

Detroit River International Crossing



Environmental Assessment Terms of Reference

May 2004

Preface

The Detroit River International Crossing Environmental Terms of Reference (TOR) reflects recent changes in approaches at the Ontario Ministry of Transportation (MTO) and the Ministry of the Environment (MOE) to the preparation of Terms of Reference. These changes are in response to a recent court decision with respect to the interpretation of Section 6.2(c) of the Ontario Environmental Assessment Act 1997 (OEAA). The court's interpretation of the wording and intent of the OEAA does not provide for any scoping of the work to be completed during the environmental assessment. Consequently, MOE has indicated that a TOR which is considered by MOE to have scoped any aspects of the work to be completed in the environmental assessment, will not be approved.

The Detroit River International Crossing TOR provides a framework to guide the preparation of the Environmental Assessment (EA). This framework will apply to the definition of the purpose of the undertaking, the development and assessment of alternatives, the development of a study area, consultation during the preparation of the EA and monitoring. As such, the Detroit River TOR is distinguished from previous TOR's in that it does not identify the undertaking or the study area, nor does it provide work plans to guide the activities to be undertaken during the OEA.

MTO is committed to meeting the requirements of the OEAA (as well as Canadian Environmental Assessment Act and U.S. NEPA requirements) as it conducts the EA. The definition of the purpose of the undertaking, the alternatives to be considered, and work plans describing how the benefits and impacts of the project will be assessed will be provided as the EA is conducted.

Table of Contents

Preface.....	i
1. Introduction and Background.....	1
1.1. Background	1
1.2. Purpose of the OEAA Terms of Reference.....	5
1.3. Ontario, Canadian and U.S. Planning and Environmental Assessment Processes.....	6
1.3.1. Ontario Environmental Assessment Act Requirements.....	6
1.3.2. Canadian Environmental Assessment Act (CEAA) Requirements.....	6
1.3.3. U.S. National Environmental Policy Act (NEPA) Requirements	8
1.3.4. Integrated Environmental Study Process	9
1.4. Statement of Proponency	9
1.5. Submission Statement.....	9
2. Purpose of the Undertaking.....	12
2.1. Overview and Outlook	12
2.1.1. Trade.....	12
2.1.2. Travel Demand	13
2.1.3. Existing Windsor-Detroit Border Crossings	16
2.1.4. Border Processing	21
2.2. Summary of Transportation Problems	22
2.3. Transportation Opportunities	23
3. Assessment and Evaluation	25
3.1. Process for Identifying and Assessing Transportation Planning Alternatives (Alternatives to the Undertaking)	25
3.2. Process for Generating a Study Area	28
3.3. Process for the Generation and Evaluation of Alternatives (Alternative Methods).....	29
3.3.1. Illustrative Alternatives (Alternative Methods)	30
3.3.2. Practical Alternatives.....	40
3.4. Process for Assessing and Evaluating Concept Design Alternative(s)	41
3.4.1. Development of the Concept Design.....	41
3.4.2. Factor Specific Environmental Inputs to the Generation and Assessment of Concept Design Alternatives	42
3.4.3. Selection of the Preferred Concept Design Alternative(s)	42
4. Monitoring Strategy	43
4.1. Project Technical Monitoring	43
4.2. OEA Process Monitoring	43
5. Consultation for the Integrated Environmental Study Process.....	44
5.1. Public Consultation During the Integrated Environmental Study Process.....	45
5.1.1. Public Information Open Houses and Follow-up Activities	45
5.1.2. Public Notification	47

5.1.3.	Private Sector Advisory Group	47
5.2.	Approach for Consulting External Agencies, Ministries and First Nations during the Integrated Environmental Study Process.....	48
5.2.1.	Ministries/Departments/Agencies.....	48
5.2.2.	Federal Agencies	49
5.2.3.	Municipalities	50
5.2.4.	Municipal Councils	51
5.2.5.	First Nations.....	51
5.3.	Pre-Submission Review of the Environmental Assessment Report/Environmental Impact Statement	52
5.4.	Submission of the EA/EIS/CEA Screening Report	52
5.5.	Consultation in Preparation of the OEA Terms of Reference	53
6.	Other Approvals Required	53

List of Exhibits

Exhibit 1.1 – Bi-National Planning and Environmental Process	3
Exhibit 1.2 – Key Map	4
Exhibit 1.3 – Schematic Illustration of the Integrated Nepa/Oeaa/Ceaa Process Environmental Study Process for Detroit River International Crossing.....	11
Exhibit 2.1 – Cross-Border Trips By Mode (2000)	14
Exhibit 2.2 – Cross-Border Passenger Car Trips By Trip Purpose, 2000 Weekday	14
Exhibit 2.3 – Windsor-Detroit Cross-Border Traffic, Historic and Projected	16
Exhibit 2.4 – Typical Border Crossing System	17
Exhibit 3.1 – Focusing the Range of Alternatives Generated as the Project Proceeds	30
Exhibit 3.1 – Common Point Analysis	35
Exhibit 5.1 – Proposed Public Consultation During Integrated Environmental Study Process.....	46

List of Tables

Table 2.1 – 2000 Daily International Traffic Crossing at Windsor-Detroit By Vehicle and Trip Type	15
Table 3.1 – Proposed Factors and Criteria for Identifying and Assessing Transportation Planning Alternatives..	27
Table 3.2 – Proposed Factors and Criteria to Assess Feasibility of the Opportunity Corridors.....	32
Table 3.3 – Environmental Components and Features to be Considered During the Generation of Alternatives	33
Table 3.4 – Criteria for Evaluating Illustrative and Practical Alternatives	38

Glossary.....	iv
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Supporting Documents (Under Separate Cover)

Glossary

CEA – Canadian Environmental Assessment

CEAA – Canadian Environmental Assessment Act

EA – Environmental Assessment

EIS – Environmental Impact Statement

FHWA – Federal Highway Administration

MDOT – Michigan Department of Transportation

MTO – Ontario Ministry of Transportation

NEPA – U.S. National Environmental Policy Act

OEA – Ontario Environmental Assessment

OEAA – Ontario Environmental Assessment Act

P/NF – Planning/Need and Feasibility Study

RA – Responsible Authority

TC – Transport Canada

TOR – OEAA Terms of Reference

1. Introduction and Background

1.1. Background

The Canada-U.S.-Ontario-Michigan Border Transportation Partnership includes the transportation authorities from two federal governments and two provincial/state governments. The Federal Highway Administration (FHWA) is an arm of the U.S. Department of Transportation and Transport Canada (TC) is the corresponding federal level agency in Canada. The Ontario Ministry of Transportation (MTO) and the Michigan Department of Transportation (MDOT) are the provincial and state agencies that have roadway jurisdiction on each side of the border between Ontario and Michigan.

The purpose of the Partnership is to improve the movement of people, goods and services across the United States and Canadian border within the region of Southeast Michigan and Southwest Ontario. The overall objectives of the Partnership in support of this purpose are the following:

- a) To improve the movement of people, goods and services in a safe and efficient manner across the U.S./Canadian border at the Detroit and St. Clair Rivers to connect with existing national, provincial and regional transportation systems, such as I-75 and Highway 401;
- b) To enhance the regional economic vitality and Canadian/U.S. trade;
- c) To meet the long term needs of the U.S. and Canadian border inspection agencies;
- d) To expedite the planning and environmental study process to ensure that future travel demands in this region can be accommodated in a timely manner;
- e) To ensure that all modes of surface transportation including road, rail and marine will be considered;
- f) To use a single integrated planning and environmental study process, resulting in a single product, which will meet the requirements of all members of the Partnership;
- g) To ensure that any solutions which are developed as a result of the above integrated planning and environmental study process comply with all relevant and applicable federal, provincial, state and/or municipal laws, regulations, bylaws, ordinances or other binding enactments validly created by bodies with legislative or rule-making authority;
- h) To ensure that the process is conducted in a financially responsible and prudent manner; and
- i) To ensure that intelligent transportation systems/state-of-the-art facilities be provided to enhance border crossing efficiency.

The Partnership jointly commissioned a Planning/Need and Feasibility Study (P/NF), which identified a long-term strategy to address the safe and efficient movement of people and goods between Southeast Michigan and Southwest Ontario. Although conducted in a manner consistent with the environmental study processes in both countries, the P/NF Study was not completed within the formal environmental study

framework. The findings of the P/NF Study, however, serve as an important basis for governments to move forward in the development and improvement of cross-border transportation services, including proceeding with the environmental study processes in the U.S. and Canada for major transportation improvements at the Detroit River international crossing. The process relating the Planning/Need and Feasibility Study to implementation of border crossing improvements is illustrated schematically in Exhibit 1.1.

A consultation component was incorporated in the P/NF Study process. Canadian and U.S. government departments, ministries and agencies, local municipalities, First Nations groups, private sector stakeholders in border transportation issues, as well as the general public were engaged in the course of the study. Throughout the P/NF Study, the Partnership affirmed that the findings of the P/NF Study may be used to initiate environmental studies in accordance with the requirements of the U.S. National Environmental Policy Act (NEPA), Canadian Environmental Assessment Act (CEAA) and Ontario Environmental Assessment Act (OEAA). This step would be followed by completion of the appropriate environmental impact/assessment studies, design of the approved improvements and ultimately, construction. Recommendations considered to be minor infrastructure or operational improvements could be implemented more directly, in accordance with the appropriate legislation. It is important to note that the Partnership is committed to implementing effective consultation programs throughout the study process.

The transportation problems and opportunities identified during the P/NF Study provide the basis for the Partnership to initiate the environmental study processes for the development and assessment of transportation alternatives at the Detroit River international crossing. A key map is provided in Exhibit 1.2.

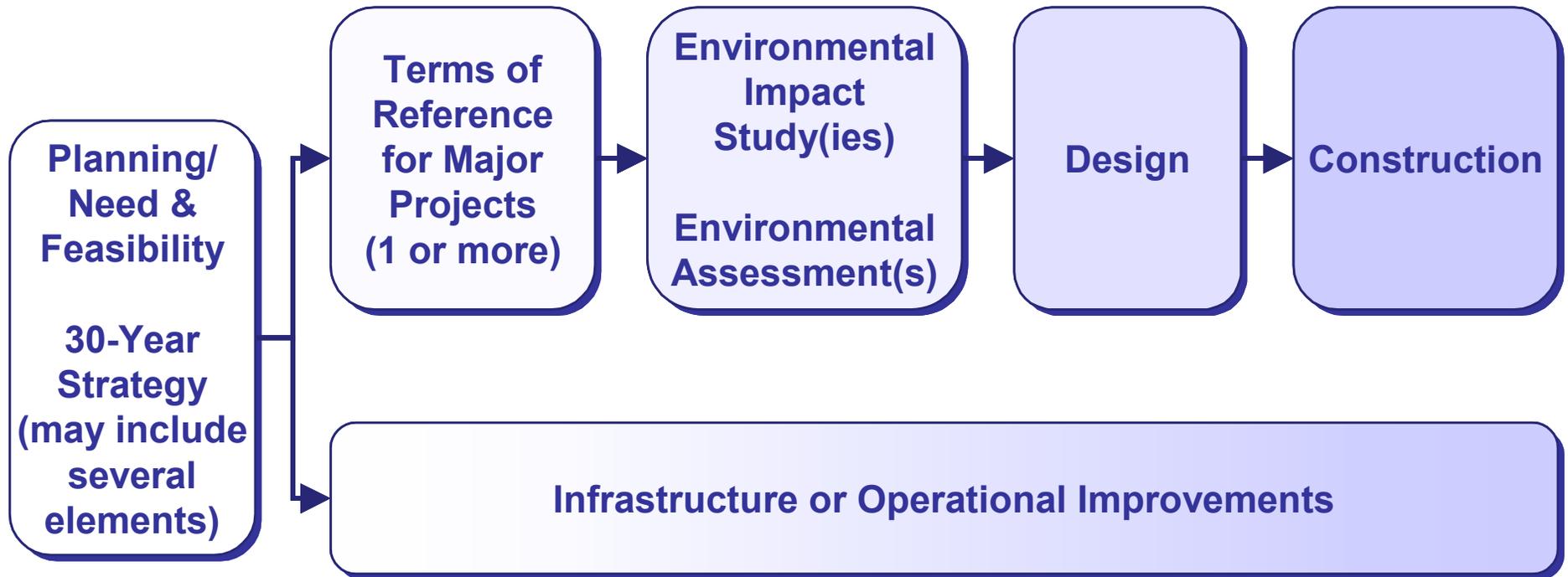
In Ontario, the environmental study process requires that major transportation improvements be carried forward as an environmental assessment. The first step in completing an environmental assessment in Ontario is the preparation of this Environmental Assessment Terms of Reference (TOR), which is hereby submitted to the Ontario Minister of the Environment for approval.

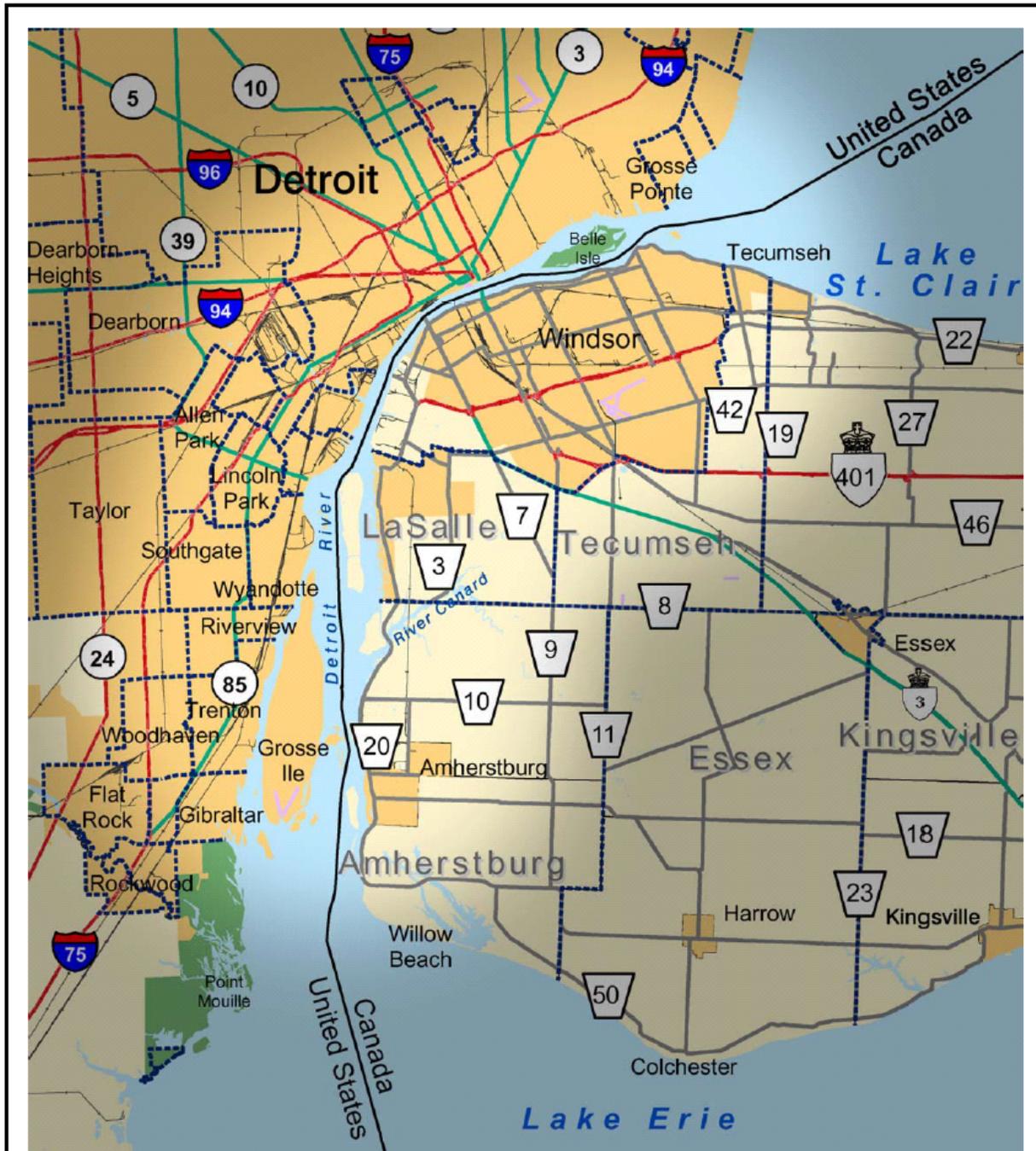
For clarity, 'OEA' will be used to refer to the Ontario Environmental Assessment, which is distinct from the NEPA and CEAA references to 'environmental assessment.'

