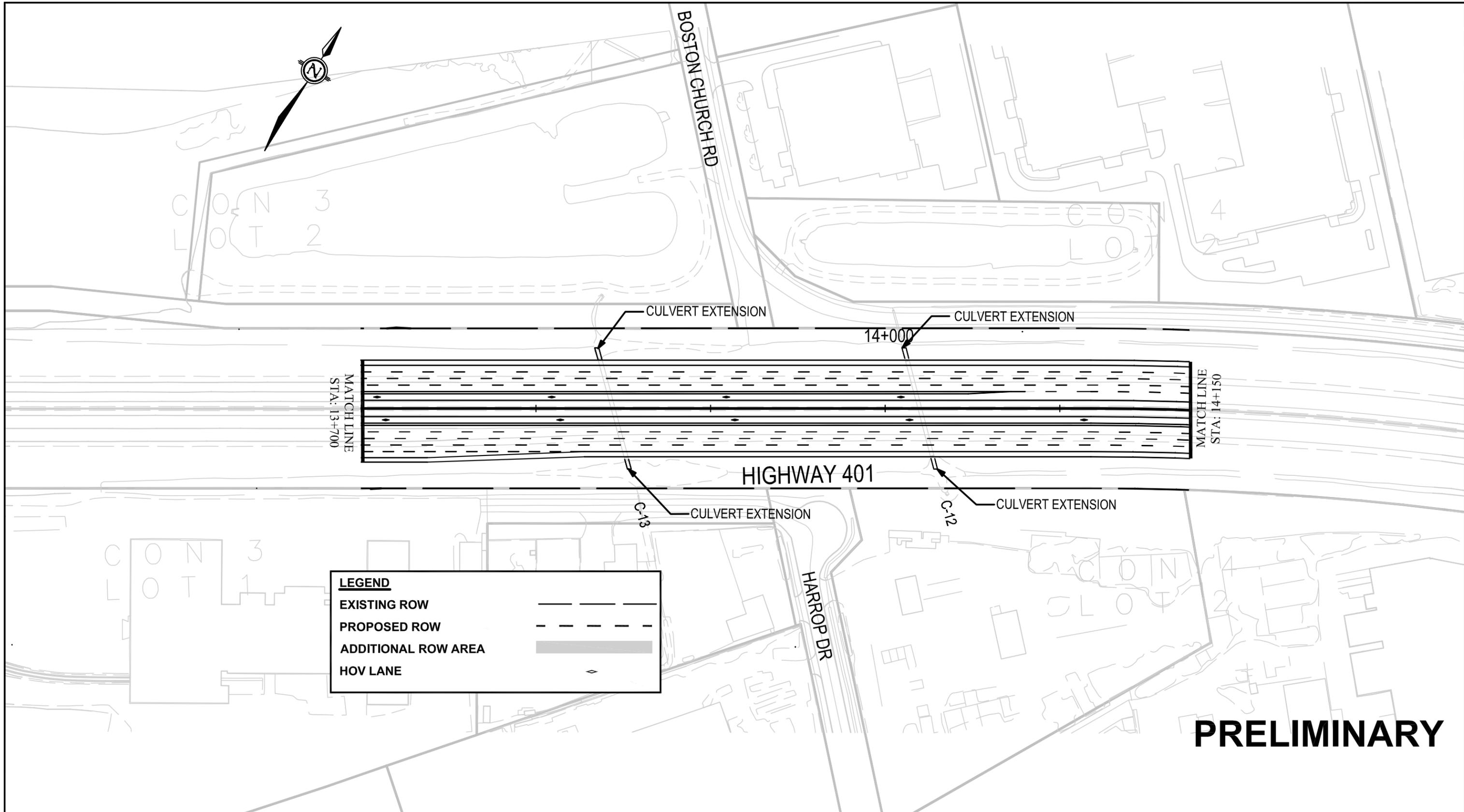
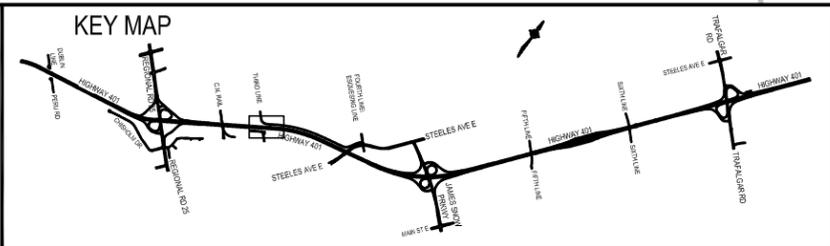


PLATE
5



LEGEND	
EXISTING ROW	— — — — —
PROPOSED ROW	- - - - -
ADDITIONAL ROW AREA	▬
HOV LANE	◇

HIGHWAY 401 IMPROVEMENTS
 PRELIMINARY DESIGN
 TRAFALGAR ROAD TO REGIONAL ROAD 25
 W.O. 07-20024



MILTON AND HALTON HILLS
 RECOMMENDED PLAN
 STATION 13+700 TO STATION 14+150

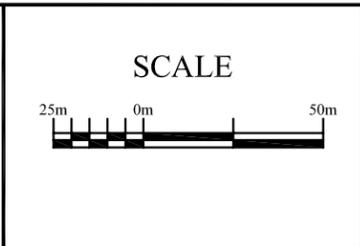
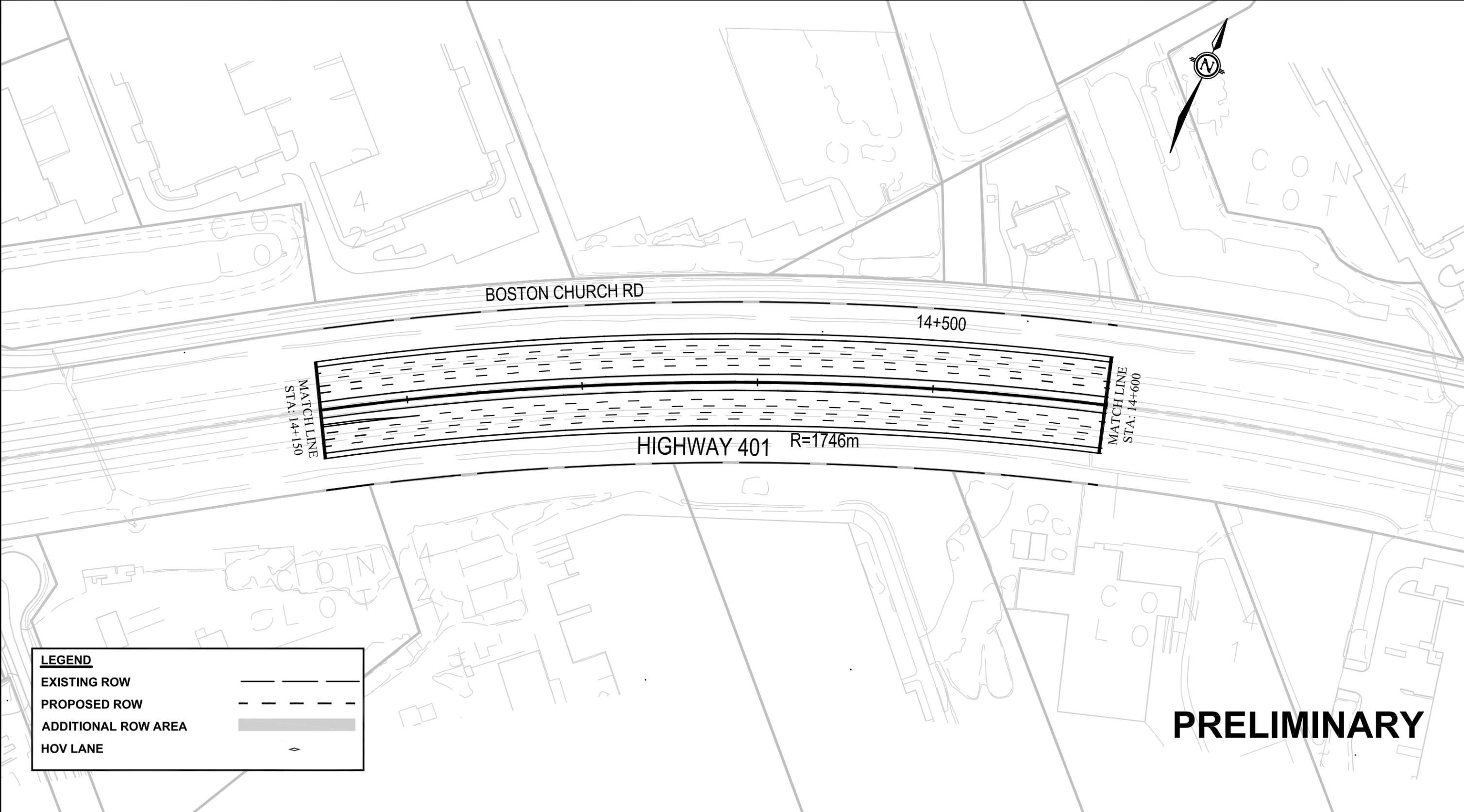


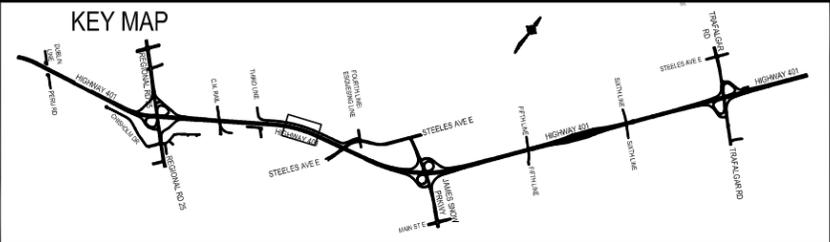
PLATE
 6



LEGEND	
EXISTING ROW	— — — — —
PROPOSED ROW	- - - - -
ADDITIONAL ROW AREA	▬
HOV LANE	◆

PRELIMINARY

HIGHWAY 401 IMPROVEMENTS
 PRELIMINARY DESIGN
 TRAFALGAR ROAD TO REGIONAL ROAD 25
 W.O. 07-20024



MILTON AND HALTON HILLS
 RECOMMENDED PLAN
 STATION 14+150 TO STATION 14+600

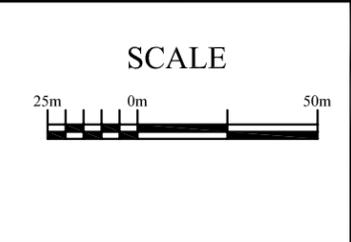


PLATE
 7



TOWN OF MILTON

CON
LOT 14

MATCH LINE
STA: 14+600

R=1746m

BOSTON CHURCH RD

CULVERT EXTENSION

CULVERT EXTENSION

BRIDGE SITE
10-068

15+000

STEELES AVE. E.

