



Canada-United States-Ontario-Michigan Border Transportation Partnership

Draft Economic Impact Analysis Work Plan

**June 2006
Version 2**

PREFACE

The Canada - U.S. – Ontario - Michigan Border Transportation Partnership (The Partnership) is composed of the Federal Highway Administration and Transport Canada representing the federal levels of government, and the Ontario Ministry of Transportation and the Michigan Department of Transportation representing the provincial/state level. 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 Southwestern Ontario.

This international transportation improvement project will require approvals from governments on both sides of the border. The Partnership has developed a coordinated process that will enable the joint selection of a recommended river crossing location that meets the requirements of *Ontario Environmental Assessment Act* (OEA), *Canadian Environmental Assessment Act* (CEAA), and *National Environmental Policy Act* (NEPA).

The goal of the partnership is to:

- obtain government approval for a new or expanded crossing with connections to the provincial highway system in Ontario and the interstate freeway system in Michigan, including provisions for processing plazas to improve traffic and trade movements at the Windsor-Detroit border;
- completion of comprehensive engineering to support approvals, property acquisition, design and construction; and,
- submit environmental assessment documents to request approval by December 2007.

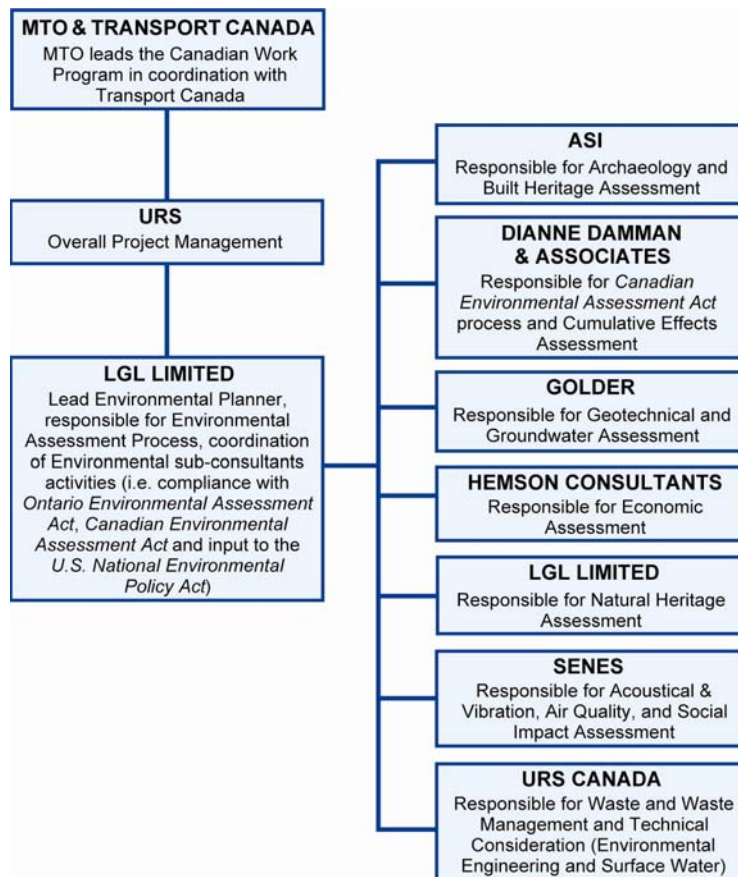
The Partnership completed a *Planning/Need and Feasibility Study* (P/NF) in January 2004 to address cross-border transportation demands for a 30-year planning period. Included in the documentation for that study was an Environmental Overview Report which provided an inventory of the existing condition in a Focused Analysis Area. Subsequently, in accordance with the *Ontario Environmental Assessment Act*, MTO prepared and submitted in May 2004 an environmental assessment Terms of Reference to the Ontario Ministry of the Environment for review and approval. The Terms of Reference was approved by the Ontario Minister of the Environment on September 17, 2004. The Terms of Reference outlines the framework that MTO and Transport Canada will follow in completing the Detroit River International Crossing Environmental Assessment (DRIC EA).

The Ontario Ministry of Transportation (MTO) is leading the Canadian work program in coordination with Transport Canada. The Michigan, Department of Transportation (MDOT), in coordination with the Federal Highways Administration (FHWA), is leading the U.S. work program.

The partnership is moving forward with technical and environmental work leading to the selection of a new or expanded border crossing, to address cross-border transportation demands for a 30-year planning period.

As an initial step in the DRIC EA process and to build upon the work completed in-depth secondary source data collection has been conducted. This work has been focused within the Preliminary Analysis Area (PAA) identified in the Environmental Overview Report, (as Amended January 2005). The noted data collection effort has been documented in a series of Working Papers. Working Papers have been prepared for the following topics: social impact assessment; economic assessment; archaeological resources; cultural resources; natural heritage; acoustics and vibration; air quality; waste and waste management; and technical considerations. The Working Papers are presented within the Environmental Overview Report (June 2005).

The Canadian Study Team and their tasks are presented below.



The purpose of the Working Papers is to document the secondary source data collection by: describing the data collection/sources used; providing an overview of study area conditions; identifying significance/sensitivity of features in the study area; and, identifying gaps in study area data and developing Work Plans to fill identified data gaps.

In conjunction with the Working Papers, a Work Plan for each discipline has been prepared to structure the filling of identified data gaps. They provide:

- a schedule and order of events for the subject under investigation by phase;
- a rationale for further data collection methodologies;
- data sources;
- methods of assessment, criteria, indicators and measures; and,
- details on the integration of each work plan with the work plans of other disciplines.

The Work Plans have been developed based on current knowledge of existing conditions within the PAA and therefore, should be considered to be living documents which will be subject to agency and public review. The partnership is aware that the assessment and evaluation of alternatives at all phases will require applying the requirements of three pieces of legislation, the OEA, CEAA, and NEPA. Therefore, in preparing the Work Plans, the partnership has sought to integrate the most rigorous requirements from each piece of legislation.

Economic Impact Analysis Work Plan

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1. INTRODUCTION

1.1 Planning/Need and Feasibility Study – Existing Environmental Conditions

The Partnership jointly commissioned a Planning/Need and Feasibility Study (P/NF) (Canada-US-Ontario-Michigan Border Transportation Partnership 2004), 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.

A consultation component was incorporated into 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 Environment 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. Hemson Consulting Ltd. has been retained to undertake the Economic Impact Analysis component of the environmental assessment study.

1.2 Detroit River International Crossing – Terms of Reference

A Terms of Reference was submitted to the Ontario Ministry of the Environment for approval in May 2004. The Terms of Reference identifies the framework that the proponent must follow in completing an individual environmental assessment. The Terms of Reference received approval in September 2004.

The planning process that the Route Planning Study and Environmental Assessment Study will follow is outlined in the Terms of Reference and consists of four stages:

- Stage 1 – Define Study Area;
- Stage 2 – Illustrative Alternatives;

- Stage 3 – Practical Alternatives; and,
- Stage 4 – Concept Design Alternatives.

