



**Highway 401/Westchester
Bourne Interchange,
Bridge Replacement &
Interchange Improvements**

GWP 3053-11-00

**Transportation Environmental
Study Report**

January 15, 2016

Project No. 12-7110

Submitted by



**DILLON
CONSULTING**

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Notice of Completion
Transportation Environmental Study Reports (TESR)
Highway 401, at Westchester Bourne, Dorchester Road and Elgin Road
Bridge Replacements and Interchange Improvements
Middlesex County (GWP 3053-11-00)

The Ministry of Transportation, Ontario (MTO) retained Dillon Consulting Limited to complete the Preliminary Design, initial Detailed Design and Class Environmental Assessment (EA) Study for improvements to the Westchester Bourne (Middlesex Road 74), Dorchester Road (Middlesex Road 32) and Elgin Road (Middlesex Road 73) interchanges at Highway 401 in Middlesex County. Proposed improvements and preliminary traffic management plans during construction include the following:

Westchester Bourne Interchange (Middlesex Road 74):

- Replacement of the bridge, interchange ramp reconfiguration, realignment of the bridge and Westchester Bourne to the west side of the existing bridge, and the realignment of Cromarty Drive southerly on Westchester Bourne
- It is expected that traffic will be maintained on Westchester Bourne except for some short duration closures. Long term closures are expected at the interchange ramps during construction. The total duration of construction is expected to be approximately 1 to 1.5 years.

Dorchester Road Interchange (Middlesex Road 32):

- Replacement of the bridge, interchange ramp reconfiguration, and a slight realignment of the bridge and Dorchester Road to the east side of the existing bridge
- Dorchester Road at Highway 401 and the interchange ramps will be fully closed during construction for approximately 1 year. The total duration of construction is expected to be approximately 1 to 1.5 years
- A signed detour route following Catherine Street, Elgin Road and Cromarty Drive will be in place during closures of Dorchester Road.

Elgin Road Interchange (Middlesex Road 73):

- Replacement of the bridge in the same location as the existing bridge. The interchange ramps will also be reconfigured
- Elgin Road at Highway 401 and the interchange ramps will be closed for the duration of construction (approximately one construction season). The total duration of construction is approximately 1 to 1.5 years
- A signed detour route following Catherine Street, Dorchester Road and Cromarty Drive will be in place during closures of Elgin Road.

During construction at each interchange, there will be temporary short duration closures of Highway 401. Access to private property will be maintained at all times during construction. Adjacent interchanges will not be closed at the same time.

The studies were completed as Group "B" projects under MTO's *Class Environmental Assessment for Provincial Transportation Facilities (2000)*. In accordance with the requirements of MTO's Class EA, three (3) Transportation Environmental Study Reports (TESRs) for the three interchanges are available for public review from **January 20 to February 19, 2016**, at the following locations:

**Ministry of the Environment &
Climate Change**
London Regional Office
733 Exeter Road
London, Ontario
Tel: 519-873-5000

Middlesex County Library
2123 Dorchester Road
Dorchester, ON
Tel: 519-268-3451

Ministry of Transportation
West Region
659 Exeter Road, Lobby
London, Ontario
Tel: 519-873-4100

The TESRs are also available online at www.hwy401middlesexbridges.ca

Interested persons are encouraged to review the TESRs and provide comments to MTO by **February 19, 2016**. If, after consulting with MTO staff, you have serious unresolved concerns, you have the right to request the Minister of the Environment & Climate Change (MOECC) (Ferguson Block, 11th Floor, 77 Wellesley St. W., Toronto, Ontario, M7A 2T5) to issue a Part II Order (i.e. "bump up") for this project. For more information on the Part II Order request process, you are encouraged to contact the MOECC. A copy of the Part II Order request must be forwarded to MTO at the address below. If no requests are received by **February 19, 2016**, the projects will be considered to have met the requirements of MTO's Class EA and may proceed to Detailed Design and construction.

Information collected will be used in accordance with the *Freedom of Information and Protection of Privacy Act* and *Access to Information Act*. With the exception of personal information, all comments will become part of the public record.

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1. INTRODUCTION

1.1 Background and Purpose

The Ministry of Transportation, Ontario (MTO) retained Dillon Consulting Limited (Dillon) to complete the Preliminary Design, Initial Detailed Design and Class Environmental Assessment (EA) Study of the Westchester Bourne (Middlesex Road 74) Bridge Replacement and Interchange Improvements on Highway 401. The interchange is located in the Municipality of Thames Centre, Middlesex County.

The Westchester Bourne Bridge, constructed in 1956, is reaching the end of its service life and requires replacement. Interchange improvements are required to accommodate the new bridge and enhance traffic safety, improve operations and capacity, improve geometric design and sight distances and apply MTO's *Highway Access Management Guidelines* (2013) at intersecting roads and private entrances. Based on these needs, the purpose of this study is to:

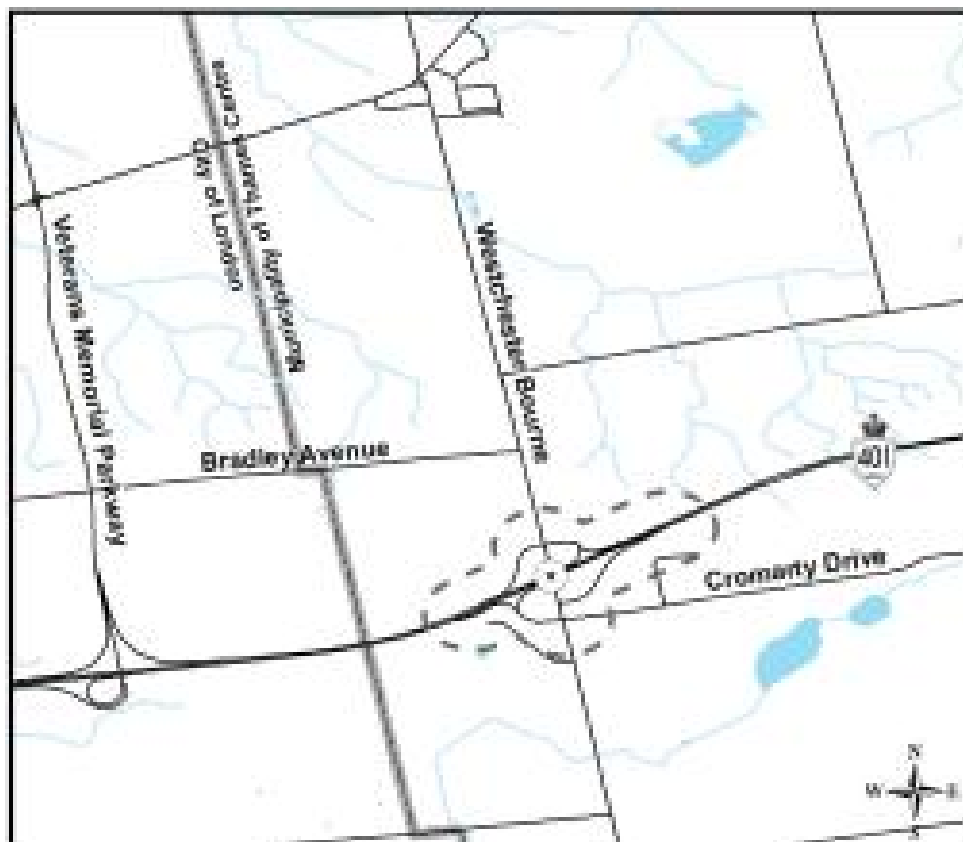
- Develop and evaluate design alternatives for the bridge replacement and interchange improvements to accommodate existing and future transportation needs in the Highway 401 corridor, including:
 - The future expansion of Highway 401 to eight lanes. (The expansion of Highway 401 is not part of this project)
 - The ultimate expansion of the highway to ten lanes
- Identify a preferred plan for the bridge replacement and interchange improvements, including preliminary construction staging and traffic management options, considering the future expansion of Highway 401.

This Transportation Environmental Study Report (TESR) documents the decision-making process leading to the selection of the preferred plan for the bridge replacement and interchange improvements.

1.2 Study Area

As shown on **Figure 1**, the Study Area consists of the lands around the Westchester Bourne interchange in the Municipality of Thames Centre, Middlesex County. The City of London boundary is located just west of the Study Area.

Figure 1: Study Area



1.3 Class Environmental Assessment Requirements

The project is being completed as a Class Environmental Assessment (EA) following MTO's *Class EA for Provincial Transportation Facilities* (2000). The Class EA categorizes it as a Group B project – major improvements to an existing transportation facility. A Group B project requires the completion of a TESR. Following the 30-day public and agency review period, the TESR is considered to have met the requirements of the *EA Act* and the project may proceed to Detailed Design.

A Design and Construction Report (DCR) will be prepared during the Detailed Design stage of the project. The DCR will include more details on the improvements, construction staging, traffic management during construction and environmental protection and mitigation measures to be incorporated into the construction contract.

1.4 Project Description

The preferred Preliminary Design of the improvements is shown on **Figure 2**. Improvements proposed as part of this project include:

- Replacement of the Westchester Bourne Bridge with a new four lane bridge (two through lanes and two speed change lanes). The bridge has a 75 year design life
- Realignment of the bridge and Westchester Bourne to the west of the existing bridge
- Replacement of the existing interchange with a Parclo A-2 interchange and potential for the future expansion of the interchange to a Parclo A-4 interchange by adding directional ramps in the southeast and northwest quadrants of the interchange. These ramps will be needed in the future for increases in local traffic
- To comply with MTO's *Access Management Guidelines* (2013), Cromarty Drive, a local municipal road, will be realigned with a new intersection on Westchester Bourne.

To minimize future costs and traffic disruption, the new bridge and interchange have been designed to accommodate the future expansion of Highway 401 to eight lanes. Also, the new bridge and interchange design is readily expandable to accommodate the ultimate expansion to ten lanes.

As part of this project, MTO is seeking environmental clearance for the property required to accommodate the new bridge and interchange improvements for the future expansion to eight lanes. MTO will protect the property required for the ultimate ten lane expansion and future directional ramps by designating them as "Controlled Access Highway". This designation ensures that any development located within MTO's permit control area under the *Public Transportation and Highway Improvements Act* is subject to MTO review and approval prior to the issuance of any entrance, building or land use permits.

More details on the proposed improvements, including construction staging and traffic management during construction, are provided in **Section 5**.

1.5 Construction Timing

Construction of the bridge replacement and interchange and road improvements shown in yellow on **Figure 2** at Westchester Bourne is planned to begin between 2017 and 2019, according to the 2015-2019 *Southern Highways Program*. Timing of projects in the *Southern Highways Program* is subject to change based on funding, planning, design, environmental approvals, property acquisition and construction requirements.

Construction timing will be coordinated with adjacent bridge replacements and interchange improvements at Veterans Memorial Parkway in the City of London and Dorchester Road and Elgin Road in the Municipality of Thames Centre. Construction of this project is anticipated to take approximately one to one and a half construction seasons to complete.

The future directional ramps shown in orange on **Figure 2** will be built sometime in the future when warranted by increases in local traffic volumes.



2. EXISTING CONDITIONS

2.1 Introduction

Section 2 of the TESR summarizes existing and projected environmental conditions potentially affected by the bridge replacement and interchange improvements. This information was used to:

- Develop and evaluate Preliminary Design alternatives, as outlined in **Section 3**
- Develop the preferred design in more detail, as described in **Section 5**
- Evaluate the impacts of the preferred design, as summarized in **Section 5**.

2.2 Transportation Engineering

2.2.1 Highway 401

Highway 401 is one of Canada's major transportation corridors. As an international trade corridor, it links major urban centres and industrial areas throughout Ontario and provides access to Quebec and the Great Lake States of the United States, such as Michigan, Illinois and Indiana.

Highway 401 currently has six through lanes in this area, including three lanes eastbound and three lanes westbound. Based on projected traffic volumes, MTO plans to widen the highway in the future to eight through lanes, plus a speed change lane in each direction at the Westchester Bourne interchange. As part of an ultimate expansion, MTO plans to widen the highway to ten lanes with a speed change lane in each direction. This section of Highway 401 is classified as a Rural Freeway Divided Highway, with a design speed of 120 km/h (RFD 120).

2.2.2 Westchester Bourne (Middlesex Road 74) and Westchester Bourne Bridge (Site #19-375)

Part of the Middlesex County Road system, Westchester Bourne provides access to the village of Dorchester to the north (via Hamilton Road) and the village of Belmont to the south. It is designated as an "Arterial Road" in the County of Middlesex Official Plan (Office Consolidation, January 2006). The existing posted speed is 80 km/h. Westchester Bourne is classified as a Rural Arterial Undivided road (RAU) with a design speed of 100 km/h (RAU 100).

The existing Highway 401 and Westchester Bourne interchange is a diamond configuration. Both the north and south ramp terminals operate under two-way stop control. The existing lane configuration and traffic control measures in the Study Area are presented in **Figure 3**.

The Westchester Bourne Underpass, constructed in 1956, is a 35.2 m single span cast-in-place reinforced concrete haunched T-beam rigid frame bridge. The bridge carries four lanes of Westchester Bourne over Highway 401. The existing reinforced concrete deck slab has a width of 17.2 m and a roadway width of 14.3 m.

The bridge was rehabilitated in 1991, including concrete repairs to the existing deck, abutments, wingwalls, and beams. The existing condition of the underpass is generally fair with some parts that are poor. Recent structural condition inspections have noted deteriorated areas on the bridge deck, abutments, wingwalls, and railing system.

In addition, the bridge is functionally obsolete since it cannot accommodate the future widening of Highway 401.

2.2.3 Cromarty Drive

Cromarty Drive is a rural local municipal road extending east from Westchester Bourne, parallel to Highway 401 on the south side. It provides local property access to farms and residences, a KOA Campground and a former MTO works yard, located at the southeast quadrant of the interchange. The intersection of Westchester Bourne and Cromarty Drive is too close to the interchange ramps and does not meet the minimum 400 metre offset, as recommended by MTO's *Highway Access Management Guidelines* (2013).

2.2.4 Traffic

2.2.4.1 Existing Traffic Volumes

Highway 401

Traffic volumes were obtained from MTO for the sections of Highway 401 west and east of Westchester Bourne. **Table 1** lists the following for the most recent year available (2009):

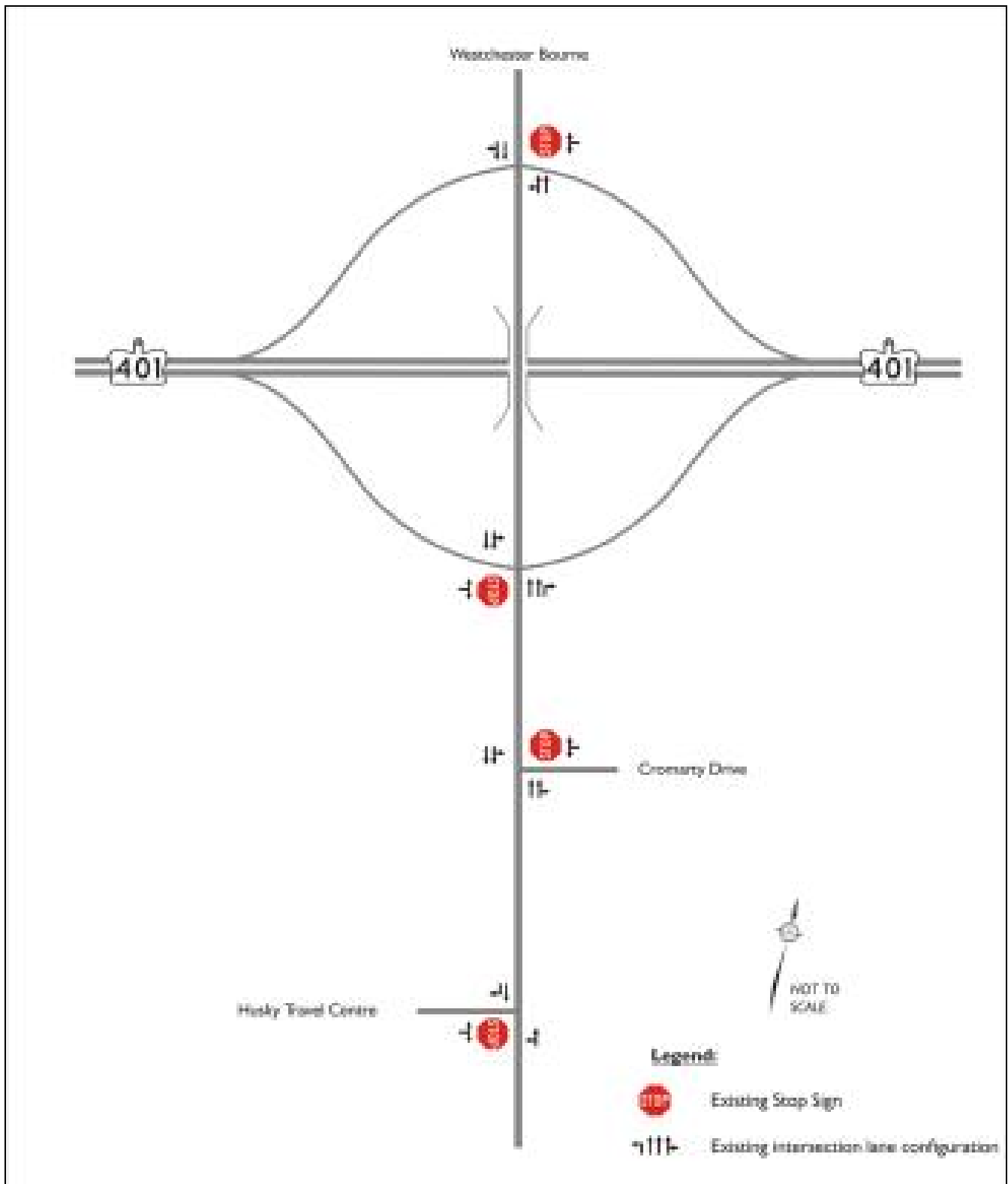
- Annual Average Daily Traffic (AADT) volumes
- Summer Average Daily Traffic (SADT) volumes
- Proportion of daily traffic traveling during the design hour (% DHV)
- Proportion of daily traffic that are trucks and commercial vehicles
- The collision rate (i.e., the number of collisions per million vehicle km).

Table 1: Existing (2009) Highway 401 Traffic Volumes

Highway 401	2010 AADT	2010 SADT	% DHV	% Trucks	Collision Rate*
Dorchester Road to Westchester Bourne	69,700	83,500	10.2%	26.9%	0.3
Westchester Bourne to Veterans Memorial Parkway	68,100	77,300	10.2%	26.4%	0.3

* Provincial Average Collision Rate – 0.5

Figure 3: Existing Lane Configurations and Traffic Control Measures



Interchange Ramps and Intersecting Roadways

Turning movement counts were provided by MTO for the Westchester Bourne intersections with the north and south ramp terminals. Peak hour traffic volumes were obtained from eight-hour counts completed by MTO in June 2011 and September 2012, at both intersections. MTO also provided hourly volumes for each ramp, collected over three one-week periods in 2008 and 2011. Traffic survey dates are shown on **Table 2**.

Dillon undertook AM and PM peak period turning movement counts on July 3 and 4, 2013, at:

- Westchester Bourne and Cromarty Drive
- Westchester Bourne and the Husky Travel Centre entrance.

Table 2: Traffic Survey Dates

Location	Survey Date(s)
Interchange Ramp Hourly Volumes (all but N/S-E ramp) <i>*except E-N/S</i>	October 17 to 23, 2011 July 4 to 10, 2011 April 4 to 10, 2011 November 13 to 19, 2008 August 5 to 11, 2008 April 21 to 27, 2008*
Interchange Ramp Hourly Volumes (N/S-E Ramp)	October 17 to 23, 2011 July 18 to 24, 2011 April 4 to 10, 2011 November 13 to 19, 2008 August 5 to 11, 2008 April 21 to 27, 2008
Westchester Bourne and North Ramp Terminal (E-N/S ramp and N/S-W ramp)	Monday, September 10, 2012 Wednesday, June 29, 2011
Westchester Bourne and South Ramp Terminal (W-N/S ramp and N/S-E ramp)	Monday, September 10, 2012 Wednesday, June 29, 2011
Westchester Bourne and Cromarty Drive	Wednesday, July 3, 2013 Thursday, July 4, 2013
Westchester Bourne and Husky Travel Centre Entrance	Wednesday, July 3, 2013 Thursday, July 4, 2013

The existing weekday AM and PM peak hour volumes are illustrated on **Figure 4**. Based on the traffic data, the PM peak hour was determined to be the most critical time period, when the total number of vehicles in the Study Area is highest.

Heavy vehicles comprise approximately 10% of traffic on Westchester Bourne north and south of the Study Area. Across the structure and immediately south of Highway 401, trucks comprise approximately 15% of the total traffic on Westchester Bourne due to additional truck activity generated by the Husky Travel Centre. Trucks comprise approximately 25% of traffic on the interchange ramps.

2.2.4.2 Existing Intersection Operations

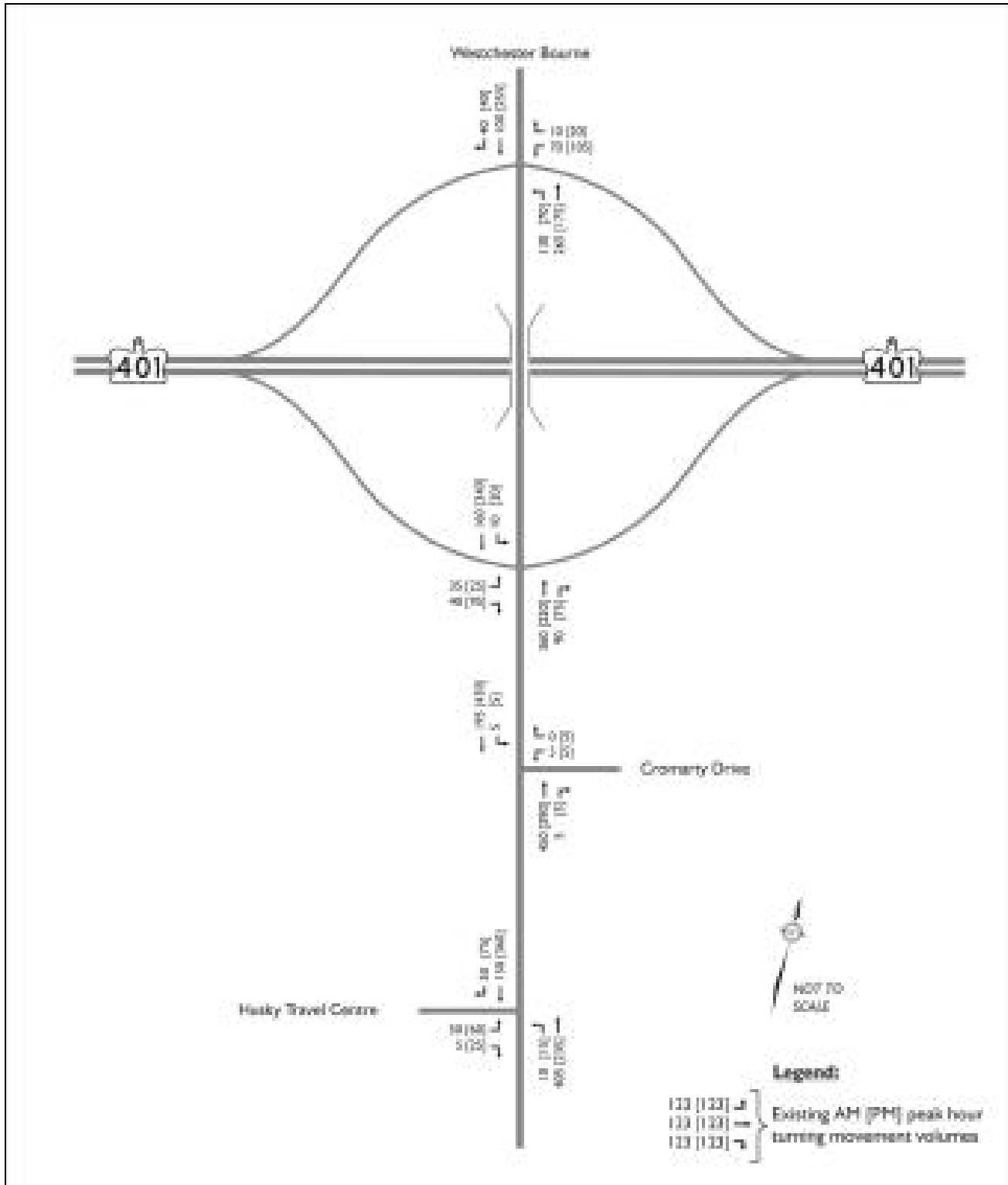
The Study Area intersections were assessed based on the existing configurations and AM and PM peak hour volumes determined by Dillon. The level of service (LOS), average vehicle delay, volume to capacity (v/c) ratio, and 95th percentile queue length were recorded for all turning movements, as well as for the intersection overall. The results are summarized in **Table 3**.

Table 3: Existing Westchester Bourne Intersection Operations

Location	Movement	AM Peak Hour				PM Peak Hour			
		LOS	Delay (s/veh)	v/c	Queue (m)	LOS	Delay (s/veh)	v/c	Queue (m)
North Ramp Terminal	WB Left/Right	C	18.5	0.24	7	C	15.4	0.28	9
	NB Left	A	0.9	0.11	3	A	0.6	0.07	2
	Overall	A	4.2	—	—	A	3.8	—	—
South Ramp Terminal	EB Left/Right	B	10.7	0.07	2	B	11.2	0.13	4
	SB Left	A	0.1	0.01	1	A	0.2	0.02	1
	Overall	A	1.3	—	—	A	2.0	—	—
Cromarty Drive	WB Left/Right	B	13.5	0.01	1	B	11.1	0.02	1
	SB Left	A	0.1	0.01	1	A	0.1	0.01	1
	Overall	A	0.2	—	—	A	0.2	—	—
Husky Travel Centre	EB Left/Right	B	14.6	0.13	4	B	14.9	0.17	5
	NB Left	A	7.7	0.01	1	A	8.4	0.02	1
	Overall	A	1.3	—	—	A	1.8	—	—

All intersections in the Study Area operate at an acceptable level of service on the stop-controlled approaches during the AM and PM peak hours.

Figure 4: Existing Peak Hour Traffic Volumes



2.2.4.3 Collision History

Highway 401

To identify any collision patterns, the collision history was reviewed for the area of the structure along mainline Highway 401 and on the interchange ramps. Collision data was not available along Westchester Bourne at the intersection with Cromarty Drive or the entrance to the Husky Travel Centre.

Over six years (2005 to 2010), a total of 87 collisions occurred on Highway 401 within 500 metres upstream and downstream of the structure, for an average of 14.5 collisions per year. The collision frequency was slightly greater in the westbound lanes (46 westbound; 41 eastbound).

The overall collision history represents a collision rate of 0.56 collisions per million vehicle km, which is comparable to the provincial average of 0.5 collisions per million vehicle km for 400-series highways. The localized collision rate is approximately double the overall rate for Highway 401 in the Woodstock to London corridor (0.2 to 0.3 collisions per million vehicle km), which is typical of areas adjacent to interchanges due to the increased number of potential conflict points. As shown by **Figure 5**, the majority of collisions were reported to occur either at the structure or within 100 metres of the structure. This corresponds to an area of the highway with reduced shoulder widths and underpass abutments located less than 2 metres beyond the outside travel lane. There is also a smaller cluster of collisions east of the structure, in the vicinity of the merging/diverging areas for the E-N/S and N/S-E ramps.

Figure 5: Collision Locations

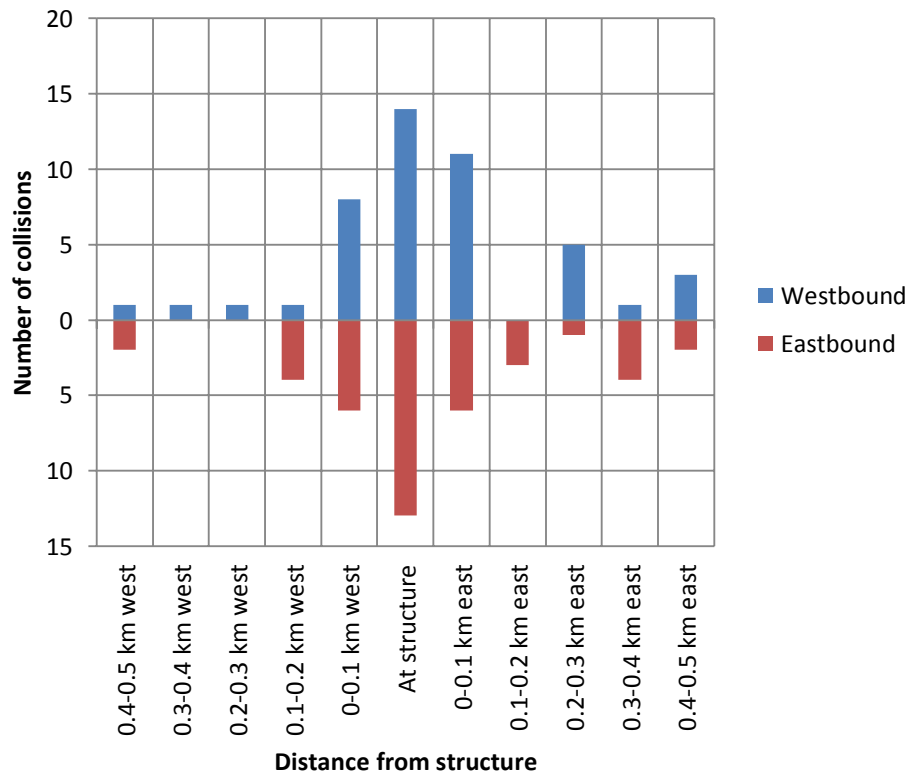
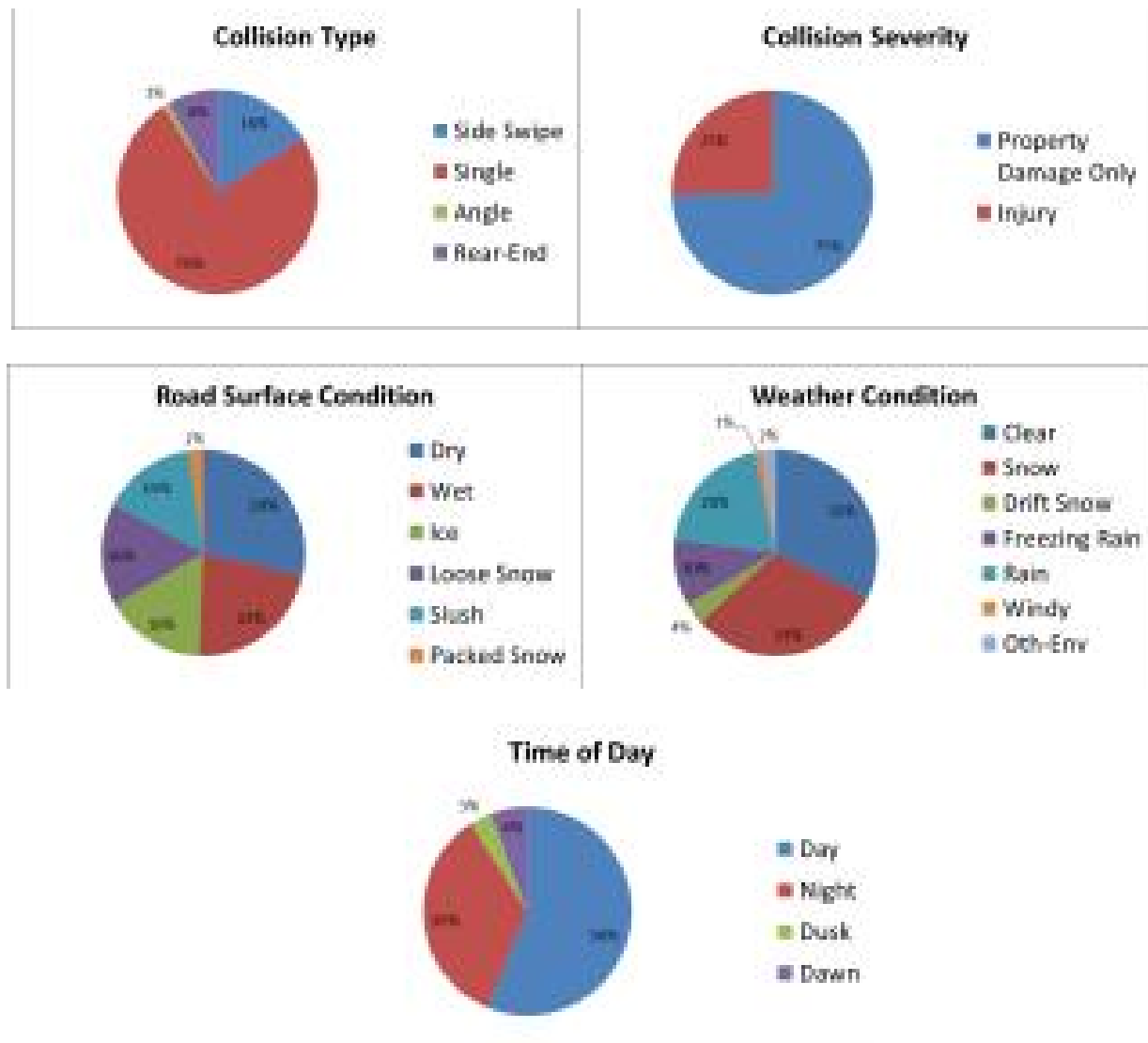


Figure 6 is a breakdown of collision types that occurred along the mainline within 1 km of the bridge over the six-year period (2005 to 2010). The following observations can be made:

- There were no fatalities, and the majority of mainline collisions (75%) resulted in property damage only
- The majority of the collisions were single-vehicle crashes (75%), with the remainder primarily divided between sideswipe and rear-end collisions
- The majority of collisions (56%) occurred in daylight conditions
- The most common road surface condition was dry pavement (29%); however, when considered in aggregate, winter road conditions (ice, snow or slush) were present for approximately half of the collisions
- Winter weather conditions (snow and freezing rain) were also a contributing factor in nearly half of the collisions (combined 45%).

Figure 6: Highway 401 Collision Summary within 1 km of Structure

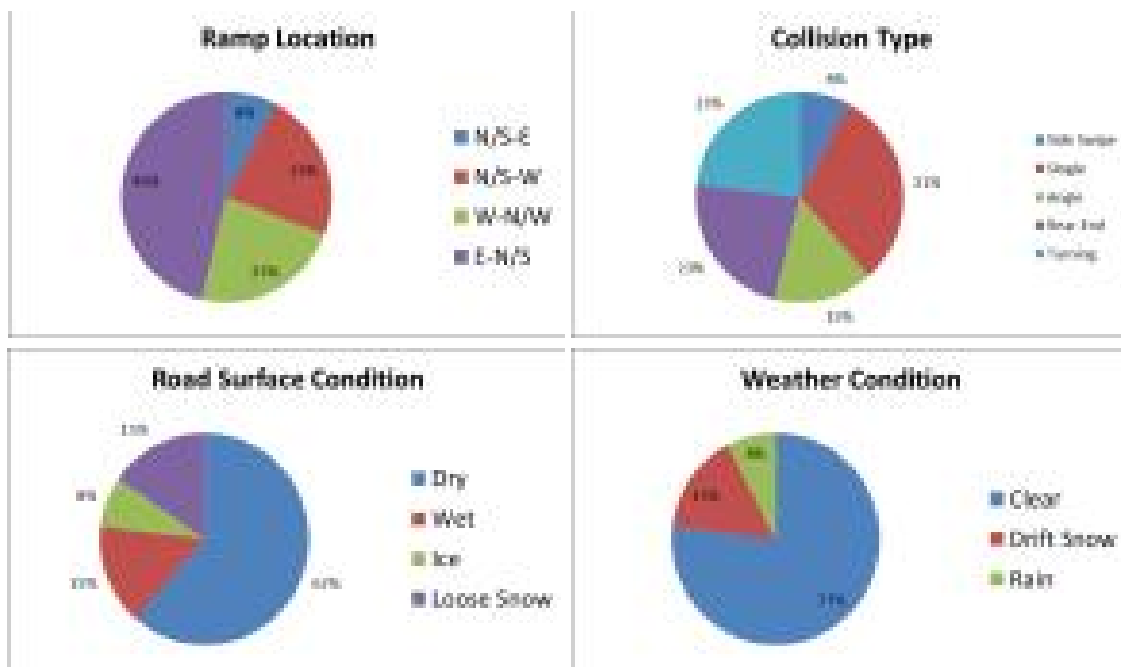


Interchange Ramps

The collision history of the Westchester Bourne interchange ramps was reviewed to identify any potential collision patterns. Over six years (2005 to 2010), a total of 13 collisions occurred on the four ramps, as shown on **Figure 7**. The following observations were made from a review of the data:

- There were no fatalities, and the majority of ramp collisions (77%) resulted in property damage only
- The E-N/S ramp had the highest collision frequency over the six year period:
 - E-N/S: six collisions
 - N/S-W: three collisions
 - W-N/S: three collisions
 - N/S-E: one collision
- Single-vehicle collisions represented the most common collision type (31%), followed closely by turning movement, right-angle, and rear-end collisions
- The majority of collisions (54%) occurred in daylight conditions
- The majority of collisions (62%) occurred on dry pavement. Winter road conditions (ice, snow or slush) were only present for 23% of the collisions
- The majority of collisions (77%) occurred during clear weather conditions. Winter weather conditions (snow and freezing rain) were only a contributing factor in 15% of the collisions
- Between five and eight of the 13 interchange ramp collisions occurred at the ramp terminal intersections (three turning movement collisions, two angle collisions and potentially some of the three rear-end collisions).

Figure 7: Westchester Bourne Interchange Ramps Collision Summary



2.2.4.4 Road Safety Concerns

The existing interchange has a variety of road safety concerns, including:

- The Westchester Bourne/Cromarty Drive intersection is located approximately 90 metres from the interchange's south ramp terminal. This is not consistent with the best practices included in MTO's *Access Management Guidelines* which recommend a minimum offset of 400 metres. The close proximity of Cromarty Drive to the south ramp terminal affects the efficiency and safety of the intersection, creates confusion for motorists accessing eastbound Highway 401 and does not accommodate the standard placement of the advance guide sign for eastbound Highway 401 on northbound Westchester Bourne
- Shared left and through lanes on Westchester Bourne at the ramp terminals increase the potential for rear end collisions.

2.2.4.5 Traffic Projections

Design hour volumes were calculated for the 10-year and 20-year horizons for the design alternatives developed for the project. Two sets of growth projections were generated, representing low growth and high growth scenarios. In both cases, the design hour volumes represent the PM peak hour identified as the most critical time period.

The low growth forecasts assume a general background growth rate of 1% per year (non-compounded). Traffic volumes at the 10-year horizon would be 10% higher than existing demand, while traffic volumes at the 20-year horizon would be 20% higher than existing demand.

The high growth forecasts assume a general background growth rate of 3% per year (non-compounded). Under this scenario, traffic volumes at the 10-year horizon would be 30% higher than existing demand, while the traffic volumes at the 20-year horizon would be 60% higher than existing demand.

These traffic forecasts are considered to be generous compared to the recent pattern of traffic growth. Historical traffic growth on Westchester Bourne and the interchange ramps was reviewed by comparing 2004 and 2011/2012 PM peak hour ramp terminal volumes. Ramp volumes have not changed substantially since 2004. Westchester Bourne traffic volumes remained comparatively stable south of the interchange and increased roughly 2% per year north of the interchange.

The proposed realignment of Cromarty Drive opposite to the entrance to the Husky Travel Centre will result in a minor adjustment to the local travel pattern. This will not affect traffic volumes along Westchester Bourne or demand on individual turning movements to and from Westchester Bourne.

There are no background developments currently anticipated in the Study Area that will impact traffic demand on Westchester Bourne or the interchange.

2.2.5 Illumination

Decision lighting is located at the interchange for the eastbound and westbound exit ramps. Illumination is also provided at the ramp intersections on Westchester Bourne.

2.2.6 Utilities

Utilities in the vicinity of the interchange include the following:

- Hydro One poles with aerial distribution lines are located along the east side of Westchester Bourne while high voltage steel towers for transmission lines are located north of the interchange
- Rogers has buried conduit (with fibre optic) approximately 30 metres east of the existing bridge. This cable crosses Westchester Bourne north of Highway 401 then continues aurally on the west side of Westchester Bourne
- Natural Resource Gas Limited buried gas main is located west of Westchester Bourne and follows the existing right-of-way until it crosses Highway 401 approximately 500 metres west of the existing bridge. It also has plant east of Westchester Bourne following the existing right-of-way until it crosses Highway 401 approximately 350 metres east of the existing bridge

- Bell Canada has buried conduit (with fibre optic) along the north side of Highway 401 crossing Westchester Bourne north of the existing ramp terminal. Bell also has buried conduit along the east side of Westchester Bourne and the north and south sides of Cromarty Drive.

2.3 Drainage and Hydrology

Most of the Highway 401/Westchester Bourne interchange is located in the Dingman Creek Subwatershed, with a small portion of the Westchester Bourne right-of-way (north of Highway 401) located in the Thames River (South Branch) watershed. The interchange area falls within the headwaters of the Dingman Creek system and is located northwest of the Foster Ponds Provincially Significant Wetland (PSW).

Surface drainage within the interchange area is facilitated by a series of drainage ditches and non-structural culverts. The median and inside lanes of Highway 401 are drained by a median storm sewer system that discharges to the adjacent drainage ditches. Surface water runoff generated within the interchange area generally flows in a southerly direction. Many of the ditches within the interchange area are poorly graded and have areas of standing water. Surficial soils, topography and proximity to the Foster Ponds PSW contribute to the poor surface drainage characteristics.

An extensive network of agricultural field drainage tiles has been installed to improve surface drainage characteristics of the land south of the Highway 401 corridor. Tile drainage systems represent the final outlet for the area within the Highway 401 corridor and Westchester Bourne interchange. There are three locations within the project limits where surface water runoff leaves the highway corridor. These points generally correspond to the location of three open footing concrete culverts that convey runoff from the north to the south side of the Highway 401 right-of-way:

- Culvert A (1.22 x 1.22 x 60.8 m) is located at Station 32+400, approximately 625 metres west of Westchester Bourne. Surface water conveyed by highway drainage ditches to this outlet location discharges from the right-of-way through an existing 450 mm agricultural field tile system called the Bruyn Municipal Drain
- Culvert B (1.22 x 1.22 x 64.75 m) is located approximately 375 metres west of Westchester Bourne (Station 32+640). A significant portion of the interchange area is drained via Culvert B and surface water conveyed by highway drainage ditches to this outlet ultimately

discharges to the Jackson Award Municipal Drain. The tiled drain is located on the west side of Westchester Bourne and runs parallel to the right-of-way

- Culvert C (1.22 x 1.22 x 71.67 m) is located approximately 350 metres east of Westchester Bourne (Station 10+350). Surface water conveyed to this outlet originates within and immediately to the north of the interchange and discharges from the right-of-way to the Jackson Manning Municipal Drain. This drain services the MTO operations yard and flows in a southwesterly direction, crossing Westchester Bourne approximately 500 metres south of Cromarty Drive.