The findings of the P/NF Study will be brought forward into the formal environmental study process for consultation. The work completed under the P/NF Study, may therefore, be modified and/or refined to reflect comments received and work carried out under the formal environmental study processes.

The Detroit River International Crossing Project is being undertaken to address the long-term needs of the border transportation network. Recognizing the timeframe required to plan and implement major transportation infrastructure (i.e. 8-10 years), the environmental study processes for a Detroit River International Crossing have been initiated. Infrastructure and operational improvements have been initiated that address the frequent and extended truck traffic delays and current congestion on approaches to existing border crossings in both the U.S. and Canada, including:

EXHIBIT 1.1 – BI-NATIONAL PLANNING AND ENVIRONMENTAL PROCESS





	DETROIT RIVER INTERNATIONAL CROSSING ENVIRONMENTAL ASSESSMENT TERMS OF REFERENCE	KEY MAP	Exhibit 1.2

- Efforts by border processing agencies to provide additional staff at the border and promote use of the NEXUS and FAST programs;
- FHWA and MDOT, together with other government agencies, the City of Detroit and the Ambassador Bridge, are proceeding with plaza and freeway connection improvements on the U.S. side of the Ambassador Bridge;
- Transport Canada, MTO and City of Windsor have agreed to a Let's Get Windsor-Essex Moving Strategy. The first phase of the strategy includes projects to speed up the flow of cross-border traffic, improve road safety, protect and strengthen local jobs and beautify the existing transportation network.

The Partnership will continue to liaise with local municipalities, other government agencies and private sector proponents regarding on-going improvements to the local transportation network for consideration in the generation and assessment of alternatives in the Detroit River International Crossing Project.

1.2. Purpose of the OEAA Terms of Reference

One of the features of the OEAA, January 1, 1997, is the requirement for the preparation, submission and approval of a TOR before work begins on an OEA. Once approved by the Ontario Minister of the Environment, the TOR provides the framework that will guide the preparation of the OEA. The approval of the TOR is the first statutory decision by the Ontario Minister of the Environment in the OEA planning and approval process. This TOR is being submitted under 6.2 (a) of OEAA.

The bi-national aspect of the border transportation improvements will require several environmental assessment studies to be completed and submitted for approvals to the various Canadian and U.S. authorities, including:

- Environmental Assessment, under OEAA;
- Environmental Impact Study, under NEPA; and,
- Environmental Assessment Screening Report under CEAA.

In order to provide some flexibility as to how the OEA will be carried out, it should be noted that the Terms of Reference set out at a minimum, what the proponent will do during the preparation of the subsequent OEA. MTO, as a member of the Canada-U.S.-Ontario-Michigan Border Transportation Partnership, will consider enhancements to the process and work tasks, as required over the course of the OEA study, based on consultation input, changes to provincial/state/federal (both U.S. and Canada) policies and the availability of new environmental information. The process outlined in this TOR is consistent with, and will be enhanced in accordance with, requirements of NEPA and CEAA processes, as appropriate. MTO, as a member of the Canada-U.S.-Ontario-Michigan Border Transportation Partnership will undertake this OEA based on the legislative requirements, policies, procedures and protocols that are in place at the time the work is done.

The subsequent OEA will be prepared in accordance with this Terms of Reference approved for this proposed undertaking.

1.3. Ontario, Canadian and U.S. Planning and Environmental Assessment Processes

An objective of the Border Transportation Partnership is to develop the appropriate integrated environmental planning process that incorporates the requirements of OEAA, CEAA and the NEPA processes as well as any other applicable Ontario, Canadian and U.S. legislation. Other applicable government policies and agreements will be considered in the integrated study process.

Overall, the three processes are similar, and their purposes are to:

- Identify purpose and need for the proposed action;
- Identify alternatives to the undertaking and alternative methods of carrying out the undertaking;
- Identify and evaluate social, economic and environmental impacts (note: the main focus of the CEAA is to identify if the undertaking will cause any adverse environmental effect);
- Analyze preliminary alternatives and identify practical alternatives;
- Select recommended alternatives;
- Conduct public consultation as part of the process;
- Seek approvals and endorsement from statutory authorities; and
- Provide a structured framework to assist public officials in making sound decisions.

1.3.1. Ontario Environmental Assessment Act Requirements

At the outset of an OEA, proponents must develop and obtain approval of a Terms of Reference (TOR) prior to commencing an environmental assessment. A TOR is a document that identifies the framework the proponent must follow in completing the environmental assessment.

The TOR is made available for public and agency review and is submitted to the Ontario Minister of the Environment for approval. Upon completion of the review period, the Minister can approve, reject or approve the TOR with amendments. Once approval has been received, the proponent can proceed with the Environmental Assessment in accordance with the TOR. The supporting documentation is not subject to the decision of the Minister.

1.3.2. Canadian Environmental Assessment Act (CEAA) Requirements

CEAA applies to certain projects that involve a decision or planned action by a federal authority, which enables the project to proceed in whole or in part. Specifically, section 5(1) of CEAA, applies to projects where a federal authority:

- Is the proponent of the project;
- Provides funding to the project;
- Provides land for the project; or
- Issues a permit, license or authorization as prescribed in the Law List Regulations.

These decisions or planned actions of federal authorities are commonly called “triggers.”

The requirements under CEAA are somewhat different from the OEAA. With respect to the federal EA process, federal authorities require certain information to determine if they have a trigger. Federal authorities often wish to know what funding or federal land is being sought and may need more information on the location and extent of the project in order to determine whether they need to issue any permit or authorization. Where project information is not specific enough for a federal authority to know whether it has a responsibility to conduct an environmental assessment, the federal authority will participate until the uncertainty is resolved (an “in-until-out approach”). This allows information needs to be satisfied throughout the EA process. For transportation projects, such information has generally not been available until the end of the provincial EA study or even into preliminary or detail design. This has resulted in proponents having to go through a second EA process to meet federal EA requirements, which has had program delivery implications (i.e. timing and cost) for MTO.

It is anticipated that work to be carried out during the EA/EIS will provide sufficient information to support a decision to trigger the federal EA process and to make a decision regarding likely significance of adverse environmental effects under CEAA. In recognition of federal interests and information requirements, concept design of the preferred practical alternative(s) will be undertaken during the OEA. This information will assist federal and provincial EA processes to move forward in an integrated manner.

The initial steps in CEAA pertain to preparation of a Project Description. Once the Project Description has been prepared and circulated to federal authorities, it will be used to identify responsible authorities (RA), expert federal authorities (FA) as well as a Federal Environmental Assessment Coordinator (FEAC) other possible RA’s and participating agencies. Subsequent decisions made after the OEA has been initiated will be used to prepare Scope of Project and Scope of Assessment documents. It is recognized that ongoing dialogue between the Partnership and federal authorities, including the Canadian Environmental Assessment Agency will be required throughout the integrated study process as details of the project unfold.

1.3.3. U.S. National Environmental Policy Act (NEPA) Requirements

The objectives and processes of NEPA are similar to those of OEAA, although the documents and approval processes are different. An illustration of the NEPA process is provided in support documentation, for information purposes.

The National Environmental Policy Act of 1969 established a national environmental policy intentionally focused on Federal activities and the desire for a sustainable environment balanced with other essential needs of present and future generations of Americans.

NEPA requires, to the fullest extent possible, that the policies, regulations, and laws of the U.S. federal government be interpreted and administered in accordance with its environmental protection goals. NEPA also requires federal agencies to use an interdisciplinary approach in planning and decision-making for any action that adversely impacts the environment.

As a member of the Partnership, FHWA initiated the NEPA process with the publication of a Notice of Intent to prepare an Environmental Impact Statement (EIS) in the Federal Register in March 2003.

There is no NEPA process equivalent of the OEA TOR, however, the Purpose of the Undertaking discussion in an OEA TOR is comparable to the Purpose and Need Statement under NEPA. The Purpose and Need Statement provides a basis for future environmental study activities in the U.S.

The draft Purpose and Need Statement is circulated to U.S. federal agencies with responsibility for approvals and permits related to the project. The agencies are requested to indicate any concerns regarding the purpose of the project or the process to be followed in completing the EIS. FHWA considers these concerns in finalizing the Purpose and Need Statement. Once the Purpose and Need Statement is finalized, scoping of the project can begin.

The preparation of a draft Purpose and Need Statement for the Detroit River International Crossing is being carried out in parallel to the preparation of the OEA TOR. Consultation with federal environmental and cooperating agencies on the draft Purpose and Need Statement to initiate discussions on the project will take place during the preparation and review of the OEA TOR. Upon approval of the OEA TOR and finalizing the Purpose and Need Statement, the Partnership will move forward together in scoping the Detroit River International Crossing project.

1.3.4. Integrated Environmental Study Process

Recognizing that this international transportation improvement project will require approvals from governments on both sides of the border, the Partnership is proposing to follow an integrated study process which meets the requirements of the respective environmental study legislation for Canada, U.S., Ontario and Michigan. This integrated process is schematically illustrated in Exhibit 1.3.

A key principle of the process is that government ministries / departments / agencies, as well as non-government agencies, interest groups, community groups and interested members of the public are provided the opportunity to participate and offer input throughout the study. The Partnership will proactively seek input from all stakeholders at key points in the decision-making process.

Another key principle of the integrated process is that, where two or more processes specify different requirements in conducting the study, the Partnership will seek to incorporate the most rigorous requirement as much as possible. However, there are certain unique requirements among Canadian, Ontario and U.S. planning processes (e.g. environmental justice), which may be directly incorporated. The Partnership will appropriately coordinate / address these issues as they arise during the integrated study process.

The intent of the Partnership is to conduct one body of work pertaining to alternative generation, analysis and evaluation, and document the project findings in format(s) suitable for circulation and review by the bi-national government agencies/ministries/departments and the general public.

In addition, throughout the environmental study process, the Partnership will coordinate meetings between Canadian and U.S. federal and state/provincial agencies of common/shared interests so that, as much as possible, a bi-national approach to identifying and addressing issues can be developed.

1.4. Statement of Proponency

The Ontario Ministry of Transportation, as a member of the Canada-U.S.-Ontario-Michigan Border Transportation Partnership, is the proponent for this Environmental Assessment Terms of Reference for the Detroit River International Crossing.

1.5. Submission Statement

An OEA prepared in accordance with this Terms of Reference will meet the requirements of Section 6(2)(a) of the OEAA and will specifically addresses the following:

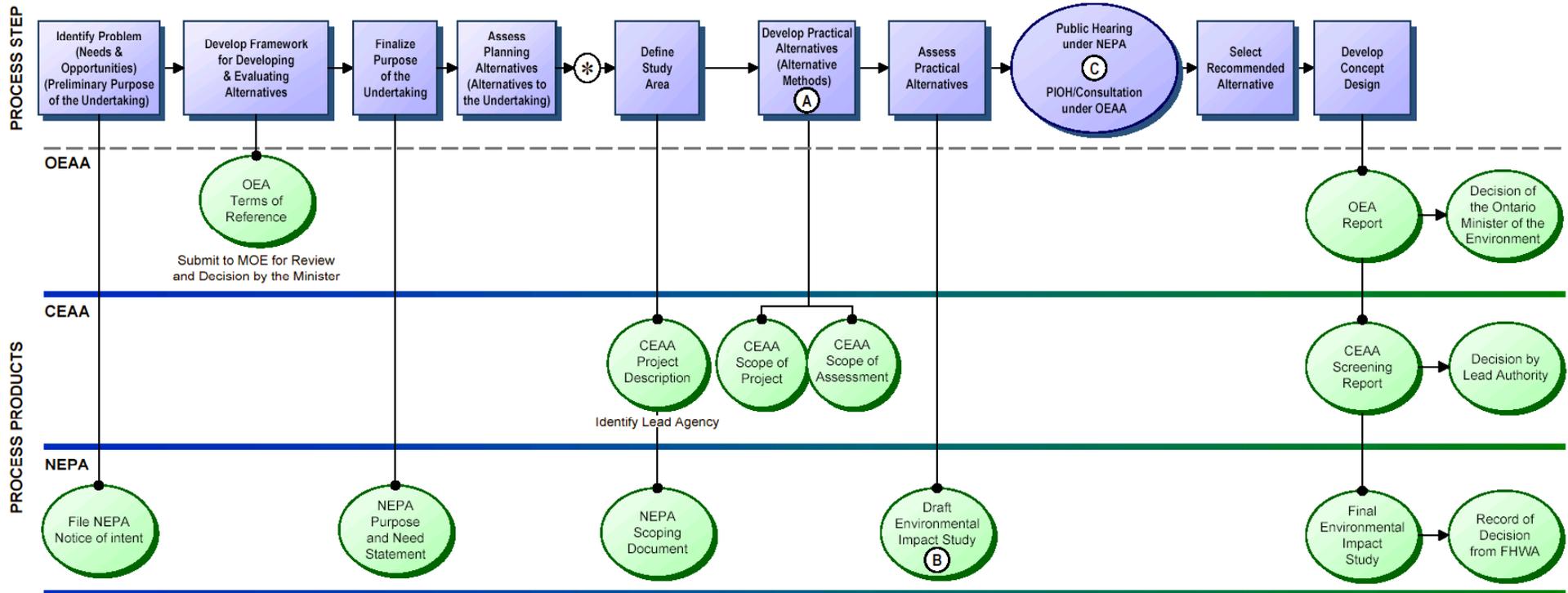
- Identification of the Proponent (Section 1 of this document);
- The purpose and need for the undertaking (Section 2);
- The process for selecting preferred transportation planning alternatives (Section 3);
- The process for generating the study area (Section 3);

- The process for selecting preferred practical alternatives (Section 3);
- The process for selecting preferred concept design alternatives (Section 3);
- A Monitoring Strategy and Schedule (Section 4);
- A description of the Consultation Plan proposed for the OEA (Section 5); and

The additional documentation submitted with this TOR, for which approval is not being sought, includes:

- a) Record of Consultation During Preparation of the TOR
- b) Supporting documentation
 - *Canada-U.S.-Ontario-Michigan Border Transportation Partnership Transportation Problems and Opportunities Report (January 2004)*;
 - The FHWA/NEPA Planning and Approval Process;
 - Preliminary Description of Existing Environment and Potential Effects;
 - Proposed Factors to Assess Feasibility of the Opportunity Corridors;
 - Environmental Components to be Considered During the Generation of Alternatives;
 - Criteria for Evaluating Illustrative and Practical Alternatives;
 - Typical Elements of Concept Design;
 - Federal / Provincial EA Coordination Process; and
 - Activities Following Approval of the EA.

EXHIBIT 1.3 - SCHEMATIC ILLUSTRATION OF THE INTEGRATED NEPA/OEAA/CEAA PROCESS
 ENVIRONMENTAL STUDY PROCESS FOR DETROIT RIVER INTERNATIONAL CROSSING



CONSULTATION

Consultation to include (refer to Section 5): Concurrence Meetings as prescribed under NEPA, Public Information Open Houses at key decision points (as a minimum) as recommended under NEPA/OEAA, and Additional Meetings on an on-going basis

* Following the assessment of planning alternatives, the process for identifying a recommended linear transportation facility, for which MTO would serve as the proponent, is illustrated. If the assessment of planning alternatives recommends other/additional alternatives, appropriate planning/implementation processes may be initiated by other proponents. MTO will meet with MOE at this point of the integrated environmental study process to obtain guidance/comment on future actions.

