Joe McKeever
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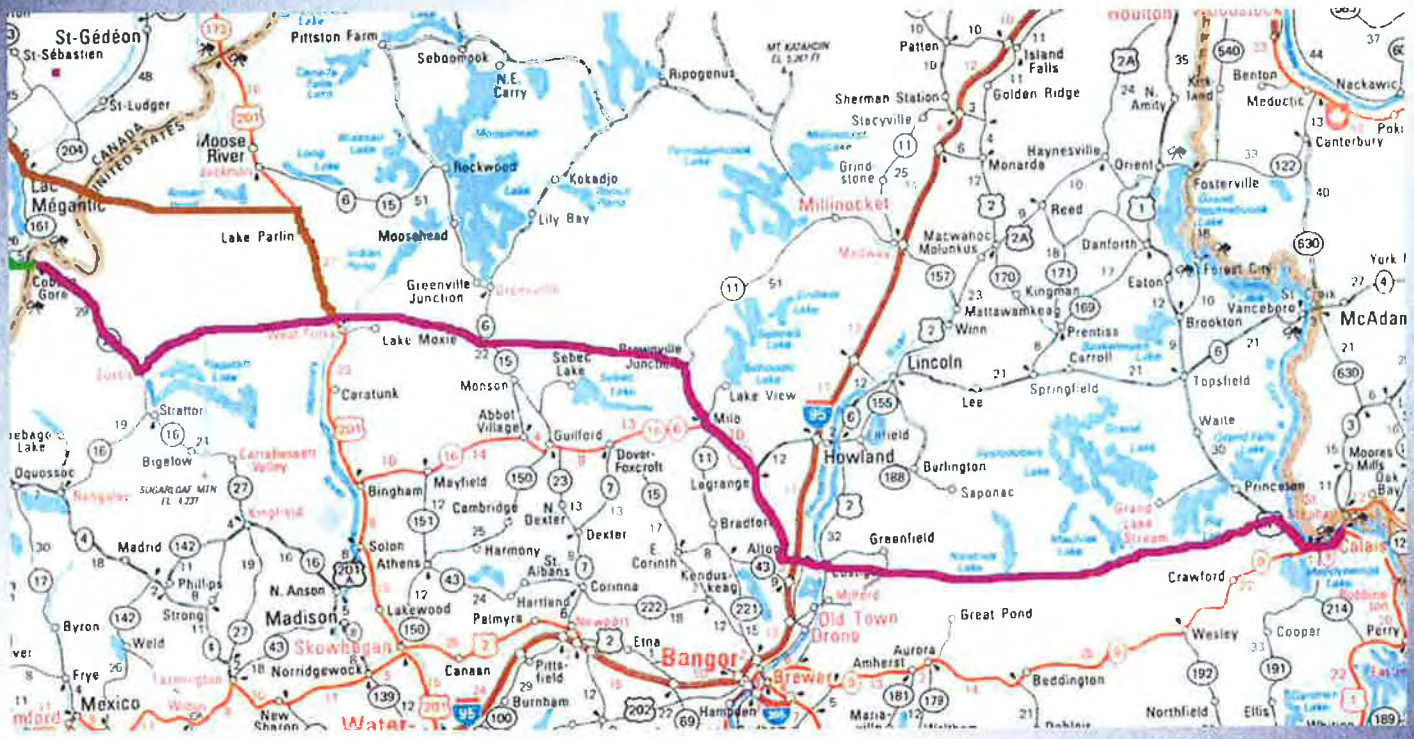
East-West Highway
Conceptual Feasibility Study
Calais to Coburn Gore



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September 15, 2008 FINAL DRAFT

EAST-WEST HIGHWAY
CONCEPTUAL FEASIBILITY REPORT
CALAIS TO COBURN GORE

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1.0 INTRODUCTION

The Louis Berger Group in conjunction with Cianbro Corporation has been studying the financial feasibility of building an east-west toll highway from Calais to the vicinity of Coburn Gore. The East-West Highway Conceptual Feasibility Study is a planning level study that focuses on developing an understanding of the potential truck traffic and revenue characteristics of this toll highway. The concept of an East-West Highway through Maine has been discussed and studied by Maine Department of Transportation and others for more than a decade. The driving force behind an east-west highway concept has been the economic benefits of linking to the east with Atlantic Canada and to the west with the larger markets in Quebec, Ontario and the Midwestern United States. This current study builds on a number of previous studies, which examined potential corridors including existing roadways and new alignments, by focusing on a more northerly route that takes advantage of existing private roads and right of ways for a significant portion of the corridor.

Legal Basis for Private Toll Road

At the present time there is no Maine law that specifically governs private toll highways. Maine DOT is currently studying this issue and is looking for models in other states to follow. At the present time the project would have to be cited under the Site Location of Development ACT (SLODA) and would require a traffic movement permit like any project whether a private road or a big box store. Maine DOT is also looking into what requirements might be triggered in the event that the toll road joined any state controlled road or actually used any part of any state road. In the latter instance, if the toll road is carrying heavier weight trucks, there would have to be state legislation to permit such trucks there would have to be state legislation to permit such trucks on the state owned portion of the road.

Northeast CanAm Connections

The East-West Highway concept has developed renewed interest as a result of the Northeast CanAm Connections Study "Integrating The Economy And Transportation". Maine DOT is serving as lead agency for this study, with approximately $1.3 million in funding from U.S. Public Law 108-7 of the Transportation and related appropriations this study seeks to provide a comprehensive assessment of the adequacy of inter-state and cross-border transportation within the northeast border region.

The study focuses on East-West movements across a region that includes central Maine, northern New Hampshire, Vermont, upstate New York as well as the Canadian provinces of Ontario, Quebec, New Brunswick, Nova Scotia and Prince Edward Island. The core focus of this study is the relationship between transportation links and the economic performance of communities within the study area from Toronto to Halifax on the Canadian side and Buffalo to Calais, Maine on the U.S. side.

The study commenced in January 2007 and is scheduled to be completed September 2008. Work is being completed on task order assignments and being reviewed by a

steering committee involving the four U.S. State Departments of Transportation (DOT) and five Canadian Ministries of Transportation (MOT). The task orders are as follows:

Task 1 – Work Scope Development

Task 2 – Reports on Existing Conditions and Needs, June 2007

Task 3 – Report on Alternative Strategic Directions, April 2008

Task 4 – Predictive Analysis, June 2008 Working Draft

Task 5 – Benefit/Cost Modeling, June 2008 Working Draft

Task 6 – Analysis of Financing Options, Scheduled July 2008

The completed task orders are posted for viewing in the documents section of the CanAm Connections web site www.CanAmConnections.com. The final report will be presented at the mid-September New England Governors and Provincial Premiers meeting in Bar Harbor, Maine. Posting on the website of the final report will follow this meeting.

Absence of Infrastructure in Middle of CanAm Region

Exhibit 2
Northeast CanAm Connections Study

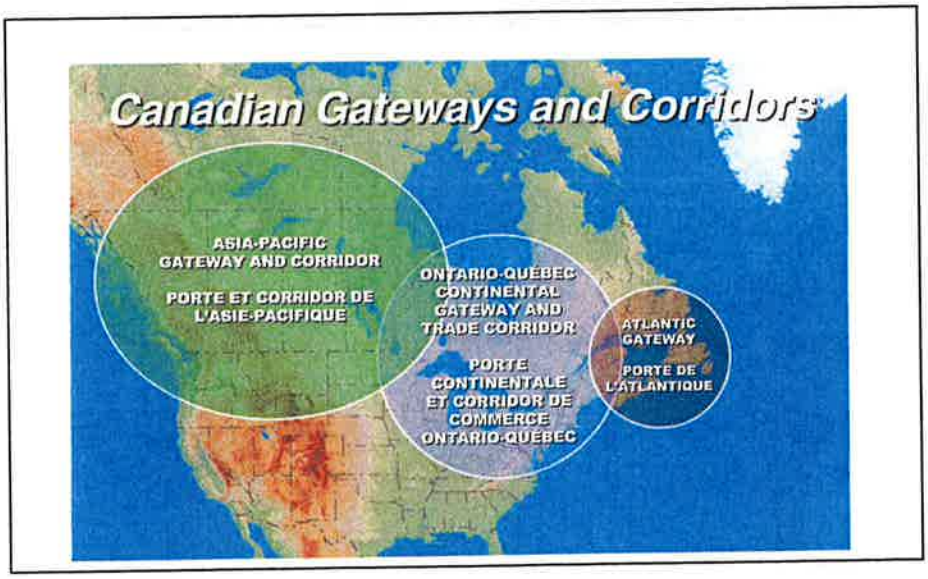
Exhibit 2 from the CanAm Study provides an alternative perspective of the "hollow middle" concept by *highlighting the lack of transportation infrastructure in the middle of the region*. As can be seen, the region is *"hollow" in terms of east-west highway and Class 1 rail service*. While the region has numerous intermodal nodes where rail and roadway meet, they are primarily in the Canadian portion of the region with very few efficient connections into the US portion of the region. In addition, the existing east-west highway and rail

routes from Halifax to Ontario are circuitous routes for products destined for many of the economic centers in and surrounding the region.

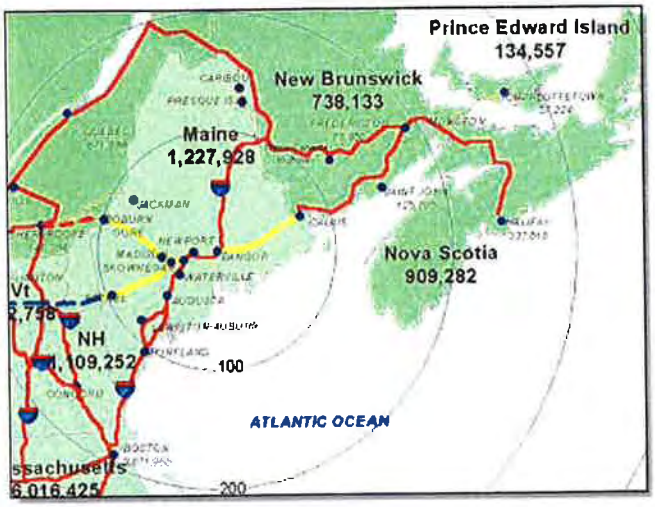
In recognition of the critical role that gateways and corridors play in Canada's international competitiveness, the Canadian government has identified the national policy framework for strategic gateways and trade corridors that will guide investment decisions. This represents a coherent national policy approach that promotes planning and partnership between the public and private sectors to guide the development of efficient and competitive gateways and corridors.

The State of Maine provides the linkage between the Ontario-Quebec Continental Gateway & Trade Corridor and the Atlantic Gateway as Atlantic Canada seeks to identify and evaluate gateway related opportunities in relation to container traffic. The creation of an East-West transportation corridor stretching from across Maine and into Ontario creates a web of crossroads by intersecting U.S. Interstates (I-95, I-91, I-93, I-89, I-87 and I-81) and connecting to the 401 in Canada. In addition, investment in East-West highways and rail corridors would not only create crossroads but also intermodal facilities at Costigan and Brownville.

Cianbro Corporation and the Louis Berger Group have combined resources to promote and develop East-West connectivity to address the needs defined by the CanAm Connections "hollow middle" and opportunities presented by the Canadian Strategic Gateways and Trade Corridors initiatives.



1.1 REGIONAL CONTEXT



The Ferry Point International Border Crossing between Calais, Maine and St. Stephen, New Brunswick is the 7th busiest easternmost border crossing between the United States and Canada. This crossing has long been recognized as a key component in the international trade corridor with Atlantic Canada and the eastern United States and is currently underutilized due to the traffic congestion and extensive delay associated with the current border crossing. The Maine Department of Transportation (MDOT), the Federal Highway Administration (FHWA), and the General Services Administration (GSA) are currently constructing a new expanded border crossing in Calais that will provide significant relief in terms of increased capacity and reduced delay. MDOT has indicated that 1,000 trucks per day currently use this border crossing and has projected annual growth rates of up to 8% for the foreseeable future. (It should be noted that as part of this study we have not verified this growth rate.)

The State of Maine has a long term objective of developing an East/West highway corridor that includes a new border crossing in Calais and a series of truck corridors on the easterly and westerly sides of I-95 to enhance the East-West movement of freight across Maine. The Northeast CanAm Connections Study is examining the adequacy of East-West transportation connections within the northeastern New England States and Eastern Canadian Provinces. The East West Highway considered by Cianbro/Berger is one piece of the overall regional context being addressed through the CanAm Study.

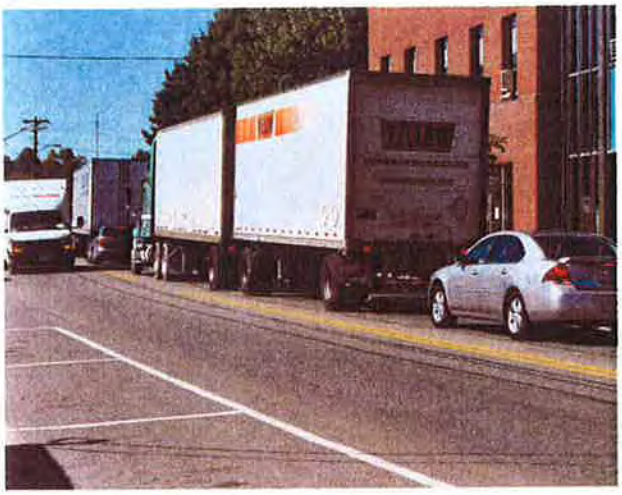
The East-West Highways financial success will depend to a large extent on the efficient and cost-efficient flow of goods and people across the Canada/U.S. border. To mitigate the unintended delays and bottlenecks, the project will require coordination with the U.S. Government Department of Homeland Security and leading edge security measures to improve wait times with a goal of transparent crossings at Calais and Coburn Gore. The widespread concern with increased frequency and duration of delays along with reports of increased inspection activity by customs and border protection is becoming a National concern.

Cianbro/Berger are working with the Border Trade Alliance (BTA) to determine the specific local needs at the East-West land border crossings in order to identify and address the underlying causes for increased delays. This will include expedited demonstration projects to test the use of new technologies and programs and conduct an assessment of current policies and programs implemented at the ports of entry and evaluate their effectiveness and leverage best practices.

In addition, BTA is supporting legislation introduced in December 2007 by Representative Ciro Rodriguez and Senator Kay Bailey Hutchison (H.R. 4309 and S. 2425 respectively) to require the study of the economic impact and scope of the growing wait-times experienced at land border crossings. The critical information that would be collected as part of these studies would provide a more concrete basis for policy-makers to determine the appropriate federal response to address the critical issue of wait-times.

Department of Homeland Security's Customers and Border Protection has stated that there is a need to significant investment to modernize our nation's facilities at land ports of entry. CBP estimates the need at $500 million annually over the next 10 years ($5 billion) to upgrade infrastructure sufficiently in order to reduce growing congestion and delays.

According to the Federal Highway Administration's (FHWA) recent report, An Initial Assessment of Freight Bottlenecks on Highways, "if the U.S. economy grows at a conservative annual rate of 2.5 to 3% over the next 20 years, domestic freight tonnage will almost double and the volume of freight moving through the largest international gateways may triple or quadruple...Without new strategies to increase capacity, congestion...may impose an unacceptably high cost on the nation's economy and productivity."



In recognition of the growing concerns associated with cross border delays and the large gap between funding available and the large need for infrastructure upgrades the U.S. Department of Transportation (DOT) announced a major new initiative to improve border travel times and help reduce associated national and regional economic costs. As part of this new initiative, the Department has created a new program called the Transportation Border Congestion Relief Program (TBCR) under which it will be selecting two or more surface transportation projects, a minimum of one on the U.S./Mexico border and one on the U.S./Canada border, which can help improve border travel times through the use of non-traditional transportation project finance, delivery and facility operation mechanisms.