MATCH LINE
STA: 15+200

HIGHWAY 401

C-11

CULVERT EXTENSION

C-10

CULVERT EXTENSION

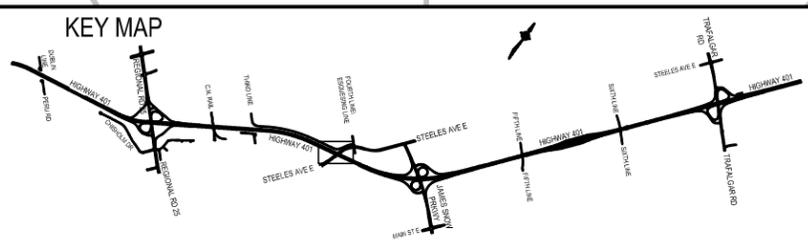
LEGEND

EXISTING ROW	— — — — —
PROPOSED ROW	- - - - -
ADDITIONAL ROW AREA	▬
HOV LANE	◇

PRELIMINARY



HIGHWAY 401 IMPROVEMENTS
PRELIMINARY DESIGN
TRAFALGAR ROAD TO REGIONAL ROAD 25
W.O. 07-20024



MILTON AND HALTON HILLS
RECOMMENDED PLAN
STATION 14+600 TO STATION 15+200

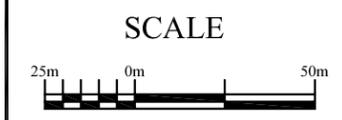
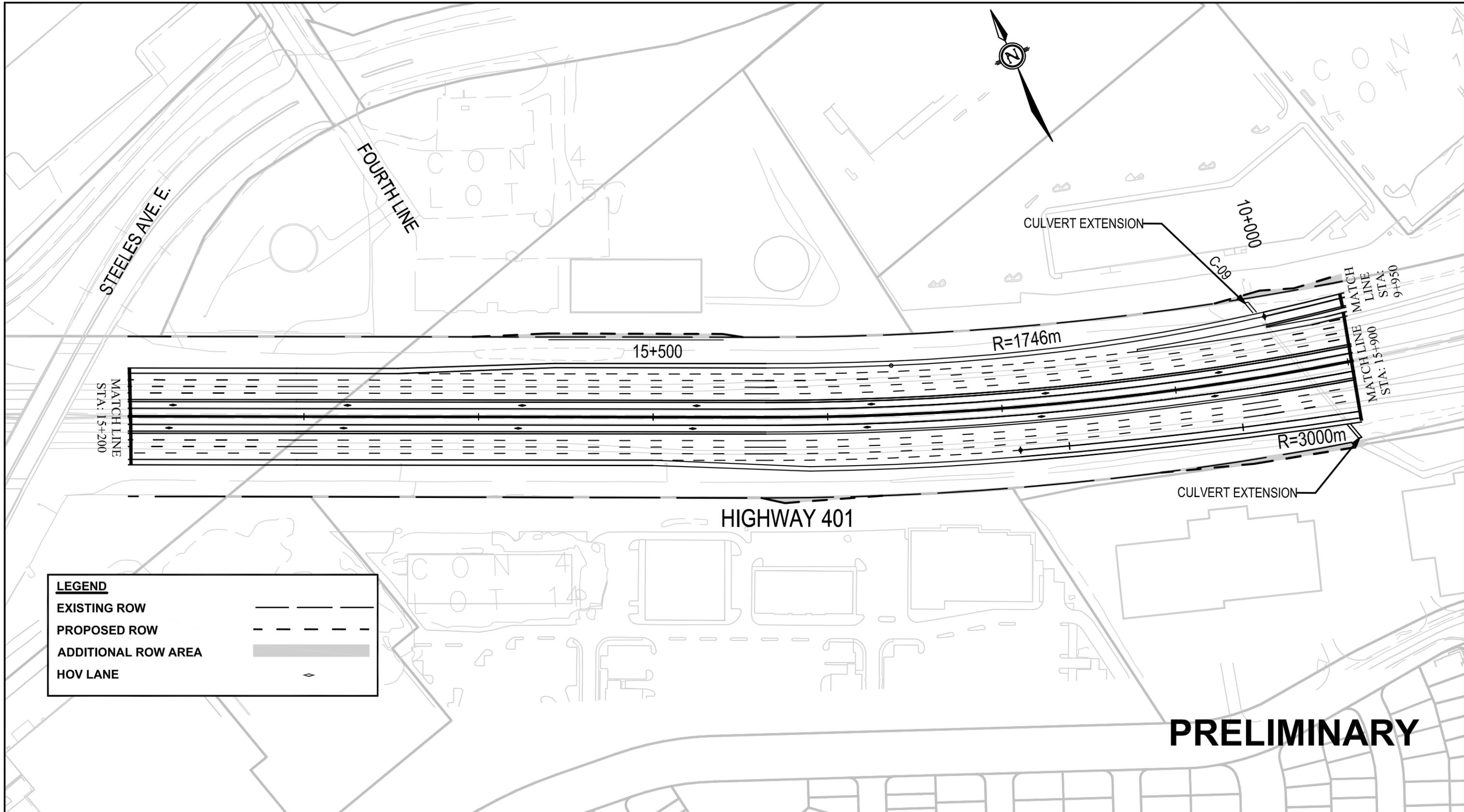


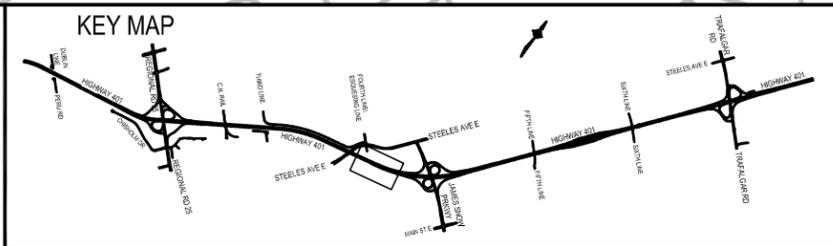
PLATE
8



LEGEND	
EXISTING ROW	
PROPOSED ROW	
ADDITIONAL ROW AREA	
HOV LANE	

PRELIMINARY

HIGHWAY 401 IMPROVEMENTS
 PRELIMINARY DESIGN
 TRAFALGAR ROAD TO REGIONAL ROAD 25
 W.O. 07-20024



MILTON AND HALTON HILLS
 RECOMMENDED PLAN
 STATION 15+200 TO STATION 15+900

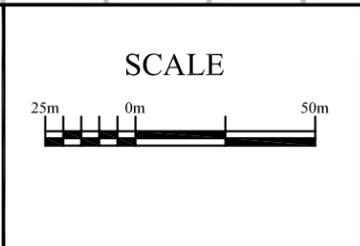
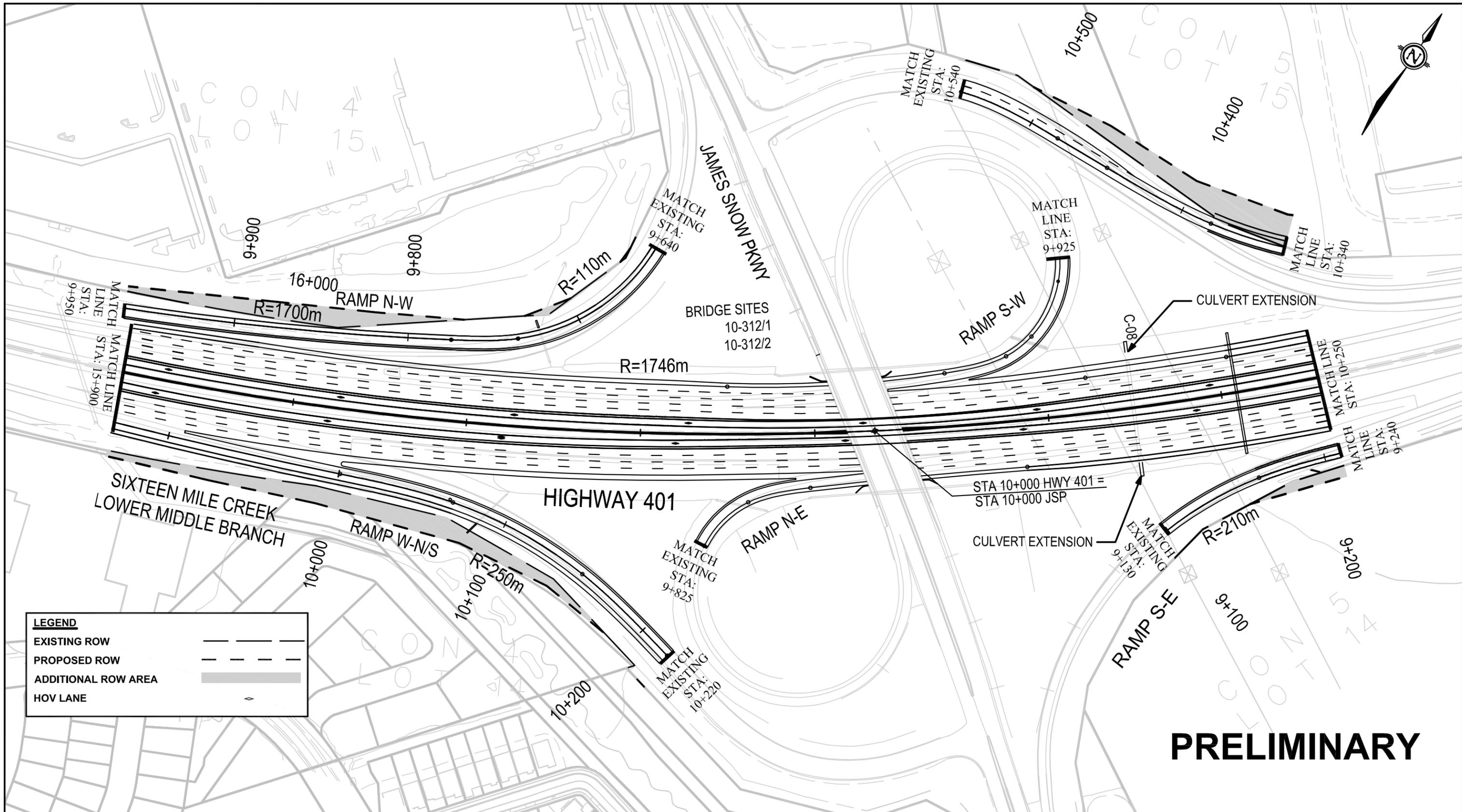


