

Report to the Legislature of the State of Michigan responding to Public Act 116 of 2009, Section 384

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Executive Summary

This Report to the Legislature of the State of Michigan has been prepared by the Michigan Department of Transportation to satisfy the requirements of P.A. 116 of 2009, Section 384 by providing: 1) an Investment Grade Traffic Forecast; and, 2) the responses of private sector transportation infrastructure developers to a Request for Proposals of Interest (RFPOI) in being part of a Public-Private Partnership on the Detroit River International Crossing Project, (DRIC).

The Detroit River International Crossing project is a bi-national effort to develop a new crossing in the Detroit – Windsor area and consists of the following elements: new Detroit River Bridge, border inspection areas in U.S. and Canada, and a link to I-75 in Detroit. The Windsor-Essex Parkway, which will provide access to the crossing, is currently under separate procurement by the Province of Ontario. The Detroit River International Crossing is pursued by a Border Transportation Partnership that includes the U.S. Federal Highway Administration, the Michigan Department of Transportation, Transport Canada and the Ontario Ministry of Transportation.

Project Purpose & Need

The Detroit River International Crossing project is aimed at providing a freeway-to-freeway connection between I-75 in Detroit, Michigan, and Highway 401 in Windsor, Ontario to support trade in the busiest corridor between the U.S. and Canada. The Detroit-Windsor trade corridor currently handles over 20 percent of total trade with Canada and more than 29 percent of trade with Canada transported by truck. Currently this corridor is served by the 81-year-old Ambassador Bridge and the 80-year-old Detroit-Windsor Tunnel, which handles very few trucks. Both crossings will need significant maintenance in the next years.

The Michigan Department of Transportation, as part of the Border Transportation Partnership, has done extensive assessment of the corridor and believes there is a need for a new crossing that will:

- Provide safe, efficient and secure movement of people and goods across the U.S.-Canadian border in the Detroit River area to support the economies of Michigan, Ontario, Canada and the U.S.
- Support the mobility needs of national and civil defense to protect the homeland.

The Detroit River International Crossing project is designed to:

- support the trade between the U.S. and Canadian economies and the long term growth of the two economies by providing freeway to freeway access;
- provide redundant crossings that are essential to ensure disruption elimination to the bilateral trade relationship between the U.S. and Canada (trade doesn't only depend on reliable transportation means but multiple links as well); and
- keep critical infrastructure in place to provide for efficient response in cases of civil and national defence as well as homeland security emergencies (e.g. natural disasters, military threats, disease outbreaks)

Economic Impact to the State of Michigan

The Detroit River International Crossing is of national significance with a significant economic impact on Michigan's economy. The economic impacts can be summed in three main categories:

• Economic diversification and growth. The project will help the area to transform into a major logistics hub for international trade and provide efficient transport options to the automotive industry and other

industries that have cross-border operations. The project is expected to help retain 25,000 and draw 3,500 new jobs into Southeast Michigan from outside the state.

- Direct Investment. The Detroit River International Crossing is an investment of over \$2.2 billion (U.S. and Canadian elements of the project less the Windsor-Essex Parkway). According to AASHTO for every \$1 of infrastructure investment, \$5.8 of economic impact is realized. The project is anticipated to create on the Michigan side of the border 40,000 construction and related jobs.
- Direct state benefits: The project may generate state and local tax revenue streams while part of the excess toll revenue from the new crossing, after the repayment of the initial investment, will be an additional source of income for the state to support future needs.

The development of the Detroit River International Crossing is important so that the State of Michigan gains these economic benefits. According to a Border Transportation Partnership study, if action is not taken, there is a risk of losing these benefits to other border states.

Market Interest into the Project

In January 2010, MDOT and TC issued a Request for Proposals of Interest in order to solicit market feedback to be used in developing governmental policy and structuring a formal DRIC procurement process and project agreements with Canada. MDOT received 20 responses, representing 37 firms. Among the respondents, MDOT has identified 10 transportation developers that have global reach that could be the leading partner in a consortium to deliver a large and complex project such as the Detroit International River Crossing. Other large Design-Build contractors and financiers could team up with developers to propose on the project.

The responses received clearly indicate that:

- There is significant private sector interest from leading developers, financiers and contractors from around the U.S. and other parts of the world in moving forward with the project;
- The private sector developers have the ability and capacity to complete all elements as a single project; several encourage it as the best approach to the project;
- The project is feasible under a public-private partnership; and,
- While real toll, availability payment and hybrid financing approaches are favored by one or another of the proposers, most respondents lean toward an availability payment model.

Funding Sources

MDOT and TC have done substantial analysis to assess the adequacy of toll revenue and other sources to fund the project. In doing so, special consideration has been placed on the feedback received from the private sector, precedent from other transactions, the current economic challenges of the State of Michigan and the lack of state transportation funds.

The analysis indicates that the project could be developed with a combination of private financing, U.S. federal funds and Canadian federal funds without contribution from the State of Michigan of its revenue or its share of federal highway formula funds.