DOT Transportation Border Congestion Relief Program Summary

The TBCR is designed to expedite border infrastructure project approval within the federal government that involve unique solutions, developed by stakeholders, to address border congestion and develop alternative sources for funding, innovated project delivery for border transportation needs.

Potential projects for inclusion with TBCR are evaluated by DOT on the following ten criteria (as outlined in the Federal Register):

1. Project Description
2. Congestion Reduction and Reduction in Land Border Travel Times
3. Use of Intelligent Transportation Systems
4. Economic Benefits and Support of Commerce
5. Value to the Users of the Project
6. Innovations in Project Delivery and Finance
7. Exceptional Environmental Stewardship
8. Finance Plan and Potential Private Sector Participation
9. Planning and Coordination Status
10. Proposed Project Time-line

The Federal Register notice of May 30, 2008 that sets forth the application process is included in Appendix A. This notice includes the background and objectives of the program along with a summary on the Federal Governments in facilitating and accelerating improvements at land border crossings.

1.2 HEAVY TRUCK WEIGHT LIMITS

The State of Maine is the only state in the Northeast with an 80,000 pound weight limit on its interstate highways. As a result, trucks in Canada can weigh as much as 70% more than those in the Maine when measured by the difference between the Maine gross weight limit of 80,000 lbs and the largest designated gross weight limit of 138,000 lbs in Canada. Differences between Canada and Maine are also reflected in the composition of the respective truck fleets. The most popular configuration in domestic trucking in both Maine and Canada is the 5-axle tractor-semitrailer. However, in Canada there are several long combination vehicle configurations that are not used in Maine. Cross-border traffic is dominated by the 5-axle tractor-semitrailer configurations and multiple axle semi-trailers are important in the Quebec-Ontario-Michigan corridor. Figure 1.2.1 published by MDOT depicts maximum gross vehicle weights for commercial vehicles.

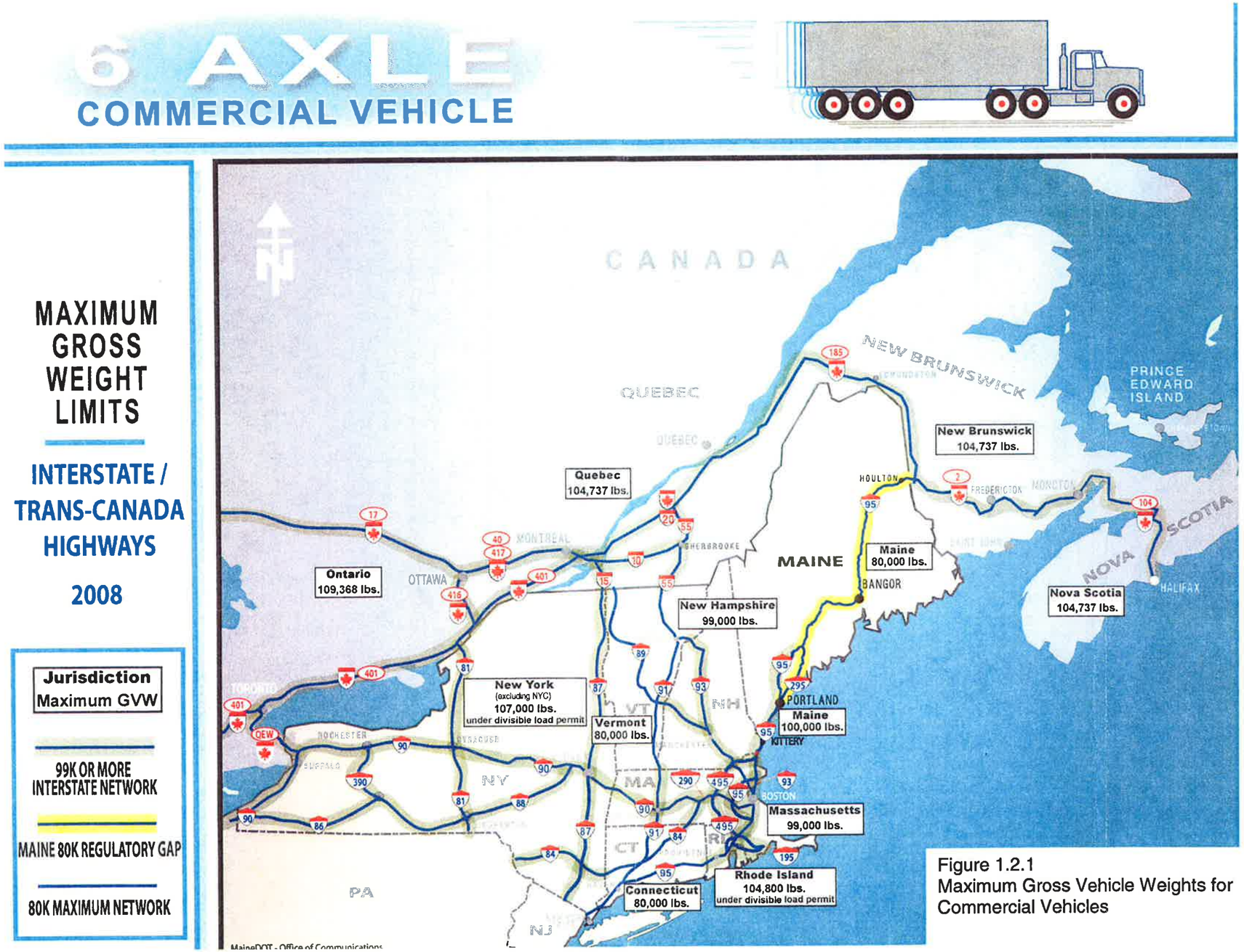


Figure 1.2.1
Maximum Gross Vehicle Weights for Commercial Vehicles

The pulp and paper industry is the largest business segment of Maine's economy with 34 pulp and paper mills employing 14,000 people, generating annual revenues of $4 billion, and accounting for over 30 percent of revenues from the state's manufacturing sector. Over the past 15-years consolidation, restructuring and foreign competition have left Maine's pulp and paper industry in a state of transition. In Canada, raw materials such as pulp and fiber or finished product can be brought to and from the mills using longer and heavier trucks than those used in Maine. This makes Maine paper mills less competitive with their Canadian counterparts.

There is currently an exception that allows Canadian configurations to travel up to 10-miles in Maine before they need to be broken down into legal loads. Preliminary discussions with Maine DOT have indicated that this exception can be extended to tie into any facility contemplated out of this East West Highway Feasibility Study.

1.3 TRAILER KING PIN SETBACK

There is a difference in the manner in which the wheelbase is measured for semi-trailers between Canada and Maine. In Canada the semi-trailer is measured from the kingpin to the center of the rear most combination of axles. In Maine it is measured from the kingpin to center of the rear most axle. For example, in a tri-axle combination whereas the center of the combination would be the rear measuring point (the middle of the middle axle) in Canada, in Maine it would be the center of the very back axle.

This leads to making most 48 foot to 53 foot trailers illegal in the State of Maine. The requisite sections in conflict in Maine are 2390J(1) under the Maine Highway Traffic Act. The majority of US States with the exception of Georgia, Connecticut, Illinois, and Maine all conform to US/Canada agreements on the measuring of semi-trailers. The conflict will arise for the proposed East West Highway in that Maine regulations could reduce access and users of the proposed toll road.

Legislative action will be required to bring Maine into conformance with US/Canada agreements on the measuring of semi-trailers.

1.4 STUD MILL ROAD

There are a number of private roads in northern Maine that provide access into large tracts of land used in the pulp and paper or forestry product industries. These roads are in many instances configured to handle the types of truck configurations discussed in sections 1.2 and 1.3 earlier. Stud Mill Road is a higher grade version of one of these private roads, it is a gravel logging road that bisects and provides access to more than

1.1 million acres of forestland formerly owned by the International Paper Company in Penobscot, Hancock and Washington counties. As shown on Figure 1.4.1, it runs generally east to west approximately 65-miles from the intersection of Greenfield Road, this figure is based on the DeLorme Maine Map & Guide.

Figure 1.4.1 Map of Stud Mill Road

and U. S. Route 2 in Costigan, Maine (approximately 15 miles north of the City of Bangor) to Route 1 in Baileyville. This eastern end of Stud Mill Road is just west of the Calais border crossing into Canada. Stud Mill Road has been used for many years to haul pulp wood from the adjacent forestlands to pulp and paper mills in northern Maine. The Maritimes and Northeast gas transmission pipeline (http://www.mnp-usa.com/) parallels much of the Stud Mill corridor (to the left of roadway in photograph below) and the recently constructed Northeast Reliability Interconnect project (http://web.ead.anl.gov/interconnecteis/) has completed an extension of the electrical grid along this corridor as well. For these reasons Stud Mill Road is known as the consolidated corridors route as it minimizes the environmental impacts associated with these utility corridors. Environmental permitting for improvements to Stud Mill Road can possibly be streamlined based on the previous efforts for the parallel utilities corridors.

Stud Mill Road varies from about 14 to 30 feet in width, with approximately one dozen stream crossings which are bridged with one-lane timber structures. Several gravel roads intersect with or cross Stud Mill Road providing access to additional forestlands or recreational areas northerly and southerly of Stud Mill Road. The photograph here depicts one of the typical stream crossings located along the length of Stud Mill Road.

At the western terminal, Stud Mill Road is in proximity to U.S. Route 2 and within 4 miles of I-95. Direct access to I-95 will require a new crossing of the Penobscot River north of Old Town. On the easterly terminal, Stud Mill Road is in relative proximity to the Calais-St. Stephen border crossing which provides access to Prince Edward Island and Halifax. The Irving Companies (http://www.jdirving.com) and Irving Oil (http://www.irvingoil.com) are located in the St. John area and are the largest employers and generators of truck traffic in the region. The Irving Companies are an industrial conglomerate of shipbuilding, transportation, building materials and forestry products, industrial equipment and consumer products. Irving Oil is a gasoline, oil and natural gas producing and exporting company. Although a large percentage of their combined truck traffic is oriented north to south there remains a fairly significant east to west component.

1.5 PENOBSCOT RIVER CROSSING

In order to provide direct access to I-95 at the western end of Stud Mill Road it will be necessary to construct a new crossing of the Penobscot River north of Old Town. From U.

S. Route 2 in Costigan it is approximately 3.5 miles to Exit 198 on I-95. This interchange is a half-diamond configuration providing a southbound on-ramp and a northbound off ramp. The river crossing will be approximately 3,000 feet in length and will need to be located northerly from what is known as Indian Island. The photograph at left is taken from the boat ramp located on U.S. Route 2 near Stud Mill Road and is looking towards Indian Island. The new crossing would be located northerly of this location.

1.6 WESTERN CORRIDORS

Although major sections of the most logical corridor are already identified (i.e., the Stud Mill Road) there are a number of gaps in particular on the western side of I-95. Selecting viable corridor segments to fill those gaps will require review of a large number of factors to establish consolidated corridors. Environmental issues such as wetland impacts, impediments to wildlife movement, forest fragmentation, and water quality impacts are obvious examples. Some additional elements for siting constraints will include impacts to public recreation and access, maintaining optimum road grades, proximity to energy generation resources (i.e., wind and biomass plants), and avoiding noise impacts and visual impacts to scenic resources, recreation areas, and conservation lands. The energy developers would be interested in tapping into the transmission capacity within a consolidated corridor, if it provides a connection to ISO-New England grid.

From a geographic perspective, existing roads such as the Golden Road, Shirley Mills Road or the Lower Enchanted Road or transmission corridors are logical segments to consider, but it will be important during the initial planning process to review the environmental feasibility of expanding (widening) those segments to accommodate a 4-lane road plus transmission or pipeline components. For example, although the Shirley Mills Road offers an existing two-lane right-of-way, it may be challenging to fit a 4-lane road with ancillary transmission width where that road crosses the outlet of Moxie Pond. This level of evaluation may or may not require some reconnaissance-level field evaluations, but we would expect most of the broad-scale study could be done through GIS analysis.

There are a number of significant conservation and land acquisition initiatives underway in the region, which should be considered in selecting a viable preferred corridor. For example, land initiatives in the Brownville Junction to Shirley Mills segment include the Plum Creek Conservation Framework affecting 350,000 acres surrounding Moosehead Lake, the AMC's Maine Woods Initiative that has most recently focused on the Katahdin

Iron Works area, and the recent large-scale land acquisition activities undertaken by Roxanne Quimby, the founder of Burt's Bees line of natural skin and body products. These are key stakeholders to consult with early in the siting process, to identify their concerns and develop solutions that will help streamline subsequent planning and permitting.

The roadway improvements within the Provence of Quebec to support the East-West Highway will require additional investigations. The initial concept was to exit Flagstaff/Enchanted Road in Eustis and follow Maine Route 27 to the border crossing at Coburn Gore. The concept was then to follow Canadian Regional Road 212 from Saint-Augusta-de-Woburn thru LaPatrie to Cookshire-Eaton and then follow Regional Road 108 to the proposed Lennoxville By-Pass connecting Auto Route 410 with Auto Route 10 and then to Montreal. Concerns have been raised regarding the prime agriculture lands along this route as well as the light pollution abatement project at Mont-Megantic Observatory. Figure 1.6.1 depicts alignment alternatives in the Province of Quebec Eastern Townships, the base map for this figure is published by Transport Quebec.

The emerging roadway alternative of Woburn to Lac-Megantic on Regional Road 161 to Stornoway and then Regional Road 108 to East Angus on Regional Road 214 to Main Road 112 connecting to Auto Road 10 will be investigated in greater detail.

A new border crossing in conjunction with the Montreal, Maine and Atlantic Rail (MM&A) border crossing will also be evaluated as part of this alternative. Adjustments to routing within Maine would now include crossing western Maine via Spencer Road, just south of Lake Parhn, to Merrill Strip Road and along the rail corridor to Lac-Megantic. This routing alternative will be investigated this fall and would include approximately 125 km of roadway improvements within the Provence of Quebec.