Ultimately, the Bruyn, Jackson Award and Jackson Manning municipal drain systems discharge to the North Branch of Dingman Creek, west of Westchester Bourne. The outlets from the tiled municipal drain systems are located more than a kilometre downstream of the Foster Ponds PSW. Based on mapping provided by the Municipality of Thames Centre, it appears that sections of the Bruyn and Jackson Manning Drain consist of dual pipe tile. Additional capacity may have been added to these two drainage system to service the Husky Service Station and the land located north of Cromarty Drive.

In general, the existing drainage infrastructure within the interchange area appears to be functioning appropriately. Sections of the roadside ditches are overgrown with cattails indicating that the ditches are poorly graded and standing water is prevalent. Although the poorly graded ditches introduce a maintenance issue, the low-lying areas provide volumetric storage of runoff from the highway and interchange drainage area, attenuating and reducing peaks flow prior to discharging to the capacity constrained tiled municipal drain receiving water systems. All three municipal drain receiving water systems have status under the *Municipal Drain Act*. Maintenance and improvements to the drains are currently facilitated by the Municipality of Thames Centre. Modifications to the municipal drain systems resulting from the proposed highway and interchange improvements are subject to the *Municipal Drain Act* improvement process.

2.4 Cultural Resources

2.4.1 Archaeology

Prior to construction, a Stage 1 and 2 Archaeological Assessment will be completed for any undisturbed lands affected by the proposed improvements. The assessment will comply with the

requirements of the Ministry of Tourism, Culture and Sport's (MTCS) *Standards and Guidelines for Consultant Archaeologists*, 2011.

2.4.2 Built Heritage

The Westchester Bourne Bridge has been screened in accordance with the *Ontario Heritage Bridge Guidelines* and is not considered to be a Provincial heritage property.

2.5 Natural Environment

2.5.1 Source Water Protection

The Study Area is located in the Upper Thames River Source Protection Area within the Thames-Sydenham & Region Drinking Water Source Protection Area, as described in the proposed *Source Protection Plan for Thames-Sydenham and Region* (November 2014). As outlined in the *Clean Water Act*, the primary objective of the Source Protection Plan is to protect existing and future drinking water sources.

As shown on the Source Protection Plan, the proposed improvements to the Westchester Bourne interchange are located in an area of low vulnerability for groundwater recharge. There are no wellhead protection zones in the Study Area and it is not in a Policy Applicability Area.

2.5.2 Fish and Fish Habitat

Since there is no direct fish habitat in the Study Area, a fish and fish habitat assessment was not completed. Foster Ponds, a PSW complex on Dingman Creek, is located about 1 km east of the Study Area. Foster Ponds is an MNR named waterbody.

2.5.3 Terrestrial Ecosystem

The terrestrial ecosystem assessment completed for the Study Area is documented in Dillon's Terrestrial Ecosystem Assessment Report (June 2015). The report addresses the potential environmental impacts of the improvements on existing terrestrial ecosystems and followed the requirements of MTO's *Environmental Reference for Highway Design* (ERD, 2013). It also

identified mitigation measures to avoid or reduce potential impacts on existing terrestrial features. Fieldwork was completed by Dillon on June 3 and June 4, 2013.

The Study Area is located in the Dingman Creek Subwatershed under the jurisdiction of the UTRCA. There are no Natural Heritage Features designated in the Study Area by the Municipality of Thames Centre Official Plan or Middlesex County Official Plan. As mentioned, the Foster Ponds PSW complex is located on Dingman Creek about 1 km southeast of the Study Area. **Appendix A** includes photographs of terrestrial resources in the Study Area.

Vegetation

Thirty-five flora species were identified within the Study Area during the terrestrial survey. None of the species are listed as Species at Risk (SAR) or considered to be provincially rare.

The Study Area is primarily agricultural (culturally influenced meadow with active row crops) with some residential and commercial uses and few natural areas. As shown on **Figure 8**, Ecological Land Classification (ELC) communities within 200 metres of the right-of-way include:

- Naturalized Coniferous Plantation at the southeast quadrant of the interchange
- Cattail Graminoid Meadow Marsh near the southwest quadrant
- Dry-Fresh Mixed Meadow along the Highway 401 right-of-way adjacent to the Husky station.

These communities are considered common in Ontario and are not designated as provincially rare.

The meadow marsh wetland community (not previously evaluated for provincial significance) will not be impacted by the proposed bridge replacement and interchange improvements. This community is isolated, not ecologically sensitive and is not hydrologically connected to an existing provincially significant wetland. The coniferous plantation also will not be impacted. A plantation of this type generally does not meet the evaluation criteria for a significant woodland.

Wildlife

During the field investigation, incidental wildlife observations were made from the roads rights-of-way. The potential for significant wildlife was determined based on the vegetation communities identified in the Study Area and evidence of wildlife use (e.g., scat, burrows, tracks, etc.). Due to the

limited extent of natural and undisturbed vegetation communities and wildlife evidence, no potentially significant wildlife habitat was observed during the field investigations.

Birds

A survey for migratory bird nests was carried out at the Westchester Bourne Bridge. During field work, no avian nests were observed under the bridge. A salt dome (recently demolished) in a former MTO Maintenance Yard on Cromarty Drive provided habitat for many Barn Swallows (*Hirundo rustica*). Barn Swallows are listed as *Threatened* and have general habitat protection under the *Endangered Species Act* (ESA, 2007).

Species at Risk (SAR) and Provincially Rare Species

During the background review, occurrence records indicated 26 SAR and/or provincially rare species are potentially present in the Study Area. However, based on the vegetation communities present, three species were identified with actual or potential habitat in the Study Area that could be impacted by the proposed works. These species include:

- Barn Swallow, as previously mentioned
- Eastern Milksnake (*Lampropeltis triangulum*), a provincially rare species listed as *Special Concern* under the *Endangered Species Act* (ESA, 2007). Milksnakes are habitat generalists known to occur in urban and agricultural areas. Within the Study Area, potential marginal foraging habitat would generally be limited to the meadow, meadow marsh and open sections within coniferous plantations
- Little Brown Myotis (*Myotis Jucifugus*), a small bat listed as provincially *Endangered* under the ESA, 2007. Potential marginal foraging habitat could be found in the Study Area's natural communities.

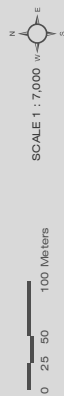
2.6 Land Uses and Socio-Economic Environment

This section of the TESR describes land uses and the socio-economic environment potentially affected by the proposed improvements at the Westchester Bourne interchange. Prepared in accordance with the requirements of MTO's *ERD for Land Use Factors*, the Study Area for this component consisted of all potentially impacted existing and future land uses.

MINISTRY OF TRANSPORTATION
HIGHWAY 401, WESTCHESTER BOURNE
BRIDGE REPLACEMENT & INTERCHANGE
IMPROVEMENTS

Ecological Land Classification
Figure 8

- Westchester Bourne Underpass
 - Barn Swallow Nesting Location
 - Watercourse
- Ecological Land Classification**
- OGL_4: Recreational
 - CVC_1: Business Sector
 - CVR_4: Rural Property
 - FOCM6: Naturalized Coniferous Plantation
 - MAMM1-2: Cattail Graminoid Mineral Meadow Marsh
 - MEMM3: Dry - Fresh Mixed Meadow
 - OAGM1: Annual Row Crop



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNH

MAP CREATED BY: SEG
MAP CHECKED BY: BC
MAP PROJECTION: NAD 1983 UTM Zone 17N

File Location: I:\GIS\127110 - MTO 11 Structure.mxd
TEAR\Figure 3a Middlesex Regional Road 74 (Westchester
Bourne) Underpass, Site ID 19-379.mxd

PROJECT: 127110
STATUS: FINAL
DATE: 11/17/2015



2.6.1 Existing Land Uses and Official Plans

The Study Area is located in the rural portion of the Municipality of Thames Centre. Most of the land around the interchange at Highway 401 is farmland used for the production of cash crops. The surrounding area consists of Class 2 agricultural soils with an area of Class 3 soils north of the interchange.

Non-agricultural uses around the interchange include the London Husky Travel Centre, with a gas station, restaurant and other services for truckers and travellers, the London KOA Campground and a former MTO Maintenance Yard used by the Municipality of Thames Centre. According to the London Husky Manager, the Travel Centre has from 2,000 to 2,500 customers a day. Other uses on Westchester Bourne and Cromarty Drive include farmhouses and non-farm residences.

As shown on **Figure 9**, lands northwest of the interchange are designated “Agricultural” in the Municipality of Thames Centre Official Plan. Important goals for the “Agricultural” area are “to preserve and enhance all prime agricultural lands and lands being used for agriculture” and “to direct non-agricultural development to Settlement Areas.”

As explained in Section 1.10.2 (2) of the Official Plan, “there is a need to set aside sufficient lands for industrial and commercial development in locations that are attractive to industry, particularly at or near Provincial Highway 401”. Based on this policy, the remaining quadrants of the interchange are designated for the following non-agricultural uses:

- Farmland at the northeast quadrant is designated “Highway Commercial”. This designation permits commercial uses that “primarily serve vehicular traffic and the travelling public”
- The former MTO Maintenance Yard at the southeast quadrant on Cromarty Drive is designated “Rural Industrial”. Permitted uses include a range of manufacturing, fabrication, warehousing and trucking related uses which are “dry” in nature and do not require municipal water and sanitary sewage services
- The KOA Campground further east on Cromarty Drive is designated “Recreational”. Permitted uses include leisure and tourism related land uses, such as golf courses, private parks, campgrounds, amusement parks, etc.
- Farmland on the east side of Westchester Bourne, south of Cromarty Drive, is designated “Highway Commercial”

- The Husky Travel Centre and large areas of vacant land to the south are also designated “Highway Commercial”.

As mentioned, there are no Natural Heritage Features designated in the Study Area by the Municipality of Thames Centre Official Plan. Foster Ponds, a PSW complex, is located about 1 km southeast of the Study Area.

The Thames Centre Official Plan designates Westchester Bourne as an “Arterial Road – County” and a “Truck Haul Route”. To facilitate traffic movement, the Plan restricts the number of access points to County Roads from abutting private properties. All other roads in the Study Area are designated as “Local Roads”.

The Study Area and surrounding area are designated “Agricultural Area” in the County of Middlesex Official Plan. According to the plan, “the purpose of the Agricultural Areas designation is to protect and strengthen the agricultural community, a major economic component”. Non-agricultural development is encouraged to locate in “Settlement Areas”. The closest “Settlement Area” is the hamlet of Dorchester. The Official Plan requires that transportation facilities minimize impacts on agriculture.

Part of the Middlesex County Road system, Westchester Bourne is designated as an “Arterial Road” in the County Official Plan. Private access to County Roads is controlled by County By-law. According to the plan, “access driveways should be limited in number and designed to minimize danger to vehicular and pedestrian traffic”. The plan requires a minimum right-of-way width of 36 metres and a minimum building and structure setback of 38 metres from the centre-line of the road.

2.6.2 Development Activity

According to the Municipality of Thames Centre (February 10, 2015), there are no current development applications in the Study Area.

MINISTRY OF TRANSPORTATION
HIGHWAY 401, WESTCHESTER BOURNE
BRIDGE REPLACEMENT & INTERCHANGE
IMPROVEMENTS

Existing Conditions
Land Use & Environmental Designations
Figure 9

Legend

-  Westchester Bourne Interchange
-  Project Study Area
-  Municipal Boundary
-  Utility Line
-  Watercourse
-  Waterbody
-  Abandoned Landfill Site
-  Extractive Industrial
-  Highway Commercial
-  Mobile Home Park
-  Recreational
-  Rural Industrial
-  Rural Residential
-  Well Head Protection Area
-  Locally Significant Wetland
-  Provincially Significant Wetland
-  Wooded Area

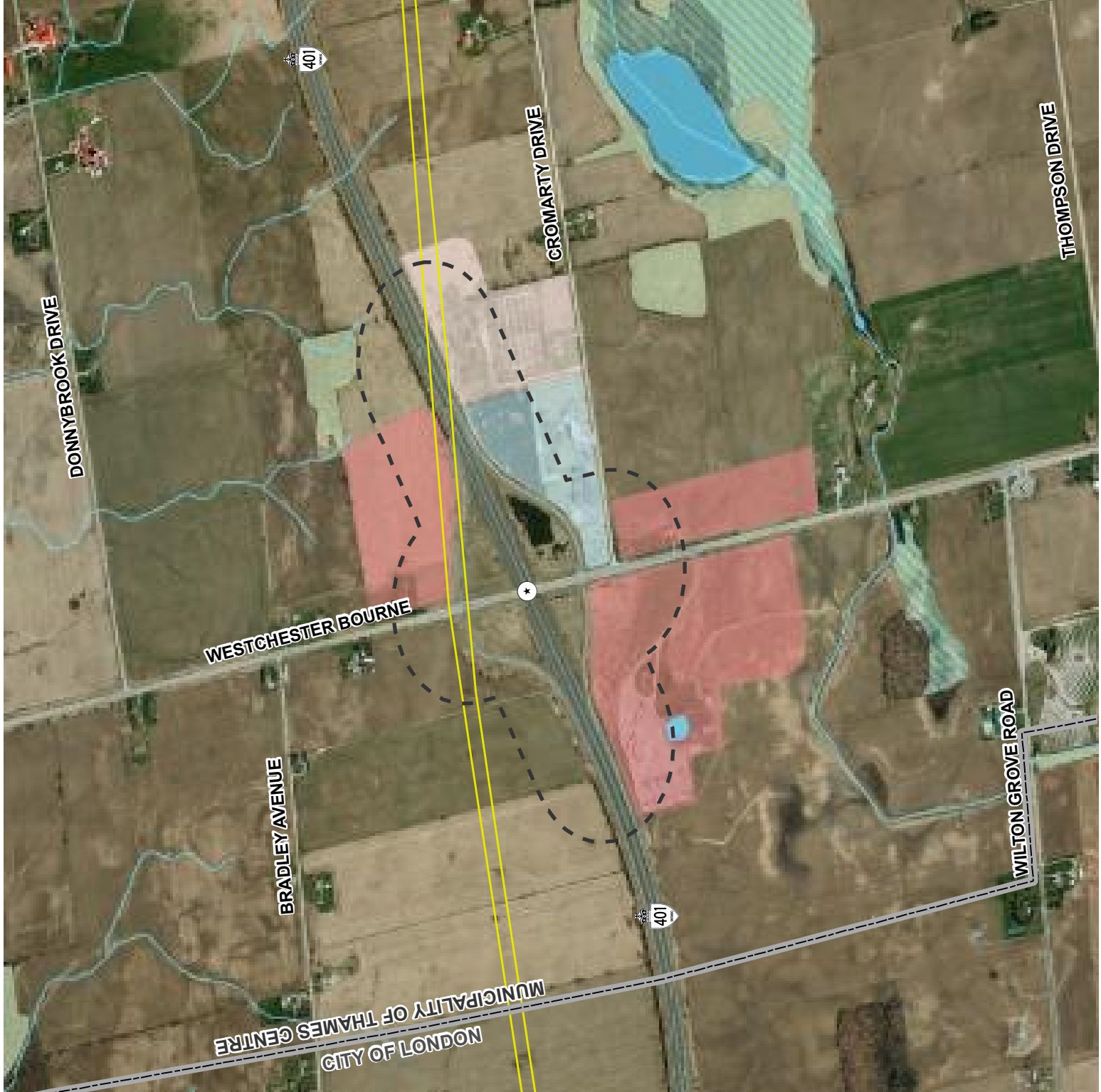


MAP DRAWING INFORMATION:
DATA PROVIDED BY MNR &
THE MUNICIPALITY OF THAMES CENTRE
MAP CREATED BY: DJF
MAP CHECKED BY: JMS
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: \\allion.ca\allion\DFS\London
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PROJECT: 12-7110
STATUS: FINAL
DATE: 03/03/2015



2.6.3 Provincial Policy Statement (PPS)

The *Planning Act* requires that any decision made by the Crown “shall be consistent” with the 2014 PPS.

The PPS includes policies for “Transportation Systems” defined as “infrastructure” and “a system consisting of corridors and rights-of-way for the movement of people and goods.” The policies require that MTO consider significant provincial resources protected by the PPS, such as prime agricultural land, natural heritage features, ground and surface water, archaeological resources and cultural heritage resources.

2.7 Contamination Overview Study

Dillon prepared a Contamination Overview Study (May 27, 2015) of the proposed improvements to identify properties in the Study Area with potential subsurface and groundwater contamination issues. Summarized in **Section 5.9** of this report, the study was completed in accordance with MTO’s *Environmental Guide for Contaminated Property Identification and Management* (2006).

3. PRELIMINARY DESIGN ALTERNATIVES

3.1 Introduction

Section 3 of the TESR summarizes the development and evaluation of Preliminary Design alternatives for the bridge replacement and interchange improvements proposed as part of this project. Based on the evaluation, this section identifies a preferred plan for the Westchester Bourne Bridge and interchange configuration. Alternative construction staging and traffic management plans are also evaluated in this section.

3.2 Interchange Improvement Alternatives

As shown on **Figures 10 to Figure 14** at the end of this section, five alternatives were developed for the Highway 401/Westchester Bourne interchange, including:

- Alternative 1A, Parclo A-2 Interchange, On-Line Alignment of Westchester Bourne
- Alternative 1B, Parclo A-2 Interchange, West Alignment Shift
- Alternative 2, Parclo A-2 Interchange, Roundabouts and West Alignment Shift
- Alternative 3, Diamond Interchange, West Alignment Shift
- Alternative 4, Parclo AB, On-Line Alignment.

Alternative 1A, Parclo A-2 Interchange, On-Line Alignment of Westchester Bourne (Figure 10)

- Westchester Bourne Bridge replaced at same location as existing bridge
- Westchester Bourne remains on existing alignment
- New four-lane bridge with two through lanes and two speed change lanes
- Cromarty Drive realigned with a new intersection at Westchester Bourne with a new private drive to former MTO Maintenance Yard
- Potential to add directional ramps in southeast and northwest interchange quadrants in the future.

Since Alternative 1A includes an on-line alignment of Westchester Bourne, a long term closure of Westchester Bourne and a temporary detour route is potentially required during construction. Long term closures of the interchange ramps are also required during construction.

Alternative 1B, Parclo A-2 Interchange, West Alignment Shift (Figure 11)

- Westchester Bourne Bridge realigned west of existing bridge
- Westchester Bourne realigned to the west
- New four-lane bridge with two through lanes and two speed change lanes
- Cromarty Drive realigned with a new intersection at Westchester Bourne with a new private drive to former MTO Maintenance Yard
- Potential to add directional ramps in southeast and northwest quadrants in the future.

Since Alternative 1B is built off-line of the existing Westchester Bourne alignment, it is expected that only short term closures will be required during construction. Long term closures of the interchange ramps are also required during construction.

Alternative 2, Parclo A-2 Interchange with Roundabouts (Figure 12)

- Westchester Bourne Bridge realigned west of existing bridge
- Westchester Bourne realigned to the west
- New two-lane bridge with two through lanes
- Cromarty Drive realigned with a new intersection at Westchester Bourne with a new private drive to former MTO Maintenance Yard
- Potential to add directional ramps in southeast and northwest quadrants in the future.

Alternative 2 involves potential short-term closures of Westchester Bourne and long term closures of the interchange ramps during construction.

Alternative 3, Diamond Interchange (Figure 13)

- Westchester Bourne Bridge realigned west of existing bridge
- Westchester Bourne realigned to the west
- New three-lane bridge with one left-turn lane
- Cromarty Drive realigned with a new intersection at Westchester Bourne with a new private drive to former MTO Maintenance Yard.

Alternative 3 involves potential short-term closures of Westchester Bourne and long term closures of the interchange ramps during construction.

Alternative 4, Parclo A-B Interchange (Figure 14)

- Westchester Bourne Bridge replaced at same location as existing bridge
- Westchester Bourne alignment maintained
- New four-lane bridge with two through lanes, one speed change lane and one left-turn lane
- Cromarty Drive realigned with a new intersection at Westchester Bourne
- Potential to add directional ramp in southeast quadrant in the future.

Since Alternative 4 includes an on-line alignment of Westchester Bourne, a long term closure of Westchester Bourne and a temporary detour route is potentially required during construction. It also involves long term closures of the interchange ramps during construction.

3.3 Comparative Evaluation of Interchange Improvement Alternatives

This section summarizes the detailed comparative evaluation of Alternatives 1A to 4. Shown on **Table 4** at the end of this section, the evaluation factors and indicators cover the full scope of the environment and reflect existing and future environmental conditions potentially affected by the alternatives. Evaluation factors included:

- Traffic Operations and Safety
- Highway and Bridge Engineering
- Drainage and Stormwater Management
- Natural Environment
- Socio-Economic Environment
- Cultural Heritage Resources
- Cost.

Traffic Operations and Safety

Alternatives 1A, 1B and 2 are preferred with respect to this factor:

- All three alternatives meet existing and future traffic needs
- Alternative 2 (Parclo A-2 Interchange with Roundabouts) maximizes road safety since it reduces potential for wrong way movements and the potential for higher severity collisions. However, Alternatives 1A and 1B better meet driver expectations since Parclo A interchanges are the most common interchange configuration in Ontario

- All three alternatives can be expanded in the future to a Parclo A-4 interchange to meet future traffic needs.

Highway and Bridge Engineering

Alternative 2 is preferred with respect to this factor, closely followed by Alternatives 1B and 4:

- Alternatives 1A and 4 best use the existing Westchester Bourne alignment and approach embankments and allow the Highway 401 ramps to be retained until Highway 401 is expanded to eight lanes
- An advantage of Alternative 2 is that it requires the least new infrastructure since it has the narrowest bridge
- An important advantage of Alternative 1B is that it minimizes the duration of closures of Westchester Bourne because it is built off-line and requires the fewest closures to construct the embankments and ramps
- Alternative 4 has the fewest impacts on utilities and avoids impacts on Hydro One distribution lines and transmission tower. Alternative 1B also avoids impacts on Hydro One facilities.

Drainage and Stormwater Management

All five alternatives result in direct impacts to the three culverts crossing Highway 401 due to the future eight-lane and ultimate ten-lane expansion of Highway 401 and the addition or modification of interchange ramps. The future/ultimate eight/ten-lane expansion of Highway 401 will require implementation of stormwater management techniques to mitigate increases in peak runoff rates to capacity constrained municipal drain tile receiving water systems.

Alternative 4 requires the fewest drainage modifications because there is no new or modified highway infrastructure proposed for the northeast quadrant of the interchange. All five alternatives are equal with respect to meeting MOECC's stormwater management requirements. The configuration modifications and addition of interchange ramps represent a marginal increase in overall levels of imperviousness within the interchange drainage areas. Drainage system modifications, such as widening and enhancement of conveyance ditches, will meet or exceed stormwater management quality and quantity control requirements for all five alternatives. All five are also equal with respect to impacts on existing municipal drain tile infrastructure with direct

impacts anticipated on the Jackson Manning Municipal Drain due to the realignment of Cromarty Drive.

Natural Environment

All five alternatives have no impacts on direct fish habitat and Species at Risk. Although all of the alternatives have limited impacts on terrestrial resources, Alternative 3 is the least preferred since it removes a spruce plantation in the southeast quadrant. Alternatives 1A, 1B, 2 and 4 are preferred because they require the least vegetation removal.

Socio-Economic Environment

Due to the west alignment shift of Westchester Bourne, Alternatives 1B, 2 and 3 minimize impacts on the socio-economic environment since they require only short duration temporary closures of Westchester Bourne. This helps facilitate the movement of farm machinery across Highway 401 and better maintains traffic to the Husky Travel Centre during construction.

With all five alternatives, the realignment of Cromarty Drive along the south side of a residence on Westchester Bourne potentially causes traffic related impacts (noise and visual impacts). During Detailed Design, a Landscape Plan will be developed to provide screening for this house.

Cultural Heritage Resources

All five alternatives are approximately equal with respect to impacts on archaeological potential since they affect similar amounts of land. The Westchester Bourne Bridge has no cultural heritage significance.

Cost

Alternative 2 is preferred with respect to infrastructure cost since it has the lowest bridge cost and avoids Hydro One transmission towers. Alternative 1A is preferred with respect to property costs since it requires the least amount of property. Overall, Alternative 2 has the lowest cost.

3.4 Preferred Interchange Improvement Alternative

Table 5 (at the end of this section) is a summary of the comparative evaluation of the Interchange Improvement Alternatives. As shown on the table, Alternative 1B, Parclo A-2 Interchange,

West Alignment Shift, is the preferred interchange improvement alternative based on the following advantages:

- It is the safest interchange configuration and can be expanded in the future
- It avoids impacts on Hydro One transmission towers
- It only requires short term temporary closures of Westchester Bourne helping to minimize impacts on farming (farm machinery movement across Highway 401) and the Husky Travel Centre during construction.

3.5 Bridge Design Options

Based on the preferred interchange improvement alternative, Dillon identified and evaluated four bridge design options for replacing the Westchester Bourne Underpass structure. The options included:

Option 1, Two Span Integral Abutment Bridge with False Abutments (Closed Abutment)

- Integral abutments with a Retained Soil System (RSS) wall at each abutment.

Option 2, Two Span Integral Abutment Bridge with 2:1 Embankments (Open Abutment)

- Integral abutments and 2:1 embankments with slope paving at each abutment.

Option 3, Single Span Post-tensioned Variable Depth Box Girder Rigid Frame Bridge

- An elegant single span structure that respects the heritage of the existing bridge with a bold visible form.

Option 4, Four Span Integral Abutment Bridge with 2:1 Embankments (Open Abutment)

- Integral or semi-integral abutments and 2:1 embankments with slope paving.

All four options have a 75 year design life and accommodate the current configuration of Highway 401, as well as the ultimate configuration of four through lanes and a speed change lane in each direction.

Option 1, the two span closed abutment arrangement, consists of two 35.5 m spans. This configuration results in the shallowest structure depth and minimizes the grade raise requirements on

Westchester Bourne. It was not preferred because it requires the use of the RSS walls for the closed abutments and results in the narrowest opening under the bridge, minimizing the drivers' view and comfort.

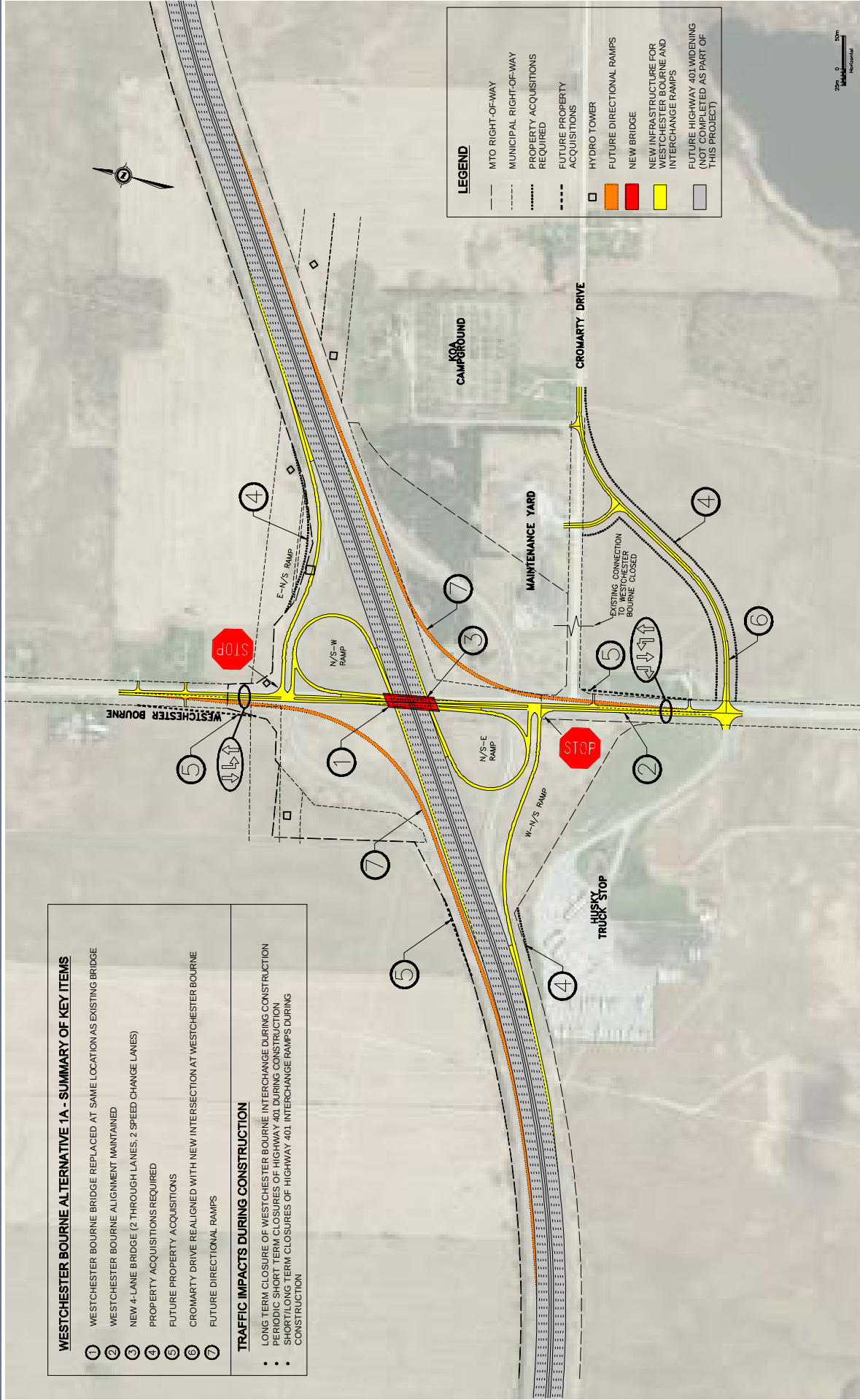
Option 2, the two span open abutment arrangement, consists of two 44.5 m spans. Compared to the closed abutment configuration, the open abutment configuration requires longer spans but increases drivers' view and comfort by improving structure transparency in the horizontal plane. Bridge aesthetics are improved due to the added transparency in the horizontal plane, but are also detracted by the deeper superstructure. Various structural types are considered appropriate for this configuration, including slab on prestressed I-girders or slab on steel box girders.

Option 3, the single span arrangement, includes an elegant structure which respects the heritage of the existing bridge and provides a bold visible form, creating a higher standard of aesthetic design. Compared to conventional multi-span slab-on-girder options, this solution offers greater safety for motorists due to the absence of a pier in the median of Highway 401. It also enhances durability due to a decreased surface of concrete exposed to salt spray. The abutment walls and ends of each box girder are staggered to accommodate the skew and minimize the span length. The required clear span is 69.5 m. The structure would be constructed using post-tensioned cast-in-place concrete.

Option 4, the four span open abutment arrangement, includes one centre pier located in the Highway 401 median, and intermediate piers located on each side of Highway 401 between the through lanes and the speed change lane. The four-span option provides minimum individual span length and structure depth but was dismissed for the following reasons:

- It requires additional infrastructure for shoulder widening, drainage and traffic protection between Highway 401 and ramp traffic merging onto Highway 401
- The overall structure length is longer and requires the construction of three piers resulting in increased costs for the structure
- Compared to the two-span options, the four-span option requires more property at the E-N/S and W-N/S ramps.

Option 2 is considered to be the preferred structure option.



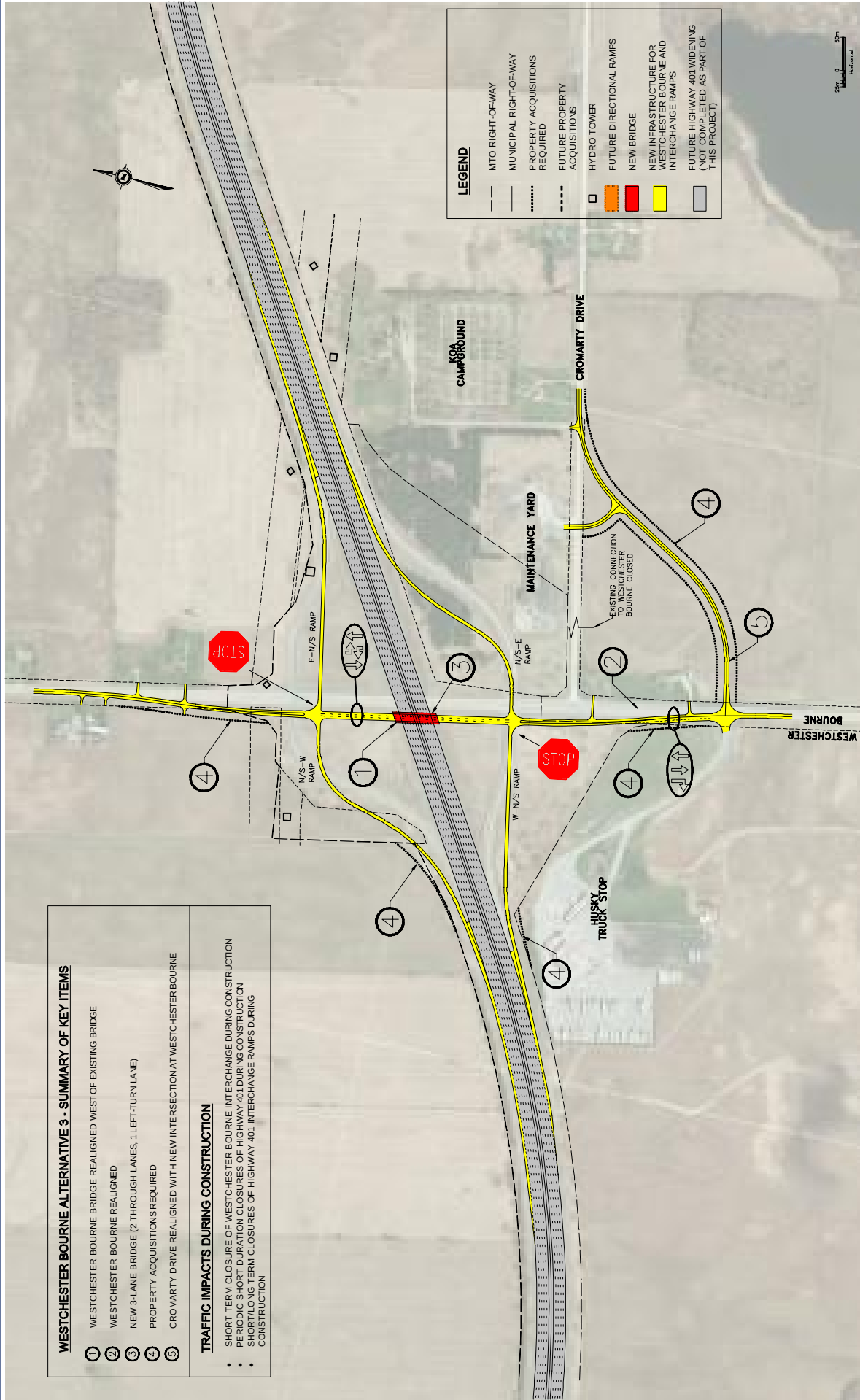
Highway 401/Westchester Bourne Bridge Replacement and Interchange Improvements
FIGURE 10: Alternative 1A - Parclo A-2 Interchange, On-Line Alignment



Highway 401/Westchester Bournie Bridge Replacement and Interchange Improvements
FIGURE 11: Alternative 1B - Parclo A-2 Interchange, West Alignment Shift



Highway 401/Westchester Bournie Bridge Replacement and Interchange Improvements
FIGURE 12: Alternative 2 - Parclo A-2 Interchange with Roundabouts, West Alignment Shift



Highway 401/Westchester Bournie Bridge Replacement and Interchange Improvements
FIGURE 13: Alternative 3 - Diamond Interchange, West Alignment Shift



Highway 401/Westchester Bourne Bridge Replacement and Interchange Improvements
FIGURE 14: Alternative 4 - Parcel A-B Interchange, On-Line Alignment

Table 4: Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Parclo A-2 Interchange On-Line Alignment	Alternative 1B Parclo A-2 Interchange West Alignment Shift	Alternative 2 Parclo A-2 Interchange with Roundabouts West Alignment Shift	Alternative 3 Diamond Interchange West Alignment Shift	Alternative 4 Parclo AB Interchange On-Line Alignment	Recommended Alternative
1. Traffic Operations and Safety						
1.1 Ability to Meet Existing Provincial Highway and Local Traffic Needs	Meets existing traffic needs and capacity requirements. 	Same as Alternative 1A. 	- Meets existing traffic needs and capacity requirements. - Roundabouts marginally increase delays for north/south through traffic and decrease delays for traffic on Highway 401 ramps. 	- Meets existing traffic needs and capacity requirements. - A continuous westbound speed change lane between Westchester Bourne and Veterans Memorial Parkway (VMP) may be required. 	Same as Alternative 3. 	Alternatives 1A, 1B and 2 do not affect VMP interchange traffic operations.
1.2 Ability to Meet Future Provincial Highway and Local Traffic Needs	- Meets future traffic needs and accommodates ultimate 10-lane expansion of Highway 401. - Can be expanded to a Parclo A-4 to meet future needs by adding direct ramps in NW and SE quadrants, if required. - A continuous westbound speed change lane between Westchester Bourne and VMP may be required if a direct N-W ramp is ultimately required. 	Same as Alternative 1A. 	- Meets future and ultimate needs, same as other alternatives. - Can be expanded to a Parclo A-4 to meet future needs by adding roundabout by-pass lanes and direct ramps in NW and SE quadrants, if required. - A continuous westbound speed change lane between Westchester Bourne and VMP may be required, same as Alternatives 1A and 1B. 	- Meets future and ultimate needs, same as other alternatives. - Future interchange expansion constrained by capacity of left turn movements to access Highway 401 from Westchester Bourne. - Limited opportunities for further expansion of interchange. 	- Meets future and ultimate traffic needs, same as other alternatives. - Can be expanded to meet future needs by adding a direct ramp in SE quadrant, if required. Expansion in NE quadrant constrained by hydro tower. - With increased traffic volumes beyond 20 years, weave movement required for E-S and N-E movements has potential to break down. 	Alternatives 1A, 1B and 2 provide flexibility for future expansion.

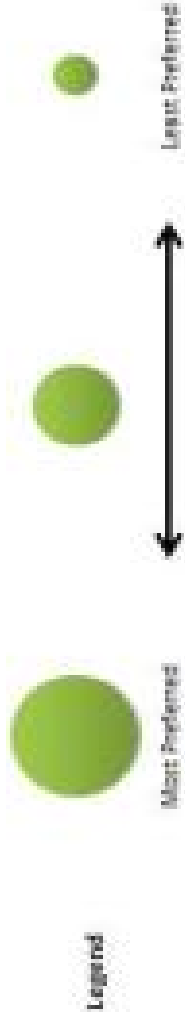


Table 4: Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Parclo A-2 Interchange On-Line Alignment	Alternative 1B Parclo A-2 Interchange West Alignment Shift	Alternative 2 Parclo A-2 Interchange with Roundabouts West Alignment Shift	Alternative 3 Diamond Interchange West Alignment Shift	Alternative 4 Parclo AB Interchange On-Line Alignment	Recommended Alternative
1.3 Road Safety	- Matches driver expectations since Parclo A is the most common interchange configuration in Ontario. - Reduces potential for wrong way movements onto Highway 401. - Increases spatial separation to VMP E-N/S ramp (beneficial), compared to Alternatives 3 and 4. - Maintains existing straight through alignment, avoiding the less than desirable back to back horizontal curves of Alternatives 1B, 2 and 3.	- Matches driver expectations, reduces potential for wrong way movements and increases spatial separation to VMP, same as Alternative 1A. - Back to back horizontal curves on Westchester Bourne increase collision potential.	- Reduces potential for wrong way movements and increases spatial separation to VMP, same as Alternatives 1A and 1B. - Roundabout design reduces potential for higher severity collisions compared to other alternatives.	- Diamond Interchange increases potential for wrong way movements onto Highway 401. - Reduces spatial separation to VMP E-N/S ramp compared to Alternatives 1A, 1B and 2. May require a continuous speed change lane. - Back to back horizontal curves on Westchester Bourne increase collision potential, same as Alternative 1B.	- Reduces potential for wrong way movements onto Highway 401, same as Alternatives 1A, 1B and 2. - Reduces spatial separation to VMP E-N/S ramp, compared to Alternatives 1A, 1B and 2. May require a continuous speed change lane. - Higher speed westbound traffic exiting Highway 401 onto inner loop ramp is less desirable than other alternatives. - Unlike other alternatives, creates a less than desirable weave for E-S and N-E movements.	Alternative 2 reduces potential for wrong way movements and higher severity collisions.
1.4 Compliance with MTO Access Management Best Practices	Realignment of Coontary Drive consistent with best practices but does not fully meet recommended minimum (400 m) intersection offset from south ramp terminal. Less separation provided than Alternative 3.	Same as Alternative 1A.	Realignment of Coontary Drive consistent with best practices but does not fully meet recommended minimum (400 m) intersection offset from south ramp terminal. Provides the least separation.	Realignment of Coontary Drive consistent with best practices but does not fully meet recommended minimum (400 m) intersection offset from south ramp terminal. Provides the most separation.	Same as Alternative 1A.	Alternative 3 provides the most separation between south ramp terminal and Cromarty Drive intersection.

