Trade and Traffic Across the Eastern US-Canada Border

Volume 2: Statistical Review of Border Crossing Trade and Traffic Data

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17 March 1998

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March 17, 1998

Mr. Rodney Slater
Secretary of Transportation
US Department of Transportation
400 Seventh Street, SW
Washington, D.C. 20590

Dear Secretary Slater:

The Eastern Border Transportation Coalition is pleased to submit Volume II of our report on Trade and Traffic Across the Eastern US-Canada Border. Volume I was completed on May 2 of last year.

This project is a follow-up to the ISTEA Section 6015 study the FHWA completed in 1994. In fact, that study stimulated the organization of the Eastern Border Transportation Coalition (EBTC).

During the Roundtables FHWA conducted for the Section 6015 Study, it became clear to the transportation agencies of Maine, Massachusetts, Michigan, New Brunswick, New York, Ontario, Quebec and Vermont and the Detroit and Buffalo Metropolitan Planning Organizations that a binational coalition was needed to focus on issues affecting the movement of people and goods across the eastern part of the US-Canada border. We organized the EBTC in 1993, and the provinces of Newfoundland, Labrador, Prince Edward Island, and the Atlantic Provinces Transportation Commission joined the coalition recently. Our purpose has been to identify and understand the border-related needs, problems and opportunities facing all of us so we can develop solutions and seek their implementation.

In 1995 the FHWA provided funds through the New York State and Michigan Departments of Transportation to conduct this study of Trade and Traffic Across the Eastern US-Canada Border. The Michigan DOT and the Southeast Michigan Council of Governments administered the project, and the EBTC study team selected the firm of Parsons Brinckerhoff Quade & Douglas, Inc. to conduct the study.

Our study purpose is to use existing data and information to:

- Provide a comprehensive picture of historic and current trade and traffic flows across the eastern border;
- Develop projections of future demand;
- Consider the roles of Canadian and US Federal inspection agencies as they affect border crossings;
- Identify short, medium, and long term infrastructure needs;
- Evaluate alternative criteria for use in defining international trade and transportation corridors; and
- Identify gaps, inconsistencies and anomalies in the available data and recommend ways to resolve them.

The key findings of our study are:

- US trade with Canada totaled US$272 billion in 1995, compared to US$256 billion in trade with the entire European Union, US$188 billion in trade with Japan, and US$110 billion in trade with Mexico.
- Seventy percent of US-Canadian trade crosses the eastern border, from Michigan/Ontario to Maine/ New Brunswick.

- The value of eastern border trade is expected to increase from US$272 billion on 1995 to up to US$454 billion by 2015.
- Eastern border vehicle crossings are expected to increase from 8 million trucks and 57 million cars in 1995 to 16 million trucks and 66 million cars by 2015.
- The rail share of Canadian exports to the US by value rose from 12 percent in 1988 to 28 percent in 1995. The availability of double-stack rail will likely cause this share to increase further.
- Transport equipment accounts for 30 percent of eastern border trade. The flows are about equal in each direction and rail carries half of Canadian exports of cars, truck, and parts.
- The benefits of US-Canadian trade extend far beyond the border. Ten states not on the Canadian border accounted for 48 percent of 1995 eastern border trade with Canada: Ohio, Indiana, Illinois, Pennsylvania, Texas, North Carolina, California, Wisconsin, Tennessee and New Jersey.
- The serious congestion and backup problems that plagued many key eastern border crossings in the early 1990s have been relieved for the present -- because auto volumes declined temporarily, infrastructure was improved at several crossings and the inspection services improved procedures significantly. This "breathing room" will evaporate quickly, though, as truck volumes continue to increase and auto crossings resume their historic upward climb.
- Cross-border infrastructure needs within the EBTC states and provinces alone exceed $8 billion and very substantial investments must be made in corridors outside of the EBTC area. The US and Canadian federal governments must exercise leadership if these needs are to be met before congestion and delays of the 1980s and early 1990s return and become even more serious and costly.
- The consideration being given by the US Administration and Congress to trade corridor and border infrastructure and planning programs is an important step toward meeting these needs.

This Volume of the EBTC study includes more detailed trade, traffic and infrastructure needs by region, state and province than Volume I and a discussion of the critical data issues.

The data we assembled during the study reflect the close economic and cultural relationships between the US and Canada.

More than 8 million trucks and almost 2 million railcars cross the eastern border each year, carrying agricultural produce and animals, wood and paper products, machinery and electronic equipment, automotive components and assembled cars and trucks. For decades, following the US-Canada Auto Pact, the auto industry has been able to operate in large measure within a single binational economy, using the rail and highway systems and crossings to connect their assembly lines, improving their competitiveness and providing consumers with the benefits of a larger manufacturing base and wider choice.

Eastern border auto volumes totaled 57 million in 1995. Sixty percent were same-day trips by Canadians to the US and Americans to Canada for the widest possible range of purposes: commuting to work; shopping; going to school; attending theater, music, and sporting events; engaging in recreation activities, visiting friends and relatives, etc.

Forty percent of cross-border trips are visits for more than one day, ranging from short excursions for many of the same-day trip purposes to longer vacation trips. Canadians constitute the largest single group of non-US visitors to Florida and US residents are the most numerous tourists visiting Canada.

These are the reasons that support our final recommendation - that we work toward the achievement of an open border between our two nations with 2012 as the target year. It would be most appropriate to celebrate the 200th anniversary of the start of the War of 1812 with the beginning of a completely open relationship between the US and Canada, the nations with the world's largest trading partnership and longest undefended border.

On behalf of the EBTC and our study team, we submit Volume II of Trade and Traffic Across the Eastern US-Canada Border and express our appreciation to the FHWA for having made this study possible.

Very truly yours,

Irving J. Rubin,
Executive Director
Eastern Border Transportation Coalition

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CHAPTER 1

Introduction

This report, Volume II of the 1997 EBTC study entitled *Trade and Traffic Across the Eastern US-Canada Border* presents detailed information on border crossing by region, state/province, metropolitan area and individual crossings. Information provided includes basic traffic volumes and additional material on the origin-destination and overall nature of traffic at key eastern crossings. Traffic volumes are compared to those on the US-Mexico and western US-Canada borders. Additional information is provided on the characteristics and key issues of each of the key crossings.

The first chapter of Volume II presents a detailed review of the overall Eastern Border with data on highway, rail and air traffic levels; followed by information on the nature of border crossing traffic across all modes including origin-destination and length of stay.

The Eastern US-Canada border has been broken into four regions for our analyses:

New England (Maine, New Brunswick, Québec, and Vermont)
St. Lawrence (Eastern New York, Ontario, and Québec)
Niagara (Western New York and Ontario)
Michigan/Ontario

Volume I divided the Eastern Border into the same regions, but used acronyms based on the included states and provinces.

The following chapters include detailed highway traffic information for each of the four regions, and for each state/province, metropolitan area, and individual crossing. For each major crossing additional information is provided on crossing characteristics and key issues. For smaller crossings, an Appendix summarizes information on characteristics and issues. This information is based on responses to questionnaires provided by Canadian and US Customs officials at each crossing, and on interviews during site visits at larger crossings.

CHAPTER 2

Eastern Border Transportation Trends

This section contains information on the overall eastern border, from New England west to Michigan/Ontario. Basic traffic levels for each mode are reviewed, with comparisons to other major border areas in the west and southwest. A second section examines the nature of traffic across all modes for the overall eastern border.

Traffic Levels

This section contains information on traffic levels for the region as a whole for each of three modes, beginning with highways and followed by sections on rail and air.

Highway Traffic

The highway traffic section examines bidirectional traffic flows, as well as directional travel into the US, and into Canada. Information is provided both on comparisons across major border regions in North America, and changes in volume since 1984 for each of the border regions. This section concludes with a review of the reasons for changes in the highway volumes.

Traffic Overview and Interpretation Issues

The Canada-to-US travel information presented in this section includes data on non-commercial autos, commercial vehicles (usually trucks but sometimes cars) and total vehicles for 1984, and 1992-1995. US to Canada travel information for these years is reported for cars, trucks and total vehicles, in order to reconcile the difference in the treatment of vehicle types, the bi-directional totals assume that all commercial vehicles are trucks. Information on total US-Canada rail and air travel is reported at the end of this chapter.

Appendix A includes a summary of data on each North American crossing, with city, state regional and national totals. The Appendix includes data on traffic vol-

ume, growth from 1984-1995, from 1992-1995, and information on each crossing and summary area's traffic levels as a percent of total traffic.

All traffic volume data used in this report, with the exception of outbound volumes to Mexico, are based on information obtained from US Customs and Statistics Canada. Outbound movements to Mexico are not available on a comprehensive basis and are assumed to be equal to inbound movements at each crossing. As such, references to the total North American two-way traffic levels are estimates because of the assumptions on outbound traffic to Mexico.

Data on traffic entering the US from Canada and Mexico were provided by US Customs for the years 1984 and 1992-1995. While these data are based on actual counts for many locations, for some smaller crossings the information is based on annual estimates by local Customs officials. US Customs aggregates the data for many smaller crossings into small areas of five or six crossings before entering the information into its data base. Because Customs keeps these data by fiscal year only, it was necessary to convert the monthly data to calendar year thereby introducing some potential for errors.

Information on traffic entering Canada was provided by Statistics Canada for the years 1972, 1984 and 1992-1995. Statistics Canada keeps data at the individual crossing level without aggregation, and was able to report data by calendar year. These data are based on actual counts rather than estimates. Statistics Canada also separates passenger vehicle entry traffic data into returning Canadian-plated vehicles vs. US-plated vehicles. In addition, for each type of vehicle, Statistics Canada reports the traffic levels by length of stay including same-day, one-day, or two-days-plus trips. The research team obtained these data for total US-Canada traffic levels only and the data are reported for reference purposes.

Traffic crossing the US-Canada border can use the 114 staffed crossings located at one of the US ports of entry shown in Figure 1. There are 62 staffed land crossings on the eastern US-Canada border, some of which are open only to passenger traffic. A listing of all the eastern US-Canada crossings can be obtained from Appendix A. The 62 eastern staffed crossings compare to the 52 staffed crossings on the western US-Canada border. The US-Mexico border contains a total of 36 staffed highway crossings.

Bidirectional Traffic Flows

A total of 56.5 million autos used the eastern crossings in 1995 (Figure 2), along with 8.1 million trucks, for a total of 64.6 million vehicles on a bidirectional basis. Figure 2 also shows traffic flows by direction; the volumes were similar in each direction.