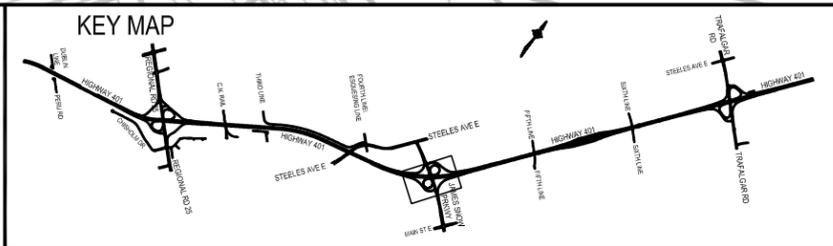
PLATE
 9



LEGEND	
EXISTING ROW	— — — — —
PROPOSED ROW	- - - - -
ADDITIONAL ROW AREA	▬
HOV LANE	◇

PRELIMINARY

HIGHWAY 401 IMPROVEMENTS
 PRELIMINARY DESIGN
 TRAFALGAR ROAD TO REGIONAL ROAD 25
 W.O. 07-20024



MILTON AND HALTON HILLS
 RECOMMENDED PLAN
 STATION 15+900 TO STATION 10+250

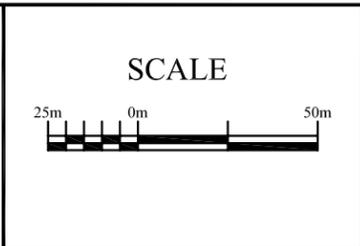
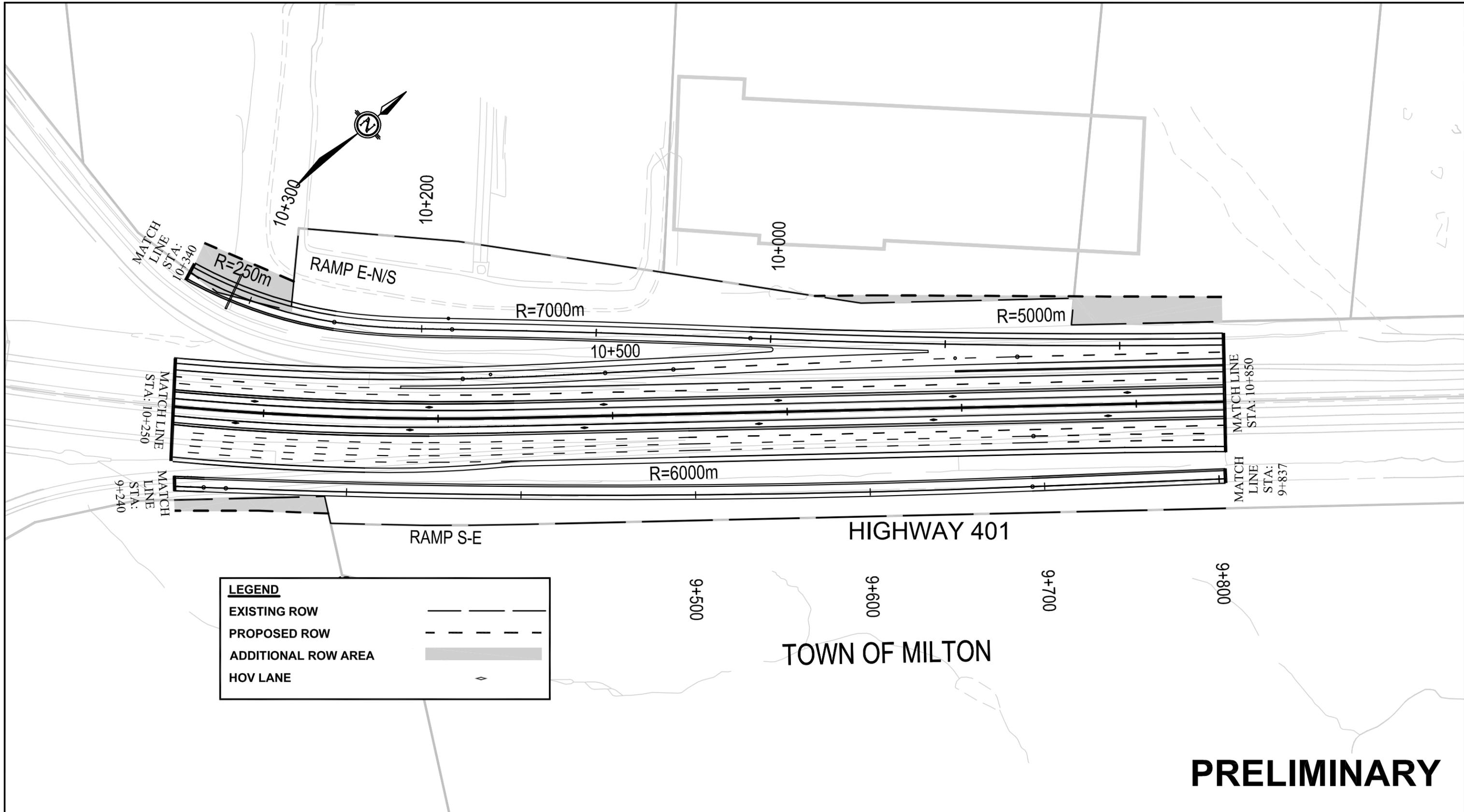


PLATE
 10



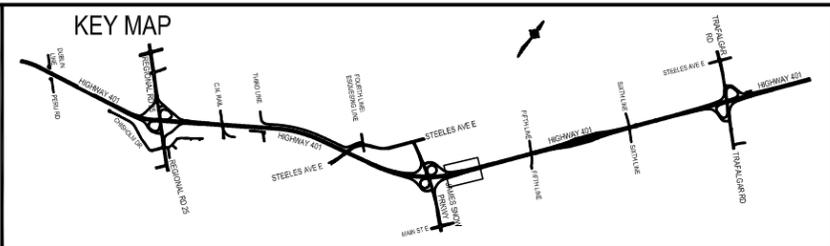
PRELIMINARY



Ontario
Ministry of Transportation



HIGHWAY 401 IMPROVEMENTS
PRELIMINARY DESIGN
TRAFALGAR ROAD TO REGIONAL ROAD 25
W.O. 07-20024



MILTON AND HALTON HILLS
RECOMMENDED PLAN
STATION 10+250 TO STATION 10+850

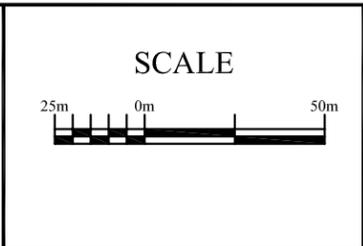
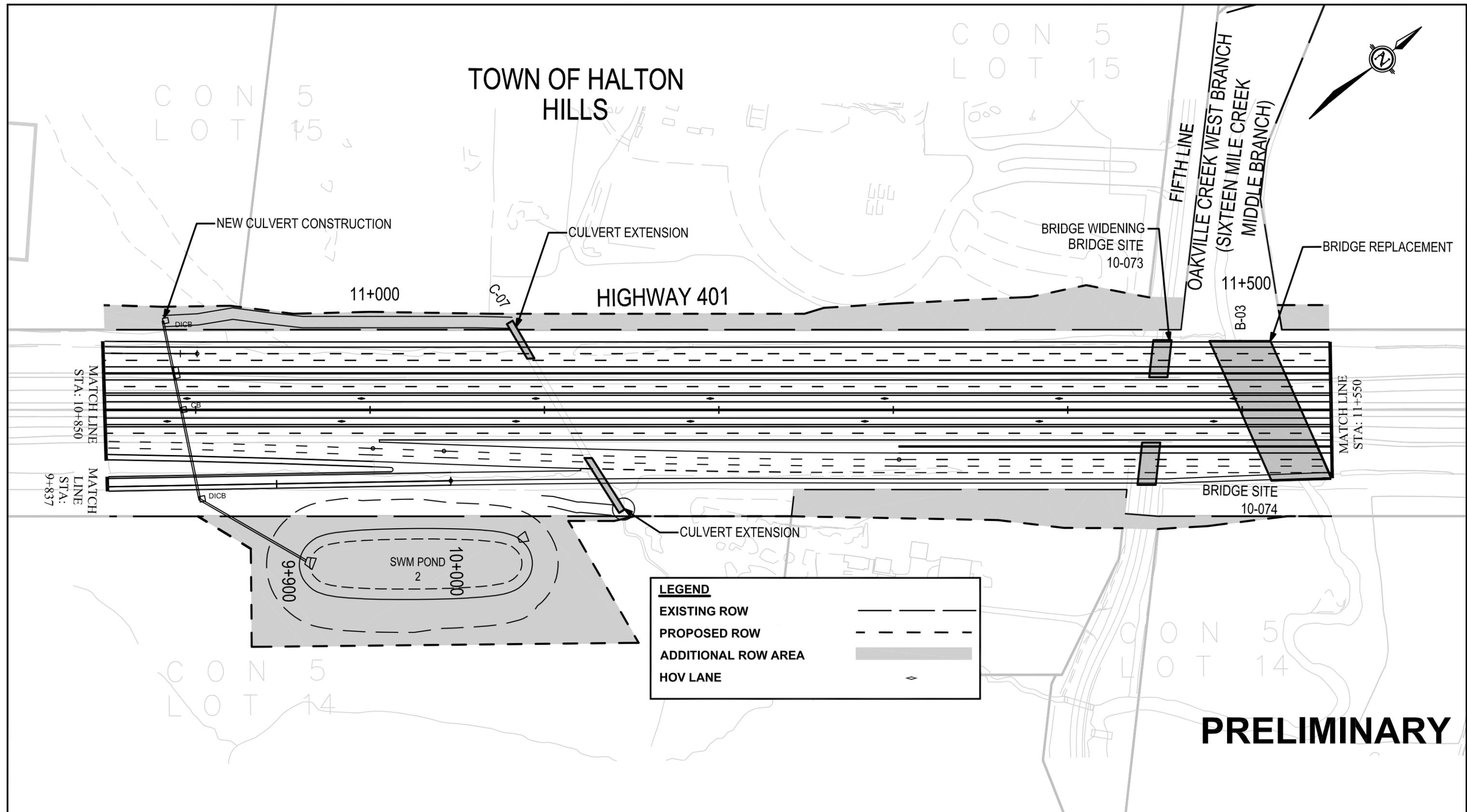