A In developing practical alternatives, the Project Team will first identify Illustrative Alternatives. The preferred Illustrative Alternatives will be carried forward as Practical Alternatives (See Section 3.3).

B Under NEPA, the Draft EIS is typically prepared and circulated prior to any selection of a recommended alternative.

C The Public Hearing following the circulation of the Draft EIS is mandatory under NEPA.

2. Purpose of the Undertaking

The purpose of the undertaking is to provide for the safe, efficient and secure movement of people and goods across the Canadian-U.S. border in the Detroit River area to support the economies of Ontario, Michigan, Canada and the U.S.

Given the importance of this trade corridor to the local, regional and national economies and recognizing the negative effects associated with poor traffic operations and congestion already occurring at existing crossings, the partnering governments must take all responsible steps to reduce the likelihood of disruption to transportation service in this corridor.

In following the requirements of OEAA, CEAA and NEPA, the purpose of the undertaking will be revisited during the integrated environmental study process and the description of the proposed undertaking (e.g. a new or expanded international crossing) may evolve or change as the project proceeds. The final purpose of the undertaking, therefore, will be defined and included in the environmental assessment study documents for this project.

2.1. Overview and Outlook

Consideration of the Purpose of the Undertaking for a transportation project requires a clear understanding of the problems and opportunities that exist within the region and within the planning horizon timeframe (30 years). The *Canada-U.S.-Ontario-Michigan Border Transportation Partnership Transportation Problems and Opportunities Report (January 2004)*, documents the work completed in identifying the transportation problems and opportunities in Southeastern Michigan-Southwestern Ontario. This section of the Terms of Reference includes the key findings related to border crossings documented in that report; the complete report is available under separate cover in Supporting Documents.

2.1.1. Trade

Canada and the United States are the largest bilateral trade partners in the world. The North American Free Trade Agreement (NAFTA) has had significant impact on trade between the two nations, solidifying/reinforcing access to bilateral trade for both markets.

In year 2000, total U.S. trade with Ontario was U.S.\$243 billion (CAN\$365 billion¹), which is larger than total U.S. trade with Japan. Recent statistics from U.S. International Trade Administration identify that Canada is the largest export market for a number of U.S. states, including Michigan, Ohio, Indiana and Illinois.

Approximately 23 percent of surface trade between Canada and the United States passed through the Detroit-Windsor corridor, signifying the importance of this border crossing to the national economies of both the United States and Canada.

¹ Unless otherwise indicated, a currency conversion rate of 1.6:1 Canadian to U.S., is used throughout this document.

Two-way trade between the U.S. and Canada through the Windsor/Detroit corridor continues to increase. Over the long term, the prospects for continued bilateral trade growth between Canada and the U.S. remain strong. As evident over the past thirty years, bilateral trade in goods and services has grown faster than GDP, increasing at an annual rate of approximately 11 percent. Moreover, in recent years, trade between Border States and provinces has grown significantly faster than national bilateral trade.

The conclusion of a report commissioned by Industry Canada on North American Integration² is that over the next 25 years, the economic integration between Canada and the U.S. will advance markedly, two-way trade flows will continue to expand sharply and that trade will play an even greater role in both economies. This report cites that “free trade forces will bring about a further increase in Canada-U.S. trade, which by 2005 or 2010 could be 20 to 30 percent above what it would have been in the absence of the recent trade agreements.”

The Detroit River frontier represents the busiest corridor for trade between Canada and the United States. The benefits of such trade to the local, regional and national economies is represented in the prosperity, opportunities and high standards of living each country enjoys, and the prospect of continued increased trade passing through this corridor must be encouraged as well as protected. The governments of Canada, United States, Ontario and Michigan each have a duty and responsibility to provide for and reduce the likelihood of disruption to the safe, continuous transport of people and goods across the Detroit River.

2.1.2. Travel Demand

As represented in Exhibit 2.1, the vast majority of international trips in the Windsor/Essex County - Detroit/Wayne County area are road-based. The modal shares depicted in this exhibit are expected to remain relatively constant over the long term, with the exception of a slight shift from truck to inter-modal rail.

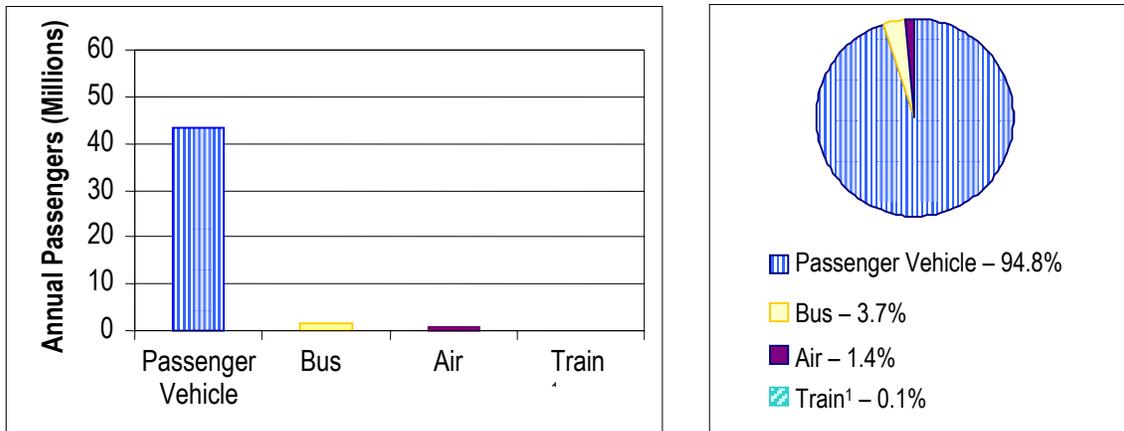
The most common trip purposes are recreational/shopping and work/business/school (refer to Exhibit 2.2). Peak travel periods for work/business/school trips do not coincide with peak recreational/shopping trips. Recreational/shopping trips are generally at lower levels during the morning and afternoon peak periods and higher in mid-day, evening and weekend periods.

Table 2.1 provides additional information as to the vehicle and trip type (by origin-destination) of these road-based trips. The vast majority of passenger trips are local, defined as beginning and ending in the Windsor/Essex County-Detroit/Wayne County area. A sizable amount of commercial trips are passing entirely through the Windsor/Essex County-Detroit/Wayne County area.

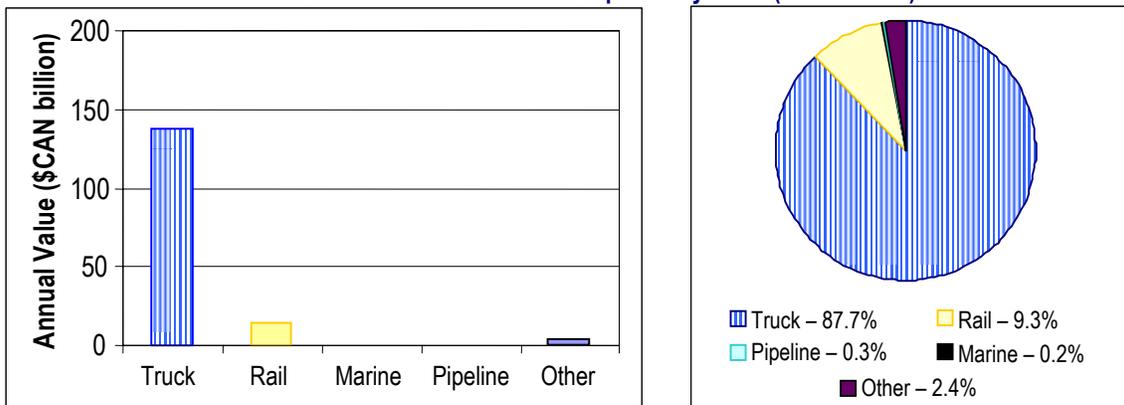
² *North American Integration: 25 Years Backward and Forward*, by Gary C. Hufbauer and Jeffrey J. Schott, Institute for International Economics, 1998.

EXHIBIT 2.1 – CROSS-BORDER TRIPS BY MODE (2000)

Cross-Border Person Trips by Mode (Annual 2000)

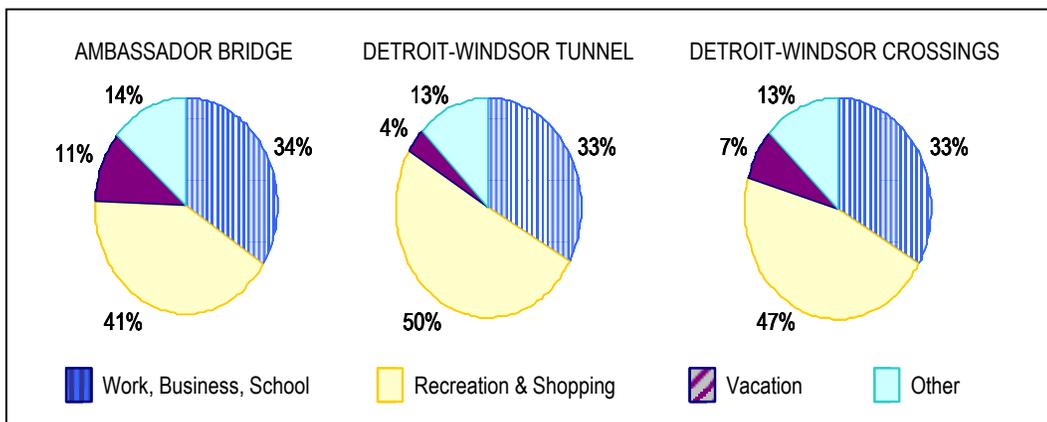


Cross-Border Value of Goods Transported by Mode (Annual 2000)



Note 1: There is no through passenger rail service provided between Windsor and Detroit. Train trips reported here are deemed to have used the rail service operating between Sarnia-Port Huron.

EXHIBIT 2.2 – CROSS-BORDER PASSENGER CAR TRIPS BY TRIP PURPOSE, 2000 WEEKDAY



**TABLE 2.1 – 2000 DAILY INTERNATIONAL TRAFFIC CROSSING AT WINDSOR-DETROIT
 BY VEHICLE AND TRIP TYPE**

Type of Traffic	Passenger	%	Commercial	%
International Local to Local	40,561	79%	3,083	24%
Local (U.S. side) to Long Distance (Canadian Side)	3,145	6%	1,983	16%
Local (Canadian side) to Long Distance (U.S. Side)	4,882	9%	2,113	16%
International Long Distance to Long Distance	3,003	6%	5,589	44%
Total	51,591	100%	12,769	100%

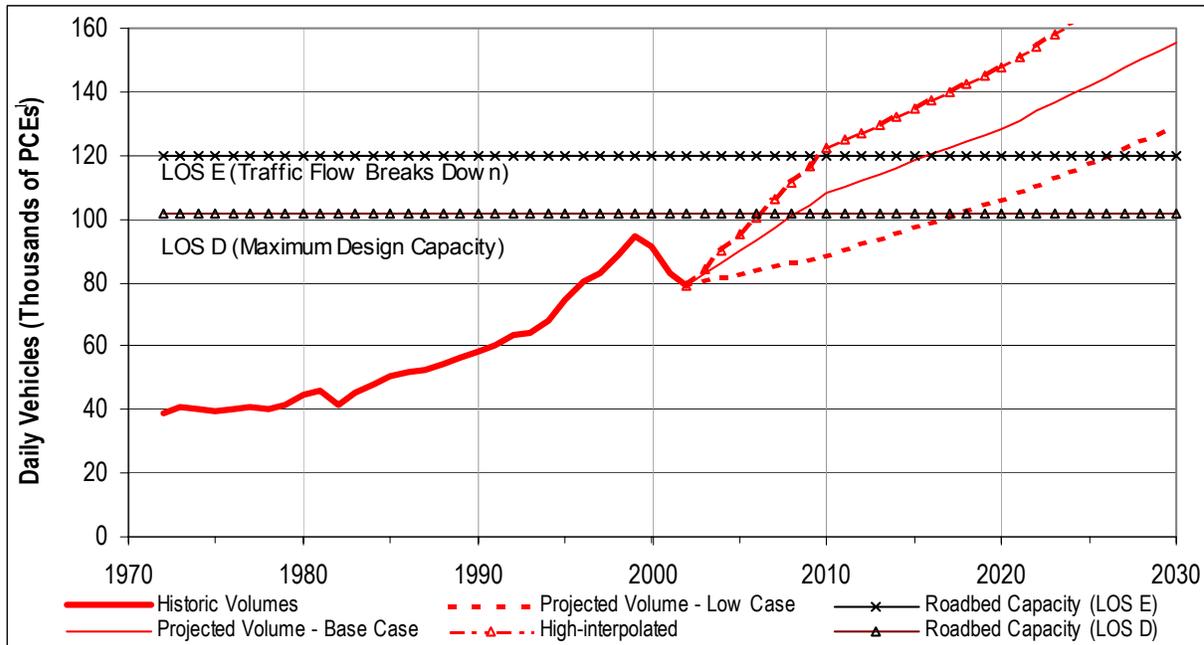
The travel demand analyses carried out during the P/NF Study involved the development of a comprehensive process to estimate future demand on the existing and currently committed future transportation network. The process included the development of a regional travel demand forecasting model. The regional model developed for this study built on extensive work already carried out by Southeastern Michigan Council of Governments (SEMCOG), MDOT, MTO and the City of Windsor. All of the models developed by these agencies were developed primarily for purposes other than examining cross-border movements. Recent economic, statistical and transport data and trends were incorporated into the regional model. Transportation planning representatives from SEMCOG, MDOT, MTO and the City of Windsor were involved in the development of the demand analysis process and calibration of the regional model.

Border traffic projections were developed based on the Partnership's understanding of the trends in goods movement, as well as the documented population and employment growth for the region, under high and low growth scenarios. In addition, a base case projection of future traffic volumes within the high and low growth projections was developed for use in analysis of border crossing performance. Over the 30-year horizon for this study, the cross-border traffic forecasts prepared for this study project an approximate 40% increase in car and 120% increase in truck traffic at the Windsor-Detroit Gateway. This corresponds to an increase in daily cross-border car trips from 52,000 to 70,000 trips and an increase in daily truck trips from 13,000 to 28,000 trips.

Transportation agencies consider the need for improvements to transportation facilities or networks based on the level of transportation service provided. The level of service (LOS) is generally a function of the volume of traffic and the roadway or network capacity. For the purposes of this study, the existing border crossing facilities are considered to be at capacity at level of service (LOS) E. (For more discussion on LOS, refer to the P/NF Study documents.) Projections of future traffic volumes were developed for three different trade scenarios: 1) high growth in Canada-U.S. trade; 2) low growth in such trade, and 3) what the Partnership believes to be the most likely scenario for trade growth, given the available data about Canada-U.S. trade trends – referred to as the Base Case.

Under either a high growth or low growth scenario, the roadway capacity of the existing border crossings will be exceeded within the timeframe of this planning study (refer to Exhibit 2.3). This will result in a deterioration of operations, increased congestion and unacceptable delays to the movement of people and goods in this strategic international corridor. Details of the border crossings and the effect of increased border traffic volumes are provided in the following section.

EXHIBIT 2.3 – WINDSOR-DETROIT CROSS-BORDER TRAFFIC, HISTORIC AND PROJECTED

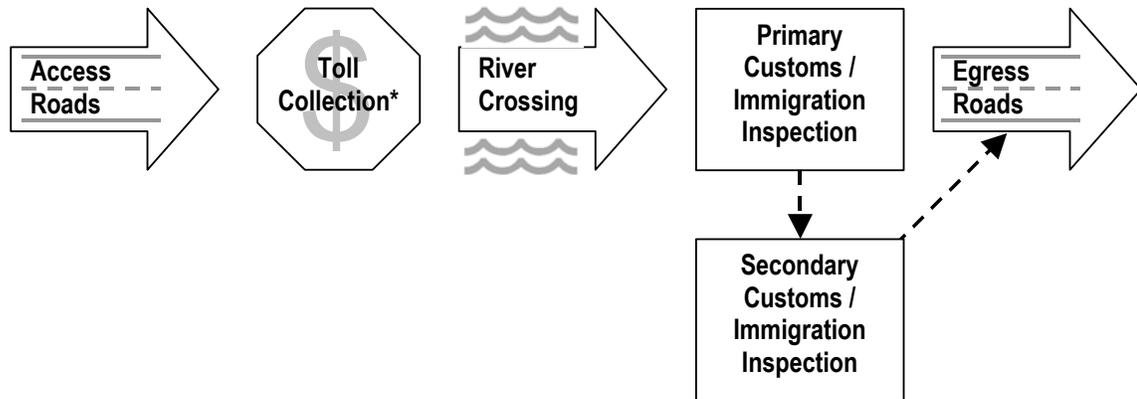


Note 1: PCE = Passenger Car Equivalent, used to express passenger cars and commercial vehicles in a single unit (e.g. one tractor trailer unit is equivalent to 3 passenger cars).