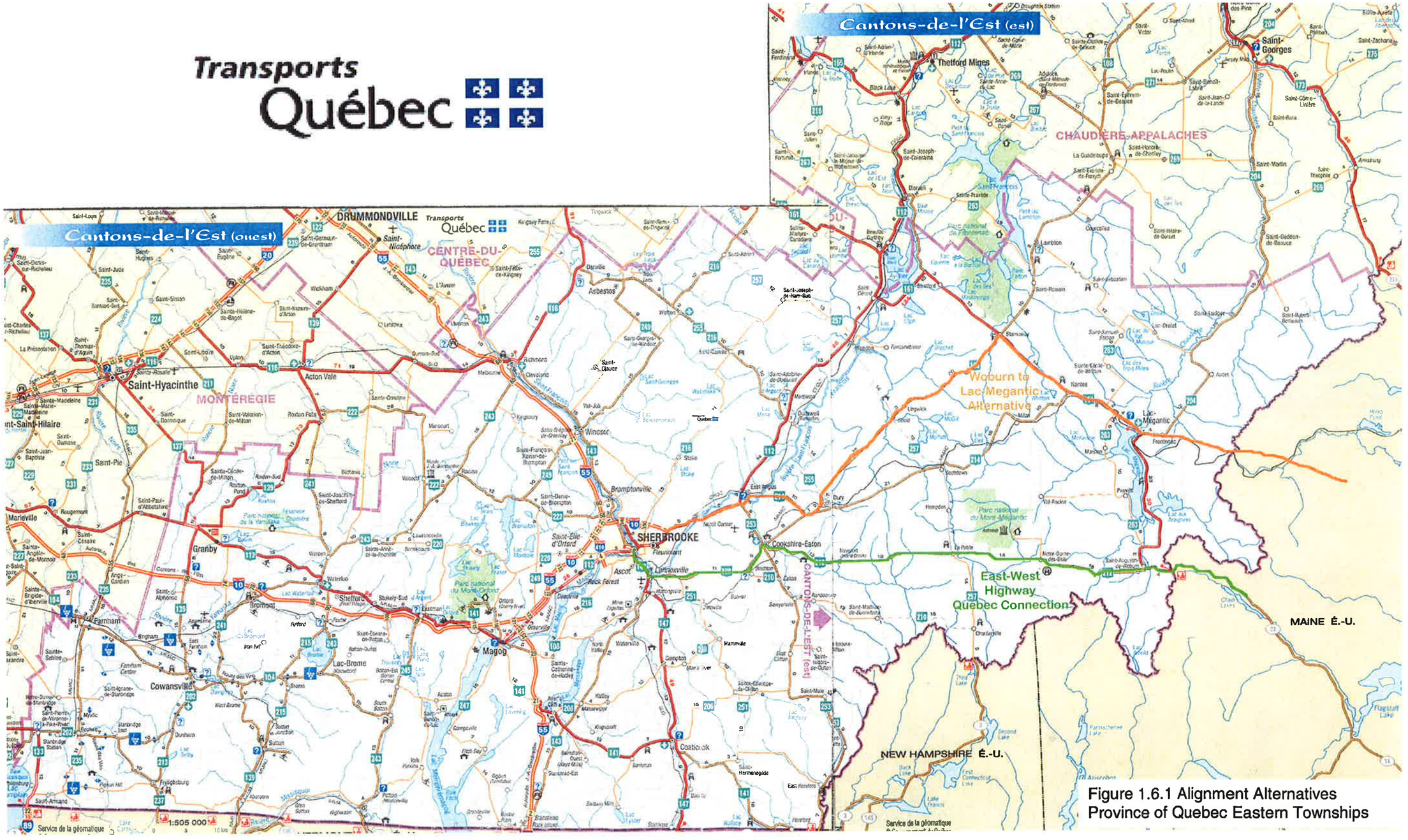


Figure 1.6.1 Alignment Alternatives
Province of Quebec Eastern Townships

2.0 PROJECT DESCRIPTION

This project would entail minor alignment and grade modifications in conjunction with minor widening along the existing Stud Mill Road corridor to result in a high speed toll road capable of handling 138,000 pound long vehicle combination trucks. Access to a new truck only border crossing near Baileyville would allow Canadian configurations to travel from the Port of Halifax to the Bangor area where they could be reconfigured and travel westerly along a designated east-west corridor to Quebec/Montreal. This truck route could be navigated in a approximately 3 ½ hours less than it would take along the Trans Canadian route between Halifax and Quebec/Montreal and also provide access to the Portland and Boston market. Several areas exist to accommodate an inter-modal terminal on either end. Although access to the Bangor-Aroostook Railroad is available at the westerly terminal with easier Interstate access and direct connection with the NB Southern Railway. Figure 2.0 depicts the general route through Maine into Quebec and has been based on the AAA Northeastern States and Provinces Map.

3.0 EVALUATION CATEGORIES

In reviewing the feasibility of an East West Highway we have considered a number of factors that may affect either the ultimate feasibility of a new toll facility in north central Maine or the scope necessary for Environmental Documentation and Permitting. The ultimate applicability and weighting of these criteria is beyond the scope of this document which is not intended to provide an extensive analysis of these categories, that study and analysis is rather the subject of subsequent more detailed studies. The intent here is to establish what issues may be relative to project feasibility from a more global perspective.

3.1 REGIONAL TRANSPORTATION SYSTEM

The maps and text of the CanAm Study (www.CanAmConnections.com) provided a very comprehensive overview of the existing transportation system in the East West Highway study area. The CanAm study concluded that roads with the study area have been highly influenced by the region's physical geography and the location of population centers. Ground infrastructure in the CanAm region traces the mountainous canvas upon which past and present planners have developed transportation systems; the maritime network is dominated by historical ports of call; and airports are located in regions with high population density."

We concur with the CanAm study that "topography has played a key role in the development of roads; this is especially evident in the U.S. portion of the Study Area. In this region, ground transportation is primarily north-south oriented, due to the obstacle of the Appalachian Mountains. Interstate 95, the only large highway in the State of Maine, is a prime example of this, as it avoids the mountainous portion of the state entirely. Instead, smaller roads, such as Route 2 are the only option for traffic that crosses from upstate New York through Vermont and New Hampshire into Central

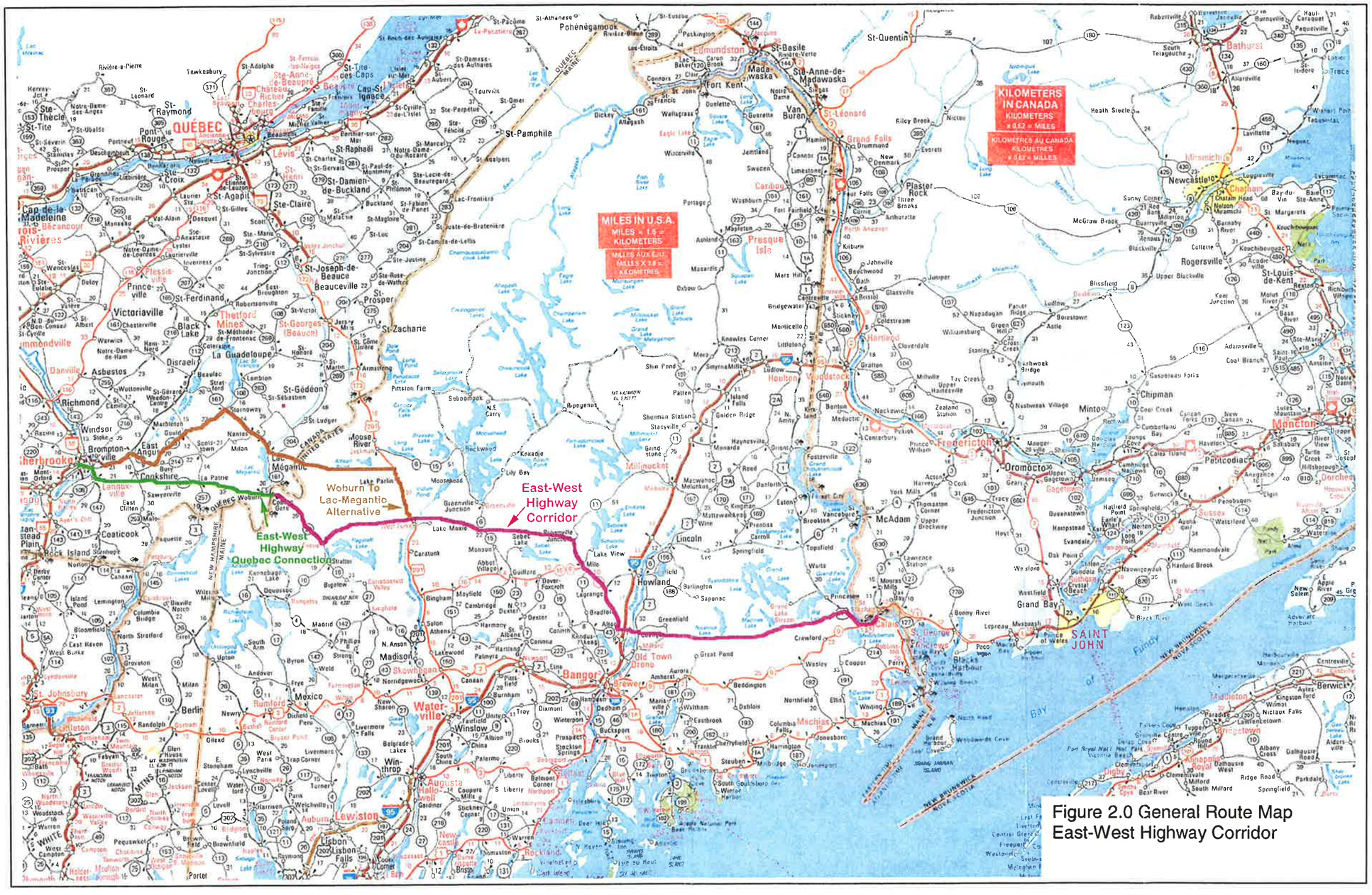


Figure 2.0 General Route Map
East-West Highway Corridor

Maine. The lack of direct routing for key trading partners, forces freight and passenger traffic onto smaller roads. The use of these roads adds cost not only in terms of fuel and time, but also in terms of safety –smaller roads are generally not as well-maintained as interstate highways and are difficult to maneuver large vehicles, such as trailers, across. In Canada, the highway network has experienced different development patterns, given the comparative abundance of population centers versus those in the U.S. portion of the Study Area. It is largely east-west oriented, with the primary through route being the 401 connecting Toronto, Ottawa and Montreal. Outside of this major route, however, highways are sparse and follow the topographical boundaries of the region.

3.2 ENVIRONMENTAL CONSIDERATIONS

This East West Highway project will arguably be the largest private development ever undertaken in the State of Maine. The Maritimes & Northeast pipeline project was similar in length, but that project pales in comparison with regard to construction scope, and the extent of permit requirements. This project will have ramifications at the local, state, and federal levels. As a result, it is likely that the state and federal permitting for the proposed 200-mile highway will be costly and time-consuming.

The most critical element for success will be working with state and federal agency leaders very early in the planning stage to: 1) agree on a well-defined, streamlined permitting process; 2) identify the critical path items that need to be addressed to make the project acceptable; and 3) arrange to have specific regulatory staff dedicated solely to the review of this project. Without support from the agencies and continuity in the review process, it will be very difficult to permit such a wide ranging and transformational project in a timely manner.

Because it will cross the section of Maine that has a large concentration of wetlands, and will involve new bridges across the Penobscot and Kennebec Rivers (plus crossings of many other small streams), it will undoubtedly involve the largest wetland mitigation and compensation program ever required in the State. This cross-section of Maine also hosts significant wildlife areas including many Essential and Significant Wildlife Habitat (including vernal pools, deer wintering areas, wading bird and waterfowl habitat, and rare species habitats), and many interconnected pond systems with native fish

populations. It is anticipated that wildlife crossings will be an important component of the project to mitigate impacts on wildlife. Cianbro has committed to making the East-West Highway a demonstration project for wildlife crossings. One potential crossing that will be considered is a land bridge as shown in the above photograph.

The regulatory involvement is expected to be intense with likely intervention (or at least thoughtful questioning) from entities as varied as the USEPA, USFWS, Friends of the Boundary Mountains, the Penobscot Nation, RESTORE: The North Woods, AMC, Maine Audubon, NRCM, and GrowSmart Maine. One of the other primary elements in ensuring successful permitting of the project will be the overall alternatives analysis. Environmental permitting at the federal and state levels requires that the identification and evaluation of several alternatives to the preferred design alternative, looking at both the corridor location and program design (for example, road versus rail). The project approach and outreach also needs to be transparent and publicly inclusive in the evaluation of alternatives to foster credibility. The project will face significant opposition from agencies and stakeholders alike if there is not a clear demonstration and agreement from the agencies that the preferred alternative is the least environmentally damaging preferred alternative (LEDPA) and has the least adverse impact on socioeconomics and regional culture.

Environmental considerations include:

3.2.1 CORRIDOR PLANNING AND SELECTION

The alternatives analysis will require identification and landscape-level evaluations of several alternative corridors in the region, which may not match the initial corridor selection. For example, although the Golden Road may not fit within the initial preferences, it is a logical alternative to evaluate in comparison to a more southern corridor. This analysis process will need to be similar to that done for BHE's 345 kv line, where BHE was required to assess and compare three geographically-separate corridors in terms of potential impacts and benefits. That study involved a comparison of the economic, engineering, and socioeconomic aspects of each alternative, plus a robust environmental assessment that considered relative impacts on wetlands, wildlife, habitats, fragmentation, water quality, recreation, and cultural resources. In addition, an alternative program plan will probably need to be evaluated that evaluates the option of providing a rail solution as opposed to a highway. We would anticipate an even more intensive scrutiny of this project's alternatives analysis because of the greater potential direct resource impacts and the myriad possible secondary impacts such as increased residential and commercial development in the corridor made possible by improved access to the region.

3.2.2 STAKEHOLDER IDENTIFICATION

There are numerous conservation entities that have a strong interest in this section of Maine. They are expected to express concerns about a number of issues concerning impacts to recreational, scenic, and ecological resources. In

addition, several large landowners like Plum Creek have major planning initiatives underway for their landholdings, which could influence corridor selection and their interest in participating in the project. Early meetings with all of the largest landholders along the route is recommended, along with key conservation organizations, influential planning groups like the Maine Better Transportation Association and GrowSmart recreational groups like the Sportsman's Alliance of Maine (who are concerned about access), to gain their support of the project.

It may also be helpful to meet with several of the major renewable energy players who are either already in Maine or are headed this way, to gauge their interest in specific corridor alternatives. These companies would include Iberdrola, Noble Environmental Power, UPC, and TransCanada, all of whom have interest in wind resources within the corridor, and possibly Suez International, who has particular expertise in biomass plants and is now taking a look at northern Maine. These energy players would be interested in tapping into transmission capacity within the corridor, if it provided a connection to ISO New England markets. Table 3.2.2 presented below identifies stakeholder contacts made to date.

Native Americans in the vicinity of the East-West Highway corridor include the Passamaquoddy Tribe of Maine and the Penobscot Nation. Tribal lands of the Passamaquoddy potentially impacted by the project would be located on the eastern end of the corridor in the vicinity of Princeton, and at the westerly end in the vicinity of an alignment option that would more directly connect with Lac-Megantic (Quebec) than the Coburn Gore alignment. Tribal lands of the Penobscot Nation potentially impacted by the project would be located near the proposed crossing of the Penobscot River in the vicinity of Costigan. Every attempt will be made to modify or shift the corridor alignment to avoid direct impacts to any tribal lands.