PLATE
11



TOWN OF HALTON HILLS

HIGHWAY 401

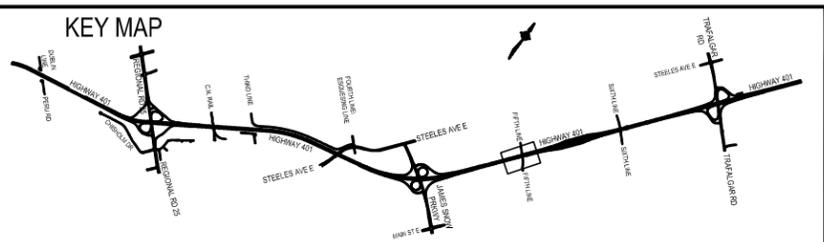
PRELIMINARY

LEGEND

EXISTING ROW	---
PROPOSED ROW	- - -
ADDITIONAL ROW AREA	█
HOV LANE	◇

Ontario
Ministry of Transportation

HIGHWAY 401 IMPROVEMENTS
PRELIMINARY DESIGN
TRAFALGAR ROAD TO REGIONAL ROAD 25
W.O. 07-20024



MILTON AND HALTON HILLS
RECOMMENDED PLAN
STATION 10+850 TO STATION 11+550

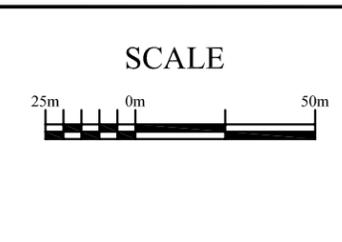
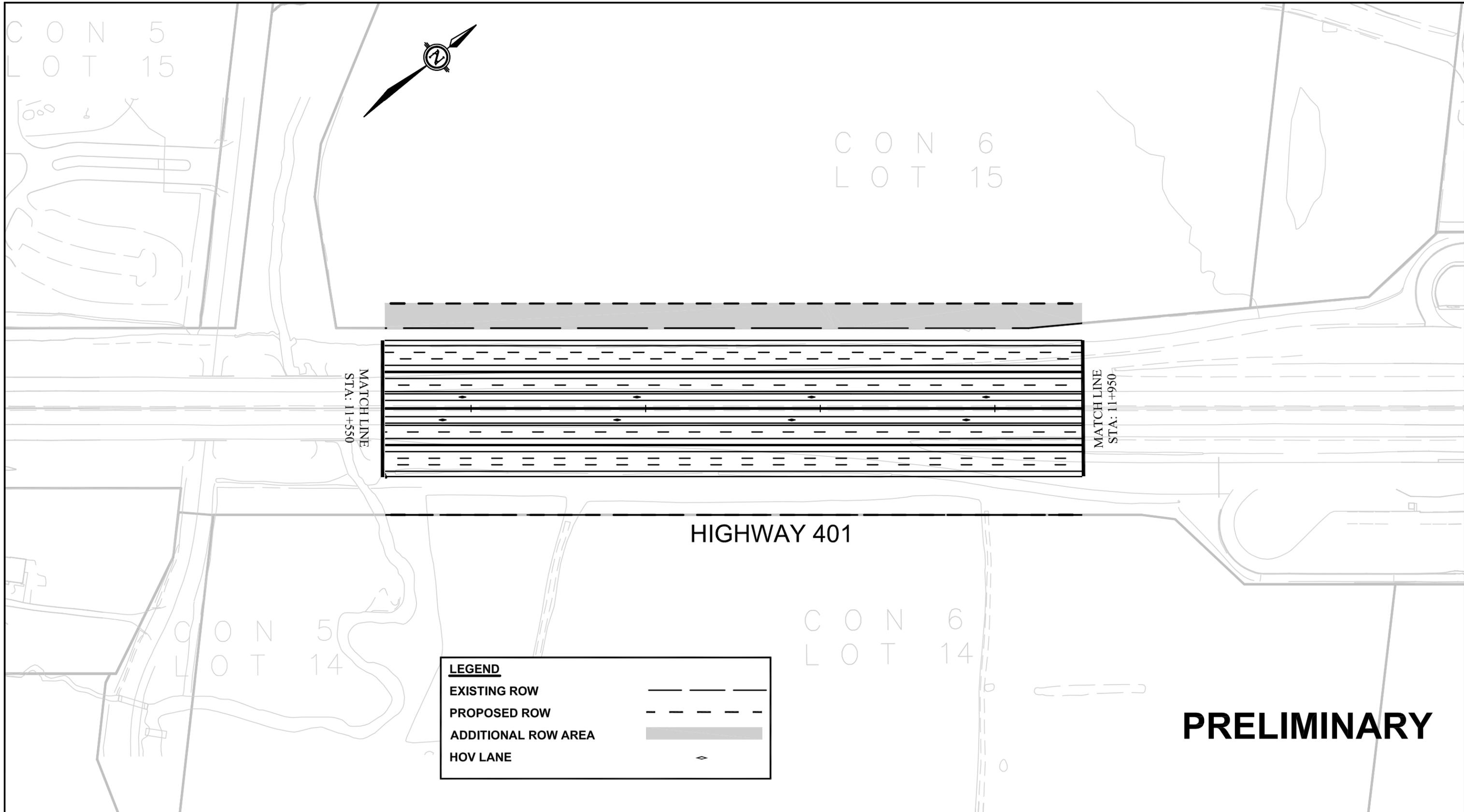


PLATE
12



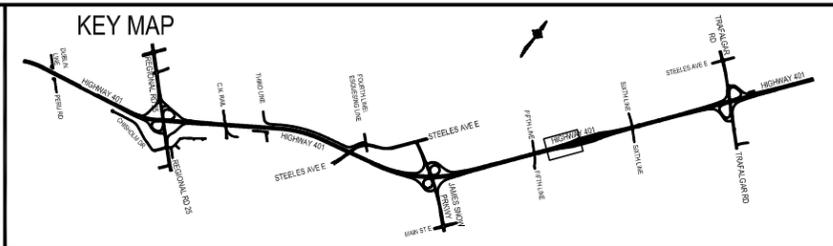
HIGHWAY 401

LEGEND	
EXISTING ROW	-----
PROPOSED ROW	- - - - -
ADDITIONAL ROW AREA	██████████
HOV LANE	◇

PRELIMINARY

Ontario
Ministry of Transportation

HIGHWAY 401 IMPROVEMENTS
PRELIMINARY DESIGN
TRAFALGAR ROAD TO REGIONAL ROAD 25
W.O. 07-20024



MILTON AND HALTON HILLS
RECOMMENDED PLAN
STATION 11+550 TO STATION 11+950

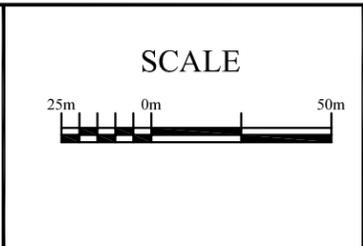


PLATE
13

CON 6
LOT 15

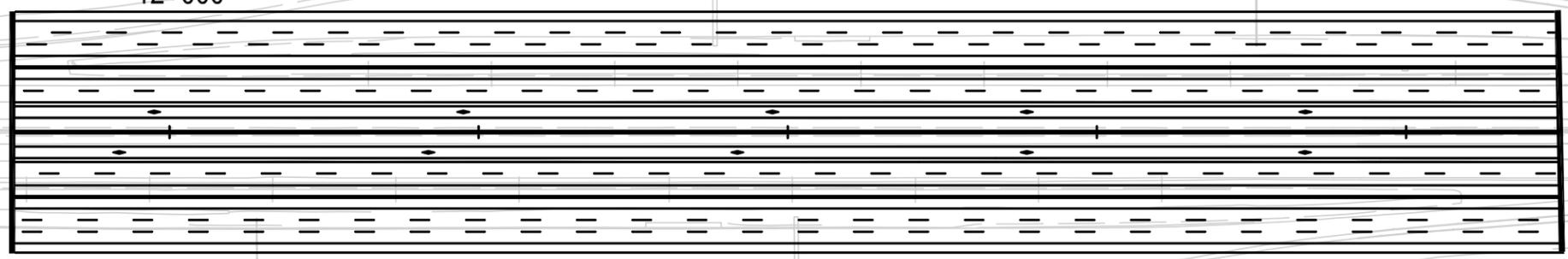


COMMERCIAL VEHICLE
INSPECTION FACILITY TO BE CLOSED

12+000

MATCH LINE
STA: 11+950

MATCH LINE
STA: 12+450



COMMERCIAL VEHICLE
INSPECTION FACILITY TO BE CLOSED

HIGHWAY 401

CON 6
LOT 14

CON 6
LOT 14

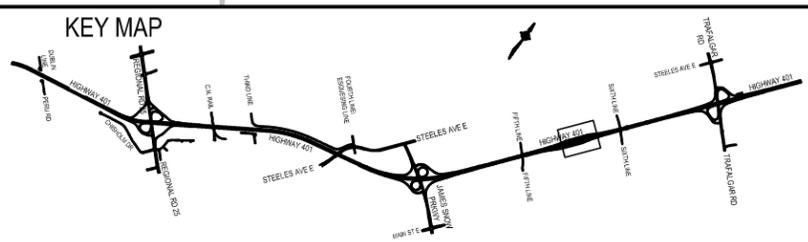
LEGEND

EXISTING ROW	---
PROPOSED ROW	- - -
ADDITIONAL ROW AREA	█
HOV LANE	◇

PRELIMINARY



HIGHWAY 401 IMPROVEMENTS
PRELIMINARY DESIGN
TRAFALGAR ROAD TO REGIONAL ROAD 25
W.O. 07-20024



MILTON AND HALTON HILLS
RECOMMENDED PLAN
STATION 11+950 TO STATION 12+450

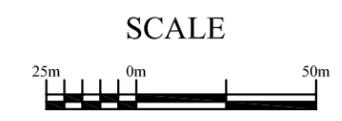
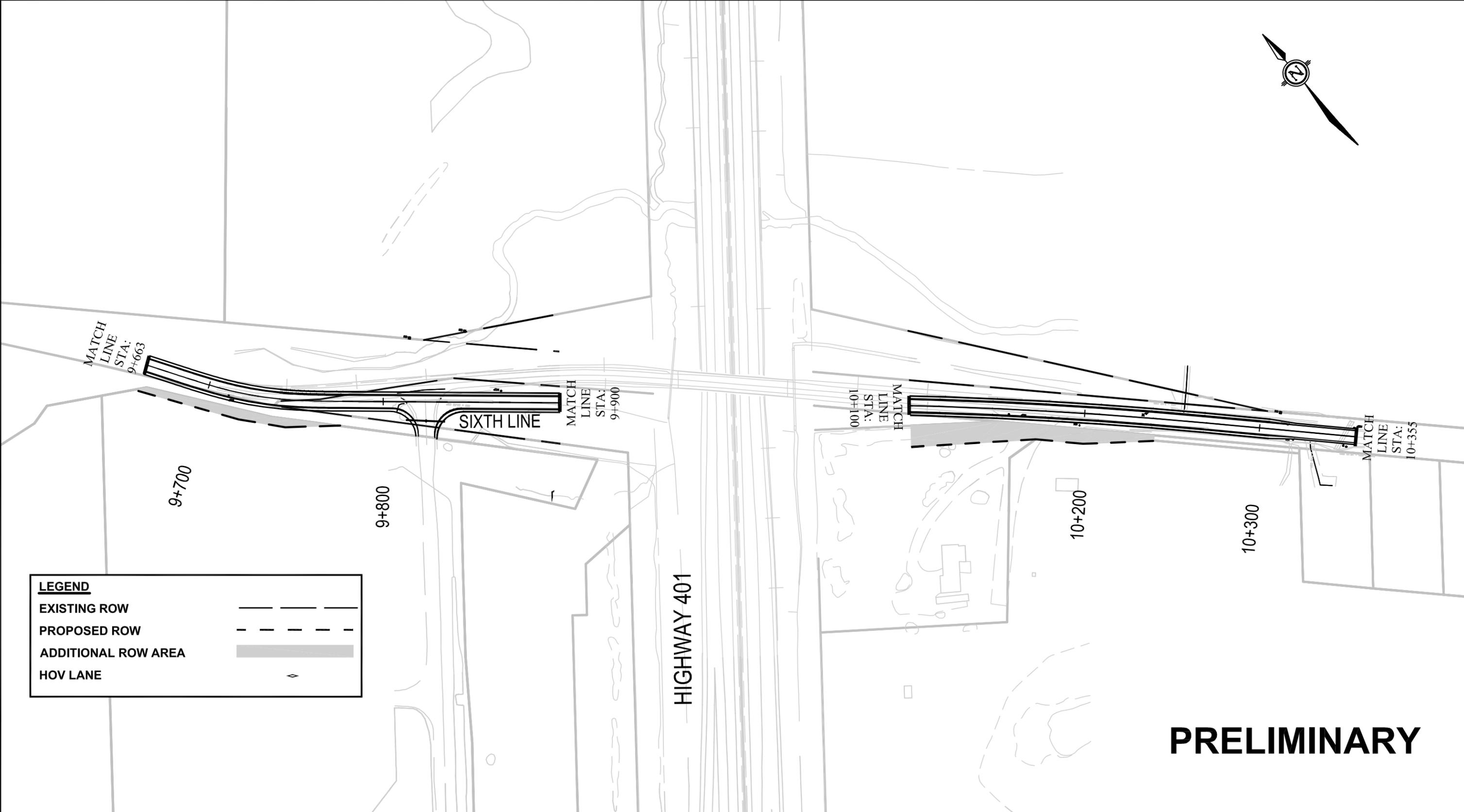