2.1.3. Existing Windsor-Detroit Border Crossings

International border crossings must be considered as a system made up of individual components. The movement of vehicles across the Canada-U.S. border involves a series of sequential activities. As illustrated in Exhibit 2.4, the border crossing system includes access roads leading to the border crossing, toll collection, the bridge span or road bed itself, customs inspection (primary and secondary), and egress roads. Border capacity is governed by all of these components with the component with the lowest capacity governing the overall effective capacity of the crossing. Consequently, the ultimate capacity of a bridge or tunnel will not be realized if the customs capacity or road access capacity is the limitation or bottleneck in the system.

EXHIBIT 2.4 – TYPICAL BORDER CROSSING SYSTEM



**Note: Toll collection may occur at or subsequent to clearing inspection.*

The two fixed links in the Windsor/Essex County-Detroit/Wayne County area connecting the roadway system in Canada to that of the U.S. are the Ambassador Bridge and the Detroit-Windsor Tunnel.

a) Ambassador Bridge Corridor

The Ambassador Bridge Corridor is considered to consist of the Highway 401 connection to Highway 3, the arterial road designated as Highway 3, Talbot Road and Huron Church Road connecting Highway 401 to the Ambassador Bridge Canadian plaza (this arterial road is herein referred to as Huron Church Road), the Ambassador Bridge and related Canada/U.S. border processing facilities, and the U.S. plaza connections to I-75/I-96.

The Ambassador Bridge, opened in 1929, is the world's longest international suspension bridge. With a total length of 2.8 km (9200 ft) and spanning some 560 m (1850 ft) across the Detroit River, this structure connects the local road network in west Windsor to the interstate freeway system in southwest Detroit. The structure features four lanes on a 17 m (55 ft) wide deck at a maximum grade of 5%. The maximum height of the bridge over the Detroit River is 45 m (152 ft). Both U.S. and Canadian plazas conduct a variety of border crossing functions, including toll collection, border processing, duty free shopping and currency exchange. In terms of total vehicle crossings, the Ambassador Bridge is the busiest border crossing in North America.

Although there are presently periods when travel demand exceeds capacity in this corridor, in general this crossing has sufficient infrastructure capacity to process existing auto and truck demands. Queues for border crossing facilities frequently extend well back onto the access roads and cross-border travelers experience significant delays. However, many of the existing queues and delays are related to various border processing issues (e.g. staffing, facilities and processing requirements), and in the last year, border security issues have resulted in increased vehicle inspection times.

The areas operating at or near capacity during peak periods in this corridor are the connections between the interstate freeway system and the U.S. plaza, primary inspection of Canada-bound automobile traffic and secondary inspection of U.S.-bound trucks.

At present, most of the signalized intersections along Huron Church Road are approaching capacity with several movements at critical levels. Under these conditions and with the large percentage of commercial vehicles using this facility, traffic flow can be unstable, with periods of congestion occurring unpredictably along the corridor.

Operational deficiencies at the Ambassador Bridge connections to the U.S. Interstate system are being addressed through large scale improvements being implemented over the next several years. The Ambassador Bridge Gateway Project, currently under construction and scheduled for completion in 2006, addresses the current deficiencies in this component of the border crossing.

An assessment of future traffic operations identifies a number of problems in this corridor. Travel demand at almost all the various components of this corridor is expected to exceed the practical capacities, resulting in severe traffic congestion and extensive delays.

MTO has planned provisions for improvements to the section of Highway 401 east of Windsor from Highway 3 easterly to Tilbury. Therefore, this component of the corridor is expected to have sufficient capacity beyond the 30 year planning horizon.

Anticipated increases in border crossing traffic, combined with modest growth in background traffic, will mean that Huron Church Road will likely exceed capacity within 5 years. As the traffic volumes approach the capacity of the facility, congestion, queuing and infiltration of traffic onto other parallel roads will become more frequent. (City of Windsor Traffic Engineering is already observing such conditions during periods of excessive delay at the border.) The effects of this problem can extend beyond the traffic and direct economic impacts associated with delays to the movement of people and goods. The local communities around the border crossings have expressed concerns with disruption to local access and impacts to air quality and noise levels during periods of congestion on the border crossing approach roadways.

No significant problems are anticipated in the future due to constraints at toll collection at the Ambassador Bridge. For U.S.-bound passenger vehicle traffic, toll collection currently occurs after vehicles have cleared U.S. Customs/Immigration inspection. The use of improved toll collection technology and frequent user programs are expected to help this component keep pace with increasing traffic demand.

Travel demand at border processing facilities on both the American and Canadian sides of the bridge is anticipated to reach available capacity within five years. It is recognized that border crossing programs, such as NEXUS and FAST, may be somewhat successful in deferring the need for additional border processing resources. However, additional staffing and facilities will be required to meet travel demand. Border processing agencies in both countries are working to address this need.

As noted earlier, operational deficiencies at the Ambassador Bridge connections to the U.S. Interstate system are being addressed through large scale improvements being implemented over the next several years. Once completed, the Ambassador Bridge Gateway Project will provide sufficient facilities to address access to the bridge plaza/freeway system and U.S. border processing requirements over the long term.

Based on the assumed roadway capacity of the Ambassador Bridge, travel demand is expected to reach capacity within 10 to 15 years. At that point, the bridge will be physically constrained from addressing increases in travel demand. It should also be noted that maintenance operations on the Ambassador Bridge structure generally require the partial closure of at least one lane. These ongoing periodic maintenance operations reduce the capacity of the facility and generate queues and delays. As with the effects of delays on Huron Church, delays due to capacity constraints on the Ambassador Bridge reach beyond the limits of the bridge and its plazas. As the busiest border crossing in North America, the impacts to the local, regional and national economies are significant. It can be anticipated that the road network leading to the structure on both sides of the border will experience similar delay, access and traffic infiltration problems as noted previously, as border crossing volumes continue to increase.

The timeframes by which travel demand is anticipated to meet capacity on the Ambassador Bridge Corridor are summarized as follows:

U.S. Interstate Connections (with gateway)	U.S. Border Processing	Ambassador Bridge	Canadian Border Processing	Huron Church Road	Highway 401 (6 lanes)
At or near capacity beyond 30 years	At or near capacity within 5 years	At or near capacity within 10 – 15 years	At or near capacity within 5 years	At or near capacity within 5 years	At or near capacity beyond 30 years

b) Detroit-Windsor Tunnel Corridor

The Detroit-Windsor Tunnel Corridor is considered to include the tunnel and related border processing facilities as well as the connections from the plaza to the downtown road networks in Windsor and Detroit. The tunnel's Canadian plaza is located at the corner of Goyeau and Park Streets, approximately four blocks south of the Detroit River in downtown Windsor. The American plaza is located on the Detroit waterfront, at the foot of Randolph Street.

Opened in 1930, the tunnel is 1,573 m (5,160 ft) long with a height clearance of 4 m (13 ft, 2 inches). The roadway is 6.7 m (22 ft) wide and allows for two lanes of traffic in opposite directions. The maximum depth from the roadbed to the river surface is 22.8 m (75 ft). The plazas at either end of the tunnel provide for a variety of border crossing functions, including toll collection, border processing, duty free shopping and currency exchange. The Detroit - Windsor Tunnel is among the busiest border crossings in North America.

The current limiting capacity constraint at this crossing is at the border processing components. The critical area operating at or near capacity during peak periods at this crossing is primary inspection of Canada-bound automobile and bus traffic and

primary inspection of U.S.-bound autos. As with the Ambassador Bridge crossing, it is recognized that frequently, queues at the border crossing extend onto the downtown road networks. Many of these queues and delays result from a lack of available staffing and border security issues, which increase vehicle inspection times.

As travel demand continues to increase, these capacity constraints will increase delay at the crossing, leading to extensive queuing on the adjacent downtown road network of both Windsor and Detroit. The tunnel operator has identified initiatives for plaza improvements on both sides of the border. These improvements address current operating deficiencies and the need for additional/improved border processing facilities at this crossing.

Due to their downtown locations, both plazas are constrained by adjacent development and the municipal street network. Short-term measures (e.g. temporary turning restrictions and lane closures during peak periods) are being implemented in both Windsor and Detroit to reduce the congestion effects on city streets caused by extensive queuing. In addition, plans are proposed for further operational improvements and improvements to border processing facilities.

The tunnel itself has sufficient capacity to meet the travel demands over the next 10 to 15 years. After that point, the tunnel will be physically constrained from addressing increases in travel demand. Similar to the issues noted for the Ambassador Bridge, the impacts to the local and regional economies will be significant. It can be anticipated that the downtown road networks leading to the tunnel on both sides of the border will experience similar delay, access and traffic infiltration problems as noted previously with the Ambassador Bridge.

The timeframes by which travel demand is anticipated to meet capacity in the Detroit-Windsor Tunnel Corridor are summarized as follows:

Downtown Detroit Road Connections to Tunnel Plaza	U.S. Border Processing	Detroit-Windsor Tunnel	Canadian Border Processing	Downtown Windsor Road Connections to Tunnel Plaza
At or near capacity within 5 years	At or near capacity within 5 years	At or near capacity within 10 - 15 years	At or near capacity within 5 years	At or near capacity within 5 years

c) Other Crossings

The Detroit River rail tunnel is situated approximately midway between the Ambassador Bridge and the Detroit-Windsor Tunnel. Opened in 1910, the rail tunnel has twin tubes with each tube accommodating a single track. One of these tubes was subsequently enlarged to take larger size equipment, while the other one is still in its original size. The larger one still cannot handle full double-stack dimension cars, however. The larger tube is the only tube currently in operation and operates well below capacity, handling approximately 25 cross-border trains per day. The owners of the rail tunnel (CP Rail and Borealis Transportation Infrastructure Trust) have a proposal for a new rail tunnel, which would accommodate rail cars of the maximum size. This proposal is coordinated with a plan to convert the two existing rail tunnels to carry trucks.

Based on publicly available industry data, the rail network in southwestern Ontario-southeastern Michigan is assumed to be operating currently at about one-third of its capacity. Future growth scenarios assuming increased diversion from truck transport to rail/intermodal were assessed to determine the likely future effects on rail operations. These scenarios acknowledge that rail has been successful at capturing a greater share of truck traffic for longer distance shipments (i.e. greater than 400 km (250 mi)). Upon consideration of a range of growth scenarios, the capacity of the rail network was determined to be sufficient to meet the long-term needs of rail transport.

The Detroit-Windsor Truck Ferry was started on the Detroit River in 1990 for the purpose of handling trucks carrying dangerous goods (Classes 1, 3, 7 and 8), which are banned from the Ambassador Bridge and tunnel crossings in accordance with Michigan State law. The ferry also handles over-sized loads that cannot use the bridge or tunnel, but in no way restricts its use to these two markets. The Canadian ferry terminal is situated off of Maplewood Drive in west Windsor. The American terminal is in southwest Detroit, at the mouth of River Rouge.

The ferry can provide a significant distance savings to trucks carrying dangerous goods or heavy loads by allowing them to cross at Windsor-Detroit as opposed to having to travel to alternate ports that support this market. The alternative for vehicles with dangerous goods within the study area is Port Huron-Sarnia; very heavy vehicles must cross much further away by land between Minnesota and Ontario. It is estimated that more than 50% of the ferry crossing trips are from London (i.e. the point at which travel distances across the corridor via Port Huron-Sarnia and Detroit-Windsor are similar) inward, with a similar market range on the Michigan side.

Future travel demand of vehicles is expected to exceed the capacity of the existing road network. This will create more opportunity for other modes and other crossings to serve the excess demand. Currently, the truck ferry operates with one-hour headways for 10-hour days and can shuttle 8 trucks per crossing. As the ferry currently handles about 40 trucks per day on average, it is operating at about 25% of capacity. It is understood that the ferry service could operate two barges, providing a daily capacity of 320 trucks and that there are proposals for additional truck ferry services on the Detroit River. Given that the current commercial vehicle travel demand at the Ambassador Bridge is approximately 12,800 trucks per day and growing, it would appear that there is sufficient market to enable marine services to continue to play a role in serving travel demand at the border but will have little effect in managing the excess demand.

2.1.4. Border Processing

Addressing issues related to border processing facilities, resources and procedures is not within direct control of the transportation agencies sponsoring this study. This responsibility lies primarily with agencies such as Canada Customs and Revenue Agency (CCRA), U.S. Department of Homeland Security (DHS) and U.S. General Services Agency (GSA). However it is recognized that delays at border processing result in congestion and delays at the Ambassador Bridge border crossing. Similarly, delays at border processing and lack of capacity at the connections to the plazas at the Detroit-Windsor tunnel results in congestion and delays at the Detroit Windsor Tunnel.

Border processing agencies have been working with the Partnership to identify issues and concerns related to border processing at the existing crossings, as well as identify the proposed increases to staffing, improvements to border processing facilities to increase capacity and programs to facilitate border processing procedures.

As a result of the terrorist attacks on the U.S. on September 11, 2001, and of ongoing national security concerns, heightened border security is a new reality facing all border crossings. Security priorities affect border crossing operations; periods of rigorous inspection of all passengers and goods using border crossings effectively reduce border crossing capacity, and lead to congestion on the road network in the vicinity of the border crossings. Transportation agencies must develop solutions to accommodate the capacity requirements of international traffic, while ensuring security concerns are also addressed.

The border processing agencies are moving forward on implementing improvements to the border crossings, to increase capacity and reduce congestion, while maintaining their objectives related to having a safe and secure border. Initiatives such as the Ambassador Bridge Gateway Project and the proposed improvements to the Detroit-Windsor Tunnel are intended to increase capacity of border processing facilities at these crossings.

Similarly, programs such as NEXUS and FAST are intended to reduce processing times for vehicles crossing the border, thereby increasing capacity and potentially lessening the need for additional staffing at the crossings. The ability of these improvements and programs to meet future travel demand is not certain. Staffing at the border crossings will continue to be an issue that will limit border processing capacity in the short term. The presently low, but increasing, participation rate in the various border crossing programs will have a direct effect on the success of these programs to increase capacity of border processing.

Transportation agencies will need to continue to coordinate border processing capacity and security issues with border processing agencies. In the short to medium term, however, the lack of adequate border processing capacity will be an issue that transportation agencies must address from a transportation perspective.

2.2. Summary of Transportation Problems

The transportation problems in the Detroit River area to be addressed by this study (which will be further defined during the OEA) are as follows:

- The lack of reasonable options for maintaining the movement of people and goods in cases of major incidents, maintenance operations, congestion or other disruptions at any of the existing border crossings;
- Lack of sufficient capacity to meet the long-term (i.e. 30-year) travel demand at the Windsor-Detroit border crossings; and
- Increased security requirements creating impacts on the movement of people and goods at border crossings.

Future traffic volumes are expected to exceed the capacity of the existing border crossings sometime within the next 30 years. Significant growth in truck traffic

associated with growing trade between Canada and the U.S. will lead to increased traffic volumes at the existing border crossings.