Recommendation

The Michigan Department of Transportation believes that the Detroit River International Crossing is a necessary project and its development will have significant impact at the state, regional and national levels. The need for the project is an outcome of the anticipated traffic growth as the U.S. and Canadian economies continue to exit the recession, and the long-term growth of trade in the world. It is also an outcome of the need for efficient freeway-to-freeway flow of goods and people, alternative reliable links and protection of the economic and physical security of two nations.

Assuming authorizing legislation by June 2010, MDOT anticipates opening of the project to traffic by the 2016 to 2017. This unique opportunity allows the creation of tens of thousands of jobs and the enhancement / diversification of the economy for decades to come.

For these reasons the Michigan Department of Transportation is recommending the adoption of legislation, currently covered under House Bill No 4961, to:

- Construct a new international crossing jointly and in agreement with Canada;
- Create a public-private partnership; and,
- Create an authorized tolling authority.

1. Introduction

1.1. Purpose of Report

This report to the State of Michigan Legislature (Report) has been prepared by the Michigan Department of Transportation (MDOT) to provide the information requested under Michigan Public Act 116 of 2009, Section 384 (PA 116). PA 116 required MDOT to prepare an investment grade traffic study and to solicit proposals of interest from the private sector to develop the project under one or more public-private partnerships.

1.2. Structure of Report

The Report outlines the following topics related to the development of the DRIC:

- Project Description (Section 2) provides information on the scope of the project and a description of the elements that comprise the proposed end-to-end solution;
- Project Rationale (Section 3) focuses on the purpose of the DRIC and the economic impact it is anticipated have on the U.S. and the State of Michigan;
- Governance Structure (Section 4) describes the principles followed by the public entities that participate in the process;
- Project Status (Section 5) provides information on the activities pursued by MDOT to comply with PA 116 and the engagement of other stakeholders;
- Request for Proposals of Interest (Section 6) discusses the responses, including the level of interest and key feedback obtained from the private sector;
- Traffic Study (Section 7) summarizes the findings of the Wilbur Smith Associates traffic study required by PA 116;
- Preliminary Cost Estimates (Section 8) provides a summary of the costs to develop the project;
- Funding Analysis (Section 9), provides an overview of the potential funding sources for the delivery of the various elements of the project; and,
- Next Steps (Section 10), provides an anticipated milestone schedule for the delivery of the Project.

2. Project Description

The DRIC is an international project that will provide an end-to-end connection between Detroit, Michigan, and Windsor, Ontario. In conjunction with the Windsor-Essex Parkway, this new, 1.8 mile, six-lane bridge will link I-75 in the U.S. with Highway 401 in Canada. The bridge will be operated as a tolled facility.

The four main project elements include the new Detroit River Bridge (Bridge), the associated border inspection areas in the U.S. and Canada, and a link to I-75 in Detroit (U.S. Interchange). The Windsor-Essex Parkway, which will provide access to the DRIC, is currently under procurement by the Province of Ontario as a stand-alone project. The elements of the DRIC Project are described in further detail below.

- **Bridge:** The Bridge will be situated in the Delray area of Detroit and in the Brighton Beach area of Windsor. It will be constructed as either a suspension or cable-stayed bridge; the choice will be made in cooperation with the private partners with public engagement. Regardless of the design selected, the bridge will have a cross-section of six 12-foot-wide vehicle travel lanes (three in each direction), ten-foot-wide shoulders, a three-foot-wide flush median and a five-foot-wide sidewalk on one side of the bridge.
- U.S. Plaza: The Bridge will link to the U.S. Plaza, which will directly connect to I-75 and Campbell Street. The plaza area will cover approximately 170 acres and will be bounded by Jefferson, Post and Campbell Streets, as well as the Norfolk-Southern/CSX rail line. A large part of the U.S. Plaza includes inspection facilities that will be used by the Customs and Border Protection agency.
- U.S. Interchange: As a result of its close proximity to I-75, the U.S. plaza will be directly connected to the I-75 freeway via a Y-type interchange centered near Livernois Avenue. Proposed as a three-level, trumpet interchange, the I-75 ramps will be elevated over both the Norfolk-Southern/CSX rail line and Fort Street.
- **Canadian Plaza:** This plaza will be situated within the Brighton Beach industrial subdivision of Windsor. The Canadian Plaza will be bounded by the Detroit River, Chappus Road, Ojibway Parkway and Broadway Street.

Please refer to Attachment A for additional technical information on all four of the project's elements.



Figure 2.1: DRIC Project Overview (incl. WEP)



Figure 2.2: View towards Canada (illustration)

Source: The Corradino Group of Michigan





Source: The Corradino Group of Michigan



Figure 2.4: View entering the U.S. (illustration)

Source: The Corradino Group of Michigan

3. Project Rationale

3.1. Project Purpose and Need

The Detroit-Windsor trade corridor consists of two high-volume international border crossings: the 81-year-old Ambassador Bridge and the 80-year-old Detroit-Windsor Tunnel. The tunnel serves very few trucks due to size/geometric restrictions while both crossing have restrictions over the movement of certain hazardous material classes. The Detroit-Windsor trade corridor is the busiest commercial land border crossing at the northern border and currently handles approximately 20% of total surface trade with Canada and more than 29% of trade with Canada transported by truck. According to the US Department of Commerce, the two-way trade that crosses just the Ambassador Bridge is more that the U.S. exports to China (2nd largest trade partner) and Japan (4th largest partner).