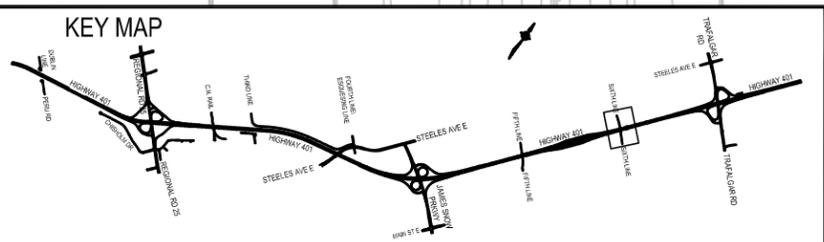
PLATE
14



LEGEND	
EXISTING ROW	
PROPOSED ROW	
ADDITIONAL ROW AREA	
HOV LANE	

PRELIMINARY

HIGHWAY 401 IMPROVEMENTS
 PRELIMINARY DESIGN
 TRAFALGAR ROAD TO REGIONAL ROAD 25
 W.O. 07-20024



MILTON AND HALTON HILLS
 SIXTH LINE
 RECOMMENDED PLAN
 SIXTH LINE
 STATION 9+663 TO STATION 10+355

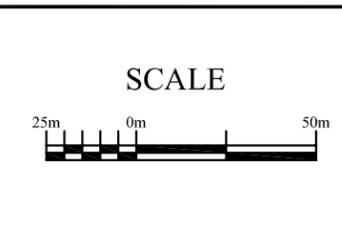
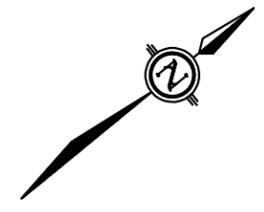


PLATE
 16

TOWN OF HALTON HILLS

HORNBY CREEK

CON 7
LOT 15



13+500

10+000

MATCH LINE
STA: 13+150

MATCH LINE
STA: 9+915

MATCH LINE
STA: 13+850

MATCH LINE
STA: 10+065

R=5000m

HIGHWAY 401

10+000

LEGEND

EXISTING ROW	— — — — —
PROPOSED ROW	- - - - -
ADDITIONAL ROW AREA	█
HOV LANE	◇

CON 7
LOT 14

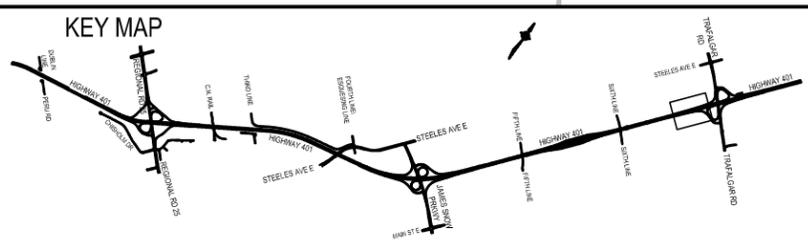
CON 7
LOT 14

TOWN OF MILTON

PRELIMINARY



HIGHWAY 401 IMPROVEMENTS
PRELIMINARY DESIGN
TRAFALGAR ROAD TO REGIONAL ROAD 25
W.O. 07-20024



MILTON AND HALTON HILLS
RECOMMENDED PLAN
STATION 13+150 TO STATION 13+850

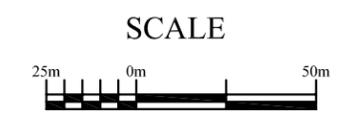
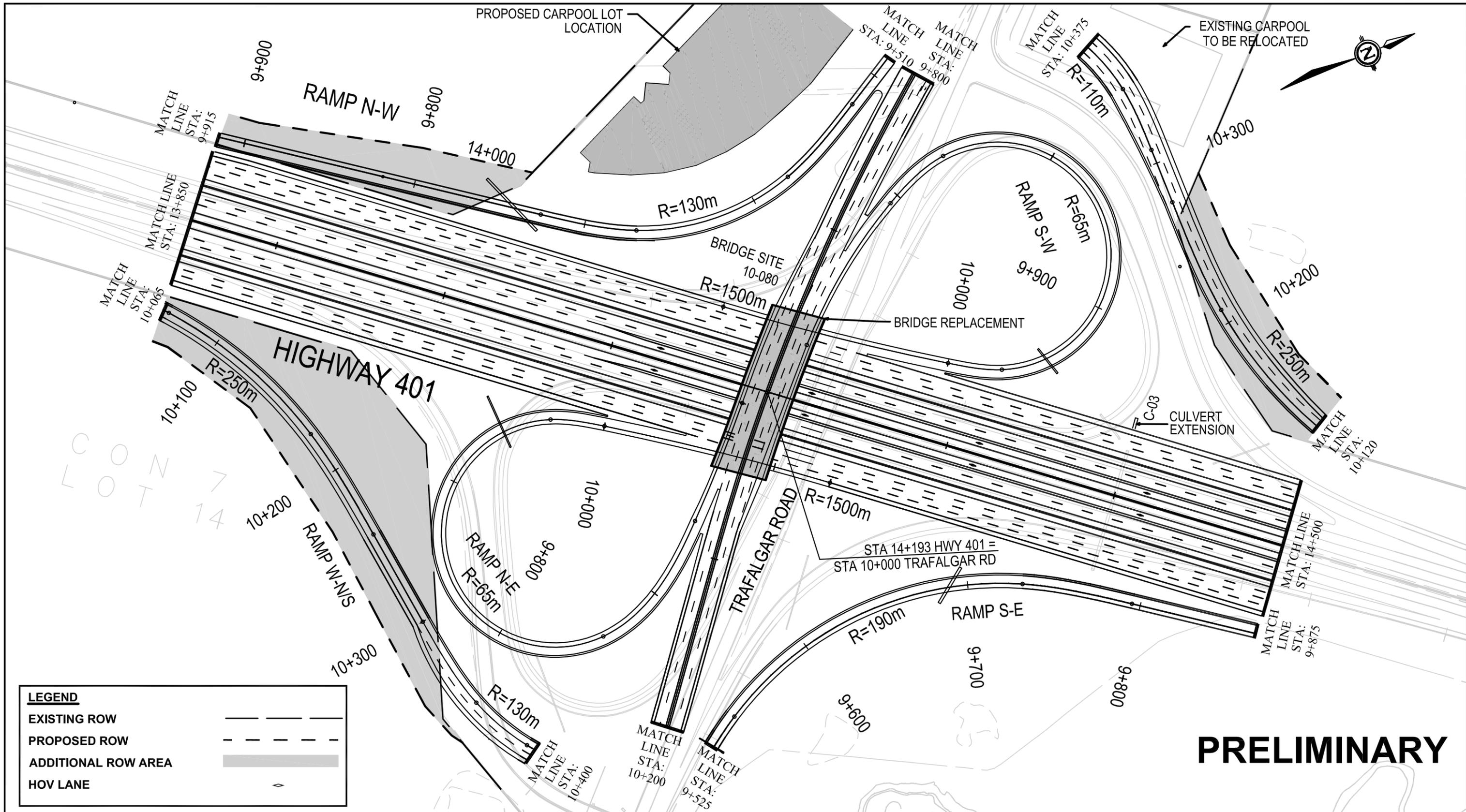