The Ambassador Bridge and Detroit-Windsor Tunnel represent two of the busiest border crossings in North America. They carry over 16 million passenger vehicles and 3.7 million commercial vehicles annually and handle 23% of the total surface trade between Canada and the U.S. The delays and resultant queuing already occurring at these crossings have several negative effects associated with poor transportation network operations, including the following:

- Increased highway safety concerns, including higher potential for collisions at intersections, entrances and queue ends;
- Lost economic opportunity costs;
- Increased air pollution;
- Impacts to access and adjacent land uses in the vicinity of the border crossings;
- Infiltration of cross-border traffic onto local roads;
- Impacts to incident/emergency response;
- Increased vehicle operating costs and fuel consumption; and
- Increased driver frustration.

Given the importance of these border crossings to the local, regional and national economies of Canada and the U.S., the effects of poor traffic operations at these border crossings extend beyond the immediate areas where traffic congestion occurs. Further, as travel demand continues to increase, the effects of increased congestion and delays will continue to worsen.

Border processing agencies are currently pursuing improvements, including additional staffing, improvements to facilities and implementation of border crossing programs. However, it is unlikely that any individual or collective improvements made will provide sufficient capacity to meet travel demand in the medium- to long-term or during periods of heightened security.

The existing roadway crossings of the Detroit River are more than 70 years old. As the structures age, the need for significant maintenance inevitably increases. Significant maintenance activities often have the potential to partially or completely close such structures to traffic.

2.3. Transportation Opportunities

In addressing the stated Transportation Problems, the OEA/EIS will consider opportunities to reduce impacts and enhance benefits to the border region. As such, this study provides the opportunity to consider the following:

- Development of a multi-modal strategy for a balanced transportation system that provides more transportation choices;
- Protection of future required right-of-way;
- Optimization of existing infrastructure;

- Facility rehabilitation to avoid or delay replacement;
- Partnerships with other proponents to co-operatively address common problems and/or shared objectives;
- Revenue generation and/or cost reduction; and
- Support for provincial, state and national economic and planning objectives.

Consideration of these transportation opportunities will not be restricted to roadway improvements. The assessment of travel demand identified a number of aspects of the transportation system that are currently operating well below capacity, and will likely continue to operate below capacity in the future under the current travel patterns. As part of the generation and assessment of transportation alternatives, the opportunity to divert excess demand to under-utilized crossings or modes will be considered.

3. Assessment and Evaluation

As noted in Section 1.3.4, the bi-national aspect of the Detroit River International Crossing project is a distinguishing characteristic for this study. The intent of the Partnership is to conduct one body of work pertaining to alternative generation, analysis and evaluation, and document the project findings in a format(s) suitable for circulation and review by the bi-national government agencies/ministries/departments and the general public.

The assessment and evaluation of alternatives will require applying the requirements of OEAA, CEAA and NEPA. Where two or more processes specify different requirements in conducting the study, the Partnership will seek to integrate the most rigorous requirement as much as possible. However, it must be recognized that, the processes can vary in many ways, such as what is considered an impact, how an impact is measured, the level of detail required to be provided, etc. The Partnership will meet all requirements of OEAA, CEAA and the NEPA processes as well as any other applicable Ontario, Canadian and U.S. legislation. Other applicable government policies and agreements will also be considered in the integrated study process.. It must be recognized, however, that it may not be possible in all cases, to integrate all requirements of NEPA, for example, into the OEAA and CEAA processes.

3.1. Process for Identifying and Assessing Transportation Planning Alternatives (Alternatives to the Undertaking)

The Ontario Environmental Assessment Act requires that a proponent provide a description of and a statement of rationale for alternatives to the undertaking. Transportation planning alternatives (i.e. alternatives to the undertaking) represent reasonable means of addressing the stated transportation problems and opportunities, as well as meeting the purpose of the undertaking as defined in this document. In addition to 'doing nothing', alternatives to address deficiencies in the transportation network capacity typically include those that increase network capacity, reduce transportation demand or combinations thereof. It is understood that such alternatives can also address the need by reducing dependency on the current crossings by reducing demand or shifting demand to other border crossings, or enhancing the role of other crossings in the network.

A unique feature of the international transportation network to be considered in the assessment of planning alternatives is border processing, which, as discussed in Chapter 2 of this document, can significantly impact the overall capacity of the network, but is not under the direct control of the Partnership. In addition to the planning process identified in this document, the Partnership will continue to work with border processing agencies in an effort to coordinate improvements to facilities, resources and procedures with planned improvements to the transportation network, as appropriate.

The Canada-U.S.-Ontario-Michigan P/NF Study identified several transportation planning alternatives, which will be revisited in the EA under the integrated environmental study process. The alternatives to be considered in the OEA/EIS will include, but are not limited to:

- Do nothing;
- Improvements to border processing;
- Transportation demand management;
- New and/or improved rail alternatives with new and/or expanded international rail crossing;
- New and/or improved transit services;
- New and/or improved marine services;
- New and/or improved road alternatives with new or expanded international road crossing; and
- Combinations of the above.

During the Environmental Assessment, MTO will provide opportunity for interested parties, agencies, stakeholders, etc. to review and comment upon the range of planning alternatives to be considered.

The assessment of transportation planning alternatives provides an opportunity to examine fundamentally different ways of addressing transportation problems. In recognition of these fundamental differences among the planning alternatives, it is appropriate to assess the effectiveness of each type of alternative in addressing the problems and taking advantage of opportunities at a functional level.

The assessment of planning alternatives at a functional level will consider broad factors and criteria that reflect the objectives of the Partnership in addressing the stated transportation problems. Table 3.1 identifies a listing of proposed factors and criteria to be considered for evaluating the practicality and feasibility of transportation alternatives.

It should be noted that Table 3.1 represents the minimum considerations concerning the identification and assessment of transportation planning alternatives. This listing is subject to refinement and modifications based on input received and study findings.

During the integrated environmental study process, MTO will provide the opportunity for interested parties, agencies, stakeholders, etc. to review and provide comments on the factors and criteria used to identify a preferred transportation planning alternative. Comments on the factors and criteria will be incorporated in the identification and assessment of planning alternatives, as appropriate.

The assessment of planning alternatives will consider work completed as part of the P/NF study, and will be based primarily on secondary source data and consultation. The basis for the assessment will include:

- Government legislation, policies and guidelines;
- Municipal policy (i.e. Official Plans);

- Public, Agencies, Consultation Groups, and other stakeholder's issues and concerns; and
- Project Team expertise.

TABLE 3.1 – PROPOSED FACTORS AND CRITERIA FOR IDENTIFYING AND ASSESSING TRANSPORTATION PLANNING ALTERNATIVES

FACTORS	CRITERIA
Transportation Network Improvement	Ability to address congestion on the transportation network by improving travel time and reliability for international passenger and freight movement
Transportation Opportunities	Ability to optimize use of existing transportation corridors or planned network improvements
Government, Land Use, Transportation Planning and Tourism Objectives	Consistency with established municipal, provincial and federal objectives and plans
Border Processing	Ability to meet the long-term needs of border processing agencies
Environmental Feasibility (Natural Environment, Socio-Economic Environment and Cultural Environment considerations);	Potential impacts to environmental factor areas (Natural Environment, Socio-Economic Environment and Cultural Environment)
Technical Feasibility	Ability to achieve minimum technical requirements at a reasonable construction/implementation cost.

The assessment will be documented clearly and concisely in a format that can be easily understood by all stakeholders.

The assessment of planning alternatives will identify the recommended planning alternative(s) to be carried forward for further consideration in the integrated environmental study process.

The remainder of this TOR describes the process to be followed for generating a study area and generating, assessing and evaluating alternatives for a linear transportation facility (i.e. alternative methods of carrying out the undertaking). A linear transportation facility is a land based linear transportation solution, which could be accommodated in existing corridors (i.e. rail, road or utility corridors) or within a new corridor. Linear transportation facilities would, for example, include bridge and tunnel options. It is understood that three scenarios can emerge at the end of the assessment of transportation planning alternatives, namely:

- 1) The Partnership finds that the recommended transportation planning alternative is one or more linear transportation facilities for which MTO would serve as the proponent, whereby the TOR will remain in effect and MTO will continue with the OEA process in accordance therein;
- 2) The Partnership finds that the recommended transportation planning alternative is not a linear transportation facility, whereby the OEA process prescribed in this TOR may be halted, and other processes may be initiated by MTO and/or other proponents, as appropriate; and,

- 3) The Partnership finds that the recommended transportation planning alternative is one or more linear transportation facilities in combination with other alternatives. In this case, the TOR will remain in effect and MTO will continue with the OEA process in accordance therein and other processes may be initiated by MTO and/or other proponents, as appropriate.

Subsequent to the assessment of transportation planning alternatives, MTO will meet with MOE to seek guidance on the intended course of action, as appropriate. .

3.2. Process for Generating a Study Area

The process for generating the study area, within which the stated problems and opportunities can be addressed, will reflect the need to provide for a range of feasible alternatives. In generating the Study area, the degree of effectiveness in addressing the stated problems and opportunities must be considered.

For information purposes, a description of the Detroit River area identified in Exhibit 1.2 and a preliminary description of potential effects related to a linear transportation facility are provided in the Supporting Documents.

On the basis of the transportation problems and opportunities, and the purpose of the undertaking as stated in this document, the following process for generating a Study Area is proposed:

- Identify significant physical constraints that may preclude the development of feasible alternatives (e.g. large waterbodies, severe changes in terrain) as well as sensitive land uses (current and future planned land use). For example, the width of the water body between Canada and the U.S. beyond the Detroit River area generally precludes any reasonable fixed link linear facility alternatives.
- Establish study area limits that provide continuous corridors of sufficient area to generate a range of linear transportation facility alternatives.
- Verify that the study area will accommodate the generation of alternatives that can reasonably address the stated problems and take advantage of opportunities. Alternatives generated must be effective in serving the existing and future travel demand on the transportation network and provide sufficient level of traffic service.

Throughout the course of the integrated environmental study, if required, the study area limits can be refined or modified to accommodate any reasonable alternatives that may be developed and for the purpose of assessing impacts. In addition, during the integrated environmental study process, MTO will provide opportunity for interested parties to review and comment on the study area limits.

Upon completion of the assessment of planning alternatives, and the generation of a study area, the NEPA Scoping Document will be prepared. This document will consider the supporting documentation provided with this TOR.

3.3. Process for the Generation and Evaluation of Alternatives (Alternative Methods)

The integrated environmental study process includes a multi-step process for the development of practical alternatives. The process outlined in this section is applicable to linear transportation solutions that fall within the mandates of the proponents of this study. Should the assessment of transportation planning alternatives identify other/additional solutions, an appropriate study process would be pursued by the pertinent agency/proponent(s).

The Ontario Ministry of Transportation and the other transportation partners are committed to planning, designing, implementing and maintaining a transportation solution in an environmentally sensitive manner. As such, an integrated study process has been developed to aid in developing alternatives that minimize adverse environmental impacts, and address the identified transportation problems.

The underlying principle regarding the alternatives generation process is to start with a broad perspective and narrow to the more focused as the project progresses. The starting point will be the Study Area to be developed as described in Section 3.2 and environmental information based largely on secondary source research and consultation.

This principle will be applied to the Detroit River International Crossing project as follows:

- Upon establishing the Study Area, Opportunity Corridors will be generated. These opportunity corridors will be of sufficient width to allow for flexibility in generating alternatives for linear transportation facilities to avoid or otherwise reduce impacts to significant environmental features which may be identified in later planning stages;
- Opportunity Corridors will be assessed to identify the preferred corridors for the generation of illustrative alternatives;
- Illustrative alternatives³ will be assessed to determine practical alternatives⁴;
- Practical alternatives will be assessed to determine the preferred practical alternative; and
- Concept Design for the preferred practical alternative will be developed.

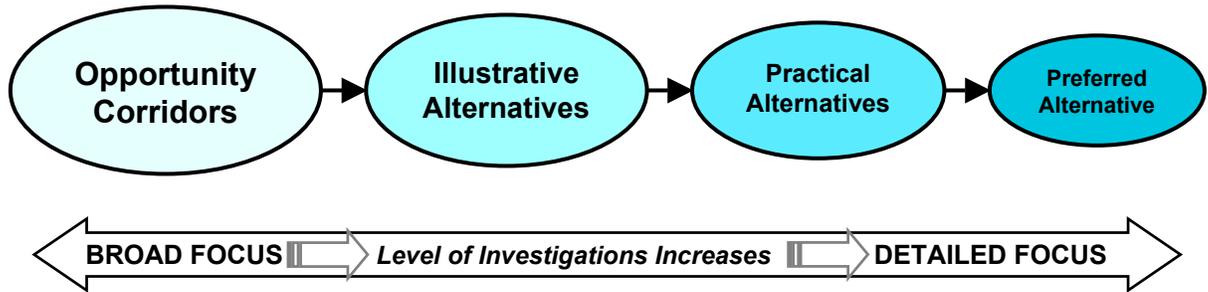
Under this process, as corridor, illustrative and practical alternatives are developed, study area information is supplemented with field data and additional research as required. When a preferred alternative is selected, concept design proceeds with even more focused data that will include detailed field surveys. This process continues on into later design stages and processes. The process of collecting additional environmental data as the project becomes more focused ensures that current information is sought and used throughout planning and design.

³ Illustrative alternatives represent the full set of alternative alignments/crossing locations to be considered.

⁴ Practical alternatives represent the set of illustrative alternatives that, upon an evaluation of impacts and benefits, are carried forward for further consideration.

The concept of focusing the range of alternatives and increasing the level of environmental and technical investigations as the project progresses is schematically illustrated as follows:

EXHIBIT 3.1 – FOCUSING THE RANGE OF ALTERNATIVES GENERATED AS THE PROJECT PROCEEDS



This approach is based on MTO's existing policies and protocols and has been used on many similar EA studies in Ontario, and is also consistent with FHWA and MDOT practices under NEPA. During the OEA, work plans will be developed to outline specific environmental inputs, investigations and methods of data collection and impact assessment at the respective study stages. Details of the process are provided in the following sections.

3.3.1. Illustrative Alternatives (Alternative Methods)

The development of illustrative alternatives will include:

- a) Identifying broad areas for generating linear transportation facility alternatives (Opportunity Corridors), and
- b) Generating route alternatives within Opportunity Corridors.

a) Opportunity Corridors

The process to develop Opportunity Corridors will consist of the following steps:

Step 1 – Identify design requirements for linear transportation facility alternatives;

Design requirements for the alternatives could include such characteristics as width of the facility, design speed, right-of-way requirements, access controls; navigational clearances, security considerations; and other design requirements that will be determined during the integrated planning process.

Step 2 – Establish constraint areas in the study area;

Constraint areas are those environmental and built features / areas that are to be avoided as much as practical to reduce the overall impacts associated with the project.

Step 3 – Establish guiding principles for the development of opportunity corridors for illustrative alternatives

The guiding principles reflect the objectives of the Partnership to address transportation needs and take advantage of transportation opportunities in the Study Area, and avoid as much as possible, generating unacceptable impacts related to a transportation solution.

The proposed guiding principles for the generation of the opportunity corridors are as follows:

- **Utilize existing infrastructure to the maximum extent** - Taking advantage of existing transportation and other linear corridors (i.e. road, rail, utility corridors) may improve usage of the transportation network and/or reduce impacts to other land uses.
- **Seek areas or land uses that are compatible, or areas in transition to compatible land uses, with transportation corridors** - Compatible areas are those that are less impacted by transportation alternatives than other land uses; areas in transition allow the opportunity to incorporate new transportation facilities in the area planning.
- **Minimize impacts to significant natural features** - Such features are usually regionally unique, protected by legislation/designations and may preclude a transportation facility.
- **Minimize impacts to city centres** - Such areas generally provide a focus for cultural, social and economic activities.

Consultation activities, including Public Information Open Houses, will be arranged to provide an opportunity for interested parties to review and comment upon these guiding principles as well as the proposed opportunity corridors.

Step 4 – Assess the feasibility of the alternative opportunity corridors and identify preferred opportunity corridors for the generation of illustrative alternatives

The assessment of opportunity corridors will be based on factors consistent with the environmental study processes in Canada and the U.S. The factors will reflect the objectives of the Partnership to address transportation and border processing needs and take advantage of transportation opportunities in the Study Area, and avoid as much as possible, generating unacceptable impacts related to a new/improved international transportation corridor.