While 56.5 million autos crossed the eastern border in 1995, 21.5 million autos crossed the western border (Figure 3). The eastern traffic levels represent 73 percent of total US-Canada auto traffic. The eastern Canada traffic levels compare to 151.3 million autos that used the US-Mexico border during 1995. The eastern traf-

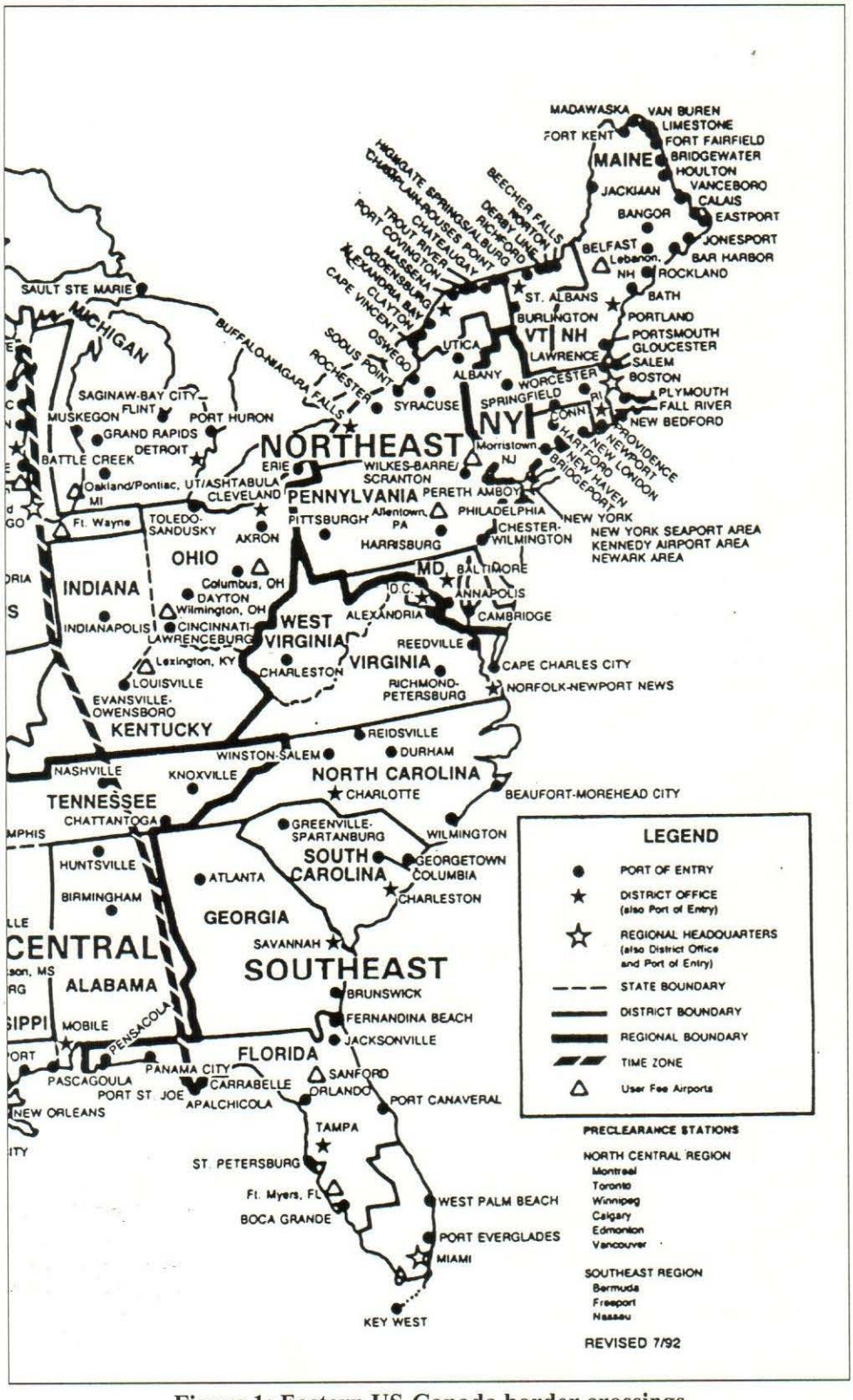


Figure 1: Eastern US-Canada border crossings

fic levels represent 25 percent of the total North American bidirectional auto traffic levels.

A total of 8.1 million trucks crossed the eastern border bidirectionally in 1995, as shown in Figure 3. This compares with the 2.2 million trucks that used the western US-Canada crossings in 1995. The eastern truck traffic represented 79 percent of total US-Canada truck traffic in 1995. The US-Mexico truck bidirectional traffic of 5.7 million vehicles is 70 percent of the eastern US-Canada truck traffic. The eastern flows represent 51 percent of total US-Canada-Mexico traffic in trucks during 1995.

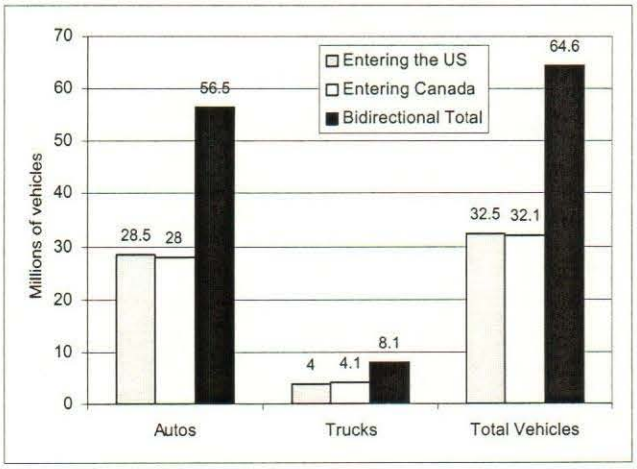


Figure 2: 1995 eastern border traffic levels

Figure 3 also shows the total vehicle bidirectional traffic levels for each area in 1995. The eastern traffic of 64.6 million vehicles represents 74 percent of total US-Canada flows, and 26 percent of total North American flows.

Trucks represent 13 percent of the total traffic on the eastern US-Canada border, while they represent 10 percent of the traffic on the western US-Canada border, as shown in Figure 4. Trucks represent just 4 percent of total bidirectional traffic on the US-Mexican border. The proportion of trucks is important because of the inspection services they require and the additional crossing time and space they occupy.

Figures 5 and 6 summarize the bidirectional Eastern Border traffic levels for autos, trucks and total vehicles for 1984 and 1992-1995 (Figure 5) and examine the growth and declines in traffic in percentage terms by major border area for the same periods (Figure 6). On the eastern US-Canada border bidirectional auto traffic totaled 40.6 million vehicles in 1984, peaked at 68.1 million vehicles in 1992, and declined to 56.5 million in 1995. Between 1984 and 1995 this auto traffic grew 39 percent. However, between 1992 and 1995 the auto traffic on the eastern border fell by 17 percent. In western Canada, from 1984 to 1995 auto traffic grew at a slower rate of 21 percent. However, between 1992 and 1995, auto traffic in the west declined by an even faster pace than it did in the east, by a negative 21 percent. On the US-Mexico border, traffic grew by 35 percent between 1984 and 1995, and by a positive 4 percent between 1992 and 1995.

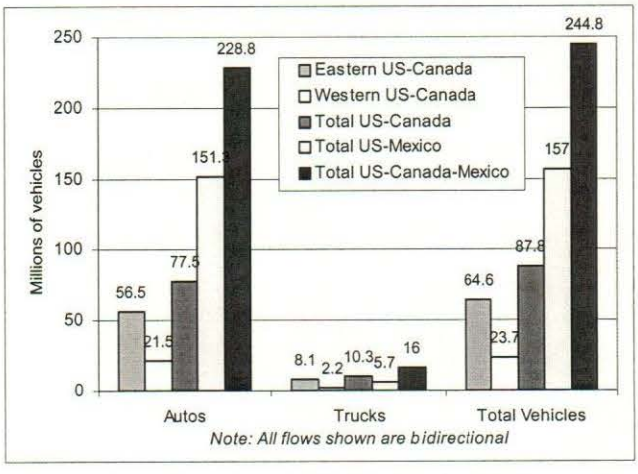


Figure 3: 1995 eastern US-Canada traffic by mode

In contrast to the auto traffic, bidirectional truck traffic on the eastern US-Canada border grew every year, rising from 4.5 million trucks in 1984 to 8.1 million in 1995, an average annual increase

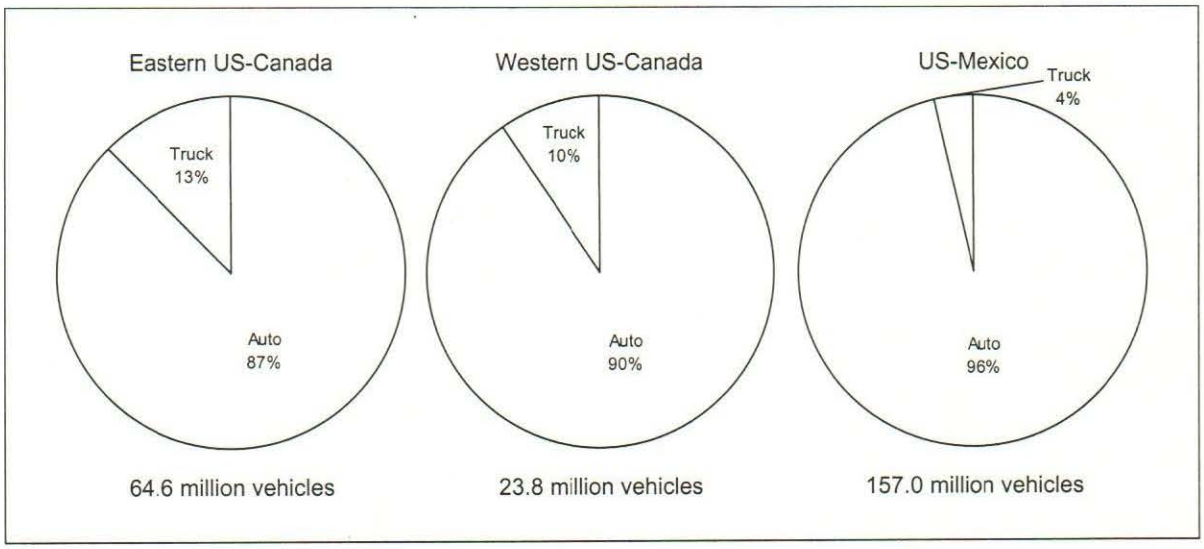
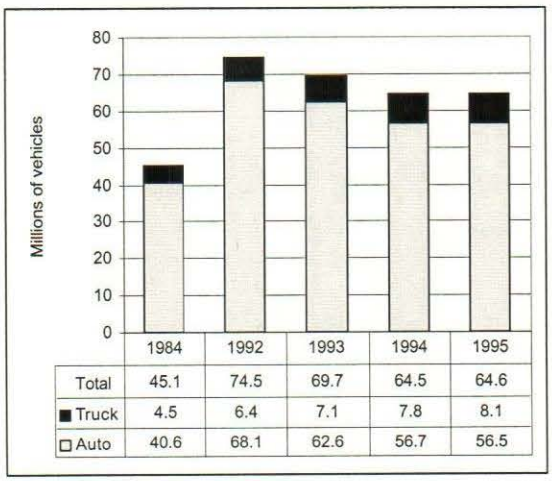


Figure 4: 1995 bidirectional volumes by vehicle type and area

of about 7 percent. On the western US-Canada border, truck traffic grew by an even greater average annual rate of 10 percent between 1984 and 1995 and by an annual average of 16 percent from 1992 to 1995, a faster pace than the east's average annual growth of 7 percent. US-Mexico truck traffic grew faster than any other region between 1984 and 1995 at (an average of 14 percent annually), but grew by a slower rate of 7 percent per year between 1992 and 1995.

Eastern border traffic flows account for the vast majority of total US-Canada travel, with some 73 percent of the total auto traffic and 79 percent of the truck traffic. While the eastern US-Canada border dominates the overall Canadian border, the eastern auto traffic of 56.5 million vehicles is just over one-third of the automobile traffic seen on the US-Mexico border. However, the eastern US-Canada truck traffic of 8.1 million vehicles is one and a half times the level of US-Mexico truck traffic. Eastern US-Canada truck traffic is just over half of all North American border crossing truck traffic.