1.3

Economic Impact Analysis Work Plan

The primary objective of the Economic Impact Analysis (EIA) is to identify the potential positive and negative impacts of the various route, plaza, and crossing alternatives on the local and regional economies of Windsor and the greater Windsor area. It is imperative that the analysis consider equally the benefits that the new highway and crossing will have on the local, provincial and national economies versus the direct negative impacts on the business community that is located along potential alternatives. In the initial phases of the EIA, the analysis will consider the impacts on the immediate economies along the routes of the long list of illustrative alternatives. The analysis will broaden to incorporate impacts on the broader Windsor region following the selection of a narrower list of technically preferred routes. The EIA is structured around two basic activities:

- Analysis and overview of the major economic implications within the broad study area of the DRIC project. This will include an overview of existing economic base, urban structure and growth outlook in the study area as the context for the more specific economic impact analysis of illustrative and practical alternatives. The initial overview of the Windsor region economic context is provided as the initial sections of this Work Plan. At the regional scale, economic effects are created by the provision of a new crossing, but, for the most part, regional economic effects are not distinguishing features among alternative routes and locations; and
- Local economic impact of the specific impacts of various alternatives at the illustrative and practical alternative stages. This includes both the effects of dislocation and disruption to business activities within the local economic fabric as well as opportunities for new economic activities created by the routes, plazas and the crossing alternatives themselves.

Broader economic effects associated with the improved transportation system will be addressed by HLB Decision Economics, within a separate workplan. We will be incorporating this work into our analysis as it relates to local economic impact.

This Work Plan provides an overview of the existing economic conditions in the study area.

2. EXISTING CONDITIONS – THE REGIONAL CONTEXT FOR THE ECONOMIC EVALUATION

2.1 Windsor–Detroit is a Key Link in a Larger Economic System

The Windsor–Detroit area is one of three major links within a system of highways and trade corridors connecting major urban areas in southwest Ontario to major US centres (Figure 1).

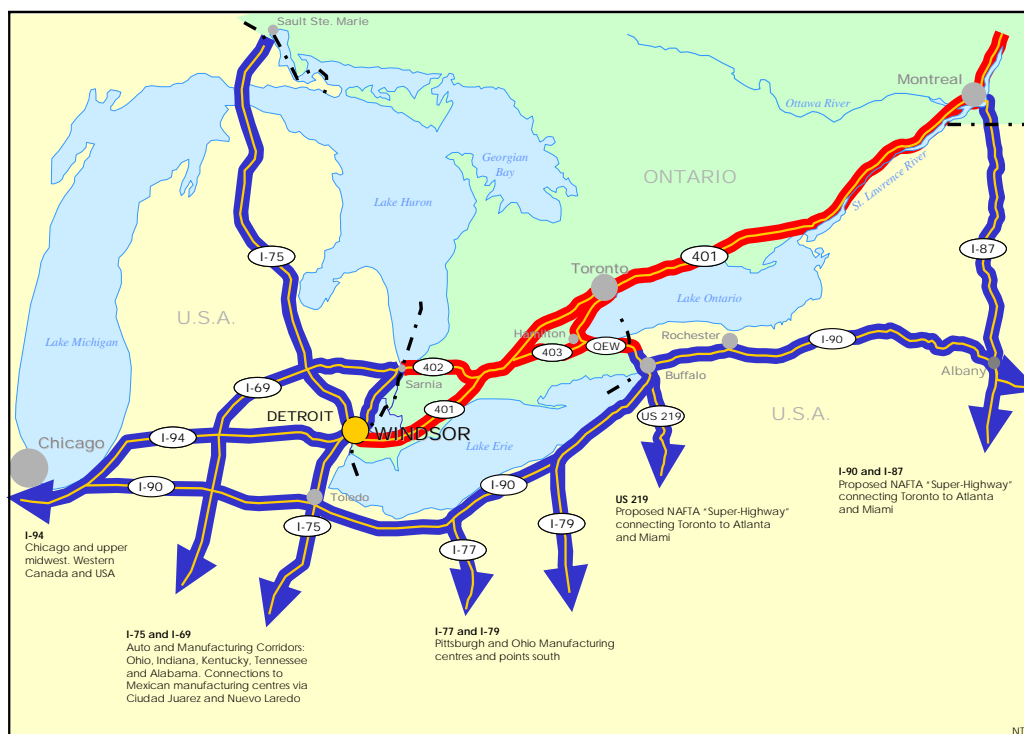


FIGURE 1: SOUTHWESTERN ONTARIO-US HIGHWAY SYSTEM

Source: Hemson Consulting Ltd.

As noted in the P/NF study (2004), a significant amount of trade occurs between Canada and the United States, and the transportation system in southern Ontario plays a key role in facilitating this economic activity. Major connections to the US served by the Windsor–Detroit crossing include:

- I-94 which provides access to Chicago and the upper mid west, Western Canada and other parts of the USA;
- I-75 and I-69 which are major auto industry and manufacturing corridors providing access to western Ohio, Indiana, Kentucky, Tennessee, Alabama and the major manufacturing centres in northern Mexico; and

- I-77 and I-79 which provide access to manufacturing in Pennsylvania, eastern Ohio and points south.

Within Windsor–Detroit, Windsor is by far the smaller of the two urban areas. The Windsor Census Metropolitan Area (CMA) is comprised of the City of Windsor and the Towns of Lakeshore, Amherstburg, Tecumseh and LaSalle. Windsor represents the major urban focus of the CMA while the built-up areas of neighbouring Tecumseh and LaSalle are located along their boundaries with Windsor. The remainder of the CMA is largely rural with a number of smaller settlements and shoreline developments.

As of mid-2004, the Windsor CMA has a population of about 330,000. This is much smaller than the 5.5 million residents within the Detroit Consolidated Metropolitan Statistical Area (CMSA). Within the CMSA, Wayne County contains the core urban area within which the central City of Detroit is located.

The difference in size between Windsor and Detroit is quite substantial (Figure 2) and since Windsor is relatively small, a major infrastructure investment could have a major economic impact. Windsor is strategically located at the end of one highway corridor in Ontario (Highway 401), and the beginning of a much larger system of highways and trade corridors to the United States. As a result, improving the connection between these two areas could have significant implications for the future economic prospects and growth in Windsor.