In 2000, the Federal Highway Administration (FHWA), MDOT, Transport Canada (TC), and the Ontario Ministry of Transportation (MTO) formed the Border Transportation Partnership to engage in a cooperative bi-national effort to provide for the safe, efficient movement of people and goods across the U.S.-Canadian border at the South East Michigan, including improved connections to national and regional highway systems such as I-75 and Highway 401. As part of this effort it was identified that, in order to support the regional, state, provincial and national economies while addressing the civil and national defense and homeland security needs of the busiest trade corridor between the U.S. and Canada, there is a need to:

- Provide new border-crossing capacity to meet increased long-term demand;
- Improve system connectivity to enhance the seamless flow of people and goods;
- Improve operations and processing capability in accommodating the flow of people and goods at the plazas; and,
- Provide reasonable and secure border crossing system options in the event of incidents, maintenance, congestion, or other disruptions.

As part of the U.S. National Environmental Policy Act (NEPA) process, approximately 50 alternative options were analyzed and nine practical build alternatives plus a no build alternative were identified. All build alternatives included an interchange connecting the plaza to the existing highway network, a U.S. border inspection plaza, and a bridge from the plaza that spans the Detroit River. The DRIC, as described in this report, was identified by the federal environmental approval processes of the U.S. and Canada as the preferred solution that would address the project's purpose and need. It should be emphasized that the project's purpose is not to replace any of the existing crossings in the area. The project is to provide for the growth of the U.S. and Canadian economies, the safe and reliable trade between the largest trading partnership in the world, and protection of the homeland.

3.2. Economic Impact

The DRIC is designed to facilitate trade in the busiest U.S.-Canada trade corridor by ensuring the efficient and reliable movement of goods across the border. As such, the DRIC is expected to have significant economic impact at national and regional levels in each country. According to the Bureau of Transportation Statistics, the total two-way trade between the U.S. and Canada amounts to \$429.6 billion, and more than 7.1 million jobs in the U.S. were supported by this trade. In addition, in 2008, foreign direct investments from Canada to the U.S. reached \$291 billion, while U.S. direct investments in Canada totaled \$275 billion.

The map below illustrates freight truck volumes and highlights the importance of Michigan and the Detroit – Windsor trade corridor in this system.



Figure 3.2: Freight Truck Volumes

Source: AASHTO Freight Transportation Bottom Line Reports, based on Global Insight 2004 TRANSEARCH data and economic forecasts.

The Great Lakes region, composed of eight U.S. states and the Canadian provinces of Ontario, is one of the most important economic areas in North America. The Great Lakes region hosts one of the largest economies in the world. The U.S. states in the region account for 27.3% of the country's population and 27.3% of its Gross Domestic Product. The States in the Great Lakes region account for more than half of the trade that moved through Detroit by all modes.

Although the project is of national and regional significance, MDOT expects that the State of Michigan House and Senate would also focus on what the development of the DRIC means for Michigan's economy. It is important to consider that international trade and commerce with Canada supports more than 220,000 jobs in Michigan and almost half of goods produced for export in Michigan are exported to Canada. Outlined below are some key points that MDOT believes are important in assessing the overall contribution of the DRIC project to Michigan:

• Michigan's supply chain and logistics industries will be further supported by a new border crossing system. The project is necessary to transition the border crossing into a modern, multi-modal network to securely move people and goods between the United States and Canada and make Southeast Michigan an even more prominent gateway for global commerce. The DRIC is positioned to be the most modern border crossing system in the world.

- Although the domestic auto manufacturing industry, as well as other industries, may have been impacted by the economic recession, it remains a very important element of the Michigan economy and shipping of supplies and materials across the border is rebounding. Also, the Detroit-Windsor trade corridor remains the most efficient route for the supply chain of other auto manufactures. A new crossing will provide more shipping options to the industry and improve the reliability of their supply chains.
- The project is expected to bring direct construction investment of over \$2.2 billion in 2009 dollars, a large percentage of which is likely to be payments to Michigan firms that will be involved directly or indirectly in the construction of the project. In addition, the multiplier effects of the investment, is expected to be significant for the economy. AASHTO estimates that for every \$1 investment in infrastructure \$5.8 is realized in economic impact.
- At a period of recession for the Southeast Michigan economy, the project is expected to create, on the Michigan side of the border alone, 10,000 construction jobs and more than 30,000 other jobs during construction.
- The new bridge, once completed, is expected to help retain another 25,000 jobs in Michigan and draw about 3,500 jobs into Southeast Michigan from outside the state.
- The project revenue operation is likely to generate local and State tax revenue streams that will be used for further investments in Michigan.
- In case any excess revenue is realized by the Project, after the repayment of the initial investment, will be available to MDOT to fund transportation investments.
- The project will be developed under one or more public-private partnerships in order to attract private sector ingenuity and private funds from both sides of the border.
- Congestion and delays at border crossings have been an issue for several years and, if not addressed, can impact individual businesses and, ultimately, the overall economy. By 2030, if we do not address congestion problems, the Michigan-Ontario border would cost the economies of Michigan and Ontario a total of \$9.4 billion in production, annually.