	1984	1992	1993	1994	1995
Total	45.1	74.5	69.7	64.5	64.6
■ Truck	4.5	6.4	7.1	7.8	8.1
□ Auto	40.6	68.1	62.6	56.7	56.5

Figure 5: Bidirectional traffic levels by year

While eastern auto traffic declined 17 percent from 1992 to 1995, auto traffic declined by 21 percent in the west and grew 4 percent on the US-Mexico border. Even with this decline, traffic was still some 40 percent higher on the eastern border than in 1984. Unlike autos, truck traffic continued to grow strongly from 1984 to 1995 along the entire US-Canada border. The growth rate on the US-Mexico border slowed considerably from 1992 to 1995, to 26 percent overall.

Traffic Entering the US

In 1995, 28.5 million autos entered the US along the eastern US-Canada border, representing 25 percent of all autos entering the US at all borders (Figure 7). The western US-Canada border accounted for 10 percent of the total autos entering the US, while the Mexican border accounted for 65 percent. However, the distribution of trucks differed significantly. The eastern US-Canada border accounted for 50 percent of all truck entries, with Mexico accounting for 35 percent and western Canada for 15 percent. The eastern US-Canada border share of total inbound truck movements increased from 1992 to 1995 because of continued strong growth on the eastern US-Canada border and slower growth on the Mexican border.

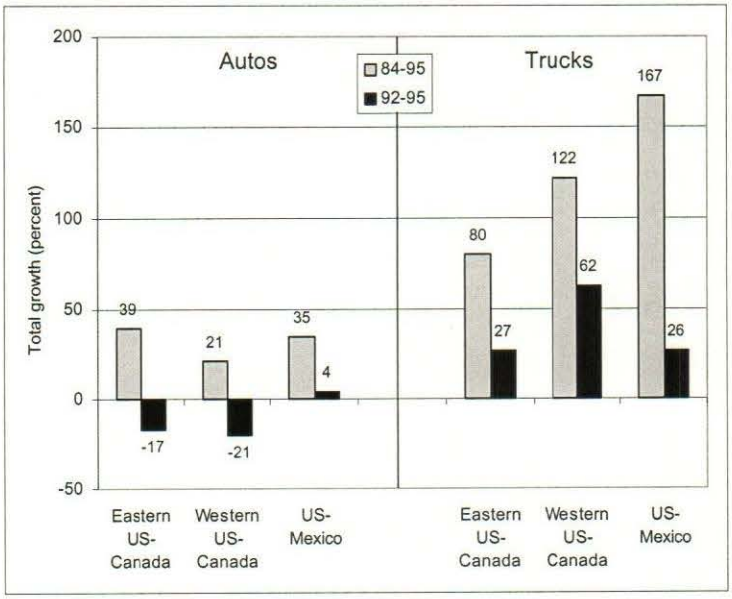
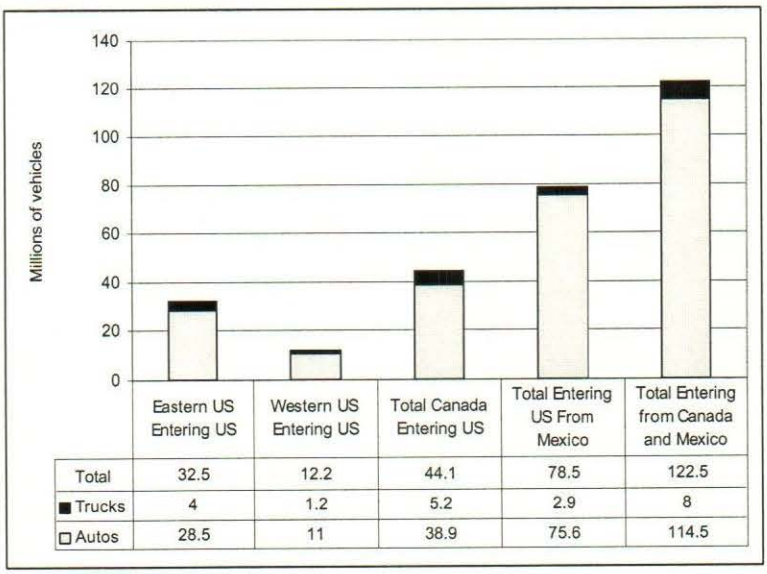


Figure 6: Traffic growth rate by vehicle type and area

Traffic Entering Canada

Traffic entering Canada showed the same characteristics along the eastern US-Canada border as traffic entering the US (Figure 8). Figure 9 breaks out 1995 auto traffic entering Canada by Canadian-plated versus US-plated vehicles, and for each of those categories by length of stay. These data, obtained for the total US-Canada border, indicate that Canadian vehicles represented 59 percent of the total autos entering (returning to) Canada in 1995, while US-plated vehicles represented 41 percent. For Canadian vehicles, 82 percent were returning from, a same-day trip, while 18 percent had stayed one night or more. For US vehicles entering Canada some 77 percent were planning a same-day trip, while 23 percent planned on staying at least one night.

The makeup of vehicle plate and length of stay changed between 1984 and 1992 to 1995, as shown in Figure 10. Canadian plates made up



	Eastern US Entering US	Western US Entering US	Total Canada Entering US	Total Entering US From Mexico	Total Entering from Canada and Mexico
Total	32.5	12.2	44.1	78.5	122.5
■ Trucks	4	1.2	5.2	2.9	8
□ Autos	28.5	11	38.9	75.6	114.5

Figure 7: 1995 traffic entering the US by type and area

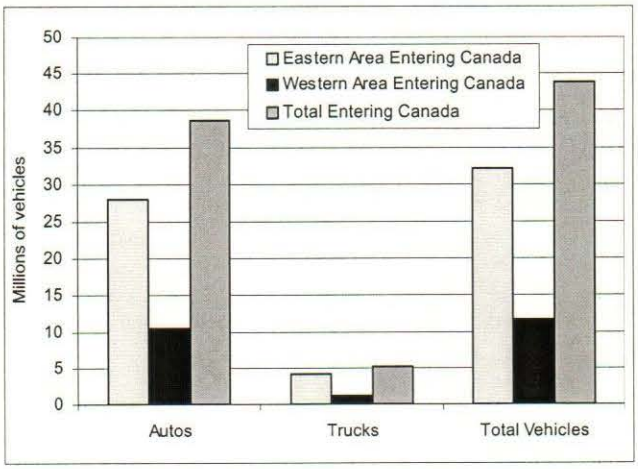


Figure 8: 1995 traffic entering Canada by vehicle type and area

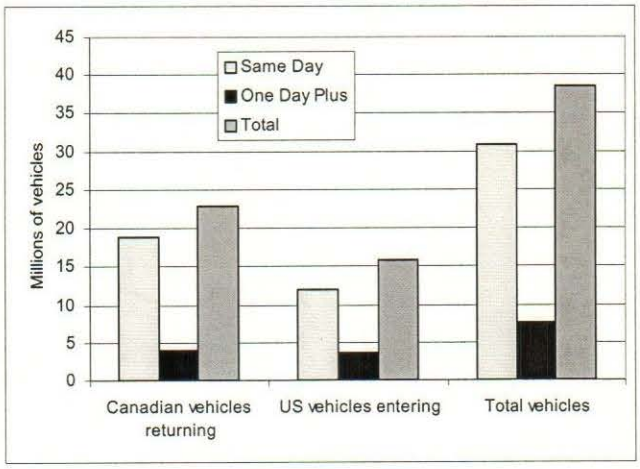


Figure 9: 1995 autos entering Canada by length of stay

55 percent of the autos entering Canada in 1984, 73 percent in 1992, and 59 percent in 1995. This change reflects the bubble in Canadian trips to the US which peaked in 1992 and declined through 1995 (though traffic has now stabilized and begun to increase slowly). These changes are reflected in the same-day Canadian-plated returns, which rose from 44 percent in 1984 to 61 percent in 1992 but fell to 49 percent by 1995.

Reasons for Auto and Truck Volume Changes

A number of factors contributed to the fluctuation in auto and the steady growth in truck traffic noted above. For autos, perhaps the principal factor was the change in the relative value of the Canadian dollar to the US dollar. While it took C$1.39 to buy a US dollar in 1986, this had dropped to C$1.15 by 1991, dramatically

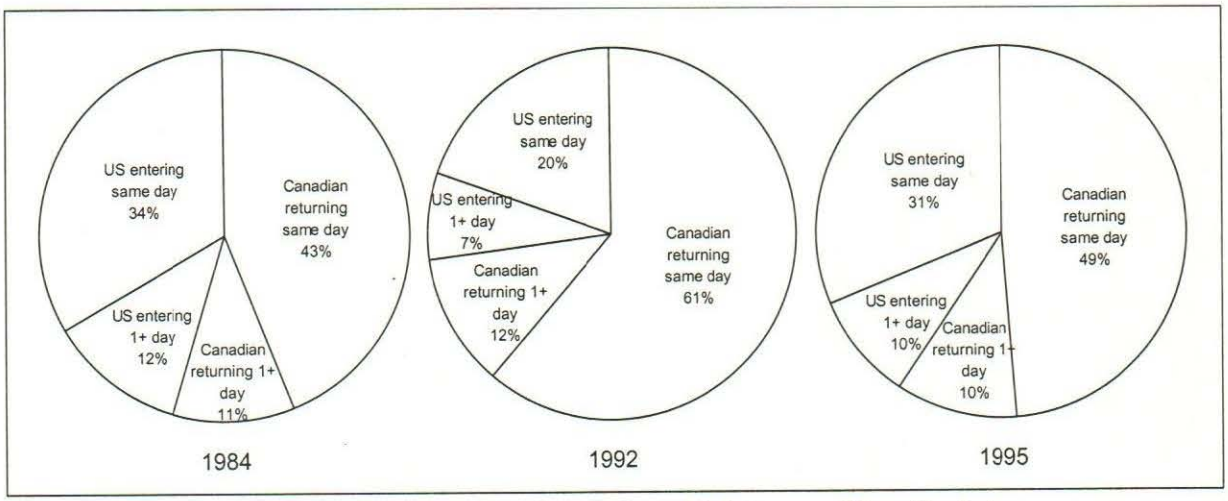


Figure 10: Autos entering Canada by vehicle type and length of stay

increasing the purchasing power of Canadians and leading to a large increase in the number of Canadians traveling to the US. The changes in the number of same-day Canadian autos returning to Canada between 1984 and 1992 point out the key role that Canadian travelers have had in the fluctuating traffic levels. In 1984, 11.7 million Canadian autos returned from same-day day trips to the US, but by 1992, this number had increased almost two-and-one-half times, to 28.9 million. Canadian-owned autos making same-day trips accounted for some three-quarters of the increase in bidirectional auto volumes over the time period, while Canadians staying more than one night in the US accounted for most of the rest of the increase. The number of American autos entering Canada remained virtually unchanged.

Other factors, in addition to currency valuation fluctuations, contributed to the 1984-1992 increase in Canadian autos entering the US. Variations in cross-border prices of key grocery items, gasoline and cigarettes, played a major role, with substantially lower prices in the US. While the perception of price savings in the US was probably somewhat greater than the reality, there were indeed some significant price differences. For instance, while a pack of Canadian cigarettes cost $4.98 more in Canada than in the US in 1989, a Canadian cigarette tax increase caused the difference to rise to $8.80 by 1992 when traffic peaked.