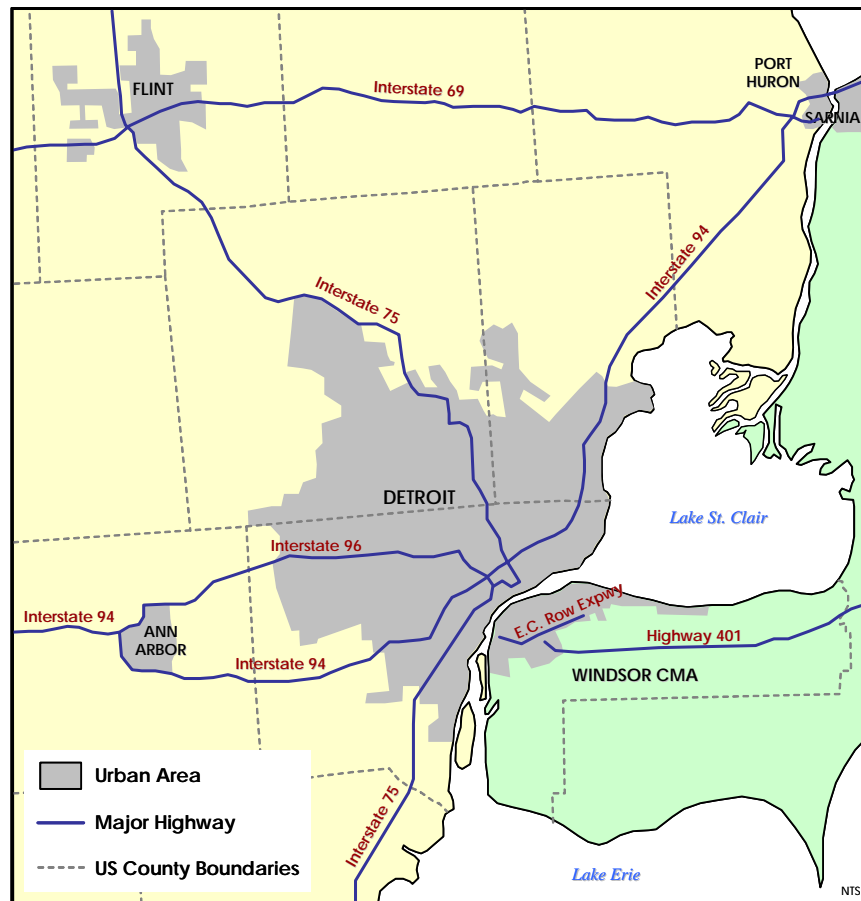


FIGURE 2: DETROIT WINDSOR CONTEXT

Source: Hemson Consulting Ltd.

2.2

Windsor is Much Smaller than Detroit, But Growing More Rapidly

For decades, the population of the Detroit CMSA has remained relatively stable, adding only about 200,000 people or 4% to the population over the past 35 years, compared to a 44% change across the US as a whole. Wayne County, however, which contains the core urban area has experienced a steady decline in population, from 2.7 million in 1970 to 2.0 million in 2004.

By comparison the Windsor CMA has grown significantly over the past 30 years, adding over 70,000 people — almost 30% growth — between 1971 and 2004 (Figure 3). A majority of this growth occurred over the past ten years, driven by the rapid local economic growth of the same period. Also unlike Detroit, the City of Windsor, as the core urban area of the Windsor CMA, has had population growth over the past decade.

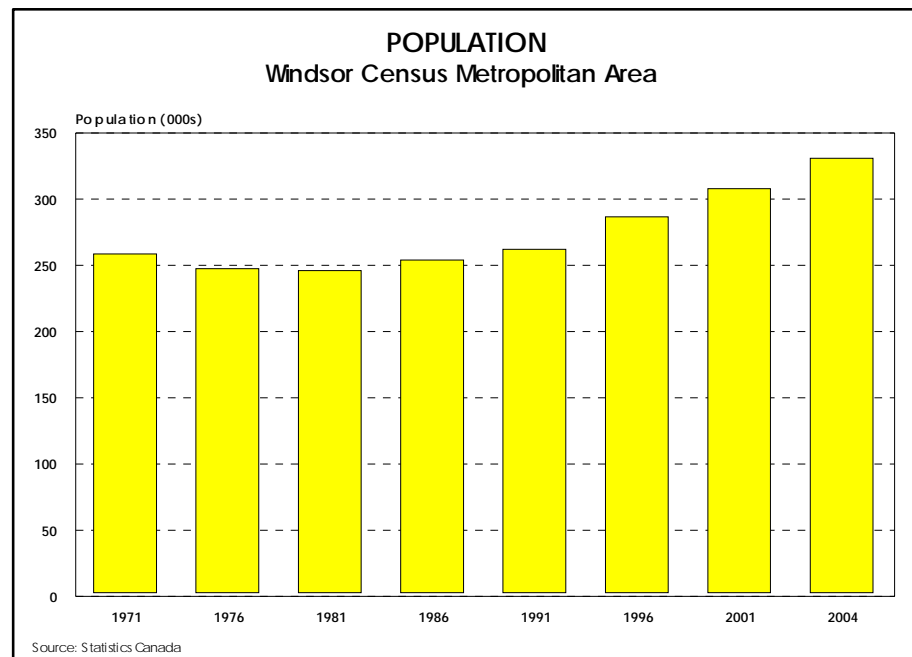


FIGURE 3: POPULATION IN THE WINDSOR CMA

A similar situation is observed with employment (Figure 4). Since the recession low in 1992, Windsor CMA has added over 40,000 jobs, an increase of over 30%. By any measure this represents healthy and significant economic growth for the community.

The continuation of the healthy economic growth performance of the Windsor CMA is desired by most stakeholders in the Windsor area. The ability to minimize negative effects and to maximize the creation of positive opportunities for growth in the local economy will be critical to analyzing the economic effects of the Detroit River alternative routes and crossings.

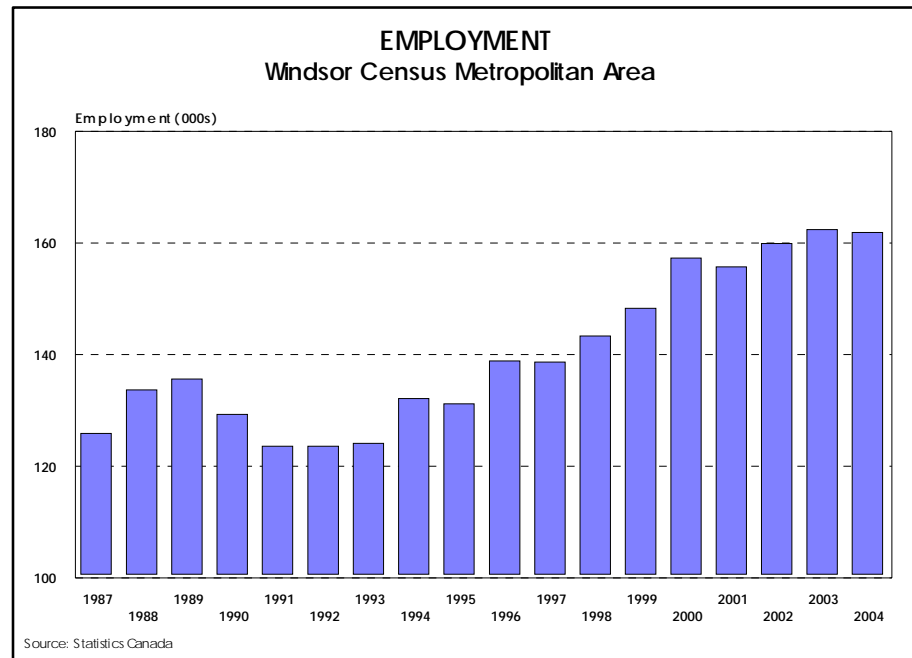


FIGURE 4: EMPLOYMENT IN THE WINDSOR CMA

2.3 Building Activity Has Been Strong

Despite some cyclical variations, new construction activity in Windsor has been strong. Although there was little population growth in the 1970s, Windsor, like elsewhere in Canada, still experienced significant housing construction. This growth came to an abrupt halt with the deep downturn in the national economy at the start of the 1980s (Figure 5). This recession disproportionately affected Windsor’s manufacturing-based economy. The remainder of the 1980s and the 1990s were characterized by steady growth in new permits as the deep recession experienced elsewhere in Canada in the early to mid-1990s was much less apparent in Windsor.