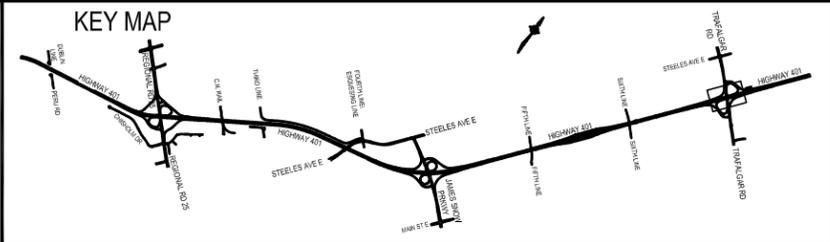
PLATE
17



LEGEND	
EXISTING ROW	— — — — —
PROPOSED ROW	- - - - -
ADDITIONAL ROW AREA	▬
HOV LANE	◊

PRELIMINARY

HIGHWAY 401 IMPROVEMENTS
 PRELIMINARY DESIGN
 TRAFALGAR ROAD TO REGIONAL ROAD 25
 W.O. 07-20024



MILTON AND HALTON HILLS
 RECOMMENDED PLAN
 STATION 13+850 TO STATION 14+500

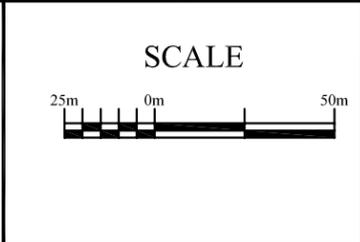
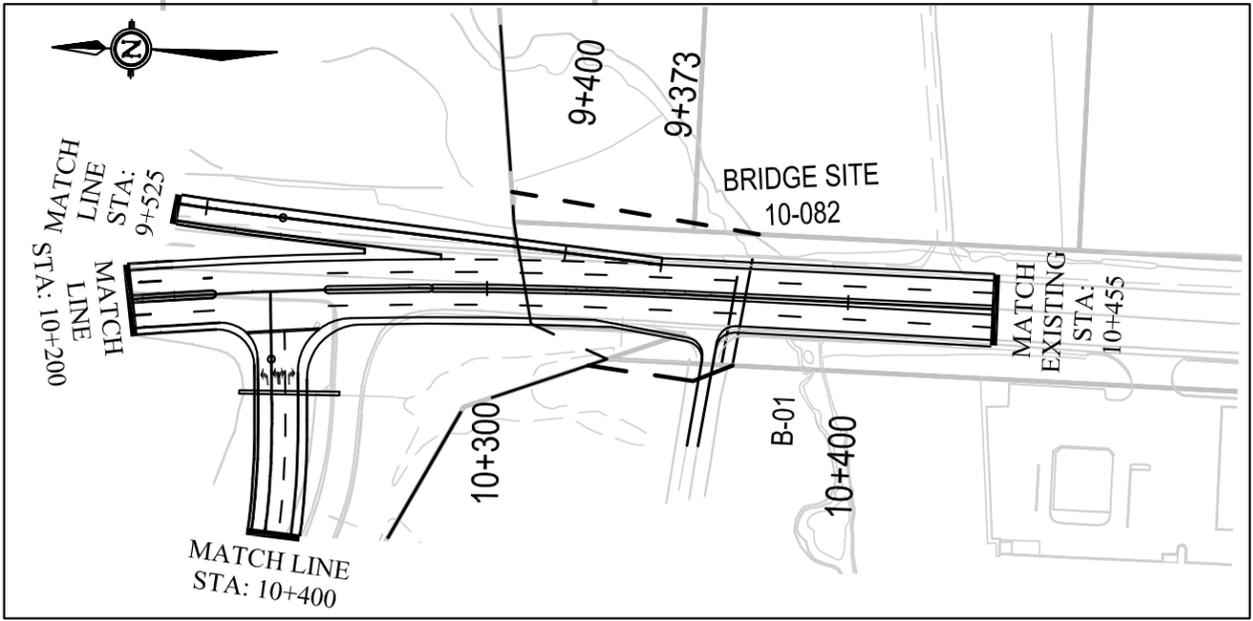
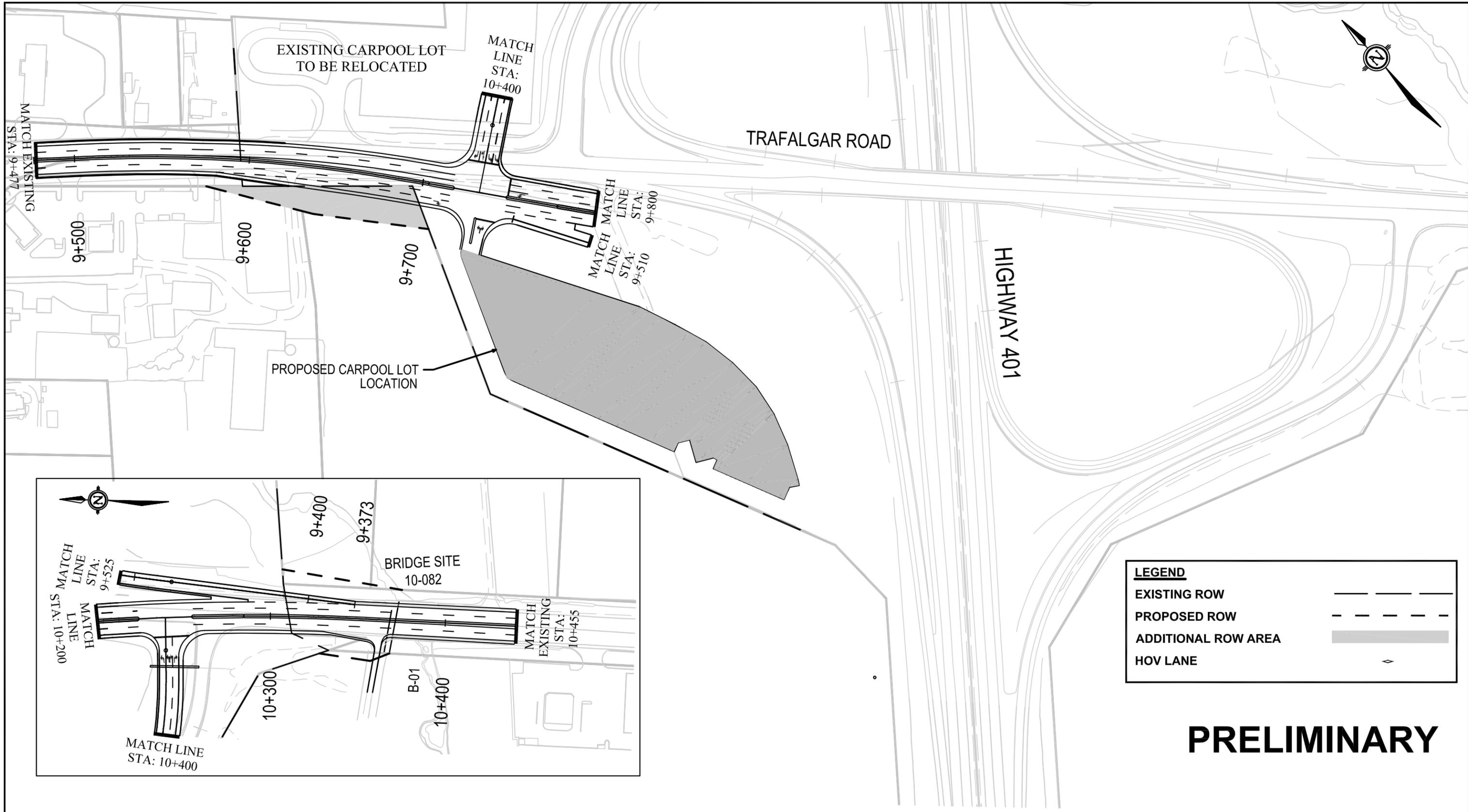


PLATE
 18

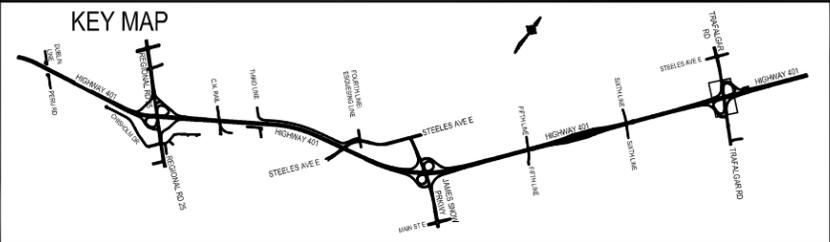


LEGEND	
EXISTING ROW	— — — — —
PROPOSED ROW	- - - - -
ADDITIONAL ROW AREA	▬
HOV LANE	◊

PRELIMINARY

Ontario
Ministry of Transportation

HIGHWAY 401 IMPROVEMENTS
PRELIMINARY DESIGN
TRAFALGAR ROAD TO REGIONAL ROAD 25
W.O. 07-20024



MILTON AND HALTON HILLS
TRAFALGAR ROAD
RECOMMENDED PLAN
TRAFALGAR ROAD
STATION 9+477 TO STATION 10+455

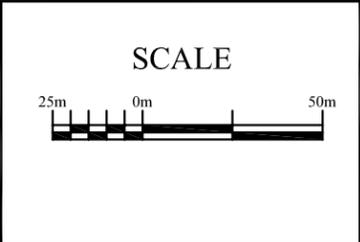
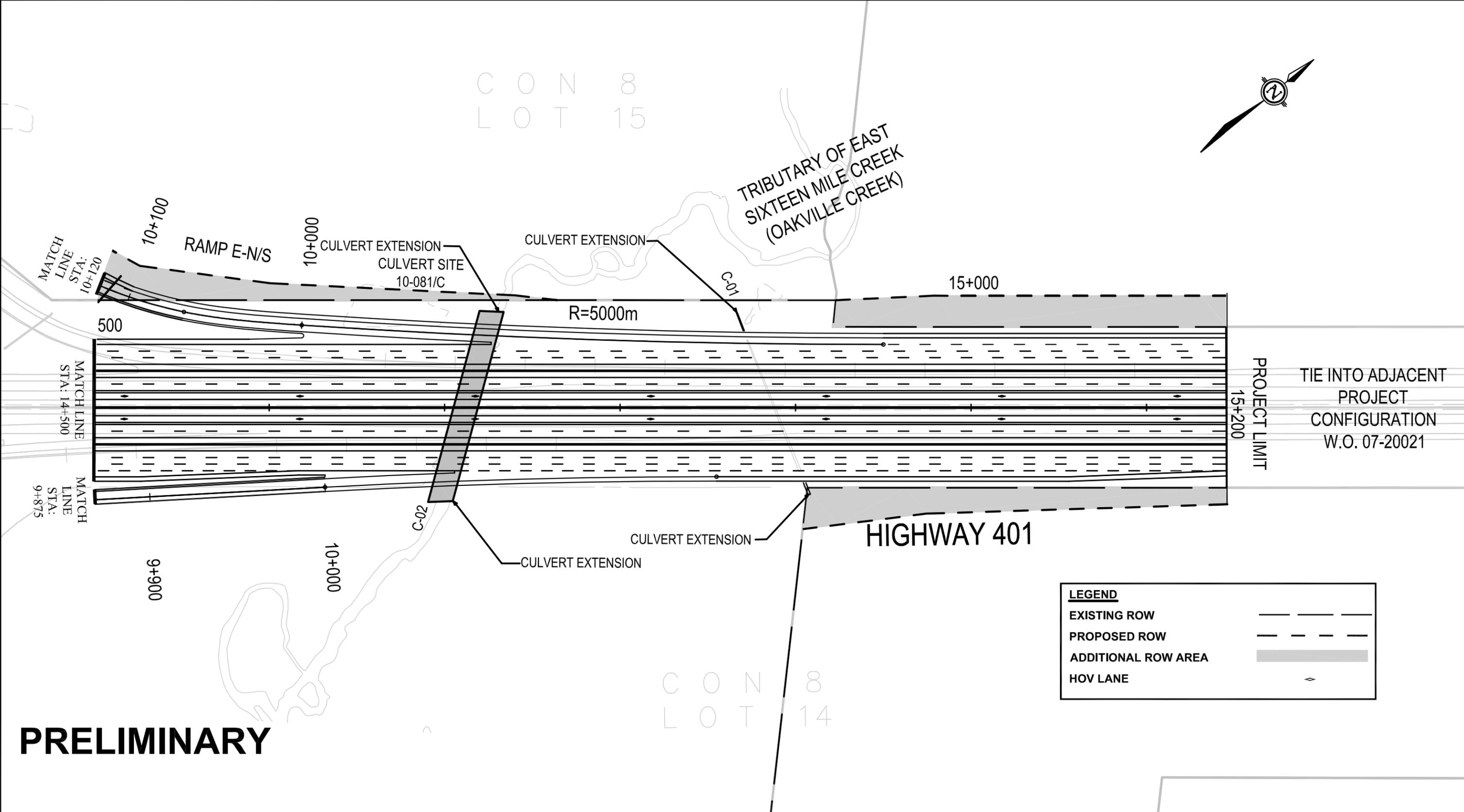
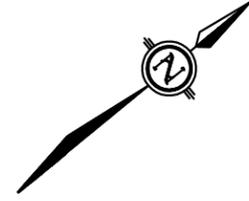