The competitiveness of Canadian stores, including their hours of service, was also a major factor in causing increasing numbers of Canadians to visit the US. A number of articles in the Canadian press during 1988-1992 pointed out that Canadians were becoming increasingly concerned about high prices, limited choice and poor service levels in Canadian stores. This perception, coupled with Sunday closing laws in Ontario and other provinces, is believed to have caused more Canadians to shop in the US.

The decrease in traffic levels between 1992 and 1995 is also almost totally accounted for by Canadian vehicles. During this period Canadian vehicles entering Canada decreased by 11.7 million, while the number of American vehicles entering Canada actually increased by 3.0 million. This decrease in Canadian traffic was due to a reversal of most of the factors that contributed to the original increase in traffic.

Perhaps most importantly, the value of the Canadian dollar began to decline (relative to the US dollar) in 1992, and fell to a rate of C$1.37 to the US dollar by 1994, reducing Canadian purchasing power and leading to the decrease in Canadians traveling to the US between 1992 and 1995. Another factor causing the drop in traffic was a return to competitiveness of Canadian stores. This has been attributed in part to the entry of US retail chains into the Canadian market, as well as by Canadian retailers working to increase their competitiveness.

The Canadian government also reduced or eliminated duties on a number of big-ticket consumer appliance goods, reducing prices in Canada to a level closer to that seen in US border states. Cigarette taxes were also lowered in Canada, with the price variation falling to just $2.72 in 1994. Sunday closing laws were repealed, further improving the attractiveness of Canadian shopping.

As of 1997, data are beginning to show that auto traffic levels are returning to a growth cycle. Most border crossings report a stabilization in auto traffic levels, and casino gambling in Windsor has caused large increases in Detroit in 1995 and 1996. Casino gambling in Niagara Falls, Ontario is bringing significant though smaller increases at the Niagara crossing. While this traffic is likely to fall if casinos open on both sides of a border, a good part of the cross-border gambling traffic will continue.

The steady increase in truck traffic at all US-Canada crossings reflects an increase in industrial production in the US and Canada. Commercial traffic increased in a tight correlation with industrial production at the Peace Bridge and it seems clear that this relationship exists at other crossings. In fact, truck traffic has increased at an even faster pace than overall industrial production. Much of this is due to the fast growth in the auto sector between 1992 and 1995 and increases in Canadian assembly plant activity.

NAFTA probably had limited impact on US-Canadian auto trade because of the decades-old US-Canada Auto Pact and the US-Canada Free Trade Agreement. However, NAFTA has had a substantial impact in facilitating specialization and cross-border sourcing of components and finished goods in other non-automotive industries. This increased use of specialized sources has led to substantial increases in trucking activity. Finally, in both the auto and related industries, the continued shift towards just-in-time inventory shipments, with more frequent shipments of smaller quantities, has also led to increased traffic.

Rail Traffic

The number of rail freight cars entering the US grew 12 percent, from 1.63 million in 1984 to 1.83 million in 1995. Figure 11 shows the volumes and changes for each major border region in North America: up 19 percent on the eastern US-Canada border; down 4 percent on the western US-Canada border; up 83 percent on the US-Mexico border, although from a much lower base.

Figure 11 depicts the share of rail border traffic in each region in 1995. The eastern US-Canada border accounted for 42 percent of the total North American cross-border rail traffic, while the western Canada border accounted for 45 percent. Mexican rail traffic, while having grown substantially between 1984 and 1995, accounted for just 13 percent of North American traffic in 1995.

Figure 12 summarizes the destination of rail traffic entering the US. North Dakota had the largest percentage of northern border rail traffic, with 20 percent of the total. The Michigan border with Ontario was second with 18 percent. Figure 13 lists the largest individual crossings. The Port Huron/Sarnia Tunnel between Michigan and Ontario carried the largest volume of any single crossing, with 217,000 rail cars in 1995, and growth of 56 percent from 1984 to 1995. The Detroit-Windsor Tunnel carried 209,000 cars, with growth of 30 percent over the same period. The next busiest crossings were at Laredo, Texas; the upper level of the Whirlpool Rapids bridge over the Niagara River; and at Blaine, Washington.

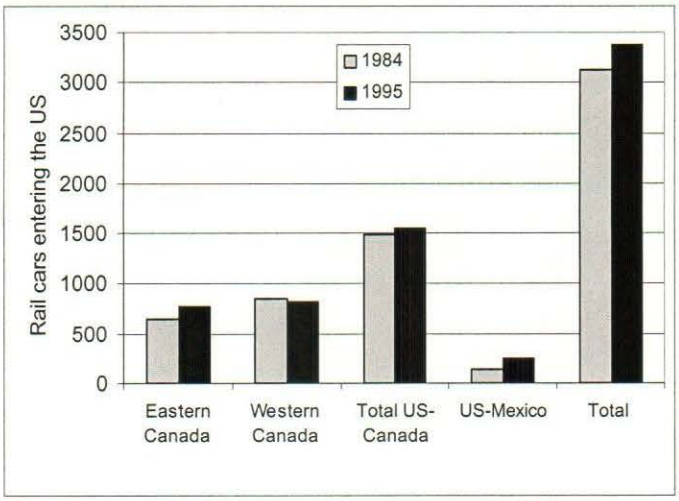


Figure 11: 1984 and 1995 rail cars entering the US and growth rates

Appendix B contains detailed information on rail freight border traffic for each crossing, region and border area.

Only limited data were available on cross-border rail passenger traffic. Table 1 shows that there were just 42,019 riders to Montreal in 1995, and just 6,073 riders to Toronto. Both numbers are for New York crossings only. For service between Chicago and Toronto through Port Huron/Sarnia, there were 32,314 passengers in 1995.

Air Traffic

Data on air traffic between Canada and the US were obtained from a 1996 report by the US Department of Transportation's Office of International Aviation. The report examines changes in air traffic since the US-Canada "open skies" aviation pact was signed on February 24, 1995. During the first year of the pact, traffic grew by 1 million passengers — 15 percent — compared to historical annual growth rates of 3 percent. High air fares from Buffalo and other US cities within driving distance of Toronto are certainly a factor in this increase. Forty-five city-pair markets received service for the first time during the first year of the Agreement.

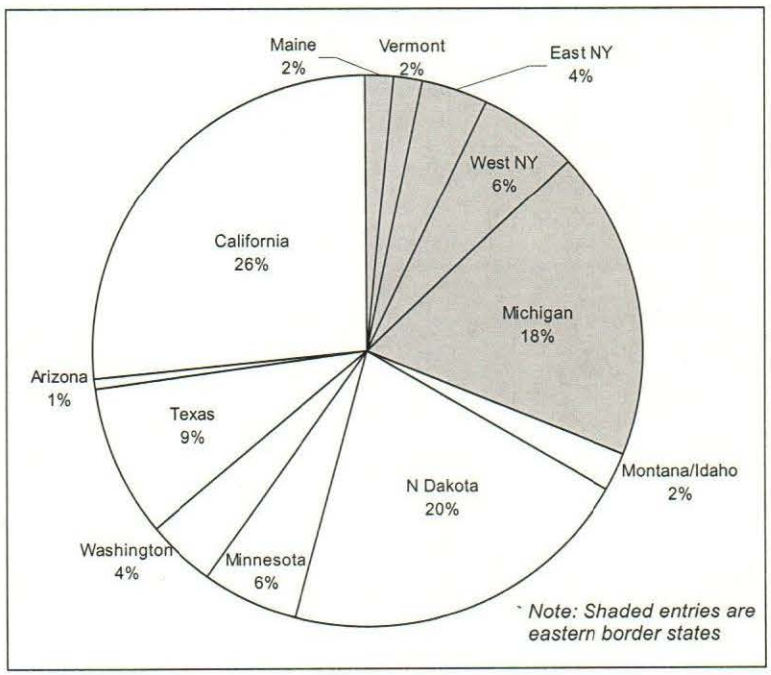


Figure 12: 1995 destinations for rail cars entering the US

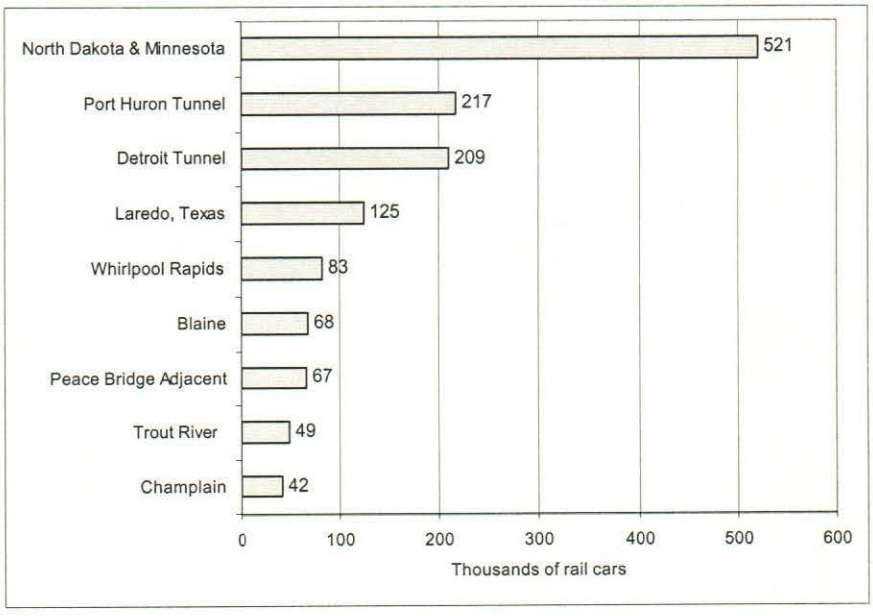


Figure 13: 1995 top rail crossings

Figure 14 shows the month-by-month changes in scheduled flights and passengers for US and Canadian carriers. Canadian carriers increased their flights 44 percent for the calendar year, with passenger traffic up 22 percent. US carriers increased flights by 22 percent and realized a 9 percent increase in passenger traffic.

No data were available on cargo flights.

Nature of All Modes Regional Traffic

To provide more detail about cross-border travelers, the Study Team obtained 1994 Statistics Canada Travel Series data for Canadians visiting the US at all Canadian crossings by all modes (including air) on the overall US-Canada border. The data contain information on the origin, destination, mode of travel, trip purpose, and spending by state for 1994. The travel data are described below, and are summarized in Tables 2 (for Canadians visiting the US) and 3 (for US visitors to

Table 1: Amtrak ridership across borders[a]

Crossing	1990	1991	1992	1993	1994	1995
Montréal	56,945	38,633	43,147	27,989	44,987	42,019
Port Huron/Sarnia	NA	NA	NA	NA	25,618	32,314

a. Source: Amtrak ridership reports.