In the industrial/commercial sector, the recession of the early 1980s was followed by more moderate levels of new permit activity. It is only since the 1990s that new construction and investment returned to levels observed in the late 1970s. The peak in 1997 is the Windsor Casino investment (Figure 6).

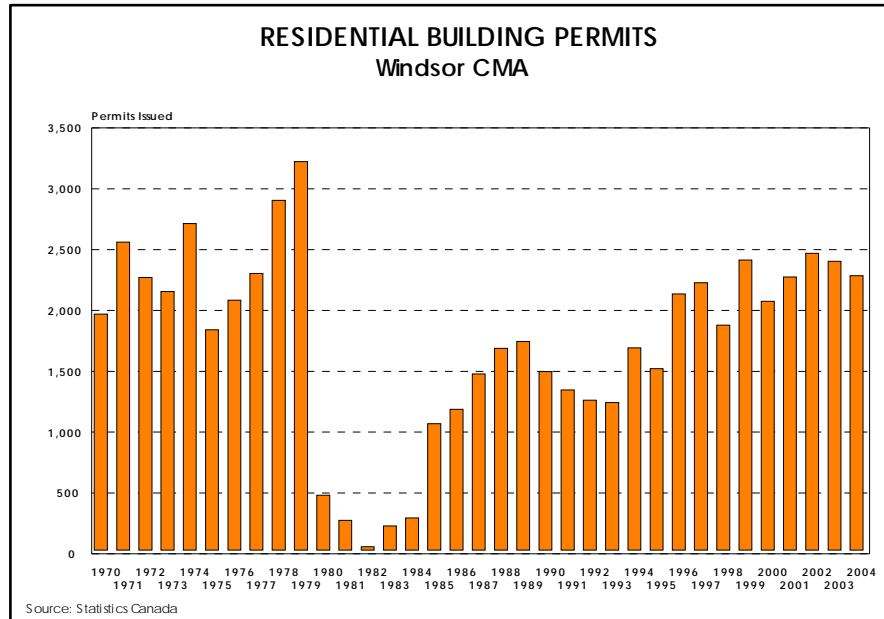


FIGURE 5: RESIDENTIAL BUILDING PERMITS IN THE WINDSOR CMA

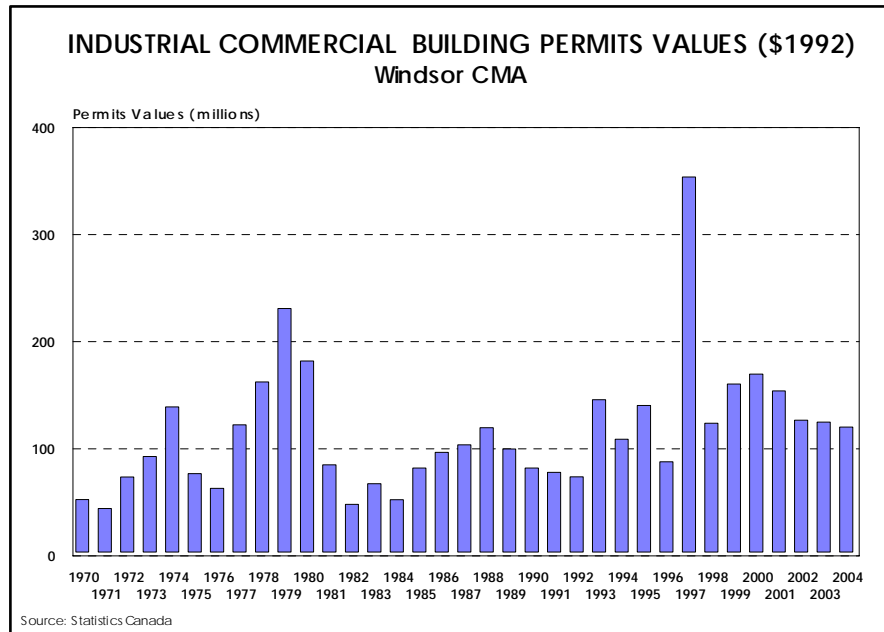


FIGURE 6: INDUSTRIAL COMMERCIAL BUILDING PERMITS IN THE WINDSOR CMA

Building activity is another viewpoint on the local economic growth of the Windsor area. The ability to create additional opportunities for growth in the local built infrastructure will also be important to analyzing the economic effects of the alternative Detroit River International crossings and routes.

2.4

Economic Base is Concentrated in the Automotive Sector

Detroit, and Windsor by extension, was the birthplace of the automobile industry. Despite significant competition from other locations in North America and around the world, Windsor–Detroit remains a global centre for the auto industry (Figure 7). Windsor’s key location in the broader transportation system has been among the reasons that it has been able to maintain its importance in this industry. Some of the major automotive sector activities in Windsor include:

- The automotive sector is a major contributor to Windsor’s manufacturing base. All three of the North American automakers produce cars and car components in Windsor. DaimlerChrysler produces 5 different vehicles models in Windsor, accounting for 12 % of the vehicles manufactured in Canada.
- Over 300,000 vehicles were produced by DaimlerChrysler at its Windsor plants in 2003. Ford has an engine plant, while General Motors has both an engine plant as well as a wide range of other automotive manufacturing activities in Windsor.
- In addition to production, Windsor is home to the DaimlerChrysler Canadian headquarters and its Automotive Research and Development Centre. Together the 3 major North American automakers employ approximately 14,000 people in Windsor, almost 10 % of the workforce. In total there are 80 companies involved in automotive parts and assembly in the City of Windsor.

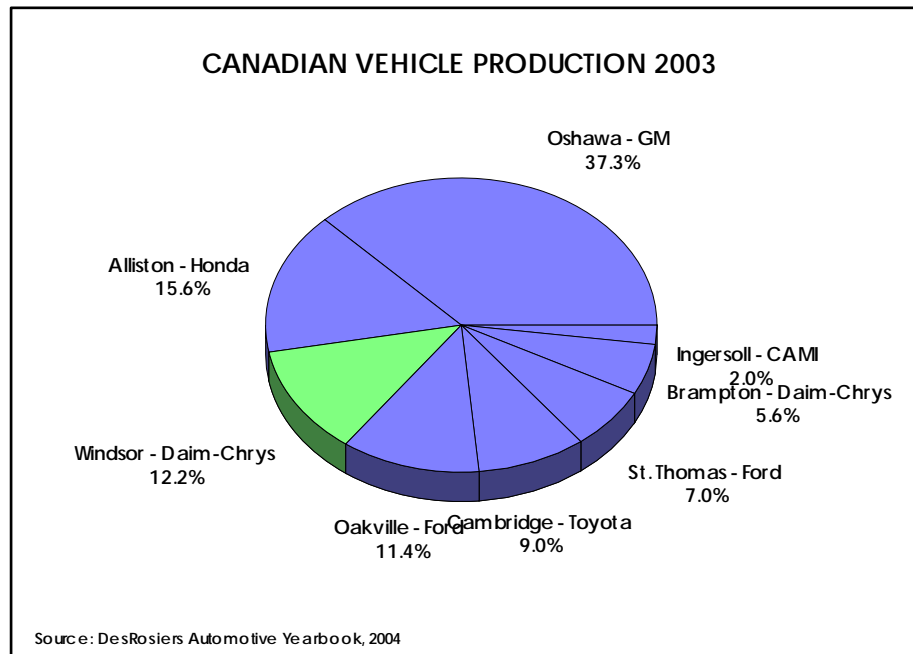


FIGURE 7: CANADIAN VEHICLE PRODUCTION

As a result of the focus on the automotive sector, Windsor has a long history as a manufacturing based economy (Figure 8). In 2004 manufacturing accounted for 46,000 employees and 28 % of total employment, compared to 18 % of Ontario’s employment and 14 % of national employment.