Table 3.2.2

Summary of our Outreach to date

East-West Transportation Utility & Communications Corridor

Dates	Organizations / Groups	Where	Pr/S	Attendees	Cianbro / Berger Attendees
8/22/2007	Rockport YMCA	Rockport, ME			Pete Vigue
8/23/2007	Bangor Chamber of Commerce	Orono, ME			Pete Vigue
9/8/2007	Bangor Rotary				Pete Vigue, Joe McKeever
10/5/2007	Maine Development Foundation				
11/8/2007	Saint John Board of Trade	St-John, NB		Breakfast Meeting with Board of Trade, APCC, Enterprise Saint John and other private meetings	Pete Vigue, Parker Hadlock, Joe McKeever, Dottie Hutchins, Miles Theeman, Tim Woodcock, Steve Pound
12/6/2007	Maine Motor Transport Association				Pete Vigue
12/12/2007	ACM	Augusta, ME		Annual Meeting	Pete Vigue
1/7/2008	University of Maine	Orono, ME		Private meetings with stakeholder groups, and dinner meeting with Bangor Chamber / Access Atlantica	Pete Vigue, Parker Hadlock, Joe McKeever, Laurette Laverdiere, Miles Theeman, and Tim Woodcock
1/8/2008	Societe de developpement economique de	Sherbrooke, Qc	Qc	Sandra Marie Hrycko, Pierre Dagenais, Louise Bourgault de la Chambre de Commerce	Brent Samson and Laurette Laverdiere
1/18/2008	Senator Collins				Pete Vigue
1/23/2008	Atlantica	Portland, ME			Parker Hadlock
2/13/2008	Quebec Ministere des Transports	Sherbrooke, Qc	Qc	Dave Henry, Qc Office; Mme Marie France Bergeron, MTQ - Estrie; M. Gilles Bourque, MTQ - Estrie	Fred Michaud, ME DOT, Parker Hadlock, Joe McKeever, Dottie Hutchins and Laurette
2/15/2008	Angus King				Pete Vigue
2/22/2008	Sherbrooke Town Hall	Sherbrooke, Qc	Qc	Jean Perrault, Mayor	Pete Vigue, Parker Hadlock, Joe McKeever, Dottie Hutchins, and Laurette Laverdiere
3/3/2008	Canadian Consulate	Boston, MA			Pete Vigue, Parker Hadlock, Joe McKeever
3/13/2008	Maine Forest Products Council	Maine			Pete Vigue
3/14/2008	Sunrise County Economic Council	Calais, Machias		Chambers, and SCEC Board Members	Pete Vigue, Miles Theeman
3/20/2008	American Society of Civil Engineers				Pete Vigue
3/21/2008	Bangor Federal Credit Union				Pete Vigue
4/8/2008	Economic Development Research Group				Pete Vigue, Joe McKeever
4/17/2008	Greater Moncton Chamber of Commerce	Moncton, NB		Sponsored by Atlantic Provinces Trucking Assoc.	Pete Vigue, Dottie
4/18/2008	Bucksport Chamber of Commerce				Pete Vigue
5/9/2008	Association of Maine Community Banks				Pete Vigue
5/21/2008	Maine Tourism Association				Pete Vigue

Summary of our Outreach to date

East-West Transportation Utility & Communications Corridor

Dates	Organizations / Groups	Where	Pr/S	Attendees	Cianbro / Berger Attendees
5/22/2008	St John Board of Trade	St-John, NB		Paul Zed MP Liberal - Federal; Frank Tenhave, Executive Director - Enterprise Fundy;	Pete Vigue, Miles, Joe McKeever, Parker, Miles, Dottie, and Laurette
5/27/2008	Ministere des transports du Quebec	Conference call		Sandra Sultana, PPP director, and Dave Henry	Joe McKeever, Parker Hadlock, Dottie, Laurette
5/28/2008	Eggs & Issues	Portland, ME			Pete Vigue
5/29/2008	Lawrence Cannon, Transport Canada	Quebec, Qc	Qc	Mr Perrault gave to Mr. Cannon an executive Summary of the project and asked that someone of his office contact us.	
6/4/2008	Nature Conservancy of Maine				Pete Vigue
6/4/2008	Maine Governor John Baldacci	Augusta, ME		And Administration Staff	Pete Vigue
6/20/2008	Quebec Ministere des Transports	Quebec, Qc	Qc	Denys Jean, Deputy Minister; Claude Larose, Director Freight and Transport; Benoit Cayouette	Pete Vigue, Ernie Kilbride, Dottie Hutchins, and Laurette Laverdiere
6/23/2008	Burshstein Shur				Pete Vigue
6/27/2008	Edmundston, Chamber of Commerce	Edmundston, NB		Mr Paul Gagnon, Edmundston -Chamber of Commerce; Vicki Durepos Landry Town of Grand Falls;Lise Couturier, President of Edmundston Chamber of Commerce; Paul O'Driscoll Chair of NB Chamber of Commerce; Curtis Holly, Grand Falls Chamber of commerce; Jacques Martin, Mayor of Edmundston	Pete Vigue and Laurette Laverdiere by Phone, Dottie Hutchins on site
6/30/2008	Appalachian Trail Conservancy	Lyme, NH		Jodie Carton	Parker Hadlock, Dottie Hutchins
7/28/2008	Maine DOT	Augusta, ME		David Cole, Fred Michaud, Gary Williams	Derish Wolff, Joe McKeever
7/28/2008		Brewer		E-W Stake Holders Dinner Meeting	Derish Wolff, Joe McKeever, Peter Vigue, Ernie Kilbride, Laurette Laverdiere, Dottie Hutchins, Parker Hadlock, Alan Grover, Johanna Lacey, Miles Theeman, Jeff Castonguay, Bion Foster, Jack Cashman, D'arcy Main-Boyington, Caro Woodcock, Gail Kelly, Susan Moore, Rep. Michaud, David Lakeman, David Lakeman Jr.

Summary of our Outreach to date

East-West Transportation
Utility & Communications Corridor

Dates	Organizations / Groups	Where	Pr/S	Attendees	Cianbro / Berger Attendees
8/5/2008	MRC Granit Lac Megantic	Sherbrooke Airport	Qc	Maurice Bernier, Prefet MRC; Colette Roy Laroche, Mayor Lac Megantic; Christian Paradis, Minister of Public Work in Ottawa, Jean Pare, Political aide, Johanne Gonthier, MP in Quebec within Charest's liberal party, Pierre Dagenais, SDES, Serge Bilodeau MRC Granit, Jean Lefebvre,SNC Lavalin	Pete Vigue, Parker Hadlock, Joe McKeever, Dottie Hutchins, and Laurette Laverdiere
8/13/2008	Ministere des Transports du Quebec, Auto	Phone contact		Paul Andre Fournier, Project Manager	Laurette Laverdiere - Will schedule meeting in Montreal

3.2.3 Resource Evaluations and GIS Screening

The first step of screening for corridor alternatives would consist of a Geographic Information Systems (GIS) analysis of existing data. This would serve as an environmental fatal flaw analysis that identifies critical items occurring among specific corridor alternatives, and provide data for a more robust and defendable comparisons between alternatives.

Land ownership will be one of the most important components to evaluate, and so one of the GIS layers to analyze is land status. Land data elements to review should include fee owner, easement status, conservation status, tax status (i.e., Tree Growth), land manager (such as Seven Islands or Wagner, who manage lands for other owners), and jurisdiction (Land Use Regulation Commission "LURC" versus Department of Environmental Protection "DEP"), the latter of which will be a critical component at permitting stage. Some of this information would require records searches with LURC and individual towns.

From an environmental resource perspective, an important focus would be to review wetlands, endangered species (like rare plant and animal locations, etc.), fisheries resources, known wildlife movement corridors, Essential and Significant Wildlife Habitats (such as deer yards), cultural resources (such as known archaeological sites, tribal resources, or section 106 historic properties), and existing conservation lands. All of these categories would need to be addressed in the permitting process, and any one of them could be a potential show-stopper for a specific route segment. Much of this information is available in public reports and databases, but some is available only through consultation with entities like the Maine Department of Inland Fisheries & Wildlife, U.S. Fish & Wildlife Service, Maine DEP, Maine Natural Areas Program, and the Maine Office of Historic Preservation.

This issue of wildlife crossings should also be factored into the economic and engineering planning at the feasibility stage. Although there are a number of cost-effective solutions for a variety of species, designing and constructing appropriate wildlife crossings for a project of this magnitude could be both extensive and costly. For example, although crossings for reptiles and amphibians can often be accommodated through small-scale innovative culvert design, some similar major highway projects in northern forest landscapes in North America have been required to develop engineered forested bridges for larger wildlife that are substantial and expensive.

3.2.4 Permitting Strategy

Unless there is a way for the developer to work with the regulatory agencies to streamline the process, the environmental permitting for this project will be lengthy, unpredictable, and complicated, due to the project size, overlapping jurisdictions, multiplicity of interests, and anticipated impacts. The state environmental permits required will include a two-step LURC permit (initial rezoning application, followed by a final development application), Maine DEP Site Location of Development permit, Maine NRPA (Natural Resources

Protection Act) permit addressing resource impacts (and possible dredge disposal for bridge-related construction activities), as well as myriad construction-related permits addressing air quality, etc.

Federal environmental permitting is likely to be the critical path for the project. Required federal permits would include a Corps 404 (Clean Water Act) permit for wetland and habitat impacts, and there will be a lot of impacts for this project. There will probably be a requirement to produce an Environmental Impact Statement (EIS) due to the need for a federal action (Corps approval) and presence of a federally-endangered species (Atlantic salmon), which could take a year for the Corps to approve. In any case, the Corps will need to see an alternatives analysis that shows that the impacts are unavoidable, and a robust mitigation plan will be required. The 404 permit application will also go through review by the USFWS, National Marine Fisheries Service, and USEPA, who will undoubtedly have comments and concerns regarding natural resources and water quality.

USEPA will also be very concerned about so-called "secondary impacts", which are triggered by additional projects in the region that are made possible by your project. This would include potential environmental, traffic, and socio-economic impacts from future build-out along the corridor. The USEPA has recently challenged a number of major projects, including the proposed widening of I-93 in New Hampshire, requiring their proponents to assess and even mitigate in advance, these potential secondary impacts. For example, we could envision this proposed road resulting in the expansion of existing towns, new commercial retail centers, additional recreational subdivisions skin to the Plum Creek Moosehead model, and a greater influx of tourists from Quebec and New Brunswick into the region (especially if the Canadian dollar continues to rise.) While those elements have positive economic impacts, they may also have negative environmental impacts that will need to be identified and assessed. This is a serious topic that will require careful analysis and early discussions with USEPA and state agencies to identify the spatial and time limits to such an analysis.

A key element for the permit strategy will be determining which portions (if not all) of the project will fall under LURC jurisdiction as opposed to the Maine DEP. Negotiating a joint LURC/DEP process would provide the best chance for success for the project. Jurisdiction of LURC versus DEP is typically dependant on where the project falls (i.e., in an organized town versus an unorganized territory), but for a 220-mile linear project that crosses the entire state, both entities would be involved. For example, the Maritimes and Northeast Pipeline only had about 1/4 of its length in LURC jurisdiction and the rest in DEP, but it had to file permit applications to both entities.

3.2.5 CO_2 Emission Reduction

The Atlantic Provinces Trucking Association has estimated that up to five hours of travel time may be realized from the proposed East West Highway. CO_2 emission reductions will be provided in tons/year to reflect the distance reductions as well as reducing idling fuel consumption at more efficient border

crossings for the proposed alignment. As an example 2,000 truck trips per day will generate an estimated 120 tons/year reduction of CO_2 emissions by utilizing the East West Highway as compared to current routes.

3.3 RIGHT-OF-WAY

At this point it is uncertain if the State of Maine will be a partner to the project, therefore the availability of eminent domain proceedings for the acquisition of right-of-way is not assured. Of equal importance is the determination if this is an East West Highway corridor or if it is a wider consolidated utility corridor. The impact of this determination is significant as the right-of-way needs for a highway corridor are generally in the 300 to 500 foot range while a consolidated utility corridor will be as much as 2,000 feet in width.

On the eastern portion of the corridor, generally along Stud Mill Road, the majority of the right of way is held by potential stakeholders. When International Paper sold the forestlands that Stud Mill Road bisects a right of way was retained along much of the length of the corridor.

On the western side of I-95 there have been a number of significant conservation and land acquisition initiatives underway, which will need to be considered in selecting a viable preferred corridor. For example, land initiatives in the Brownville Junction to Shirley Mills segment include the Plum Creek Conservation Framework affecting 350,000 acres surrounding Moosehead Lake, the AMC's Maine Woods Initiative that has most recently focused on the Katahdin Iron Works area, and the recent large-scale land acquisition activities undertaken by Roxanne Quimby. These are key stakeholders to consult with early in the siting process, to identify their concerns and develop solutions that will help streamline subsequent right-of-way acquisition activities.

Land ownership will be one of the most important components to evaluate, and so one of the GIS layers to analyze is land status. Land data elements to review should include fee owner, easement status, conservation status, tax status (i.e., Tree Growth), land manager (such as Seven Islands or Wagner, who manage lands for other owners), and jurisdiction (LURC versus DEP), the latter of which will be a critical component at permitting stage. Some of this information would require records searches with LURC and individual towns. This will help to distinguish the land acquisition differences between alternatives.

To establish an estimated cost for right-of-way acquisition an interview was conducted with the Cianbro Corp right-of-way specialist. The specialist provided data for the acquisition costs associated with recent projects in central Maine. Using data for a variety of property types it was agreed to use a unit cost of $3,000 per acre and that a corridor of 2,000 feet in width would be obtained for the non Stud Mill portion of the corridor.

There is the potential to increase the revue profile of the project by incorporating short, medium and long term value through the provision for utilities such as gas or electric transmission lines as well as the addition of communications infrastructure within the East-West Highway right-of-way. Some of the potential opportunities are summarized below:

General Opportunities

There may be interest from power, gas and other utilities to locate within the corridor. Focus may also be placed on installation of fiber optic cable along the corridor suitable for a number of short and long term uses. Power and gas utilities may be interested in leasing fiber optic lines to control their facilities. Mobil phone companies may be interested in leasing fiber optic lines to connect cell towers and equipment within the network. Mobile phone companies could co-locate their gear on electric transmission structures, build their own cell towers or lease space on cell towers build on speculation by others but in any case would be interested in leasing access to fiber optic lines. The speculative towers could ultimately support wireless communications, broadcast media, internet service providers, utility companies, etc. Rest stops, tolling facilities and intermodal facilities will need telecom connectivity for pay phones, credit card payments, internet, connectivity with home base, etc.

Medium Term

When fiber optic is installed along the entire length of the East-West Highway corridor it provides the opportunity for leasing to:

- Large telecom companies for connectivity between metro areas and the trans-Atlantic jump-off points in the Maritimes.
- Small local and regional telecom companies to facilitate service and redundancy options for local service.
- Tie into the new Bangor to New Brunswick fiber build-out for additional telecommunications path redundancy options.

Long Term

Once the highway is in place and established secondary growth may occur and these fiber optic lines may be leased to local, regional or national firms to serve new development spurred by the highway.

3.4 Construction Cost Estimate

As a part of the preparation of this Conceptual Feasibility Study for the East-West Highway a conceptual level estimate of construction costs has been developed. This section explains the methodology used to develop this estimate. It should be noted that this cost estimate is based on current year costs and inflation has not been factored in at this time. The conceptual cost estimate may be found in Appendix A.

The format was based on a cost estimating worksheet that has been used during the planning stages of several projects to develop conceptual cost estimates. At the heart of this worksheet are unit costs that are derived for the major cost drivers of the project and applied by estimated lengths of facilities or quantities of major components. As the East West Highway is refined and specific alignments are generated through the environmental process, more detailed cost estimates will be completed.

The cost estimate worksheet is based on per lane and per 1,000 foot costs factors. This is accomplished through the use of typical sections that were developed for several portions of the work. For each of these typical sections fifteen to twenty major items of construction were quantified for a 1,000 foot long section of the work and unit prices were applied to estimate a unit cost to construct a 1,000 foot long section of work using this typical section. The cost estimating worksheet then breaks the project down into segments of work by typical section and develops a cost estimate for the roadway portion of the work. Other major elements of the work are then accounted for including earthwork, clearing and grubbing, turf establishment, bridges, right-of-way, and stormwater management/wetland mitigation. These major categories of work are subtotaled and then percentages are added to account for drainage above what is accounted for in the typical sections, mobilization, pollution control during construction, miscellaneous items, construction engineering, and contingencies.

The mainline segment of the East West Highway was estimated as an initial 2-lane divided facility with an alternating truck climbing lane. In addition frontage roads were included for the eastern portion of the project.

Bridges were quantified by general categories including:

- Major Water Crossings which would include the Penobscot and Kennebec Rivers;
- Minor Trail Crossings which would include recreation and other minor rod and trail crossings; and
- Minor critter crossings which includes a range from simple culverts to forested bridges.

Interchanges were estimated at approximately a twenty mile spacing and costs derived by an average of 4 ramps per interchange with an average ramp length of 3,000 feet. In addition acceleration and deceleration lanes were added for on and off ramps.