The P/NF Study identified a set of factors to be used to assess the feasibility of opportunity corridors. These factors are outlined in Table 3.2. The rationale and proposed method of assessment of these criteria are provided in the supporting documentation. It should be noted that Table 3.2 represents the minimum considerations concerning the assessment of opportunity corridors; this listing is subject to refinement and modifications based on input received and study findings. Consultation activities,

including Public Information Open Houses, will provide an opportunity for interested parties to review, and provide input regarding these corridor assessment factors. The assessment of corridors will be carried out initially using primarily secondary sources data on Study Area features, consultation with public and private sector stakeholders and travel demand modelling work. Corridor mapping will identify the various types of land uses and features potentially affected. Travel demand modelling work will be used to assess transportation network performance with each of the corridors.

The assessment is intended to confirm the feasibility of the various opportunity corridors and identify, if possible, which corridors are to be carried forward for the generation of illustrative route alternatives.

Consultation activities, including Public Information Open Houses, will provide an opportunity for interested parties to review and comment upon the assessment of opportunity corridors.

TABLE 3.2 – PROPOSED FACTORS AND CRITERIA TO ASSESS FEASIBILITY OF THE OPPORTUNITY CORRIDORS

FACTOR	CRITERIA
Transportation Network Improvement	• Support local international traffic
	• Support long distance freight travel
	• Support long distance passenger travel
	• Limit negative impacts to access and mobility on local road networks (address international truck and/or vehicle congestion)
Transportation Opportunities	• Optimize use of the existing infrastructure
Government, Land Use, Transportation Planning, and Tourism Objectives	• Support existing land use and future plans
	• Support the transportation system
	• Maintain security and protect against system vulnerability
Border Processing	• Meet the long term needs for inspection and processing of commercial and passenger traffic
Environmental Feasibility	• Avoid as much as possible impacts to constraint areas associated with natural, social, cultural and economic features in the study area
Technical Feasibility	• Technical Considerations (i.e. length of corridor, length of river crossing, geotechnical conditions)
	• Constructability and Related Impacts

b) Generation of Illustrative Alternatives

Within the opportunity corridors that are carried forward, alternatives will be generated considering the connections/relationships between the transportation systems in both Michigan and Ontario.

Secondary sources data, such as aerial photography, constraint mapping (e.g. G.I.S. data) compiled during the preparation of the TOR and from external agencies and municipal Official Plans, will serve as a starting point to assist in the generation of

alternatives. More detailed mapping will be prepared and additional secondary source data will be compiled prior to the generation of illustrative alternatives. Detailed data collection, including limited field investigations, air photo interpretation, meetings with interested groups and individuals and discussions with ministries, agencies and the public, will then be conducted to obtain input into the generation of alternatives and to gain an appreciation of potential impacts to environmental features.

Illustrative alternatives will be developed based on technical and environmental objectives to avoid the most significant/sensitive environmental resource areas and study area features to the extent possible.

The objectives for generating alternatives will be to develop alternatives that are efficient/direct, meet objectives and design requirements of Partnership agencies, reflect the needs of border agencies, and minimize/avoid impacts to significant environmental and study area features to the extent possible. Table 3.3 outlines the environmental components that will be considered in addressing the objective to minimize/avoid impacts to the extent possible. It should be noted that these represent the minimum environmental considerations concerning generating alternatives and are subject to refinement and modification during the Integrated Environmental Study Process based on study findings and input received from stakeholders.

**TABLE 3.3 – ENVIRONMENTAL COMPONENTS AND FEATURES TO BE CONSIDERED
 DURING THE GENERATION OF ALTERNATIVES**

COMPONENT	FEATURE
Natural Environment	<ul style="list-style-type: none"> • Groundwater Quality and Quantity • Surface Water Quality and Quantity • Agricultural Lands • Wetlands • Areas of Natural and Scientific Interest (ANSI's) • Environmentally Sensitive Areas (ESA's) • Woodlands • Wildlife Preserves • Species at Risk / Endangered Species
Cultural Environment	<ul style="list-style-type: none"> • Historical, Archaeological and Cultural Sites • National, State, and Provincial Parks, and Conservation/Recreational Areas
Social Environment	<ul style="list-style-type: none"> • Landfills and Hazardous Waste Sites • Areas of Residential Development • Areas of Commercial / Institutional Development

Additional details regarding the rationale for using the above noted objectives and data sources are included in the supporting documents.

The alternatives will then be reviewed with agencies and the public through the consultation process and Public Information Open Houses. Consultation activities,

such as Public Information Open Houses, will provide an opportunity for interested parties to review and comment upon the objectives used to develop illustrative alternatives as well as the alternatives themselves. This consultation phase is critical to developing a reasonable set of illustrative alternatives. Local residents can add very valuable information to the database gathered by the Project Team.

It is anticipated that during the consultation events, comments and suggestions will be submitted regarding modifying/refining illustrative alternatives. The process for assessing the refinements suggested during these consultation events is based on the factor specific environmental inputs.

The criteria employed for generating alternatives will form the basis for determining whether suggested refinements should be carried forward. Refinements will be examined based on consideration of the natural, socio-economic, cultural environments and technical generation criteria and integrated where warranted.

The preferred illustrative alternatives will be identified through the evaluation process described later in this section and brought forward for further analysis. This set of preferred alternatives are deemed the practical alternatives.

Consultation activities, such as Public Information Open Houses, will provide opportunity for interested parties to review and comment upon the evaluation of illustrative alternatives.

c) Evaluation of Illustrative Alternatives

After the various illustrative alternatives are generated based on the generation criteria and refined based on consultation, the evaluation of the alternatives will commence. The evaluation of illustrative alternatives will identify the practical alternative(s) to be carried forward for further consideration during the integrated environmental study process.

The Partnership recognizes that the evaluation of alternatives for the Detroit River International Crossing Project may be complex due to the diverse nature of the project area and the inherent differences in cultures, values, objectives and priorities of the Canadian and American communities potentially impacted by the project. The evaluation will strive to incorporate the commonalities among the bi-national communities and objectively address their differences.

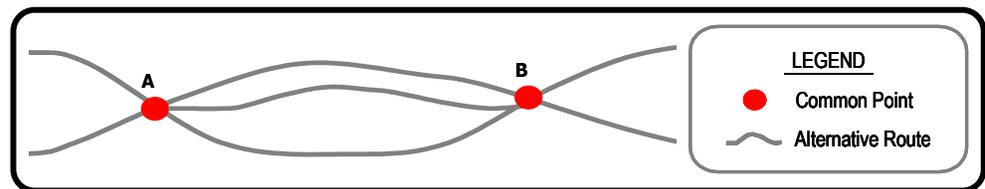
The evaluation of illustrative alternatives is a two-step process. The first step entails an assessment of the impacts of the various alternatives under consideration. At this stage, each environmental feature is examined to determine the extent of impact. Net impacts will be identified; these refer to the effects on the environment that remain after standard mitigation measures have been applied to reduce the extent of the impact. It is recognized that for some factor areas, impacts will occur outside of the Study Area. The assessment of impacts will also include an examination of the significance of effects as required under CEAA.

The second stage is the evaluation itself. This stage builds upon the information obtained from the impact assessment stage and involves a comparative analysis of the advantages and disadvantages of the alternatives considered to select a preferred alternative. At this stage, the relative importance of the environmental features is determined. A "Do Nothing" scenario will be carried forward to represent a

base case for comparison to the preferred alternative.

Throughout the study area, it is expected that during the generation and evaluation of alternatives, various linear alternatives may have common points where they intersect. In such cases, an analysis will be undertaken to determine preferred alternatives for portions of the study area rather than comprehensively examining all combinations of alternatives for the entire corridor. For example, alternatives between common points “A” and “B” would be compared to select a preferred alternative route for that segment of the corridor prior to assessing alternatives beyond common point “B” (refer to Exhibit 3.1).

EXHIBIT 3.1 – COMMON POINT ANALYSIS



d) Evaluation Methods

The evaluation of alternatives is an integral component of the integrated environmental study. A sound evaluation process is based on five key principles:

- 1) Comprehensive;
- 2) Understandable;
- 3) Replicable;
- 4) Traceable; and
- 5) Participatory.

The Ontario Ministry of Environment recommends that the evaluation approach should be clearly described and government ministries, agencies and the public should be asked for their comments early in the study process. The method(s) used to predict net environmental effects and evaluate advantages and disadvantages must, according to the Guidelines, clearly identify the relative differences and key impact trade-offs.

The Partnership is proposing two complementary evaluation approaches to assist in the selection of a recommended alternative for the proposed Detroit River International Crossing. A Reasoned Argument (or Trade-off) method will be the primary tool used to identify a preferred alternative. An Arithmetic (weighting-scoring) method will be the secondary tool and will be used to verify the results of the trade-off method.

The Reasoned Argument (trade-off) evaluation component will provide a clear presentation to stakeholders of the key trade-offs between the various evaluation factors and the reasons why one alternative is preferred over another. The Arithmetic evaluation provides a means to compare the alternatives based on a numerical scaling with weights assigned by the Partnership and other stakeholders as determined through the environmental study consultation. A numerical approach is a

good sensitivity analysis tool to determine if the conclusions of the reasoned argument approach are valid and appropriate. During the integrated environmental study, the decision making process will be clearly documented in support of a traceable process and to ensure it is understandable to those who may be affected by the decisions. Details on the Reasoned Argument (trade-off) and Arithmetic evaluation methodologies are outlined as follows:

Reasoned Argument (Trade-off) Method

This method will be the primary evaluation method employed to select a preferred alternative. This method highlights the differences in net impacts associated with the various alternatives. Based on these differences, the advantages and disadvantages of each alternative are identified. The relative significance of the impacts are examined to provide a clear rationale for the selection of a preferred alternative. The rationale that favours the selection of one alternative over all others will be derived from the following sources:

- Government legislation, policies and guidelines;
- Existing Land Use and Municipal policy (i.e., Official Plans);
- Technical Considerations (i.e. degree to which the identified transportation problems are solved);
- Issues and concerns identified during consultation with ministries, departments and agencies, municipalities, ratepayer and interest groups and the general public (including input obtained through the weighting of the relative level of importance of evaluation criteria); and
- Project Team expertise.

Arithmetic Evaluation Component

The Arithmetic Evaluation component will be the secondary method of evaluation and will incorporate both the level of importance of each environmental attribute (referred to as the weight) and the magnitude of the impact (or benefit) associated with an alternative (referred to as the score). Numerical values are derived for both the level of importance (weight), and the magnitude of the impact (score) associated with each alternative.

The weight is multiplied by the score to obtain a total. The totals for each alternative are compared to determine the preferred alternative. The Arithmetic Evaluation Method also allows for sensitivity testing as numerous weighting scenarios can be developed.

Weighting (level of importance)

Generally, more weight is assigned to those features, which are felt to be more important in assessing impacts generated by alternatives, and less weight is given to those features, which are considered to be less important.

Weighting scenarios will be used for this evaluation component. One weighting scenario will be developed by the Partnership Project Team, other weighting scenarios will be developed by the general public. Additional weighting scenarios can be developed in consultation with regulatory agencies and municipalities. Weighting

scenarios reflect the diverse range of views as to what features are held to be more important. As such, it is possible that weighting scenarios may vary by stakeholder group as well as by region. The Partnership will consider all weighting scenarios in selecting a preferred alternative. In addition, numerous sensitivity tests can be run to reflect input from other stakeholders. Questionnaires focused on establishing the relative weights that participants feel should be given to each environmental attribute will be distributed at the appropriate round of consultation activities. This range of views represented in the weighting scenarios and questionnaires will provide the Project Team with an understanding of community values with respect to the relative importance of each environmental feature which will be considered in coming to any recommendation.

The results of the weighting scenarios will be reviewed and compared to the results of the Reasoned Argument component.

Scoring (degree of impact)

Qualified Project Team specialists with expertise in impact assessment will assess the degree of impact and assign a score. The score assigned to each environmental attribute by the qualified specialist is relative to the impact generated. Relative impacts can range from those that are positive (benefit the environment) to negative (detrimental to the environment).

The assessment of impacts will be derived from field measurements, results of prediction models, secondary data sources (as appropriate) and other means as described in the supporting documentation.

Implementation of Evaluation Approaches

As previously noted, the Reasoned Argument (trade-off) method is the primary evaluation tool to select a preferred alternative with the Arithmetic approach used to substantiate the findings of the Reasoned Argument (trade-off) evaluation. The two evaluation approaches will be implemented concurrently. For example, the Project Team's assumptions and rationale behind its assessment of the level of importance of environmental attributes will be documented along with the corresponding arithmetic value assigned to the impact. In addition, input from stakeholders and the public will be coordinated through public information centres and other public consultation activities (e.g. meetings, workshops) to ensure issues, concerns and the magnitude of potential impacts are properly identified and understood by the Project Team.

The results of the Reasoned Argument (trade-off) evaluation component will be compared to the results from the Arithmetic Evaluation component. If the two components result in the identification of different preferred alternatives, the differences between the two alternatives will be identified. The results of the Arithmetic Method will be analyzed to determine the key weight-score combinations in the Arithmetic Evaluation. Similarly, the rationale for each trade-off decision will be revisited, to determine if the Project Team decision was appropriate. If the rationale supporting the trade-off decisions is valid and appropriate, the preferred alternative identified by the Reasoned Argument (trade-off) method will stand. However, if the results of the Arithmetic Evaluation lead to modifications to the trade-off decision rationale, the Reasoned Argument (trade-off) method preferred alternative may be

revised. The decision making process will be clearly documented and presented for stakeholder comment.

e) Factor Specific Environmental Inputs to the Evaluation of Illustrative Alternatives

The data collected on the study area (once established) will assist in identifying the types of impacts each alternative will result in, on each component of the environment. Environmental components include:

- Natural Environment
- Socio-economic Environment
- Cultural Environment

In addition to the above noted environmental considerations, technical requirements / considerations (i.e. effective transportation solutions, constructability, cost) will also be examined in the evaluation of illustrative alternatives.

Each of these components will be defined by a set of evaluation criteria, which group the environmental aspects considered in the analysis of impacts for this project. Impacts will be quantified according to the list of indicators shown in Table 3.4. It is recognized that for some factor areas, impacts will occur outside of the Study Area. The rationale for proposing these evaluation criteria, as well as proposed data sources, are outlined in the supporting documentation. The evaluation criteria listed represent the minimum requirements in the process of evaluating alternatives and are subject to refinement and modification during the integrated environmental study process based on study findings, government policy and input received from the various stakeholder groups, including the public.