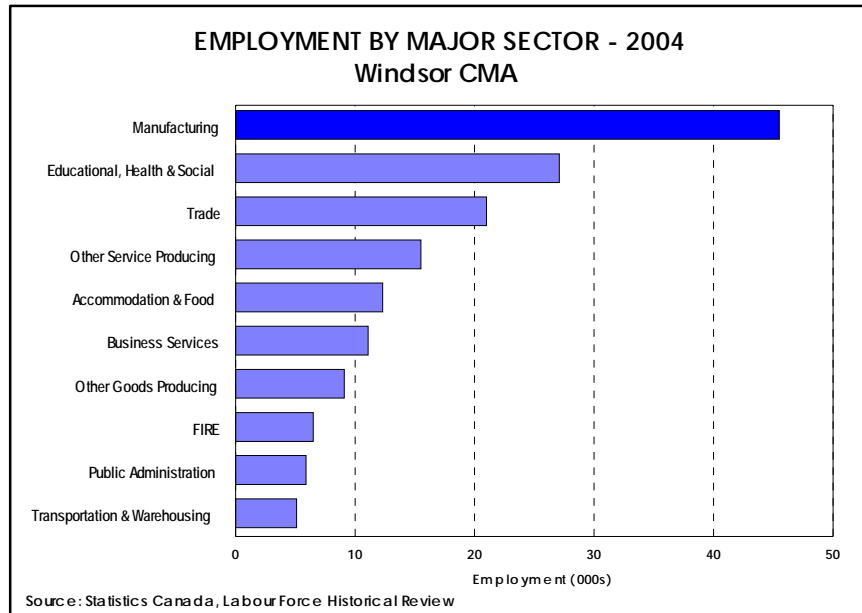


FIGURE 8: EMPLOYMENT BY MAJOR SECTOR IN WINDSOR CMA 2004

The focus on manufacturing within Windsor’s economic base is clear when compared to Ontario. Manufacturing is also the largest component of employment in Ontario, but there is a greater diversity in other service-providing sectors (Figure 9).

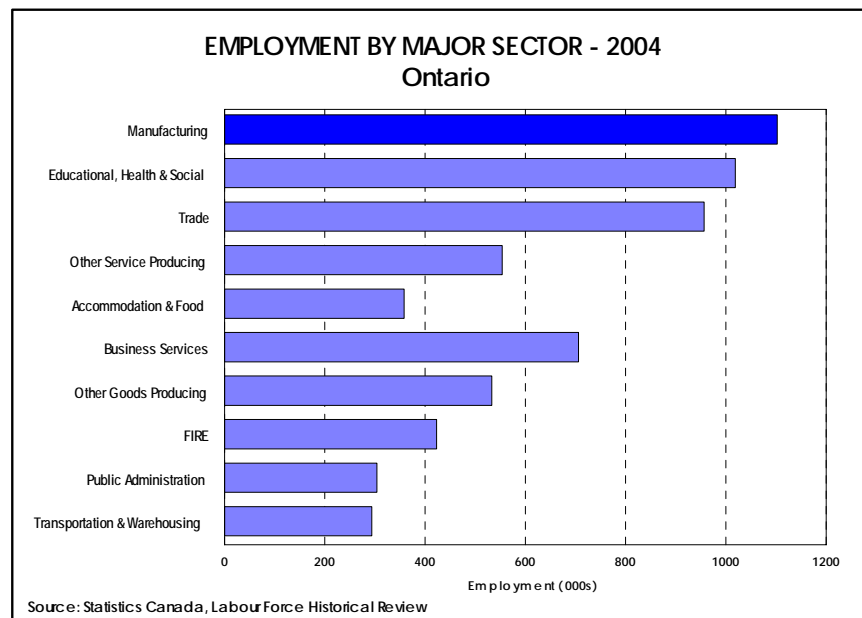


FIGURE 9: EMPLOYMENT BY MAJOR SECTOR IN ONTARIO 2004

While all aspects of economic activity will be important to the analysis of the Detroit River crossing alternatives, the effects and opportunities for the manufacturing sector, particular the auto manufacturing sector, are critical to the analysis.

2.5 The Link Between Local Economic Activity and Border Crossings Needs to be Better Understood

It is clear that Windsor is a small part of a much larger system of industrial activity and that its economic base is focussed on the automotive sector, which depends heavily on goods movement. What is not as well understood, however, is the link between the local economic activities and the border crossing. For the vast majority of businesses involved in international trade in the Windsor area, an additional crossing has to be taken as a positive benefit to the economic activity.

For economic activities that are heavily dependant on the border crossing, increased crossing capacity is likely to have a positive effect on future growth. However, such gains in accessibility also accrue to other locations along the connecting highway system on both sides of the border. Therefore, to achieve potential economic gains, locally, arising from a new crossing, the Windsor area needs to be in a position to take advantage of economic opportunities, mainly through land and supporting infrastructure. Part of the analysis of the crossing and route alternatives will be to consider where routes provide the best opportunities for the Windsor area to achieve greater economic growth.

A recent employment analysis prepared for the City of Windsor concludes that future employment growth, while still expected to be dependent on the auto sector, is becoming increasingly diversified and less likely to experience fluctuations due to cyclic economic conditions¹. While, the report provides no conclusions on the dependence of the economic base on the border crossing, we would caution the reader not to interpret a reduced dependence on the auto sector as a reduced dependence on the border crossing. The development of the Windsor Casino is a clear example of this dependence upon border crossings and of employment diversity. Many firms within a more diverse industrial base and a more diverse economic base may be equally as trade dependant as the auto sector.

Where possible the economic analysis of the DRIC EA will include consideration of the economic activities most closely affected by the crossing itself. This includes both industrial opportunities as well as those related to travel and tourism.

¹ City of Windsor Annexed Area Master Plan Study, Employment Analysis, Stantec Consulting Ltd, 2003, page 4.17

3. ECONOMIC IMPACT ASSESSMENT OF THE ALTERNATIVES

3.1 Economic Impact Assessment Phases

The EIA will be conducted based upon 4 major phases of work that begins with an analysis of a broad range of illustrative route, plaza and crossing options and ends with a technically preferred alternative. The 4 major phases include:

- Phase I – Illustrative Alternatives Analysis;
- Phase II – Practical Alternatives Analysis;
- Phase III – Concept and Design; and
- Phase IV – Technically Preferred Alternatives.

As discussed in Section 1.2, the Terms of Reference established four stages of study for the DRIC EA. Stages 2 to 4 correlate with Phases I to III of the Economic Impact Study.