In summary, MDOT believes that investment in a new border crossing will have three significant impacts on the State of Michigan: (i) immediate creation of jobs, thereby providing an economic stimulus; (ii) laying the foundation for future productivity growth to help foster Michigan's long-term economic diversification and success; and, (iii) generating increased income for the State of Michigan.

4. Governance

4.1. History

To guide the Border Transportation Partnership's effort, a Charter was created in February, 2005. The Charter outlined the Partnership's objectives, created a Working Group and Steering Committee, and defined their respective roles and responsibilities. The Charter also includes a conflict resolution policy and rules of conduct. Key decisions are made by the Steering Committee, comprised of members from the four governmental units listed above, which has been tasked with providing overall project coordination.

The process for the assessment and development of the DRIC is based on a set of guiding principles that include:

- Government ownership of the lands required for the project;
- Government oversight and contractual administration of the bridge;
- Minimizing public sector project financing;
- Efficient and unified operations and management; and
- Ensuring continuous dedication of the structure to its public purpose.

In January 2005, the Partnership began environmental processes in each country that met the legal requirements of all four partners. All required environmental approvals in both countries were received in 2009.

4.2. Structure

The DRIC will be owned by the public sector. The private sector will be involved in the development, financing and operation of the project. The public interest will be protected through the terms and conditions defined in a public-private partnership contract with a private developer. Items such as safety, security, maintenance and environmental compliance of project components will be included in the public-private partnership contract. The respondents to a future formal procurement process will be evaluated on proposed Good Neighbour Policies, among other criteria. The private developer will be required to uphold these policies during all phases of the project and is expected to provide an avenue for public input.

In addition to that MDOT and TC will have to enter into an agreement that will specify the roles of each party.

5. Project Status

5.1. Activities Pursuant PA 116

Pursuant to the requirements of PA 116, MDOT engaged in a series of activities to advance the development of the DRIC through a public-private partnership. These activities included "market sounding" and solicitation of proposals of interest from the private sector. An investment grade traffic study was prepared and made publicly available as part of the RFPOI process. Based on the private sector response, the maximum financial exposure of MDOT was determined and a method to cover it secured.

5.1.1. Market Sounding and RFPOI

Pursuant to the requirements of PA 116, on January 27, 2010, MDOT and TC issued a Request for Proposals of Interest (RFPOI). This solicitation invited, on a non-binding basis, individual firms or teams of firms experienced in the development and/or financing of large transportation infrastructure projects to express their interest in developing the DRIC and provide feedback on key elements of the project. Responses to the RFPOI were submitted by March 17, 2010 and have been reviewed by MDOT, TC, and their respective advisors.

Prior to the issuance of the RFPOI, MDOT in conjunction with TC completed an informal market sounding exercise in the context of one-on-one interviews with the private sector. These interviews, conducted in December 2009, were used to formulate the RFPOI.

Section 6 provides an overview of the feedback from the RFPOI process.

5.1.2. Investment Grade Traffic Study

MDOT retained Wilbur Smith Associates (WSA), an international company specializing in transportation and infrastructure consulting, to complete an investment-grade traffic study on the DRIC. This study was completed by WSA in February 2010 and was made publicly available.

Section 7 provides a summary of the findings of the traffic study.

5.1.3. Indicative Cost Inputs

Parsons/Corradino, the project Coordinating Consultant engaged by MDOT, has developed cost estimates to construct and operate the project on the U.S. side of the border. Parsons submitted this information to MDOT in December 2009. Delcan / DavisLangdon / Morrison Hershfield] are the engineering firms that performed the respective task on the Canadian side on behalf of TC. The cost estimates that were developed include:

- Right of Way and Utility relocation;
- Design and Construction; and
- Operation and Maintenance.

Section 8 provides a summary of the indicative project costs for the development of the DRIC.

5.1.4. Funding Analysis

MDOT has analyzed sources of funds that could be used to finance delivery of the project. Such sources include U.S. federal funds, U.S. federal credit assistance, and Canadian government funds, in addition to private financing (i.e. equity and loans). The approach that MDOT followed focused on identifying funds for the delivery of the whole project at minimum or no cost to the State of Michigan. The analysis of

private financing was based on the input provided by market participants through the RFPOI process and market precedent from similar transactions.

Section 9 provides a summary of the findings of the analysis of potential funding sources.

5.2. Environmental Approvals / Permits

The U.S. National Environmental Policy Act (NEPA) process was successfully completed with the signing of the Record of Decision (ROD) on January 14, 2009. Necessary approvals and permits pursuant to the mitigation program in the ROD and independently required by state and federal agencies cannot be pursued until the authorization of HB 4961.