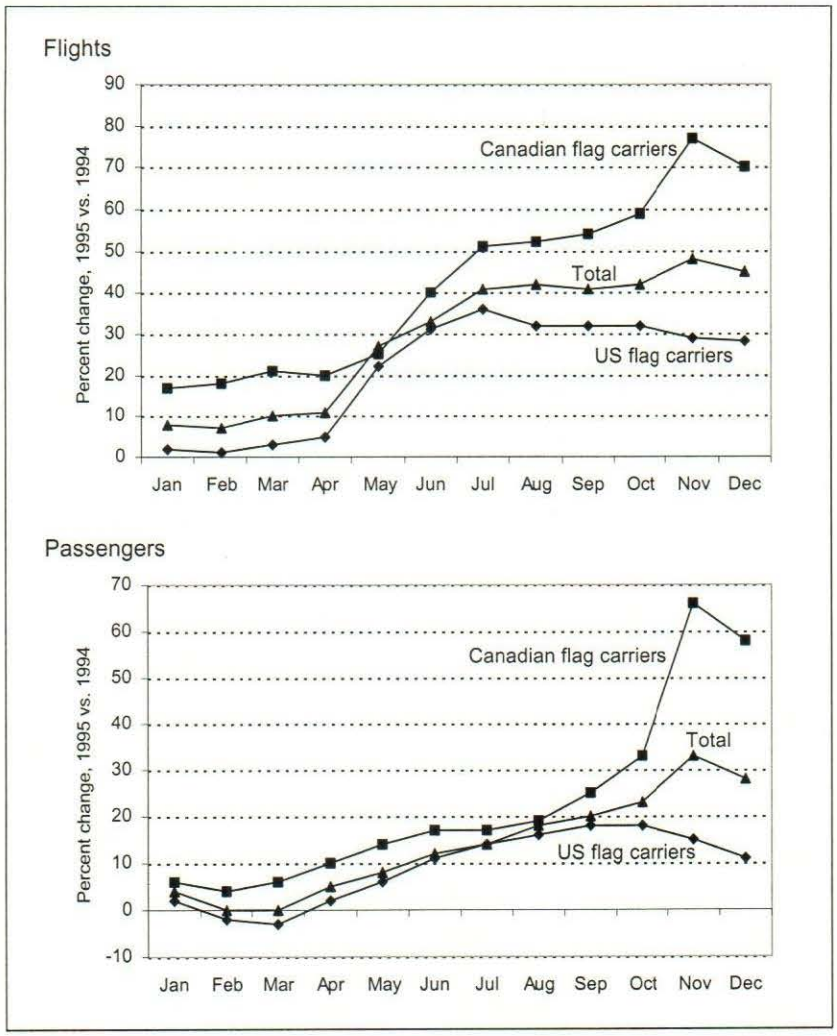


Figure 14: US-Canada scheduled flights and passengers, 1994-95

Canada). These data include all modes of travel, although autos were used for 97 percent of same-day trips and 72 percent of the trips of longer duration.

Person-Visits by Canadians and Americans

There were 96.6 million US-Canada bidirectional person visits during 1994. Of this total 60.5 million were Canadians visiting the US and two thirds of these were same-day visits. Of the 60.5 million total visits, 42.7 million had an origin in the eastern Canadian provinces of Ontario, Quebec and the Atlantic provinces of Newfoundland, Nova Scotia and Prince Edward Island, while 28.7 million had an origin in Ontario.

Additional travel information on the four crossings at Calais, Maine; Derby line, Vermont; Fort Erie, New York and Port Huron, Michigan indicate how the percentage of Canadians varies by crossing, ranging from 82 percent at Calais to 53

Table 2: Selected characteristics of 1994 Canadian visitors to the US

Note: All values are percentages unless otherwise stated.

Traveler characteristics		Same day trips by Canadians to the US				One or more nights stay by Canadians in the US			
Residence		All provinces	Atlantic provinces	Quebec	Ontario	All provinces	Atlantic provinces	Quebec	Ontario
Number of trips		39,378,300	5,607,400	4,111,600	18,186,100	21,112,200	914,300	3,365,600	10,474,300
Mode of transport	Auto	97.1	98.5	96.5	95.9	71.6	66.8	69.2	73.7
	Airplane					14.5	18.1	21.6	18.2
	Bus					4.6			
	Other	2.9	1.5	3.5	4.1	9.3	15.1	9.2	8.1
Trip purpose	Holiday/vacation	60.1	64.5	55.9	57.9	51.1	50.9	51.6	49.5
	Visit friends	8.7	12.6	10.5	8.7	16.1	17.6	13.8	17.5
	Meetings	5.3	4.1	6.1	6.2	5.7	5.6	5.4	12.3
	Visit second home							12.9	
	Shopping					1.7			
	Other	25.9	18.8	27.5	27.2	25.4	25.9	16.3	20.7
Origin	Ontario	46.2			100	49.6			100
	British Columbia	25.1				15.7			
	Quebec	10.4		100		15.9		100	
	Nova Scotia						46.7		
	Newfoundland						6.2		
	Prince Edward Island						6.4		
	New Brunswick	14.1	99				40.7		
	Other	4.2	1	0	0	18.8	0	0	0

Continued

Table 2: Selected characteristics of 1994 Canadian visitors to the US (Continued)

Note: All values are percentages unless otherwise stated.

Traveler characteristics		Same day trips by Canadians to the US				One or more nights stay by Canadians in the US			
Destination	New York	23.6		37.7	42.4	13	6.1	19.7	18
	Michigan	23.2			50.1	7.2	0.5	0.6	13.6
	Maine	15.6	99.8	11.8		3.9	34.9	8.8	1.3
	Vermont	5.1		48.1			2.6	16.5	2.2
	New Hampshire						8.5	4.4	1
	Great Lakes region					10.8	2.2	2.8	11.9
	Northeast USA					10.8	17.9	16	11
	Southeast USA					21.9	18.1		31.9
	Midwest USA					5.1		1.1	2.2
	Western USA	25.1				17.1	6.1	4.2	6.1
	Other	7.4	0.2	2.4	7.5	10.2	3.1	25.9	0.8
Total spending (millions of 1994 Canadian dollars)		C$1,201.7	C$117.9	C$91.2	C$653.8	C$7,004.1	C$308.5	C$1,206.3	C$3,480.7
Spending by state	New York	30.1		44.9	48.9	7.4	3.2	8.4	10.7
	Michigan	24.5			44.8	3.4	0.4		6.4
	Maine	10.5	99.8	7.8		2.2	17	5.6	0.9
	Vermont	3.5		45.2		1.9	0.8	5.3	1.7
	New Hampshire	0.1				0.7	3.3	1.9	0.5
	Great Lakes					6	2.5	3.6	8
	Northeast USA	0.4				6.8	9.9	10.6	6.5
	Southeast USA					36.9	46.3	52.7	47.3
	Midwest USA	2.6					3	1.8	2.9
	Western USA	25.1				30.5	13.6	10.1	6.2
	Other	3.2	0.2	2.1	6.3	4.2	0	0	8.9

percent at Buffalo. (These data by crossing are reported in more detail in the following sections dealing with each crossing.)

Of the total 36.1 million Americans visiting Canada in 1994, 27.6 million had origins in the eastern half of the US and 18.8 million of these eastern origin visits were same-day trips.

Length of Stay

The data indicate that 64 percent of all person-visits were same-day trips, with little variation by nationality and direction of the travel. These same-day trips are most likely related to local border community activity, while the other third of the trips, for longer than a day, are probably related to tourism and longer distance trips. Length-of-stay information for 1995 as well as 1994 was also obtained for four specific crossings on the eastern border:

Calais, Maine / St. Stephen, New Brunswick
Rock Island, Quebec / Derby Line, Vermont
Buffalo, New York (Peace Bridge) / Fort Erie, Ontario
Sarnia, Ontario / Port Huron, Michigan (Blue Water Bridge)

While there were few differences in length of stay by nationality for all eastern origins, there were some interesting differences for specific crossings. For instance, at Calais/St. Stephen, 83 percent of the Canadians entering the US were making same-day trips in 1995, while just 51 percent of the Americans entering Canada made same-day trips. This suggests that at this crossing a very large percentage of the Canadian trips to the US are related to the local community (e.g. shopping, commuting, local business, visiting friends or family and recreation) while US resident trips to Canada are more likely related to tourism than is the case with Canadians. Canadians traveling to the US account for some four-fifths of the total person-trips at the Calais/St. Stephen location.

Similar percentages of same-day trips occurred in each direction at the Blue Water Bridge and Derby Line/Rock Island crossings. However, at the Peace Bridge, the same-day percentages were reversed. At Buffalo, it was the Americans traveling to Canada that had a greater proportion of same-day trips, with 79 percent.

Origin-Destination Patterns

For same-day trips by Canadians to the US, 97 percent were by auto (Table 2); 46 percent of origins were in Ontario and 25 percent were in British Columbia. There were 39.4 million total same-day person visits by Canadians. Border-wide, the state of Washington was the largest destination for same-day trips with 25 percent of the total, while New York accounted for 24 percent of the trips, Michigan 23 percent, and Maine 16 percent. As would be expected, the data for one-night-plus visits border-wide show a greater percentage of trips to and from areas away from the border. While 97 percent of same-day trips were by auto, the percentage falls to 72 for longer duration trips.

Table 3: Selected characteristics of 1994 US visitors to Canada

Note: All values are percentages unless otherwise stated.

Traveler characteristic		Same day trips by US citizens to Canada				One or more nights stay by US citizens in Canada			
Residence		All states	New England	New York	Michigan	All states	New England	New York	Midwest
Number of trips		22,324,400	2,134,100	7,020,300	9,688,100	13,809,300	559,000	4,147,000	4,018,000
Mode of transport	Auto	92.6	Data not available			68.8	Data not available		
	Airplane					18.8			
	Other	7.4				12.4			
Trip purpose	Holiday/vacation	40.2	Data not available			49.9	Data not available		
	Visit friends	17.3				17.5			
	Meetings	6.1				7.9			
	Other	36.4				24.7			
Origin	New York	27.9	Data not available			14	Data not available		
	Michigan	37.3				12.3			
	Maine	6.6				1.8			
	Vermont	2.5				0.7			
	Southeast USA	2.1				9.1			
	Midwest USA	8.6				21.6			
	Western USA	11.5				22.9			
	Other	3.5				17.6			
Destination	Ontario	74.3	4.2	93.2	99.7	49.8	12.3	60.5	78.3
	Quebec	5.7	31.7	6		13.1	52.6	22	5.8
	Atlantic provinces	6.9	63.7			6.3	30.6	8.2	2.8
	Other	13.1	0.4	0.8	0.3	30.8	4.5	9.3	13.1
Total spending (millions of 1994 US dollars)		$862.7	$41.7	$259.1	$462.6	$4,395.7	$141.2	$1,269.0	$1,141.0
Spending by state	Ontario	Data not available	3.8	95	99.4	42.4	13	47.4	55.2
	Quebec		38.4	4.5		16.1	52.3	27.6	7
	Atlantic provinces		57.8			6.5	25.3	8.8	2.6
	Other		0	0.5	0.6	35	9.4	16.2	35.2

For the same-day trips, looking at just Atlantic province origins of trips to the US, the local nature of the traffic is even more apparent, with New Brunswick and Maine accounting for a percent of the origins representing 100 percent of the destinations. For longer overnight trips, Nova Scotia accounted for 47 percent of the origins, while Maine represented just 35 percent of the destinations. A similar trend is evident for Quebec and Ontario origins, with same-day trips being mostly local as one would expect, and overnight plus trips being distributed around the area to a much greater degree.