From the analysis, costs were grouped under several categories and resulted in the unit prices shown below in Table 3.4.1

Table 3.4.1 East West Highway Construction Cost Estimate Unit Prices (in 2008 $)

Item	Unit Price	Units
Roadway		
Mainlines	$600,000	1,000 lf
Mainline Truck Lane	$160,500	
Frontage Roads	$225,000	1,000 lf
Interchanges		
Ramps	$245,000	1,000 lf
Acceleration Lanes	$111,000	Each
Deceleration Lanes	$71,000	Each
Structures		
Major Water Crossings	$20,000,000	Each
Minor Trail Crossings	$2,000,000	Each
Minor Critter Crossings	$1,000,000	Each

Earthwork was analyzed for two situations. The first included areas where terrain is gentle and only minor earthwork was anticipated and the second was rolling terrain where more significant earthwork was expected. For these situations percentages were developed and applied to the estimated roadway costs. This methodology was reviewed with a heavy civil/highway contractor familiar with the project area and minor adjustments were made in the percentages used.

Elements that have not been included in this estimate, which may result in significant cost components, include the following:

- up to 125 kilometers of existing roadway in Quebec will need to be upgraded as a result of the East/West Highway and is not included in this construction cost estimate,
- toll collection system design, development and deployment including equipment;
- communications infrastructure along the corridor to support the tolling system;
- environmental documentation and permitting;
- engineering design associated with the roadway and structures;
- maintenance;
- ultimate widening of facility; and
- inflation.

Using the methodology outlined above preliminary construction costs based upon the conceptual alignment have been estimated as **$2,145,000,000** in 2008 dollars. The role of inflation should not be underestimated as a 3% inflation rate compounded over 6 years escalates costs by 20%. So this is a significant component that will need to be accounted for in the next stage of project assessment.

3.5 CORRIDOR SOCIO-ECONOMICS

No attempt has been made at this time to examine the existing socio-economic conditions within the study area or to evaluate project related future economic growth related to the new toll facility. Socioeconomic forecasts will be included in subsequent studies of the corridor to examine historical and projected growth in population, households, employment, and median household income that comprise secondary and cumulative economic impacts and growth associated with the project.

3.6 TRAFFIC ASSESSMENT

It is important to note that no traffic data has been specifically collected as part of this conceptual feasibility study. We have reviewed a variety of sources in both Canada and the US and we generally concur with the finding of the CanAm study that "the region poses difficult challenges in the assembly and interpretation of data on the physical, operational, and performance characteristics of its transportation system." Data collected from the Canadian Provinces was difficult to compare with data from US Customs or Maine DOT because Canadian data was in tonnage or cargo value and the US Customs data did not agree with Maine DOT data both of which were in the form of vehicle classification counts. Going forward with a more detailed traffic and revenue study of the East West Highway will require specific data collection and traffic modeling efforts to accurately assess existing truck traffic and reasonably predict future truck traffic at the Calais border crossing. An equally important requirement of this effort will be an origin and destination assessment to determine how much of the projected truck traffic can reasonably be expected to use an East West Highway.

3.6.1 ROLE OF SAINT JOHN, HALIFAX AND MELFORD PORTS

Port of Halifax

The Port of Halifax is a deepwater North American gateway providing service to Europe, the Mediterranean, the Middle East and Southeast Asia. It is the first inbound port and the last outbound port on the North American continent, enabling the shortest ocean voyage for ships operating on the North Atlantic. Containers, roll-on/roll-off and bulk cargo are currently shipped via rail or truck to Montreal, Toronto, Chicago, and the northeast. In addition to the Port of Halifax a new marine terminal facility on the western side of the Strait of Canso adjacent to the Melford Industrial Land Reserve is under design with the expectation of being operation in 2011 with up to 1.5 million TEU's annually. Initial projections for cargo destinations from Melford are 5% to eastern Canada, 15% to New England, 40% to Mid-Atlantic destinations and 40% to the Ohio River Valley. The truck route to reach Montreal and the Ohio River Valley is a circuitous route through New Brunswick (NB) and Quebec using the Trans-Canada Highway. It has been speculated that any viable option that would reduce travel time would have the potential to divert a large portion of this truck traffic.

Having said this, it should also be noted that there are a number of factors affecting the current downward trending in cargo volumes at Halifax including:

- Declining demand in the US for imports due to declining value of the US dollar, in particular against the pound sterling and Euro, recessionary economic conditions, and the ongoing decline US housing market.
- The on-going shift of manufacturing capacity from European and Mediterranean locations to Asia has started to be reflected in the routes used for imports to the US.
- Mergers in the shipping industry and route changes have resulted in a restructuring of shipping lines and services available and has resulted in the loss of some capacity at Halifax.
- The diversion of cargo from Halifax to the St. Lawrence Seaway and Canada Pacific's Montreal Gateway terminals.
- Although Halifax has shoreside and terminal capacity it is located in the downtown area where the narrow streets create congestion and increase travel time for road transportation to and from port.

Cargo statistics for 2007 from the Port of Halifax show a total of 490,000 TEUs being handled, it is important to note that a TEU is the amount of cargo that a twenty foot long container can hold, although this unit is somewhat inexact we can generalize that roughly 2 TEU's equate to a standard configuration tractor trailer. Although from this perspective the volume of import and export cargo handled by Halifax in 2007 was the equivalent of 245,000 trucks or an AADTT of 670, which correlates well with a recent report from the Halifax government that a bypass route around downtown Halifax would divert 700 trucks per day from inner city streets. It is important to keep in mind that currently less than 30% of Halifax's cargo moves via truck. Using the 10 year average annual volumes handled by Halifax inconsideration of current trends affecting cargo volume there, it appears that the stated goals of the Port of Melford, at triple the volume of Halifax, may be somewhat optimistic. Using the current Halifax cargo volumes with Melford's projections we are looking at a total AADTT related to port activity at 2,700 trucks per day with as much as 40% having destinations west of Nova Scotia or an upper limit of 1,100 trucks per day associated with port activity.

Port of Saint John

The Port of Saint John is located in the Province of New Brunswick and has been in operation since the early 1800's when it was a hub of shipbuilding and lumber trade. The port has expanded and transformed over its history from a regional to an international port and is currently configured to handle general cargo, liquid and dry bulk cargo, forest products, breakbulk, and containerized cargo. During the five year period of 2003 through 2007 the port handled an average of 26.4 million metric tons of cargo of all types per year with almost 93% of this tonnage coming from liquid bulk cargo primarily consisting of crude oil/refined fuel imports and refined fuel exports which combined account for 90% of all tonnage handled at the port.

In the mid 1970's a container terminal was added to the port however in the late 1980's the port lost many of its container services when several cargo lines began using vessels too large for Saint John and consolidated those lines with ones in Halifax. During the five year period of 2003 through 2007 the port handled an average of 47,100 container TEUs per year most of which serve between Saint John and the Caribbean. This containerized cargo at Saint John is less than 10% of that handled by the Port of Halifax and less than 5% of the projections for the Port of Melford.

Intermodal service is provided to Montreal through several short line operators including the New Brunswick Southern Railroad (NBSR) and Canadian National Railway (CN) track that provides access to the CN intermodal terminal in Moncton which serves New Brunswick and the Maritimes. All of the Saint John docks and terminals are served by on-dock rail service or have access to either NBSR or CN lines so it appears that the port is not a significant generator of truck traffic at this time.

Atlantic Gateway

The Government of Canada in 2007 outlined a National Policy Framework for Strategic Gateways and Trade Corridors that will be used to direct investments from a new $2.1 billion National Gateways and Border Crossing Fund. The core elements include the Asia-Pacific Gateway and Corridor, the Ontario-Quebec Continental Gateway, and the Atlantic Gateway. There are a number of insights relative to the establishment of an Atlantic Gateway that expand upon the ports potential discussed in section 3.6.1 and at the same time provide an additional context for the role an East-West Highway can play.

Atlantic Canada Opportunities Agency (2007) *Atlantic Gateway Business Case*

- The Atlantic Gateway would benefit the entire country (Canada) by contributing to the development of a competitive and efficient national supply chain. This supply chain would improve the productivity and competitiveness of businesses in Ontario, Quebec and the Atlantic region that would ship through Atlantic Gateway.
- There are opportunities in the region, but there are also challenges that can only be addressed through public and private sector collaboration and effort.
- Opportunities for the Atlantic Gateway include increased container traffic for Atlantic Canadian ports through the Suez Canal; potential for increased commodities exports; and the potential for increased trade with emerging former communist countries in Eastern Europe.
- Increased traffic volumes through Atlantic Canada could create the critical mass required to reduce transport costs and create new service opportunities.
- Containerized trade has been the fastest growing marine sector over the past 15 years and coupled with the expansion of global manufacturing

in Asia has led to explosive growth in trade activity between North America and Asia. In the past 5 years container trade in North America has increased at a compound annual growth rate of nearly 7% in 2005 with projections to increase by 50% by 2015 over 2005 volumes. Table 3.6.1.1 below summarize growth rates and projections.

Table 3.6.1.1 Historical and Projected Future Performance by Opportunity Area

Opportunity Area	Growth Rates in Atlantic Canada Over Past Decade	Projected to 2025
Containers (TEUs)	**3.2%**	**6.9%**
Liquid Bulk (tons)	**8.9%**	**0.8%**
General Cargo (tons)	**4.2%**	**2.8%**
Air Passengers	**3.6%**	**2.8%**
Air Cargo (tons)	**n/a**	**4.2%**
Cruise Passengers	**16.4%**	**3.9%**

- Atlantic Canada is geographically well positioned and has acted as a gateway to North America for over 100 years. However, in order to fully capitalize on the emerging opportunities, the vision for Atlantic Gateway must be anchored on a bigger scale. Governments and stakeholders should consider important infrastructure and capacity needs for the next 20 years.

- About 70% of Halifax's cargo moves inland via rail and the other 30% moves to and from markets by truck or short sea shipping. About 20% of Halifax's cargo is destined to or originates in the U.S. Mid-West by rail.

- Container traffic has flat-lined in Atlantic Canada over the past 7 years however the shift or larger container vessels from the Panama Canal to the Suez Canal has not been fully felt at Halifax and in the future the increasing Suez shift should put Halifax at an advantage.

- Development of the Atlantic Gateway may require investment in infrastructure including ports, highways, border crossings, railways, transload facilities, staging areas, etc.

- In New Brunswick the National Highway System includes routes 1, 2, 7, 8, 11, 15, 16, 17, and 95. Route 2 is the Trans-Canada Highway (TCH) running from the Novi Scotia border to the Quebec border, with route 95 connecting to the U. S. border and Interstate 95 at Woodstock. Interstate 95 runs along the east coast of the U. S. to Miami and is the major north-south highway along the east coast, connecting Atlantic Canada to Boston and New York. Route 1 is also a major trucking route, connecting the TCH to Saint John and the busy U. S. border crossing at St. Stephen/Calais.

- As the only Atlantic province on the international land border with the U.S., New Brunswick is the main gateway for import/export traffic between

Atlantic Canada and New England. Important crossings include those at Madawaska/Edmunston, Houlton/Woodstock, and St. Stephen/Calais. Since the implementation of free trade in 1989, truck traffic entering the U.S. through New Brunswick's border crossings has increased significantly. From 1997 to 2005 the volume of truck shipping crossing the border at St. Stephen increased by 32% northbound and 68% southbound. The volumes at Woodstock increased by 64% northbound and 80% southbound.

- The introduction of the new four lane highway from Moncton to Fredericton and the connection of the highway through to Woodstock and beyond helps explain the dramatic growth experienced at Woodstock.

3.6.2 Role of Irving Oil and Irving Companies

Stakeholder interviews were conducted with Irving Oil and the Irving Companies, located in St. John, and it was found that the predominant travel orientation for their trucks was north south. Their trucks enter the United States at the Calais border crossing and then head for I-95 or the Route 1 corridors and are unlikely to consider toll routes. We did learn however that up to 400 trucks per month, from the multiple trucking companies operated by the Irving Companies, could potentially be diverted to an East West Highway. The critical issue in the diversion of these east-west oriented trucks, which currently use the Trans Canadian Highway, is a significant reduction in border crossing times at Calais. Historically trucks could take as long as an hour to be processed at Calais although the new border crossing has been completed it is uncertain at this time what the impact has been on border crossing times.

3.6.3 Previous East-West Corridor Studies

There have been several previous studies that examined the concept of an east-west route for both trucks and passenger cars from areas of Canadian Maritime Provinces through Maine to Montreal, Quebec and the Midwestern United States. These studies include the following:

- Wilbur Smith Associates (WSA) (1997) *Proposed Route 9/U.S. Route 2 Toll Road Exploratory Revenue Assessment.*
- City of Bangor Maine (1998) *Debt Capacity Study of Potential Revenues From A Proposed East-West Highway.*
- Maine Department of Transportation (1999) *Technical Report on an East-West Highway in Maine.*
- Wilbur Smith Associates (1999) *Maine East-West Highway Assessment of Toll Financing Feasibility.*

Of these previous studies only the 1999 Wilbur Smith Associates (WSA) Study completed traffic modeling efforts to test alternative corridors and develop toll-free traffic estimates. It is for this reason that the current reassessment

presented below has been based on the results of the previous Wilbur Smith traffic assessment.

3.6.4 Current Re-assessment of Previous Modeling - Summary

The 1999 WSA Assessment of Toll Financing Feasibility was based on the use of the Maine Statewide Travel Demand Forecast model. As part of that study effort several alternative routes were analyzed for the East/West highway and several assumptions were made regarding tolling rates and locations. Since that effort was based on a travel demand model and this East/West route currently under consideration is within the same region as the WSA alternatives, LBG felt that for this conceptual feasibility study that a re-assessment of the WSA study would represent a good starting point for understanding potential truck volumes on an East/West highway. It should be noted, that significant refinement of the analyses, traffic modeling and data collection efforts will be required for this information to be used for financing or decision making purposes. The intention here is to make projections from the previous WSA Study that can be presented as being representative of the minimum traffic levels that can be expected on the East-West Highway. The complete reassessment conducted by LBG has not been included in this Conceptual Feasibility Study.

The WSA Study was used as both a guide and as the basis of an initial demand analysis. The modeling overview discussion presented in the WSA Study indicates that the traffic model used for that study had been calibrated to 1995 traffic levels and was then expanded to include potential Canadian trips that were not using Maine routes for their travel. Ultimately the model was used to develop average annual daily traffic volumes for 2015 and 2030. The alternative corridors analyzed by WSA are comparable with the potential corridor for the East-West Highway and two of the WSA alternatives have similar border crossing locations on both the easterly and westerly ends For this Conceptual Feasibility Study minor adjustments were necessary to account for traffic growth and inflation that have occurred since 1995, these adjustments were applied to the results of the WSA Study as part of this initial effort to establish the minimum truck volume that can be expected to uses the East-West Highway.

According to WSA study there were about 600 trucks crossing Maine in 1999. Using a 2% per year growth rate we can expect the number of trucks crossing Maine to have increased to 700 by 2007. Assuming that truck traffic continues to increase at this 2% per year growth rate we could expect as a minimum, the number of trucks to increase to in excess of 800 trucks by 2015 and in excess of 1,100 by 2030. Table 3.6.4.1 on the next page presents these projected two-way truck volume projections.

Table 3.6.4.1 – Two-Way Truck Projections Based on WSA Study 1999

Year	Truck Counts
1999	600
2007	700
2015	825
2030	1,100

The East-West corridor concept is to provide a more direct linear way for truck and trip traffic with origins and destinations between Calais to Coburn Gore in Maine and points further east to ports at Melford and Halifax in the Maritime Provinces and destinations westerly into Quebec, Montreal and Midwestern markets. Figure A presents the E-W corridor alignment, distances and the destinations on either end.

3.6.5 Additional Traffic Data Sources Considered

Several additional data sources were considered during the development of this Conceptual Feasibility Study and have been used to develop an upper limit projection for truck traffic potentially using the East-West Highway.