PLATE
19

CON 8
LOT 15



TIE INTO ADJACENT
PROJECT
CONFIGURATION
W.O. 07-20021

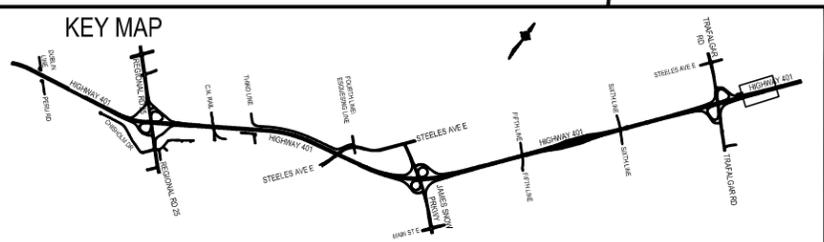
LEGEND

- EXISTING ROW
- PROPOSED ROW
- ADDITIONAL ROW AREA
- HOV LANE

PRELIMINARY

CON 8
LOT 14

HIGHWAY 401 IMPROVEMENTS
PRELIMINARY DESIGN
TRAFALGAR ROAD TO REGIONAL ROAD 25
W.O. 07-20024



MILTON AND HALTON HILLS
RECOMMENDED PLAN
STATION 14+500
TO
PROJECT LIMIT 15+200

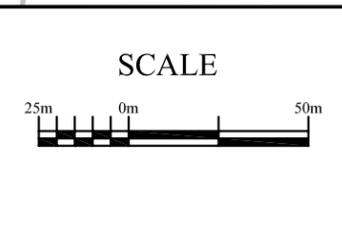
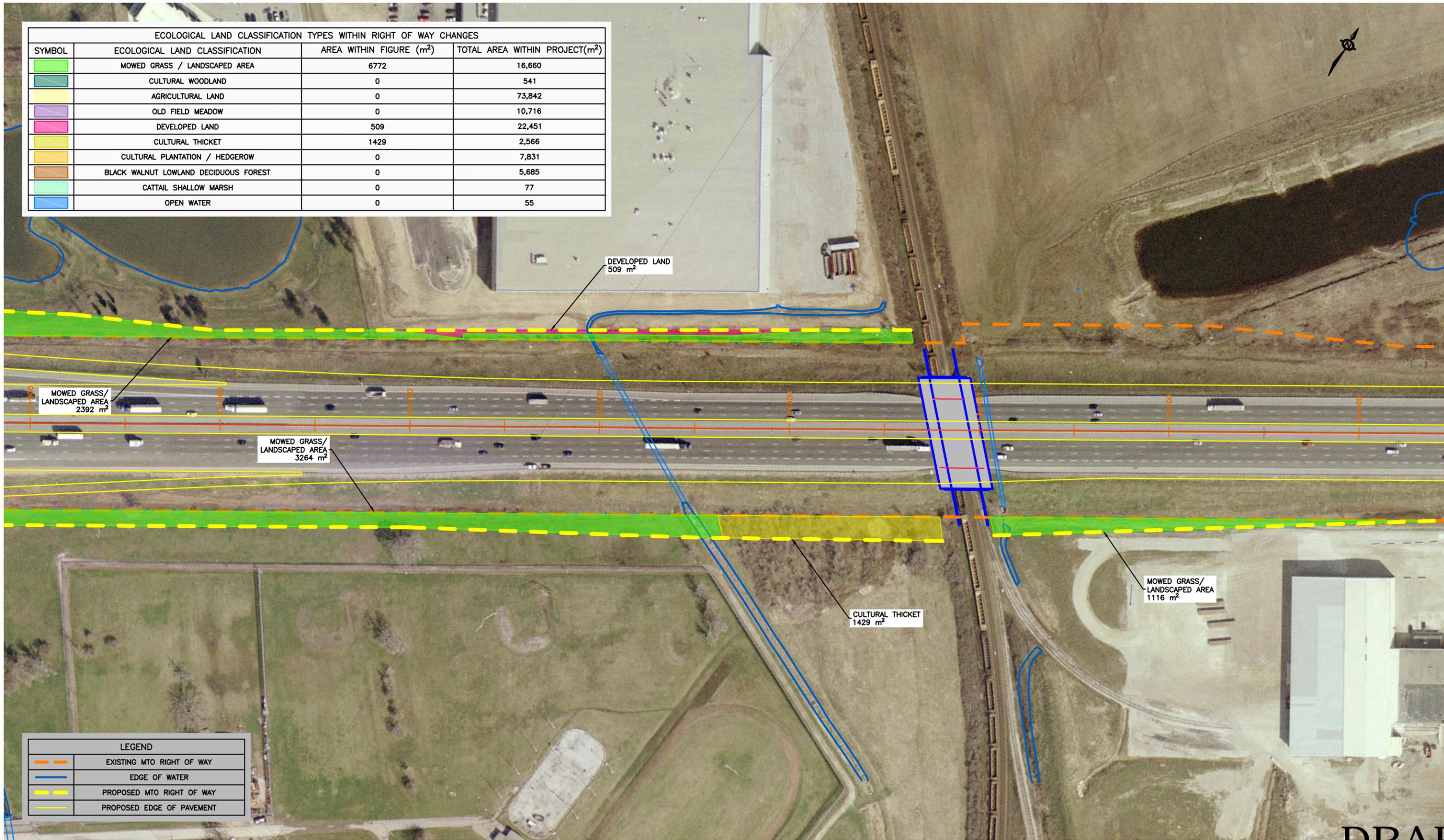


PLATE
20

APPENDIX D

Terrestrial Impacts Associated With the Recommended Plan

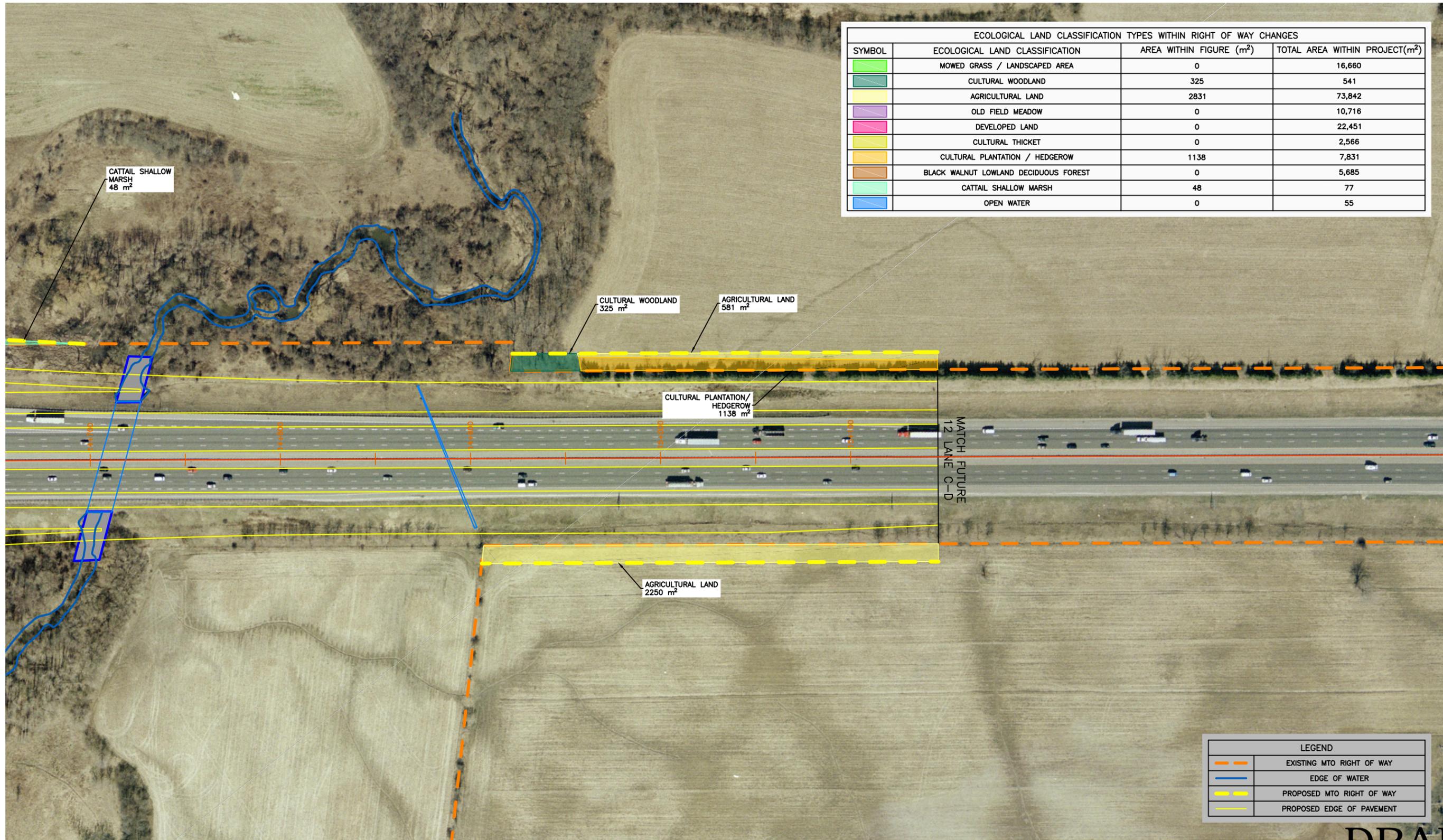
ECOLOGICAL LAND CLASSIFICATION TYPES WITHIN RIGHT OF WAY CHANGES			
SYMBOL	ECOLOGICAL LAND CLASSIFICATION	AREA WITHIN FIGURE (m ²)	TOTAL AREA WITHIN PROJECT(m ²)
	MOWED GRASS / LANDSCAPED AREA	6772	16,660
	CULTURAL WOODLAND	0	541
	AGRICULTURAL LAND	0	73,842
	OLD FIELD MEADOW	0	10,716
	DEVELOPED LAND	509	22,451
	CULTURAL THICKET	1429	2,566
	CULTURAL PLANTATION / HEDGEROW	0	7,831
	BLACK WALNUT LOWLAND DECIDUOUS FOREST	0	5,685
	CATTAIL SHALLOW MARSH	0	77
	OPEN WATER	0	55



DRAFT

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AMEC Earth & Environmental 160 Traders Boulevard East Mississauga, Ontario, Canada L4Z 3K7 		www.amec.com/earthandenvironmental																																													

P:\VA\Projects\0101\TC101402_URS_Rev_401_Trafalgar to 25\Background\MEC CAD Files\Vertical - Right of Way Expansion Area.dwg - 3-5 - Oct. 13, 2011 5:01pm - notonwebsite