For the 2.2 million Americans visiting Canada on same-day trips, Michigan was the origin for 37.3 percent and New York accounted for 28 percent of the total visits. Ontario was the destination for 74 percent of these trips. For same-day visits with origins in New England, 64 percent of the visits were to the Atlantic provinces and 32 percent to Quebec. New York and Michigan origin same-day visits were almost exclusively to Ontario. For one-night-plus visits originating in New England, Quebec was the destination 53 percent of the time, followed by the Atlantic provinces. New York and other eastern state origins had an Ontario destination in 61 percent of the cases, and a Quebec destination in 22 percent of the person visits. Ontario was the key destination for Midwest one-night-plus origins as well.

Summaries of the percentage of trips with an origin or destination in the border area are included later in this report for each of the four crossings with specific travel data. At Buffalo, 50 percent of the bidirectional trips have both an origin and destination in the border states/provinces and an additional 42 percent have either an origin or destination in one of the eastern border states or provinces. At Port Huron/Sarnia, 76 percent of the trips have both origin and destination in Ontario and Michigan, making this a highly local crossing for autos, though not for trucks. The Calais/St. Stephen crossing had the lowest percentage of origins or destinations within border states, with a total of 67 percent, reflecting a greater proportion of long-distance overnight trips.

More specific origin-destination data were available from surveys done at Buffalo, Calais, and the Michigan crossings. These are reviewed in the following chapters. In general, the larger the metropolitan area, the larger the proportion of trips with an origin, destination, or both outside the border area, and the larger the proportion of trips with a duration of more than the same day.

Spending by Area

Statistics Canada travel series data show that in 1994 Canadians spent C$8.2 billion in the US on cross-border trips by all modes; C$1.2 billion during same-day trips, and C$7.0 billion on trips of one night or longer. Americans spent US$5.3 billion in Canada in 1994. Of that amount, US$4.4 billion was on one-night-plus trips. Spending totals by destination states or provinces for eastern origin areas by trip duration are shown in Tables 2 and 3. Note that the one-night-plus data includes airline as well as auto travel.

Almost all US spending in Canada occurs in Ontario or Quebec, but Canadian spending in the US is distributed more widely. Spending details for Canadians visiting the US via the four crossings for which detailed data were available show spending by destination for Canadians visiting the US. For the Calais crossing, spending by Canadians totaled C$124.4 million, with an average of C$62.7 per visit and 54 percent was spent in Maine, and an additional 11 percent occurring in an other eastern border state. Canadians using this crossing spent 20 percent of their US expenditures in Florida.

Canadians using the Niagara crossings spent C$527.3 million in the US and averaged of C$113 per visit. However, unlike the Calais crossing, only 21 percent of this was spent in New York or other border states, with 43 percent spent in Florida, and 23 percent in the rest of the southeastern US.

The Sarnia crossing was more similar to Calais, in that a larger percentage of spending was done in the border state or area. Spending at the Rock Island crossing, between Vermont and Quebec, is also concentrated in the border states, with 26 percent of it occurring in Vermont itself.

Trip Purpose

The primary source of trip purpose information is also from the Statistics Canada travel series. Unfortunately, the important element of trip purpose is highly suspect, as less than one percent of both Americans and Canadians indicated shopping as their primary trip purpose. This may be due to shopping being listed last on the survey forms or a reluctance to report shopping in the other country.

The data for the four specific crossings indicate that for Canadians visiting the US, the primary purpose given is "holiday-vacation" in about 55 to 65 percent of the visits. The second is "visit friends," at about 15 percent. At Calais, 6 percent of the respondents listed "transit to Canada" as the primary purpose. At Buffalo, "second home" was mentioned by 6 percent of those surveyed.

For Americans visiting Canada, 50 percent of those crossing at Calais and Rock Island mentioned "holiday-vacation" as the primary purpose. However, at Sarnia this response was provided just 38 percent of the time. The "visit friends" category was somewhat higher than at other locations at 23 percent.

Some additional trip purpose information is available from surveys at Buffalo and Calais, and is reported in the following chapters. Unlike the Statistics Canada data, these surveys indicate that shopping is a significant trip purpose for Canadian visits to the US. For instance, the October, 1990, weekday survey indicated that for Canadian vehicles entering the US, 21 percent were doing so for shopping. Another 21 percent indicated a work purpose. For Americans visiting Canada, just 3 percent reported shopping, and 8 percent reported work as their purpose. The most frequent reason given in this survey was recreation, at 37 percent for Canadians visiting the US, and 50 percent for Americans visiting Canada.

CHAPTER 3

Regional Characteristics and Issues

This chapter details traffic levels on the eastern border by region. The four subsequent chapters contain data on each region's overall traffic, and information on the characteristics and issues at each crossing. For four of the crossings additional travel data for the crossing is also provided. These crossings are at Calais, Maine; Derby Line, Vermont; Fort Erie, New York and Port Huron, Michigan.

Regional Traffic Levels

Figure 15 shows bidirectional traffic volumes for 1995 by vehicle type for each of the four eastern border regions. Bidirectional auto crossings totaled 57 million vehicles. New York and Michigan had similar levels of auto traffic, 21 to 23 million vehicles and 38 to 40 percent of total auto traffic respectively. Maine accounted for 9 million vehicles and 16 percent of the total, Vermont/New Hampshire for 3.4 million vehicles and 6 percent of total autos. Bidirectional truck crossings totaled 8.1 million.

Michigan accounted for 38 million vehicles (47 percent) and New York 31 million (38 percent). Maine and Vermont/New Hampshire split the remaining 1.2 million (15 percent). Trucks accounted for 9 percent of the total traffic crossing in New England, 12 percent at Niagara, and 14 percent in the Michigan/Ontario and St. Lawrence regions.

Figure 16 shows bidirectional traffic levels for autos and for trucks for 1984, and 1992 to 1995, for each of the four regions. Figure 17 shows the total growth in each region for autos and trucks for the periods of 1984 to 1995 and for 1992 through 1995. For autos the data indicate that each region had strong growth from 1984 to 1995, with Michigan/Ontario growth at 60 percent, and St. Lawrence at 49 percent. The other two regions had growth around 25 percent over the period. However, from 1992 to 1995, all of the regions except Michigan/Ontario showed a substantial decline in bidirectional auto traffic. The New England region had a 31 percent decline in traffic from 1992 to 1995, while St. Lawrence and Niagara

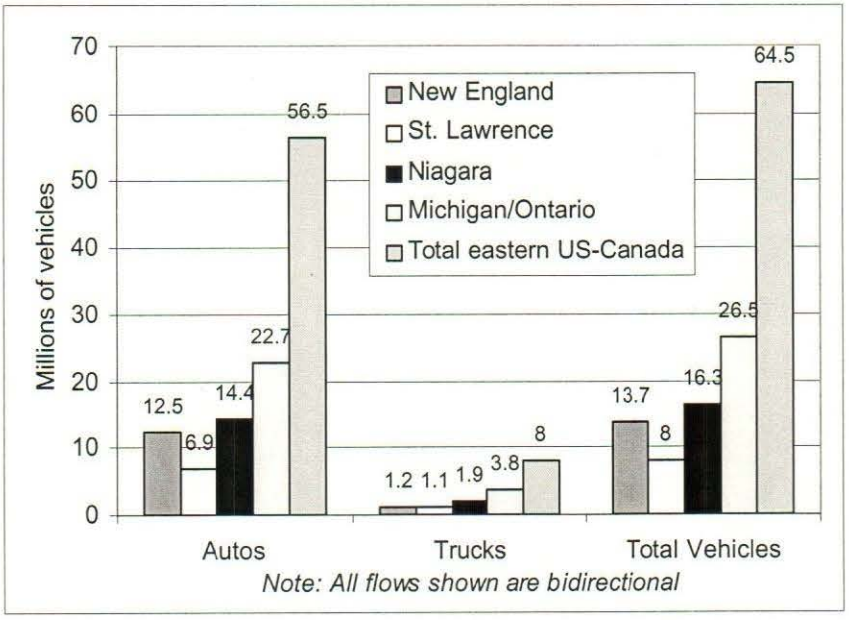
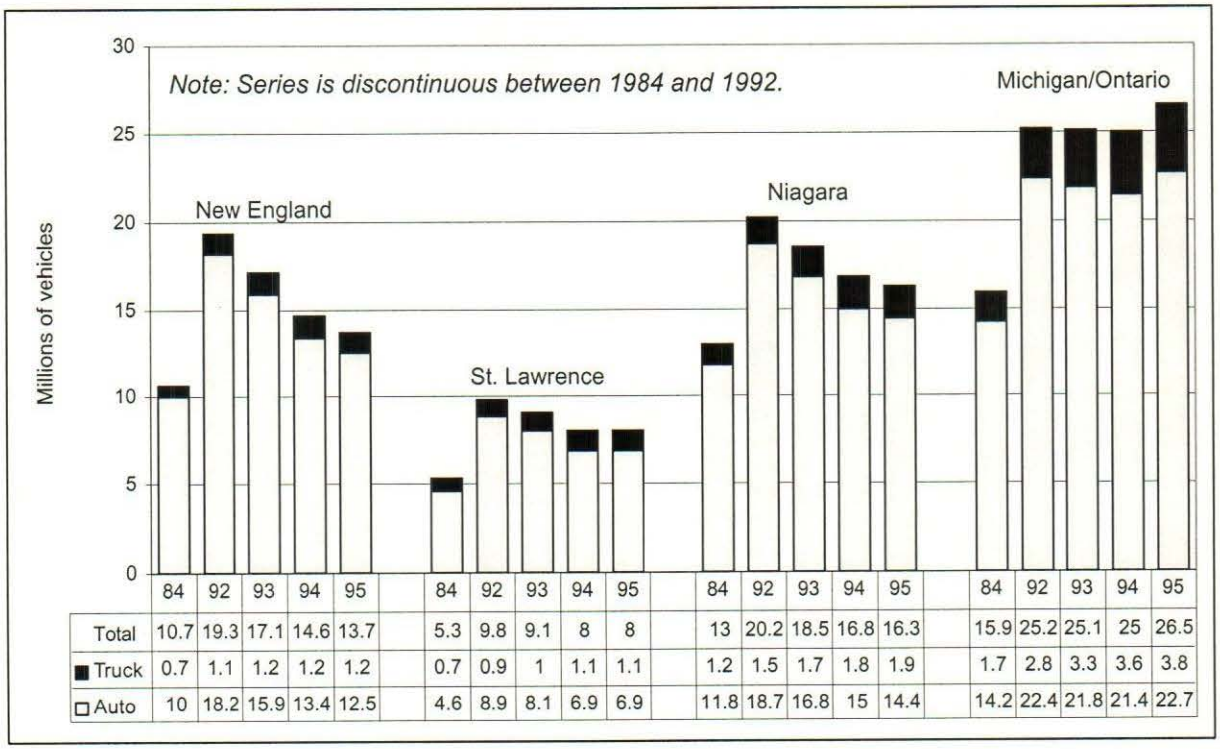


Figure 15: Total 1995 eastern border traffic by vehicle type and region



	New England					St. Lawrence					Niagara					Michigan/Ontario				
	84	92	93	94	95	84	92	93	94	95	84	92	93	94	95	84	92	93	94	95
Total	10.7	19.3	17.1	14.6	13.7	5.3	9.8	9.1	8	8	13	20.2	18.5	16.8	16.3	15.9	25.2	25.1	25	26.5
Truck	0.7	1.1	1.2	1.2	1.2	0.7	0.9	1	1.1	1.1	1.2	1.5	1.7	1.8	1.9	1.7	2.8	3.3	3.6	3.8
Auto	10	18.2	15.9	13.4	12.5	4.6	8.9	8.1	6.9	6.9	11.8	18.7	16.8	15	14.4	14.2	22.4	21.8	21.4	22.7