Maine DOT St. Croix River Crossing Traffic Projections

The new river crossing constructed as part of the new border crossing at Calais contained the traffic projects presented in Table 3.6.5.1 below.

Table 3.6.5.1 Traffic Data Calais Border Crossing

	2004		2024	
Location	AADT	AADTT	AADT	AADTT
At Border	2,830	1,390	4,020	1,970
US 1 South	10,240	1,430	12,890	1,800
US 1 North	9,200	184	9,420	188

The count location for the US Route 1 South is prior to the junction with Route 9, traffic with southerly destinations in New England are likely to use the Route 9 corridor to access I-95. There is currently a 10-mile exception that allows Canadian configuration loads to travel across the border before breaking down into US configurations.

New Brunswick Permanent Traffic Counter Data

The New Brunswick Department of Transportation provided traffic count data for the period of 2003 through 2005. This data is contained on a map entitled *Permanent Traffic Counter Data 2003* – 2005 and presents annual average daily traffic volumes for trucks and automobiles at a total of 38 locations in New Brunswick. This data has been tabulated and is summarized here in Table 3.6.5.2 below. This data shown here is taken from permanent counter locations 3, 6, 7, and 9 which are located along the Trans Canadian Highway and represent the volume of trucks currently using the Trans Canadian loop around Maine and is indicative of potential truck traffic that can be diverted to an East-West Highway. As shown here there is currently an approximate 2-way truck volume of 1,700 per day, using the same 2% annual growth rate as applied to the WSA Study this daily 2-way truck volume would increase to as many as 3,200 per day by 2030.

Table 3.6.5.2 Volume of Trucks Using Trans Canadian Highway

Location	2004	2005	2030
Saint John	1,810	1,800	3,060
Prince William	1,920	1,920	3,200
River de Chute	1,660	1,670	2,880
Quebec Border	1,620	1,660	2,800

Note: Data presented in this Table has been extrapolated from data presented on the map entitled. Permanent Traffic Counter Data 2003 – 2005 issued by the New Brunswick Department of Transportation.

New Brunswick Border Crossings

The Atlantic Gateway Business Case (September 2007) prepared by Inter Vistas Consulting for Atlantic Canada Opportunities Agency included the following discussion regarding truck traffic growth at border crossings.

> *"As the only Atlantic province on the international land border with the United States, New Brunswick is the main gateway for import/export traffic between Atlantic Canada and New England. Important crossings are Madawaska/Edmunston, Houlton/Woodstock and Calais/St. Stephen. Since the implementation of free trade in 1989, truck traffic entering the U.S. through New Brunswick's border crossings has increased significantly. From 1997 to 2005, the volume of truck shipping crossing the border at St. Stephen increased by 32% (northbound) and 68% (southbound). The volumes at Woodstock were even more dramatic: 64% (northbound) and 80% (southbound).*

In 2005, $659 million (USD) worth of goods was shipped northbound through St. Stephen and $1.6 billion was shipped southbound for a total of $2.28 billion. Woodstock handled very similar volumes for a total of $2.35 billion. By way of comparison, the Detroit, Michigan border crossing handled over $108 billion in two-way truck cargo in 2005.

While the volume of cargo shipped through St. Stephen rose steadily through the 1990s, the growth rate moderated after 2000. Woodstock has continued to witness relatively strong growth (27%) in both northbound and southbound traffic. Both now handle relatively similar total volumes. The introduction of the four lane highway from Moncton to Fredericton and the twinning of the highway through to Woodstock and beyond might explain the relative growth of the Woodstock crossing relative to St. Stephen."

City of Bangor Maine Projection and Analysis East West Highway

The Finance Department of the City of Bangor issued an untitled Memorandum on July 24, 1998 that presented a "Projection and Analysis" of select data regarding an East-West Highway running from Calais, through Bangor to Coburn Gore. This Projection and Analysis was based on the WSA Study as well as a data set provided by the *Canadian-American Center and the Atlantic Provinces Truck Owners Association* (CAC). Table 3.6.5.3 below includes data that has been extracted and projected from the CAC data presented in Table 3.6.5.3 of the aforementioned memorandum. The column labeled traffic with High, Medium and Low entries refers to the scenarios analyzed by the City which were High Traffic/Low Toll, Medium Traffic/Medium Toll, and Low Traffic/High Toll. The data presented by the City was in total annual vehicles that could be expected to divert from all Canadian routes to an East-West Maine route using 1995 data projected to 2005 conditions. As presented in Table 4 below the data has been converted into daily traffic volumes and has been projected to 2030 levels by applying a 2% annual growth rate which is the same rate used to project the WSA Study.

Table 3.6.5.3 Potential Daily Volume of Trucks Switched From Trans-Canadian Highway to East-West Highway

Traffic	1995	2005	2030
High	2,630	2,900	4,860
Medium	2,235	2,470	4,130
Low	1,790	1,975	3,300
Note: Data presented in this Table has been extrapolated from data presented in a memorandum issued by the City of Bangor, Maine on July 24, 1997.			

These numbers for trucks include all types of commercial vehicles so the numbers will be higher than those indicated in Table 3.6.5.3 which are based on vehicle classification counts and represent tractor trailer configurations only. This data does indicate that a significant potential exists for the diversion of truck volumes currently using the Trans Canadian Highway to an East-West Highway.

The tolls used by the City of Bangor in their analysis ranged from $3.00 to $12.50 per truck depending on location and traffic scenario and from $1.25 to $2.00 per automobile depending on location and traffic scenario.

3.6.6 East-West Highway Estimated Daily Truck Volume

Projections based on the 1999 WSA Study have shown that a minimum of 1,100 trucks per day could be expected to use an East-West Highway by 2030. Additional data sets that were not considered in the WSA Study have been evaluated and projected to 2030 using the same 2% annual growth rate that was used to project the WSA Study data. This includes data presented in Table 3.6.5.3 which presents the volume of trucks using the Trans Canadian Highway and Table 3.6.5.4 which presents a range of trucks that could be expected to divert from the Trans Canadian Highway to an East West Highway. This data suggests that a significant portion of the truck traffic currently and projected to use the Trans Canadian Highway can be expected to divert to the East West Highway. The projections for traffic on the Trans Canadian are based on the same 2% annual growth rate used to project the WSA Study and as such may not accurately account for the planned port facilities at Melford or Sydney. Based on this information, using the low volume/high toll information from the City of Bangor, we would establish an upper range for the daily truck volume using the East West Highway in 2030 as between 3,000 and 4,000 trucks per day. These estimates need to be subjected to more refined data collection and analysis.

3.6.7 Insights and Conclusions From Previous Studies

There are a number of insights relative to the establishment of an East-West Highway across Maine that are worth mentioning here as they may assist in evaluating the potential merits of the facility.

CanAm Connections Steering Committee (2007) *Northeast CanAm Economic Benefits and Costs Analysis.*

- Global trade is projected to continue its upward trend and congestion and capacity constraints in major urbanized areas and gateway regions are forcing shippers to look for alternatives providing the region an opportunity to take advantage of its geographic location and access to world trade lanes.
- The NE CanAm region relies more heavily on truck and less on rail than the rest of US and Canada as a whole. Ninety-three percent of all traffic in terms of tonnage is shipped via truck in the US portion of the CanAm region.

- Cross border trade dominates trade flows with two thirds of all freight flows moving in the US side of the region. This is being driven by NAFTA and could increase if the region is able to take advantage of increasing global trade.
- The circuitous route (Trans Canadian Highway) that trucks travel from Halifax to Montreal to Ontario to avoid border crossings and access highways that more adequately meet the needs of trucks leads to additional miles, translating into higher costs.

Maine Department of Transportation (1999) ***Technical Report on an East-West Highway in Maine.***

- Travel between Maine and Canada is forecast to grow at a greater rate than overall statewide travel. This forecast explicitly assumes a significant appreciation in the Canadian dollar to a level not seen in more than fifteen years.
- Truck travel on Maine roads is projected to increase substantially over the forecast period, with through trucking expected to grow at an annual rate of 2%.
- The vast majority of Maine's trade with Canada is in natural resource based commodities including, petroleum, wood pulp, lumber, etc.
- New England's Canadian exports consisting of high value equipment, electronic components, fabricated machinery and parts.
- Total annual commodity movements to and from Maine will grow steadily with an average growth rate for outbound freight of 2.5% per year and 2.0% for inbound freight.
- Canadian freight movements to the US are expected to grow at a rapid 6.2% average annual rate while freight from the US is projected to rise at a slower 4.9% annual rate.

The Cornell Group (2007) ***Port Development Strategic Plan Maine Port Authority.***

- With a world class container facility at Searsport, Maine can capture Midwest cargo from competitor ports on the east coast and Canada.
- With appropriate port infrastructure at Searsport and rail connections to the Midwest, Searsport can conservatively capture 68,000 TEU container cargo in 2012, increasing to 360,000 TEU by 2020.
- The East-West Highway would greatly improve roadway access to Montreal.

3.7 FINANCIAL CONSIDERATIONS

The goal of the financial model is to determine the financial viability for the East West Highway under 3 separate scenarios according to specific project, traffic, revenue, cost, and financial assumptions. The assumptions used will be explained in greater detail below.

Assumptions and Scenarios

Below is table 3.7.1 listing and describing the project assumptions used:

Table 3.7.1 Project Assumptions

Assumption Variable	**Description or Value used**
Project Assumptions	
Total Project Length	220 miles
Number of Lanes	1.5 lanes each direction
Interchange Spacing	22 miles
Frontage Roads Length	50 miles
Frontage Roads Number of Lanes	2 lanes
Total Construction Costs	$2.145BB over 4 years
Assumption Variable	**Description or Value used**
Project Assumptions	
Annual O&M Costs	$20,000 / lane-mile
Major Maintenance Costs	(5% of total construction costs incurred every 10 years)
Traffic and Revenue Assumptions	
2015/2030 AADT	1 of 3 Toll scenarios chosen with accompanying scenario assumptions (explained below)
Car Toll	
Truck Toll	
Traffic Growth beyond 2030	2.5% annual growth
Annualization Factor	300 (multiplication factor to convert vehicle day trips to annual trips).
Additional revenues	10% (ancillary sources of revenues as a percentage of traffic revenues).
Financial Assumptions	
Debt Share	50% (Debt contribution to initial financing as a percentage of total financing).
Debt Service Interest Rate	8%
Debt maturity length	75 years

Further Assumptions used in the financial model:

- Operations begin in Year 2015.
- $10 million will be spent for preliminary studies costs in both 2009 and 2010.
- From Year 2015 to 2030, the growth in car and truck volume is based on a forecasted growth specified within each scenario.
- Car and Truck tolls remain in 2008 dollars for the life of the Highway.
- Additional revenues are calculated as 10% of the annual Vehicle Revenues.
- From 2031 until the end of the Highway's term, car and truck volumes will increase over the previous year's volume by 2.5%.

Scenarios:

3 scenarios were considered in the financial model.

- Scenario 1 constitutes car and truck traffic forecasts performed by Wilber Smith Associates.
- Scenario 2 represents internal estimates based on optimistic assumptions regarding car and truck traffic trends.
- Scenario 3 represents the "ideal" situation which would achieve an acceptable IRR for the project and equity holders.

Note that Scenarios 2 and 3 were not based on exhaustive traffic analyses; rather they serve as optimistic scenarios based on favorable assumptions.

Scenario Parameters	Scenario		
	1	2	3
Car Toll – full trip	$25	$50	$100
Truck Toll – full trip	$50	$150	$200
2015 Daily Car Traffic	1,000	1,500	1,500
2015 Daily Truck Traffic	825	2,000	2,500
2030 Daily Car Traffic	1,500	2,500	3,000
2030 Daily Truck Traffic	1,100	3,500	4,000

Below is a breakdown of the figures used per each scenario:

Parameter	Scenario 1	Scenario 2	Scenario 3
Car Toll – Full Trip	$25	$50	$100
Truck Toll- Full Trip	$50	$150	$200
2015 Daily Car Traffic	1,000	1,500	1,500
2015 Daily Truck Traffic	825	2,000	2,500

The key assumptions Preliminary Studies, Construction, and Operations and Maintenance financing are shown below:

Cost Type	Financing Source	Time Length
Preliminary Studies	100% Equity	2 Years
Construction	50% Equity / 50% Debt	4 Years
O&M Costs	Current Year Project Revenues	75 Years

Financial Results

The financial model computes the Net Present Value (NPV) and Internal Rate of Return (IRR) for the East West Highway for each scenario. The model also provides data on financial performance figures such as Annual Debt Coverage (Operational Income / Debt Interest Payment) in order to highlight the project's proximity to debt default. Furthermore, the project cash flow and equity cash flow are provided in order to give the user an idea of the annual cash flow performance (in current year dollars) throughout the life of the project. The model results are summarized in the following table.

Financial Results Summary Per Scenario				
		Scenario 1	Scenario 2	Scenario 3
Project[1]	NPV (MM$)	$(2,375)	$171	$2,447
	IRR	Negative	8.3%	11.9%
Equity	NPV (MM$)	$(1,533)	$1,013	$3,289
	IRR	Negative	10.8%	16.6%

The results indicate that under the conservative traffic estimates (Scenario 1), the East West Highway is not an attractive investment unless some financial contribution is provided by the state/provincial entities that will ultimately benefit from the Highway. Under the more optimistic assumptions (scenarios 2 and 3), the East West Highway can provide sufficient returns to the equity and debt holders. Note that these results are indicative and based on several assumptions (especially on the traffic forecasts) and should not be used to make investment decisions. The underlying assumptions and final results would be verified and further refined in a subsequent detail study.

4.0 NEXT STEPS

These Next Steps were developed in conjunction with Cianbro Corporation and include the need to identify a Financial Partner / Constructor / Program Manager to assist Cianbro / Berger with further analysis of the project. Funding will be required to:

- Retain specialty firms to conduct independent investment grade traffic and revenue analysis.
- Initiate the permitting activity with state and federal agencies to develop an approach towards agreeing on a well defined and streamlined process. In addition it will be necessary to identify the critical path items that need to be addressed to make the permitting strategy acceptable in order to obtain approvals.
- Develop preliminary engineering design to 25% level to allow for initiation of acquisition of appropriate option positions for the Right-of-Way.
- Update construction cost estimate and schedule.
- Finalize program with Canadian partners to develop legislative process for 125 km of main road improvements within the Province of Quebec.
- Determine appropriate next steps in working with Border Trade Alliance and stakeholders to develop expedited Border Demonstration Project to test the use of new technologies and programs at the land crossings between Maine and New Brunswick as well as Maine and Quebec.

[1] The project NPV and Cash Flow is calculated by subtracting total annual maintenance costs, debt payments, and/or construction costs from annual revenues in order to calculate the overall profitability of the project and return on investment. The equity NPV and Cash Flow is calculated by subtracting annual maintenance costs, debt payments, and/or construction costs paid for by equity holders only from annual revenues in order to calculate the profitability as measured by equity-holders and the return on equity.

APPENDIX A

Issued on: May 28, 2008.

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Assistant General Counsel for Aviation Enforcement & Proceedings, U.S. Department of Transportation.

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DEPARTMENT OF TRANSPORTATION

Transportation Border Congestion Relief Program

AGENCY: Department of Transportation (DOT).

ACTION: Notice; request for applications.

SUMMARY: The Federal Government has an important role to play in facilitating and accelerating transportation-related capacity and operational improvements at international land border crossings that will improve border travel times and help reduce associated national and regional economic costs. To fulfill this role and to encourage the greater use of non-traditional transportation project finance, delivery, and facility operation mechanisms at the Nation's critical international land border crossings, the DOT is soliciting applications from interested international land border States, bridge and tunnel operators, and private entities to participate in the Transportation Border Congestion Relief (TBCR) Program. The goal of the TBCR Program is to identify and assist international land border States with implementing innovative solutions to help address land border travel time delay and facilitate trade and travel without compromising the vital mission of securing America's borders. The DOT intends to select two or more surface transportation projects, a minimum of one on the U.S./Mexico border and one on the U.S./Canada border, which can help improve border travel times.