Selecting the preferred route will begin by assessing a wide variety of illustrative alternative alignments in three main corridor areas in the Windsor area: east, central and south. Following the analysis of illustrative alternatives a set of practical alternatives will be selected, the number of which will vary depending on the results of the illustrative alternatives analysis. For instance there are a greater number of opportunities for crossing the Detroit River in the south and central areas than in the east. Connections and crossings must also correspond with opportunities on the U.S. side. The practical alternatives will be further refined to identify technically preferred routes and crossings. As the process of selecting the preferred alternative evolves the level of analytical detail assessing the economic impact of a new link between Highway 401 and a new river crossing will increase.

3.2 Effects on Urban Structure and Economic Land Use

The potential effects of the various alternatives within each of the four phases will take into consideration impacts on Windsor's urban structure and economic land uses. The various alternatives will be assessed in the context of the urban structure to identify the potential areas of impact. URS Canada will be developing a set of illustrative, practical, conceptual and technically preferred alternatives for the study. These will be developed within the broad 'opportunity corridors' identified in the PN/F report which already take into account a number of constraints. The opportunity corridors were developed to take advantage of existing opportunities and avoid as much as possible generating unacceptable land use impacts on city centres and environmental features.

A key factor in estimating the economic impact of the illustrative alternatives is to understand the current urban structure. The City of Windsor's basic urban structure is shown in Figure 10.

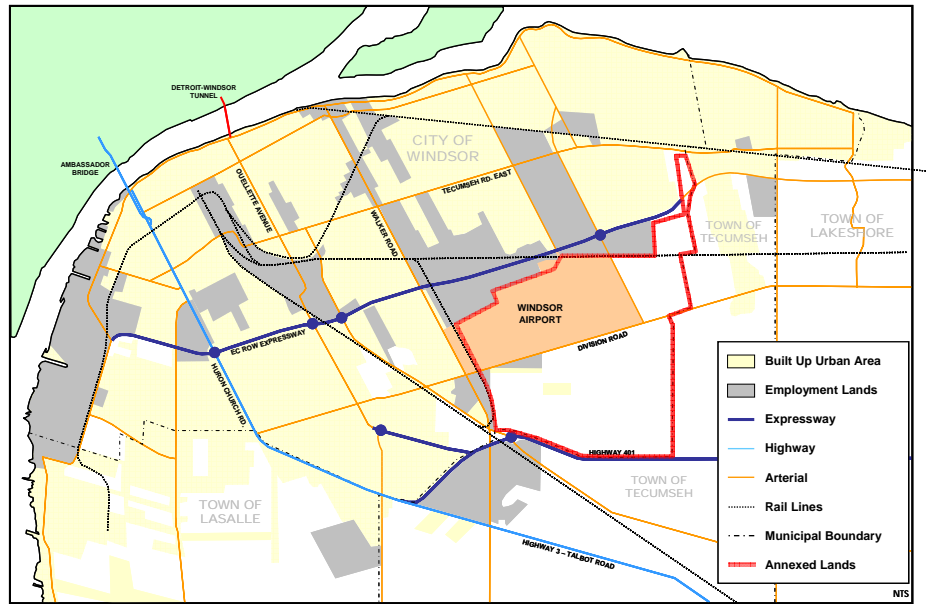


FIGURE 10: CITY OF WINDSOR URBAN STRUCTURE

Source: Hemson Consulting Ltd.

Figure 11 shows the major employment areas located throughout the urban area. The largest employment areas are located in central Windsor and along the Detroit River on the western edge of the City. Additional employment lands are located in neighbouring LaSalle and Tecumseh. All employment areas are located adjacent to or are within close proximity to a railway or major highway. Similarly major retail concentrations are located in highly accessible locations and in many cases within or adjacent to an employment area.

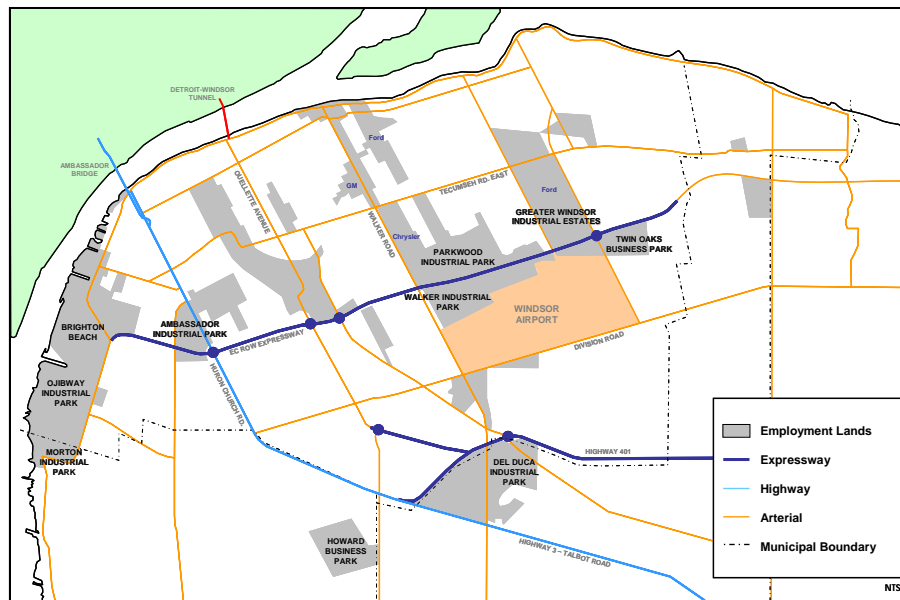


FIGURE 11: CITY OF WINDSOR EMPLOYMENT AREAS

Source: Hemson Consulting Ltd.

One of Windsor's largest contiguous land uses is the Windsor Airport. Windsor Airport comprises 2,200 acres of land. Approximately 1,100 acres have been identified as surplus and earmarked for commercial-industrial development. As well, additional surrounding lands are planned for future development. In 2003 the City of Windsor annexed approximately 2,400 acres of land from the Town of Tecumseh generally east and south of the Airport to provide a mix of industrial, commercial and residential opportunities through the area (Figure 10).

From an urban structure perspective, some alignments will have more significant implications than others. For example, consider the three roadway projects that the Province announced on April 21, 2005, that will be undertaken in Windsor. The three projects and their impacts include the following and are illustrated in Figure 12 below:

- The upgrade and extension of Lauzon Parkway provides improved transportation access to the Airport and annexation area and is the most significant from an urban structure perspective. This will greatly improve the prospects for industrial development around the Airport and would also have significant implications for other types of development in the area;
- Improvements to Highway 3/Talbot Road from Highway 401 to Todd Lane will primarily affect people and businesses in the corridor with less significant effects on urban structure. The area is largely developed around the existing road and employment area located at the intersection of Highway 401; and
- The upgrade and expansion of Manning Road to a 4-lane arterial road will serve primarily as a by-pass route serving the new growth areas in eastern Windsor. This will have implications for development pressure in the immediate area, indirect impacts on growth in central Windsor, and may also have an effect on the growth prospects in the Town of Tecumseh and Lakeshore.