Figure 16: 1984-1995 bidirectional traffic levels by region and year

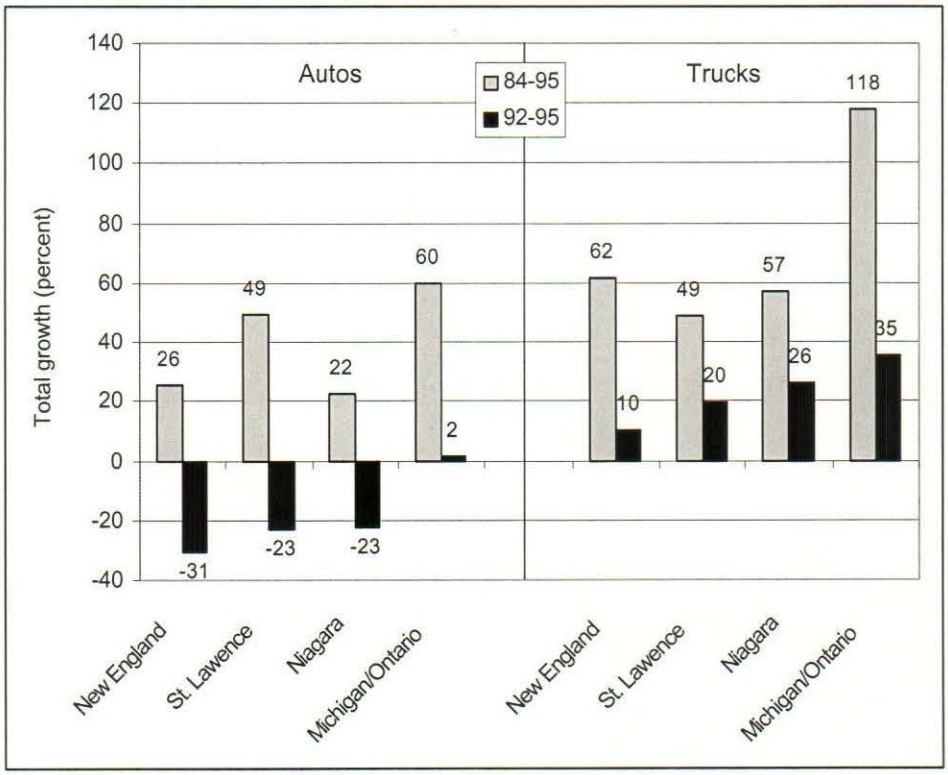


Figure 17: Total bidirectional total growth by vehicle type and region, 1984-95

declined by 22 percent. These declines reflect decreases in Canadian shopping in the US as evidenced by the declines in Canadian same-day trips discussed earlier. The Michigan/Ontario region had a 2 percent increase in auto traffic from 1992 to 1995, primarily because traffic through Detroit to gambling facilities offset declines in the number of trips for shopping. This traffic more than offset the losses from reduced Canadian shopping in the US.

For bidirectional truck traffic, each of the regions experienced strong growth from 1984 to 1995. Michigan/Ontario led the eastern border with a 118 percent increase, followed by New England with a 62 percent increase, and St. Lawrence and Niagara with increases of 49 percent and 57 percent respectively. Truck traffic growth remained strong from 1992 to 1995 in all four regions. The Michigan/ Ontario region led this growth at 35 percent, followed by St. Lawrence, and New England. The increases in truck traffic reflect continued specialization and integration of the US and Canadian economies in ways that lead to extensive cross-border shipping of components and finished goods.

Individual Crossing Rankings

Tables 4 and 5 summarize the traffic volume rankings for entry to the US of individual crossings in North America as a whole, and for the Canadian border alone.

Table 4: 1995 crossing rankings for US-bound traffic from Canada and Mexico

Rank	Autos		Trucks		Total	
	Crossing	Volume (millions)	Crossing	Volume (millions)	Crossing	Volume (millions)
1	San Ysidro (CA)	14.3	Ambassador Bridge	1.1	San Ysidro (CA)	14.3
2	El Paso BOA (TX)	8.5	Blue Water Bridge	0.6	El Paso BOA (TX)	8.8
3	Calexico (CA)	7.1	Peace Bridge	0.6	Calexico (CA)	7.3
4	Hidalgo (TX)	4.7	Otay Mesa (CA)	0.5	Hidalgo (TX)	4.8
5	El Paso Del Norte (TX)	4.5	Lewiston-Queenston	0.4	Ambassador Bridge	4.7
6	Detroit-Windor Tunnel	4.2	Blaine/Pacific (WA)	0.4	El Paso Del Norte (TX)	4.5
7	Ambassador Bridge	3.6	El Paso BOA (TX)	0.3	Detroit-Windsor Tunnel	4.3
8	Otay Mesa (CA)	3.5	Laredo International	0.3	Otay Mesa (CA)	4.0
9	Laredo Juarez (TX)	3.4	Champlain	0.3	Laredo Juarez (TX)	3.7
10	Peace Bridge	3.1	Laredo Juarez (TX)	0.3	Peace Bridge	3.7
11	Ysleta (TX)	2.9	Ysleta (TX)	0.3	Ysleta (TX)	3.2
12	Blaine/Douglas (WA)	2.7	Thousand Islands	0.2	Blaine/Douglas (WA)	2.7
13	San Luis (AZ)	2.6	Calexico (CA)	0.2	San Luis (AZ)	2.6
14	Brownsville B+M (TX)	2.4	Nogales West (AZ)	0.2	Blue Water Bridge	2.6
15	Laredo International	2.3	Brownsville B+M (TX)	0.2	Brownsville B+M (TX)	2.6

Table 5: 1995 crossing rankings for US-bound traffic from Canada only

Rank	Autos		Trucks		Total	
	Crossing	Volume (millions)	Crossing	Volume (millions)	Crossing	Volume (millions)
1	Detroit-Windor Tunnel	4.2	Ambassador Bridge	1.1	Ambassador Bridge	4.7
2	Ambassador Bridge	3.6	Blue Water Bridge	0.6	Detroit-Windsor Tunnel	4.3
3	Peace Bridge	3.1	Peace Bridge	0.6	Peace Bridge	3.7
4	Blaine/Douglas (WA)	2.7	Lewiston-Queenston	0.4	Blaine/Douglas (WA)	2.7
5	Blue Water Bridge	2.0	Blaine/Pacific (WA)	0.4	Blue Water Bridge	2.6
6	Blaine/Pacific (WA)	1.7	Champlain	0.3	Blaine/Pacific (WA)	2.1
7	Calais (ME)	1.7	Thousand Islands	0.2	Lewiston-Queenston	2.0
8	Sault St. Marie (MI)	1.6	Detroit-Windsor Tunnel	0.1	Calais (ME)	1.8
9	Queenston-Lewiston	1.6	Highgate (VT)	0.1	Sault St. Marie (MI)	1.7
10	Rainbow Bridge (NY)	1.6	Calais (ME)	0.1	Rainbow Bridge (NY)	1.6
11	Champlain	1.2	Jackman (ME)	0.1	Champlain	1.5
12	Massena (NY)	1.1	Houlton (ME)	0.1	Massena (NY)	1.2
13	Madawaska (ME)	1.0	Derby Line (VT)	0.1	Madawaska (ME)	1.0
14	Derby Line (VT)	0.8	Sault St. Marie (MI)	0.1	Derby Line (VT)	0.9
15	Thousand Islands	0.7	Massena (NY)	0.1	Thousand Islands	0.9

These rankings are for autos, trucks and total vehicles. Note that these are for individual crossings and not groups of bridges in the same port or city.

For auto traffic entering North America overall, the top five ranked crossings are on the Mexican border, with San Ysidro, California (south of San Diego) totaling 14.3 million autos entering the US in 1995. The Detroit-Windsor Tunnel is sixth with 4.2 million autos, and the Ambassador Bridge at Detroit-Windsor is seventh. The Peace Bridge at Buffalo-Fort Erie is 10th, and Blaine/Douglas in Washington is 12th.

For truck traffic entering the US in 1995 for all North America, Detroit-Windsor's Ambassador Bridge is first, with 1.1 million vehicles. The Blue Water Bridge was second, the Peace Bridge third, Lewiston-Queenston is fifth, Champlain, NY is ninth, and Thousand Islands is twelfth.

For total auto and truck traffic, entering the US, the Ambassador Bridge ranks fifth, the Detroit-Windsor Tunnel seventh, the Peace Bridge tenth, and the Blue Water Bridge is fourteenth.

Table 5 shows total traffic crossing the US-Canada border. For autos the Detroit-Windsor Tunnel, the Ambassador Bridge, and the Peace Bridge are ranked first, second, and third. For trucks the first three positions are the Ambassador Bridge, Blue Water Bridge and Peace Bridge. For total vehicle traffic (both cars and trucks) on the US-Canada border, the Ambassador Bridge was first, the Detroit-Windsor Tunnel second, and the Peace Bridge third. The Blue Water Bridge was fourteenth and Queenston-Lewiston bridge was fifteenth.

Traffic Characteristics and Issues on the Four Eastern Border Regions

This section contains an overview of the crossings in each of the four eastern regions a brief summary of traffic levels and a more detailed discussion for the four crossings for which detailed origin-destination data were available. The summaries conclude with a discussion of the key characteristics and issues for the region and at the individual crossings.

The operating characteristics of each crossing were determined through a combination of site visits and questionnaire surveys for locations not visited. Of the 62 crossings on the eastern border, 18 were visited by project personnel.

The 18 sites visited were[1]:

New England Region;
Calais, ME/Houlton
Jackman/Highgate Springs

1. The tunnel and bridge crossings are identified by the name of the facility. Other crossings are identified by the communities they connect.

Richford/Derby Line 91
Derby Line 5

St. Lawrence Region
Champlain
Ogdensburg
Thousand Islands
Massena/Cornwall bridge

Niagara Region
Peace Bridge
Rainbow Bridge
Whirlpool Rapids Bridge
Lewiston-Queenston Bridge

Michigan/Ontario Region
Ambassador Bridge
Detroit-Windsor Tunnel
Blue Water Bridge

For the sites not visited, questionnaires were mailed to the crossing operator on each side of the border, and to the federal inspection services (FIS) on each side. Responses were received for most locations and this information is summarized in Appendix C and discussed briefly in each region section. It should be noted that this is not an attempt to profile each crossing. The US Department of Transportation ISTEA 6015 Report includes profiles for each crossing. This report attempts to highlight key changes since the 6015 Report, and to summarize issues related to local operating characteristics.

The site visits and questionnaires addressed several types of information. Perhaps most important, was an assessment of whether the crossing was operating efficiently, with respect to the level of congestion and delays. The second type of information sought related to the characteristics of the crossing itself, such as hours of service and physical limitations. The third type related to the nature and type of traffic using the facility. Travel data from Statistics Canada were used in part for this section. Where origin-destination data and/or trip purpose data were available, this was obtained. However, for most locations this information was anecdotal. The fourth type of information related to investment needs. In addition to the surveys, information was also obtained from a questionnaire sent to state and provincial transportation agencies. The fifth type of information reported was institutional problems and opportunities, related primarily to FIS agencies and toll collection.