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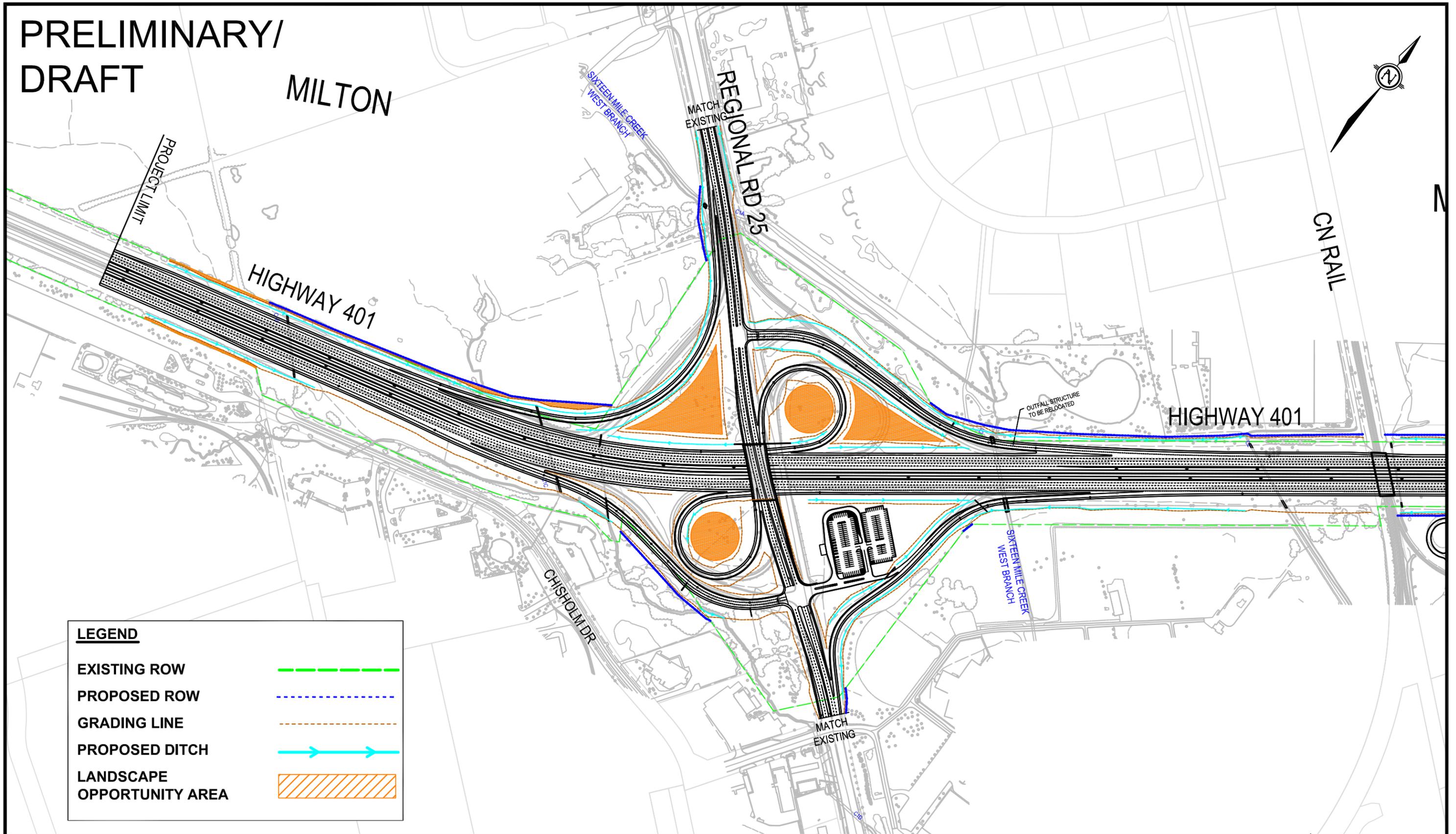
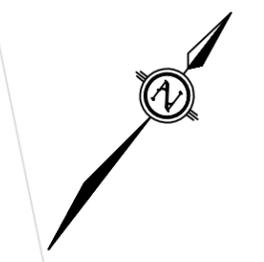
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APPENDIX E

Landscape Opportunity Plan

PRELIMINARY/
DRAFT

MILTON



LEGEND	
EXISTING ROW	
PROPOSED ROW	
GRADING LINE	
PROPOSED DITCH	
LANDSCAPE OPPORTUNITY AREA	



HIGHWAY 401
TRAFALGAR TO REGIONAL ROAD 25
W.O. 07-20024

LANDSCAPE OPPORTUNITY PLAN

SCALE: 1:5000
50m 0 50m 100m
DATE: APRIL 23, 2012

DWG
1

PRELIMINARY/ DRAFT MILTON



CN RAIL

FOURTH LINE

MILTON

BOSTON CHURCH RD

HIGHWAY 401

STEELES AVE E

LEGEND

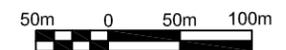
- EXISTING ROW 
- PROPOSED ROW 
- GRADING LINE 
- PROPOSED DITCH 
- LANDSCAPE OPPORTUNITY AREA 



HIGHWAY 401
TRAFALGAR TO REGIONAL ROAD 25
W.O. 07-20024

LANDSCAPE OPPORTUNITY PLAN

SCALE: 1:5000



DATE:

APRIL 23, 2012

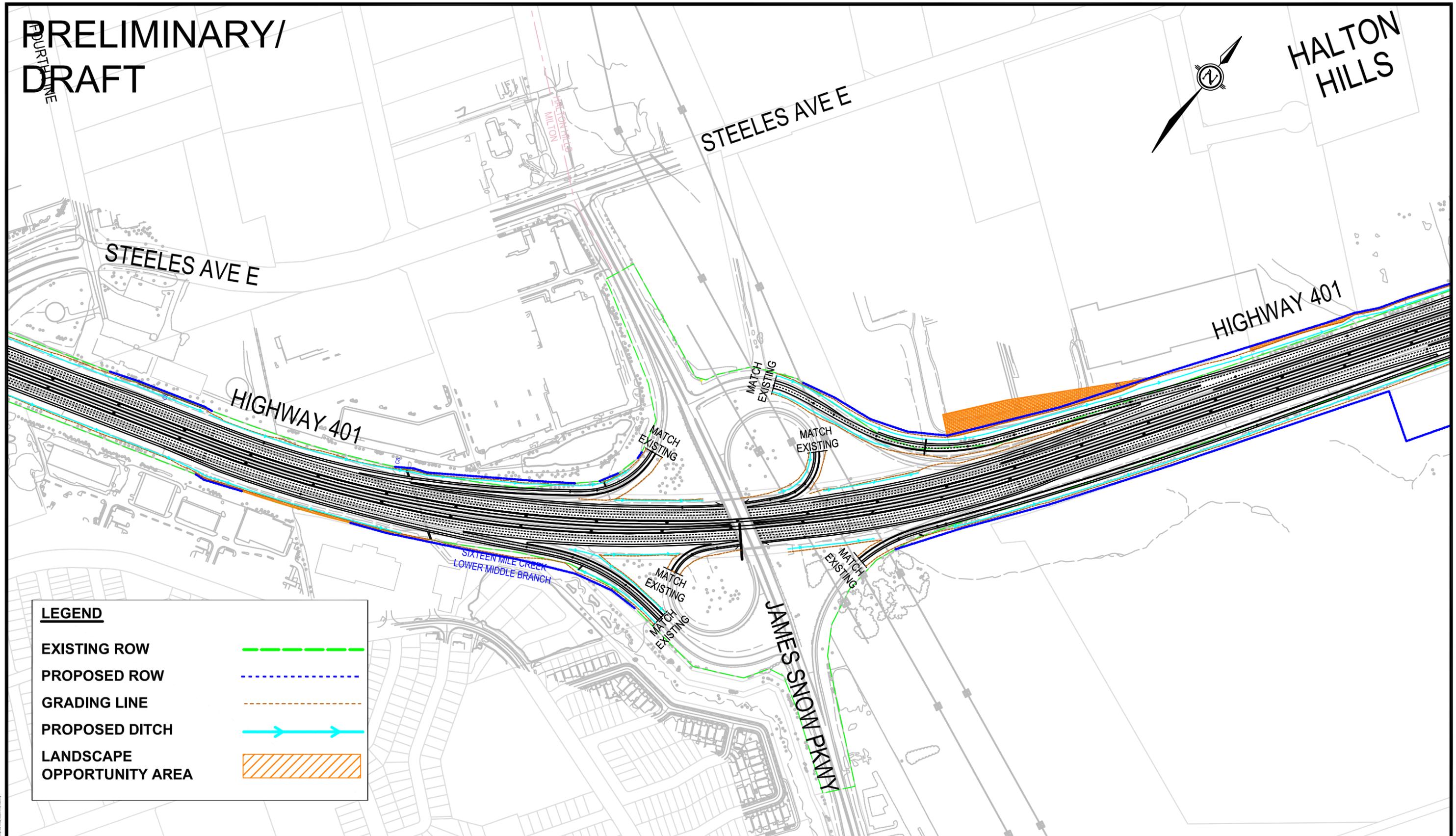
DWG

2

**PRELIMINARY/
DRAFT**



**HALTON
HILLS**



LEGEND	
EXISTING ROW	
PROPOSED ROW	
GRADING LINE	
PROPOSED DITCH	
LANDSCAPE OPPORTUNITY AREA	



HIGHWAY 401
TRAFALGAR TO REGIONAL ROAD 25
W.O. 07-20024

LANDSCAPE OPPORTUNITY PLAN

SCALE: 1:5000
50m 0 50m 100m
DATE: APRIL 23, 2012

DWG
3

PRELIMINARY/
DRAFT

HALTON
HILLS



FIFTH LINE

SIXTEEN MILE CREEK
MIDDLE BRANCH

HIGHWAY 401

DRAINAGE FEATURE
TO BE RELOCATED

MATCH
EXISTING

SIXTH LINE

SIXTEEN MILE CREEK
MIDDLE EAST BRANCH

SIXTH LINE

MATCH
EXISTING

MILTON

FIFTH LINE

LEGEND

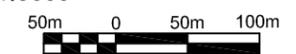
- EXISTING ROW 
- PROPOSED ROW 
- GRADING LINE 
- PROPOSED DITCH 
- LANDSCAPE OPPORTUNITY AREA 



HIGHWAY 401
TRAFALGAR TO REGIONAL ROAD 25
W.O. 07-20024

LANDSCAPE OPPORTUNITY PLAN

SCALE: 1:5000



DATE:

APRIL 23, 2012

DWG

4

PRELIMINARY/ DRAFT STEELES AVE E

HALTON HILLS

HIGHWAY 401

MATCH EXISTING

TRAFALGAR RD

SIXTEEN MILE CREEK EAST BRANCH

PROJECT LIMIT

HIGHWAY 401

MILTON

TRAFALGAR RD

SIXTEEN MILE CREEK EAST BRANCH

MATCH EXISTING

LEGEND

- EXISTING ROW 
- PROPOSED ROW 
- GRADING LINE 
- PROPOSED DITCH 
- LANDSCAPE OPPORTUNITY AREA 