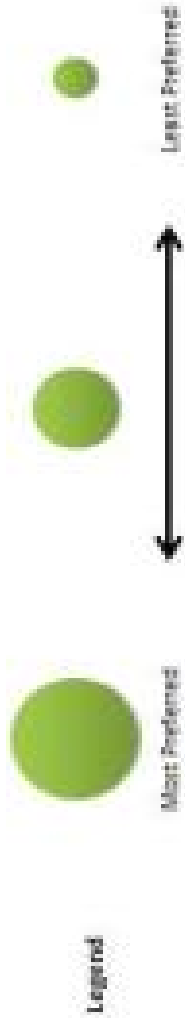


Table 4: Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Parclo A-2 Interchange On-Line Alignment	Alternative 1B Parclo A-2 Interchange West Alignment Shift	Alternative 2 Parclo A-2 Interchange with Roundabouts West Alignment Shift	Alternative 3 Diamond Interchange West Alignment Shift	Alternative 4 Parclo AB Interchange On-Line Alignment	Recommended Alternative
2. Highway and Bridge Engineering						
2.1 Best Use of Existing Road Infrastructure	• Maintains existing Westchester Bourne alignment. Use of existing approach embankment reduces required embankment construction. • Maintains existing entrance to Husky Truck Stop. • Potential to use existing interchange ramps until Highway 401 is expanded.	• Maintains existing entrance to Husky Truck Stop, same as other alternatives. • Requires new approach embankments for westerly shift of Westchester Bourne.	• Maintains existing entrance to Husky Truck Stop, same as other alternatives. • Requires new approach embankments for westerly shift of Westchester Bourne and roundabouts due to flatter profile requirements.	• Maintains existing entrance to Husky Truck Stop, same as other alternatives. • Requires new approach embankments for west alignment shift of Westchester Bourne.	• Maintains existing Westchester Bourne alignment. Use of existing approach embankment reduces required embankment construction, same as Alternative 1A. • Maintains existing entrance to Husky Truck Stop, same as other alternatives. • Potential to use existing interchange ramps until Highway 401 is expanded.	Alternatives 1A and 4 best utilize existing Westchester Bourne alignment and approach embankments and allow Highway 401 ramps to be retained as an interim configuration.
2.2 Local Road Network Connectivity	• Maintains existing road network connectivity.	• Same as other alternatives.	• Same as other alternatives.	• Same as other alternatives.	• Same as other alternatives.	Equal

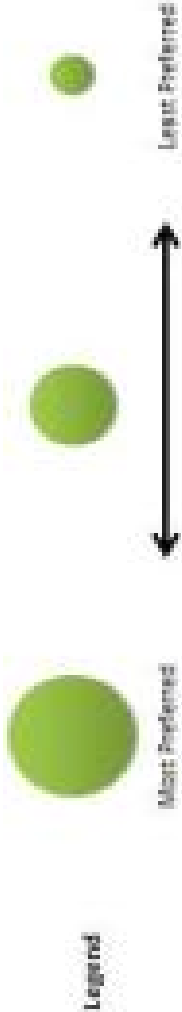


Table 4: Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Parclo A-2 Interchange On-Line Alignment	Alternative 1B Parclo A-2 Interchange West Alignment Shift	Alternative 2 Parclo A-2 Interchange with Roundabouts West Alignment Shift	Alternative 3 Diamond Interchange West Alignment Shift	Alternative 4 Parclo AB Interchange On-Line Alignment	Recommended Alternative
2.3 New Infrastructure Requirements	- Required new infrastructure: - One new bridge with two through lanes and two speed change lanes for direct inner loop ramps - All new interchange ramps but total length of ramps is less than Alternative 4 - Significant embankment construction on Westchester Bourne to widen existing embankment to required lane configuration, but less than Alternatives 1B, 2 and 3 - Realignment of Cromarty Drive to meet MTO best practices. Also requires modifications to entrances on Cromarty Drive. 	- Required new infrastructure: - One new bridge with two through lanes and two speed change lanes for direct inner loop ramps, same as Alternative 1A - All new interchange ramps, same as Alternative 1A - Significant embankment construction on Westchester Bourne for alignment shift to west, but less than Alternative 2 - Modifications to entrances on Westchester Bourne - Realignment of Cromarty Drive and modifications to entrances, same as Alternative 1A. 	- Required new infrastructure: - One new bridge with two through lanes - All new interchange ramps, same as Alternative 1A - Significant embankment construction on Westchester Bourne for alignment shift to west and roundabouts. Flatter grades for roundabouts require more embankment fill than other alternatives - Significant modifications to entrances on Westchester Bourne south of Highway 401. Private driveway required south of roundabout splitter islands for access to residences - Realignment of Cromarty Drive and modifications to entrances, same as other alternatives. 	- Required new infrastructure: - One new bridge with two through lanes and one shared left turn lane - All new interchange ramps, same as Alternative 1A - Significant embankment construction on Westchester Bourne for alignment shift to west, but less than Alternative 2 - Modifications to entrances on Westchester Bourne - Realignment of Cromarty Drive and modifications to entrances, same as other alternatives. 	- Required new infrastructure: - One new bridge with two through lanes and speed change lane for direct inner loop ramp and northbound left turn lane - All new interchange ramps. Total length of ramps is longer than other alternatives - Significant embankment construction on Westchester Bourne to widen existing embankment to required lane configuration, but less than Alternatives 1B, 2 and 3 - Requires realignment of Cromarty Drive and modifications to entrances, same as other alternatives. 	Alternative 2 requires the least new infrastructure since it has the narrowest structure.

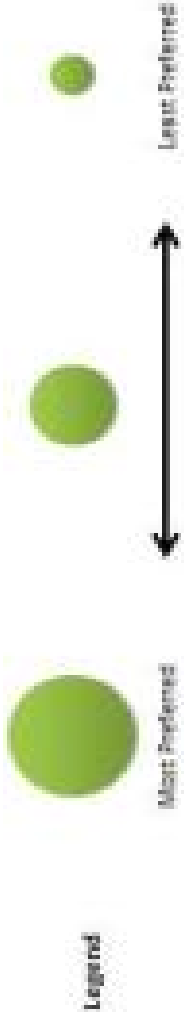


Table 4: Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Parclo A-2 Interchange On-Line Alignment	Alternative 1B Parclo A-2 Interchange West Alignment Shift	Alternative 2 Parclo A-2 Interchange with Roundabouts West Alignment Shift	Alternative 3 Diamond Interchange West Alignment Shift	Alternative 4 Parclo AB Interchange On-Line Alignment	Recommended Alternative
2.4 Traffic Staging	• Bridge construction requires closure of Westchester Bourne. No concerns expressed by EMS, County or Municipality. • Requires short duration closures of: • Highway 401 to remove existing bridge and place girders for new bridge. • Interchange ramps. • Requires longer closures of W-N/S ramp and E-N/S ramp. Duration of closures can be limited with traffic staging, but this increases cost. Closure of Westchester Bourne will not permit E-S and W-N movements.	• Requires closure of Westchester Bourne to remove existing bridge and construct tie-ins on Westchester Bourne, but duration of closure is shorter than Alternatives 1A and 4 since traffic can be maintained on existing roadway. • Requires short duration closures of Highway 401 and interchange ramps, same as Alternative 1A. • Requires longer closures of W-N/S and E-N/S ramps. Duration can be limited with traffic staging, but this increases cost, same as other alternatives.	• Requires closure of Westchester Bourne, same as Alternative 1B. • Requires short duration closures of Highway 401 and interchange ramps, same as other alternatives. • Requires longer closures of W-N/S, N/S-W and E-N/S ramps. Duration can be limited with traffic staging, but this increases cost.	• Requires closure of Westchester Bourne, same as Alternatives 1B and 2. • Requires short duration closures of Highway 401, same as other alternatives. • Longer closures of all interchange ramps. Duration can be limited with traffic staging, but this increases cost, same as other alternatives.	• Bridge construction requires closure of Westchester Bourne, same as Alternative 1A. • Requires short duration closures of Highway 401 and interchange ramps, same as other alternatives. • Requires longer closures of W-N/S and N/S-E ramps. Duration can be limited with traffic staging, but this increases cost, same as other alternatives. Closure of Westchester Bourne will not permit E-S and W-N movements.	Alternative 1B reduces duration of closures of Westchester Bourne and requires the fewest closures to construct embankments and ramps.
2.5 Construction Complexity	• Bridge construction simplified by completion in one stage with full closure of Westchester Bourne.	• Bridge construction simplified by completion in one stage.	• Same as Alternative 1B	• Same as Alternative 1B	• Bridge construction simplified by completion in one stage with full closure of Westchester Bourne, same as Alternative 1A. • Bridge requires flares due to difference in width for direct taper of larger inner loop ramp.	Alternatives 1A, 1B, 2 and 3 bridges are simpler to construct because they do not require flares on the structure.

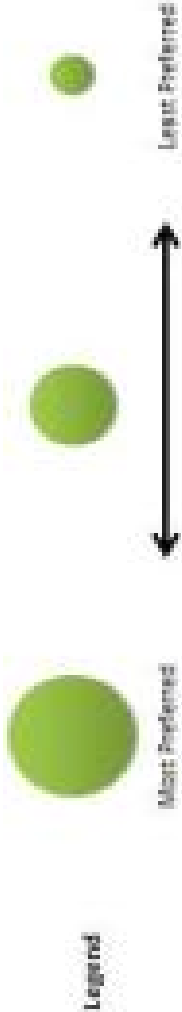


Table 4: Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Parclo A-2 Interchange On-Line Alignment	Alternative 1B Parclo A-2 Interchange West Alignment Shift	Alternative 2 Parclo A-2 Interchange with Roundabouts West Alignment Shift	Alternative 3 Diamond Interchange West Alignment Shift	Alternative 4 Parclo AB Interchange On-Line Alignment	Recommended Alternative
2.6 Impacts on Utilities	- Required utility relocations: - Minor impacts on Natural Resources Gas Limited gas line at Cromarty Drive. Relocation required east of Westchester Bourne for new E-N/S ramp - Rogers cables east of Westchester Bourne for E-N/S and N/S-W ramps - Hydro One aerial distribution wires east of Westchester Bourne north of Highway 401for E-N/S and N/S-W ramps - One Hydro One transmission tower in NE quadrant impacted by new E-N/S ramp - Potential impacts on Bell plant at existing Cromarty Drive intersection. Bell fibre optic plant in NW quadrant for intersection. Bell fibre optic plant in NE quadrant for E-N/S ramp.	- Required utility relocations: - Minor impacts on Natural Resources Gas Limited gas line at Cromarty Drive, same as other alternatives. Relocation of gas line west of Westchester Bourne to accommodate alignment shift - Rogers cables east of Westchester Bourne for E-N/S and N/S-W ramps - Hydro One aerial distribution wires east of Westchester Bourne north of Highway 401 for E-N/S and N/S-W ramps - Potential impacts on Bell plant at existing Cromarty Drive intersection, same as other alternatives. Bell fibre optic plant in NW quadrant for westerly shift of Westchester Bourne.	- Required utility relocations: - Minor impacts on Natural Resources Gas Limited gas line at Cromarty Drive, same as other alternatives. Relocation of gas line in two locations west of Westchester Bourne for alignment shift and north terminal roundabout - Rogers cables east of Westchester Bourne for E-N/S and N/S-W ramps - Hydro One aerial distribution wires east of Westchester Bourne north of Highway 401 for E-N/S and N/S-W ramps - Potential impacts on Bell plant at existing Cromarty Drive intersection, same as other alternatives. Bell fibre optic plant in NE quadrant for westerly shift of Westchester Bourne.	- Required utility relocations: - Minor impacts on Natural Resources Gas Limited gas line at Cromarty Drive, same as other alternatives. Relocation of gas line in two locations west of Westchester Bourne for new N/S-W ramp and Westchester Bourne alignment shift to west - Rogers cables east of Westchester Bourne for E-N/S ramp - Hydro One aerial distribution wires east of Westchester Bourne north of Highway 401 for E-N/S ramp - One Hydro One transmission tower with direct impacts in NE quadrant for E-N/S ramp - Potential impacts on Bell cables at existing Cromarty Drive intersection, same as other alternatives. Bell fibre optic plant in NW quadrant for westerly shift of Westchester Bourne and N/S-W ramp.	- Required utility relocations: - Minor impacts on Natural Resources Gas Limited gas line at Cromarty Drive, same as other alternatives. Relocation of gas line in two locations west of Westchester Bourne for new N/S-W ramp and E-N/S ramp. - Potential impacts on Bell plant at existing Cromarty Drive intersection, same as other alternatives. Bell fibre optic plant in NW quadrant for N/S-W and E-N/S ramps.	Alternative 4 does not impact Rogers cables, Hydro One aerial hydro distribution lines and Hydro One transmission tower east of Westchester Bourne.

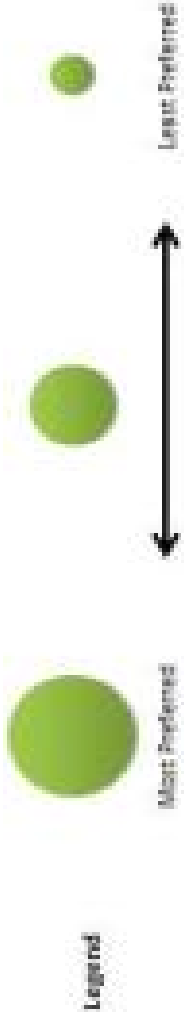


Table 4: Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Parclo A-2 Interchange On-Line Alignment	Alternative 1B Parclo A-2 Interchange West Alignment Shift	Alternative 2 Parclo A-2 Interchange with Roundabouts West Alignment Shift	Alternative 3 Diamond Interchange West Alignment Shift	Alternative 4 Parclo AB Interchange On-Line Alignment	Recommended Alternative
3. Drainage and Stormwater Management						
3.1 Municipal Drain and Drainage Modifications	- Requires minor highway drainage modifications within interchange: - Modification of three highway drainage culverts across Highway 401 - New highway drainage culverts required for new W-N/S and E-N/S ramps - Existing highway drainage culverts across existing N/S-W and N/S-E ramps can be eliminated.	Same as Alternative 1A	- Requires minor highway drainage modifications within interchange: - Modification of three highway drainage culverts and one new culvert at bridge across Highway 401 - New highway drainage culverts required for new W-N/S and E-N/S ramps - Existing highway drainage culverts across existing N/S-W and N/S-E ramps can be eliminated.	- Requires minor highway drainage modifications within interchange: - Modification of three highway drainage culverts and one new culvert at the structure across Highway 401 - New highway drainage culverts required for new W-N/S, N/S-W, N/S-E and E-N/S ramps.	- Requires minor highway drainage modifications within interchange: - Modification of one highway drainage culvert across Highway 401 - New highway drainage culverts required for new N/S-W and W-N/S ramps - Culvert across E-N/S ramp can be eliminated.	Alternative 4 requires the fewest drainage modifications.
3.2 Ability to Meet MOE Stormwater Management Requirements	- Negligible change in stormwater runoff volume/peak flows due to interchange reconfiguration. - Highway drainage ditch enhancements, storm sewer outlet protection and erosion and sediment control plan meets MOE requirements.	Same as other alternatives.	Same as other alternatives.	Same as other alternatives.	Same as other alternatives.	Equal

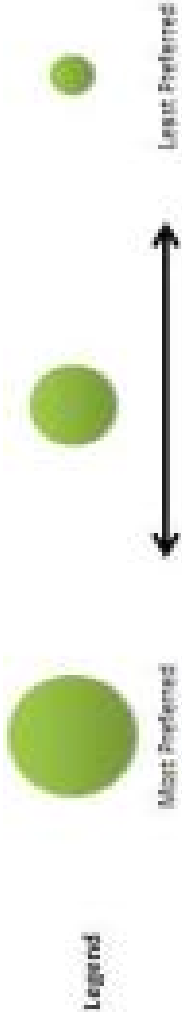
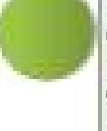
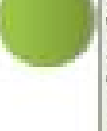
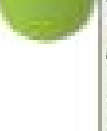
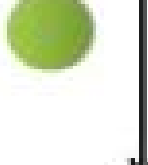


Table 4: Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Parclo A-2 Interchange On-Line Alignment	Alternative 1B Parclo A-2 Interchange West Alignment Shift	Alternative 2 Parclo A-2 Interchange with Roundabouts West Alignment Shift	Alternative 3 Diamond Interchange West Alignment Shift	Alternative 4 Parclo AB Interchange On-Line Alignment	Recommended Alternative
4. Natural Environment						
4.1 Impacts on Fish and Fish Habitat	No impacts on direct fish habitat. 	Same as other alternatives. 	Same as other alternatives. 	Same as other alternatives. 	Same as other alternatives. 	Equal
4.2 Impacts on Terrestrial Resources	Vegetation removal limited to herbaceous ground cover. Limited impacts on wildlife. 	Same as Alternative 1A. 	Same as Alternatives 1A and 1B. 	Ramps in SE quadrant remove a space plantation. Limited impacts on wildlife. 	Same as Alternatives 1A, 1B and 2. 	Alternatives 1A, 1B, 2 and 4 require the least vegetation removal.
4.3 Impacts on Species at Risk	No impacts anticipated. 	Same as other alternatives. 	Same as other alternatives. 	Same as other alternatives. 	Same as other alternatives. 	Equal

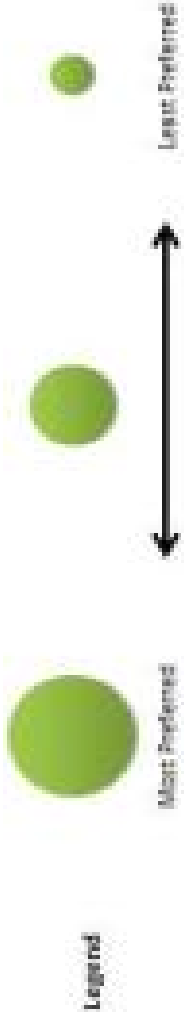


Table 4: Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Parclo A-2 Interchange On-Line Alignment	Alternative 1B Parclo A-2 Interchange West Alignment Shift	Alternative 2 Parclo A-2 Interchange with Roundabouts West Alignment Shift	Alternative 3 Diamond Interchange West Alignment Shift	Alternative 4 Parclo AB Interchange On-Line Alignment	Recommended Alternative
5. Socio-Economic Environment						
5.1 Impacts on Agriculture	- Realignment of Cromarty Drive requires significant amount of farmland designated for long term agricultural use in Thames Centre Official Plan. Also severs a farm holding. (Frontage along Westchester Bourne designated “Highway Commercial”.) - Short duration full closures of Westchester Bourne during construction restrict movement of farm equipment across Highway 401.	- Westerly realignment of Westchester Bourne requires small amount of farmland north of Highway 401, designated for long-term agricultural use. - Realignment of Cromarty Drive requires significant amount of farmland and severs a farm, same as Alternative 1A. - Short duration full closures of Westchester Bourne during construction restrict movement of farm equipment across Highway 401, but duration of closure is shorter than Alternatives 1A and 4.	- Westerly realignment of Westchester Bourne requires small amount of farmland, same as Alternative 1B. - Realignment of Cromarty Drive requires significant amount of farmland, same as other alternatives. - Full closure of Westchester Bourne during construction restricts movement of agricultural equipment across Highway 401, but duration of closure is shorter than Alternatives 1A and 4.	- Ramps in NW quadrant require small amount of farmland designated for long-term agricultural use in Thames Centre Official Plan. - Westerly realignment of Westchester Bourne requires small amount of farmland, same as Alternatives 1B and 2. - Realignment of Cromarty Drive requires significant amount of farmland, same as other alternatives. - Full closure of Westchester Bourne during construction restricts movement of agricultural equipment across Highway 401, same as Alternative 1A.	- Ramps in NW quadrant require a small amount of farmland designated for long term agricultural use in Thames Centre Official Plan. - Realignment of Cromarty Drive requires significant amount of farmland, same as other alternatives. - Full closure of Westchester Bourne during construction restricts movement of agricultural equipment across Highway 401, same as Alternative 1A.	Alternatives 1B and 2 minimize impacts on agriculture.

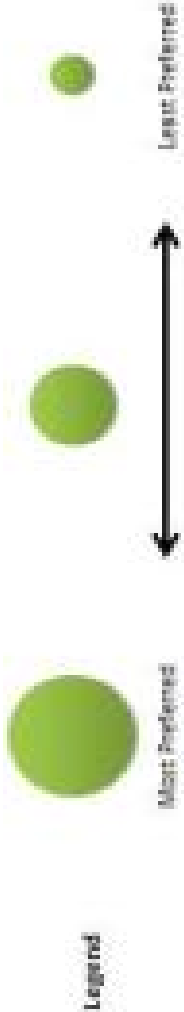


Table 4: Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Parclo A-2 Interchange On-Line Alignment	Alternative 1B Parclo A-2 Interchange West Alignment Shift	Alternative 2 Parclo A-2 Interchange with Roundabouts West Alignment Shift	Alternative 3 Diamond Interchange West Alignment Shift	Alternative 4 Parclo AB Interchange On-Line Alignment	Recommended Alternative
5.2 Impacts on Residential Uses	Realignment of Cromarty Drive along south side of a residence on Westchester Bourne causes potential traffic related impacts (noise and visual impacts). (Property designated “Highway Commercial” in Thames Centre Official Plan.) 	- Realignment of Cromarty Drive affects a residence on Westchester Bourne, same as Alternative 1A. - Westerly realignment of Westchester Bourne moves road farther away from residences reducing traffic related impacts. Also requires modifications to all residential entrances. 	- Realignment of Cromarty Drive affects residence on Westchester Bourne, same as other alternatives. - Roundabout islands eliminate access to residences on Westchester Bourne. Requires a private drive to Cromarty Drive for access to these residences. 	Same as Alternative 1B. 	Same as Alternative 1A. 	Alternatives 1A and 4 minimize impacts on residential uses.

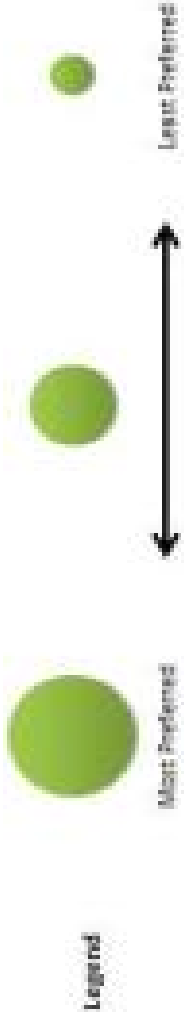


Table 4: Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Parclo A-2 Interchange On-Line Alignment	Alternative 1B Parclo A-2 Interchange West Alignment Shift	Alternative 2 Parclo A-2 Interchange with Roundabouts West Alignment Shift	Alternative 3 Diamond Interchange West Alignment Shift	Alternative 4 Parclo AB Interchange On-Line Alignment	Recommended Alternative
5.3 Impacts on Commercial Uses	• Maintains existing entrance to Husky Truck Stop. • Short duration full closures of Westchester Bourne and interchange ramps temporarily impact accessibility to Husky Truck Stop. • Realignment of W-N/S ramp requires some property from Husky Truck Stop. No impacts on site operation.	• Maintains existing entrance to Husky Truck Stop. • Westerly realignment of Westchester Bourne and W-N/S ramp require small amount of property from Husky Truck Stop (more than Alternative 1A). No impacts on site operation. • Short duration full closures of Westchester Bourne, and ramp movements during construction temporarily impact accessibility to Husky Truck Stop, but duration is shorter than Alternatives 1A and 4.	• Same as Alternative 1B.	• Same as Alternative 1B.	• Same as Alternative 1A.	Alternatives 1B, 2 and 3 minimize impacts on commercial uses.
5.4 Impacts on Rural Industrial Uses	• Realignment of Geometry Drive requires the extension and realignment of a access driveway to former MTO Maintenance Yard (designated "Rural Industrial" in Thames Centre Official Plan).	• Same as Alternative 1A.	• Same as other alternatives.	• Same as other alternatives.	• Same as other alternatives.	Equal

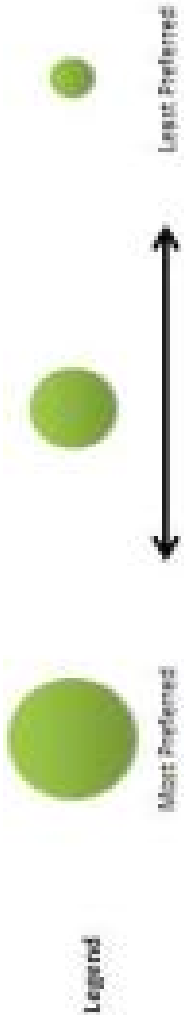


Table 4: Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Parclo A-2 Interchange On-Line Alignment	Alternative 1B Parclo A-2 Interchange West Alignment Shift	Alternative 2 Parclo A-2 Interchange with Roundabouts West Alignment Shift	Alternative 3 Diamond Interchange West Alignment Shift	Alternative 4 Parclo AB Interchange On-Line Alignment	Recommended Alternative
5.5 Impacts on Commercial Recreational Land Uses	- Short duration full closures of Westchester Bourne and interchange ramps temporarily impact accessibility to KOA Campground. - Realignment of Cromarty Drive requires minor modifications to KOA Campground driveway.	- Short duration full closures of Westchester Bourne, and ramp movements during construction temporarily impact accessibility to KOA Campground, but duration is shorter than Alternatives 1A and 4. - Same impacts on KOA driveway as Alternative 1.	Same as Alternative 1B.	Same as Alternatives 1B.	Same as Alternative 1A.	Equal
5.6 Conformity to County of Middlesex Official Plan	Generally conforms but has more impacts on agriculture than Alternatives 1B and 2.	Better conforms to Official Plan since it minimizes impacts on agriculture.	Better conforms, same as Alternative 1B.	Generally conforms, same as Alternative 1A.	Generally conforms, same as Alternative 1A.	Alternatives 1B and 2 minimize impacts on agriculture.

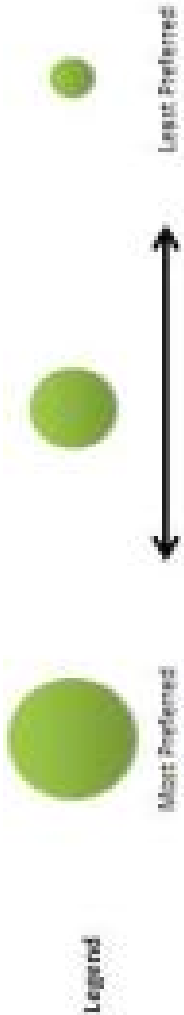


Table 4: Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Parclo A-2 Interchange On-Line Alignment	Alternative 1B Parclo A-2 Interchange West Alignment Shift	Alternative 2 Parclo A-2 Interchange with Roundabouts West Alignment Shift	Alternative 3 Diamond Interchange West Alignment Shift	Alternative 4 Parclo AB Interchange On-Line Alignment	Recommended Alternative
5.7 Conformity to Thames Centre Official Plan	Conforms. Lands around interchange designated “Recreational”, “Highway Commercial” and “Rural Industrial”. Interchange improvements help increase development potential. Cromarty Drive realignment increases development potential of lands designated “Highway Commercial” by providing more road frontage.	Same as Alternative 1A.	Same as other alternatives.	Same as other alternatives.	Same as other alternatives.	Equal
6. Cultural Heritage Resources						
6.1 Impacts on Lands with Archaeological Potential	Affects the least land (1.67 hectare) with archaeological potential.	Affects 1.89 hectare with archaeological potential.	Affects 204 hectare with archaeological potential.	Affects 191 hectare with archaeological potential.	Affects the most land (2.06 hectare) with archaeological potential.	Equal, alternatives affect similar amounts of land with archaeological potential.
6.2 Impacts on Bridges with Cultural Heritage Significance	No impacts. Westchester Bourne Bridge does not have cultural heritage significance.	Same as other alternatives.	Same as other alternatives.	Same as other alternatives.	Same as other alternatives.	Equal

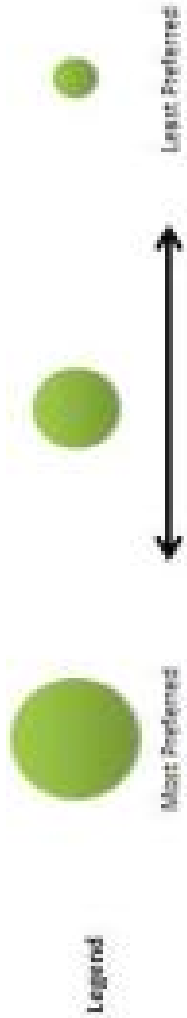


Table 4: Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Parclo A-2 Interchange On-Line Alignment	Alternative 1B Parclo A-2 Interchange West Alignment Shift	Alternative 2 Parclo A-2 Interchange with Roundabouts West Alignment Shift	Alternative 3 Diamond Interchange West Alignment Shift	Alternative 4 Parclo AB Interchange On-Line Alignment	Recommended Alternative
7. Cost						
7.1 Infrastructure Cost	• High overall cost of new underpass structure. • Low cost for construction staging compared to Alternatives 1B, 2 and 3 since Westchester Bourne will be closed during construction. • High overall cost for grade raise and embankment widening for new structure, but less than Alternatives 1B, 2 and 3. • High cost of new interchange ramps, but less than Alternative 4. • High overall cost to relocate Hydro One transmission tower. • Moderate cost to realign Cromarty Drive, same as other alternatives.	• High overall cost of new underpass structure. • Higher cost for construction staging than Alternatives 1A and 4 due to need to provide roadside safety protection, traffic control measures and temporary intersections to maintain traffic on Westchester Bourne during construction. • High overall cost for grade raise and new embankments on Westchester Bourne for approach to new offline structure. • High cost to construct new interchange ramps and roundabout intersections. • Moderate cost to realign Cromarty Drive, same as other alternatives.	• High overall cost of new underpass structure, but less than other alternatives. • Higher cost for construction staging, same as Alternative 1B. • High overall cost for grade raise and new embankments on Westchester Bourne for approach to new offline structure but less than Alternative 1B. • High cost to construct new interchange ramps and roundabout intersections. • Moderate cost to realign Cromarty Drive, same as other alternatives.	• High overall cost of new underpass structure, but less than Alternatives 1A, 1B and 4. • Higher cost for construction staging than Alternatives 1A and 4 due to need to provide roadside safety protection, traffic control measures and temporary intersections to maintain traffic on Westchester Bourne during construction. • High overall cost for grade raise and new embankments on Westchester Bourne for approach to new offline structure but less than Alternative 1B. • High cost to construct new interchange ramps, same as Alternative 1A. • High overall cost to relocate Hydro One transmission tower. • Moderate cost to realign Cromarty Drive, same as other alternatives.	• High overall cost of new underpass structure. • Low cost for construction staging compared to Alternatives 1B, 2 and 3 since Westchester Bourne will be closed during construction. • High overall cost to construct grade raise and widen existing embankments for new structure, but less than Alternatives 1B, 2 and 3. • Highest cost to construct new interchange ramps. • Moderate cost to realign Cromarty Drive, same as other alternatives.	Alternative 2 has the lowest underpass structure cost and avoids Hydro One transmission towers.

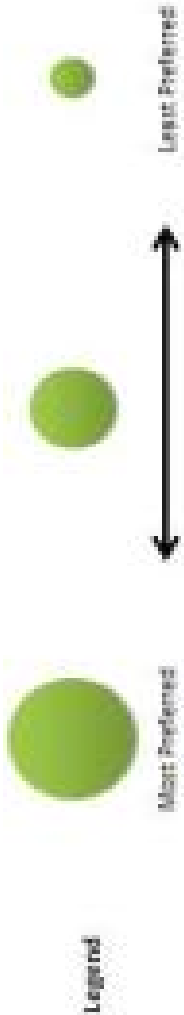
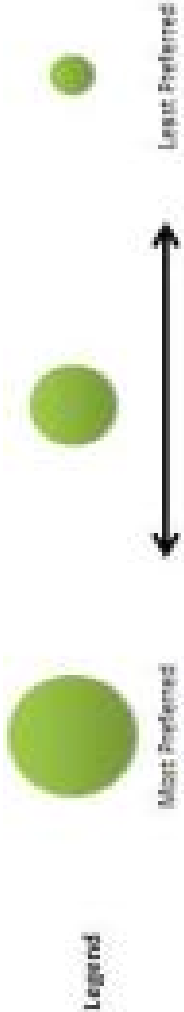


Table 4: Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Parclo A-2 Interchange On-Line Alignment	Alternative 1B Parclo A-2 Interchange West Alignment Shift	Alternative 2 Parclo A-2 Interchange with Roundabouts West Alignment Shift	Alternative 3 Diamond Interchange West Alignment Shift	Alternative 4 Parclo AB Interchange On-Line Alignment	Recommended Alternative
7.2 Property Cost	• Low overall cost for property for new E-N/S ramp (0.10 ha) and W-N/S ramp (0.02 ha). • High overall cost for property for Cromarty Drive realignment (1.55 ha), same as other alternatives. 	• Low overall cost for property for Westchester Bourne realignment (0.33 ha). • Low overall cost for property for W-N/S ramp (0.05 ha). • High overall cost for property for Cromarty Drive realignment (1.55 ha), same as other alternatives. 	• Low overall cost for property for Westchester Bourne realignment and north roundabout (0.41 ha). • Low overall cost for property for W-N/S ramp (0.08 ha). • High overall cost for property for Cromarty Drive realignment (1.55 ha), same as other alternatives. 	• Low overall cost for property for Westchester Bourne realignment (0.23 ha). • Low overall cost for property for N/S-W ramp (0.09 ha), W-N/S ramp (0.03 ha) and E-N/S ramp (0.01 ha). • High overall cost for property for Cromarty Drive realignment (1.55 ha), same as other alternatives. 	• High overall cost for property for new N/S-W ramp (0.51 ha) and W-N/S ramp (0.02 ha). • High overall cost for property required to realign Cromarty Drive (1.55 ha), same as other alternatives. 	Alternative 1A requires the least amount of property.



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Table 5: Summary of Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Ponds A-2 Interchange, On-Line Alignment	Alternative 1B Ponds A-2 Interchange, West Alignment Shift	Alternative 2 Ponds A-2 Interchange with Roundabouts, West Alignment Shift	Alternative 3 Diamond Interchange, West Alignment Shift	Alternative 4 Ponds A-2 Interchange, On-Line Alignment	Recommended Alternative
1. Traffic Operations and Safety	- Meets existing traffic needs/capacity requirements, most common interchange configuration - Interchange can be expanded in future, more easily accommodates large truck movements than Alt. 2 - Horizontal curves on Westchester Bourne less desirable than Alts. 1A and 4 - Improves consistency with MTO Highway Access Management Guidelines	- Meets existing traffic needs/capacity requirements, most common interchange configuration - Interchange can be expanded in future, more easily accommodates large truck movements than Alt. 2 - Horizontal curves on Westchester Bourne less desirable than Alts. 1A and 4 - Improves consistency with MTO Highway Access Management Guidelines for intersection separation, same as Alt. 1A.	- Meets existing traffic needs/capacity requirements, most common interchange configuration, roundabouts reduce severity of collisions. - Interchange can be expanded in future. - Horizontal curves less desirable than Alts. 1A and 4 - Least consistent with MTO Highway Access Management Guidelines for intersection separation.	- Meets existing traffic needs/capacity requirements but has potential for wrong way movements onto Highway 401 - Limited opportunities for future interchange expansion - Horizontal curves on Westchester Bourne less desirable than Alts. 1A and 4 - Most consistent with MTO Highway Access Management Guidelines for intersection separation.	- Meets existing traffic needs/capacity requirements but configuration concerns include high speed of Highway 401 exiting traffic to inner loop ramp and weaving movements. - Future interchange expansion constrained by Hydro tower - Improves consistency with MTO Highway Access Management Guidelines, same as Alts. 1A and 1B.	Alternative 1A and 1B are the most common interchange configuration and can be expanded in the future.
2. Highway and Bridge Engineering	- Makes best use of existing infrastructure but requires more new infrastructure than Alts. 2 and 3 due to wider bridge. Existing ramps could be used until Highway 401 is widened - Major traffic impacts during construction caused by Westchester Bourne closure and long-term detour. Shorter construction duration than Alts. 1B, 2 and 3 - Short-term on-site detours for Highway 401 traffic - Requires some utility relocations, plus relocation of at least one Hydro One tower.	- Retains less existing infrastructure than Alts. 1A and 4, requires most new infrastructure (wider bridge, embankment construction) - Requires temporary closure of Westchester Bourne but traffic can be maintained on existing road minimizing traffic impacts but increasing construction complexity. Overall construction duration longer than Alts. 1A and 4 - Short-term on-site detours for Highway 401 traffic, same as Alt. 1A - Requires some utility relocations, does not impact Hydro One towers, same as Alt. 2.	- Retains less existing infrastructure than Alts. 1A and 4 but requires least new infrastructure (narrower bridge) - Requires temporary closure of Westchester Bourne, same as Alt. 1B. Longest overall construction duration - Short-term on-site detours for Highway 401 traffic, same as other alternatives - Requires same extent of utility relocations as Alt. 1B.	- Retains less existing infrastructure than Alts. 1A and 4, requires more new infrastructure (wider bridge) than Alt. 2 - Requires temporary closure of Westchester Bourne, same as Alts. 1B and 2. Overall construction duration longer than Alts. 1A and 4 - Short-term on-site detours for Highway 401 traffic, same as other alternatives. Westchester Bourne requires long-term detour but duration shorter than Alts. 1A and 4 - Requires the most utility relocations, plus at least one Hydro One tower	- Best use of existing infrastructure, but requires more new infrastructure than Alts. 2 and 3 due to wider bridge (same as Alt. 1A). Existing ramps could be used until Highway 401 is widened - Major traffic impacts during construction caused by Westchester Bourne closure and long-term detour. Overall construction duration shorter than Alts. 1B, 2 and 3 - Short-term on-site detour for Highway 401 traffic, same as other alternatives - Requires the least utility relocations, does not impact Hydro One towers	Alternative 2 minimizes traffic impacts and does not impact Hydro One towers.
3. Drainage and Stormwater Management	Requires minor drainage modifications and meets MOE Stormwater Management requirements, same as other alternatives.	Same as Alt. 1A.	Same as Alts. 1A and 1B.	Same as Alts. 1A, 1B and 2.	Requires less drainage modifications than other alternatives and meets MOE requirements.	Alternative 4 requires the least drainage modifications.

Legend

Most Preferred

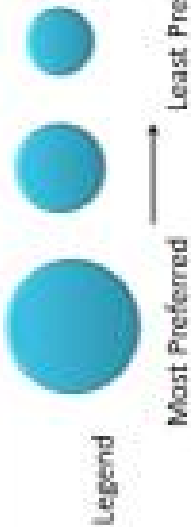
Least Preferred

Table 5: Summary of Comparative Evaluation of Preliminary Design Alternatives

Evaluation Criteria	Alternative 1A Parcel A-2 Interchange, On-Line Alignment	Alternative 1B Parcel A-2 Interchange, West Alignment Shift	Alternative 2 Parcel A-2 Interchange with Roundabouts, West Alignment Shift	Alternative 3 Diamond Interchange, West Alignment Shift	Alternative 4 Parcel A-B Interchange, On-Line Alignment	Recommended Alternative
A. Natural Environment	- No impacts on direct fish habitat, same as other alternatives. - Limited vegetation removal, same as Alts. 1B, 2 and 4. - No impacts on Species at Risk. - Requires significant amount of farmland, full closure of Westchester Bourne during construction restricts farm equipment movement across highway. - Potential traffic impacts on residence on Westchester Bourne caused by Cromarty Drive realignment, same as other alternatives. - Requires some property from Husky Truck Stop, same as other alternatives. Westchester Bourne and interchange ramp closures temporarily impact business at truck stop. - Conforms to County/Local Official Plans. - Affects the least land with archaeological potential.	- Same as Alternative 1A. - Requires more farmland than Alt. 1A but construction staging has fewer impacts on farm equipment movement. - Same impacts on residence on Westchester Bourne as other alternatives, alignment shift moves road further away from residences. - Requires some property from truck stop, same as other alternatives, better maintains traffic to truck stop during construction than Alts. 1A and 4. - Conforms to County/Local Official Plans.	- Same as Alternative 1A. - Requires same amount of farmland as Alt. 1B, construction staging has minimal impacts on farm equipment movement, same as Alt. 1B. - Increased length of private driveway causes maintenance and service impacts on residence on Westchester Bourne. - Alignment shift moves road further away from residences. - Same impacts on truck stop as Alts. 1B and 3. - Conforms to County/Local Official Plans.	- No impacts on direct fish habitat. - Removes spruce plantation in southeast interchange quadrant. - No impacts on Species at Risk. - Requires the most farmland but construction staging has minimal impacts on farm machinery movement. - Same impacts on residence on Westchester Bourne as other alternatives, alignment shift moves road further away from residences. - Same impacts on truck stop as Alts. 1B and 2. - Conforms to County/Local Official Plans.	- Same as Alternative 1A. - Requires slightly more farmland than Alt. 1A, full closure of Westchester Bourne during construction restricts farm machinery movement across highway, same as Alt. 1A. - Same impacts on residence on Westchester Bourne as other alternatives. - Same impacts on truck stop as Alt. 1A. - Conforms to County/Local Official Plans.	Alternatives 1A, 1B, 2 and 4 minimize impacts on the natural environment.
B. Socio-Economic Environment						Alternatives 1B, 2 and 3 minimize impacts on existing land uses.
C. Cultural Heritage Resources	- Highest cost due to wider structure and Hydro One tower impacts. - Lowest cost for property for interchange ramps.	Affects slightly more land with archaeological potential than Alt. 1A.	Affects the second most land with archaeological potential.	Affects more land with archaeological potential than Alt. 1B.	Affects the most land with archaeological potential.	Alternative 1A affects the least land with archaeological potential.
D. Cost	- Highest cost due to wider structure and Hydro One tower impacts. - Lowest cost for property for interchange ramps.	- Higher cost than Alt. 2 due to wider structure, but similar embankment construction. - Lower utility relocation costs than other alternatives since Hydro One towers not impacted. - Higher cost for property than Alt. 1A due to road realignment.	- Lowest cost for new infrastructure (narrowest structure). - Same utility and property costs as Alt. 1B.	- Higher cost than Alternative 2 due to wider structure and Hydro One tower impacts, but infrastructure cost similar to Alt. 1B. - Same property costs as Alts. 1B and 2.	- Higher cost for new infrastructure (wider structure), same as Alts. 1A and 1B. - Same utility costs as Alt. 1B and 2. - Highest cost for property due to interchange ramps.	Alternative 2 has the lowest overall cost.

Alternative 1B is the Preferred Alternative:

- Safest interchange configuration, can be expanded in the future, requires a temporary closure only of Westchester Bourne and avoids impacts on hydro towers
- Better maintains traffic to Husky Truck Stop during construction



4. PUBLIC AND AGENCY CONSULTATION

4.1 Introduction

Section 4 summarizes public and agency consultation undertaken throughout the Class EA and design study. Copies of consultation materials referred to in this section are included in **Appendix B**.

4.2 Contact List

The project Contact List includes Federal departments, the MPP for Elgin-Middlesex-London, Provincial Ministries, the Municipality of Thames Centre, local agencies, such as UTRCA, local interest groups and property owners from the Municipality of Thames Centre Assessment Roll. Updated throughout the project, the Contact List also includes First Nations, emergency services and utilities.

4.3 Notice of Study Commencement

The Notice of Study Commencement (in **Appendix B**) explained that MTO plans to replace the bridges and improve the Highway 401 interchanges at Westchester Bourne, Dorchester Road and Elgin Road. Grouped together as part of MTO's Interchange Improvements and Bridge Replacements in Middlesex County project, the improvements at the Dorchester Road and Elgin Road interchanges are being addressed by separate MTO TESRs.

Distribution of Notice

Tamm Communications arranged for the Notice of Study Commencement to appear in the February 27, 2013, editions of the Aylmer Express and London Sarnia L'Action, the French language newspaper, and the March 7, 2013, edition of the Dorchester Signpost. The MPP for Middlesex-Elgin-London was advised about the project and publication dates by Dillon letter dated February 20, 2013.