TABLE 3.4 – CRITERIA FOR EVALUATING ILLUSTRATIVE AND PRACTICAL ALTERNATIVES

FACTOR	CRITERIA
Socio-Economic Environment	
Property and Access	1) Impacts to residential areas (i.e. property, access impacts) 2) Impacts to commercial/industrial areas (i.e. property, access impacts) 3) Impacts to agricultural operations
Community Effects	4) Nuisance impacts (e.g.. noise, lighting) 5) Impacts to cemeteries, schools, places of worship, unique community features 6) Effects on community activity / mobility 7) Effects on aesthetics / community character
Governmental Land Use Strategies	8) Compatibility with government goals / objectives / policies 9) Effects on approved private development proposals
Cultural Environment	
Archaeology	10) Impacts to historic/archaeological sites
Heritage and Recreation	11) Impacts to built heritage features and cultural landscape units 12) Impacts to National, State/Provincial and local parks/recreation sites

TABLE 3.4 - CRITERIA FOR EVALUATING ILLUSTRATIVE AND PRACTICAL ALTERNATIVES CON'T

FACTOR	CRITERIA
Natural Environment	
Groundwater	13) Impacts to groundwater recharge and discharge areas, as well as identified wellhead and source protection areas and areas susceptible to groundwater contamination
Aquatic Habitat, Fisheries, and Surface Water	14) Impacts to critical fish habitat features (spawning, rearing, nursery, important feeding areas) 15) Number of watercourse crossings required 16) Impacts to water bodies, including channel realignments and fill
Agricultural	17) Impacts to prime agricultural areas
Wetlands	18) Impacts to Provincially Significant Wetlands and wetland function 19) Impacts to evaluated and unevaluated wetlands
Wildlife	20) Effects on species at risk / endangered species (vegetation, fish and wildlife) 21) Effects on ecologically functional areas such as connective corridors or travel ways
Special Areas	22) Impacts to important wildlife areas such as deeryards, heronries, waterfowl areas, important bird areas (IBA). Other areas to be considered are any identified wildlife management, rehabilitation and research program sites. 23) Impacts to environmentally significant features such as Environmentally Sensitive Areas (ESAs), Areas of Natural and Scientific Interest (ANSIs) or other areas of provincial, regional or local significance and the functions of these features 24) Impacts to special spaces including the Detroit River, Conservation Authority Lands and NEPA 4(f) lands including the function of these features
Air Quality	25) Effects on sensitive receptors to air quality 26) Air pollutants and GHG emissions
Woodlands	27) Impacts to significant forest stands and woodlots (including interior forest habitat)
Resources	28) Impacts to mineral, petroleum and mineral aggregate resources
Property Waste & Contamination	29) Effect on operating and closed waste disposal sites 30) Impacts to other known contaminated sites
Technical Considerations	
Transportation	31) Transportation Operations 32) Network Compatibility 33) Border Processing
Engineering	34) Constructability Issues
Cost	35) Cost

Note: Table 3.4 represents the minimum criteria to be considered during the evaluation of alternatives (practical and illustrative alternatives) and are subject to refinement and modification during the Integrated Environmental Study Process based on study findings and input received from stakeholders.

3.3.2. Practical Alternatives

a) Development of Practical Alternatives

As noted in Section 3.3.1 b), the evaluation of illustrative alternatives will identify the practical alternative(s) to be carried forward for further consideration. It is anticipated that, due to the nature of this project, more than one practical alternative will be brought forward for further study. During the consultation events, comments and suggestions will be submitted regarding modifying/refining the illustrative alternatives being carried forward (i.e. practical alternatives). The process for assessing the refinements suggested during these consultation events is based on the factor specific environmental inputs, as discussed previously in Section 3.3.1 b).

The criteria employed for generating illustrative alternatives will form the basis for determining whether suggested refinements should be carried forward. Refinements will be examined based on consideration of the natural, socio-economic, cultural environments and technical generation criteria.

After the selected illustrative alternatives are refined based on consultation and the generation criteria, the practical alternatives will be developed. Practical alternatives are developed through more detailed design (although still at a preliminary level) to better identify property requirements, infrastructural implications, construction staging impacts and mitigation measures. More detailed mapping of the practical alternatives will be prepared based on additional secondary sources data, field surveys and investigations and additional consultation. This data is used to increase and enhance the level of information used in the evaluation to select the technically preferred alternative.

b) Evaluation of Practical Alternatives

Depending on the nature of the practical alternatives, the evaluation will implement the same two-step process used to evaluate illustrative alternatives.

Net impacts will be identified based on the additional information provided about the practical alternative. As with illustrative alternatives, it is recognized that for some factor areas, impacts may occur outside of the defined Study Area.

As with the evaluation of illustrative alternatives, the evaluation will build upon the information obtained from the impacts assessment stage and will involve a comparative analysis of the advantages and disadvantages of the alternatives considered. The relative importance of the factors, as identified during the evaluation of illustrative alternatives, will be used in the evaluation of practical alternatives. A "Do Nothing" scenario will be carried forward to represent a base case for comparison to the practical alternative.

Prior to selecting a preferred practical alternative(s), in accordance with NEPA requirements, a draft EIS will be prepared and circulated to U.S. government agencies and other stakeholders. The draft EIS will provide the information used to generate the study area, the evaluation of illustrative alternatives, as well as the analysis of practical alternatives. A formal Public Hearing will be arranged in the U.S. to provide interested parties the opportunity to comment upon the work documented

in the draft EIS.

The third round of Public Information Open Houses (PIOH) will be arranged in conjunction with the U.S. Public Hearing to provide stakeholders a similar opportunity to comment on the analysis of practical alternatives. The consultation activities associated with the third round of PIOH will include meetings with Canadian ministries/agencies (both federal and provincial) to provide an opportunity to input to the generation and analysis of practical alternatives.

Upon completion of the formal Public Hearing and third round of Public Information Open Houses, the Partnership will consider the comments received, refine the alternatives and analysis as required, and undertake the evaluation of the practical alternatives.

As with the illustrative alternatives, two evaluation methods will be used. The decision making and rationalizing of the results of the two methods will be conducted as identified in Section 3.3.1 d).

The fourth round of Public Information Open Houses will provide interested parties the opportunity to comment on the selected preferred practical alternative(s).

3.4. Process for Assessing and Evaluating Concept Design Alternative(s)

3.4.1. Development of the Concept Design

Concept Design will be prepared for only those alternatives that are recommended subsequent to the generation and evaluation of practical alternatives (described in Section 3.3.2). Concept Design includes the consideration and development of specific engineering and environmental issues to further understand very particular implications of the recommended alternative. The Concept Design plan will be undertaken to a level of engineering detail necessary to support:

- The development of mitigation measures in consultation with the appropriate agencies;
- A decision under CEAA by each Federal Regulatory Authority (RA) on whether adverse environmental effects (after mitigation) are significant or not;
- OEA approval under OEAA; and
- FHWA approval under NEPA.

This Concept Design process includes the consideration of concept design alternatives, assessment of the concept design alternatives and selection of the preferred concept design alternative. In addition to the continuing public and private sector consultation, a fifth round of Public Information Open Houses will be held to seek stakeholder input to the concept Design alternatives.

Concept Design alternatives are assessed based on consideration of natural, socio-economic and cultural impacts as well as technical considerations. Mitigating measures will be developed during the concept design phase and, upon selection of the preferred Concept Design, these measures will be incorporated to alleviate the

anticipated environmental effects.

3.4.2. Factor Specific Environmental Inputs to the Generation and Assessment of Concept Design Alternatives

There are three underlying principles for generating concept design alternatives:

- Take advantage of engineering opportunities and avoid environmental impacts, where possible;
- Minimize design-related impacts caused where environmental features cannot be avoided; and
- Provide sufficient design details to reach agreements with federal and provincial regulatory agencies and permit a CEA screening if necessary during the planning and concept design stage of the project.

3.4.3. Selection of the Preferred Concept Design Alternative(s)

The selection process shall include but not be limited to:

- Concept design alternatives that have significant environmental impacts (natural environment, socio-economic environment and cultural environment) but offer no significant transportation engineering advantages will be screened out first;
- Remaining alternatives will be assessed to determine their ability to address the study transportation objectives and to identify their environmental impacts after application of reasonable mitigating measures; and
- The net environmental effects (i.e. after applying conceptual mitigation measures for significant effects) will be used as a basis to compare alternatives.

The Concept Design stage concludes with the selection of the technically preferred concept design alternative(s). The selected alternative(s) represents an aggregate of all design alternatives that achieve the best overall balance of transportation engineering, individual factor area impacts and overall environmental impacts, including input that has been received through consultation on those issues.

Concept Design plans will be prepared for the preferred concept alternative(s) at an appropriate level of detail. Typical elements of Concept Design can be viewed in supporting documentation.

4. Monitoring Strategy

During the integrated environmental study process, MTO will commit to developing a monitoring program for the implementation (construction) of the proposed design for the Detroit River International Crossing in cooperation with MDOT, FHWA and TC. The OEA Report will include a comprehensive list of all commitments made during the study to guide future environmental work and consultation as well as effects and compliance monitoring.

4.1. Project Technical Monitoring

During the study, a monitoring strategy will be developed to reflect how the Partnership proposes to ensure that the implementation of proposed mitigating measures and key design features are consistent with project commitments outlined in the OEA Report and any subsequent environmental study documentation (prepared as part of the detail design process).

An environmental effects and compliance monitoring program is necessary to identify potential non-conformance with environmental design, and environmental protection requirements (as identified during the OEA) and to initiate corrective action to bring the work into compliance with environmental requirements committed to in the OEA Report and any subsequent environmental documentation for this undertaking.

Monitoring and any necessary follow-up programs may continue beyond the end of the construction phase. The duration of the monitoring and follow-up programs will vary and will depend on the conditions of permits and approvals granted by regulatory agencies.

4.2. OEA Process Monitoring

During the planning and design processes, the proponent will ensure compliance with OEA process commitments prior to project implementation. During construction, the proponent ensures that external notification and consultations are consistent with any commitments that may have been made earlier in the OEA Report, TESRs and Design and Construction Reports. For some sections of the corridor, the content of the TESR and the Design and Construction Report may be combined in a Transportation Environmental Study Report prepared during Detail Design. Following construction, monitoring will ensure that any follow-up information is provided to external agencies as per any outstanding environmental commitments.

5. Consultation for the Integrated Environmental Study Process

Consultation with affected parties is an essential part of the planning process and provides a mechanism for the proponent to define and respond to issues.

The following outlines a proposed plan for consulting with agencies, departments, ministries, First Nations, Public and Private Sector Consultation Groups, Municipalities and the public during the integrated environmental planning process.

Consultation activities undertaken during the study will focus on the following seven stages of the planning process:

1. Purpose and Need / Assessment of Planning Alternatives

External agencies and ministries, municipalities and the public will have the opportunity to review and comment on the defined purpose and need as well as the development and assessment of the planning alternatives.

2. Development of Illustrative Alternatives

External agencies and ministries, municipalities and the public will be asked to comment on the development of the illustrative alternatives and the criteria to evaluate the illustrative alternatives and select practical alternatives

3. Refinement and Evaluation of Illustrative Alternatives

External agencies and ministries, municipalities and the public will have the opportunity to provide input on refining illustrative alternatives to minimize environmental impacts. The evaluation criteria will be applied to allow the selection of alternatives. External agencies and ministries, municipalities and the public will be asked to comment on the evaluation and the rationale for the selection of the practical alternatives.

4. Analysis of Practical Alternatives

External agencies and ministries, municipalities and the public will have the opportunity to provide input on the analysis of practical alternatives.

5. Evaluation and Selection of a Preferred Practical Alternative

The evaluation criteria will be applied to allow the selection of preferred alternative. External agencies and ministries, municipalities and the public will be asked to comment on the evaluation and the rationale for the selection of the preferred alternative.

6. Concept Design and Mitigation of the Preferred Alternative

This step will be to consider Concept Design details and refinements and address specific impacts of the preferred alternative that will require mitigation during design, construction and post construction. External agencies and ministries, municipalities and the public will be asked to comment on the evaluation and the rationale for the selection of the preferred Concept Design alternative.

7. Environmental Assessment Documentation Submission

The Partnership will prepare the environmental study reports under NEPA, OEAA and the Screening Report under CEAA for submission to their respective approval authorities. External agencies, ministries and municipalities will be asked to comment on the reports prior to their submission, as appropriate.

A consultation record will be maintained throughout the integrated environmental study process to document project issues raised and Project Team responses to those issues.

5.1. Public Consultation During the Integrated Environmental Study Process

The public has a major role and responsibility in determining the success of a public consultation program. The extent to which the public participates, the issues they raise and how such issues are resolved all influence the effectiveness of the consultation process.

Within the integrated environmental study process, public consultation will involve reviewing, commenting and providing input to the technical and environmental work undertaken and to provide input to the public consultation process. The proposed consultation plan encourages proactive consultation, which will allow comments and views of the public to assist in influencing the study and recommendations thereof.

5.1.1. Public Information Open Houses and Follow-up Activities

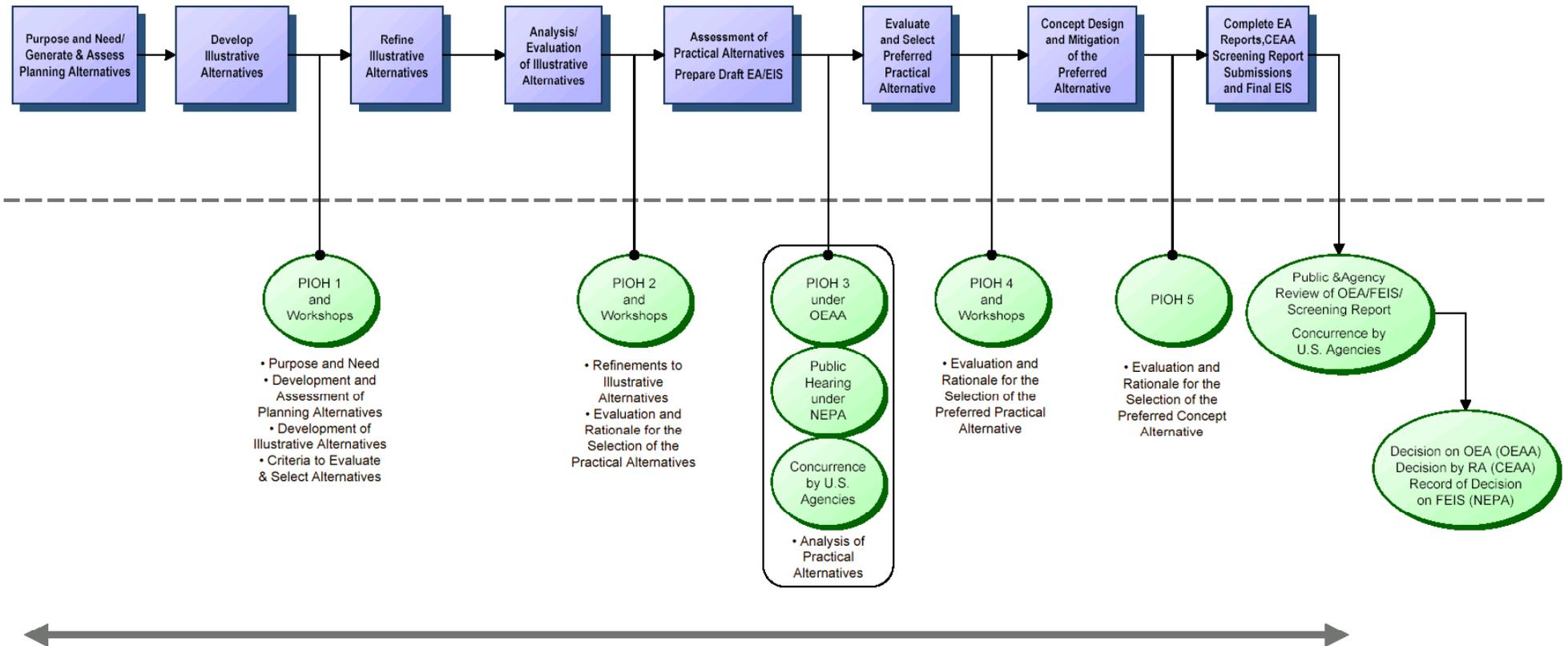
It is proposed that five rounds of Public Information Open Houses (PIOHs) and follow-up activities will be held during the environmental study process to generally coincide with the above noted planning stages (refer to Exhibit 5.1). It is intended that Stages 1 and 2 will be addressed at the first PIOH.

Each round of PIOHs will include as a minimum four individual meetings held throughout the Windsor/Essex County-Detroit/Wayne County areas. The precise locations/venues of each PIOH will be determined during the study based on project needs/issues, input from municipalities and the availability of venues; however, it is expected that meetings will be held as follows: Windsor, LaSalle, southwest Detroit/east Dearborn, and Wyandotte. The PIOHs will be arranged as drop-in centres (open house format) to allow the public to see results, exchange information, and ask one-on-one questions of the Project Team. The PIOHs also serve an important function in providing an opportunity for members of the Project Team to ask questions of the public to gain further understanding of specific conditions, issues and concerns regarding the study. The public will also have an opportunity to have questions answered.

The third PIOH on the Canadian side will coincide with a formal Public Hearing in the U.S. The Public Hearing is required to be held under NEPA, and provides an opportunity for the public to submit their comments on the draft EIS, including the analysis of practical alternatives.