In Canada, a coordinated environmental assessment was completed to meet the requirements of both the *Ontario Environmental Assessment Act* (OEAA) and *Canadian Environmental Assessment Act* (CEAA). The responsible federal authorities (Transport Canada, Fisheries and Oceans Canada and the Windsor Port Authority) approved the environmental assessment on December 3, 2009. The approval identified requirements for future work in relation to all three Canadian components of the project (the bridge, the plaza, and The Windsor-Essex Parkway). The Ontario environmental assessment approval, issued on August 24, 2009, included only conditions specifically related the construction of The Windsor Essex Parkway.

5.3. Other Stakeholders

Beyond the agencies that form the Border Transportation Partnership (i.e. FHWA, MDOT, TC, and MTO), several other U.S. and Canadian agencies, had or will have a role in the approvals, specifications and development of various elements of the project. The key agencies that MDOT and TC coordinate in order to facilitate the development of the project include GSA, CBP, U.S. Department of State, U.S. Coast Guard, US Department of Agriculture, US Food and Drug Administration and Canada's Border Services Agency and Food Inspection Agency.

5.3.1. U.S. General Services Administration

The US General Services Administration (GSA) acts as the landlord on behalf of all Federal agencies. All building construction on the plaza shall conform to both GSA and U.S. Customs and Border Protection (CBP) design standards. During design and construction those agencies shall have review and approval authority.

MDOT coordinates closely with GSA and CBP and holds regular meetings in order to ensure alignment of schedule and objectives.

5.3.2. U.S. Customs and Border Protection

The Federal Inspection Station (FIS), which is comprised of the secure inspection areas of the U.S. plaza, is primarily under the operational jurisdiction of CBP, with other US Federal agencies such as US Department of Agriculture, Animal Plant Health Inspection Service, and US Food and Drug Administration operating in the plaza.

5.3.3. U.S. Department of State

One of the principal approvals and permits related to the Project is the Presidential Permit required for a new international crossing by the U.S. Department of State. MDOT has discussed the draft permit application with the Department of State. The Department of State has indicated that permit conditions include approval of the project by the Michigan Legislature. MDOT anticipates submitting the application in the short term following authorizing legislation is in place.

5.3.4. U.S. Coast Guard

The U.S. Coast Guard of the Department of Homeland Security is responsible for issuing permits related to navigable waters of the U.S. A Section 9 Permit would allow construction of the bridge over the Detroit River. Issuance of this permit includes a public review process, and issuance can occur only after the Presidential Permit is received. MDOT anticipates submitting the application in the short term following authorizing legislation is in place.

5.3.5. Canada Border Services Agency/Canadian Food Inspection Agency

In Canada, Transport Canada is responsible for procuring the Canadian plaza. As such, TC has worked closely with the CBSA in the development of the design of border inspection facilities at the Canadian port of entry. Similarly, TC has worked with the Canadian Food Inspection Agency to ensure their requirements are incorporated into the functional design of the plaza.

6. Request for Proposal of Interest

6.1. Respondents

MDOT received 20 responses to the RFPOI representing 37 firms in total (several firms had already begun teaming in anticipation of the project). MDOT believes that this process was highly successful, having received interest from a large number of important market players and obtaining useful feedback for structuring the project. Among the respondents, MDOT identified at least 10 global developers that could potentially be the leading partner in a bidding consortium plus other large Design-Build (DB) contractors or financiers that could team up with developers in order to bid for the project. A list of the 20 firms that submitted expressions of interest is provided below:

- Acciona
- ACS Dragados
- BMO Capital Markets
- Bouygues
- Citigroup Global Markets
- Cintra
- Coco Paving
- Daelim
- Fluor
- Global Via Infrastructuras
- Gowlings

- Hotchief
- Kiewit, Flatiron, TY Lin Inc., Buckland and Taylor, HNTB Co., MMM Group
- Macquarie
- Meridiam, AECOM
- Scott Associates Architects
- SNC Lavalin, American Bridge, Barton Marlow, Granite Construction, EllisDon, Scotia Capital FA
- Scotia Capital
- Walsh Construction Co., PCL, IHI, Parsons -Brinckerhoff, Chodai
- Walter Toebe, Edward Levy, P3 Development Co.

Attachment B, separately bound, provides copies of all the letters of interest received by MDOT.

Significant number of proposals came from private sector developers with extensive experience in developing large, complex infrastructure projects (see figure 6.1). Combined, these developers have under management more than 390 public-private partnership projects, of which 158 are roads and/or bridges. Many of the other respondents have also participated in a number of mega projects and PPPs.

Developer	# of Total Public- Private Partnerships	# of Road/Bridge Projects	Miles under Management
Acciona	27	8	424
ACS Dragados	67	24	1460
Bouygues	15	6	726
Cintra	32	25	1900
Fluor	15	10	175
Global Via Infrastructuras	41	24	500
Hochtief	32	16	465
Macquarie	110	27	N/A
Meridiam / AECOM	26	14	500
SNC Lavalin	28	4	170
Total	393	158	6,320+

Figure 6.1: Developer Project Experience

Source: Corporate websites and/or responses to the RFPOI

MDOT expects additional interest from the market once the project is approved by the Michigan legislature.