The notice, along with a comment form requesting comments by March 20, 2013, were distributed as follows:

- Agencies on the Contact List received copies by a Dillon letter dated February 25, 2013
- Residences and businesses in the Study Area received copies by Dillon letter also dated February 25
- First Nations received copies by MTO letter dated February 21, 2013.

Dillon also sent letters dated February 25, 2013, to Aboriginal Affairs and Northern Development Canada (AANDC) and the Ministry of Aboriginal Affairs (MAA) advising them of the First Nations on the Contact List and requesting information on claims and litigation.

The project website was launched on February 4, 2013, under five separate URLs. To date, there have been 541 visits to www.hwy401middlesexbridges.ca. Of these, 60% are new visitors while 40% are returning. The average website visit is three minutes and 15 seconds.

A total of 11 replies were received to the notice, including four from agencies and six from the public.

First Nations and Agency Comments

Comments were received from the following:

- AANDC provided information on First Nations, land claims and litigation. Mississaugas of the New Credit and Six Nations of the Grand River were added to the Contact List based on the information received
- MNRF requested more information on the project to allow the Ministry to screen the Study Area for natural heritage concerns. This information was provided to MNRF.

Dillon and MTO met with representatives of Middlesex-London EMS and the Municipality of Thames Centre Roads and Fire Departments on October 1, 2013, to present the design options developed for the Westchester Bourne interchange. Construction staging and traffic management were also discussed. No concerns were expressed by the agencies in attendance.

Dillon met with representatives of Middlesex County on October 21, 2013 and July 6, 2015, to discuss detour routes for traffic staging during construction. Cost sharing opportunities for upgrades to the detour routes were discussed at a meeting with Middlesex County and Thames Centre on November 10, 2015.

Public Comments

Of the six people who replied to the Notice of Study Commencement, four requested to be kept informed and did not provide any comments. Comments were received from the following:

- Nature London stated it may want to meet with the Project Team to review the natural environmental data collected for the project and impacts and mitigation
- London Husky asked about access during construction and stated they have from 2,000 to 2,500 customers a day.

4.4 Public Information Centre

A PIC was held at the Dorchester Community Centre on March 26, 2015, from 4:00 p.m. to 7:00 p.m. The purpose of the PIC was to obtain public and agency input on the preferred Preliminary Designs developed for the three bridge and interchange improvement projects at Westchester Bourne, Dorchester Road and Elgin Road in Middlesex County.

Distribution of PIC Notice

Tamm Communications arranged for the notice to appear in the March 11, 2015, editions of the Aylmer Express and Dorchester Signpost. The MPP for Elgin-Middlesex-London was advised of the PIC and publication dates by Dillon letter dated March 4, 2015.

The notice was sent to the Contact List by Dillon letter dated March 9, 2015. First Nations received a copy of the notice by MTO letter dated March 9, 2015.

PIC Format and Displays

The PIC was an informal walk-in session with displays summarizing the work completed to date on the project. MTO and Dillon staff were in attendance to explain the displays, record comments and answer questions. The PIC displays covered the following:

- Project Description, Study Purpose and MTO Class EA process
- Need for Improvements
- Existing Conditions, including descriptions of the natural, socio-economic and cultural heritage environments at the three interchanges
- Preliminary Design Alternatives developed for the Westchester Bourne interchange, including Alternatives 1A, 1B, 2, 3 and 4
- Summary of Comparative Evaluation of Alternatives. Alternative 1B, Parclo A-2 Interchange, West Alignment Shift, was identified as the Technically Preferred Alternative
- Construction staging and traffic management for the preferred design alternative. A preferred detour route along Wilton Grove Road, Veterans Memorial Parkway and Hamilton Road was also shown
- Evaluation criteria for the impact assessment of the preferred Preliminary Design
- Next Steps in the Class EA process.

Copies of the displays and a comment form requesting comments by April 7, 2015, were handed out to all present. The PIC boards were uploaded to the project website (www.hwy401middlesexbridges.ca) on March 27, 2015.

PIC Attendance

A total of 22 individuals signed the record of attendance. Most of the attendees were residents of the surrounding community and business owners who own or operate businesses near the three interchanges.

PIC Informal Discussions

In general, public feedback regarding the bridge replacements and interchange improvements was positive. Key issues discussed at the PIC about Westchester Bourne included the following:

- Concerns regarding impacts on emergency vehicle access and responses during construction
- Concerns about the realignment of Cromarty Drive and impacts on existing farm holdings and residences

- Questions about the property acquisition process
- The London Husky Truck Stop noted that disruptions to traffic flow during construction will impact its business and requested that construction timing and detour routes be carefully reviewed to minimize potential impacts. It was also noted that the current lane configurations on Westchester Bourne leading to the entrance is unsafe and should be reconfigured as part of the project. A meeting to discuss these issues with Husky occurred early in the project on November 26, 2013.

PIC Written Submissions

A total of six written submissions were received pertaining to the improvements at the Westchester Bourne interchange:

First Nation, Agency and Interest Group Comments

- Chippewas of the Thames First Nation commented that it has no concerns but would like to be kept informed of any changes
- The Middlesex County Engineer requested an electronic copy of the PIC displays
- The Deputy Mayor of Thames Centre commented that a commuter parking lot should be considered for Westchester Bourne, transport truck parking should be accommodated on Highway 401 on-ramp shoulders and millings from the project should be given to the municipality to compensate for construction related impacts
- Nature London requested a copy of the natural heritage reports prepared for the project
- UTRCA provided comments on the natural environmental features at all three interchanges.

Business Comments

- London Husky Travel Centre commented that it prefers Alternative 1B (the preferred alternative) for the interchange but is concerned about access to the site during construction and safety for trucks exiting the site. Husky also asked about any changes to the turning lanes into the site and how much property will potentially be required for the ultimate ten-laning of Highway 401.

Following the PIC, meetings were held in April and May 2015 with a local farmer and a local resident to discuss concerns regarding the potential impacts of the Cromarty Drive realignment.

5. IMPACTS AND MITIGATION

5.1 Introduction

Section 5 of the TESR includes an impact assessment of the preferred Preliminary Design of the Westchester Bourne bridge replacement and interchange improvements. Measures and provisions to avoid or mitigate impacts are also identified in this section. **Table 6** at the end of the report summarizes the impact assessment.

5.2 Project Description

5.2.1 Bridge Replacement and Interchange Improvements

Shown on **Figure 2** (in **Section 1**), the preferred Preliminary Design for the project is a Parclo A-2 interchange with a west alignment shift of Westchester Bourne (Interchange Improvement Alternative 1B) and all new interchange ramps. The existing bridge will be replaced with a new four lane bridge with two through lanes and two speed change lanes for the direct inner loop ramps. The preferred bridge design is a two span integral abutment bridge (Bridge Option 2). The design also provides the potential to add directional ramps in the southeast and northwest quadrants of the interchange in the future.

To meet MTO's *Highway Access Management Guidelines*, Cromarty Drive will be realigned with a new intersection at Westchester Bourne. New driveways to the former MTO Maintenance Yard (now used by the Municipality of Thames Centre) and the KOA Campground are required for access to realigned Cromarty Drive. The preferred alternative maintains the existing entrance to the Husky Travel Centre.

5.2.2 Construction Staging and Traffic Management

The total duration of construction for the improvements is expected to be approximately 1 to 1.5 years. Traffic management and construction staging will be confirmed during Detailed Design and documented in a Design and Construction Report (DCR). The following provides an overview of anticipated traffic impacts:

Highway 401

- Traffic will be reduced to two lanes in each direction for construction of the bridge piers
- Temporary short duration full closures of both eastbound and westbound lanes of Highway 401 are required to remove the existing bridge and erect girders for the new bridge
- Long duration ramp closures are required for the westerly shift of Westchester Bourne and construction of the new ramps.

Westchester Bourne

- Construction of the new bridge will be completed in a single stage
- Limited closures on Westchester Bourne are anticipated since the new bridge is constructed off-line
- One lane of traffic in each direction will be maintained except for short duration closures required to construct tie-ins to existing Westchester Bourne at the north and south limits.

Cromarty Drive

- Traffic is generally maintained, except for short duration closures required to tie-in to existing Cromarty Drive at the east limits.

As noted, short duration closures of Highway 401 will be required to replace the structure. During the closures required to place new girders, it is anticipated that an on-site detour can be maintained using the existing interchange ramps. Closures of Highway 401 to remove the existing bridge will require offsite short term detours using the local road network. Proposed detour routes for the Highway 401 closures are shown on **Figure 15**. **Figure 16** shows proposed detour routes for the temporary closures of Westchester Bourne.

These detour routes will be confirmed during Detailed Design with input from Middlesex County, Municipality of Thames Centre and the City of London. Short duration closures of Cromarty Drive will not include signed detour routes. Advanced notice will be provided of all closures. Adjacent interchanges will not be closed at the same time. Lane reductions on Highway 401 are also anticipated through the construction area. OPP will be present at key intersections along the proposed detour routes during Highway 401 closures.

5.2.3 Illumination

Illumination will be provided on Highway 401, Westchester Bourne and within the interchange as warranted by MTO policies. It will be installed to meet current Ministry standards.

5.3 Impact Assessment

Table 6 at the end of this report includes an impact assessment of the preferred Preliminary Design. Measures to avoid or mitigate impacts are also identified. The following sections summarize the impact assessment.

5.4 Traffic Operations and Safety

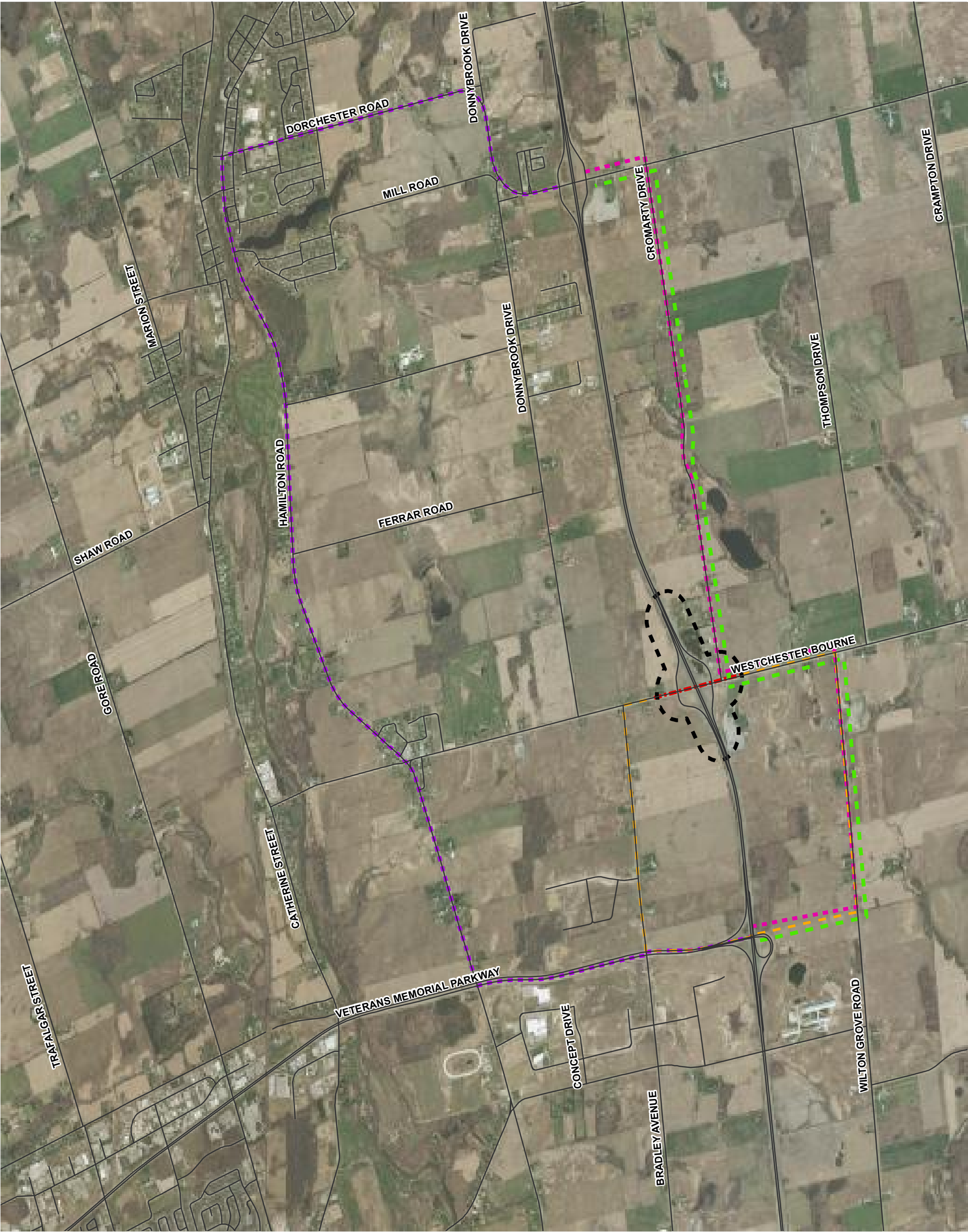
As shown on **Table 6**, the preferred design meets existing and future Provincial highway and local traffic needs.

The replacement of the existing diamond interchange with a Parclo-A interchange increases road safety since it is the most common interchange configuration in Ontario, thereby meeting driving expectations. This type of interchange also reduces the potential for wrong-way movements onto Highway 401.

5.5 Highway and Bridge Engineering

5.5.1 Traffic Impacts during Construction

Construction of the improvements will cause some out-of-way travel, access disruptions and traffic delays for traffic on Highway 401 and Westchester Bourne, as outlined in **Table 6**. A significant advantage of the preferred Preliminary Design is that it minimizes the number and duration of closures of Westchester Bourne because it is built-off line of the existing road alignment. As a result, traffic can be maintained on Westchester Bourne during most of construction, minimizing impacts on agriculture, existing commercial uses and local residents. Measures to mitigate these impacts are shown on **Table 6**.



MINISTRY OF TRANSPORTATION
HIGHWAY 401, WESTCHESTER BOURNE
BRIDGE REPLACEMENT & INTERCHANGE
IMPROVEMENTS

Westchester Bourn
Detour Routes - Highway 401 Closure
Figure 15

Legend

- Eastbound Detour (Girder/Demo)
- Westbound Detour (Demo)
- Westbound Detour (Girder)
- Westchester Bourn Closed
- Westchester Detour

Demolition requires closure of Highway 401
in both directions simultaneously.

Veterans Memorial Parkway construction
will be completed prior to construction at
Westchester Bourn.

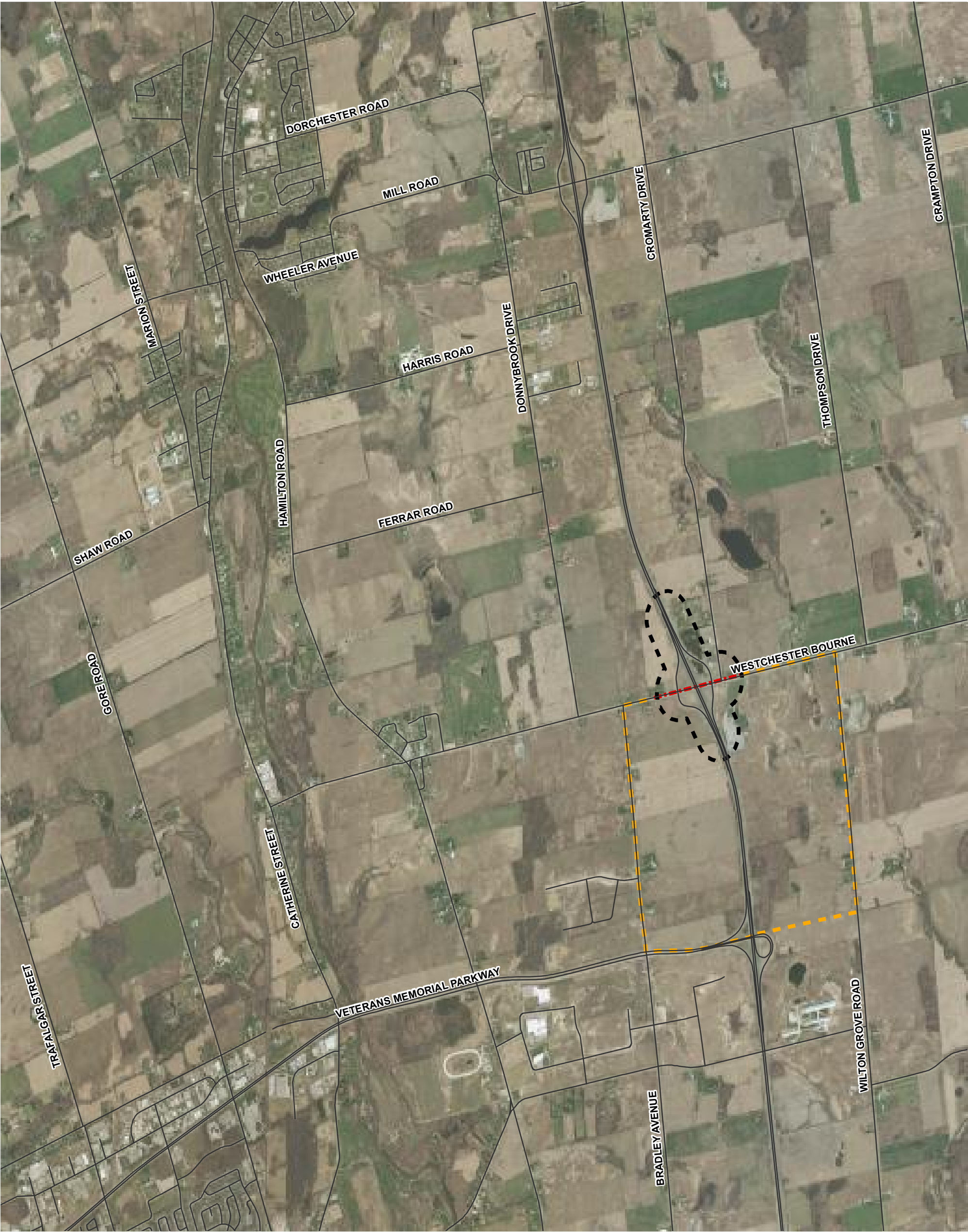


MAP DRAWING INFORMATION:
DATA PROVIDED BY MNR &
THE MUNICIPALITY OF THAMES CENTRE
MAP CREATED BY: MMS
MAP CHECKED BY: BJF
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: \\dillon.ca\\DILLON_DFS\\London
(London CAD\\GIS\\127110 - 12 Structures\\mxd



PROJECT: 12-7110
STATUS: DRAFT
DATE: 09/14/2015



MINISTRY OF TRANSPORTATION
HIGHWAY 401, WESTCHESTER BOURNE
BRIDGE REPLACEMENT & INTERCHANGE
IMPROVEMENTS

**Westchester Bourne
Detour Routes**
Westchester Bourne Closure
Figure 16

Legend

- Westchester Bourne Closed
- Westchester Bourne Detour

Veterans Memorial Parkway construction
will be completed prior to construction at
Westchester Bourne.



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNR &
THE MUNICIPALITY OF THAMES CENTRE
MAP CREATED BY: MMS
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(London CAD)\GIS\127110 - 12 Structures\mxd



PROJECT: 12-7110
STATUS: DRAFT
DATE: 09/14/2015

5.5.2 Emergency Services

Middlesex County and local emergency services have expressed no concerns about the impacts of the proposed improvements on emergency services response times. All emergency services will be notified in advance of construction and provided with maps showing detour/alternate EMS routes. Regular communication will be maintained with EMS throughout construction.

5.5.3 Utilities

All utilities will be relocated in advance of construction. Relocations will be co-ordinated with the utilities during the Design-Build stage. Potential conflicts caused by the proposed improvements include the following:

- The Natural Resource Gas Limited gas main conflicts with the westerly realignment of Westchester Bourne and new interchange ramps in the southwest quadrant. There is also potential for conflict with the new interchange ramps in the northeast quadrant
- Rogers aerial utility on the west side of Westchester Bourne conflicts with the realignment of the road to the west
- Bell Canada buried conduit (containing fibre optic) conflicts with the northwest quadrant for the realignment of Westchester Bourne. Removals for the realignment of Cromarty Drive will conflict with Bell buried conduit along the east side of Westchester Bourne and the north and south sides of Cromarty Drive
- There is potential for conflict with Hydro One aerial distribution along the east side of Westchester Bourne at the new intersection for the north ramp terminal.

5.6 Drainage and Stormwater Management

The preferred Preliminary Design causes direct and indirect impacts on existing drainage infrastructure, stormwater quality and quantity and existing municipal drain receiving water systems associated with the Highway 401/Westchester Bourne interchange area. The following drainage improvements are required:

- Three open footing concrete culverts will require extensions to accommodate the reconfiguration of the W-N/S and E-N/S ramps and interim tie-ins to the existing 6-lane

cross-section of Highway 401. These culverts also require extensions to accommodate the future/ultimate eight/ten-lane configuration of Highway 401 and the addition of future N-W and S-E directional ramps. The total length of culvert extensions is anticipated to be approximately 15 metres for Culvert A, 29 metres for Culvert B and approximately 13 metres for Culvert C

- Construction of the new Westchester Bourne bridge, shifted west of the existing structure, will have a direct impact on the existing storm sewers and non-structural circular culverts currently located adjacent to the existing bridge. The design of the new drainage infrastructure for the new bridge will accommodate the future/ultimate eight/ten-lane configuration of Highway 401 with respect to layout, outlet locations and conveyance capacity.

The construction of the N/S-W and N/S-E ramps and the reconfiguration of the E-N/S and W-N/S ramps will result in a minor impact on the quality and quantity of stormwater runoff generated within the interchange area and discharged to the Bruyn, Jackson Award and Jackson Manning tiled municipal drain receiving water systems. The potential future addition of directional interchange ramps will incrementally increase the rate and volume of stormwater generation within the interchange.

To mitigate the increase in stormwater runoff potential, all new/reconfigured roadside ditches will incorporate a minimum 1.0 metre bottom width and, in select locations, be widened to 2.0 metres and enhanced to promote short-term attenuation, infiltration and vegetative uptake. Ditch enhancements will help reduce post-improvement increases in runoff rate and volume prior to discharging to receiving water systems. It is anticipated that stormwater management techniques constructed within the highway drainage system along Highway 401 and within the interchange will avoid conveyance capacity impacts on the existing tiled municipal drain systems.

The reconfiguration of Cromarty Drive will have a direct impact on the existing Jackson Manning Municipal Drain. The southerly shift in the Cromarty alignment will require a new road crossing of the existing Jackson Manning Drain tile. Reconfiguration of the roadside ditches will also require the addition of surface water inlets into the existing tile system. It is anticipated that the modifications to Cromarty Drive will maintain the existing drainage catchment areas associated with the tile and that the proposed modifications to the drain will be documented by a 'Letter of Advice' prepared by Thames Center in accordance with the *Municipal Drain Act*.

5.7 Natural Environment

5.7.1 Erosion and Sedimentation

Grading during construction potentially causes erosion and sedimentation, including vegetation dieback at the edge of the construction area. Site specific erosion and sedimentation control measures will be developed during the design stage following MTO's *Environmental Guide for Erosion and Sediment Control during Construction of Highway Projects* (MTO 2007). The measures will be based on the following general guidelines:

- Minimize the disturbance of existing well vegetated ditches and grassed slopes
- Protect undisturbed slopes and sensitive ditching with silt fence and temporary straw bale flow checks. These measures must remain in place until exposed soils are stabilized
- Place erosion control blanket on 2:1 slopes where height warrants its use
- Place appropriately sized rip rap and geotextile at new and existing storm sewer outlets.

Special contract provisions will be developed during Detailed Design with timing restrictions to minimize the length of time between the start of any work that disturbs earth surfaces and the application of final cover to 45 days. The provisions will also require that final cover be applied by a certain date to allow vegetation to be established during the growing season.

5.7.2 Source Water Protection

Identifying potential threats to source water is an important aspect of source water protection. The proposed improvements will have no impacts on source water. Ancillary project activities (application of road salt, handling and storage of fuel, etc.), however, may pose a low risk to local groundwater and surface water quality. To minimize the threat from these activities, MTO will apply current best management practices (e.g., MTO's Salt Management Plan), adhere to established Ministry plans and policies and implement special contract provisions protecting ground and surface water during construction. The provisions will be prepared in accordance with MTO's *Environmental Reference for Contract Preparation* (ERCP) which provides guidance on implementing environmental protection and mitigation during construction to meet the Ministry's environmental protection requirements.

5.7.3 Fish and Fish Habitat

Although the Study Area has no direct fish habitat, all highway drainage improvements will be designed to have no impacts on downstream fish habitat. As mentioned, the Study Area is part of the Dingman Creek Subwatershed under the jurisdiction of UTRCA.

5.7.4 Terrestrial Ecosystems

Vegetation

Vegetation removals required for the interchange improvements include parts of some meadow communities and isolated trees along the edge of the coniferous plantation for the future directional ramp in the southeast quadrant. The potential impacts of removing vegetation include increased vulnerability of areas cleared of vegetation to invasion by non-native species, vegetation dieback at the edge of the construction area, decreased shade and cover for wildlife and localized temporary displacement of wildlife.

These impacts will be mitigated by incorporating the following measures into the construction contract:

- Minimize vegetation removal to the extent possible
- Delineate Tree Protection Zones (TPZs) during the design stage
- Follow tree felling and grubbing procedures, as outlined in *OPSS 201, Construction Specification for Clearing, Close Cut Clearing, Grubbing*
- Implement erosion and sediment control measures, as outlined previously. These measures will be developed in more detail during Detailed Design
- Areas temporarily cleared of vegetation to facilitate road and culvert works will be stabilized (e.g., vegetated and seeded) prior to the removal of erosion and sedimentation control measures
- Disturbed areas along drains will be re-vegetated with native species to minimize invasion and colonization by non-native species and increase shade/cover for wildlife.

Migratory and other Protected Birds

During fieldwork in 2013, no bird nests were observed under the Westchester Bourne Bridge. Vegetation removal during the bird nesting period for tree and non-tree nesting species

(April 1 to August 31) could be non-compliant with the *Migratory Birds Convention Act* (MBCA, 1994) if the removal causes the destruction or disturbance of active nests (with eggs or young birds) or the wounding and/or killing of species protected under the *MBCA*.

To protect nesting birds and comply with the *MBCA*, the following measures will be incorporated into the construction contract:

- Vegetation removal should be completed outside the breeding bird period **(April 1 to August 31)**
- Vegetation removal can occur during the restricted breeding bird period if a qualified Avian Biologist conducts a nest search of the area prior to work commencing and determines that active nests are not present in or close to the work area
- During Detailed Design, a qualified Avian Biologist will conduct a nest search of the structure. If nests are present, appropriate measures will be developed to ensure compliance with the *MBCA*.

Species at Risk and Provincially Rare Species

No potential SAR habitat was observed during Dillon's field survey in 2013. To ensure the project has no impacts on SAR, information on SAR potentially present in the Study Area will be updated during the design stage.

There is potential for the provincially rare Eastern Milkshake to be present within the Study Area, although the quality of habitat in the meadow, meadow marsh and open areas in the coniferous plantation communities is low. To mitigate the low potential for impacts to this species, the following measures will be implemented:

- A Fact Sheet and detection protocols for Eastern Milkshake will be provided to the contractor before construction begins
- Workers must be vigilant and check work areas and machinery for the presence of reptiles prior to each day of construction
- To prevent this species from entering construction areas, temporary exclusion fences will be installed prior to **April 15** to exclude snakes and contain the work areas in the southeast quadrant of the interchange along the coniferous plantation and kept in place until

October 1. Exclusion fences will be identified on the contract drawings and included in the specifications

- If Milksnake is encountered in the construction area, work must be temporarily suspended until the animal is out of harm's way. If Milksnake persists in the work area, a person qualified to handle snakes will be contacted to relocate the animal.

These measures will be developed in more detail during Detailed Design.

5.8 Socio-Economic Environment

5.8.1 Impacts on Agriculture

The proposed improvements have the following impacts on agriculture:

- The westerly realignment of Westchester Bourne requires 0.3 hectare of farmland northwest of the interchange. The farm is designated for long-term agricultural use in the Middlesex County and Municipality of Thames Centre Official Plans. However, the small size and location of the "property take" at the edge of the existing field will not adversely affect farm viability or operation of the farm
- The realignment of Cromarty Drive requires 1.7 hectare of farmland and severs an existing farm holding. However, these lands may eventually be developed since the frontage along Westchester Bourne is designated for "Highway Commercial" uses in the Thames Centre Official Plan. The Cromarty Drive realignment helps increase the land's development potential by providing more road frontage for the property.

5.8.2 Impacts on Other Land Uses

Impacts on other land uses include the following:

- The realignment of Cromarty Drive along the south side of a residence on Westchester Bourne potentially causes traffic related impacts on this house, including noise and visual impacts. A Landscape Plan to provide screening for this house will be developed during Detailed Design
- The westerly realignment of Westchester Bourne requires modifications to all residential

entrances along this section of the road. All property affected by the entrance modifications will be fully restored during construction. Also, the westerly realignment moves the road farther away from some residences potentially reducing traffic related impacts

- The W-N/S ramp and westerly realignment of Westchester Bourne require 0.2 hectare of property from the Husky Travel Centre. This has no impacts on the layout or operation of the truck stop
- The Cromarty Drive realignment requires a new entrance to the KOA Campground. The campground will also be affected by the short duration full closures of Westchester Bourne
- The realignment also requires a new entrance location for the former MTO Maintenance Yard.

5.8.3 Short-Term Construction Impacts

Noise, vibrations and air quality (dust) impacts during construction will be mitigated by construction best practices for noise, vibration and dust control. Overnight work may require an exemption from the Municipality of Thames Centre noise control by-law. The need for an exemption will be determined during Detailed Design.

5.8.4 Light Trespass and Pollution

The illumination improvements proposed as part of the project potentially cause light trespass, increased night sky light pollution and increased energy consumption. These impacts will be evaluated during the design stage in accordance with MTO policies to limit pollution of the night-time sky.

5.8.5 Conformity to Official Plans

The improvements conform to the Middlesex County Official Plan since they minimize impacts on agriculture, a major focus of the County plan. The improvements also conform to the Thames Centre Official Plan. The interchange improvements and Cromarty Drive realignment help increase the development potential of lands around the interchange designated for non-agricultural uses. Lands at the northeast, southeast and southwest quadrants of the interchange are designated for “Highway Commercial” uses in the Thames Centre Official Plan.

5.8.6 Consistency with Provincial Policy Statement (PPS)

The proposed bridge replacement and interchange improvements are consistent with the goals and policies of the PPS for transportation systems:

- The improvements are consistent with the PPS goal of providing transportation systems which are safe, energy efficient and facilitate the movement of people and goods and are appropriate to address projected needs
- Consistent with the PPS, the improvements make efficient use of existing and planned infrastructure
- MTO has integrated transportation and land use considerations in all stages of the planning process, as required by the PPS
- MTO is planning for and protecting the Highway 401 corridor, interchanges and the right-of-way for the future.

The PPS also requires that MTO consider the significant resources protected by the PPS, when planning for corridors and rights-of-way. Significant resources affected by the improvements include prime agricultural lands and lands with archaeological potential. Impacts on agriculture are not significant. Impacts on lands with archaeological potential will be avoided by obtaining archaeological clearance from MTCS prior to construction. No other significant Provincial resources are affected by the proposed improvements.

5.9 Impacts on Potentially Contaminated Property

For the interchange area, there is a moderate to high potential for impacts on the subsurface based on the adjacent retail fuel outlet and former MTO Maintenance Yard. The retail fuel outlet, located southwest of the underpass, has several large underground fuel storage tanks and records of fuel spills from vehicles. Based on the interpreted groundwater flow direction to the south, the portion of the Study Area located north of Highway 401 has a moderate potential for impacts to the subsurface while the areas south of Highway 401 have a high potential for impacts.

Based on the findings of this report, Phase I Environmental Site Assessments are recommended for areas with high potential for contamination.

5.10 Cultural Heritage Resources

The proposed improvements affect 1.9 hectares of land with archaeological potential. The potential destruction/disturbance of archaeological resources will be avoided by the completion of assessments prior to construction. Archaeological clearance is required from MTCS prior to construction.

5.11 Summary of Environmental Concerns and Commitments

As shown on **Table 6**, the proposed bridge replacement and interchange improvements will have no significant impacts on transportation engineering considerations or the natural, cultural and socio-economic environments. All potential adverse impacts can be avoided or mitigated by the environmental protection and mitigation measures identified in the table. These measures will be developed in more detail during the Detailed Design stage of the project.

6. ENVIRONMENTAL CLEARANCES AND APPROVALS

This TESR will be available for the required 30-day public and agency review period. If no Part II Order requests are received by MOECC during this time, the TESR is approved under the *EA Act*.

The following design and construction related approvals are required prior to construction:

- Archaeological clearance is required from the Ministry of Tourism, Culture and Sport
- Exemptions from the Municipality of Thames Centre noise control by-law may be required for night-time work.

DILLON CONSULTING LIMITED
LONDON, ONTARIO



Jeff Matthews, P.Eng.
Project Manager



Janet Smolders, MCIP
Environmental Planner

Table 6: Summary of Environmental Concerns and Commitments

I.D. #	I. D. # Sub-issues	Issues/Concerns Potential Effects	Potentially Concerned Agencies	Mitigation/Protection/Monitoring Measures
1. Traffic Operations and Safety	1.1 Ability to Meet Existing/Future Provincial Highway and Local Traffic Needs	Meets existing and future needs.	MTO, Middlesex County, Thames Centre, travelling public	Not required.
	1.2 Road Safety	- Matches driver expectations since Parclo A is the most common interchange configuration in Ontario. - Replacement of diamond interchange with a Parclo A interchange reduces potential for wrong-way movements onto Highway 401.	MTO, Middlesex County, Thames Centre, travelling public	Not required.
2. Highway and Bridge Engineering	2.1 Traffic Impacts during Construction	Out-of-way travel, access disruptions and traffic delays during construction for travelling public, local road users, farmers and Husky Travel Centre caused by: - Short duration closures of Highway 401 and interchange ramps to remove existing bridge - Short duration closure of Highway 401 to construct new bridge - Traffic staging (lane reductions) on Highway 401 to construct bridge piers - Longer duration closures of W-N/S and E-N/S ramps for construction of new interchange - Short duration lane closures of Westchester Bourne to remove bridge and construct tie-ins to Westchester Bourne.	MTO, Middlesex County, Thames Centre, travelling public	Traffic impacts minimized by: - During short duration closures of Highway 401, traffic will be maintained on-site using existing interchange ramps - Adjacent interchanges on Highway 401 will not be closed at the same time - Detour routes for Highway 401 closures will be confirmed during the design stage in consultation with Middlesex County and local municipality - Construction contract will include requirements for OPP presence at intersection along detour routes during Highway 401 closures - Off-line construction of new bridge allows existing Westchester Bourne to remain open to traffic, significantly reducing duration of closures - To limit the impact of ramp closures, opportunities to keep the existing ramps open during construction will be considered during the design stage, helping to reduce impacts on accessibility to Travel Centre.
	2.2 Emergency Services	Potential emergency services vehicle delays to incidents on Highway 401 and Westchester Bourne.	MTO, Middlesex County, Thames Centre, local residents and businesses and travelling public	- Provide advanced notice of road and lane closures to emergency services, including maps showing detour routes - Maintain regular communication with emergency services during construction.
	2.3 Impacts on Utilities	Required utility relocations include: - Natural Resources Gas Limited gas lines at Cromarty Drive and west of Westchester Bourne - Rogers cables in northeast and southeast quadrants of interchange - Hydro One aerial distribution wires in northeast quadrant of interchange - Potential impacts on Bell plant at existing Cromarty Drive intersection - Bell fibre optic plant in northwest quadrant of interchange.	MTO, Middlesex County, Thames Centre, travelling public	Relocation of utilities will be co-ordinated with utilities during Detailed Design. Relocation will occur prior to construction of the bridge replacements and interchange improvements.

Table 6: Summary of Environmental Concerns and Commitments

I.D. #	I. D. # Sub-issues	Issues/Concerns Potential Effects	Potentially Concerned Agencies	Mitigation/Protection/Monitoring Measures
3. Drainage and Stormwater Management	3.1 Culvert Modifications	Culvert modifications potentially cause erosion/sedimentation and impacts on downstream fish and fish habitat. Improvements require minor highway drainage modifications within interchange: • Modification of three highway drainage culverts across Highway 401 • New highway drainage culverts required for new W-N/S and E-N/S ramps • Existing highway drainage culverts across existing N/S-W and N/S-E ramps can be eliminated • Cromarty Drive realignment requires a new crossing of Jackson Manning Drain tile.	MTO, MOECC, MNRF, Middlesex County, Thames Centre, UTRCA	• Drainage modifications will be designed to meet MTO drainage design criteria and incorporate erosion/scour protection and watercourse/fisheries protection measures • Culvert configuration and protection measures will be developed during design stage • During Detailed Design, modifications to the Jackson Manning Drain tile will be documented in a “Letter of Advice” prepared by Thames Centre under the <i>Municipal Drain Act</i>.
	3.2 Drainage/Stormwater Management (SWM) – Water Quantity/Quality Impacts	• Minor addition of impervious surface (pavement) within right-of-way will slightly alter pre-construction hydrologic characteristics for runoff peak flow rates, runoff volumes and quality • Negligible increases in peak flows and runoff volumes slightly increase potential for erosion, sediment transport and downstream flooding • Also slightly increases potential for transport of roadway runoff containing heavy metals, hydrocarbons and other deleterious substances.	MTO, MOECC, MNRF, Middlesex County, Thames Centre, UTRCA	• All new ditches will be designed with a minimum 1.0 m bottom width, low gradient and permanent rock flow checks to improve online storage characteristics, promote infiltration/vegetation uptake, attenuate peak flows and settle suspended solids • Newly graded soil will be protected from surface erosion and sediment transport with temporary and permanent sediment and erosion control measures.
4. Natural Environment	4.1 Erosion and Sedimentation	Potential erosion and sedimentation impacts during construction caused by grading and other construction activities.	MTO, MOECC, MNRF, Middlesex County, Thames Centre, UTRCA	The following measures will be developed during the design stage in accordance with MTO’s <i>Environmental Guide for Erosion and Sediment Control during Construction of Highway Projects</i> : • Minimize disturbance of existing well vegetated ditches and grassed slopes • Protect undisturbed slopes and sensitive ditching with silt fence and temporary straw bale flow checks until exposed soils are stabilized • Place erosion control blankets on 2:1 slopes where height warrants its use • Place appropriately sized rip rap and geotextile at new and existing storm sewer outlets • Special contract provisions with timing restrictions to limit the length of time between the start of clearing and application of final cover to 45 days.
	4.2 Impacts on Fish and Fish Habitat	No impacts on direct fish habitat but construction activities could cause impacts on downstream habitat.	MTO, DFO, MNRF, UTRCA	Downstream fisheries will be protected by erosion and sedimentation control measures and watercourse/fisheries protection measures implemented during construction.
	4.3 Source Water Protection	Construction of the proposed improvements will have no impacts on source water. However, ancillary activities (application of road salts and handling/storage of fuel) may pose low risk to local groundwater and surface water quality.	MTO, MOECC, MNRF, Middlesex County, Thames Centre, UTRCA, local residents and businesses	The following measures will be implemented during construction and operation to avoid threats to ground/surface water quality: • Apply current best management practices (e.g., MTO’s Salt Management Plan) • Adhere to established MTO plans and policies • Implement special contract provisions during construction, prepared in accordance with MTO’s <i>Environmental Reference for Contract Preparation</i> (ERCP).

Table 6: Summary of Environmental Concerns and Commitments

I.D. #	I. D. # Sub-issues	Issues/Concerns Potential Effects	Potentially Concerned Agencies	Mitigation/Protection/Monitoring Measures
5. Socio-Economic Environment	4.4 Impacts on Terrestrial Resources	Removes parts of some meadow communities and isolated trees along edge of a coniferous plantation. Potential impacts of vegetation removal are: - Increased erosion/sedimentation - Increased vulnerability to invasion by non-native species - Decreased shade/cover for wildlife - Localized temporary displacement of wildlife.	MTO, MNRF	Measures to minimize the impacts of vegetation removal will be incorporated into the construction contract, including: - Minimize vegetation removal to the extent possible and delineate TPZs on the drawings - Follow standard tree felling and grubbing procedures - Implement erosion and sediment control measures and re-vegetate with native species.
	4.5 Impacts on Migratory/Protected Birds	Potential destruction of nests, eggs and young prior to and during construction.	MTO, MNRF	Impacts on migratory and other protected birds will be avoided by: - Vegetation removal will be completed outside the breeding bird period (April 1 to August 31) - Vegetation removal can occur during the restricted period if a qualified Avian Biologist conducts a nest search of affected vegetation/structures and determines that active nests are not present in or close to the work area - During the design stage, a qualified Avian Biologist will conduct a nest search of the structure. If nests are present, appropriate measures will be developed to ensure compliance with the <i>MBCA</i>.
	4.6 Impacts on Species at Risk (SAR)	Potential disturbance, removal or destruction of Eastern Milksnake habitat (low potential).	MTO, MNRF	To mitigate the low potential for impacts on Eastern Milksnake, the following measures will be implemented prior to and during construction: - Fact Sheet and detection protocols provided to contractor prior to construction - Installation of temporary exclusion fencing prior to April 15, maintained until October 1 - If Milksnake is encountered in construction area, work must be temporarily suspended. Information on SAR potentially present in the Study Area will be updated during the design stage.
	5.1 Impacts on Agriculture	- Westerly realignment of Westchester Bourne requires 0.3 hectare of farmland northwest of interchange. Property is designated for long-term agricultural use in Thames Centre Official Plan - Realignment of Cromarty Drive requires 1.7 hectare of farmland and severs a farm holding. Frontage along Westchester Bourne is designated “Highway Commercial” in Thames Centre Official Plan.	MTO, OMAF, Middlesex County, Thames Centre, local farmers	- Small size and location of required farmland on Westchester Bourne (at the edge of existing field) does not adversely affect farm viability or operation - Cromarty Drive realignment helps increase development potential of land designated “Highway Commercial” by providing more road frontage.
	5.2 Impacts on Residential Uses	- Realignment of Cromarty Drive along south side of a residence on Westchester Bourne potentially causes traffic related impacts (noise, visual impacts) on this house. House is designated “Highway Commercial” in Thames Centre Official Plan - Realignment of Westchester Bourne requires modifications to all residential entrances along Westchester Bourne - Realignment of Westchester Bourne moves road away from residences potentially reducing traffic related impacts.	MTO, Middlesex County, Thames Centre, local residents	- A Landscape Plan will be developed during Detailed Design to screen the residence on Westchester Bourne affected by the Cromarty Drive realignment - Property affected by entrance modifications will be fully restored during construction.