DATES: Applications must be received on or before June 30, 2008.

ADDRESSES: Interested parties should submit applications to Marcus J. Lemon, Esq., Chief Counsel, Federal Highway Administration, HCC–1, Room E82–328, 1200 New Jersey Avenue, SE., Washington, DC 20590 or electronically to *transportationbordercongestionrelief@dot.gov.*

FOR FURTHER INFORMATION CONTACT: Ms. Alla C. Shaw, Esq. (202) 366–1042, *Alla.Shaw@dot.gov*, HCC–30, Room E84–463, 1200 New Jersey Avenue, SE., Washington, DC 20590, HCC Team Leader, or Mr. Roger Petzold, Team Leader, Border, Interstate, and GIS Program, (202) 366–4074, *Roger.Petzold@dot.gov*, HEPI–10, Room E74–312, 1200 New Jersey Avenue, SE., Washington, DC 20590. Office hours are from 7:30 a.m. to 5 p.m., e.t., Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:

Electronic Access and Filing

An electronic copy of this document may be downloaded from the Office of the Federal Register's home page at: *http://www.archives.gov* and the Government Printing Office's Web page at: *http://www.access.gpo.gov/nara.*

Background

The DOT is establishing a Transportation Border Congestion Relief Program to demonstrate how non-traditional transportation project finance, delivery, and operation mechanisms can be used to improve land border travel times and can facilitate trade and travel without compromising the vital mission of securing America's borders within the Border Region (A Border Region is defined in section 1303(g)(1) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA–LU) (Pub. L. 109–59; Aug. 10, 2005) as any portion of a U.S. State that is within 100 miles of an international land border with Canada or Mexico). The DOT is seeking applications from the 15 international land border States, bridge and tunnel operators, or from private sector entities which identify and advance land border transportation projects that can alleviate current or forecasted congestion at or near the U.S. border with Mexico and with Canada within the border zone. The DOT envisions a selection of two or more projects that can serve as models for land border travel time improvements.

The DOT is interested in pursuing projects that can address ways to improve land border travel times because of the significance of border transportation to our Nation. More than 17 million truckloads of freight crossed America's borders with Canada and Mexico in 2005, carrying over half of the $711 billion in products the U.S. traded with its North American neighbors. Since 1990, the value of freight shipments among the U.S., Canada, and Mexico has risen by 170 percent, growing an average of 8 percent annually. Trade between the U.S. and Canada is about $2 billion per day. In addition to the large amounts of daily trade, at least 2 million people legally cross our borders in any given day. These huge numbers are putting a serious strain on the transportation network at and near our international land border crossings. Travel times for crossing U.S. borders have steadily increased since 1996, frustrating individuals, families, and commerce with negative impacts on quality of life, efficiency, and prudent use of resources.

In an effort to combat the growing problems of transportation congestion, the DOT launched the "National Strategy to Reduce Congestion on America's Transportation Network" (Congestion Initiative) in May of 2006.[1] The Congestion Initiative is designed both to reduce transportation congestion in the short-term and to build the foundation for successful longer-term congestion reduction efforts.

Objectives

The primary objectives of the TBCR Program are to:

A. Reduce border travel time delays by promoting non-traditional transportation project delivery and operation approaches at or near international land border crossings.

B. Illustrate the benefits of alternative financial models.

C. Promote and support a more efficient coordination process among the various Federal and local agencies that have an interest in our Nation's land borders.

D. Improve system connectivity to facilitate trade and the safe, legitimate, movement of people and goods across the U.S. border by decreasing border travel times without compromising the vital mission of securing America's borders.

E. Demonstrate the viability of developing land border crossing projects using an investment model based on sound economics and market principles.

F. Build on the institutional expertise in place within the U.S./Mexico Joint Working Committee for Border Planning *http://www.borderplanning.fhwa.dot.gov/mexico.asp* and the U.S./Canada Transportation Border Working Group *http://www.thetbwg.org*, and interagency groups related to border facilitation.

Application Process

A land border State, bridge or tunnel operator, or private sector entity (Applicant) interested in the TBCR Program should submit a TBCR Application to the DOT. The

[1] Speaking before the National Retail Federation's annual conference on May 15, 2006, in Washington, DC, former U.S. Transportation Secretary Norman Mineta unveiled a new plan to reduce congestion plaguing America's roads, rails, and airports. The National Strategy to Reduce Congestion on America's Transportation Network includes a number of initiatives designed to reduce transportation congestion. The transcript of these remarks is available at: *http://www.dot.gov/affairs/minetasp051806.htm.* Additional information may be located at: *http://www.fightgridlocknow.gov.*

Application should address the areas of information discussed below and demonstrate how the project would provide adequate, reliable and sustainable capacity for the life of the facility. Bridge and tunnel operators and private entities should provide a written endorsement from the border State in which the proposed project is located and evidence of consultation with the appropriate foreign jurisdictions, as well as Federal agencies which will play a role in the implementation of the project, within 30 days of submitting an Application. Transportation Border Congestion Relief Applications may include new capacity development or upgrades/extensions of existing capacity. The Applicant should also state whether the proposed project will cross any Federal or Indian lands and how it will involve or impact transportation in the foreign jurisdiction. To the extent the proposed project is already in development, the Applicant should describe broadly the remaining activities that must be undertaken and the ways the proposed non-traditional approach may help the project become operational.

The Applicant may be requested to submit additional information if necessary to evaluate the Application. All proposed projects must be located within the Border Region (a Border Region is defined in section 1303(g)(1) of SAFETEA–LU as any portion of a U.S. State that is within 100 miles of an international land border with Canada or Mexico). If a border State submits more than one project, it should prioritize the proposed projects. The deadline for submitting an Application is June 30, 2008. If an Applicant submits an Application after the deadline, the Application will be considered to the extent practicable.

Applications will be evaluated and ranked based on the following elements:

1. Project Description

The Applicant should include a detailed description of the proposed land border project, including its purpose, location, preliminary design features, rough estimate of capital cost, proposed delivery schedule, likely financing mechanism(s), current level of service, and information about the status of agreement among any affected stakeholders to advance the proposed project. The Applicant should include a map with detailed information about U.S., State, and local numbered route and other important facilities clearly identified as well as information about the foreign jurisdiction(s) involved.

2. Congestion Reduction and Reduction in Land Border Travel Times

The proposed land border project may address current or future congestion. The Applicant should describe where and how the proposed project would (a) reduce current congestion levels, or (b) address future expected congestion based on projected travel trends at the land border crossing. The Applicant should discuss the impact of the project on movement of individuals or freight and/or traffic congestion. The congestion reduction discussion should present all relevant data related to the proposed congestion relief benefits of the project including information about the annual volume of commercial and passenger vehicle traffic at the relevant land border crossing, expected reduction in vehicle travel times through the land border crossing, and potential benefits to the U.S. economy.

3. Use of Intelligent Transportation Systems

Whether the proposed project is on a new or existing alignment, the Applicant should explain how transportation technologies would be used to benefit users by enhancing the mobility and efficiency of the land border crossing. Examples of mobility improvements include use of intelligent transportation systems, traffic conditions monitoring, computerized traffic control systems, traveler information systems, electronic toll collection, and open road tolling.

4. Economic Benefits and Support of Commerce

The Applicant should explain how the proposed project would support U.S. economic growth including information about how the project would improve the predictability of freight movements or travel by individuals through the land border crossing. In support of the economic benefits, the Applicant should include current data on the national and regional economic impact of delays in border travel times, etc.

5. Value to the Users of the Project

The Applicant should describe the benefits of the proposed project within the border zone to its users. Potential benefits include reduced border travel times, increased safety, faster and more convenient access to terminals for commercial vehicles, environmental benefits, truck-only lanes, and increased travel speeds, etc.

6. Innovations in Project Delivery and Finance

The Applicant should highlight any innovative project delivery and financing features proposed for the project. The Applicant should specifically address the eligibility of the proposed project for credit assistance under the Transportation Infrastructure Finance Innovation Act (TIFIA) and Private Activity Bonds (PABs).

7. Exceptional Environmental Stewardship

The Applicant should describe any proposed innovative methods for completing the environmental review process effectively, and/or any exceptional proposed measures for avoiding or mitigating air, noise, or water impacts, or impacts to environmental or cultural resources.

8. Finance Plan and Potential Private Sector Participation

The Applicant should submit an initial plan that identifies potential sources of financing and the private sector's likely role. This may include proposals for private sector financial contribution to the proposed project. Private sector participation can encompass a wide range of contractual arrangements by which public (Federal, State, or local) authorities and private entities collaborate in the financing, development, operation, and ownership of a transportation infrastructure project. Potential contractual arrangements for the project include, but are not limited to:

(a) Long-term concessions or franchise agreements;

(b) Design, Build, Operate and Maintain contracts;

(c) Design, Build, Finance, and Operate contracts;

(d) Build, Own and Operate contracts; and

(e) Design-Build contracts.

The Applicant should describe the efficiencies likely to result from private sector participation, as well as the process likely to be used to ensure robust competition among private financial entities.

9. Planning and Coordination Status

The Applicant should provide information about the status of planning and coordination activities. The Applicant should identify and discuss: (a) The status of coordination among interested Federal agencies and local stakeholders; (b) relevant consideration and/or coordination with the governments of Canada and Mexico; (c) whether the project is included, or expected to be included, in State and

metropolitan planning organization plans and programs; (d) whether the project is consistent with plans and programs developed by empowerment zone and community organizations; (e) whether the project is consistent with plans developed for compliance with the Clean Air Act; (f) whether or not the project is supported by the U.S. Customs and Border Protection Agency or by the General Services Administration; and (g) whether or not the project has or will require a Presidential Permit.

10. Proposed Project Time-line

The Applicant should include a proposed project time-line with estimated start and completion dates for major elements of the proposed project such as:

(a) Development phase activities (planning, feasibility analysis, revenue forecasting, environmental review, preliminary engineering and design work, and other preconstruction activities);

(b) Inclusion of the project in the relevant State and metropolitan transportation improvement plans;

(c) Approval needed for any required Presidential Permits;

(d) Acquisition of real property (including land related to the project and improvements to land); and

(e) Construction, reconstruction, and/or rehabilitation activities.

The Applicant also should describe the results of any preliminary engineering or preconstruction activities done to date and relate it to the project time-line.

Transportation Border Congestion Relief Program Development Agreement

After a project is accepted for administration under the TBCR Program, the next major action by the Applicant would be to work with DOT, the relevant border State, municipalities, Indian tribal government(s), Federal agencies, and foreign jurisdictions to draft a TBCR Program Development Agreement for the project (Development Agreement). The Development Agreement would address the commitments of all parties to the project (Federal, State, municipal and private) with respect to the financing, planning and design, environmental process, construction, operations, maintenance, and other components. The Development Agreement would also identify the specific objectives of the project and performance measures that would be used to evaluate the success of the project in achieving these objectives.

DOT Resources and Commitments To Expedite the Delivery of the Border Crossing Project

If a project is selected for participation in the TBCR Program, the DOT will work with the project sponsor to expedite the delivery of the project. Potential DOT resources and commitments include:

A. Federal Transportation Border Congestion Relief Project Team

The DOT will work with the relevant Federal agencies with an interest in the land border crossing to establish a senior-level Federal border congestion team to advance the planning and implementation of the project, including expediting, to the maximum extent practicable, their reviews for relevant permits or other approvals, and take related actions as necessary, consistent with available resources and applicable laws.

B. Accelerated Review and Conditional Approval of Experimental Features Under the FHWA SEP–15 Process

Special Experimental Project 15 (SEP–15) is designed to permit tests and experimentation in the project development process for title 23, United States Code projects. Potential areas of experimentation for TBCR Program projects include innovative finance, tolling and contracting requirements. More information about the SEP–15 program is available on the following Web site: *http://www.fhwa.dot.gov/ppp/index.htm.* The DOT is considering further experimental programs that may apply to the approved projects.

C. Expedited Commitment Process for TIFIA Credit Assistance

The TIFIA program provides three forms of credit assistance—secured loans, loan guarantees, and standby lines of credit—for surface transportation projects of national or regional significance. Each border State seeking to incorporate TIFIA credit assistance as part of a project finance plan can receive a preliminary TIFIA commitment under SEP–15.

The DOT would work with each project sponsor to establish a preliminary plan of finance incorporating TIFIA assistance. This preliminary commitment would expedite the loan review process to be undertaken should the border State's selected concessionaire seek TIFIA assistance. Information about the TIFIA credit program is available on the following Web site: *http://tifia.fhwa.dot.gov/.*

D. Priority Access to DOT Experts

Projects accepted for the TBCR Program will have access to DOT experts knowledgeable in the areas of planning, the environment, public-private partnerships, finance, construction, safety, operations, and asset management.

E. Other Discretionary Funding

The DOT will work with Applicant(s) to identify other possible discretionary funding sources.

F. Tolling and Private Activity Bonds (PAB)

Applicant(s) may consider applying to DOT for authority to toll any Federal-aid highway as part of a TBCR project. The use of tolls would not only help finance the road, but the use of tolls also, if the amounts are varied, could help manage the volume of traffic utilizing the crossing at any given point during the day. Applicants may also consider applying for an allocation of PAB authority under Section 11143 of SAFETEA–LU as part of a TBCR project. The DOT will work with any selected Applicant(s) to explore what options might be available in these areas.

Authority: 49 U.S.C. 101.

Issued on: May 23, 2008.

Thomas J. Barrett,

Deputy Secretary.

[FR Doc. E8–12055 Filed 5–29–08; 8:45 am]

BILLING CODE 4910–22–P

DEPARTMENT OF TRANSPORTATION

Federal Transit Administration

Intent To Prepare an Environmental Impact Statement for Improvements to the Danbury Rail Branch in Connecticut

AGENCY: Federal Transit Administration (FTA), U.S. Department of Transportation (DOT).

ACTION: Notice of intent to prepare an Environmental Impact Statement.

SUMMARY: The Federal Transit Administration (FTA) and the Connecticut Department of Transportation (ConnDOT), in cooperation with the Southwest Regional Planning Agency and Housatonic Valley Council of Elected Officials, intend to prepare an Environmental Impact Statement (EIS) on proposed commuter rail transit service and infrastructure improvements along the New Haven Line, Danbury Branch Rail Line in Connecticut. The New York Metropolitan Transportation Authority's Metro North Railroad

APPENDIX B

CONCEPTUAL CONSTRUCTION COST ESTIMATE

The Conceptual Construction Cost Estimate was developed in conjunction with Cianbro Corporation and Sargent Corporation.