The following observations are made after reviewing the response to the RFPOI:

- Leading global developers, financiers and contractors from around the world are interested in partnering in the project;
- The private sector developers have the ability and capacity to complete all elements of the project as a single project;
- The responses indicate that the project is feasible under a public-private partnership; and
- Real toll, availability payment (with toll operations) and hybrid financing approaches are options for engaging the private sector in this project.

In summary, the number of responses to the RFPOI and the quality of the proposers clearly indicate forming a public-private partnership will lead to successful project execution.

7. Traffic Study

The Detroit-Windsor trade corridor consists of two high-volume international border crossings – the Ambassador Bridge and the Detroit-Windsor Tunnel. The Blue Water Bridge, a third international border crossing connecting Port Huron to Sarnia, carries a high volume of commercial traffic as well. The Ambassador Bridge, the Detroit-Windsor Tunnel, and the Blue Water Bridge comprise the existing border crossings in Southeast Michigan. Together, these crossings are among the five busiest passenger vehicle crossings between the United States and Canada with the Ambassador Bridge carrying the highest commercial vehicle traffic of all border crossings between the United States and Canada.¹

In 2009, these crossings captured 15.0 million two-way border crossing traffic, or 45.4 percent of vehicular border crossing traffic tracked by the Public Border Operators Association (PBOA), and 3.7 million two-way commercial vehicular traffic, or 62.2 percent of commercial border crossing traffic tracked by the PBOA. This activity at the three Southeast Michigan border crossings represents an estimated \$202 billion Canada/United States surface trade of which \$145 billion, or 72 percent, is truck related. The economic activity generated from this trade directly effects many jobs in the State of Michigan and the Province of Ontario – the U.S. International Trade Administration estimates that approximately 7 percent of U.S. jobs are tied to the export of manufactured goods, which translates to millions of jobs.

The existing cross-border demand traveling through the region consists of a traffic mix that includes a large portion of commuter traffic, recreational/vacation traffic, and commercial vehicular traffic -90 percent of which is tractor trailer vehicles. Commercial traffic across the three existing Southeast Michigan border crossings has experienced a positive average annual growth of 3.2 percent from 1972 to 2009.

Given the long distance nature of many commercial vehicles, the decision on which border crossing to use may be made, in some instances, hundreds of miles before the crossing. Many factors affect a travelers' crossing choice decision including crossing time. Crossing times vary depending on the number of toll and immigration booths, as well as design and engineering of local and approach roads. The following figure details the average crossing volumes for the Project:

Year	Passenger Cars	Commercial Vehicles	Total
2016	9,000	9,500	18,700
2025	12,800	13,500	26,500
2035	17,500	16,900	34,600
2040	18,500	18,400	37,100

Figure 7.1: DRIC - Average Weekday Traffic

Source: Wilbur Smith Associates

Note: The total transactions of average weekday include passenger cars, commercial vehicles and miscellaneous traffic such as motorcycles.

MDOT believes that the findings from the investment-grade traffic study reaffirmed the:

¹ Data provided by the Public Border Operators Association (PBOA) and based on crossings that are members of the PBOA.

- Need for an additional border crossing in the Detroit-Windsor corridor despite the current economic downturn;
- Traffic projections developed as part of the FEIS for the project; and
- Strong bi-national commitment to construct a new publicly owned border crossing that will provide end-to-end connectivity and redundancy for the existing crossings.

As part of the Final Environmental Impact Statement (FEIS) submitted to FHWA in December 2008, traffic projections were developed which showed that the forecasted growth of commercial and passenger cross-border traffic over the next 30 years was projected to exceed the capacity of the existing crossings. The current WSA traffic study reaffirms the need for the project and shows that average weekday traffic projections for 2035 (the horizon year used in the FEIS) are less than 10 percent different from the traffic projections in the FEIS.

Document	Date	DRIC Average Weekday Traffic (Vehicles)
Final Environmental Impact Statement (FEIS)	Nov. 2008	38,218 ^a
Investment Grade Traffic Study for Legislature	Feb. 2010	34,600 ^b
Change from FEIS		-9.47%

Figure 7.2: DRIC FEIS vs Investment Grade Traffic Forecasts for Year 2035

Notes: (a) FEIS Table 3-20, page 3-123, (35,657 extrapolated to 2035 Consistent with Procedures used in FEIS), (b) Comprehensive Traffic Study for the DRIC, Chapter 6, Table 6-10 page 6-22

8. Preliminary Cost Estimates

The engineering consultants retained by MDOT and TC developed preliminary cost estimates for the development of the all the project elements. The total cost for the project is estimated at \$2.2 billion in \$2009, of which \$1.3 billion are related to assets on the U.S. side and \$0.85 billion on the Canadian side.

The table below provides an overview of the cost estimates for the completion of the four project elements. The costs are provided in further detail than the four project elements provided in previous pages in order to differentiate between U.S. and Canadian costs as well as responsibilities of different agencies.