Table 6: Summary of Environmental Concerns and Commitments

I.D. #	I. D. # Sub-issues	Issues/Concerns Potential Effects	Potentially Concerned Agencies	Mitigation/Protection/Monitoring Measures
	5.3 Impacts on Commercial Uses	W-N/S ramp and westerly realignment of Westchester Bourne require a small amount of property (0.2 hectare) from Husky Travel Centre.	MTO, Middlesex County, Thames Centre, local businesses	Required property has no impacts on site operation.
	5.4 Impacts on Commercial Recreational Uses	Cromarty Drive realignment requires a new entrance to campground.	MTO, Middlesex County, Thames Centre, local businesses	Property affected by entrance modifications will be fully restored during construction.
	5.5 Impacts on Rural Industrial Uses	Realignment of Cromarty Drive requires the extension and relocation of access driveway to former MTO Maintenance Yard (designated “Rural Industrial” in Thames Centre Official Plan)	MTO, Middlesex County, Thames Centre	Property affected by entrance modifications will be fully restored during construction.
	5.6 Short-term Construction Impacts on Existing Land Uses	Noise, vibrations and air quality (dust) impacts during construction.	MTO, MOE, Middlesex County, Thames Centre, local residents and businesses	Mitigated by standard measures implemented during construction.
	5.6 Impacts on Potentially Contaminated Property	Interchange has high potential for subsurface impacts due to presence of retail fuel outlet and former maintenance yard.	MTO, Middlesex County, Thames Centre	A Phase 1 Environmental Site Assessment of these sites will be completed prior to construction.
	5.7 Light Trespass and Pollution of Night-time Sky	Potential light trespass and increased night sky light pollution caused by illumination improvements.	MTO, Royal Astronomical Society, local residents	Impacts will be evaluated during the design stage in accordance with MTO policies to limit pollution of night-time sky.
	5.8 Conformity to County of Middlesex Official Plan	Conforms since it minimizes impacts on agriculture.	MTO, Middlesex County	Not required.
	5.9 Conformity to Thames Centre Official Plan	Conforms. Interchange improvements and Cromarty Drive realignment help increase development potential of lands around interchange designated for “Highway Commercial” uses.	MTO, Thames Centre	Not required.
	5.10 Consistency with Provincial Policy Statement	Consistent. Proposed improvements are consistent with the goals and policies of the PPS for transportation systems. Significant resources potentially affected by proposed improvements include prime agricultural lands and lands with archaeological potential.	MTO, MMAH, OMAF, MTCS, Middlesex County, Thames Centre, local residents	- Impacts on agriculture are not significant - Impacts on archaeological resources avoided by obtaining archaeological clearance from MTCS prior to construction.
	6.1 Archaeological Resources	Affects 1.9 hectare of land with archaeological potential. Potential disturbance/destruction of archaeological resources during construction.	MTO, MTCS, Middlesex County, Thames Centre	Impacts on lands with archaeological potential avoided by completion of archaeological assessments and obtaining archaeological clearance from MTCS prior to construction.
6. Cultural Resources	6.2 Built Cultural Heritage Resources	Westchester Bourne Underpass structure not considered to be a provincial heritage property.	MTO, MTCS, Middlesex County, Thames Centre	Not required.

APPENDIX A

Terrestrial Resources

Representative Photographs taken June 3, 2013 and June 4, 2013

Photograph 1 – Middlesex Road 74 (Westchester Bourne) Interchange

- Naturalized Coniferous Plantation
- Looking north



Photograph 2 – Middlesex Road 74 (Westchester Bourne) Interchange

- Dry – Fresh Graminoid Meadow
- Looking south from ROW, south of Highway 401



Representative Photographs taken June 3, 2013 and June 4, 2013

Photograph 3 – Middlesex
Road 74 (Westchester
Bourne) Interchange

- Cattail Graminoid
Meadow Marsh
- Looking northwest
from ROW, south of
Highway 401



APPENDIX B

Public and Agency Consultation



Contact List										
Information	By Name	By Name	Organization	Department	Title	Address	City/Town	Postcode	TEL	FAX
Utilities										
City	Accounting	Realty	Index One Networks Inc.			PO Box 12149 Indian River	Northville, ON	N0B 1A1		
City	Call	Phone	Bell Canada			20 Huron Street W. R110	Northville, ON	L0N 1B2		
City	Address	Mobile	Regent Communications		President/Partner	311 Grand Court Drive	Orillia, ON	R0G 1A8		
City	Phone	Mobile	Simon Inc. Limited		Manager, Local Services	PO Box 2001, 20 East David Street	Orillia, ON	R7H 2G1	(705) 326-6000 ext. 1171	Open/Off hours contact
City	City	Phone	Servpro			160 Dundas Street, Room 10	London, ON	N6H 4G4		info@servpro.ca
Local Businesses										
Property Owners (Responded to Notices)										
Property Owners (From Property Assessment Rels)										
Numbers of persons who have been retained to comply with Freedom of Information and Protection of Privacy Act										
Numbers of persons who have been retained to comply with Freedom of Information and Protection of Privacy Act										
Numbers of persons who have been retained to comply with Freedom of Information and Protection of Privacy Act										

Notice of Study Commencement Three Highway 401 Interchange Improvements & Bridge Replacements in Middlesex County

The Ministry of Transportation, Ontario (MTO) has retained Dillon Consulting Limited to undertake the Preliminary Design, initial Detailed Design and Class Environmental Assessment for interchange improvements and bridge replacements along Highway 401 in Middlesex County:

- Middlesex Road 74 (Westchester Bourne)
- Middlesex Road 32 (Dorchester Road)
- Middlesex Road 73 (Elgin Road)

The purpose of this study is to identify a preferred plan for each location, including construction staging and traffic management plans. The study will involve the development of alternatives to accommodate both interim (10 year) and ultimate (30 year) transportation needs for the Highway 401 corridor. More information on this project is available on the project website at www.hwy401middlesexbridges.ca.

The Process

These studies are being carried out as Group B projects in accordance with the requirements of the *MTO Class Environmental Assessment (EA) for Provincial Transportation Facilities (2000)*. The studies will include background technical and environmental studies, as well as consultation activities to obtain input from the public and local businesses.

Comments

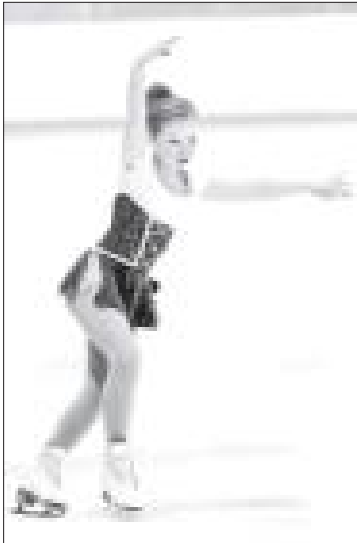
We are interested in obtaining your comments by **March 20, 2013**. Information collected will be used in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record. For more information, to provide comments or be added to the mailing list, please contact:

Mr. Jeff Matthews, P.Eng., Project Manager
Dillon Consulting Limited
Box 426, London, Ontario, N6A 4W7
Tel.: 519-438-6192
Toll Free: 1-888-345-5668 Ext. 1275
Fax: 519-672-8209
Email: hwy401middlesexbridges@dillon.ca

Mr. Dan Barber, P.Eng., Snr. Project Engineer
Ministry of Transportation, Ontario
West Region, Planning and Design Section
659 Exeter Road
London, Ontario, N6E 1L3
Tel.: 519-873-4812
Toll Free: 1-800-265-6072 Ext. 4812
Fax: 519-873-4600
Email: Dan.Barber@ontario.ca



If you have accessibility requirements to participate in this project, please contact a team member.
Des renseignements sont disponibles en français en composant Stephen Betts, 1-800-345-5668.



Isabelle Peters-Row, 9, of Aylmer competed in the 2013 Skate Canada Western Ontario STARSkate Championships and Adult Showcase at East Elgin Community Complex on the weekend. She won bronze in a preliminary flight and competed as a member of the Tillsonburg Skating Club.

(AE/Craig Bradford)



Aylmer Skating Club member Miracle Collins, 15, competed in the Junior Bronze free skate during the 2013 Skate Canada Western Ontario STARSkate Championships and Adult Showcase at East Elgin Community Complex on Saturday. Over the weekend, an estimated 500 competitors skated in singles, dance and pairs with some categories serving as a qualifying event for the 2013 Skate Ontario STARSkate Championships and Skate Ontario Club to be held in Fort Erie March 22-24.

(AE/Craig Bradford)



East Elgin Sportsmen's Association members competed at the 31st annual Canadian Airgun Grand Prix held Feb. 15-17 in Toronto. From left are Chris Baldwin (second in men's air rifle final, third in open men's), second in men's air rifle team, second in junior team), Shea Sullivan (personal best in open ladies), Morgan Van Deursen (competed in open men's), Cole Van Deursen (personal best in open men's), Kaitlyn Harvey (first in three disciplines and a personal best in open ladies), Coach Richard Manning, Stacey Franklin (personal best in disabled prone and standing) and Sabrina Sergeant (open ladies). Absent are Dustin Giesbrecht (personal best in men's final), Jessica Hornby (ladies final, open ladies, first in women's team), Laura Inchley (open ladies), Stephen Inchley (open men's) and Coach Elaine Brown.

East Elgin Sportsmen's Association member Kaitlyn Harvey, 23, of Sparta excelled at the 31st annual Canadian Airgun Grand Prix held in Toronto Feb. 15-17. She won first place in three disciplines: ladies air rifle final (combined score of 882.9), ladies air rifle open (390x23, 390x22 for a combined 780x45) and women's air rifle team. "This was a personal best for me," Ms. Harvey said of her ladies air rifle open score. "I've shot higher than a 390 (out of 400) but not two times in a row." She said the top women's air rifle shooters in the world score 397 in a single round. "I want to win an Olympic medal some day."

(AE/Craig Bradford)

Aylmer Curling Club report

by Paul Bode

The men's round-robin playoffs continue as we get closer to determining who will be crowned Club Champions for 2012-2013.

In the 'A' Flight, the winning teams included the team of Ron Mervis, Andy Haayema, Rick Plaquet and Murray Edgar, and the team of Jeff Vannoornd, Harry Knibbe, George Steenberg and Darryl Manuel.

In the 'B' Flight the team of Ben Vandermeer, Jason Whitley, Gil Smith and Dave

Ritchie; the team of Jack Van Kasteren, Scott Wilson, Tom Van Kasteren and Mike Beringer; and the team of Dave Menzies, Brian Thompson, Bill March and John Hurley won their games.

Victories in the 'C' Flight went to the team of Craig Van Ymeren, Peter Van Ymeren, Joel Debrandere and Cale Van Happen; the team of Dennis Bodway, Larry Jeffery, John Bardwell and John Beekman; and the team of Mike Silverthorn, Rick Cooper, Gary

Shackleton and Jim Buis.

The teams putting "W's" on the scoreboard this past Thursday and Friday in Mixed League action were the team of Ron and Lisa Mervis with Mae Legg and Kevin Donkers; the team of Mike Silverthorn, Lauren Silverthorn, Beth Phoenix and Lisa Crane; the team of Cam Thompson, Kerry Kerr, and Keith and Connie Patterson; the team of Joe de Ryk, Doug Clarke, Bill Squires and R. Thomas; and the team of Larry VanAcker, Bob Facey, Paul Stinchhoff and Gary Austin all won their games.

In case you missed it on TSN or you were watching the Academy Awards on Sunday evening, Team Ontario skipped by Rachel Holman defeated Team Manitoba lead by Jennifer Jones to win the Scotties Tournament of Hearts in Kingston. As Canadian Women's Curling Champions, the team now goes to Riga, Latvia to compete in the World Championships beginning March 16.

It is interesting to note that the Volvo Centre in Riga only seats 1,000 people, considering the women just played in the 5,600-seat K-Rock Centre in Kingston this past week and the 9,000-seat Budweiser Gardens in London in 2006.

On Monday, Feb. 18 at 9 a.m. the team of Les Shackleton, Al MacDonald, Morley David and Arn Baertsoen, and the team of Brent Strickland, Victor Strickland, D. Holmes and Keith Pat-

Blazers report

by Dean Pressey

Blazers made it to the finals in a Windsor tournament held Feb. 8-10. Results from that tournament: Blazers 0 - Detroit 4; Blazers 5 - Michigan 0; Blazers 4 - Windsor 0; Blazers 0 - Detroit 2. Blazers lead the best three-out-of-five SOWHL semi-finals over Kitchener two games to zero.

Friday, Feb. 15

Blazers 7 - Kitchener 0

Second-period scoring for the Blazers: Becky Jennison from Adelle DePaape; Lexi Wilson from Kari Hilton (power play); Carrie Tokarczyk from Jennison (power play).

Third-period scoring for the Blazers: Wilson from Hilton and Naomi Taylor; Taylor from Tokarczyk; Amanda Somerville from Jennison and DePaape (power play); Tokarczyk from Hilton and Taylor (power play).

Lindsay Martin went the distance between the pipes for her eighth shutout of the season.

Sunday, Feb. 17

Blazers 7 - Kitchener 1

First-period scoring for the

Blazers: Wilson from Taylor and DePaape.

Scoring for Kitchener: Ona Mezenberg from Kahla Stern.

Second-period scoring for the Blazers: Hilton from Wilson and Steph Fagan; Fagan from Wilson and Hilton.

Third-period scoring for the Blazers: Jennison from Joyce Spruyt and Taylor; Fagan from Somerville; Somerville from Hilton and Taylor (power play); Wilson from Spruyt and DePaape (power play).

Lindsay Martin went the distance between the pipes for the win.



Public Notice Re: East Elgin Community Complex Fees and 2013 Budget

This Notice given under the provisions of the Corporation of the Town of Aylmer By-law # 55-02 being a by-law respecting the form and manner and times for the provision of notice.

On behalf of the Council of the Township of Malahide and the Town of Aylmer, and at its meeting scheduled on March 19, 2013, the Advisory Committee of the East Elgin Community Complex will receive input from the public regarding the proposed fees for the use of the Complex and the 2013 Complex budget.

Persons wishing to appear before the Advisory Committee to provide input to the fees and the budget may do so by attending the Committee Meeting at the East Elgin Community Complex at 7:00 p.m. on Tuesday, March 19, 2013. Written submissions to the Advisory Committee will also be considered if submitted to the General Manager at the Complex no later than Noon on Thursday, March 14, 2013.

For information on this topic contact:

Janey Bennett, Administrator and Deputy Clerk, Town of Aylmer
@ (519) 779-3164

Theresa Kleban, General Manager East Elgin Community Complex
@ (519) 773-6531

Dated at the Town of Aylmer this 20th day of February 2013

Further written material regarding proposal is available at no cost from the General Manager of the East Elgin Community Complex OR the Town of Aylmer Municipal Office

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NOTICE OF STUDY COMMENCEMENT

Three Highway 401 Interchange Improvements and Bridge Replacements in Middlesex County

The Ministry of Transportation (MTO) has retained Dillon Consulting Limited to undertake the preliminary design, initial detailed design and class environmental assessment for interchange improvements and bridge replacements along Highway 401 in Middlesex County:

- Middlesex Road 74 (Windsor/Bourne)
- Middlesex Road 32 (Dorchester Road)
- Middlesex Road 73 (Elgin Road)

The purpose of this study is to identify a preferred plan for each location, including construction staging and traffic management plans. The study will involve the development of alternatives to accommodate both interim (10-year) and ultimate (30-year) transportation needs for the Highway 401 corridor. More information on this project is available on the project website at www.hwy401middlesexbridges.ca.

THE PROCESS

These studies are being carried out as Group 'B' projects in accordance with the requirements of the MTO Class Environmental Assessment (EA) for Provincial Transportation Facilities (2000). The studies will include background technical and environmental studies as well as consultation activities to obtain input from the public and local businesses.

COMMENTS

We are interested in obtaining your comments by March 20, 2013. 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 more information, to provide comments or be added to the mailing list, please contact:

Mr. Jeff Matthews, P.Eng., Project Manager
Dillon Consulting Limited
P.O. Box 426
London, ON N6A 4W7
tel: 519-438-6192
toll-free: 1-888-345-6668 ext. 1275
fax: 519-672-8209
e-mail: hwy401middlesexbridges@dillon.ca

Mr. Dan Barber, P.Eng., Sr. Project Engineer
Ministry of Transportation
West Region, Planning and Design Section
659 Exeter Road
London, ON N6E 1L3
tel: 519-873-4812
toll-free: 1-800-265-0072 ext. 4812
fax: 519-873-4000
e-mail: dan.barber@ontario.ca

If you have accessibility requirements to participate in this project, please contact a team member.

Des renseignements sont disponibles en français en composant Stephen Betts, 1-888-345-6668.



East Elgin Sportsmen's Association member Kaitlyn Harvey, 23, of Sparta excelled at the 31st annual Canadian Airgun Grand Prix held in Toronto Feb. 15-17. She won first place in three disciplines: ladies air rifle final (combined score of 882.9), ladies air rifle open (390x23, 390x22 for a combined 780x45) and women's air rifle team. "This was a personal best for me," Ms. Harvey said of her ladies air rifle open score. "I've shot higher than a 390 (out of 400) but not two times in a row." She said the top women's air rifle shooters in the world score 397 in a single round. "I want to win an Olympic medal some day."

(AE/Craig Bradford)

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Oxford Mutual Insurance Company
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Eunger@oxfordmutual.com



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MUTUAL INSURANCE

NOTICE OF ANNUAL GENERAL MEETING

TAKE NOTICE that an Annual General Meeting of the Members of West Elgin Mutual Insurance Company will be held at the Dutton-Dunvich Community Centre, 1 Scotland Rd., Dutton, on Wednesday the 27th day of March, 2013 at the hour of 7:00 p.m. for the following purposes:

1. To receive the 2012 Annual Financial Statement
2. To elect Directors
- Directors whose terms expire at this meeting are Norm Miller, Larry McLeod, and Ron Hayhoe. All are eligible for re-election. In addition there will be an election to fill an unexpired term of two years. Ruelen Lilley was appointed by the Board during 2012 to fill the position until the upcoming Annual Meeting.
3. To appoint an auditor

Financial statements for the year ended December 31, 2012 are posted on the Company website. To view the statements go to www.westelgin.com. If you would prefer a hard copy, please call the Dutton office at 519-762-3530 (toll free 1-800-265-7635) and a copy will be mailed to you.

Brian Downie
Corporate Secretary

Following the business portion of the meeting please stay to enjoy our guest speaker, Gary Danner as he shares his insights on

"The Importance of Goal Setting"

Gary has been a Business Coach/Trainer with Dale Carnegie Training for the past 14 years and is a Business Development Supervisor at F&C.

Light snacks and refreshments will be served following the meeting.

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Retirement Residence
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New Patients Welcome

Matthew London DD
120 Centre Street

519-633-1624



274



Immigration : attention à vos origines

En Suisse, on peut voter pour choisir quels immigrés obtiendront leur citoyenneté. Et certains pays obtiennent plus de votes que d'autres... Ce sont des municipalités qui organisent de tels référendums. Avant le vote, les électeurs reçoivent une liste de « candidats » avec quelques-unes de leurs caractéristiques : scolarité, métier, maîtrise de la langue, pays d'origine... Or, deux chercheurs en sciences politiques viennent d'observer que le critère ayant le plus d'influence sur le vote est le pays d'origine. Dans leur étude publiée par l'*American Political Science Review*, ils révèlent que les plus désavantagés sont les migrants de Turquie ou de l'ex-Yougoslavie, qui obtiennent en moyenne 15% moins de suffrages que ceux d'Europe de l'Ouest. Un bon niveau d'intégration ou une parfaite maîtrise de la langue influencent très peu les décisions. À l'inverse, un grand

nombre d'immigrants du même pays en même temps joue un rôle très négatif pour l'obtention de la nationalité. Depuis une décision du Tribunal fédéral en 2003, le nombre de communes recourant à ce dispositif a considérablement baissé. Mais cela concerne encore 30% des communes.

Ne touchez pas au requin blanc

D'ordinaire, les gens accusés de cruauté envers les animaux le sont à propos de tristes histoires de chiens ou de chats. Un requin blanc, c'est plus rare. Un Sud-Africain, Leon Bekker, a été condamné au début de février à l'accusation d'avoir, entre autres, « perturbé et harcelé » un requin blanc. Avec deux autres hommes, il l'avait capturé et traîné sur les rochers pour le faire mourir, tandis que lui et les autres se faisaient prendre en photo avec leur proie. Le requin blanc fait partie des espèces protégées. Cette capture a ap-

porté à Bekker, en vertu d'une loi de 1988 sur la protection des ressources marines, un an de prison, une première en Afrique du Sud.

Anatomie d'une caresse

Pourquoi les caresses sont-elles agréables ? La question peut paraître étrange mais elle contient la clé d'un mécanisme qui permet à notre corps de transformer un contact en sentiment. Pour un grand nombre de mammifères, les caresses sont synonymes de plaisir. Or, des chercheurs en neurosciences de Caltech ont identifié les neurones qui réagissent quand une souris reçoit une caresse. Ils ont ainsi pu observer la réaction des neurones de la peau et constater que des récepteurs différents s'activaient selon que l'on pince ou caresse la souris. Chez l'humain, certaines structures ressemblent à ces récepteurs de caresses. Des expériences plus approfondies devront être menées.

Actualités scientifiques

Source : Agence Science-Press

Le retour de Robin

ISABELLE BURGUN

La réalisatrice Marie-Monique Robin, avec son côté Robin des Bois, pourfendeuse des injustices et des agroindustriels, est de retour avec son nouveau pamphlet, *Les Moissons du futur*, une véritable ode à l'agro-écologie —des pratiques agricoles écologiques.

Alors que Télé-Québec avait mis la première partie des *Moissons du futur* à l'affiche lundi soir et malgré la pluie, la salle du Coeur des sciences de Montréal, où avait lieu une représentation, était pleine. Et ses fans étaient nombreux : ceux qui avaient vu les précédents opus, *Le monde selon Monsanto* et *Notre poison quotidien*.

Les Moissons du futur met à l'écran des agriculteurs heureux —ils sourient tous— sauf le pauvre agriculteur déprimé des États-Unis, adepte des pesticides. Cette vision, un peu manichéenne, montre des cultures alternatives à l'industrie agroalimentaire gérée de pesticides : non-labour, enfouissement, diversité des cultures, etc. « C'est un film bonbon, très positif. Et étrangement, je ne décolère pas depuis que je l'ai fait car j'ai constaté qu'il y a de nombreuses manières de cultiver autrement », relève Marie-Monique Robin.

À portée d'avion —on suit un globe terrestre translucide qui passe de mains en mains— on découvre différentes façons de cultiver, comme la Milpa, appelée au Québec « Les trois sœurs », une alliance entre la culture du maïs, des haricots et des courges. Une symbiose qui améliore les cultures et éloigne les insectes. Tout comme une autre méthode montrée dans le film, celle du « push-pull » (attraction-répulsion) qui consiste à faire pousser deux plantes dans le champ et à l'orée —la première, au milieu des plants, va chasser les insectes, l'autre, hors du champ, va les attirer. Un compagnonnage bien utile !

Décevantes moissons

Lorsque la lumière revient dans la salle, et que le tour du monde de la réalisatrice s'arrête —ainsi que son globe de plastique sautillant— que reste-t-il ? Une vision enamourée de pratiques ancestrales —les canards qui fertilisent la rizière, l'enfouissement de feuilles, etc.— et autres pratiques d'écopastoralisme. Pourtant on reste gêné par un manque de recul face au sujet et beaucoup de raccourcis. Oui, je l'avoue, je partage assez le point de vue du journaliste Michel

Alberganti.

Les yeux pleins de belles images, de nombreuses questions perdurent : comment nourrir bientôt 9 milliards d'humains ? Comment développer à grande échelle une agriculture durable sans recourir aux divers poisons chimiques —et sans OGM, du moins tant que le principe de précaution est de mise ? Comment financer ce changement pour transformer le modèle industriel en d'immenses jardins productifs ? Comment persuader les grands propriétaires de (re)donner la terre aux paysans ? Sans compter les changements climatiques qui viennent bouleverser la donne.

Si on rencontre des figures intéressantes, tel le rapporteur spécial des Nations-Unies Olivier de Schutter qui milite pour le droit à l'alimentation, on reste un peu sur notre faim quand au prétexte de départ : comment nourrir le monde sans pesticides —et donc mettre tout cela sur une grande échelle ?

Marie-Monique Robin n'y a pas vraiment répondu ni pendant, ni après le visionnement. À une jeune fille qui lui demandait « comment nourrir les villes sans être obligé de se mettre les mains dans la terre ? », elle a affirmé qu'il fallait que les villes cessent de croître —« L'autonomie alimentaire de Paris est de 3 jours » a rappelé Mme Robin, sans nous donner la recette. La lutte à la croissance sera d'ailleurs le sujet du prochain documentaire de la prolifique auteure.

AVIS DE DÉBUT D'ÉTUDE

Trois améliorations aux échangeurs de l'autoroute 401 et remplacements de ponts dans le comté de Middlesex

Le ministère des Transports (MTO) a retenu les services de Dillon Consulting Limited pour la réalisation de la conception préliminaire, de la conception détaillée initiale et de l'évaluation environnementale pour ces améliorations aux échangeurs et ces remplacements de ponts le long de l'autoroute 401 dans le comté de Middlesex :

- Middlesex, Road 74 (Westchester Bourne)
- Middlesex, Road 32 (Dorchester Road)
- Middlesex, Road 73 (Elgin Road)

L'objectif de cette étude est d'identifier le meilleur plan pour chaque lieu, y compris les étapes des travaux de construction et les plans de gestion de la circulation. L'étude inclura le développement d'options pour répondre aux besoins de transports intérieurs (10 ans) et ultimes (30 ans) du couloir de l'autoroute 401. Plus d'informations sur ce projet sont disponibles sur le site Internet du projet à l'adresse suivante : www.hwy401middlesexbridges.ca.

LE PROCESSUS

Ces études sont réalisées conformément aux exigences relatives au groupe « B » de l'*Évaluation environnementale (EE) de portée générale pour les installations provinciales de transport* (2000) du MTO. Les études comprendront des études techniques et environnementales approfondies ainsi que des activités de consultation dans le but d'obtenir l'avis du public et des entreprises locales.

COMMENTAIRES

Nous souhaitons recevoir vos commentaires d'ici le 20 mars 2013. Les informations recueillies seront utilisées conformément à la Loi sur l'accès à l'information et la protection de la vie privée. Tous les commentaires, à l'exception des renseignements personnels, seront versés au dossier public. Pour plus d'informations, si vous souhaitez formuler des commentaires ou pour que votre nom soit ajouté à la liste d'envoi, veuillez contacter :

M. Jeff Matthews, ing., gestionnaire de projet
Dillon Consulting Limited
P.O. Box 426
London (Ontario) N6A 4W7
tél. : 519-438-6192
sans frais : 1-888-345-5668, poste 1275
télééc. : 519-672-8209
courriel : hwy401middlesexbridges@dillon.ca

M. Dan Barber, ing., ingénieur principal de projet
Ministère des Transports
Région Ouest, section planification et conception
659 Exeter Road
London (Ontario) N6E 1L3
tél. : 519-873-4812
sans frais : 1-800-265-6072, poste 4812
télééc. : 519 873-4600
courriel : dan.barber@ontario.ca

Si, afin de participer à ce projet, vous souhaitez faire valoir des exigences en matière d'accessibilité, veuillez contacter l'un des membres de l'équipe dont les coordonnées figurent ci-dessus.



Ontario

February 20, 2013



Mr. Jeff Yurek
MPP Elgin-London-Middlesex
790 Talbot Street, Suite 201 West Wing
St. Thomas, Ontario
N5P 1E2

Attention: Mr. Yurek

**Ministry of Transportation, Ontario (MTO)
Notice of Study Commencement
Three Highway 401 Interchange Improvements and Bridge Replacements
in Middlesex County (GWP 3053-11-00)**

Dear Mr. Yurek:

As outlined in the attached notice, the MTO has retained Dillon Consulting Limited to complete the Preliminary Design, initial Detailed Design and Class Environmental Assessment (EA) process for interchange improvements and bridge replacements for three bridges along Highway 401 in Middlesex County:

- Middlesex Road 74 (Westchester Bourne)
- Middlesex Road 32 (Dorchester Road)
- Middlesex Road 73 (Elgin Road).

Additional project information can be found on the project website at www.hwy401middlesexbridges.ca.

The studies will be completed in accordance with the Class Environmental Assessment for Provincial Transportation Facilities (2000) as a Group "B" project. Two Public Information Centres (PIC) will be held later this year to obtain public and agency input on the preliminary design alternatives generated for the proposed replacements. Notices for the PICs will be advertised in local media outlets and mailed to the project contact list.

The enclosed notice will be published in the February 27, 2013 editions of the Aylmer Express and L'Action London/Sarnia.

130
Dufferin Avenue
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(519) 672-8209

...continued

Dillon Consulting
Limited



MPP Elgin-London-Middlesex

Page 2

February 29, 2011

If you would like more information or to provide comments, please contact one of the project managers named on the enclosed notice.

Yours sincerely,

DILLON CONSULTING LIMITED



Janet Smolders, MCIP
for Jeff Matthews, P. Eng.
Project Manager

BJF:jpa
Encl.

cc: Dan Barber – MTO, Project Manager
Susan Wager – MTO, Environmental Planner

Our File: 12-7119

Ministry of Transportation

Engineering Office
Environmental Section
West Region

669 Exeter Road
London, Ontario N6E 1L3
Telephone: (519) 873-4860
Facsimile: (519) 873-4800
Email: Cathy.Giesbrecht@ontario.ca

Ministère des Transports

Bureau du génie
Section de l'environnement
Région de l'Ouest

669, chemin Exeter
London, (Ontario) N6E 1L3
Téléphone: (519) 873-4860
Télécopieur: (519) 873-4800



February 21, 2013

Letter provided to all First Nations listed on
project contact list

Attention:

**Ministry of Transportation, Ontario (MTO)
Notice of Study Commencement
Three Highway 401 Interchange Improvements & Bridge Replacements
in Middlesex County (GWP 3053-11-00)**

Dear Chief Madabee,

As outlined in the attached notice, the MTO has retained Dillon Consulting Limited to complete the Preliminary Design, initial Detailed Design and Class Environmental Assessment (EA) process for interchange improvements and bridge replacements for three bridges along Highway 401 in Middlesex County:

- Middlesex Road 74 (Westchester Bournce)
- Middlesex Road 32 (Dorchester Road)
- Middlesex Road 73 (Elgin Road).

Additional project information can be found on the project website at www.hwy401.middlesexbridges.ca

This letter is to inform you that the project team will be writing the following First Nation communities to introduce the study and to invite them to provide comments:

Chief Joe Miskokomon
Chippewas of the Thames First
Nation
320 Chippewa Road, RR 1
Muncey ON N0L 1Y0

Chief Gregory Peters
Moravian of the Thames
14760 School House Line, RR 3
Thamerville ON N0P 2K0

Chief Louise Hillier
Caldwell First Nation
P.O. Box 388
Leamington ON N8H 3W3

Chief Tom Bressette
Chippewas of Kettle and Stony
Point First Nation
Kettle and Stony Point Band
Office
6247 Indian Lane
Kettle & Stony Point FN ON
N0N 1J1

Chief Patrick Waddilove
Munsee-Delaware First Nation
RR 1
Muncy ON N0L 1Y0

Chief Chris Plain
Chippewas of Aamjiwnaang
978 Tashmoo Avenue
Sarnia ON N7T 7H5

Chief Joel Abram
Oneida Nation of the Thames
First Nation
2212 Elm Avenue, RR 2
Southwold ON N0L 2G0

Chief Burton Kewyosh Jr.
Walpole Island First Nation
RR 3
Wallaceburg ON N8A 4K9

The studies will be completed in accordance with the *Class Environmental Assessment for Provincial Transportation Facilities (2000)* as a Group "B" project. Two Public Information Centres (PIC) will be held to obtain public and agency input on the preliminary design alternatives generated for the proposed replacements. Notices for the PICs will be advertised in local media outlets and mailed to the project contact list.

If you have any comments, questions or concerns, please fill out the enclosed comment form and return it to us by March 20, 2013, or contact one of the project managers named on the enclosed notice.

Yours truly,



Cathy Giesbrecht
Head, Environmental Section
MTO, West Region

Encl.

Notice of Study Commencement
Comment Form

cc:

Don Barber – MTO, Project Manager
Susan Wagner – MTO, Environmental Planner
Joe de Laronde – MTO, Aboriginal Liaison Officer
Jeff Matthews – Dillon Consulting Limited, Project Manager
Janet Smolders – Dillon Consulting Limited, Environmental Planner

February 25, 2013

Letter sent to agencies on project
contact list

Attention:

Ministry of Transportation, Ontario (MTO)
Notice of Study Commencement
Three Highway 401 Interchange Improvements & Bridge Replacements
in Middlesex County (GWP 3053-11-00)

Dear

As outlined in the attached notice, the MTO has retained Dillon Consulting Limited to complete the Preliminary Design, initial Detailed Design and Class Environmental Assessment (EA) process for interchange improvements and bridge replacements for three bridges along Highway 401 in Middlesex County:

- Middlesex Road 74 (Westchester Bourne)
- Middlesex Road 32 (Dorchester Road)
- Middlesex Road 73 (Elgin Road).

Additional project information can be found on the project website at www.hwy401middlesexbridges.ca.

The studies will be completed in accordance with the Class Environmental Assessment for Provincial Transportation Facilities (2000) as a Group "B" project. Two Public Information Centres (PICs) will be held later this year to obtain public and agency input on the preliminary design alternatives generated for the proposed replacements. Notices for the PICs will be advertised in local media outlets and mailed to the project contact list.

...continued

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Fax
(519) 672-8279



Page 2
February 25, 2013

If you have any comments, questions or concerns, please fill out the enclosed comment form and return it to us by March 20, 2013, or contact one of the project managers named on the enclosed notice.

Yours sincerely,

DILLON CONSULTING LIMITED



Janet Smolders, MCIP
for Jeff Matthews, P. Eng.
Project Manager

BJF:amb
Encl.

cc: Dan Barber – MTO, Project Manager
Susan Wagter – MTO, Environmental Planner

Our File: 12-7110

February 25, 2013



**Ministry of Transportation, Ontario (MTO) – Notice of Study Commencement
Three Highway 401 Interchange Improvements & Bridge Replacements
in Middlesex County (GWP 3053-11-00)**

Dear Resident/Business Owner:

As outlined in the attached notice, the MTO has retained Dillon Consulting Limited to complete the Preliminary Design, initial Detailed Design and Class Environmental Assessment (EA) process for interchange improvements and bridge replacements for three bridges along Highway 401 in Middlesex County:

- Middlesex Road 74 (Westchester Bypass)
- Middlesex Road 32 (Dorchester Road)
- Middlesex Road 73 (Elgin Road).

Additional project information can be found on the project website at www.hwy401middlesexbridges.ca.

The studies will be completed in accordance with the Class Environmental Assessment for Provincial Transportation Facilities (2000) as a Group "B" project. Two Public Information Centres (PICs) will be held later this year to obtain public and agency input on the preliminary design alternatives generated for the proposed replacements. Notices for the PICs will be advertised in local media outlets and mailed to the project contact list.

If you have any comments, questions or concerns, please fill out the enclosed comment form and return it to us by **March 20, 2013**, or contact one of the project managers named on the enclosed notice.

Yours sincerely,

DILLON CONSULTING LIMITED

Janet Smolders, MCIP
for Jeff Matthews, P. Eng.
Project Manager

BJF:amb
Encl.

cc: Dan Barber – MTO, Project Manager
Susan Wagner – MTO, Environmental Planner

Our File: 12-7110

130
Dufferin Avenue
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Fax
(519) 672-8289

Dillon Consulting
Limited

February 25, 2013

Aboriginal Affairs and Northern Development Canada
Consultation and Accommodation Unit
5H – 5th Floor – 10 Wellington Street
Gatineau, Quebec
K1A 0H4

Attention: Ms. Allison Berman
Regional Expert for Ontario

Ministry of Transportation, Ontario (MTO)
Notice of Study Commencement
Three Highway 401 Interchange Improvements & Bridge Replacements
in Middlesex County (GWP 3053-11-00)

Dear Ms. Levesque:

As outlined in the attached notice, the MTO has retained Dillon Consulting Limited to complete the Preliminary Design, Initial Detailed Design and Class Environmental Assessment (EA) process for interchange improvements and bridge replacements for three bridges along Highway 401 in Middlesex County:

- Middlesex Road 74 (Westchester Bourne)
- Middlesex Road 32 (Dorchester Road)
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To create a comprehensive Aboriginal consultation program, we are developing a mailing list that includes Aboriginal groups who may have an interest in the area, including First Nations and Métis communities and/or representative organizations. Please provide information on:

- Specific claims in the area

...continued

130
Dufferin Avenue
London, Ontario
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Telephone:
(519) 638-6192
Fax:
(519) 672-8200



Aboriginal Affairs and Northern Development Canada

Page 2

February 25, 2013

- Comprehensive claims in the area
- Any litigation or legal activity involving Aboriginal groups.

The mailing list for this project currently includes the following First Nations and/or Métis communities:

- Walpole Island First Nation
- Chippewas of the Thames First Nation
- Chippewas of Kettle and Stoney Point First Nation
- Anishinabeg First Nation
- Caldwell First Nation
- Oneida Nation of the Thames
- Munsee-Delaware Nation
- Moravian of the Thames.

Notifications will also be sent to the following Political Territorial Organizations (PTO's) and/or Consultation Units:

- Southern First Nations Secretariat
- London and District Chiefs Council
- Association of Iroquois and Allied Indians
- Union of Ontario Indians.

Yours sincerely,

DILLON CONSULTING LIMITED

Janet Smolders, MCIP
for Jeff Matthews, P. Eng.
Project Manager

BJF:amb
Encl.

cc: Dan Barber – MTO, Project Manager
Susan Wagter – MTO, Environmental Planner

Our File: 12-7110

February 25, 2013

Ministry of Aboriginal Affairs
Consultation Unit
160 Bloor Street East, 9th Floor
Toronto, Ontario
M7A 2E6

Attention: Ms. Heather Levesque
Manager

Ministry of Transportation, Ontario (MTO)
Notice of Study Commencement
Three Highway 401 Interchange Improvements & Bridge Replacements
in Middlesex County (GWP 3053-11-00)

Dear Ms. Levesque:

As outlined in the attached notice, the MTO has retained Dillon Consulting Limited to complete the Preliminary Design, initial Detailed Design and Class Environmental Assessment (EA) process for interchange improvements and bridge replacements for three bridges along Highway 401 in Middlesex County:

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- Middlesex Road 32 (Dorchester Road)
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- Specific claims in the area

...continued

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(519) 672-8289



Ministry of Aboriginal Affairs

Page 2

February 25, 2013

- Comprehensive claims in the area
- Any litigation or legal activity involving Aboriginal groups.

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- Walpole Island First Nation
- Chippewas of the Thames First Nation
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- Aamjiwnaang First Nation
- Caldwell First Nation
- Oneida Nation of the Thames
- Munsee-Delaware Nation
- Moravian of the Thames.

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- London and District Chiefs Council
- Association of Iroquois and Allied Indians
- Union of Ontario Indians.

Yours sincerely,

DILLON CONSULTING LIMITED

Janet Smolders, MCIP
for Jeff Matthews, P. Eng.
Project Manager

BJF:amb
Encl.

cc: Dan Barber – MTO, Project Manager
Susan Wagner – MTO, Environmental Planner

Our File: 12-7110

March 26, 2013

Janet Smolders
Dillon Consulting
130 Dufferin Ave.
London, ON N6A 5R2
jasmolders@dillon.ca

Dear Ms. Smolders,

Thank you for your e-mail of February 25, 2013 regarding your request for information held by Aboriginal Affairs and Northern Development Canada (AANDC) on established or potential Aboriginal and treaty rights in the vicinity of the three Highway 401 Interchange Improvements and Bridge Replacements in Middlesex County (GWP 3053-11-00) in Ontario.

Consulting with Canadians on matters of interest or concern to them is an important part of good governance, sound policy development and decision-making. In addition to good governance objectives, there may be statutory or contractual reasons for consulting, as well as the common law duty to consult with First Nations, Métis and Inuit when conduct that might adversely impact rights Aboriginal or treaty rights (established or potential) is contemplated.

It is important to note that the information held by AANDC is provided as contextual information and may or may not pertain directly to Aboriginal or treaty rights. In most cases, the Aboriginal community remains best positioned to explain their traditional use of land, their practices or claims that may fall under section 35, including claims they may have put before the courts.

AANDC has developed the Aboriginal and Treaty Rights Information System (ATRIS), which brings together information regarding Aboriginal groups such as their location, related treaty information, claims (specific, comprehensive and special) and litigation data.

The Consultation Information Service (CIS) response

The CIS has prepared the attached response which combines the resources of ATRIS and the support of sectors and regions within the AANDC. Using a 100 km radius surrounding the project location, information regarding potentially affected Aboriginal communities is presented in the attached report in the following sections for each community:

Aboriginal Community Information includes key contact information and any other information such as Tribal Council affiliation.

Treaties includes information on historic and modern treaties.

Claims includes specific, comprehensive and special claims.

Self-Government Agreements and other negotiations may be part of comprehensive claims or stand-alone negotiations.

Litigation usually refers to litigation between the Aboriginal Group and the Crown, often pertaining to section 35 rights assertions or consultation matters.

Also included, where available, is a section entitled **Other Considerations**. This may include information on Métis rights or information on the assertions of other Aboriginal groups, consultation-related protocols or agreements and other relevant information.

Should you require further assistance regarding the information provided, or if you have any questions and/or comments about the enclosed response, please do not hesitate to contact me.

Regards,

Allison Berman
Regional Subject Expert for Saskatchewan, Manitoba and Ontario
Consultation and Accommodation Unit
Aboriginal Affairs and Northern Development Canada
5H- 5th Floor,
Gatineau, QC K1A 0H4
Tel: 819-934-1873

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Consultation Information Service Response – March 2013

Highway 401 Interchange Improvements and Bridge Replacements in Middlesex County (GWP 3053-11-00) - Ontario.

- Middlesex Road 74 (Westchester Bourne)
- Middlesex Road 32 (Dorchester Road)
- Middlesex Road 73 (Elgin Road)

The green line links the three intersections:



Within a 100 km radius of the project are Bands whose reserves and/or band offices are located within the yellow circle. These First Nation communities are noted by orange pegs:



Caldwell First Nation
Chippewas of Kettle and Stony Point
Chippewas of the Thames First Nation
Mississauga of the Credit
Moravian of the Thames
Munsee-Delaware Nation
Onondaga Nation of the Thames
Six Nations of the Grand River

The request sent in to the CIS also requested that Aamjiwnaang and Walpole Island First Nation be included. The following information should assist you in planning any consultation that may be required.