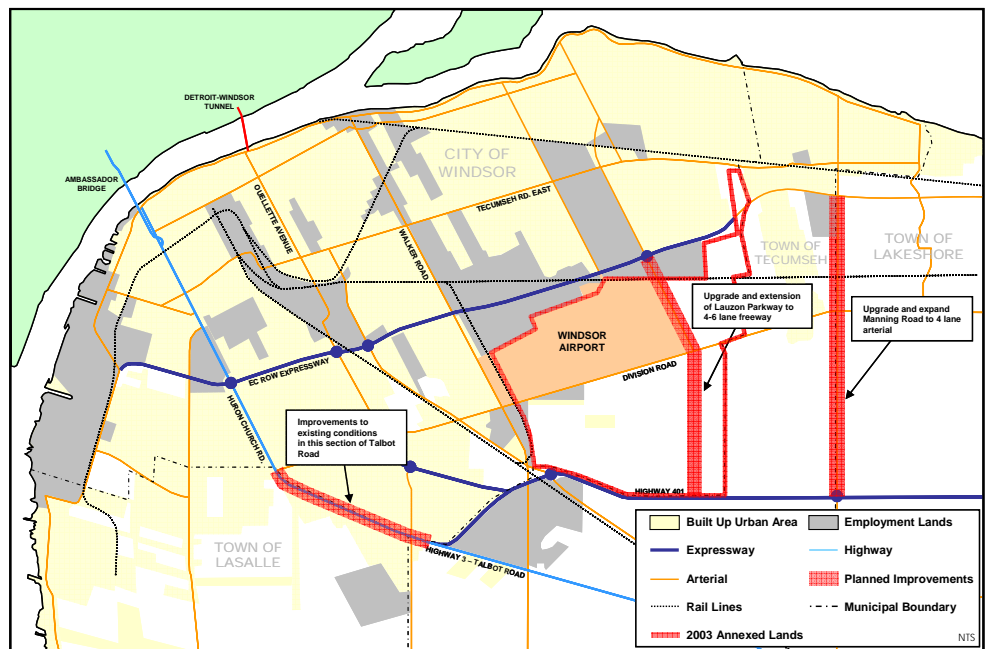


FIGURE 12: PLANNED ROAD IMPROVEMENTS

Source: Hemson Consulting Ltd.

Irrespective of the provincial announcement to undertake these improvements the DRIC study will proceed with its own evaluation of possible route alternatives even where there is overlap between them.

The EIA will continue to be refined and detailed through further analysis as the Illustrative Alternative routes and crossings are reduced to a short list of Practical Alternatives. More detailed analysis will consider impacts on economic land uses, concentrations of economic activity and future designated areas for economic growth.

4. PHASE I - ILLUSTRATIVE ALTERNATIVES ANALYSIS

The area of investigation for the Illustrative Alternatives Analysis is illustrative routes, plazas, plaza extensions and crossings within the Preliminary Analysis Area (Figure 13). In general, this includes the City of Windsor and the Towns of LaSalle, Tecumseh and Amherstburg.

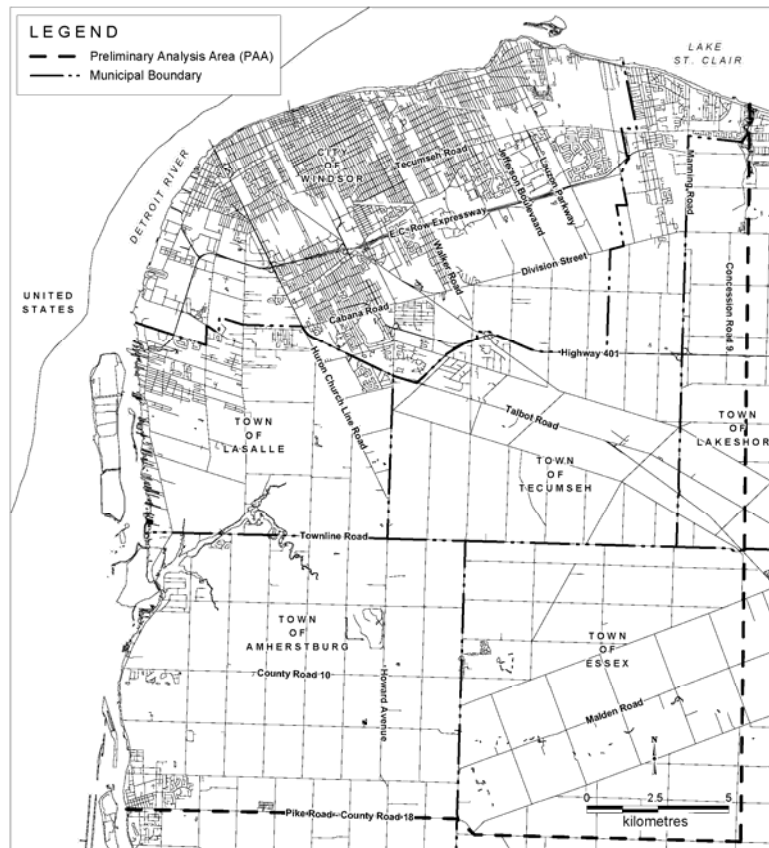


FIGURE 13. KEY PLAN OF THE PRELIMINARY ANALYSIS AREA.

The economic impact of the first phase for the illustrative alternatives for a new or expanded crossing will be laid over the urban structure and conclusions will be provided on the likely effect on economic activity. There will be economic impacts associated with the disruption or displacement of economic activity causing changing access patterns. These can be both positive and negative for businesses within the corridor.

Positive impacts may result from improved access for commercial and industrial development, presenting better opportunities for existing uses or major new growth areas.

Negative impacts could result from the displacement of existing businesses, limiting or removing access for existing land uses through the construction of new facilities in existing

areas, or potential indirect effects on other areas resulting from changes in the planned direction of growth.

For the illustrative set of alternatives the following set of variables will be considered to assess the economic impact associated with the construction of routes, plazas and crossings:

- Number of businesses; and
- Industrial, commercial and retail land uses

A quantitative assessment will be made of the number of businesses displaced or disrupted. The measure for this assessment will be based on the following:

- A right-of-way (ROW) of 100 m will be considered for all illustrative route segments and crossing alternatives as this is the maximum required in the event that a service road option is required in addition to the route;
- A business will be considered displaced if any part of its building lies within the 100m ROW, thereby resulting in a complete loss of business activity, or where the new ROW adversely affects access to a property and severely affects business operations;
- A business will be considered disrupted if a portion of property lies within the 100 m ROW, so business operators may not be significantly affected but compensation would be required as a result of the property taking;
- Similar measures are applicable to assessing the economic impact of a proposed plaza and bridge location;
- A qualitative assessment will be undertaken in terms of the potential effects on economic land use along the illustrative alternatives. Based upon a qualitative comparison of the various pros and cons of each potential alignment conclusions will be provided regarding the economic implications of the routes, plazas and crossings.

This assessment will be used as a basis to describe the potential impacts of displacing or disrupting businesses and employment along each illustrative route. The impacts will depend upon the nature of the area. A route passing through a largely developed or densely populated area will have a larger economic impact than one passing through a less developed or vacant area.

The intent of this task is to identify a set of practical alternatives that will have the least negative effects in each of the corridor areas. This information will be used as a basis for more detailed business surveys in Phase II.