ROADS (Cost per 1,000 feet of New Construction)

East/West Highway

	Station	to	Station	Typical	LF	Cost/1000LF	Total
2-lane Divided	Calais		Coburn Gore	B	1161600	$0.00	$0.00
Alternating Truck Lane	Calais		Coburn Gore	C	232320	$0.00	$0.00
Frontage Roads	Calais		Costigan	L	528000	$1,000.00	$528,000.00
Interchange Ramps		10		D	120000	$1,000.00	$120,000.00
Accel Lane				H	20	$0.00	$0.00
Decel Lane				J	20	$0.00	$0.00
						Roads Subtotal	**$648,000**

EARTHWORK

	Calais	Costigan	12% Roadway	$0.00
	Costigan	Coburn Gore	30% Roadway	$0.00
			Earthwork Subtotal	**$0**

CLEARING AND GRUBBING

		Length	Width	Area ac	Unit Cost	Total
2-lane Divided w/Truck Lane	assume half	580800	300	4000	$8,600.00	$34,400,000.00
Frontage Roads	assume half	369600	100	848	$8,600.00	$7,296,969.70
Interchange Ramps	assume half	320000	100	735	$8,600.00	$6,317,722.68
					Clearing& Grubbing Subtotal	**$48,014,692**

LOAM & SEED

	Length	Width	Area sy	Unit Cost	Total
2-lane Divided w/Truck Lanes	1161600	40	5162667	$4.00	$20,650,666.67
Frontage Roads	739200	25	2053333	$4.00	$8,213,333.33
Interchange Ramps	640000	25	1777778	$4.00	$7,111,111.11
				Loam & Seed Subtotal	**$35,975,111**

BRIDGES

Major Structures Water Crossings	4	$20,000,000.00	$80,000,000.00
Minor Structures Trail Crossings	30	$2,000,000.00	$60,000,000.00
Minor Structures Criter Crossings	10	$1,000,000.00	$10,000,000.00
		Loam & Seed Subtotal	**$140,000,000**

RIGHT-OF-WAY

	Length	Width	Area AC	Unit Cost	Total
2-lane Divided w/Truck Lanes	897600	2000	41212	$3,000.00	$123,636,363.64
				Right-of-Way Subtotal	**$123,636,364**

BMPS-WETLAND MITIGATION

		Area sf	Unit Cost	Total
Wetland Mitigation	0.5/mile	110	$300,000.00	$33,000,000
			Detention Basin Subtotal	**$33,000,000**

Project Subtotal	**$381,274,167**
Mobilization (5% Roadway Subtotal)	$71,446,733
Pollution Control (5% Roadway Subtotal)	$71,446,733
Miscellaneous Items (15% Roadway Subtotal)	$214,340,200
Subtotal	**$1,786,168,331**
Construction Engineering & Contingencies (20% Subtotal)	#REF!
Roadway Total	**$2,143,401,997**

ROUNDED TOTAL = $2,145,000,000

Typical B

	Unit	Length (ft)	Width (ft)	Depth (ft)	factor	factor	Quantity	Unit Cost	Total
8" Hot Bituminous Pavement	Ton	1000	72	0.67	0.11	0.054	3456	$65.00	$224,640.00
12" Crushed Gravel EP to EP	CY	1000	72	1.00	0.04		2667	$19.25	$51,333.33
12" Crushed Gravel Side Slopes	CY	1000			0.27	2	540	$19.25	$10,395.00
12" Gravel EP to EP	CY	1000	72	1.00	0.04		2667	$15.50	$41,333.33
12" Gravel Side Slopes	CY	1000			0.46	2	920	$15.50	$14,260.00
24" Sand EP to EP	CY	1000	72	2.00	0.04		5333	$13.50	$72,000.00
24" Sand Side Slopes	CY	1000			0.99	2	1980	$13.50	$26,730.00
Traffic Lines Lanes	LF	1000				2	2000	$0.25	$500.00
Traffic Lines Shoulders	LF	1000				4	4000	$0.25	$1,000.00
Concrete Median Barrier	LF	1000			0	1	0	$75.00	$0.00
Guard Rail (20% useage)	LF	1000			0.2	2	400	$16.50	$6,600.00
Guard Rail Terminal Units (4 per 1,000 ft)	Each	1000			0.004		4	$1,800.00	$7,200.00
Fine Grading	SY	1000	72		0.11		7920	$1.00	$7,920.00
CB's	Each					8	8	$1,500.00	$12,000.00
18" RCP	LF	1800					1800	$52.00	$93,600.00
Pipe Ends	Each					3	3	$670.00	$2,010.00
Underdrain (20% useage)	LF	1000			0.2	4	800	$16.20	$12,960.00
Stone Fill Class B @ Outfall (3 each)	CY	20	10	1	0.04	3	22	$36.70	$815.56
Uniform Officers w/Vehicle (10 hrs/10,000 ft)	HR	1000			0.001	2	2	$35.00	$70.00
Flaggers (10 hrs/10,000 ft)	HR	1000			0.001	2	2	$19.50	$39.00
Field Office and Lab (1 per 100,000 feet)	Unit	1000			0.00001	2	0.0	$30,000.00	$600.00
MOT ($10,000/100,000 ft)	Unit	1000			0.00001	1	0	$10,000.00	$100.00
Signing ($2,500/1,000 ft)	Unit	1000			0.001	2	2	$4,500.00	$9,000.00

Typical C

	Unit	Length (ft)	Width (ft)	Depth (ft)	factor	factor	Quantity	Unit Cost	Total
8" Hot Bituminous Pavement	Ton	1000	12	0.67	0.11	0.054	576	$60.00	$34,560.00
12" Crushed Gravel EP to EP	CY	1000	12	1	0.04		444	$19.25	$8,555.56
12" Crushed Gravel Side Slopes	CY	1000			0.27	2	540	$19.25	$10,395.00
12" Gravel EP to EP	CY	1000	12	1	0.04		444	$15.50	$6,888.89
12" Gravel Side Slopes	CY	1000			0.46	2	920	$15.50	$14,260.00
24" Sand EP to EP	CY	1000	12	2	0.04		889	$13.50	$12,000.00
24" Sand Side Slopes	CY	1000			0.99	2	1980	$13.50	$26,730.00
Traffic Lines Lanes	LF	1000				2	2000	$0.25	$500.00
Traffic Lines Shoulders	LF	1000				4	4000	$0.25	$1,000.00
Concrete Median Barrier	LF	1000			0	1	0	$75.00	$0.00
Guard Rail (30% useage)	LF	1000			0.3	2	600	$16.50	$9,900.00
Guard Rail Terminal Units (4 per 1,000 ft)	Each	1000			0.004		4	$1,800.00	$7,200.00
Fine Grading	SY	1000	12		0.11		1320	$1.00	$1,320.00
CB's	Each					0	0	$1,500.00	$0.00
18" RCP	LF	200					200	$52.00	$10,400.00
Pipe Ends	Each					0	2	$670.00	$1,340.00
Underdrain (20% useage)	LF	1000			0.2	1	200	$16.20	$3,240.00
Stone Fill Class B @ Outfall (3 each)	CY	20	10		0.04	0	0	$36.70	$0.00
Uniform Officers w/Vehicle (10 hrs/10,000 ft)	HR	1000			0.001	2	2	$35.00	$70.00
Flaggers (10 hrs/10,000 ft)	HR	1000			0.001	2	2	$19.50	$39.00
Field Office and Lab (1 per 100,000 feet)	Unit	1000			0.00001	2	0.0	$30,000.00	$600.00
MOT ($10,000/100,000 ft)	Unit	1000			0.00001	1	0	$40,000.00	$400.00
Signing ($2,500/1,000 ft)	Unit	1000			0.001	2	2	$4,500.00	$9,000.00
Construction Signs ($1,000/100,000 ft)	Unit	1000			0.00001	2	0	$1,000.00	$20.00
Overhead Sign Structures (1/100,000 ft)	Unit	1000			0.00001	2	0.02	$100,000.00	$2,000.00
									$ 160,418.44
									$ 160,418

Typical D

	Unit	Quantity	Old Unit Cost	Old Total	Unit Cost	Total
5 1/2" Hot Bituminous Pavement	Ton	975	$34.00	$33,150.00	$65.00	$63,375.00
8" Crushed Gravel EP to EP	CY	691	$15.00	$10,365.00	$19.25	$13,301.75
8" Crushed Gravel Side Slopes	CY	120	$15.00	$1,800.00	$19.25	$2,310.00
8" Gravel EP to EP	CY	691	$9.00	$6,219.00	$15.50	$10,710.50
8" Gravel Side Slopes	CY	580	$9.00	$5,220.00	$15.50	$8,990.00
8" Sand EP to EP	CY	691	$7.00	$4,837.00	$13.50	$9,328.50
8" Sand Side Slopes	CY	480	$7.00	$3,360.00	$13.50	$6,480.00
Traffic Lines Lanes	LF	0	$0.25	$0.00	$0.25	$0.00
Traffic Lines Shoulders	LF	2000	$0.25	$500.00	$0.25	$500.00
Guard Rail (30% useage)	LF	500	$12.50	$6,250.00	$16.50	$8,250.00
Guard Rail Terminal Units (4 per 1,000 ft)	Each	4	$1,200.00	$4,800.00	$1,800.00	$7,200.00
Fine Grading	SY	3111	$1.00	$3,111.00	$1.00	$3,111.00
CB's	Each	4	$1,200.00	$4,800.00	$1,500.00	$6,000.00
18" RCP	LF	600	$25.00	$15,000.00	$52.00	$31,200.00
Pipe Ends	Each	2	$400.00	$800.00	$670.00	$1,340.00
Underdrain (20% useage)	LF	200	$12.50	$2,500.00	$16.20	$3,240.00
Stone Fill Class B @ Outfall (3 each)	CY	15	$21.00	$315.00	$36.70	$550.50
Lighting (1 per 250 ft)	Each	4	$3,000.00	$12,000.00	$3,300.00	$13,200.00
Uniform Officers w/Vehicle (100 hrs/1,000 ft)	HR	2	$35.00	$70.00	$35.00	$70.00
Flaggers (100 hrs/1,000 ft)	HR	2	$15.00	$30.00	$19.50	$39.00
Field Office and Lab (1 per 10,000 feet)	Unit	0.2	$30,000.00	$6,000.00	$30,000.00	$6,000.00
MOT ($40,000/1,000 ft)	Unit	1	$40,000.00	$40,000.00	$40,000.00	$40,000.00
Signing ($4,500/1,000 ft)	Unit	1	$4,500.00	$4,500.00	$4,500.00	$4,500.00
Construction Signs ($1,000/1,000 ft)	Unit	1	$1,000.00	$1,000.00	$1,000.00	$1,000.00
Overhead Sign Structures (1/10,000 ft)	Unit	0	$100,000.00	$0.00	$100,000.00	$0.00
				$ 166,627.00		$ 240,696.25
						$ 240,696

Typical L

	Unit	Quantity	Old Unit Cost	Old Total	Unit Cost	Total
3" Hot Bituminous Pavement	Ton	646	$34.00	$21,964.00	$65.00	$41,990.00
8" Crushed Gravel EP to EP	CY	840	$15.00	$12,600.00	$19.25	$16,170.00
8" Crushed Gravel Side Slopes	CY	80	$15.00	$1,200.00	$19.25	$1,540.00
8" Gravel EP to EP	CY	840	$9.00	$7,560.00	$15.50	$13,020.00
8" Gravel Side Slopes	CY	150	$9.00	$1,350.00	$15.50	$2,325.00
8" Sand EP to EP	CY	840	$7.00	$5,880.00	$13.50	$11,340.00
8" Sand Side Slopes	CY	170	$7.00	$1,190.00	$13.50	$2,295.00
Vertical Curb	LF	800	$15.50	$12,400.00	$15.50	$12,400.00
2" Sidewalk	SY	509	$10.00	$5,090.00	$13.87	$7,059.83
4" Granular Backfill	CY	170	$13.00	$2,210.00	$21.00	$3,570.00
Traffic Lines Lanes	LF	200	$0.25	$50.00	$0.25	$50.00
Traffic Lines Shoulders	LF	2000	$0.25	$500.00	$0.25	$500.00
Guard Rail (30% useage)	LF	600	$12.50	$7,500.00	$16.50	$9,900.00
Guard Rail Terminal Units (4 per 1,000 ft)	Each	4	$1,200.00	$4,800.00	$1,800.00	$7,200.00
Fine Grading	SY	3778	$1.00	$3,778.00	$1.00	$3,778.00
CB's	Each	4	$1,200.00	$4,800.00	$1,500.00	$6,000.00
18" RCP	LF	600	$25.00	$15,000.00	$52.00	$31,200.00
Pipe Ends	Each	2	$400.00	$800.00	$670.00	$1,340.00
Underdrain (20% useage)	LF	200	$12.50	$2,500.00	$16.20	$3,240.00
Stone Fill Class B @ Outfall (3 each)	CY	15	$21.00	$315.00	$36.70	$550.50
Lighting (1 per 250 ft)	Each	4	$3,000.00	$12,000.00	$3,300.00	$13,200.00
Uniform Officers w/Vehicle (100 hrs/1,000 ft)	HR	2	$35.00	$70.00	$35.00	$70.00
Flaggers (100 hrs/1,000 ft)	HR	2	$15.00	$30.00	$19.50	$39.00
Field Office and Lab (1 per 10,000 feet)	Unit	0.2	$30,000.00	$6,000.00	$30,000.00	$6,000.00
MOT ($20,000/1,000 ft)	Unit	1	$20,000.00	$20,000.00	$20,000.00	$20,000.00
Signing ($4,500/1,000 ft)	Unit	1	$4,500.00	$4,500.00	$4,500.00	$4,500.00
Construction Signs ($1,000/1,000 ft)	Unit	1	$1,000.00	$1,000.00	$1,000.00	$1,000.00
				$ 155,087.00		$ 220,277.33
						$ 220,277

Accel H

	Unit	Quantity	Unit Cost	Total
5 1/2" Hot Bituminous Pavement	Ton	382	$65.00	$24,830.00
8" Crushed Gravel EP to EP	CY	600	$19.25	$11,550.00
8" Gravel EP to EP	CY	556	$15.50	$8,618.00
8" Sand EP to EP	CY	556	$13.50	$7,506.00
Traffic Lines Shoulders	LF	1500	$0.25	$375.00
Fine Grading	SY	2444	$1.00	$2,444.44
Uniform Officers w/Vehicle (100 hrs/1,000 ft)	HR	2	$35.00	$70.00
Flaggers (100 hrs/1,000 ft)	HR	2	$19.50	$39.00
Field Office and Lab (1 per 10,000 feet)	Unit	0.3	$30,000.00	$9,000.00
MOT ($10,000/1,000 ft)	Unit	2	$10,000.00	$20,000.00
Signing ($4,500/1,000 ft)	Unit	2	$4,500.00	$9,000.00
Construction Signs ($1,000/1,000 ft)	Unit	1.5	$1,000.00	$1,500.00

$ 94,932.44
$ 94,932

Decel J

	Unit	Quantity	Old Unit Cost	Old Total	Unit Cost	Total
5 1/2" Hot Bituminous Pavement	Ton	283	$34.00	$9,622.00	$65.00	$18,395.00
8" Crushed Gravel EP to EP	CY	445	$15.00	$6,675.00	$19.25	$8,566.25
8" Garvel EP to EP	CY	412	$9.00	$3,708.00	$15.50	$6,386.00
8" Sand EP to EP	CY	412	$7.00	$2,884.00	$13.50	$5,562.00
Traffic Lines Shoulders	LF	775	$0.25	$193.75	$0.25	$193.75
Fine Grading	SY	1856	$1.00	$1,855.56	$1.00	$1,855.56
Uniform Officers w/Vehicle (100 hrs/1,000 ft)	HR	2	$35.00	$70.00	$35.00	$70.00
Flaggers (100 hrs/1,000 ft)	HR	2	$15.00	$30.00	$19.50	$39.00
Field Office and Lab (1 per 10,000 feet)	Unit	0.2	$30,000.00	$6,000.00	$30,000.00	$6,000.00
MOT ($10,000/1,000 ft)	Unit	1	$10,000.00	$10,000.00	$10,000.00	$10,000.00
Signing ($4,500/1,000 ft)	Unit	1	$4,500.00	$4,500.00	$4,500.00	$4,500.00
Construction Signs ($1,000/1,000 ft)	Unit	0.8	$1,000.00	$800.00	$1,000.00	$800.00
				$ 46,338.31		$ 62,367.56
						$ 62,368

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