First Nation/Aboriginal Community Information

Aamjiwnaang
Chief Christopher Plain
978 Tashmad Avenue
Sarnia, Ontario, N7T 7H5
Phone: (519) 336-8410 Fax: (519) 336-0382
www.aamjiwnaang.ca

Treaty Area - Southern Ontario Treaties to open the Interior; 1815 to 1862
For more information on the treaties, see "Other Considerations" below.

Membership:

Union of Ontario Indians
Chiefs of Ontario
Southern First Nations Secretariat (London District Chiefs Council)
For more information, see "Other Considerations" below.

Specific Claims:

Name: Clench Defalcation
Status: In negotiations
Description: The Plaintiffs claim a misappropriation of sale proceeds.

Legal Proceedings:

Name: Ada Lockridge v. Ministry of the Environment, HMTQ in Right of Ontario, Suncor Energy Products Inc., Attorney General of Ontario, Minister of the Environment Ontario

Status: active

Court File No.: 528/10

Description: The Plaintiffs allege that the Ministry of the Environment has granted permits and licenses resulting in the release of pollutants in an area south of Sarnia which surrounds the territory around the Applicants' reserve.

Name: Chippewas of Samia v. Attorney General of Canada et al, Attorney General of Canada, CN Realities, Great Western Railway

Status: active

Court File No.: not available

Description: In 1995 the Samia First Nation launched a lawsuit against Canada, Ontario, several thousand property owners, and business and industries, regarding an 1839 sale of 1/3 of the Samia reserve to Malcolm Cameron. On Dec 21, 2000, the Ontario Court of Appeal found that although there was no formal surrender, the actions of the First Nation indicated their intent to surrender the land. In these exceptional circumstances, the Court ruled that the rights of the innocent third parties who have relied on the patent must prevail. The patent was therefore found to be valid. The Court left open the right of the Chippewas to proceed with a claim for damages against the Crown.

Community background:

In September of 2011, the First Nation launched the above lawsuit (*Ada Lockridge v. Ministry of the Environment et al*) against Ontario's Ministry of the Environment. Two members of the First Nation assert that by permitting a recent 25 % increase in production at a Suncor refinery, the government has violated Section 7 of the Canadian Charter of Rights and Freedoms: the right to life, liberty and the security of the person. Lawyers also cite a violation of equality rights under Section 15 of the Charter, saying the First Nation bears a disproportionate environmental burden. Within 25 kilometres of the Aamjiwnaang reserve, there are more than 60 industrial facilities, about 46 of them on the Canadian side of the border. These concerns are of great importance to the Aamjiwnaang First Nation, and should be taken in to consideration when contacting the community.

Agreement negotiations:

Anishinabek Nation (UOI) negotiations on Governance and Education
Please see "Other Considerations" below for more details.

Caldwell First Nation
Chief Louise Hillier
P.O. Box 388
Leamington, Ontario, N8H 3W3
Phone: 519-322-1766 Fax: 519-322-1533

Treaty area – Southern Ontario Treaties for Settlement: 1783 to 1815

In the early part of the 20th century, the Department of Indian Affairs took some preliminary steps to provide a reserve for this First Nation. None of these attempts were completed, and the First Nation remained without a land base and other benefits under Treaty 2 of 1790. The Caldwell land claim is being settled through the Specific Claims process. For more information on the treaties, see "Other Considerations" below.

Membership:

Association of Iroquois and Allied Indians
Southern First Nations Secretariat (London District Chiefs Council)
Chiefs of Ontario
For more information, see "Other Considerations" below.

Specific Claims:

No active claims to report.

Legal Proceedings:

Name: Peter Welch v. HMTQ in Right of Ontario

Status: active (as of 23/11/2011)

Court File No.: not yet available

Description: This is a Fish and Wildlife Conservation Act prosecution involving a member of the Caldwell First Nation. The case involves an investigation regarding the shooting of a deer in 2011. The applicant is claiming Aboriginal and treaty rights to hunt, and will argue that his Charter rights were breached in the investigation.

Chippewas of Kettle and Stony Point

Chief Thomas Bressette (tenure expires June 23, 2014)

6247 Indian Lane

Kettle and Stony Point First Nation, Ontario, N0N 1J1

Phone: (519) 786-2125 Fax: (519) 786-2108

www.kettlepoint.org/home.html

Treaty Area - Southern Ontario Treaties to open the Interior: 1815 to 1862

For more information on treaties, see "Other Considerations" below.

Membership:

Southern First Nations Secretariat (London District Chiefs Council)

Union of Ontario Indians

Chiefs of Ontario

See "Other Considerations" below for further information.

Specific Claims:

Name: 1927 Surrender

Status: active litigation

Description: The First Nation alleges that the 1927 surrender of part of the Kettle Point Indian reserve no. 44 and its subsequent sale in 1929 was invalid.

Name: Glensh Defalcation

Status: active negotiations

Description: The Plaintiffs claim a misappropriation of sale proceeds.

Legal Proceedings:

Name: Chippewas of Sarnia et al. v. HMTQ in Right of Canada, Laurie Desautels, Polysar Hydrocarbons Limited

Status: active

Court File No.: 1796A/87

Description: In 1987, the Chippewas of Sarnia and Kettle Point (Chippewas) sued Ontario and Polysar for a declaration of Aboriginal rights recognized by the Royal Proclamation of 1763 and never ceded to the waterbeds of the St. Clair River and Lake Huron and damages for Polysar's

gas pipeline contained therein. The Plaintiffs allege that Ontario has breached its fiduciary duties and trust obligations to the band as a result of granting licenses to the various companies named as defendants. The plaintiffs seek damages and declaratory relief.

Name: Chippewas of Kettle and Stony Point v. Attorney General of Canada et al.

Status: active

Court No: C22726

Description: The Plaintiffs allege that the 1927 surrender and subsequent letters patent for a portion of the Kettle Point Reserve is invalid, and that the beach front was not surrendered.

Name: Rosalie Winnifred Manning et al v. HMTQ

Status: active

Court File No.: T-3077-94

Description: The plaintiffs, who claim to be members of the self-styled Stony Point First Nation, and the defendants, the Chippewas of Kettle and Stony Point are recognized as one band by the department. The plaintiffs claim, among other things, that the Crown breached its fiduciary duty. They allege this occurred through the Crown's failure to ensure the plaintiffs' interests: with regards to the Stony Point Reserve; when represented in its negotiations with the Chippewas of Kettle and Stony Point Band; trespassing from 1942 to 1964; the environmental degradation of the land; and the plaintiffs loss of the use and enjoyment of the lands.

Name: Corporation of Township of Bosanquet v. Attorney General of Canada, Chippewas of Kettle and Stony Point

Status: active

Court File No.: 24085/98

Description: The Town of Bosanquet has initiated a claim against Canada in which they are asking the court for a declaration that the beachfront at Camp Ipperwash is dedicated to public use and that any transfer of land to the First Nation would be restricted by the declaration. The land in question was originally surrendered by the Chippewas of Kettle and Stony Point in 1928 and subsequently sold to private individuals. In 1944, the land was transferred to the Department of National Defence and became part of Camp Ipperwash. In accordance with the 1981 Order in Council (PC 1981-499), Canada made the commitment to return Camp Ipperwash, including the portion obtained from private individuals in 1944, to the band when no longer needed for military purposes. Canada is negotiating the return of the land with the Kettle and Stony Point First Nation. In separate litigation involving Canada, the Town of Bosanquet and a number of private homeowners, the Chippewas of Kettle and Stony Point are claiming a portion of the West Ipperwash Beach, which is adjacent to the Kettle Point Reserve.

Name: Chippewas of Kettle and Stony Point First Nation v. HMTQ in Right of Canada

Status: closed

Court File No.: T-863-96

Description: In 1942, approximately 2,111 acres of lands comprising the Stony Point Indian Reserve were appropriated by the Department of National Defence under the authority of the War Measures Act. Since the end of the war the Chippewas of Kettle and Stony Point have sought the return of this land, now Camp Ipperwash, to reserve status.

Name: HMTQ v. David Cloud

Status: active

Court File No.: not available

Description: This case relates to a criminal proceeding in the Ontario Court Provincial Division. The Plaintiffs allege that they have a treaty right to hunt and that the Game and Fish Act of

Ontario is of no force and effect with respect to them by virtue of section 52 of the Constitution Act and by reason of their Treaty rights within the meaning of section 35.

Name: Reta George, Maynard George, Roy George, Noreen Kewageshig, Janet Cloud, Lee George v. HMTQ in Right of Canada, Department of Indian Affairs and Northern Development, Department of National Defence.

Status: active

Court File No.: T-2565-94

Description: In 1942 approximately 2,111 acres of lands comprising the Stony Point Indian Reserve were expropriated by the Department of National Defence under the authority of the War Measures Act. Since the end of the war, the Chippewas of Kettle and Stony Point have sought the return of this land to reserve status. In 1981, after extensive negotiations with the band council, the federal government entered into a settlement with the band and agreed to return the lands when no longer required for military purposes. In 1994, the government announced its intentions to return the lands to the Chippewas of Kettle and Stony Point. The plaintiffs claim to be members of the self-styled 'Stoney Point First Nation' which they claim is a separate First Nation from the Chippewas of Kettle and Stony Point and the rightful beneficiary of the Camp Ipperwash lands. The essence of their claim is that the 'Stoney Point First Nation' originally occupied the former Stony Point Reserve and therefore, the Crown should return the Camp to the members of the 'Stoney Point First Nation' rather than the Chippewas of Kettle and Stony Point. The Crown does not recognize the 'Stoney Point First Nation' as a separate Band.

Traditional Territory:

In March 2012, the Chippewas of Kettle and Stony Point First Nation reaffirmed their claim (see above Chippewas of Samia et al. v. HMTQ) to the lakebed surrounding their First Nation in a letter to AANDC. They wish to be notified by government, proponents, groups or individuals who use, or who plan to use, the area they consider their traditional territory. This area is described as such:

"from the point of intersection of the surrendered lands with Lake Huron at its most northerly point, extending directly out onto Lake Huron to the international boundary, then running along the international boundary to the southerly limit of the herein described lands at the water's edge of the St. Clair River, and the land underlying this portion of Lake Huron (lake bed)"

Additions to Reserve:

Since 2009, the Province has been engaged with the First Nation to transfer the Ipperwash Provincial Park lands as an addition to their reserve. These lands are being transferred through the federal Additions to Reserve process.

Agreement negotiations:

Anishinabek Nation (UOI) negotiations on Governance and Education

Please see "Other Considerations" below for more details.

Chippewas of the Thames

Chief Joe Miskokomon (tenure expires June 27, 2013)

320 Chippewas Road

Muncey, Ontario, N0L 1Y0

Phone: (519) 289-5555

Fax: (519) 289-2230

www.cottfn.ca/index.htm

Treaty Area – Southern Ontario Treaties to open the Interior: 1815 to 1862
For more information on the treaty see "Other Considerations" below.

Membership:

Southern First Nations Secretariat (London District Chiefs Council)

Union of Ontario Indians

Chiefs of Ontario

See "Other Considerations" below for further information.

Specific Claims:

Name: Big Bear Creek Reserve

Status: active negotiations

Description: It is alleged that the 5,120 acre Big Bear Cree Reserve was patented and sold by the Crown in the 1830s without a proper surrender by the First Nation. Furthermore, the compensation paid by the Crown for the loss of the reserve in 1849-50 was inadequate. The land in question was reserved for the First Nation under the Longwoods Treaties (1819-1822). A community vote on whether to accept Canada's offer to settle is expected to take place over the fall of 2012. The government has offered to pay the costs of acquiring land in Southwestern Ontario of the size believed to be the equivalent of the lost reserve (21 sq. Km).

Name: Caradoc IR Railway Right of Way

Status: under assessment

Description: The First Nation alleges the failure to properly manage 3 railway transactions on Caradoc Indian reserve and failure to provide proper and lawful consideration to protect First Nation interest.

Name: Caradoc Reserve 1834 Surrender

Status: under assessment

Description: The First Nation alleges that Canada breached fiduciary duties and duty of honour and integrity in relation to the 1834 Surrender.

Legal Proceedings:

Name: Ether Deleary, Virgil Wilson, Eldon French, George Henry, Mina Riley, Martha Albert, John Riley, Mark French, Merle Fisher, Chippewas of Thomas Band of Indians

Status: now pursued as a specific claim

Court File No.: T-541-83

Description: This action was instituted in February, 1983 but pursued as a specific claim. The plaintiffs, the Chippewas of the Thames allege that, as part of the surrender of their traditional lands in 1922, they were promised certain reserve lands. When the Caradoc reserve was set aside for this band, two parcels of land were not included which should have been; according to

the band. The Town of Muncey is located on part of this disputed land. The plaintiffs ask for a declaration that these parcels are part of their reserve.

Agreement negotiations:

Anishinabek Nation (UOI) negotiations on Governance and Education

Please see "Other Considerations" below for more details.

Mississaugas of the Credit

Chief Bryan Laforme (tenure expires December 15, 2013)

2789 Mississauga Road

RR 8

Hagersville, Ontario, N0A 1H0

Phone: (905) 768-1133 Fax: (905) 768-1225

www.newcreditfirstnation.com

Treaty Area – Southern Ontario treaties for Settlement: 1783 -1815

For more information on the treaties, see "Other Considerations" below.

Membership:

Association of Iroquois and Allied Indians

Chiefs of Ontario

See "Other Considerations" below for more information.

Specific Claims:

Name: 1923 Williams Treaties

Status: active litigation

Description: The United Indian Council alleged that the Williams Treaty was invalid. They state that compensation has been inadequate for land taken, along with a failure to provide reserves. The First Nations involved are: Alderville, Beausoleil, Chippewas of Georgina Island, Chippewas of Mnjikaning, Curve Lake, Hlaxwatha, Mississauga's of Scugog Island.

Legal Proceedings:

Name: Mississaugas of the New Credit – Toronto Purchase v.

Status: inactive

Court File No.: not available

Description: This concerns an 1805 surrender of land presumably by the Mississaugas of the New Credit. Documentation concerns discussions for a letter accepting settlement of the issue,

Name: Mississaugas of the New Credit First Nation v. Attorney General of Canada, Maurice Bryan Laforme, Kerri Louise King, Attorney General of Ontario

Status: active

Court File No.: CV-12-373

Description: In this matter, the Mississaugas of the New Credit First Nation seeks a declaration of fee simple interest to a parcel of land in Hagersville which lies adjacent to the Applicant's Reserve. The Applicant also seeks a declaration that the reservation of mines and minerals as set out in the original Crown Patent issued February 18, 1884 is null and void. The Applicant asserts that this property was originally part of a larger tract of land to which the Applicant had aboriginal rights, and that this larger tract of land was sold by the Applicant to the Crown in the

18th century. The Applicant claims that in 1999, the Applicant entered into a Land Claim Settlement Agreement whereby Canada agreed that it would recommend an addition to the Applicant's reserve. The Applicant claims that following their application to the Crown to have the property added to its reserve, the Crown had concerns which prevented the completion of the Addition to Reserve process. The Crown's concerns were regarding the capacity of a First Nation to hold title to lands in fee simple, and also about a reservation clause found in the original Crown Patent whereby the rights to all mines and minerals were reserved to the Government of Ontario.

Moravian of the Thames (Delaware Nation)
Chief Greg Peters (tenure expires May 31, 2013)
RR 3
Thamesville, Ontario, N0P 2K0
Phone: (519) 692-3836 Fax: (519) 692-5522

Treaty Area – Southern Ontario treaties for settlement: 1783 to 1815
For more information on the treaty, see "Other Considerations" below.

Membership:
Southern First Nations Secretariat
Association of Iroquois and Allied Indians
See "Other Considerations" below for further information.

Specific Claims:
No active claims to report.

Legal Proceedings:
No litigation to report.

Munsee-Delaware Nation
Chief Patrick Waddlove (tenure expires June 4, 2014)
RR1
Muncey, Ontario, N0L 1Y0
Phone: (519) 289-5396 Fax: (519) 289-6156
<http://www.munseedelawarenation.org/>

Treaty - Southern Ontario treaties for settlement: 1783 to 1815
For more information on the treaties, see "Other Considerations" below.

Membership:
Southern First Nations Secretariat (London District Chiefs Council)
Union of Ontario Indians
Chiefs of Ontario
See "Other Considerations" below for further information.

Specific Claims:

No active claims to report.

Legal Proceedings:

No relevant litigation listed.

Agreement negotiations:

Anishinabek Nation (UOI) negotiations on Governance and Education

Please see "Other Considerations" for more details.

Oneida Nation of the Thames

Chief Joel Abram (tenure expires July, 2014)

2212 Elm Ave.

Southwold, Ontario, N0L 2G0

Phone: (519) 652-3244 Fax: (519) 652-9287

www.oneida.on.ca

Treaty - Southern Ontario treaties for settlement: 1783 to 1815

For more information on the treaties, see "Other Considerations" below.

Membership:

Association of Iroquois and Allied Indians

Southern First Nations Secretariat (London District Chiefs Council)

Chiefs of Ontario

See "Other Considerations" below for further information.

Specific Claims:

No relevant claims to report.

Legal Proceedings:

Name: In the matter of An Arbitration ordered by the Director of the Cemeteries Branch of the Ontario Minister of Government Services Pursuant to the Regulation made pursuant to the Ontario Cemeteries Act

Status: dormant since 2006

Court File No.: not available

Description: This is a Notice of Constitutional Question with respect to an arbitration concerning cemeteries near Dorchester, Ontario. The Oneida Nation Council of Chiefs represent the Haudenosaunee people buried in this land and assert that they have Aboriginal title to the land they occupy. 202249 Ontario is a development company that bought this land in late 2003 in order to subdivide the land into lots for single-family homes. Direct negotiations between Oneida Nation Council of Chiefs and the President of the development company failed and an effort to find a mediated resolution was also unsuccessful. In early December 2004, the development company brought heavy equipment onto the land and graded the proposed roads, disturbing two graves in the process. Charges were laid against the company under the Cemeteries Act, resulting in an order for the development company to return the topsoil and restore the land. The President of the company indicated that he would not comply with this

order, and instead made application to The Director of the Cemeteries Branch to appoint an arbitrator pursuant to the Ontario Cemeteries Act. This appointment was to take effect on November 11, 2005.

Six Nations of the Grand River

Chief William (Bill) Kenneth Montour (tenure expires December 8, 2013)

1895 Chiefswood Road

PO Box 5000

Ohsweken, Ontario, N0A 1M0

Phone: (519) 445-2201 Fax: (519) 445-4208

www.sixnations.ca

Recognized Leadership and Consultation:

The Federal Government recognizes the elected Chief and Council (who are elected under the Indian Act) as the official Canadian leadership of Six Nations. For consultation purposes, the Federal Government recommends that the elected Chief and Council of Six Nations be engaged.

Membership:

Chiefs of Ontario

For more information, see 'Other Considerations' below.

Land Grant:

Haldimand Proclamation of 1784 and Simcoe Patent of 1793

The Six Nations were native to an area that lies within present-day New York State and were allied with the British Crown during the American War of Independence. As compensation for lands lost as a result of the war, the Six Nations and their descendants were granted lands six miles deep on each side of the Grand River, from its mouth to its source. The granted lands were within a portion of territory that the Mississauga surrendered to the Crown in the Between The Lakes Treaty of 1784/1792 (the 1784 agreement contained a boundary description that was geographically impossible and this error was addressed and corrected in 1792).

The Simcoe Patent of 1793 confirmed the lands granted to the Six Nations by the Haldimand Proclamation; However, it included only lands within the corrected 1792 surrender and thus did not extend to the source so the Grand River. It specifies that the Six Nations can surrender and dispose of their land only to the Crown. Any other leases, sales or grants to people other than Six Nations shall be unlawful and such intruders evicted. A link to a map and additional information can be found at:

<http://www.aboriginalaffairs.gov.on.ca/english/negotiate/sixnations/sixnations.asp>

Specific Claims:

Between 1980 and 1995, Six Nations submitted 28 specific claims to Aboriginal Affairs and Northern Development Canada under its Specific Claims Policy. These claims focus on the government's management of their lands and other assets from 1784 to the present. In March 1995, Six Nations filed a lawsuit against the Government of Canada and the Province of Ontario, which also related to how Six Nations' lands and monies were managed by the Crown (refer to Six Nations of the Grand River Band of Indians v. HMTQ in Right of Canada and HMTQ

in Right of Ontario. Court file no. 406/95 in the litigation section below for additional information). As there was significant overlap between the 28 specific claims and the claims put forward in the litigation, work on the specific claims was suspended.

Other Claims:

In 1994, Six Nations submitted a claim to the Minister of Aboriginal Affairs and Northern Development Canada regarding their "right to hunt and fish," which was premised in part on the Nanfan Treaty of 1701. This Treaty (also known as the Treaty of Albany) was related to the protection of hunting and fishing rights in and around Lakes Erie, Huron and Ontario, as well as a portion of the United States. The Treaty was between representatives of the Five Nations (now the Six Nations) and John Nanfan, the acting colonial governor of New York. Six Nations were referred to the Province of Ontario for remedy, as the province has the primary responsibility for harvesting.

Legal Proceedings:

Name: Six Nations of the Grand River Band of Indians v. HMTQ in Right of Canada and HMTQ in Right of Ontario - Superior Court of Justice

Status: active

Court File No.: 406/95

Description: The Plaintiffs claim an accounting of all Six Nations' assets including money and real property held in trust by the Crown for the benefit of the Six Nations since 1784. The Plaintiff seeks a declaration by the Court that the Defendants are in breach of their fiduciary duties towards the Plaintiff, and are liable for replacing all assets or the value of all assets found to be missing, with compound interest. The allegation of repeated breaches of fiduciary duty is supported by examples of breaches, between 1784 and 1870, that can be separated into 14 discrete claims.

Name: Thahoketotsh of Kanekota v. HMTQ

Status: active

Court File No.: T-1396-12

Description: In this claim, the Plaintiff seeks, among other things, the removal of alleged non-native squatters from Lot 1 Concession 11, Clearview Township, Simcoe County. He alleges that the Crown has not respected the Royal Proclamation of 1784 and he also seeks compensation from other parties, such as the Canadian Hydro Developers, Inc. and Enbridge Gas, for their alleged illegal involvement in the area.

Name: Thahoketotsh of Kanekota v. HMTQ

Status: active (November 2012)

Court File No.: T-2007-12

Description: In this action, the Plaintiff alleges that the Defendant Canada has allowed federal and provincial law to apply to a tract of land described in the *Haldimand Proclamation of 1784* in violation of an alleged British Order in Council dating from 1704, the *Royal Proclamation of 1763*, ss. 90, 91(24) and 109 of the *Constitution Act, 1867* and an alleged Canadian Order in Council relating to disallowance, dating from 1875. The Plaintiff particularly alleges that Canada has violated its duty in allowing the *Indian Act*, the *Supreme Court Act* and the *Ontario Public Lands Act* to apply to the Haldimand Tract. The Plaintiff seeks as relief a declaration that Canada has the duty not to allow the application of federal or provincial law to the Haldimand Tract except by a treaty in compliance with the *Royal Proclamation of 1763* with any dispute resolved by a Standing Royal Committee constituted under the alleged Order in Council of 1704. The Plaintiff seeks to have the declaration described above determined under Rule 220(1)(a) of the Federal Courts Rules, and in writing under Rule 369.

Name: Six Nations Elected Council on its own behalf and on behalf of the Six Nations of the Grand River v. The Corporation of the City of Brantford

Status: active

Court File No.: CV-08-381454

Description: The Plaintiffs seek various declarations pertaining to Ontario and/or the City of Brantford's constitutional duty to consult with and accommodate the Six Nations of the Grand River before considering or undertaking any planning activities and disposition of lands which could potentially affect the interests of the Six Nations of the Grand River.

Name: Aaron Deffor, the Haudenosaunee Development Institute v. the Corporation of the City of Brantford – Superior Court of Justice

Status: active

Court File No.: CV-08-356782

Description: The Applicants Aaron Deffor and the Haudenosaunee Development Institute intend to question the constitutional validity and applicability of By-laws 63-2008 and 64-2008 of the City of Brantford Municipal Code, made under the Municipal Act, 2001, S.O. 2001, c. 25. The hearing is scheduled for November 2012.

Name: King Chief ah'she hodeeheehonto v. HMTQ in Right of Canada

Status: active

Court File No.: 10-20244 JR

Description: This is a Notice of Constitutional Question which seems to involve an argument involving Six Nations that among other things relies on the Two Row Wampum Treaty and other Aboriginal and treaty rights, as protection from the jurisdictional obligation to follow Canada's laws and other obligatory requirements.

Name: Regina v. Michael Clarence Monture

Status: active

Court File No.: not available

Description: The defendant is a member of the Mohawk Nation from the Six Nations of the Grand River, and is seeking relief under section 35 of the Constitution Act, 1982. The defendant alleges that the sub-standard health facilities are infringing on and limiting his Aboriginal rights, as well as preventing him from delivering contemporary health care.

Out-of-Court settlement discussions

Since 1999, the Government of Canada, the Province of Ontario and Six Nations have made several attempts to resolve the historical grievances raised in Six Nations' 1995 lawsuit (refer to Six Nations of the Grand River Band of Indians v. HMTQ in Right of Canada and HMTQ in Right of Ontario, Court file no. 406/95 in the litigation section above for additional information) through out-of-court settlement negotiations. Information on these discussions, including the negotiation process that commenced after the occupation of the Douglas Creek Estates site in Caledonia, Ontario, can be found on the AANDC website at: <http://www.aandc-sandc.gc.ca/enqr/100100016334/100100016335>

Unilateral Protocol

The Six Nations of the Grand River published a unilateral consultation and accommodation policy in 2009. You may wish to review this protocol to better understand the First Nation's perspective regarding consultation and accommodation. However, the federal government is not a party to this protocol and does not endorse the content. The link to the protocol is: <http://www.sixnations.ca/admConsultationAccommodationPolicy.pdf>

Walpole Island

Chief Burton Kewayosh Jr. (tenure expires June 23, 2014)

RR 3, Wallaceburg, Ontario, N8A 4K9

Phone: (519) 627-1481 Fax: (519) 627-0440

Treaty Area:

By July 10, 1827, several Chippewas groups had ceded the lands of Treaty 29 to the British Crown. However, neither this Treaty nor any other established the Walpole Island reserve. Walpole Island is unsundered land of the First Nation which was granted reserve status through the 1850 Proclamation intended to protect the "lands and property of the Indians in Lower Canada". The following specific claims and litigation refers to land outside of the Walpole Island reserve. The Federal Government's position is that it does not recognize Aboriginal rights and title to these off-reserve areas.

Membership:

Southern First Nations Secretariat

Chiefs of Ontario

See "Other Considerations" below for more information.

Specific Claims:

Many of the below claims are listed as 'active litigation'. This means that the First Nation may have chosen to pursue these claims through the courts after submitting them to the Specific Claims process, or, to refer them to the Specific Claims Tribunal for a binding decision.

Name: Anderdon

Status: active litigation

Description: The First Nation alleges that the Crown failed to carry out the terms of the surrender of 300 acres in Anderdon Township in 1848.

Name: Bob Lo (Bois Blanc) Island

Status: active litigation

Description: The First Nation alleges that the surrender in 1786 was invalid and that no compensation was ever paid.

Name: East Sister Island

Status: active litigation

Description: The First Nation alleges that the Crown breached its fiduciary obligations regarding the use, license and disposition of the island.

Name: Fighting Island

Status: active litigation

Description: The First Nation alleges that Fighting Island and the adjacent fishery and waters have never been lawfully surrendered by Walpole Island First Nation.

Name: Grass Island

Status: active litigation

Description: The First Nation alleges that Canada illegally patented Grass Island in 1890, and that the island was never surrendered. Furthermore, no compensation for it was paid to Walpole Island.

Name: Hen and Chicken Island

Status: active litigation

Description: The First Nation alleges the Crown breached its fiduciary obligations regarding the use, license and disposition of the island.

Name: Lower Indian Reserve

Status: active negotiations

Description: The First Nation seeks the return of lower reserve, or compensation and questions the price paid for the land. The claim is located in the township of Moore.

Name: Middle Island

Status: active litigation

Description: The First Nation alleges the Crown breached its fiduciary obligations permitting Middle Island to be occupied pursuant to a license of occupation with no remuneration to the First Nation. The Crown also failed to advertise the sale of Middle Island.

Name: North Harbour Island

Status: active litigation

Description: The First Nation alleges the Crown breached its fiduciary obligations regarding the use, license and disposition of the island

Name: Peche Island (Fishing / Peach Island)

Status: active litigation

Description: The First Nation alleges licenses and leases were issued to Peche Island without any compensation paid to First Nation. Claimant also alleges that they did not receive fair market value for Peche Island at time of surrender in 1857.

Name: Pelee Island

Status: active litigation

Description: The First Nation alleges Pelee Island was never surrendered, and that 1870 surrender did not include Pelee Island. Furthermore, no compensation has been paid to the First Nation for the island.

Name: St. Clair Flats

Status: active litigation

Description: The First Nation alleges that in 1892 Ontario illegally sold and patented part of St. Clair Flats.

Name: Turkey Island

Status: active litigation

Description: The First Nation alleged that Walpole Island Indians and the Chippewas of Anderton were the rightful owners of Turkey Island. They claim that Canada erred in seeking a surrender from the Wyandotts of Anderton in 1874.

Legal Proceedings:

Name: Walpole Island First Nation, Ekejwanong Territory v. Attorney General of Canada, HMTQ in Right of Ontario

Status: active

Court File No.: 00-CV-189329

Description: The Plaintiff is asserting their unextinguished Aboriginal title and claiming the Aboriginal right to hunt, access and preserve sacred sites to the Three Fires Confederacy Unceded Traditional Lands. The claimed area includes land that is subject to treaty 25 (1822) which was not signed by the Plaintiff. These lands also include lands subject to treaties 2,6,7,12,29 and the Township of Anderson. The Plaintiff excludes islands or water lots that were encompassed by treaties signed by them or their predecessors, as well as any land that is owned in fee simple by private parties.

Name: HMTQ in Right of Canada v. Clark Peters, Paul Tooshkenig Jr., William Shipman, Lonni Shipman, Clark Peters Jr.

Status: active

Court File No.: not available

Description: The Notice of Constitutional Question deals with the Robinson-Superior Treaty that provides that "its Aboriginal beneficiaries the full and free privilege to hunt". The Defendants are members of the Walpole First Nation, and were hunting moose in the Robinson-Superior Treaty area, with the permission of the Michipicoten First Nation. They are challenging Section 6 of the Fish and Wildlife Conservation Act, alleging that it gives no priority to any persons having Treaty or Aboriginal rights, and is inconsistent with section 35 of the Constitution Act, 1982, and it is therefore inapplicable to Aboriginal persons.

Name: William Shipman, Clark Peters Jr., Clark Peters, Paul Tooshkenig, Lonnie Shipman v. HMTQ in Right of Canada

Status: active

Court File No.: 260-91; 260-92; 260-94; 260-25; 4-434029

Description: The Defendants intend to question the validity of s.6 of the Fish and Wildlife Conservation Act made pursuant to the Interim Enforcement Policy, generally and in regard to the application to the Defendants. The Defendants were charged with hunting moose for food purposes, within the boundaries of the Robinson-Superior Treaty. The Defendants assert that they were exercising their Aboriginal and/or treaty right to hunt within their traditional territory.

Name: William Shipman, Clark Peters Jr., Clark Peters, Paul Tooshkenig, Lonnie Shipman v. HMTQ in Right of Canada

Status: active

Court File No.: C44543

Description: The Appellants intend to question the constitutional validity and applicability of s.6 of the Fish and Wildlife Conservation Act. The Appellants assert that the Ontario licensing system for the issuance of moose hunting licences gives no priority to any persons having Treaty or Aboriginal rights. They will argue, inter alia, that s.6 of the Fish and Wildlife Conservation Act is inconsistent with s. 35 of the Constitution Act as it does not give priority to persons having Treaty or Aboriginal rights, and that prosecutorial discretion cannot be exercised if the constitutional priority of Treaty and Aboriginal rights is not respected. They will also argue that they are entitled to the benefits of the hunting rights protected by the Robinson-Superior Treaty and by s. 35 of the Constitution Act, and that these hunting rights are unjustifiably infringed by s. 6 of the Fish and Wildlife Conservation Act.

Name: Chief Daniel R. Miskokomon et al v. Minister of Transport

Status: closed

Court File No.: T-1920-93

Description: The plaintiffs claim Aboriginal and treaty rights and Aboriginal title to the waters and beds under the waters of portions of Lake Huron, the St. Clair River, Lake St. Clair, and Lake Erie stemming from the Royal Proclamation of 1763. The plaintiffs further state that Canada is in breach of its fiduciary duty to the First Nation for granting easements to permit construction of the CN tunnel, which will directly interfere with the rights and title of the First Nation.

Name: Walpole Island First Nation v. Attorney General of Canada, Minister of Environment, ICI Canada Inc.

Status: closed

Court File No.: T-272-97

Description: Imperial Chemical Industries Canada (ICI) operated a fertilizer plant on the St. Clair River from 1967-1968. On 10 Feb 1995, ICI applied for approval to discharge waste into the river - approval was granted. The Walpole Island First Nation (WIFN) commenced actions to have the decision rescinded. The Minister of Environment refused because, among other things, the proposed discharge posed no threat to public health or environment. On May 29, 1997 WIFN filed a Memorandum of Argument, claiming that the Minister's decision constituted an infringement of their Charter rights i.e. enjoyment of life and health.

Walpole Island First Nation Consultation Protocol:

The Walpole Island First Nation passed its own consultation protocol. It states their expectations from government and proponents in any activities or decision making undertaken in their traditional territory. It is recommended that this protocol be reviewed in advance of consultation to better understand the First Nation's expectations. However, the federal government is not a party to this agreement and does not endorse the content. A link to the protocol is:

http://indigenouspeoplesissues.com/attachments/article/2576/2576_WalpoleIsland_Consultation_Protocol2009.pdf

Public notice of Aboriginal title assertion:

The Council of the Three Fires published a notice (2005) asserting Aboriginal title by Walpole Island First Nation- Bkejwanong Territory. Walpole Island First Nation gives notice to all Crown departments and agencies, federal or provincial and to municipalities that it wishes to be notified and consulted with in relation to any actions taken in respect of the claimed territory.

Other Considerations

Aboriginal Rights Assertions: the Métis

The inclusion of the Métis in s.35 represents Canada's commitment to recognize and value their distinctive cultures, which can only survive if they are protected along with other Aboriginal communities. In 2003, the Supreme Court of Canada affirmed Métis rights under s.35 of the Constitution Act, 1982, in the Sault St. Marie area, in the Powley decision. For more information on the Powley decision visit the following link: www.aadnc-aandc.gc.ca/eng/1100100014419

The Office of the Federal Interlocutor for Métis and Non-Status Indians (OFI) is aware that the Métis Nation of Ontario (MNO), its regional and community councils, have asserted a Métis right to harvest in a large section of the province.

The provincial government has accommodated Métis rights on a regional basis within Métis harvesting territories identified by the MNO. These accommodations are based on credible

Métis rights assertions. An interim agreement (2004) between the MNO and the Ministry of Natural Resources (MNR) recognizes the MNO's Harvest Card system. This means that Harvester's Certificate holders engage in traditional Métis harvest activities within identified Métis traditional territories across the province. For a map of Métis traditional harvesting territories visit the MNO website at: <http://www.metisnation.org/harvesting/harvesting-map.aspx>

The MNO maintains that Aboriginal 'rights-holders' are Métis communities which are collectively represented through the MNO and its community councils. In partnership with community councils, MNO has established a consultation process. The MNO has published regional consultation protocols on their website which offer pre-consultation stage instructions on engaging the Métis through their community councils (via the consultation committee made up of an MNO regional councilor, a community councilor representative and a Captain of the Hunt). Please note however, that this organization does not represent all Métis in Ontario.

Métis Nation of Ontario

Métis Consultation Unit is located within the MNO head office.
500 Old St. Patrick Street, Unit 3
Ottawa, Ontario, K1N 9G4
Phone: (613) 798-1488 Fax: (613) 725-4225
www.metisnation.org/home.aspx

Métis National Council

4-340 MacLaren Street,
Ottawa, Ontario, K2P 0M6
Phone: (613) 232-3216 Fax: (613) 232-4262
www.metisnation.ca

For an indication of the population in Ontario who self-identify as Métis, visit the Statistics Canada website. The Ontario map indicates populations as small as 250 up to over 2,000 within its borders.

http://coodispost.statcan.gc.ca/2006/13011619/200805130120090313011619/16181522091400090112_13011619/151401021518090709140112_201520011215052009190904161516_0503-eng.pdf

Legal Proceedings concerning the Métis in Ontario

Name: HMTQ in Right of Canada v. Michel Blais

Status: active

Court File No.: 08-213

Description: The Applicant is charged with unlawfully harvesting forest resources in a Crown forest without a license contrary to the Crown Forest Sustainability Act, 1994. The Applicant, a Métis, asserts that he is an Aboriginal person within the meaning of s. 35 of the Constitution Act, 1982 and that the alleged harvesting occurred in lands set apart for the Batchewana Band pursuant to the Robinson Treaty of 1850. He claims that the Batchewana First Nation may permit Métis persons to exercise the same Aboriginal and treaty rights as its members pursuant to this treaty.

Name: HMTQ in Right of Canada, Laurie Desautels v. Henry Wetelainen Jr.

Status: active

Court File No.: CV-08-151

Description: The defendant, Henry Wetelainen Jr., intends to question the constitutional validity of sections 28, 31 and 40 of the Crown Forest Sustainability Act (1994), S.O. 1994, c. 25 and

Ontario Regulation 167/95, as amended, in relation to an act or omission of the government of Ontario. The defendant claims that he was exercising Aboriginal and treaty rights afforded by the Adhesion to Treaty 3, by harvesting wood within his traditional territory. He claims that he is a Métis/Non-Status Indian and that the imposition of payment for harvesting or use of the forest resource is an infringement and violates his constitutional rights.

Name: Ministry of Natural Resources v. Kenneth Sr. Paquette

Status: active

Court File No.: to be determined

Description: This Notice of Constitutional Question relates to a provincial prosecution involving a charge pertaining to hunting moose. The Defendant intends to assert his s. 35 right as a Métis person to hunt moose, and he also intends to seek a Charter remedy under s. 15 of the Charter.

Court Decisions concerning the Métis in Ontario

R. v. Laurin, Lemieux, Lemieux (2007)

Three Métis defendants were charged with fishing violations and claimed that the decision of the Ministry of Natural Resources (MNR) to prosecute them violated the terms of the Interim Agreement (2004) between the MNR and the Métis Nation of Ontario (MNO). As the defendants were indeed Harvester Card holders authorized to fish in the Mattawa/Nipissing territory, therefore, they were entitled to the exemption in the agreement.

The Court concluded that laying of charges against any valid Harvester Card holder who is harvesting in the territory designated on the card within 2 years of the 2004 agreement was a breach. The Interim Agreement itself was silent as to any geographic limitations. There was no mention of the Agreement only applying north and east of Sudbury. Further, the reliance on Harvester Cards, which explicitly contained the territorial designation of the cardholder, signified that the MNR accepted such designations for the purpose of the agreement. The Court was clear to note that this case did not make any ruling regarding the merits of any claim that the Mattawa/Nipissing area contains section 35 rights bearing Métis communities.

Harry Daniels (2013)

The Plaintiffs sought judicial declarations that: Métis and non-Status Indians are "Indians" under section 91(24); that the Crown owes a fiduciary duty to Métis and non-Status Indians as Aboriginal peoples; and, Métis and non-Status Indians have the right to be consulted and negotiated with in good faith by the government of Canada, on a collective basis through representatives of their choice. On January 8, 2013, the Federal Court ruled in favour of Harry Daniels et al and declared Métis and non-status Indians as "Indians" under section 91(24) of the *Constitution Act, 1867*.

Membership

First Nations may or may not delegate certain authority and/or powers to tribal councils to administer programs, funding and/or services on their behalf. The best source of information with respect to consultation is through individual First Nations themselves.

Association of Innuqs and Allied Indians

This is a political organization which advocates the interests of its eight members. Using political lines the members form a collective to protect their Aboriginal and treaty rights.

www.aiqi.on.ca

387 Princess Avenue

London, Ontario, N6B 2A7
Phone: (519) 434-2761

Chiefs of Ontario

The Chiefs of Ontario is a coordinating body for 133 First Nation communities in Ontario. The main objective of this body is to facilitate the discussion, planning, implementation and evaluation of all local, regional and national matters affecting its members.
www.chiefs-of-ontario.org

Administrative Office:
111 Peter Street, Suite 804
Toronto, Ontario, M5V 2H1
Phone: (416) 597-1266
Fax: (416) 597-8365

Political Office:
109 Mission Road
Fort William First Nation Ontario, P7J 1L3
Phone: (807) 628-9339
Fax: (807) 628-8404

Southern First Nations Secretariat

The Secretariat is a non-profit, non-political corporate support body. It provides service delivery for the London District Chiefs Council (association of 7 First Nation governments), and facilitates communications amongst member First Nations, their organizations and other similar service providers.

<http://www.sfnso.on.ca>
22361 Austin Line
Bothwell, Ontario, N0P 1C0
Phone: 519-692-5968 Fax: 519-692-5972

The Union of Ontario Indians (UOI)

The UOI is a political advocate for approximately 40 member First Nations across Ontario. Its headquarters is located on Nipissing First Nation, just outside of North Bay Ontario, and has satellite offices in Thunder Bay, Curve Lake First Nation and Munsee-Delaware First Nation. The UOI delivers a variety of programs and services. The Anishinabek Nation incorporated the Union of Ontario Indians (UOI) as its secretariat in 1949.

www.anishinabek.ca

Head Office:
1 Migizi Mkan
North Bay, Ontario, P1B 8J8
Phone: (705) 497-9127
Fax: (705) 497-9135

Regional Office
300 Anemki Place
Thunder Bay, Ontario, P7J 1H9
Phone: (807) 623-8887

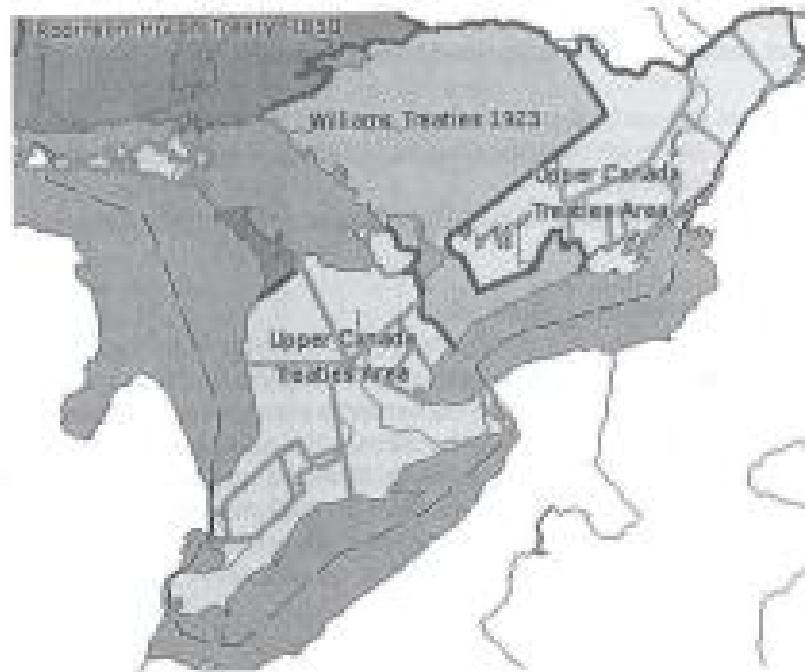
Treaty Area

In general, where historic treaties have been signed, the rights of signatory First Nations are defined by the terms of the Treaty. In many cases, however, there are divergent views between First Nations and the Crown as to what the treaty provisions imply or signify.