5. PHASE II – PRACTICAL ALTERNATIVES ANALYSIS

The area of investigation for the Practical Alternatives Analysis is the practical routes, plazas, plaza extensions and crossings within the technically preferred illustrative alternatives. This area is known as the Area of Continued Analysis (ACA) and is illustrated in Figure 14.

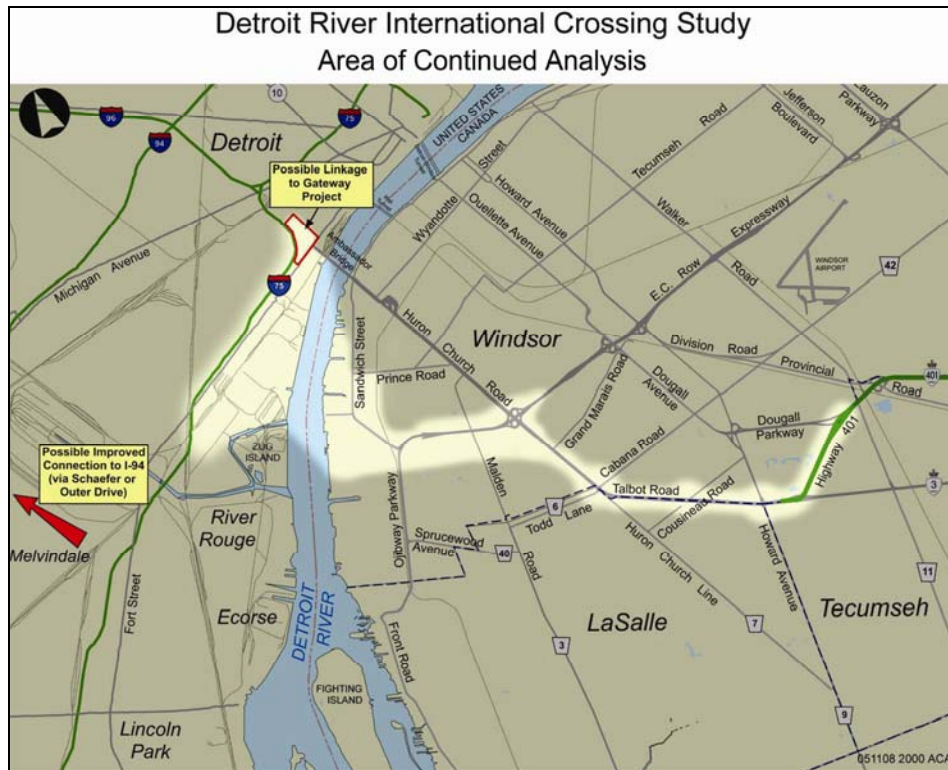


FIGURE 14. KEY PLAN OF THE AREA OF CONTINUED ANALYSIS.

Once the short-list of Practical Alternatives have been chosen, the second phase of the EIA analysis would be devoted to undertaking a more detailed examination of the respective economic and business impacts associated with each alternative. The broad objective is to determine the types of businesses in the corridor, and based upon this estimate the economic impact of displacing and disrupting business activity, and the extent to which changing road patterns and access will affect economic activity.

5.1 Preparation of Route, Plaza and Crossing Profiles

Whereas the analysis of the Illustrative Alternatives focused generally on the number of businesses affected, the analysis of the Practical Alternatives will investigate more

precisely the direct and indirect effects on businesses within or adjacent to the Practical Alternatives as well as those who may be affected by changes in the shifting traffic patterns that would result, for example, the tourism-related businesses along a given road. The extent of impact will be determined by field work in the form of a visual survey and a review of land use designation maps, as appropriate, depending on the location of the routes. Appropriate mapping will be provided, as required, to assist in communicating the major conclusions. The number of businesses potentially affected by the alternatives will be identified. Additional field work may be required to identify potential areas likely to suffer exceptional negative impacts or positive benefits as a result of changes to transportation access.

The key measures that will be used in this analysis will be quantitative and will determine the number of business that will be displaced or disrupted by a proposed route, plaza or crossing. A business will be considered to be displaced where the actual building or establishment lies partially or wholly within the proposed ROW. A business will be considered disrupted where a business is able to continue operating but whose access may be altered or where a partial property taking is required. For the purposes of the route analysis a 100 m ROW will be used for all routes.

5.2 Businesses Sample Survey

We are proposing to conduct interviews with business owners for the practical alignments. However, the number of businesses to be surveyed will vary depending on the concentration of economic activity within or near each of the alternatives. The selection of the sample of business owners and operators will build upon the findings of the previous task, which will have identified the areas where the greatest potential effect on businesses is for the illustrative alternatives. The sample will be constructed to represent, as accurately as possible, businesses in identified areas of impact.

In consultation with other members of our consulting team, and our US counterparts, we will develop a series of questions, which will be administered in the form of a survey to businesses within the identified sample, either by phone or in-person. How many of each type are undertaken depends on the types of businesses in the sample, which is yet to be determined. We can confirm, however, that a certain number of in-person interviews will be undertaken for each sample of businesses. We propose to collect information on the nature of the businesses, customer profile and the businesses role in the transportation network.

The information on the nature of the businesses will include:

- Goods and services provided;
- Years of operation;
- Seasonality;
- Recent business trends;
- Share of business from local market;
- Recent or future business expansion;

- Employment; and
- Revenues.

The customer profile information collected will include:

- Type of customers;
- Travel mode of customers;
- Local versus transient customer type; and
- Advertising methods.

The transportation network role information collected will include:

- Accessibility;
- Visibility;
- Safety;
- Mode and facility dependency (road, highway, rail, transit);
- Border Crossing; and
- Airport.

5.3 Conclusions of Analysis of Practical Alternatives

The information collected through the surveys will allow us to draw a number of conclusions on the real estate and economic impact of the routes. Information on the nature of business, combined with the detailed route profile will provide more detailed estimates of the employment likely to be displaced, and implications for property assessment and tax revenue.

Information on the nature of businesses will also allow us to provide conclusions on the potential for relocation. For example businesses serving local highway-oriented customers are more difficult to relocate than users serving the broader manufacturing complex. This would have implications for any subsequent strategy to address loss of property assessment and taxes.

Finally, information on the customer profile and transportation network will assist in drawing conclusions on the amount of employment or revenue that depends upon access or visual exposure to drive by traffic. An appropriate reduction factor will be applied to estimate actual employment and revenue losses that businesses may experience due to restrictions in access or alternative alignments. Conversely, an appropriate upward adjustment could be applied to estimate positive effects.

6. PHASES III – CONCEPT DESIGN ALTERNATIVE

A significant component of the EIA is undertaken in Phases I and II of this Work Plan. The Phase I and II EIA provide input into Stages II and III of the DRIC EA. Following the completion of Stage III of the DRIC EA there will be less additional economic analysis undertaken with respect to the Stage IV of the Concept Design Alternative. The EIA will progress from a quantitative to qualitative analysis that will respond to site specific issues and unique circumstances regarding the design of the technically preferred alternative. For instance, there may be precise design issues with respect to an access point that may require modification due to adverse effects on or to benefit nearby businesses.

In addition to providing input to site specific economic issues and economic circumstances of the Concept Design Alternative, work in Phase III of the EIA will also include an examination and investigation of the broader economic effects of the Technically Preferred Alternative on the local, regional and national economies.