	US Bridge	CA Bridge	U.S. Plaza			175	Total
USD 2009 \$'000	& Approach	& Approach	Toll Plaza	GSA [♭]	CA Plaza	Interchange	
Construction / Design	233,704	238,429	47,214	89,755	155,934 ²	123,810	888,846
ROW ^a / Utilities	32,556	-	63,020	110,500	50,595	152,220	408,891
Contingencies	79,367	83,164	13,055	17,491	72,037	35,017	300,131
Contractor Markups	62,164	68,668	5,430	14,810	59,480	22,069	232,621
Soft costs	75,047	57,223	17,540	34,811	49,567	52,779	286,967
Other ^c	18,762	-	4,385	2,600	-	34,195	59,942
Total	501,600	447,484	150,644	269,967	387,613	420,090	2,177,398
Owner's costs ^d	54,409	-	118,187	-	-	330,694	503,290

Figure 8.1: Project Cost Breakdown by Element

Source: Parsons, Delcan / Davis Langdon / MorrisonHershfield

Notes: (a) ROW costs based on DEIS, parcel by parcel, estimate (b) GSA's submittal to the U.S. Office of Management & Budget includes higher numbers (see section 9.3), (c) Includes FHWA cost reporting management contingency, (d) These numbers were the basis of the analysis presented in Section 9.4 and represent costs that could be under certain scenarios MDOT related costs. The difference from the number in Section 9.4. is due to adjustments for inflation and the impact of credit federal assistance.

MDOT and TC intend to engage in value engineering and invite the private sector to provide innovative ideas to reduce the cost of the project and provide further economies.

9. Funding Analysis

9.1. Potential Funding Sources

The DRIC is a large transportation project that, beyond the main bridge, also involves significant supporting infrastructure elements (i.e. I75 interchange, U.S. and Canadian inspection plazas) and would typically require multiple funding sources for its completion. Pursuant to the requirements of PA 116 MDOT has performed analysis in order to assess:

- the size of private financing that the toll revenue can support; and
- the federal funding from the U.S. and Canadian governments that would be available for the development of project.

In performing its analysis, MDOT placed special consideration on the funding challenges that the State of Michigan is currently facing and the lack of matching state transportation funds. The results of this preliminary funding analysis, as provided in the following table, indicate that, based on the current assumptions, the DRIC can be developed without State of Michigan funds, including federal highway formula funds.

Project Components	Potential Funding Source
Main Bridge	Private Financing (i.e. toll revenue)
U.S. Approach Bridge	Private Financing (i.e. toll revenue)
Canadian Approach Bridge	Private Financing (i.e. toll revenue)
U.S. Toll Plaza	Canadian Federal Funds
Canadian Toll Plaza	Canadian Federal Funds
I-75 Interchange	Canadian Federal Funds
Duty Free, Customs Broker, Other (U.S. and Canada)	Private Financing or Lease Revenue
U.S. Inspection Plaza	U.S. General Services Administration
Canadian Inspection Plaza	Canadian Federal Funds
Canadian GBSA Headquarters	Canadian Federal Funds

Figure 9.1: Funding per Project Component

The following paragraphs provide detail on the funding of the Bridge and approach bridges, the U.S. Plaza and the I-75 Interchange.

9.2. Private Financing

The analysis of the private financing was based on the cost and traffic projections that were developed for MDOT. The analysis scenarios placed significant weight on the market feedback from the respondents to the RFPOI, as well as market precedent from similar transactions in North America.

The analysis focused on two public-private partnership models that involve private financing:

Type of Model	Description	Examples in North America and Size
Real Tolls	Private developer is responsible for designing, building, financing, operating and maintaining the project. The government grants the right to the developer to receive tolls.	North Tarrant Express - Texas (\$2.2 billion), LBJ – Texas (\$4 billion), Capital Beltway – Virginia (\$1.9 billion), SH 130 Seg. 5&6 – Texas (\$1.35 billion)
Availability Payments	Private developer is responsible for designing, building, financing, and maintaining the project. The government receives the tolls (if toll project) and makes periodic, performance adjusted, payments to the developer.	Port of Miami Tunnel – Florida (\$0.86 billion), I595 – Florida (\$.1.67 billion), A30 – Canada (\$1.5 billion)

Figure 9.2: Public-private partnership model

Note: These are examples of projects that reached financial close during the credit crisis (financial close for LBJ in Texas is pending)

In both cases, a basic assumption was that the DRIC is a toll project and the base toll revenue used assumed starting toll rates equal to the current Ambassador Bridge increasing with inflation.

The results of the analysis indicate that, based on the assumptions used and current market conditions, the bridge and the approach bridges could be funded with private funds that will be repaid with toll revenue. Other elements of the project can either be under the same public-private partnership as the Bridge or be developed under separate agreements.

If the State of Michigan Legislature authorizes MDOT to proceed with the development of the project, MDOT intends to coordinate with TC and select the business model that would generate the value for money and public benefits.