In areas where no historic treaty exists or where such treaties were limited in scope (i.e. where only certain rights were addressed by the treaty, such as the Peace and Friendship Treaties), there may be comprehensive claims that are asserted or being negotiated. Comprehensive claim negotiations are the means by which modern treaties are achieved.

Treaties of Southern Ontario- The Upper Canada Treaties

There are several treaty making eras which impact the province of Ontario. These eras are known as the Upper Canada Land Surrenders from 1764 to 1862. These surrenders are seen as treaties which transfer all Aboriginal rights and title to the Crown in exchange for one-time payments or annuities. They tended to be made with individual First Nation groups for tracts of land.



*Atlas of Canada

1764-1782 – Early Land Surrenders

The Royal Proclamation of 1763 established the protection from encroachment of an Aboriginal territory outside of the colonial boundaries. Rules and protocols for the acquisition of Aboriginal lands by Crown officials were set out and became the basis for all future land treaties. In response to military and defensive needs around the Great Lakes, the Indian Department negotiated several land surrender treaties in the Niagara region.

1783-1815- Treaties for Settlement

As part of the plan to resettle some 30,000 United Empire Loyalists who refused to accept American rule, and fled to Montreal, the Indian Department undertook a series of land surrenders west of the Ottawa River with the Mississauga and the Chippewa of the southern Great Lakes. These tended to be uncomplicated arrangements whereby for a particular Aboriginal group was paid a specific sum paid in trade goods, to surrender a stated amount of land.

1815-1862- Treaties to Open the Interior

After the war of 1812, the colonial administration of Upper Canada focused on greater settlement of the colony. The Indian Department completed the last of the over 30 Upper Canada Land Surrenders around the Kewartha, Georgian Bay, and the Rideau and Ottawa Rivers. All of this land which today is known as Southern Ontario, was ceded to the Crown.

Specific claims

Specific claims refer to claims made by a First Nation against the federal government related to outstanding lawful obligations, such as the administration of land and other First Nation assets, and to the fulfilment of Indian treaties, although the treaties themselves are not open to re-negotiation. This response provides summaries of active and relevant claims that are current to the date of the response. Claims that have been settled or closed may also be included to give a sense of the First Nation's claims history with the Crown.

As the claims progress regularly, it is recommended that the status of each claim be reviewed through the Reporting Centre on Specific Claims. A listing of concluded claims is also available through the Reporting Centre at:

http://psa5-scd5.sinc-inac.gc.ca/SCBR1_E/Main/ReportingCentre/External/externalreporting.aspx

Self Government Agreement Negotiations

Self-government agreements set out arrangements for Aboriginal groups to govern their internal affairs and assume greater responsibility and control over the decision making that affects their communities. Many comprehensive claims settlements also include various self-government arrangements. Self-government agreements address: the structure and accountability of Aboriginal governments, their law-making powers, financial arrangements and their responsibilities for providing programs and services to their members. Self-government enables Aboriginal governments to work in partnership with other governments and the private sector to promote economic development and improve social conditions.

Anishinabek Nation (Union of Ontario Indians) negotiations on Governance and Education

In 1995, the Anishinabek Nation's Grand Council authorized its secretariat arm, the Union of Ontario Indians (UOI), to begin self-government negotiations with Canada. Negotiations towards agreements in the areas of education and governance began in 1998.

An agreement-in-principle (AIP) on education was signed in November 2002. In February 2007, the parties signed the AIP with respect to governance. Final agreement negotiations are proceeding in parallel, and together these agreements would mark important steps towards the Anishinabek Nation's long-term objective of supporting participating First Nations to move out from under the Indian Act.

The governance agreement will provide the establishment of the Anishinabek Nation government and the recognition of participating First Nation lawmaking authority in four core governance areas: leadership selection, citizenship, culture and language, and management and operations of government.

The education AIP authorized the parties to negotiate a final agreement with respect to lawmaking authority for primary, elementary and secondary education for on-reserve members, and to administer AANDC's post-secondary education assistance program. Negotiations towards a final agreement with respect to education are nearing conclusion. The Province of Ontario is not a party to these negotiations but is engaged in tripartite discussions on particular issues that would assist in the implementation of the final agreement.

To prepare for self-government in member communities, the Union of Ontario Indians has undertaken a range of activities including a Community Engagement Strategy, the development of an appeal and redress process, a constitutional development process and a number of capacity development activities.

Provincial guidelines

Under its responsibility to promote stronger Aboriginal relationships, the Ontario Ministry of Aboriginal Affairs has produced *Draft Guidelines on Consultation with Aboriginal Peoples Related to Aboriginal Rights and Treaty Rights*. These guidelines are for use by ministries who seek input from key First Nations and Métis organizations, all Ontario First Nations and selected non-Aboriginal stakeholders. To review the guidelines, visit:

<http://www.aboriginalaffairs.gov.on.ca/english/policy/draftconsultJune2006.pdf>



Smolders, Janet <janet@ Dillon.ca>

RE: Hwy 401 Interchange Improvements & Bridge Replacements EA, Middlesex County

1 message

Walker, Korey (MNR) <Korey.Walker@ontario.ca>

Wed, Feb 27, 2013 at 3:21 PM

To: "hwy401middlesexbridges@dillon.ca" <hwy401middlesexbridges@dillon.ca>

Cc: "Walker, Korey (MNR)" <Korey.Walker@ontario.ca>, "McCloskey, Amanda (MNR)" <Amanda.McCloskey@ontario.ca>

Hi Jeff,

Just to clarify, we are looking for the below information to be provided regarding the Highway 401 interchange improvements and bridge replacements project in Middlesex County even though the below email states "for future requests". The information requested below will be used to screen the subject lands for natural heritage concerns. Sorry for any confusion.

Thank you

-Korey Walker

E: 519-113-4737

From: Walker, Korey (MNR)**Sent:** February 27, 2013 3:02 PM**To:** "hwy401middlesexbridges@dillon.ca"**Cc:** McCloskey, Amanda (MNR); Walker, Korey (MNR)**Subject:** Hwy 401 Interchange Improvements & Bridge Replacements EA, Middlesex County

Hi Jeff,

Thank you for providing the MNR with the notice of study commencement for the Highway 401 interchange improvements and bridge replacements project in Middlesex County.

For future requests please provide a description of the project activities and a description of the location (e.g. lot and concession and/ or municipal address) as well as a map. If possible please provide the anticipated timing and duration of the project activities to occur.

We also ask that proponents/ consultants visit the Natural Heritage Information Centre (NHIC) Biodiversity Explorer and Land Information Ontario to gather natural heritage information on the site prior to submitting a request through MNR. In your submission to the district, please show us the information obtained from NHIC and LIO as well as the information identified above and we will provide any additional information we may have at the district.

Natural Heritage Information Centre (NHIC) compiles, maintains and distributes information on species at risk, natural species, plant communities and spaces of conservation concern in Ontario. This information is stored in a spatial database used for tracking this information and can be located; http://nhic.mnr.gov.on.ca/nhic_.cfm This is a web-based GIS map function, that you can use to zoom in on the subject lands and download recorded information. NHIC is not complete, as data always exists outside of databases, but it gives an idea of where to start.

Land Information Ontario (LIO) manages geographic information for use in maps and Geographic Information Systems (GIS). LIO has a web-accessible data warehouse that contains more than 250 different layers of geographic data. The data ranges from the location of underground wells to satellite imagery. LIO can be reached at (705) 755-1878. You can also access the general user version online at: <http://www.mnr.gov.on.ca/en/Business/LIO/index.html>

Also, just for clarification, if the information request is a general natural heritage request or is SAR specific but relating to a planning file please send the information request directly to me. If the request is SAR specific please use the ESAScreeningRequest.AylmerDistrict@ontario.ca.

Due to the high volume of requests we receive, please note that MNR responses may take 6-8 weeks after receipt of all required information. It is highly recommended that proposed projects and requests for information be submitted to MNR as early as possible before the schedule commencement date.

If you have any questions regarding the information provided above please let me know.

-Kerry Walker

Planning Intern

Ministry of Natural Resources

Aylmer, ON N5H 2S6



Smolders, Janet <j.smolders@dillon.ca>

MTO Bridge Replacement Study

1 message

Chris Traini <ctraini@middlesex.ca>

Wed, Feb 27, 2013 at 11:11 AM

To: "Janet Smolders (j.smolders@dillon.ca)" <j.smolders@dillon.ca>

Hi Janet,

As you can guess the County will definitely want to be involved with the study for the bridge replacements across our County Roads.

Please keep me in the loop. The majority of our comments will likely be with regards to detours and road closures.

Thanks!

Chris Traini, P.Eng.

County Engineer

County of Middlesex

ctraini@middlesex.ca

(519) 434-7321 ext. 2264

Notice of Study Commencement
Three Highway 401 Interchange Improvements & Bridge Replacements in Middlesex County

Notice of Study Commencement – Comment Form

Please complete this form and return it to Dillon Consulting Limited. Information will be collected 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.

☐ I/we would like to kept informed regarding this project.

☒ Please remove me from the mailing list for this project.

Agency:
(If applicable) LONDON HYDRO

Name: Rob Doyle

Mailing Address: 111 HORTON ST.

LONDON ON.

N6B 3N9

☐ I/we prefer to receive information by email.

E-mail: _____

Comments/ Questions/ Concerns:

The proposed works @
Middlesex Rd 74 (Westchester Bypass)
" " 32 (Dorchester Rd)
" " 73 (Elgin Rd).

are all outside London Hydro's jurisdiction.

Please return this form by March 20, 2013 to:

Dillon Consulting Limited
130 Dufferin Avenue, Suite 1400
London, Ontario, N6A 5R2

Tel: 519-438-6192
Fax: 519-672-8209
E-mail: hw401middlesexbridges@dillon.ca

Attention: Janet Smolders, MCIP
File No. 12-1118



Notice of Study Commencement
Three Highway 401 Interchange Improvements & Bridge Replacements in Middlesex County

Notice of Study Commencement – Comment Form

Please complete this form and return it to Dillon Consulting Limited. Information will be collected 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.

- ☒ I/we would like to kept informed regarding this project.
☐ Please remove me from the mailing list for this project.

Agency:
(if applicable) MIDDLESEX-LONDON EMS

Name: STEPHEN JAN VALKENBURG

Mailing Address: 340 WATERLOO ST
LONDON, ON
N6B 2N6

- ☒ I/we prefer to receive information by email.

E-mail: stjanvalkenburg@mlens.ca

Comments/ Questions/ Concerns:

Please return this form by **March 20, 2013** to:

Dillon Consulting Limited
130 Dufferin Avenue, Suite 1400
London, Ontario, N6A 5R2

Tel: 519-438-6192
Fax: 519-672-8209
E-mail: hw401middlesexbridges@dillon.ca

Attention: Janet Smolders, MCIP
File No. 13-7119



Notice of Public Information Centre Three Highway 401 Interchange Improvements & Bridge Replacements in Middlesex County

The Ministry of Transportation, Ontario (MTO) has retained Dillon Consulting Limited to undertake the Preliminary Design, initial Detailed Design and Class Environmental Assessment for interchange improvements and bridge replacements at the following three locations on Highway 401 in Middlesex County:

- Middlesex Road 74 (Westchester Bourne)
- Middlesex Road 32 (Dorchester Road)
- Middlesex Road 73 (Elgin Road).

The purpose of this study is to develop alternatives for improving the interchanges and replacing the bridges to accommodate future transportation needs along the Highway 401 corridor. More information on this project is available on the project website at www.hwy401middlesexbridges.ca.

Public Consultation

A Public Information Centre (PIC) will be held on **March 26, 2015**, to obtain public and agency input on the preferred designs developed for the three bridges. The PIC will be an informal drop-in session with displays summarizing the work completed to date. Members of the Project Team will be available to explain the displays, answer questions and record comments.

The Process

This study is being carried out in accordance with the requirements of the MTO Class Environmental Assessment (EA) for Provincial Transportation Facilities (2000). The process leading to the selection of the preferred alternatives will be documented in a Transportation Environmental Study Report (TESR) for each interchange. The TESRs will be available for public review in spring/summer 2015.

Comments

We are interested in obtaining your comments by **April 7, 2015**. 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 more information, to provide comments or to be added to the mailing list, please contact:

Mr. Jeff Matthews, P.Eng.

Project Manager

Dillon Consulting Limited
Box 426
London, Ontario, N6A 4W7
Tel.: 519-438-6192
Toll Free: 1-888-345-5668, Ext. 1275
Fax: 519-672-8209
Email: hwy401middlesexbridges@dillon.ca



Mr. Dan Barber, P.Eng.

Sr. Project Engineer

Ministry of Transportation
West Region, Planning and Design Section
659 Exeter Road
London, Ontario, N6E 1L3
Tel.: 519-873-4812
Toll Free: 1-800-265-6072, Ext. 519-873-4812
Fax: 519-873-4600
Email: Dan.Barber@ontario.ca



If you have accessibility requirements to participate in this project, please contact a team member.
Des renseignements sont disponibles en français en composant Stephen Betts, 1-888-345-5668.



Signpost photos by Wendy Spence

FUN FAMILY NIGHT: (top left) Nate, 8, and his parents Mike and Paula Coppola take a break after building a Lego maze at River Heights.

(Above) Katelyn Coppola, 10, supervises her sister Maria, 4, (left) and Kyndree Healey, 3, at the area set up for younger visitors.

(Bottom left) Colin, 6, (left) and his brother Matthew, 3, ham for the cam as parents Charity and Mike display the family's creation during Lego Game Night.



Stream of Dreams

(Continued from page 1)

It is a true collaborative activity, with the Optimist Club and other groups footing the bill for the fish and Dorchester resident Ruth John and others helping with necessary materials for the project. LDSSS students are set to sand and prime the wooden fish. Northdale Central teacher and artist Kim Barber will help make a community sign to commemorate the event.

Zeisner is thrilled because the community will be involved, the kids get to be creative and students and teachers will work alongside each other to complete the project.

Each student will get a fish that they get to paint, so there will be 480 of them across the fence that spans the front of the school. The artwork should last 10 years or more.

Before the painting of the project, UTRCA staff will speak to students about the importance of water and fish habitats, threats to it, and actions we can take in the community to protect them.

SUDOKU

					7	
9		2		6		
4		7		8	1	9
7		6	2			
3				5	2	
			8			3
		4	7			1
1	2					6
			9	1	4	

Fun By The Numbers

Like puzzles? Then you'll love Sudoku. This mind-bending puzzle will have you hooked from the moment you square off. So sharpen your pencil and put your Sudoku savvy to the test!

Source: www.sudoku.com

Here's How It Works:

Sudoku puzzles are formatted as a 9x9 grid, broken down into nine 3x3 boxes. To solve a Sudoku, the numbers 1 through 9 must fill each row, column and box. Each number can appear only once in each row, column and box. You can figure out the order in which the numbers will appear by using the numbers clues already provided in the boxes. The more numbers you know, the easier it gets to solve the puzzle!

NOTICE OF PUBLIC INFORMATION CENTRE

Three Highway 401 Interchange Improvements and Bridge Replacements in Middlesex County

The Ontario Ministry of Transportation (MTO) has retained Dillan Consulting Limited to undertake the Preliminary Design, Initial Detailed Design and Class Environmental Assessment for interchange improvements and bridge replacements at the following three locations on Highway 401 in Middlesex County:

- Middlesex Road 51 (Windsor-Beacon)
- Middlesex Road 33 (Dorchester Road)
- Middlesex Road 73 (Elgin Road)

The purpose of this study is to develop alternatives for improving the interchanges and replacing the bridges to accommodate future transportation needs along the Highway 401 corridor. More information on this project is available on the project website at www.hwy401-middlesexbridges.ca.

PUBLIC CONSULTATION

A Public Information Centre (PIC) will be held on **March 26, 2015**, to obtain public and agency input on the preferred design developed for the three bridges. The PIC will be an informal drop-in session with displays summarizing the work completed to date. Members of the Project Team will be available to explain the displays, answer questions and record comments.

THE PROCESS

This study is being carried out in accordance with the requirements of the MTO Class Environmental Assessment (CA) for Provincial Transportation Facilities (2002) as a Group "B" project. If during the study, it is determined that there are no significant environmental effects associated with the project, MTO may decide to categorize the project as a Group "C" project. A notice would be published in the newspaper advising of the change and providing an opportunity to comment.

COMMENTS

We are interested in obtaining your comments by **April 7, 2015**. 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 more information, to provide comments or to be added to the mailing list, please contact:

Mr. Jeff Matheson, P.Eng.

Project Manager
Dillan Consulting Limited
130 Dufferin Avenue, Suite 1000
London, ON N6A 5P2
tel: 519-328-8100
toll-free: 1-800-343-3888 ext. 1270
fax: 519-327-4000
e-mail: jeff@middlesexbridges.ca

Mr. Dan Barber, P.Eng.

Senior Project Engineer
Ministry of Transportation
West Region, Planning and Design Section
455 Banker Road
London, ON N6B 1L3
tel: 519-973-3813
toll-free: 1-800-263-6873 ext. 519-973-3813
fax: 519-973-3000
e-mail: dan.barber@ontario.ca



If you have accessibility requirements to participate in this project, please contact a team member.

Our meetings are held at accessible locations in compliance with the Accessibility Act, 1-800-343-3888.

Share Moments Craft Supplies

NEW PRODUCTS IN!

PARIS French d'oreille for d'oreille design

We have a whole NEW spring display!

1000 Main Street, Unit 101, Aylmer, ON N6L 1A1 • Monday-Saturday
519-335-1111 • 519-335-1111

2014 Aylmer fire calls steady, losses down

Aylmer Fire Chief Sam Taylor told Aylmer councillors at a recent meeting that emergency calls in 2014 were on par with 2013, but the dollar loss was down about \$100,000.

There were 107 emergency calls in 2014 and 108 in 2013, Chief Taylor detailed in his annual report to council.

He said over 100 for a year was considered "busy."

That compared with 100 calls for service in 2013 and the lowest in 10 years, 69, that was recorded in 2011.

There were 11 structures or vehicles in 2014 for an estimated \$378,150 in damage.

That compared with eight in 2013, for an estimated \$373,800 in damage for 2012.

"The dollar loss was down about \$100,000 which was good," Chief Taylor said.

The \$956,500 in damage caused by fires in 2014 was the

most reported since 1995.

The lowest amount of damage reported in 2011 was \$809,450," Chief Taylor wrote in his report, adding in his 2014 report that the dollar loss was \$809,450.

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is known should an emergency occur.

"This information is critical to the incident commander," he wrote. "If it's known that there is a fire, the incident commander can be alerted to the fire at an earlier time the incident commander would know to call mutual aid for additional manpower at the onset of the incident."

Mutual aid are agreements between fire departments to help each other when resources are thin or if an emergency in one municipality is beyond its own resources.

Thirty homes were checked for working smoke alarms and carbon monoxide alarms during emergency responses and 19 of them were in compliance with Ontario Fire Code requirements for alarms.

The 11 homes not in compliance were loaned alarms temporarily or given batteries until the homeowners could purchase and install their own.

"The compliance rate in 2014 was 63.33 percent which is an improvement over the 40 percent in 2013 but there is still room for improvement," Chief Taylor wrote.

"We would like to see better numbers and it should be 100 percent," he told councillors.

He also reminded them that carbon monoxide alarms became mandatory for all single family residences on Oct. 15, 2014.

Compliance for buildings with up to six dwelling units is April 14, 2015 and buildings with more than that amount in October 2015.

Chief Taylor said 14 carbon monoxide alarm calls were responded to in 2014 and no gas was detected.

Nine of the calls were due to malfunctioning alarms and five were "human perceived emergencies (low batteries)."

He said it was important for homeowners and tenants to understand how their carbon monoxide alarms (and smoke alarms) work and encouraged everyone to read the instructions that come with the units.



Members of the local World Day of Prayer Committee led about 60 gathered in hymns, prayers and Bible readings during an ecumenical service hosted by Aylmer Christian Reformed Church on Friday afternoon, March 6. This year's service was written by the World Day of Prayer Committee of The Bahamas

which was then prepared and adapted for use in Canada by the Women's Inter-Church Council of Canada. Other than the Bahamas, the theme for this year's World Day of Prayer was "Jesus said to them, 'Do you know what I have done to you.'" Grace Miedema was the guest speaker.

(AE/Craig Bradford)

Aylmer councillors concerned over county levy increase

Some Aylmer councillors during their meeting Monday, March 2, expressed concerns over the recently approved Elgin County budget that includes a 5.4-percent tax increase.

They mostly focused on the almost \$30-million cost of rebuilding Terrace Lodge and how that expense would be paid.

Councillor Peter Barbour started the discussion by saying most municipalities tried to keep any annual budget increase below 1 percent.

He said the county's 5.4-percent increase was a "significant increase" in the county's history.

Mayor Greg Currie, Aylmer's representative on county council, said the main reason for the Elgin tax increase was linked to the decision to construct a new Terrace Lodge long-term care home on the same site as the existing one just east of Aylmer.

He said county councillors had looked at other less expensive options such as renovating or expanding the current facility

but eventually chose to rebuild.

They decided to start the process now in order to submit applications to the provincial government, mainly for assistance.

Cr. Barbour asked if that meant there were further tax increases to come in future county budgets while the process continued over the next few years.

Mayor Currie responded it wasn't known what the provincial government would do for assistance and there could be other sources of funding.

Deputy Mayor Mary French said she had been approached by Malahide Deputy Mayor Mike Wolfe about having a meeting between themselves and the mayors of the two municipalities to talk about a fundraising campaign for the new Terrace Lodge.

She said Bayham had also been contacted as was Elgin-Middlesex-London MP Joe Preston, who has experience with fundraising campaigns. She had also heard from others in the community who were interested in helping with fundraising.

Cr. Arthur Oslich asked

what was to become of the existing building when a new Terrace Lodge was built.

Mayor Currie said that remained to be seen but the hope was the old facility would be taken over by another service or services for seniors or some other suitable use.

"The last option is to tear it down," he said.

Cr. Oslich asked if a new county administration building was also included in the 2015 Elgin budget.

Mayor Currie said it wasn't known what the provincial government would do for assistance and there could be other sources of funding.

Cr. Ann Laur said all the talk of building new facilities came at a time when Aylmer and the surrounding municipalities were experiencing no growth.

"Nobody can afford to live here with no growth," she said. "I guess I am just a little concerned. Are there not other areas we can be cutting back? We simply can't afford this."

Mayor Currie "wholeheartedly agreed" with Cr. Laur.

"There has to be a bottom to the well," he said, adding that didn't seem to be acknowledged by the rest of county council.

Cr. Arthur Oslich asked

Elgin County Ltd. Country Store

Water Garden Seminar
Saturday March 21st from 10am - 3pm

Water garden expert, Jay Shuster from Laguna will be covering topics such as planning, construction and maintenance of a water garden, as well as installing plants and fish.

Topics: Planning your water garden, Designing and installing water features, Maintaining and watering water features.

Coffee and Snacks Provided

Jay Shuster and Doug Coates from Laguna will be available from 10-12 for answers to any questions. Please call Elgin County Ltd. Country Store or send an email to info@elgincounty.ca for more information.

50% Discount on all water garden products

NOTICE OF PUBLIC INFORMATION CENTRE
Three Highway 401 Interchange Improvements and Bridge Repairs in Middlesex County

The County of Middlesex is currently in the process of planning and preparing for the construction of three interchanges and bridge repairs on Highway 401 in Middlesex County.

The purpose of this notice is to provide information regarding the project and to invite the public to provide input on the project.

Public Information Centre
A public information centre will be held on March 11, 2015, from 10:00 a.m. to 4:00 p.m. at the Elgin County Office, 1000 Main Street, Aylmer, ON N6L 1A1. The purpose of the centre is to provide information regarding the project and to invite the public to provide input on the project.

Project Description
The project consists of three interchanges and bridge repairs on Highway 401 in Middlesex County. The project is being funded by the Province of Ontario and the County of Middlesex.

Project Location
The project is located on Highway 401 in Middlesex County, between the 1000 Main Street interchange and the 1000 Main Street interchange.

Project Timeline
The project is expected to start in the summer of 2015 and to be completed by the end of 2016.

Project Impact
The project is expected to have a minimal impact on traffic and the environment.

Project Benefits
The project is expected to improve traffic flow and safety on Highway 401.

Project Contact
For more information, please contact the Project Manager, Mr. [Name], at [Phone Number] or [Email Address].

Project Website
For more information, please visit the project website at [Website Address].

Project Signage
Signage will be placed along Highway 401 to provide information regarding the project.

Project Construction
Construction will be carried out in a phased manner to minimize disruption to traffic.

Project Safety
Safety is the top priority for the project. All construction activities will be carried out in accordance with safety protocols.

Project Environment
The project will be carried out in a manner that minimizes impact on the environment.

Project Community
The project is a community project and the community is invited to provide input on the project.

Project Funding
The project is funded by the Province of Ontario and the County of Middlesex.

Project Approval
The project has been approved by the County Council and the Provincial Government.

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March 9, 2015

Fisheries and Oceans Canada
Southern Ontario District
304-3027 Harvester Road
Burlington, Ontario
L7R 4K3

Attention: Ms. Emily Morton
Fish Habitat Biologist

Ministry of Transportation, Ontario (MTO)
Notice of Public Information Centre
Three Highway 401 Interchange Improvements and Bridge Replacements in
Middlesex County

Dear Ms. Morton:

As outlined in the attached notice, MTO has retained Dillon Consulting Limited to complete the Class Environmental Assessment (EA), Preliminary Design and initial Detailed Design for interchange improvements and bridge replacements along Highway 401 at three locations in Middlesex County:

- Middlesex Road 74 (Westchester Bourne)
- Middlesex Road 32 (Dorchester Road)
- Middlesex Road 73 (Elgin Road).

Additional project information can be found on the project website at www.hwy401middlesexbridges.ca.

130
Dufferin Avenue
London, Ontario
Canada
N6A 5R2
Mail Box 426
London, Ontario
Canada
N6A 4W7
Telephone:
(519) 438-6192
Fax:
(519) 671-8209

...continued

Dillon Consulting
Limited

Fisheries and Oceans Canada

Page 2

March 9, 2015

A Public Information Centre (PIC) is scheduled for **March 26, 2015**, to obtain public and agency input on the preferred design plans for the interchanges. The PIC will be an informal drop-in session.

**Public Information Centre
March 26, 2015
Dorchester Community Centre
Lions Room
2066 Dorchester Road
4:00 p.m. to 7:00 p.m.**

Yours sincerely,

DILLON CONSULTING LIMITED



Brandon Fox, B.E.S.
for Jeff Matthews, P.Eng.
Project Manager

BJF:rrs
Encl.

cc: Dan Barber, MTO
Susan Wagter, MTO

Our file: 12-7110

Ministry of Transportation

Engineering Office
Environmental Section
West Region

609 Exeter Road
London, Ontario N6E 1L3
Telephone: (519) 873-4560
Facsimile: (519) 873-4600
Email: Cathy.Giesbrecht@ontario.ca

Ministère des Transports

Bureau de génie
Section de l'environnement
Région de l'Ouest

609, chemin Exeter
London, (Ontario) N6E 1L3
Téléphone: (519) 873-4560
Télécopieur: (519) 873-4600



March 9, 2015

Chief Chris Plain
Aamjiwnaang First Nation
978 Tashmun Avenue
Sarnia, ON
N7T 7H5

Attention: Chief Chris Plain

**Ministry of Transportation, Ontario (MTO)
Notice of Public Information Centre
Three Highway 401 Interchange Improvements & Bridge Replacements in Middlesex County**

Dear Chief Plain,

As outlined in the attached notice, MTO has retained Dillon Consulting Limited to complete the Class Environmental Assessment (Class EA), Preliminary Design and initial Detailed Design for interchange improvements and bridge replacements along Highway 401 at three locations in Middlesex County:

- Middlesex Road 74 (Westchester Bourse)
- Middlesex Road 32 (Dorchester Road)
- Middlesex Road 73 (Elgin Road).

Additional project information can be found on the project website at www.hw401middlesexbridges.ca.

A Public Information Centre (PIC) is scheduled for **March 26, 2015**, to obtain public and agency input on the preferred design plans for the interchanges. The PIC will be an informal drop-in session.

**Public Information Centre
March 26, 2015
Dorchester Community Centre
Lions Room
2066 Dorchester Road
4:00 p.m. to 7:00 p.m.**

If you have any questions about the study, please contact one of the Project Managers named in the enclosed notice. Should you prefer to meet with Ministry staff to discuss the study, please contact the undersigned at (519) 873-4560, or by email at: Cathy.Giesbrecht@ontario.ca

Yours truly,



Cathy Giesbrecht
Head, Environmental Section
MTO, West Region

Encl. Notice of Study Commencement

cc: Sharilyn Johnston – Aamjiwnaung First Nation, Environmental Officer
 Dan Barber – MTO, Project Manager
 Susan Wagner – MTO, Environmental Planner
 Leslie Currie – MTO, Aboriginal Liaison Officer
 Jeff Mathews – Dillon Consulting Limited, Project Manager
 Janet Smolders – Dillon Consulting Limited, Environmental Planner



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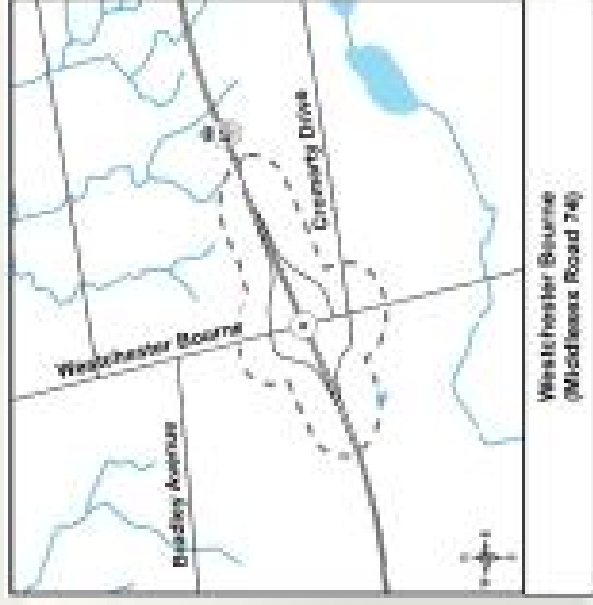
Highway 401 Three Interchange Improvements & Bridge Replacements in Middlesex County

Public Information Centre
March 26, 2015

Project Description

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MTO is undertaking the Class EA, Preliminary Design and Initial Detailed Design of interchange improvements and bridge replacements at three locations on Highway 401 in the Municipality of Thames Centre, Middlesex County:



Need for Improvements

3

- **Need for Bridge Replacements:**
 - The three bridges are reaching the end of their service life
 - Accommodation of the future widening of Highway 401 to 10 lanes
- **Need for Interchange Improvements:**
 - Opportunities to enhance traffic safety, operations and capacity
 - Improve geometric design and sight distance
 - Apply MTO's Highway Access Management Guidelines at intersecting roads and private entrances



Study Purpose

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The purpose of this study is to develop alternatives for replacing the bridges and improving the interchanges to accommodate existing and future transportation needs in the Highway 401 corridor. As part of this project, MTO is seeking environmental clearance for:

- **Bridge replacements** to replace the bridges that are nearing the end of their service life and accommodate the future expansion of Highway 401 to 10 lanes
- **Interchange improvements** to accommodate the new bridge. The interchanges will be designed to be readily expandable to accommodate the future expansion of Highway 401 to 8 lanes and ultimately 10 lanes.

A preferred plan will be identified for each location, including construction staging and timing.



Environmental Assessment Process

The study is being completed in accordance with the requirements of MTO's Class Environmental Assessment (Class EA) for Provincial Transportation Facilities (2000). The Class EA process ensures that:

- All relevant engineering and environmental factors are considered in the planning and design process
- Public and agency input is integrated into the process.

The improvements at the three interchanges are categorized as Group B projects (major improvements to an existing transportation facility) under the Class EA.

The study involves:

- Completion of an environmental assessment, including an assessment of the impacts of the proposed changes and identification of environmental protection/mitigation measures
- The documentation of the EA process in a Transportation Environmental Study Report (TESR) prepared for each interchange for public and agency review.





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WESTCHESTER BOURNE

Westchester Bourne Interchange - Existing Conditions

7

Natural Environment

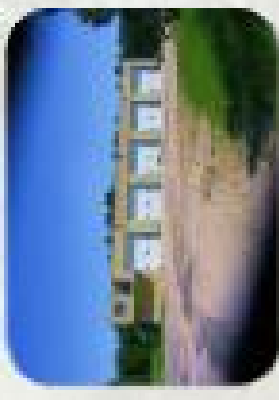
- No significant features

Socio-economic Environment

- Predominantly agricultural area designated for long-term agricultural use in the County and local municipal Official Plans
- Lands around interchange designated for highway commercial, rural industrial and agricultural uses
- Land uses located at interchange include London Husky Car Truck Stop, Highway and Road Maintenance Facility, London KOA Campground and several residences
- Hydro One towers located near interchange

Cultural Heritage Environment

- Existing bridge not considered to be a Provincial Heritage Property under Ontario Heritage Bridge Guidelines
- An archaeology assessment may be required





Westchester Bourne (Middlesex Road 74) Alternative 2 - Parclo A-2 Interchange with Roundabouts, West Alignment Shift



Westchester Bourne (Middlesex Road 74) Alternative 3 - Diamond Interchange, West Alignment Shift



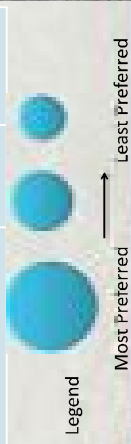
Westchester Bourne (Middlesex Road 74) Alternative 4 – Parclo A-B Interchange, On-Line Alignment



Westchester Bourne (Middlesex Road 74)

Summary of Comparative Evaluation of Alternatives

Evaluation Criteria	Alternative 1A Parclo A-2 Interchange, On-Line Alignment	Alternative 1B Parclo A-2 Interchange, West Alignment Shift	Alternative 2 Parclo A-2 Interchange with Roundabouts, West Alignment Shift	Alternative 3 Diamond Interchange, West Alignment Shift	Alternative 4 Parclo A-B Interchange, On-Line Alignment	Recommended Alternative
1. Traffic Operations and Safety	- Meets existing traffic needs/capacity requirements, most common interchange configuration - Interchange can be expanded in future, more easily accommodates large truck movements than Alt. 2 - Realignment of Cromarty Drive improves consistency with MTO Highway Access Management Guidelines	- Meets existing traffic needs/capacity requirements, most common interchange configuration - Interchange can be expanded in future, more easily accommodates large truck movements than Alt. 1 - Horizontal Curve on Cromarty Drive - Gradeable Cromarty Drive - Requires consistency with MTO Highway Access Management Guidelines, same as Alt. 1A	- Meets existing traffic needs/capacity requirements, most common interchange configuration - Interchange can be expanded in future, more easily accommodates large truck movements than Alt. 1A - Horizontal Curve on Cromarty Drive - Gradeable Cromarty Drive - Requires consistency with MTO Highway Access Management Guidelines, same as Alt. 1A	- Meets existing traffic needs/capacity requirements but potential for wrong way movements under Highway 401 - Interchange can be expanded in future, more easily accommodates large truck movements than Alt. 1A - Horizontal Curve on Cromarty Drive - Gradeable Cromarty Drive - Requires consistency with MTO Highway Access Management Guidelines, same as Alt. 1A	- Meets existing traffic needs/capacity requirements but configuration concerns - Interchange can be expanded in future, more easily accommodates large truck movements than Alt. 1A - Horizontal Curve on Cromarty Drive - Gradeable Cromarty Drive - Requires consistency with MTO Highway Access Management Guidelines, same as Alt. 1A	Alternatives 1A and 1B are the most common interchange configuration and can be expanded in the future
2. Highway and Bridge Engineering	- Makes best use of existing infrastructure but requires more new infrastructure than Alts. 2 and 3 due to wider bridge. Existing ramps could be used until Highway 401 is widened - Major traffic impacts during construction caused by Westchester Bourne closure and long-term detour. Shorter construction duration than Alts. 1B, 2 and 3 - Short-term, on-site detours for Highway 401 traffic - Requires some utility relocations, plus relocation of at least one Hydro One tower	- Meets existing traffic needs/capacity requirements, most common interchange configuration - Interchange can be expanded in future, more easily accommodates large truck movements than Alt. 1A - Horizontal Curve on Cromarty Drive - Gradeable Cromarty Drive - Requires consistency with MTO Highway Access Management Guidelines, same as Alt. 1A	- Meets existing traffic needs/capacity requirements, most common interchange configuration - Interchange can be expanded in future, more easily accommodates large truck movements than Alt. 1A - Horizontal Curve on Cromarty Drive - Gradeable Cromarty Drive - Requires consistency with MTO Highway Access Management Guidelines, same as Alt. 1A	- Meets existing traffic needs/capacity requirements but potential for wrong way movements under Highway 401 - Interchange can be expanded in future, more easily accommodates large truck movements than Alt. 1A - Horizontal Curve on Cromarty Drive - Gradeable Cromarty Drive - Requires consistency with MTO Highway Access Management Guidelines, same as Alt. 1A	- Meets existing traffic needs/capacity requirements but configuration concerns - Interchange can be expanded in future, more easily accommodates large truck movements than Alt. 1A - Horizontal Curve on Cromarty Drive - Gradeable Cromarty Drive - Requires consistency with MTO Highway Access Management Guidelines, same as Alt. 1A	Alternative 2 minimizes traffic impacts and does not impact Hydro One towers
3. Drainage and Stormwater Management	Requires minor drainage modifications and meets MOE Stormwater Management requirements, same as other alternatives	- Meets existing traffic needs/capacity requirements, most common interchange configuration - Interchange can be expanded in future, more easily accommodates large truck movements than Alt. 1A - Horizontal Curve on Cromarty Drive - Gradeable Cromarty Drive - Requires consistency with MTO Highway Access Management Guidelines, same as Alt. 1A	- Meets existing traffic needs/capacity requirements, most common interchange configuration - Interchange can be expanded in future, more easily accommodates large truck movements than Alt. 1A - Horizontal Curve on Cromarty Drive - Gradeable Cromarty Drive - Requires consistency with MTO Highway Access Management Guidelines, same as Alt. 1A	- Meets existing traffic needs/capacity requirements but potential for wrong way movements under Highway 401 - Interchange can be expanded in future, more easily accommodates large truck movements than Alt. 1A - Horizontal Curve on Cromarty Drive - Gradeable Cromarty Drive - Requires consistency with MTO Highway Access Management Guidelines, same as Alt. 1A	- Meets existing traffic needs/capacity requirements but configuration concerns - Interchange can be expanded in future, more easily accommodates large truck movements than Alt. 1A - Horizontal Curve on Cromarty Drive - Gradeable Cromarty Drive - Requires consistency with MTO Highway Access Management Guidelines, same as Alt. 1A	Alternative 4 requires the least drainage modifications



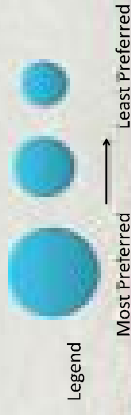
Westchester Bourne (Middlesex Road 74)

Summary of Comparative Evaluation of Alternatives, cont'd...

Alternative	Alternative 1A Proposed 4.5 km change in line alignment	Alternative 1B Proposed 4.5 km change in line alignment	Alternative 2 Proposed 4.5 km change in line alignment	Alternative 3 Proposed 4.5 km change in line alignment	Alternative 4 Proposed 4.5 km change in line alignment
1. Road Improvements	1. No impacts on direct fill habitat. 2. Limited vegetation removal. 3. No impacts on riparian habitat.	1. No impacts on direct fill habitat. 2. Limited vegetation removal. 3. No impacts on riparian habitat.	1. No impacts on direct fill habitat. 2. Limited vegetation removal. 3. No impacts on riparian habitat.	1. No impacts on direct fill habitat. 2. Limited vegetation removal. 3. No impacts on riparian habitat.	1. No impacts on direct fill habitat. 2. Limited vegetation removal. 3. No impacts on riparian habitat.
2. Wetland Improvements	1. No impacts on riparian habitat. 2. Limited vegetation removal. 3. No impacts on riparian habitat.	1. No impacts on riparian habitat. 2. Limited vegetation removal. 3. No impacts on riparian habitat.	1. No impacts on riparian habitat. 2. Limited vegetation removal. 3. No impacts on riparian habitat.	1. No impacts on riparian habitat. 2. Limited vegetation removal. 3. No impacts on riparian habitat.	1. No impacts on riparian habitat. 2. Limited vegetation removal. 3. No impacts on riparian habitat.
3. Road Improvements	1. No impacts on riparian habitat. 2. Limited vegetation removal. 3. No impacts on riparian habitat.	1. No impacts on riparian habitat. 2. Limited vegetation removal. 3. No impacts on riparian habitat.	1. No impacts on riparian habitat. 2. Limited vegetation removal. 3. No impacts on riparian habitat.	1. No impacts on riparian habitat. 2. Limited vegetation removal. 3. No impacts on riparian habitat.	1. No impacts on riparian habitat. 2. Limited vegetation removal. 3. No impacts on riparian habitat.