Follow-up activities will be held as necessary throughout the project; however, it is expected these activities will be required as follows:

EXHIBIT 5.1 - PROPOSED PUBLIC CONSULTATION DURING INTEGRATED ENVIRONMENTAL STUDY PROCESS



Note: additional meetings will be held from time to time as required

- Following PIOH 1 to address any outstanding concerns and issues regarding purpose and need, and the generation of illustrative alternatives;
- Following PIOH 2 to identify issues regarding the selection of the practical alternatives and possible refinements; and
- Following PIOH 4 to identify issues regarding the selection of the preferred practical alternative and possible refinements.

The first two rounds of PIOHs, as well as the first two rounds of follow-up activities will focus on the development, refinement and evaluation of illustrative alternatives. The third and fourth round of PIOHs as well as the third round of follow-up activities are intended to allow the public to comment on the evaluation and selection of the preferred practical alternative, refinements, environmental impacts and proposed mitigation measures.

The focus of the follow-up activities held following PIOH 1 and PIOH 2 are to provide the opportunity to bring stakeholders together to develop an understanding of the potential impacts of the illustrative alternatives to be considered. The focus of follow-up activities held following PIOH 4 is to provide the opportunity to bring stakeholders together to develop an understanding of the potential impacts of the selected practical alternative. Follow-up activities will be arranged to address specific project issues and concerns as they arise. The format of these activities will be flexible to reflect the type of Project Team - stakeholder interaction required to address a particular issue(s) but could include workshops, kitchen table meetings, etc.

5.1.2. Public Notification

The first component of the Public Consultation Plan will be to develop contact lists which will include ratepayer and community groups, recreational groups, agricultural groups, etc. located on both sides of the border in the study area. The mailing list developed during the OEA TOR will be the starting point for this stakeholder list. These groups will be notified of project activities including study start-up, PIOHs, and follow-up activities (as appropriate). Notification methods include newspaper advertisements (for study commencement, each round of PIOHs and Environmental Assessment report submission), press releases, brochure distribution and mailing letters to those groups/ individuals on the Project Team's mailing list(s). In addition, a website will be maintained for this project. The website will host pertinent information regarding the project including notices of study commencement and project activities.

Once a preferred practical alternative has been identified, letters will be sent directly to all potentially affected landowners.

The OEA Report and NEPA EIS will be made available for public review prior to finalizing and submission (see Section 5.3).

5.1.3. Private Sector Advisory Group

A Private Sector Advisory Group was established during the P/NF Study. The group was comprised of selected private sector businesses on both sides of the border (e.g. border crossing owner/operators, proponents, automotive industry representatives) with an interest in the functioning of the border crossings. These participants can offer valuable input and professional expertise with regard to the operations and

issues associated with border crossings, and are often knowledgeable regarding local issues, border issues and can assist in the identification of other private sector groups that should be consulted. As a minimum, meetings with the Private Sector Advisory Group will be held at key points in the study.

5.2. Approach for Consulting External Agencies, Ministries and First Nations during the Integrated Environmental Study Process

External agencies provide valuable support by identifying compliance issues (laws, regulations, policies and programs) and other areas of concern within their jurisdiction. These groups can offer valuable input and professional expertise and are often knowledgeable regarding local issues and can assist in the identification of local interest groups that should be consulted. The following section discusses consultation with Provincial Ministries/Agencies, State Departments/Agencies, U.S. and Canadian Federal Agencies, Municipalities and First Nation Groups.

5.2.1. Ministries/Departments/Agencies

A Regulatory Agency Advisory Group will be assembled which includes potentially affected provincial and state departments, ministries, agencies and federal departments. Notification letters distributed early on the study process will canvass participation in the advisory group. Ministries, departments and agencies will be kept apprised of project activities and be sent notices regarding principal consultation activities.

Consultation with ministries, department and agencies will involve reviewing, commenting and providing input to the environmental assessment studies, the technical analysis and the ongoing comment/input to the consultation process. Liaison with representatives of ministries, departments and agencies will be arranged to:

- obtain information on study area features;
- exchange pertinent study information; and
- obtain input on project issues pertaining to each agency's mandate.

In developing a bi-national approach to identify and address project issues, the Partnership will coordinate meetings with Canada, U.S., Ontario and Michigan ministries, departments and agencies which share common interests.

A minimum of six rounds of Regulatory Agency Advisory Group Meetings will be held. These meetings will be held to coincide with the following study phases:

- 1) Assessment of planning alternatives/generation of illustrative alternatives
- 2) Refinement and evaluation of illustrative alternatives
- 3) Refinement and assessment of practical alternatives
- 4) Selection of the preferred practical alternatives

- 5) Concept design and mitigation of the preferred alternative
- 6) OEA/EIS Report Submission

The proposed meetings will provide the opportunity for two-way communication between the Project Team and government agencies to identify issues and gain a better understanding of environmental conditions that should be factored into the alternative generation process, gain input on the process and criteria (including their relative level of significance) to be used in the evaluation of alternatives, gain input on potential impacts associated with the preferred alternative and potential design refinements to minimize adverse environmental impacts, and receive direction on proposed mitigation measures. The purpose of the final agency advisory group meeting will be to present a draft OEA/EIS Report for review prior to submission for formal review and approval. The purpose of the pre-submission review is to ensure accuracy of the report and to gain support for recommendations, mitigation and commitments.

It is recognized that certain agencies will have more interest in this project than others. In Ontario, these agencies primarily include Ministry of the Environment, Ontario Ministry of Natural Resources and Conservation Authorities, while in Michigan, these agencies include Department of Environmental Quality, Department of Natural Resources, and the State Historic Preservation Office. Additional meetings will be held with these agencies as required to ensure the latest data is available and that the Project Team has a good understanding of potentially significant and sensitive issues early in the study process to resolve concerns and to develop appropriate mitigation measures. In addition, a meeting likely will be required prior to the OEA/EIS Report submission to finalize conceptual fisheries compensation plans.

5.2.2. Federal Agencies

The participation of federal agencies will be sought in the same manner as provincial ministries and agencies. These agencies will be included in the Regulatory Agency Advisory Group.

Involvement with federal agencies in this project is expected to occur early in the study process to coordinate Canadian Environmental Assessment Act (CEAA) requirements (Scope of Project and Scope of Assessment) and address the requirements for approval/permits from Regulatory Agencies (such as the Canadian Coast Guard for Navigable Waters Protection Act approval and the Federal Department of Fisheries and Oceans for Fisheries Act approval). Other federal agencies to be engaged during the study include, but are not limited to the Canadian Transportation Agency (CTA), Windsor Port Authority, Foreign Affairs Canada and Environment Canada. Similarly, consultation with key U.S. federal review agencies such as Army Corps of Engineers, Environmental Protection Agency and Coast Guard will be initiated early on in the study process. Federal agencies will also be consulted to determine potential implications to federally owned lands.

The Canadian Environmental Assessment Agency, Ontario Region will be contacted early in the study to assist in the coordination of federal and provincial EA approvals. The agency will be involved in consultation activities involving federal agencies, as appropriate.

The International Joint Commission will be contacted early in the study process to determine their role in the environmental study process and identify any issues and concerns, as well as requirements for approval of the project.

Border processing agencies, including Canada Customs and Revenue, Canadian Immigration Office, Ministry of Agriculture, Department of Homeland Security and U.S. Food and Drug Administration will be consulted throughout the project to obtain input on alternatives generation and analysis, as well as to obtain comments on the evaluation of alternatives.

5.2.3. Municipalities

A Municipal Advisory Group will be assembled which will include representatives from potentially affected municipalities within Windsor/Essex County-Detroit/Wayne County, including SEMCOG. It is assumed that the representatives on the Public Sector Consultation Group established for the preparation of this OEA TOR will continue their role during the environmental study.

During the environmental study process, consultation with municipalities will involve reviewing, commenting and providing input to the environmental studies, the technical analysis and the ongoing comment/input to the consultation process. Generally, consultation with municipal representatives will be sought throughout the study process. Liaison with municipal representatives will be arranged to obtain information on study area features, exchange pertinent study information and obtain input on project issues pertaining to each municipality. In addition, input from municipal representatives will be sought as to the appropriate methods for consultation with their respective councils.

Bi-national Municipal Advisory Group meetings will be required at key stages of the study process and to address broader study area co-ordination issues. However, it is also proposed that separate meetings with regional and local municipal representatives be undertaken during the study process to effectively and specifically address municipal issues. Additional individual meetings with municipal representatives will be held as required.

Municipalities will be kept apprised of project activities and be sent notices regarding all publicly advertised consultation activities. A minimum of six rounds of Municipal Advisory Group Meetings will be held. These meetings will be held to coincide with the following study phases:

1. Assessment of planning alternatives/generation of illustrative alternatives
2. Refinement and evaluation of illustrative alternatives
3. Refinement and assessment of practical alternatives
4. Selection of the preferred practical alternatives
5. Concept design and mitigation of the preferred alternative
6. OEA/EIS/CEA Screening Report Submission

The composition of the Municipal Advisory Group (i.e. local, regional or bi-national based) for each round of meetings will be determined during the study process;

however, it is expected that bi-national based meetings will be required for the generation and refinement of illustrative alternatives, evaluation of illustrative alternatives, assessment of practical alternatives, selection of the preferred practical alternatives and the development of concept design alternatives.

The proposed meetings will provide the opportunity for effective two-way communication between the Project Team and local/regional municipalities to identify issues and gain a better understanding of environmental conditions to factor into the alternative generation process, gain input on the process and criteria (including their relative level of significance) to be used in the evaluation of alternatives, gain input on potential impacts associated with the preferred alternative and potential design refinements to minimize adverse environmental impacts, and receive direction on proposed mitigation measures. The purpose of the final Municipal Advisory Group meeting will be to present a OEA/EIS Report for review prior to submission for formal review and approval. The purpose of the pre-submission review is to ensure accuracy of the report and to gain support for recommendations, mitigation and commitments.

5.2.4. Municipal Councils

Municipal councils are key stakeholders within the integrated environmental study process and municipal representatives from the Municipal Advisory Group (identified in Section 5.2.3) will be considered the main link between the Project Team to their respective councils. Council presentations to SEMCOG, Windsor, Detroit, LaSalle, Tecumseh, Wyandotte, Essex County (and others upon request) are proposed prior to each round of Public Information Open Houses. Council support will be sought for the preferred alternative prior to the fifth round of Public Information Open Houses. At the request of any Council, the Partnership will attend additional Council meetings to discuss project related issues.

5.2.5. First Nations

It is recognized that there may be a range of First Nation issues associated with this project. As such, establishing and maintaining affective communications with First Nation groups will enable the identification and resolution of key issues. First Nations will be consulted throughout the integrated environmental study as necessary.

Potential issues for First Nations include:

- Effects on land used for traditional hunting or fishing
- Impacts to areas used for the harvesting of country foods
- Impacts to locations of medicinal plants
- Impacts to sacred grounds
- Impacts to known burial sites
- Implications to Land Claim areas

It is recognized that the above noted issues are more suitably addressed at different stages of the environmental study process. As such, proactive communication with

First Nations early in the study process will be required to augment existing conditions information and to identify First Nation interests. Meetings with First Nations will be held early in the study process to collect data. The input received regarding conditions within the study will assist in the process of generating alternatives. Based on dialogue with First Nations, specific issues will be identified and appropriate factors / criteria will be developed to ensure that the issues raised are given appropriate consideration in the generation and evaluation of alternatives.

Effective two-way communication with First Nations will continue as the study proceeds into the Assessment and Evaluation stages to determine the relative significance of identified features and into the Concept Design process to ensure that appropriate mitigation measures (as necessary) are developed to appropriately address the environmental effects of the preferred alternative. Meetings will be held, if required, with Elected and Confederacy Councils prior to each round of Public Information Open Houses. First Nations will be provided the opportunity to review an OEA/EIS Report prior to submission for formal review and approval. The purpose of the pre-submission review is to ensure accuracy of the report and to gain support for recommendations, mitigation and commitments.

5.3. Pre-Submission Review of the Environmental Assessment Report/Environmental Impact Statement

The OEA/EIS Report will be available for a municipal/agency/public/First Nations review prior to finalizing for formal submission. The final Municipal Advisory Group, Private Sector Advisory Group and Regulatory Agency Advisory Group meetings will be used to present an OEA/EIS Report for review prior to submission for formal review and approval. The purpose of the pre-submission review is to ensure accuracy of the report and to explain the rationale and gain support for recommendations, mitigation and commitments. The documentation will be available at government offices, public libraries and on the project web site.

5.4. Submission of the EA/EIS/CEA Screening Report

Once finalized, the OEA Report will be submitted to MOE. The submission will be in accordance with Reg. 334, including:

- The OEA Report will include an Executive Summary and a list of studies and reports done in connection with the undertaking or matters related to the undertaking.
- Unbound maps showing the location of the undertaking and the area affected by it will be included in the submission.

The OEA Report will document all pertinent aspects of the study concerning both sides of the border (i.e. existing conditions, consultation activities, environmental effects, mitigation and commitments. This Terms of Reference (TOR) document and the Minister's "Notice of Approval" of the TOR will also be included in the appendices of the OEA Report. As part of the MOE review process, the Report will be circulated

to all pertinent government agencies for review, and will also be made available for public review. Upon consideration of all comments received, the Minister will make a decision on the OEA.

Under CEAA, a Screening Report(s) is prepared and circulated to the Screening Committee (federal government review team). The Screening Report(s) is then circulated to all pertinent federal regulatory authorities (RAs) for review. The OEA Report will be appended to the Screening Report(s) as part of this circulation. The RA responsible for the preparation of the respective Screening Report(s) will determine if further agency or stakeholder review is required/appropriate. The RAs will decide whether to exercise any power or perform any duty or function that would permit the project to proceed. As delegated by the RAs, Screening Reports may be carried out by the Partnership (or their consultants) with direction from the RAs in consultation with expert federal authorities (FAs).

In the U.S., the Final EIS (FEIS) will be submitted to FHWA. FHWA will circulate the FEIS to government agencies and members of the public that have made substantive comments. Upon consideration of all comments received, FHWA will issue a Record of Decision.

5.5. Consultation in Preparation of the OEA Terms of Reference

A consultation record has been prepared to outline the consultation activities undertaken in preparation of this Terms of reference and how stakeholder comments have been considered. The Consultation Record is provided in the supporting documents (available under separate cover).

6. Other Approvals Required

It is recognized that a number of approvals may be required for this project. Consultation with approval agencies will continue during the EA to coordinate timing of approvals, approval requirements and to ensure that approvals are ultimately obtainable. Potential permits/approvals/authorizations and agreements required from Canadian Ministries/Agencies/Authorities include but are not limited to the following:

- Navigable Waters Protection Act Approval (Federal Government)
- Fisheries Act Approval (Federal Government)
- International Boundary Waters Treaty Act Authorization (Federal Government)
- Determination of Significance of Adverse Environmental Effects under Section 20 of the Canadian Environmental Assessment Act (if not determined during the provincial EA approval stage)
- Agreements with local utilities
- Railway Crossing Agreement
- Hydro Construction Agreements (Hydro One Networks)
- TransCanada Pipeline Crossing Permit
- International Joint Commission Permit
- Other agency approvals as required.

Potential permits/approvals/authorizations and agreements required from U.S. Departments/Agencies/ Authorities include but are not limited to the following:

- State Department Presidential Permit
- U.S. Coast Guard Bridge Permit
- U.S. Army Corps of Engineers Section 404 Permit
- U.S. Fisheries and Wildlife Service Threatened and Endangered Species Act
- Michigan Natural Resources and Environmental Protection Act (all administered by the MDEQ):
 - Part 31 – Floodplain Encroachment
 - Part 91 – Soil Erosion and Sedimentation Control
 - Part 301 – Inland Lakes and Streams
 - Part 303 – Wetlands
 - Part 365 – Threatened and Endangered Species
- Federal Clean Water Act Section 401 certification from MDEQ may be required.