9.3. U.S. General Services Administration

GSA has submitted a prospectus for the DRIC to the U.S. Federal Office of Management & Budget for approximately \$450 million. The Office of the Management & Budget will decide whether the facilities will purchased or leased and subsequently it will be submitted for approval by the Congress. MDOT anticipates that GSA will cover all the costs related to the U.S. inspection plaza.

In addition GSA has retained consultants that will be working on the design of the inspection plaza

9.4. Canadian Government

As part of the discussions with TC for the development of the DRIC and after taking into consideration the challenging period for Michigan's public finances, the Government of Canada has agreed to fund Michigan's cost including the portion of the project that would normally be covered by federal highway formula funds. This cost was estimated at \$550 million. This amount could be decreased or eliminated following further value engineering, innovative ideas from the private sector and the financial proposals received for the Project.

Canada will be repaid from the excess toll revenues to be derived from the operation of the new bridge. This Michigan-Canada partnership is similar to the one in which Michigan paid the entire cost of the main arched portion of the Blue Water Bridge on both sides of the border and was repaid by tolls.

It should be emphasized the State of Michigan and MDOT will have equal rights in the governance of the Project. As part of that governance process, MDOT and TC will select the business model based on value for money and public benefits and that clearly protects the public's interest.

In case of a business model in which the public agencies receive the toll revenue (e.g. availability payment model, hybrid model), the Government of Canada will assume the risk of any shortfalls in the toll revenue that would be used to fund the availability payments and receive any excess revenue to repay any such outlay. In return the Government of Canada would receive any excess revenue to repay for any outlay. Under such a scenario (i.e. toll revenue received by public agencies), the State of Michigan and its agencies would have no liability caused by any revenue shortfalls.

Please refer to Attachment D for the letter provided by the Government of Canada.

10. Anticipated Schedule

MDOT, following authorization by the State of Michigan Legislature intends to enter into a formal procurement process. The following schedule is indicative of the key project milestones and the anticipated date of completion:

Milestone	Date
Michigan Legislative /Canadian Cabinet Approvals*	Spring/Summer 2010
Issue Request for Qualifications (RFQ)	Winter 2010-11
Issue Request for Proposals (RFP)	Summer 2011
Bid Submittals	Winter 2011-12
Commercial Close	Summer 2012

Figure 10.1: Anticipated Schedule for Forming a Public-Private Partnership

Note: These approvals are conditions precedent to proceed to subsequent milestones.

Attachment 1 Exhibit I – Project Components: End-to-End Project



Exhibit II - Project Components: U.S. Plaza



Source: The Corradino Group of Michigan, Inc. and Parsons Transportation

Exhibit III – Project Components: Canada Plaza





Exhibit IV - Project Components: Crossing Cross-Section

Exhibit V – Windsor-Essex Parkway



Minister of Transport, Infrastructure and Communities



Ministre des Transports, de l'Infrastructure et des Collectivités

Ottawa, Canada K1A 0N5

1 2 9 2010

FAX:(517) 335-6863

Governor Jennifer M. Granholm Office of the Governor State of Michigan P.O. Box 30013 Lansing, Michigan 48909 U.S.A.

Dear Governor:

l am writing with respect to the Detroit River International Crossing (DRIC) project.

As you know, since 2005, Transport Canada has been working diligently with its bi-national partners, the United States Federal Highways Administration, the Michigan Department of Transportation (MDOT) and the Ontario Ministry of Transportation, to complete the comprehensive environmental assessments for the DRIC. Those environmental assessments have now been completed and approved in both Canada and the United States. The partnership is now in a position to proceed with the implementation of the much-needed new bridge crossing that will connect Highway 401 in Windsor and Interstate-75 in Detroit, the busiest international trade corridor in the world.

In keeping with the 2009 Michigan Budget language (PA 116, Section 384), I understand that the State Legislature intends to fully adopt or reject authorizing legislation for the DRIC project by June 1, 2010. I understand that MDOT will be responding to the requirements of the State Legislature by May 1, 2010, including proposals from the private sector expressing interest in a public-private partnership to construct the bridge, plaza, and related infrastructure as well as an investment grade traffic study for the project.

Given the importance of this new crossing to the economic security and future prosperity of the United States and Canada, on behalf of the Government of Canada, I am pleased to inform you that Canada is prepared to increase its financial participation in the DRIC project.

Canadä

Upon the Michigan Legislature adopting all of the authorizing legislation for the implementation of the DRIC project, Canada, MDOT and a future private partner would have to enter into the requisite governance and financial agreements to implement the project. Through these agreements, which will be subject to the approval of the Government of Canada, Canada would be prepared to offer to increase its financial participation up to a maximum of US\$550 million, for project components in Michigan that would not be funded by the public-private partnership or the United States Government. Amongst other terms to be negotiated to the satisfaction of both Canada and MDOT, Canada would expect repayment from the anticipated toll revenues to be derived from the operation of the new bridge.

I would propose that you convey this intention from the Government of Canada to the State Legislature, should it be helpful to their decision-making related to the future of the DRIC project.

I look forward to a positive outcome and to working with you and your officials on the implementation of this very important project.

Sincerely,

loan Sand

John Baird, P.C., M.P.