Alternative 1B is the Preferred Alternative:

- Safest interchange configuration, can be expanded in the future, requires a temporary closure only of Westchester Bourne and avoids impacts on hydro towers
- Better maintains traffic to Husky Truck Stop during construction



Westchester Bourne, Preferred Alternative 1B, Parcel A-2 Interchange, West Alignment Shift Impacts During Construction

15

General traffic impacts during construction are:

- **Highway 401:**
 - Short duration closures of Highway 401
 - Ramp closures will be required, but the duration of closures will be limited where possible
 - Lane reductions are anticipated through the construction area
- **Westchester Bourne:**
 - One lane of traffic will be maintained in each direction for most of construction
 - Short duration closure of Westchester Bourne (approximately 8 weeks) for the removal of the bridge and to complete construction of the embankments
- Preferred detour route for closures follows Wilton Grove Road, Veterans Memorial Parkway and Hamilton Road
- Alternative detour routes may be considered by MTO in consultation with Middlesex County and the Municipality of Thames Centre
- Concerns expressed by EMS, County and local municipality have been addressed





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DORCHESTER ROAD

Dorchester Road Interchange - Existing Conditions

17

Natural Environment

- Dorchester Swamp Provincially Significant Wetland (PSW), an Area of Natural and Scientific Interest (ANSI), borders the highway right-of-way
- Dorchester Swamp is a “Carolinian Canada Site” supporting a diverse population of Carolinian species of flora and fauna
- Streams in the Study Area support diverse fish populations, including Rock Bass, White Sucker, Pumpkinseed, Brook Trout, and Northern Brook Lamprey



Socio-Economic Environment

- Predominantly agricultural area designated for long-term agricultural use. Lands around interchange designated for highway commercial, and recreational uses
- Land uses located at interchange include proposed Petro Canada Travel Centre, Anthony’s Mobile Home Park and residences
- Large outdoor recreational development planned for southeast quadrant of interchange



Cultural Heritage Environment

- Existing bridge not considered to be a Provincial Heritage Property under the Ontario Heritage Bridge Guidelines
- An archaeological assessment may be required



Dorchester Road (Middlesex Road 32) Alternative 1 – Parclo A-2 Interchange, East Alignment Shift



Dorchester Road (Middlesex Road 32) Alternative 2 - Parclo B-2 Interchange, On-Line Alignment



Dorchester Road (Middlesex Road 32) Alternative 3 – Parclo A-B Interchange, West Alignment Shift



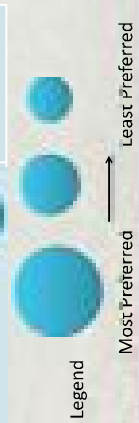
Dorchester Road (Middlesex Road 32) – Technically Preferred Alternative 4 – Parclo A-2 Interchange, Partial Shift



Dorchester Road (Middlesex Road 32)

Summary of Comparative Evaluation of Alternatives

Evaluation Criteria	Alternative 1 Parclo A-2 Interchange, East Alignment Shift	Alternative 2 Parclo B-2 Interchange, On-Line Alignment	Alternative 3 Parclo A-B Interchange, West Alignment Shift	Alternative 4 Parclo A-2 Partial Shift	Recommended Alternative
1. Traffic Operations and Safety	- Meets existing traffic needs/capacity requirements, most common interchange configuration - Interchange can be easily expanded in future - Decision points for drivers on Highway 401 not obscured by bridge, however, horizontal curves on Dorchester Road increase collision potential compared to Alt. 2	- Meets existing traffic needs/capacity requirements. Retains existing straight Dorchester Road alignment - Local interchange configuration is less desirable than Alt. 3 and 4 - Interchange improvements recommended by Service Centre - Driver visibility on Highway 401 restricted due to proximity of bridge to local ramps. Potential for increased collision potential	- Meets existing traffic needs/capacity requirements but interchange configuration is less desirable than Alt. 1 and 2 - Interchange improvements recommended by Service Centre - Driver visibility on Highway 401 restricted due to proximity of bridge to local ramps. Potential for increased collision potential	- Meets existing traffic needs/capacity requirements, most common interchange configuration - Interchange can be easily expanded in future - Decision points for drivers on Highway 401 not obscured by the bridge, however, horizontal curves on Dorchester Road increase collision potential compared to Alt. 1 and 2	Alternative 4 is preferred because it best meets drivers' needs and expectations, can accommodate future expansion and is the safest
2. Highway and Bridge Engineering	- Retains the least existing infrastructure but new interchange configuration requires the least new infrastructure - Can be constructed with full detour of Dorchester Road or staged construction option: - Construction staging maintains traffic on Dorchester Road during construction - Requires long duration ramp closures - Multiple short duration closures/detours of Highway 401 to remove existing bridge and construct portions of new bridge - Less complex to construct due to offline alignment but complexity is slightly increased due to horizontal curve north of Highway 401 - Requires the most utility relocations, similar to Alt.	- Retains the least existing infrastructure but requires a larger bridge and longer ramp to accommodate new interchange configuration - Can be constructed with full detour of Dorchester Road or staged construction option: - Construction staging maintains traffic on Dorchester Road during construction - Requires long duration ramp closures - Multiple short duration closures/detours of Highway 401 to remove existing bridge and construct portions of new bridge - More complex to construct due to offline alignment - Requires fewer utility relocations compared to Alt. 1 and 2	- Meets existing traffic needs/capacity requirements but interchange configuration is less desirable than Alt. 1 and 2 - Interchange improvements recommended by Service Centre - Driver visibility on Highway 401 restricted due to proximity of bridge to local ramps. Potential for increased collision potential	- Meets existing traffic needs/capacity requirements, most common interchange configuration - Interchange can be easily expanded in future - Decision points for drivers on Highway 401 not obscured by the bridge, however, horizontal curves on Dorchester Road increase collision potential compared to Alt. 1 and 2	Alternatives 1 & 4 are preferred because they are the least complex to construct, can accommodate Dorchester Road traffic during construction and require the least new infrastructure
3. Drainage and Stormwater Management	Requires minor drainage modifications, meets MOE Stormwater Management requirements	Requires fewer utility relocations compared to Alt. 1 and 2	Meets existing traffic needs/capacity requirements but interchange configuration is less desirable than Alt. 1 and 2	Meets existing traffic needs/capacity requirements, most common interchange configuration	Equal



Dorchester Road (Middlesex Road 32)

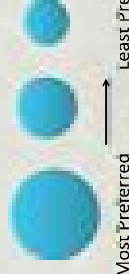
Summary of Comparative Evaluation of Alternatives, cont'd...

Evaluation Criteria	Alternative 2 Parclo A-2 Interchange, East Alignment Shift	Alternative 3 Parclo B-2 Interchange, On-Line Alignment	Alternative 3 Parclo A-B Interchange, West Alignment Shift	Alternative 4 Parclo A-2 Interchange Partial Alignment Shift East	Recommendation Alternative
4. Natural Environment	- Drainage modifications potentially affect fish habitat (Watercourse 5) - Removes 0.87 ha of wooded area - Potential for indirect impacts to the Dorchester Swamp Provincially Significant Wetland (PSW) - Ramps in SE quadrant potentially have direct impacts on Species at Risk	- Same fisheries impacts as Alt. 1 - Removes 0.82 ha of wooded area - Removes 0.24 ha of wooded area in Dorchester Swamp PSW - Potential for indirect impacts to Dorchester Swamp PSW - Removes in SE quadrant potentially have direct impacts on Species at Risk	- Same fisheries impacts as Alt. 1 - Removes 0.25 ha of wooded area - Removes 0.21 ha of wooded area in Dorchester Swamp PSW - Potential for indirect impacts to Dorchester Swamp PSW - Removes in SE quadrant potentially have direct impacts on Species at Risk	- Same fisheries impacts as Alt. 1 - Removes 0.63 ha of wooded area - Potential for indirect impacts to Dorchester Swamp PSW - Removes in SE quadrant potentially have direct impacts on Species at Risk	Alternatives 1 & 4 are preferred because they avoid impacts on Dorchester Swamp PSW
5. Socio-Economic Environment	- Requires some farmland, minimal impacts on farm equipment movement - Requires property from three residences and mobile home park, some traffic related impacts on mobile home park - Requires property from Service Centre in SW quadrant to accommodate ramps. No impacts to site layout - Conforms to County/local Official Plans	- Requires more farmland than Alt. 1 - Potential impacts on residential value, less property required than Service Centre - Conforms to County/local Official Plans, same as Alt. 1	- Similar impacts on farmland as Alt. 1 - Requires residential and mobile home park entrance modifications, some traffic related impacts on mobile home park - West alignment shift requires some property from Service Centre. No impacts to site layout - Conforms to County/local Official Plans, same as other alternatives	- Requires the least amount of farmland - Requires property from two residences and mobile home park, some traffic related impacts on mobile home park - Some park, no impacts on operations of mobile home park - Property required from Service Centre in SW quadrant to accommodate ramps required less for planned traffic and - Conforms to County/local Official Plans, same as other alternatives - Affects the least land with archaeological potential	Alternative 2 minimizes impacts on commercial land uses
6. Cultural Heritage Resources	Affects the second least amount of land with archaeological potential	Affects the least land with archaeological potential	Affects less land with archaeological potential than Alt. 2 but more than Alt. 1 and 4	Affects the least land with archaeological potential	Alternative 1 affects the least land with archaeological potential
7. Cost	- Similar cost to construct new bridge compared to Alts 3 and 4 - Least cost for ramp construction, similar to Alt. 4 - Moderate overall cost to construct embankments - Cost for staging similar to Alts 3 and 4 - Second lowest property cost	- Highest cost to construct new bridge compared to Alts 1 and 4 - Highest and the same construction cost for ramp construction - Lowest overall cost to construct embankments - Highest cost for staging - Highest property cost	- Similar cost to construct new bridge compared to Alts 1 and 4 - Moderate cost for ramp construction - Highest overall cost to construct embankments - Cost for staging similar to Alts 3 and 4 - Second highest property cost	- Slightly higher cost to construct new bridge compared to Alts 1 and 3 - Least cost for ramp construction, similar to Alt. 1 - Moderate overall cost to construct embankments but lower than Alt. 1 and Alt. 3 - Least cost for staging - Alts 1 and 3 - Lowest property cost	Alternative 4 since it has relatively low construction cost and lowest property cost

Alternative 4 is the Preferred Alternative because:

- it best meets drivers needs and expectations, can accommodate future expansion and is the safest
- It is the least complex to construct, can accommodate Dorchester Road traffic during construction and requires the least new infrastructure
- Avoids impacts on Dorchester Swamp PSW
- Relatively low construction cost, lowest property cost

Legend



Dorchester Road, Preferred Alternative 4, Parclo A-2 Interchange, Partial Shift Traffic Impacts During Construction

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General traffic impacts during construction are:

- Highway 401:
 - Short duration closures of Highway 401
 - Ramp closures will be required, but the duration of closures will be limited where possible
 - Lane reductions are anticipated through the construction area
- Dorchester Road:

Staged Construction Option	Full Closure Option
• One lane of traffic will be maintained in each direction through the construction area • Periodic closures of Dorchester Road to replace the structure are anticipated • Temporary ramp connections will be used to limit the impact of required ramp closures • Staged construction will take approximately 2 construction seasons	• Dorchester Road will be closed for the duration of construction (approximately 8 months) • Temporary ramp connections will be used to limit the impact of required ramp closures
- Preferred detour route for closures follows Cromarty Drive, Elgin Road and Hamilton Road
- Alternative detour routes may be considered by MTO in consultation with Middlesex County and the Municipality of Thames Centre
- Adjacent interchanges will not be closed at the same time
- Concerns expressed by EMS, County and local municipality have been addressed





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ELGIN ROAD

Elgin Road Interchange - Existing Conditions

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Natural Environment

- Dorchester Swamp Provincially Significant Wetland (PSW) surrounds the interchange. Designated as “Natural Environment Area” in Middlesex County Official Plan and “Group A Natural Heritage Lands” in Middlesex Centre Official Plan
- Potential Species at Risk/Species of Conservation Concern habitat adjacent to right-of-way (Blandings Turtle, Snapping Turtle)
- Streams in the Study Area support diverse fish populations, including Rock Bass, White Sucker, Pumpkinseed, Brook Trout, and Northern Brook Lamprey

Socio-Economic Environment

- Commuter parking lot at interchange
- Residences located north and south of interchange

Cultural Heritage Environment

- Existing bridge not considered to be a Provincial Heritage Property under the Ontario Heritage Bridge Guidelines
- An archaeological assessment may be required



Elgin Road (Middlesex Road 73) – Technically Preferred Alternative 1 - Parclo A-2 Interchange, On-Line Alignment

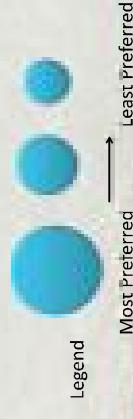


Alternative 2 – Parco A-2 Interchange with Roundabouts, On-Line Alignment



Elgin Road (Middlesex Road 73) Summary of Comparative Evaluation of Alternatives

Evaluation Criteria	Alternative 1 Parclo A-2 Interchange, On-Line Alignment	Alternative 2 Parclo A-2 Interchange with Roundabouts, On-Line Alignment	Alternative 3 Diamond Interchange, On-Line Alignment	Recommended Alternative
1. Traffic Operations and Safety	- Meets existing traffic needs/capacity requirements, most common interchange configuration - Interchange can be expanded in future - Improves consistency with MTO Highway Access Management Guidelines for separation to carpool parking lot	- Meets existing traffic needs/capacity requirements but roundabouts marginally decrease motorist/traffic ability to "flow" around interchange configurations, roundabouts reduce severity of collisions - Interchange expansion requires relocation of carpool parking lot - Connection of carpool parking lot to roundabout does not meet MTO best practices but alternative locations limited by environmental constraints - Relates good use of existing light road and requires the best new infrastructure Government Bridge but requires relocation of parking lot - Major traffic impacts during construction, same as A1.1 - Construction duration same as other alternatives - Requires some utility relocations, same as A1.1	- Meets existing and future needs/capacity requirements but increases potential for wrong-way movement on to Highway 401 - Future road design expansion to a Parclo A configuration requires significant construction to improve consistency with MTO best practices, same as A1.1	Alternative 1 is the most common interchange configuration and can be expanded in the future
2. Highway and Bridge Engineering	- Makes best use of existing infrastructure but requires the most new infrastructure (widest bridge and embankments) - Major traffic impacts during construction caused by closure of Elgin Road and long-term detour - Short-term on-site detours for Highway 401 traffic - Construction duration same as other alternatives - Requires some utility relocations	Same as Alternative 1	- Relates best use of existing infrastructure, same as A1.1, but requires more infrastructure due to wider bridge - Major traffic impacts during construction caused by closure of light road, same as other alternatives - Construction duration same as other alternatives - Requires more utility relocations than other alternatives	Equal
3. Drainage and Stormwater Management	Requires minor drainage modifications, meets MOE Stormwater Management requirements	Same as Alternative 1	Requires more extensive drainage modifications than other alternatives, meets MOE requirements	Alternatives 1 and 2 require the fewest drainage modifications
4. Natural Environment	- Affects fish habitat in Watercourses 2 and 3 - Removes 0.16 hectare of vegetation in Dorchester Swamp Provincially Significant Wetland (PSW) - potentially causing direct and indirect impacts on Species at Risk - Impacts on PSW limited to two interchange quadrants	- Same Relocations, impacts as Alternative 1 - Removes the most vegetation (0.58 hectares) in Dorchester Swamp PSW potentially causing the most direct and indirect impacts on Species at Risk - Impacts PSW in all four interchange quadrants	- Same Relocations, impacts as other alternatives - Removes slightly more vegetation (0.11 hectares) in Dorchester Swamp PSW than A1.1, potentially causing more direct and indirect impacts on Species at Risk - Impacts PSW in all four interchange quadrants	Alternative 1 minimizes impacts on Dorchester Swamp PSW



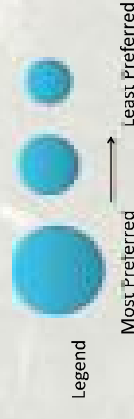
Elgin Road (Middlesex Road 73)

Summary of Comparative Evaluation of Alternatives, cont'd...

Evaluation Criteria	Alternative 1 Propose A-1 Interchange, On-Line Alignment	Alternative 2 Propose A-2 Interchange with Roundabouts, On-Line Alignment	Alternative 3 Propose A-3 Interchange, On-Line Alignment	Recommended Alternative
3. Socio-Economic Environment	- Can provide parking for use for expanded services - Generally conforms to SO County Road Official Plans but impacts environmentally significant Socheman Feeding	- Requires relocation of parking lot, but can be relocated - Generally conforms to Official Plans, same as Alt. 1 but has the most impacts on environmentally significant Socheman Feeding	- Same as Alternative 1 - Generally conforms to Official Plans, same as Alt. 1 but has more impacts on environmentally significant Socheman Feeding	Alternative 1 minimizes impacts on parking lot and Socheman Feeding
4. Cultural Heritage Resources	Affects the best land with archaeological potential	Affects the best land with archaeological potential	Affects slightly more land with archaeological potential than Alt. 2	Alternative 1 affects the least land with archaeological potential
5. Cost	- Highest overall construction cost (interchange structure and pavement area) - Requires the least property	- Lowest overall construction cost (interchange structure and pavement area) - Requires the most property	- Highest overall construction cost than Alt. 3 (interchange structure and pavement area) - Requires more property than Alt. 1	Alternative 2 has the lowest overall construction cost and requires the least pavement

Alternative 1 is the Preferred Alternative:

- Most common interchange configuration, can be expanded in the future
- Although it has major traffic impacts due to closure of Elgin Road during construction (same as other alternatives), the on-line alignment minimizes impacts on Dorchester PSW
- Minimizes impacts on Dorchester Road PSW
- Highest overall construction cost but the lowest property costs



Elgin Road, Preferred Alternative 1, Parcel A-2 Interchange, On-Line Alignment Impacts During Construction

32

General traffic impacts during construction are:

- Highway 401:
 - Short duration closures of Highway 401
 - Ramp closures will be required, but the duration of closures will be limited where possible
 - Lane reductions are anticipated through the construction area
- Elgin Road:
 - Construction of new bridge requires full closure of Elgin Road and a local road detour lasting approximately 8 months
 - Preferred detour route follows Cromarty Drive, Dorchester Road and Hamilton Road
 - Alternative detour routes may be considered by MTO in consultation with Middlesex County and the Municipality of Thames Centre
- Concerns expressed by EMS, County and local municipality have been addressed



Next Steps

	March 2015	April 2015	May 2015	June 2015	Beyond July 2015
Respond to comments received at PIC	Winter/Spring 2015				
Finalize Recommended Alternatives	Incorporate public comments and finalize design				
Publication of TESRs			Available for public review mid spring 2015		
Opportunity for Public Input		Please provide input throughout the project			
Initial Detailed Design				Initial Detailed Design	
Finalize Design and Construction					Detailed Design

MTO's Southern Highways Program indicates construction of the three interchange improvements and bridge replacements will be initiated between 2016 and 2018

Thank you for attending

Your input is important to the outcome of this project.

Please complete a comment form and return it by **April 7, 2015**

Project updates are available on the project website at: www.hwy401.middlesexbridges.ca

Information on this project is being collected 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.



Accessibility

Under the *Accessibility Standards for Customer Service Regulation (2008)*, the Ministry of Transportation, Ontario (MTO) is committed to ensuring that public participation opportunities are accessible to all participants. This Public Information Centre (PIC) incorporates the following accessibility features:

- Accessible venue location for persons with disabilities, including wheelchair ramps, accessible washrooms, parking and elevators
- For persons requiring assistance, project team members will:
 - Explain presentation board content
 - Assist with the preparation and submission of comment forms
- Reading aids are available, including magnifying glasses



Ontario Ministry of Transportation
Three Highway 401 Interchange Improvements & Bridge Replacements in Middlesex County

Public Information Centre – Comment Form

Please complete this form and return it to Dillon Consulting Limited. Information is being collected 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.

Agency:
(If applicable) _____

Name: _____

Mailing Address: _____

Email: _____

☐ I/we prefer to receive information by email.

Comments/Questions/Concerns (use back if more space is needed):

Please deposit this form in the comment box or return it by **April 7, 2015** to:

Dillon Consulting Limited
130 Dufferin Avenue, Suite 1400
London, Ontario, N6A 5R2

Tel: 519-438-6192
Fax: 519-672-8209
E-mail: hw401middlesexbridges@dillon.ca

Attention: Janet Smolders, MCIP
File No. 12-7110





Fox, Brandon <bfox@dillon.ca>

Highway 401 Three Interchange Improvements Public Information Centre Follow-up

1 message

Fox, Brandon <bfox@dillon.ca>

Tue, Apr 7, 2015 at 1:18 PM

To: "Middlesex Bridges (MEGA EA)" <hwy401middlesexbridges@dillon.ca>

Cc: 127110 <127110@dillon.ca>

Bcc: djoyce@suncor.com, sethier@suncor.com, info@dcfc.ca, bjones@uniongas.com, bell.moc@netricom.com, snowsellm@thamesriver.on.ca, helstenm@thamesriver.on.ca, info@carolinian.org, Sandy Levin <s.levin@sympatico.ca>, mfa4h@bellnet.ca, lqbal.Kalsi@mlhu.on.ca, rkalan@thamescentre.on.ca, mjenner@thamescentre.on.ca, gborduas@thamescentre.on.ca, shari.prowse@ontario.ca, craig.cooper@ontario.ca, andrea.fleischhauer@ontario.ca, drew.crinklaw@ontario.ca, tina.dufresne@ontario.ca, craig.newton@ontario.ca, emily.morton@dfo-mpo.gc.ca, jeff.yurek@pc.ola.org

Hello,

Enclosed is a copy of the displays presented at the Public Information Centre held for the above mentioned project on March 26, 2015. If you have any comments, questions or concerns, please fill in the enclosed comment form and return it to Dillon at your earliest convenience.

Sincerely,



Brandon Fox

Dillon Consulting Limited

130 Dufferin Avenue Suite 1400

London, Ontario, N6A 5R2

T - 519-438-1288 ext. 1307

F - 519 - 672-8209

BFox@dillon.ca

www.dillon.ca



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2 attachments



FINAL PIC Boards 030515 8.pdf
18446K



Comment Form - 022415.pdf
89K

April 21, 2015



County of Middlesex
399 Ridout Street North
London, ON
N6A 2P1

Attention: Ms. Kathy Bunting
Clerk

***Ministry of Transportation
Highway 401 Three Interchange Improvements and Bridge Replacements in
Middlesex County
Public Information Centre Displays***

Dear Ms. Bunting:

Enclosed is a copy of the displays presented at the Public Information Centre (PIC) held for the above mentioned project on March 26, 2015. If you have any comments, questions or concerns, please fill in the enclosed comment form and return it to Dillon at your earliest convenience.

Yours sincerely,

DILLON CONSULTING LIMITED

A handwritten signature in blue ink, appearing to read "B. Fox", is written over a faint, larger signature that appears to read "Jeff Matthews".

Brandon Fox, B.E.S.
for Jeff Matthews, P.Eng.
Project Manager

BJF:amw
Encl.

Our file: 12-7110

130
Dufferin Avenue
London, Ontario
Canada
N6A 5R2
Mail: Box 426
London, Ontario
Canada
N6A 4B7
Telephone
(519) 438-6192
Fax
(519) 672-8209

Dillon Consulting
Limited



CHIPPEWAS OF THE THAMES FIRST NATION

March 23, 2015

Cathy Giesbrecht
Head, Environmental Section
Ministry of Transportation, West Region
659 Exeter Road
London, Ontario N5E 1L3

Subject: Three Highway 401 Interchange Improvements & Bridge Replacements in Middlesex County, Notice of Public Information Centre

Dear Cathy,

We are in receipt of correspondence of the aforementioned project.

In our screening of your correspondence we have identified no concerns with your project or the information that you have presented to us at this time.

We ask that if there are any changes to your project that are of a substantive nature that you keep us informed.

Thank you for notifying Chippewa of the Thames First Nation.

Sincerely,

Fallon Burch
Chippewa of the Thames
Consultation Coordinator

c: Jeff Matthews, P.Eng., Project Manager, Dillon Consulting Limited
Dan Barber, P.Eng., Sr. Project Engineer, Ministry of Transportation



Smolders, Janet <jsmolders@dillon.ca>

Re: 401 Bridges

1 message

Fox, Brandon <bfox@dillon.ca>

Fri, Mar 27, 2015 at 10:41 AM

To: Chris Traini <ctraini@middlesex.ca>

Cc: Jeff Matthews <jmatthews@dillon.ca>, Brad Craig <bcraig@dillon.ca>, 127110 <127110@dillon.ca>, "Barber, Dan (MTO)" <Dan.Barber@ontario.ca>, "Middlesex Bridges (MEGA EA)" <hwy401middlesexbridges@dillon.ca>

Hi Chris,

As requested, below is a link to the PIC display boards for the Highway 401 Three Interchange Improvements public meeting held on March 26, 2015. I have also attached a copy of the project comment form. We are requesting to receive comments by April 7, 2015.

Link to PIC Display Boards:<https://drive.google.com/file/d/0B1z4YClc2c8iNm5Nv1gtYlp3U0E/view?usp=sharing>

Thanks,
Brandon



Brandon Fox
Dillon Consulting Limited
130 Dufferin Avenue Suite 1400
London, Ontario, N6A 5R2
T - 519-438-1288 ext. 1307
F - 519 - 872-8209
bfox@dillon.ca
www.dillon.ca



Please consider the environment before printing this email

On Tue, Mar 24, 2015 at 10:27 PM, Matthews, Jeff <jmatthews@dillon.ca> wrote:

Hi Chris,

We are still finalizing...will email as soon as we are done.

Jeff



Jeff Matthews
Partner
Dillon Consulting Limited
130 Dufferin Avenue Suite 1400
London, Ontario, N6A 5R2
T - 519-438-1288 ext. 1275
F - 519.872.8209
M - 519-821-5834
jmatthews@dillon.ca
www.dillon.ca



Please consider the environment before printing this email

On Mon, Mar 23, 2015 at 8:28 AM, Chris Traini <ctraini@middlesex.ca> wrote:

Ontario Ministry of Transportation
Three Highway 401 Interchange Improvements & Bridge Replacements in Middlesex County

Public Information Centre – Comment Form

Please complete this form and return it to Dillon Consulting Limited. Information is being collected 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.

Agency:
(If applicable) Thames Centre

Name: M Meyer

Mailing Address: _____

Email: M.Meyer@Thamescentre.on.ca

☐ I/we prefer to receive information by email.

Comments/Questions/Concerns (use back if more space is needed):

- Parking lot at Westchester would be worth looking at - Speak to Perry Sim @ Husky
- wonder how Transports that park on on/off ramps will be accommodated.
- Would like to suggest pullings from Road go to municipality as part of Inconvenience -
- Do not think Round about have any merit on 74.

Please deposit this form in the comment box or return it by **April 7, 2015** to:

Dillon Consulting Limited
130 Dufferin Avenue, Suite 1400
London, Ontario, N6A 5R2

Tel: 519-438-8192
Fax: 519-872-8209
E-mail: hwy401middlesexbridges@dillon.ca

Attention: Janet Smolders, MCIP
File No. 12-07110





Smolders, Janet <jsmolders@dillon.ca>

Hwy 401 Three Interchange Improvements & Bridge Replacements - PIC Displays

1 message

Fox, Brandon <bfox@dillon.ca>

Fri, Mar 27, 2015 at 10:45 AM

To: mmeyer@thamescentre.on.ca

Cc: Jeff Matthews <jmatthews@dillon.ca>, "Barber, Dan (MTO)" <Dan.Barber@ontario.ca>, "Middlesex Bridges (MEGA EA)" <hwy401middlesexbridges@dillon.ca>, 127110 <127110@dillon.ca>

Mr. Meyer,

Thank you for attending for the Public Information Centre for the above noted project last night. As requested at the meeting, below is a link to the project website where an electronic copy of the PIC display panels and comment form can be downloaded.

<https://sites.google.com/a/dillon.ca/10bridges-ca/hwy401middlesexbridges/middlesex-bridges---notices>

Thanks,
Brandon

Brandon Fox
Dillon Consulting Limited
130 Dufferin Avenue Suite 1400
London, Ontario, N6A 5R2
T - 519-438-1288 ext. 1307
F - 519 - 872-8209
bfox@dillon.ca
www.dillon.ca



Please consider the environment before printing (Ais email)

UPPER THAMES RIVER CONSERVATION AUTHORITY

"Inspiring a Healthier Environment"



March 28, 2015

Dillon Consulting Limited
130 Dufferin Avenue
London, Ontario
N6A 5R2

Attention: Jeff Matthews - (via e-mail: bwy401middlesexbridges@dillon.ca)

Dear Mr. Matthews:

Re: Ministry of Transportation Ontario, Notice of Public Information Centre
[Three] Highway #401 Interchange Improvements & Bridge Replacements
Middlesex Road 74 (Westchester Bourne), Middlesex Road 32 (Dorchester
Road), Middlesex Road 73 (Elgin Road)
County of Middlesex

Upper Thames River Conservation Authority (UTRCA) staff are in receipt of your letter (dated March 9, 2015) regarding the *Ministry of Transportation, Ontario, Notice of Public Information Centre: Three Highway 401 Interchange Improvements and Bridge Replacements in Middlesex County*. We offer the following comments:

(Please note that our scope of review is based on the policies set out in the Upper Thames River Conservation Authority Planning Policy Manual (June 28, 2006). EA review for the proposed Highway 401 Interchange Improvements and Bridge Replacements project would generally be guided by, but not limited to, natural heritage, natural hazard, and pollution prevention areas of concern for lands regulated within our jurisdiction.)

General Comments

- 1) Please note that given the broad concept proposal at this time, we are unable to provide detailed technical comments. However, we appreciate being contacted early in the process and are always open to meeting with you to discuss and work through any concerns or complications along the way.

UTRCA Regulated Areas

- 2) According to the enclosed project location mapping, two of the three underpass locations (Dorchester Road and Elgin Road) occur within or adjacent natural hazard and natural heritage features regulated by the UTRCA. Provincially Significant Wetland (PSW) areas as well as riverine flood and erosion hazard features associated with a variety of watercourses exist within the study area. Mapping which outlines these features is available upon request. (Please refer to Digital Mapping – Item #4 below).

There do not appear to be any UTRCA regulated natural hazard and/or natural heritage areas associated with Road 74 (Westchester Bourne).

UTRCA Owned Lands

- 3) Aside from the properties/features regulated by the Conservation Authority, the UTRCA additionally owns a variety of properties adjacent the Elgin Road interchange. Mapping which outlines properties owned by the UTRCA is available upon request. (Please refer to Digital Mapping – Item #4 below).

Digital Mapping

- 4) Our staff can provide digital mapping which outlines the boundaries of the natural heritage and natural hazard features present within the UTRCA portion of the study area. Our natural heritage and natural hazard features digital mapping may be obtained by contacting our GIS department (contact: Phil Simm, 519-451-2800 x 247). Generally the fee involved with obtaining digital mapping of our natural heritage and natural hazard features is \$100.

Hydrology/Hydraulic Considerations

- 5) Any proposed work or activity in the vicinity of these natural hazards should be designed: a) with regard for the potential for flooding and erosion within the MTO property; and b) to avoid exacerbating flood and erosion concerns on adjacent, upstream and/or downstream properties.
- 6) Should bridge and/or culvert replacements be required at any of the watercrossing structures along Highway #401 within the study area we recommend the EA consider/evaluate potential bridge configurations with the hydraulic capacity to convey – at a minimum - the 250yr return period flows, with additional consideration of a factor of safety for ice/debris blockage. The evaluation should consider the benefit of reducing flood risk/damages (upstream/downstream) with respect to the bridge hydraulic capacity.

Aquatic Ecology

- 7) According to our records, the watercourses within and/or adjacent to the Dorchester Road interchange are classified as warmwater, baitfish containing watercourses. For these watercourses, we recommend that any proposed works be planned to mitigate effects on the warmwater baitfish community. Ideally, to protect these local fish populations during their spawning and nursery periods, no in-water work or activity should occur on these reaches from **March 15th to June 30th** of any year.

According to our records, the watercourses within and/or adjacent to the Elgin Road interchange are classified as coldwater, salmonid containing watercourses. We recommend that any proposed works be planned to mitigate effects on this coldwater stream community. Ideally, to protect local fish populations during their spawning and nursery periods, no in-water work or activity should occur on these reaches from **September 15th to June 30th** of any year.

- 8) Detailed fish/mussel and benthic sampling records may be available from our office for some of these watercourses. Generally there is a fee involved with obtaining this information.

Terrestrial Ecology

- 9) Our data indicates the potential presence of a variety of provincially protected Species At Risk (SAR) – plants - in the vicinity of the Elgin Road (Road 73) interchange. The Ontario Ministry of Natural Resources and Forestry (MNR) would be the agency responsible for provincially protected SAR species and the one to contact directly regarding SAR information.
- 10) If replacement of any bridges are required, we would suggest that terrestrial field surveys be undertaken to determine what species of birds (if any) may be nesting underneath the structures. The UTRCA has no bird records for the specified areas to suggest what species may be using the bridges as nesting habitat. If any species have been confirmed appropriate mitigation measures may need to be taken to ensure that the work being undertaken does not impact the individuals or their habitat and as a result contravene any relevant legislation (e.g. *Endangered Species Act*, *Migratory Birds Convention Act*).
- 11) Our staff note recent (Species At Risk) Blanding's Turtle records in the vicinity of the Dorchester Road and Elgin Road interchanges and we note a recent record of Blanding's Turtle mortality on one of the Dorchester Road interchange ramps.
- 12) UTRCA staff do not have any reptile and/or amphibian records for the study area. If the work area includes any rip rap or crevices staff would suggest these areas are surveyed for snakes, in particular whether there are any snakes using the site as a hibernacula. It will be important to protect any existing hibernacula as well as exclude snakes from entering the work area during construction.

Areas of Natural or Scientific Interest

- 13) Our data indicates the presence of an Areas of Natural or Scientific Interest (ANSIs) located within the Elgin Road interchange study area. However, MNR would be the agency responsible for ANSI data and the one to contact directly regarding ANSI information.

Water Quality, Woodlands and Other Natural Heritage Features

- 14) The study areas for all three interchanges lie within portions of the Dorchester and Dingman Creek subwatersheds. Please refer to our latest (2012) edition of the Upper Thames River Watershed Report Cards for information related to water quality, woodlands and other natural heritage features, available on our website at:

www.thamesriver.on.ca/Watershed_Report_Cards/Watershed_Report_Cards-2012.htm

Drinking Water Source Protection

- 15) We are also providing Drinking Water Source Protection information for all projects occurring in areas identified as vulnerable. To that end, please review the attached Drinking Water Source Protection information (Appendix A).

We would appreciate receiving information and reports as they become available in order to ensure that we can meet the project deadlines with our comments.

Should you require clarification on any of the above or have any further questions, please do not hesitate to contact the undersigned.

Yours truly,

UPPER THAMES RIVER CONSERVATION AUTHORITY



Karen Winfield

Land Use Regulations Officer

(Tel. (519)-451-2800 x 237)

c.c. - Don Barber, MTO - (via e-mail: Don.Barber@ontario.com)

Encl. - Appendix A (Drinking Water Source Protection Information applicable to the proposed MTO
Three Highway 401 Interchange Improvements and Bridge Replacements in Middlesex County)

Appendix A – Drinking Water Source Protection Information applicable to the proposed MTO Three Highway 401 Interchange Improvements and Bridge Replacements in Middlesex County

DRINKING WATER SOURCE PROTECTION

The *Clean Water Act* (CWA), 2006 is intended to protect existing and future sources of drinking water. The Act is part of the Ontario government's commitment to implement the recommendations of the Walkerton Inquiry as well as protecting and enhancing human health and the environment. The CWA sets out a framework for source protection planning on a watershed basis with Source Protection Areas established based on the watershed boundaries of Ontario's 36 Conservation Authorities. The Upper Thames River, Lower Thames Valley and St. Clair Region Conservation Authorities have entered into a partnership for The Thames-Sydenham Source Protection Region. Drinking Water Source Protection represents the first barrier for protecting drinking water including surface and ground water from becoming contaminated or overused thereby ensuring a sufficient, clean, safe supply now and for the future.

Assessment Reports:

The Thames-Sydenham Source Protection Region has prepared *Assessment Reports* which contain detailed scientific information that:

- identifies vulnerable areas associated with drinking water systems,
- assesses the level of vulnerability in these areas, and
- identifies activities within those vulnerable areas which pose threats to the drinking water systems, and assess the risk due to those threats.

The Assessment Report for the Upper Thames watershed delineates three types of vulnerable areas: Wellhead Protection Areas, Highly Vulnerable Aquifers and Significant Groundwater Recharge Areas. We wish to advise that two of the interchange locations contain areas identified as being a Wellhead Protection Area, Highly Vulnerable Aquifer and Significant Groundwater Recharge Areas.

Mapping which shows these areas is available at:

Wellhead Protection Areas:

<http://www.sourcewaterprotection.on.ca/utrcs-assessment-report/>

Highly Vulnerable Aquifers:

http://www.sourcewaterprotection.on.ca/wp-content/uploads/UTRCA/Appendices/A1-Maps/Map4-3-2_Highly%20Vulnerable%20Aquifers.pdf

Significant Groundwater Recharge Areas:

<http://www.sourcewaterprotection.on.ca/wp-content/uploads/UTRCA/Appendices/A1-Maps/Map4-2-2%20SGRA%20Vulnerability.pdf>

Source Protection Plans:

Using the information in the *Assessment Report*, an *Amended Proposed Source Protection Plan* has been developed for the Upper Thames watershed. The *Proposed Source Protection Plan*, along with any written comments, has now been submitted to the Province for approval by the Minister of the Environment. The *Amended Proposed Source Protection Plan* is available at:

<http://www.sourcewaterprotection.on.ca/source-protection-plan/amended-proposed-source-protection-plan/>

The *Amended Proposed Plan* consists of a range of policies that together, will reduce the risks posed by the identified water quality and quantity threats in the vulnerable areas. These proposed policies include a

range of voluntary and regulated approaches to manage or prohibit activities which pose a threat to drinking water. Activities that can lead to low, medium and significant threats have been identified in Appendix 10 of the *Upper Thames River Source Protection Area Assessment Report*, dated August 12, 2011. Available at:

<http://www.sourcewaterprotection.on.ca/utrsa-assessment-report/>

A) Middlesex Road 74 (Westchester Bourse)

- No threats currently identified at this interchange location.

B) Middlesex Road 12 (Dorchester Road)

AREA OF VULNERABILITY	VULNERABILITY SCORE	THREATS CIRCUMSTANCES	&
Highly Vulnerable Aquifer (HVA)	6	Moderate and Low threats	
Significant Groundwater Recharge Area (SGRA)	6 & 2	Moderate and Low threats	
Wellhead Protection Area (WHPA) WHPA (E)	6.3	Moderate and Low threats	

Certain Activities in the vicinity of this interchange may be considered *Moderate or Low* threats to drinking water.

C) Middlesex Road 73 (Elgin Road)

AREA OF VULNERABILITY	VULNERABILITY SCORE	THREATS CIRCUMSTANCES	&
Highly Vulnerable Aquifer (HVA)	6	Moderate and Low threats	
Significant Groundwater Recharge Area (SGRA)	6	Moderate and Low threats	
Wellhead Protection Area (WHPA) WHPA (D) WHPA (E)	6 6.3	Moderate and Low threats	

Certain Activities in the vicinity of this interchange may be considered *Moderate or Low* threats to drinking water.

Under the CWA, the Source Protection Committee has the authority to include policies in the *Proposed Source Protection Plan* that may prohibit or restrict activities identified as posing a *significant threat* to drinking water. Municipalities may also have or be developing policies that apply to vulnerable areas when reviewing development applications. Proponents considering land use changes, site alteration or construction in these areas need to be aware of this possibility.

Provincial Policy Statement (PPS, 2005):

Section 2.2.1 requires that:

"Planning authorities shall protect, improve or restore the quality and quantity of water by: d) implementing necessary restrictions on development and site alteration so:

- 1. protect all municipal drinking water supplies and designated vulnerable areas; and*
- 2. protect, improve or restore vulnerable surface and ground water features, and their hydrological functions"*

Section 2.2.2 requires that:

"Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restored".

Municipalities must be consistent with the Provincial Policy Statement when making decisions on land use planning and development.

Ministry of Transportation
Manager of Engineering
West Region

659 Exeter Road
London, Ontario N6E 1L3
Telephone: (519) 873-4373
Facsimile: (519) 873-4388

Ministère des Transports
Chef du Bureau du génie
Région de l'Ouest

659, chemin Exeter
London (Ontario) N6E 1L3
Téléphone : (519) 873-4373
Télécopieur : (519) 873-4388



December 2, 2015

Mr. Mike LaBlanc
Director, Operations
Municipality of Thames Centre
4305 Hamilton Rd
Dorchester, Ontario
N0L 1G3

Dear Mr. LaBlanc:

RE: GWP 3053-11-00 - Detour Routes for Structure Replacements and Interchange Improvements on Highway 401 at Westchester Bourne, Dorchester Road and Elgin Road

Thank you for meeting with ministry staff and Dillon Consulting Ltd staff on November 10, 2015 regarding the proposed detour routes for the above noted projects. Further to that meeting, I want to communicate the action MTO will take.

- Pre-construction and post-construction pavement reviews of the detour routes will be conducted. MTO will be financially responsible for any damage that results from the detoured Highway 401 traffic and will work with the Municipality to address any damage that may occur.
- For all closures of Highway 401, there will be OPP presence at key intersections along the detour routes to aid in efficient movement of traffic.
- As part of the next design phase:
 - The intersections along the detour routes will be evaluated. Where operational improvements are needed due to increased traffic volumes, MTO will fund the improvements and work with the Municipality to have them implemented.
 - MTO will consult with County and Municipality staff to provide more detailed timing of construction and closures.

The project team has committed to advising Municipality staff when the Transportation Environmental Study Reports (TESRs) are published for these projects.

Should you have any further project related questions, please contact Dan Barber, Senior Project Engineer at 519-873-4812 or Dan.Barber@ontario.ca.

Sincerely,

for Martin Favell, P. Eng.
A/Manager of Engineering

c: Dan Barber, P.Eng. Senior Project Engineer
Jeff Matthews, P.Eng. Consultant Project Manager, Dillon Consulting Ltd.

Ministry of Transportation
Manager of Engineering
West Region

659 Easter Road
London, Ontario N6E 1L3
Telephone: (519) 873-4373
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December 2, 2015

Mr. Chris Traini, P.Eng
County Engineer
Middlesex County
Administration Offices
399 Ridout Street North
London, ON
N6A 2P1

Dear Mr. Traini:

RE: GWP 3053-11-00 - Detour Routes for Structure Replacements and Interchange Improvements on Highway 401 at Westchester Bourne, Dorchester Road and Elgin Road

Thank you for meeting with ministry staff and Dillon Consulting Ltd staff on November 10, 2015 regarding the proposed detour routes for the above noted projects. Further to that meeting, I want to communicate the action MTO will take.

- Pre-construction and post-construction pavement reviews of the detour routes will be conducted. MTO will be financially responsible for any damage that results from the detoured Highway 401 traffic and will work with the County to address any damage that may occur.
- For all closures of Highway 401, there will be OPP presence at key intersections along the detour routes to aid in efficient movement of traffic.
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 - MTO will consult with County and Municipality staff to provide more detailed timing of construction and closures.

The project team has committed to advising County staff when the Transportation Environmental Study Reports (TESRs) are published for these projects.

Should you have any further project related questions, please contact Dan Barber, Senior Project Engineer at 519-873-4812 or Dan.Barber@ontario.ca.

Sincerely,

for Martin Favell, P. Eng.
A/Manager of Engineering

c: Dan Barber, P.Eng. Senior Project Engineer
Jeff Matthews, P.Eng. Consultant Project Manager, Dillon Consulting Ltd.