CHAPTER 4

The New England Region

The New England region includes 37 staffed crossings between Maine or Vermont and Quebec or New Brunswick that are tracked by Statistics Canada. However, US Customs does not report traffic data for each of these crossings separately, but instead combines several of the crossings into groups. This made it necessary to match the Canadian crossings with the locations that US Customs groups together in order to arrive at bidirectional traffic levels. The US data limitations result in our being able to report reliable bidirectional traffic levels for 16 of the crossings in this region.

Traffic

As indicated in Figure 15, there were 12.5 million bidirectional auto crossings in this region in 1995, or some 22 percent of the total on the eastern border. Nine million of these vehicles crossed crossings the border with Maine. Auto traffic grew 26 percent between 1984 and 1995, but decreased 31 percent between 1992 and 1995 (Figures 16 and 17). This decline in traffic between 1992-1995 was the largest proportional drop in traffic in the region.

Figure 15 also shows that 1995 truck traffic in the region totaled 1.2 million vehicles, 15 percent of the eastern US-Canada border total. Truck traffic was fairly evenly split between Maine and Vermont, with Maine representing 700,000 of the truck crossings. Trucks were 9 percent of the traffic. Between 1984 and 1995 truck traffic grew by 62 percent, a growth percentage exceeded only in the Michigan-Ontario region (Figures 16 and 17). Between 1992 and 1995, New England region truck traffic grew 10 percent.

Figures 18, 19 and 20 show the region's 1995 auto, truck and total vehicle bidirectional traffic levels, respectively. The busiest total traffic crossing was at Calais/St. Stephen, with 3.3 million vehicles, or 24 percent of the total, consisting of 3.1 million autos and 168,000 trucks. The second busiest crossings group in the area was Madawaska/Edmunston, with 1.8 million total vehicles, 1.7 million of them autos.

Figure 18: 1995 New England region bidirectional auto volumes

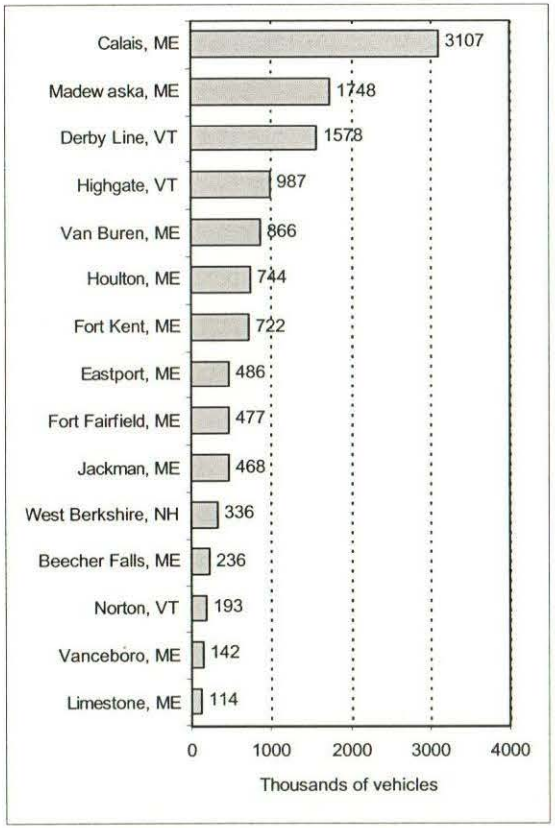


Figure 19: 1995 New England region bidirectional truck volumes

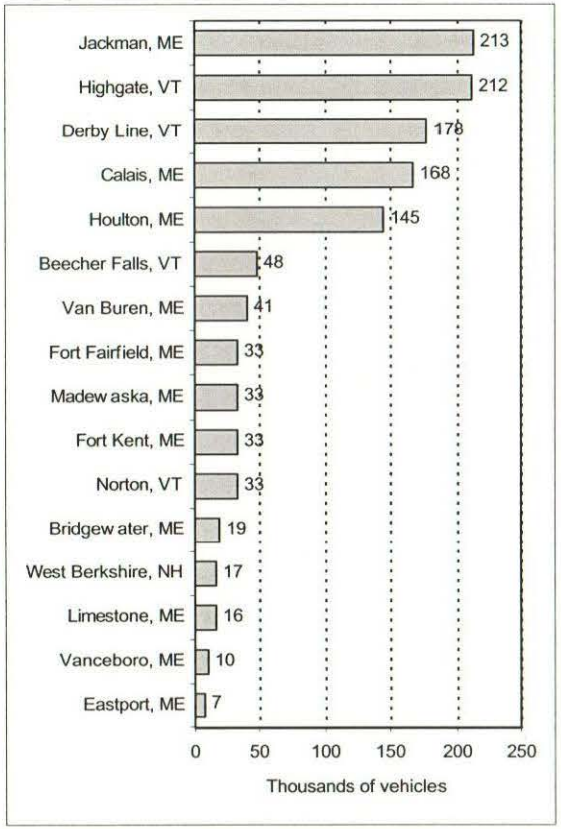
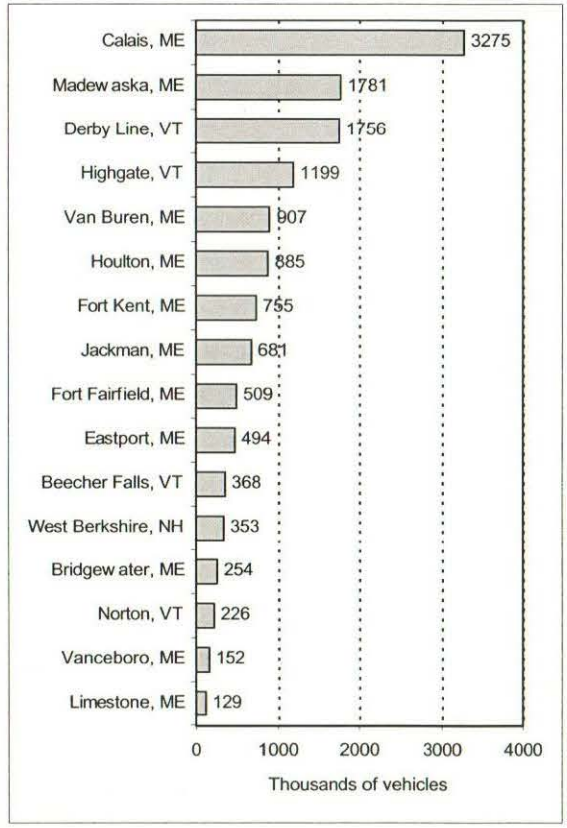


Figure 20: 1995 New England region bidirectional total volumes



Derby Line, Vermont/Rock Island was the third busiest crossing group with 1.8 million vehicles, 1.6 million of those being autos. The Jackman, Maine grouping of crossings was the busiest truck crossing with 213,000 vehicles, followed by the Highgate, Vermont group with slightly fewer trucks, and the Derby Line, Vermont group with about 180,000. The three crossings account for 50 percent of both truck and auto traffic in the region

Nature of Traffic

In general, Canadians in Eastern Canada use border crossings far more than Americans. The data for all modes (Tables 2 and 3 in Chapter 2) indicate that for Canadians with Atlantic province[1] trip origins and Americans with New England trip origins, 71 percent of all trips were made by Canadians. This is confirmed by the data for the Calais/St. Lawrence road crossings specifically, where 82 percent of the trips were by Canadians visiting the US. This contrasts with the Niagara region where the proportions of Americans and Canadians using the border was much closer to 53 percent Canadians.

For Canadians visiting the US in the New England region, the all-mode data indicate that for same-day trips, 99 percent originate in New Brunswick with a destination in Maine. For one-night-plus trips, 47 percent originate in Nova Scotia, 47 percent visit Maine and 18 percent visit the southeastern US. Many of these are probably by air. For Americans from New England visiting Canada for same day trips, 64 percent visit the Atlantic provinces and 32 percent visit Quebec. For one night plus trips, 53 percent visit Quebec and 31 percent visit Atlantic provinces.

Origin-destination data for the crossings (Table 6) for which specific information was obtained indicate that at Calais/St. Stephen 67 percent of the trips had a border state or province origin and/or destination, and 73 percent at Derby Line. Fifty-three percent of the trips had both an origin and destination on the border at St. Stephen, and 50 percent at Rock Island/Derby line. Because most Canadians live within driving distance of the border, those visiting the US were far more likely to have an origin as well as a destination in a border state/province than for Americans, far more of whom live in non-border states. At Calais/St. Stephen 67 percent of Canadian visits met this condition, but just 38 percent of Americans. Similar numbers exist at Derby Line. This suggests that for both crossings, Canadians are more likely to use the facility for same day interaction than is the case for Americans. American trips are more likely to have a tourist related or longer distance purpose.

For all modes of travel, Americans with a New England origin making same day trips spent US$41.7 million in Canada during 1994. Fifty-eight percent of this was spent in Atlantic provinces, and 38 percent in Quebec. Americans making one-night-plus trips spent US$141.2 million, with 52 percent of that in Quebec and 25

1. The Atlantic Provinces in this context includes Newfoundland, Labrador, Nova Scotia, and Prince Edward Island.

Table 6: Summary of origin-destination patterns at four crossings

Crossing	Direction	Internal-internal[a]	Internal-external[b]	Volume
Calais/St. Stephen	Canada→US	66.5%	8.1%	1,985,000
	US→Canada	38.2%	19.7%	437,000
	Total	53.1%	13.6%	2,422,000
Rock Island/Derby Line	Canada→US	55.5%	16.5%	1,290,000
	US→Canada	42.6%	32.4%	411,000
	Total	50.2%	23.0%	1,701,000
Port Huron/Sarnia	Canada→US	75.4%	8.0%	2,739,000
	US→Canada	76.9%	12.5%	1,872,000
	Total	75.8%	11.0%	4,611,000
Buffalo/Fort Erie	Canada→US	48.9%	43.2%	4,660,000
	US→Canada	56.5%	32.3%	4,205,000
	Total	50.3%	41.2%	8,865,000

a. Both origin and destination in one of the border states/provinces.
b. Either the origin or destination (but not both) in one of the border states/provinces.

percent in the Atlantic provinces. Canadians from Atlantic provinces making same-day trips spent C$117.9 million, 99 percent of that in Maine. Canadians with Atlantic province origins making one-night-plus trips spent C$308.5 million in the US, 37 percent of that in Florida and 17 percent in Maine. The Calais crossing data indicate that Canadians visiting the US spent C$124.4 million, 54 percent of it in Maine and 20 percent in Florida. New England origin Americans visiting Canada spent US$66.7 million, 41 percent in Nova Scotia and 38 percent in New Brunswick. For Derby Line an even greater percentage of the visits was local, with the spending also concentrated in the border area to a greater degree than was the case at Calais.

Investment Needs

Appendix D includes summaries of the investment needs for each state and province (all figures are in US dollars). The need for the states and provinces in this region are primarily for corridor highways. These include $56 million in Maine and $101 million in Vermont, primarily for US-2. New Brunswick has $59 million in corridor needs and Quebec has $5 million.

The most pressing border crossing need is at the Calais/St. Stephen crossing, where $8 million is required long term (half on each side). New Brunswick's cor-

ridor needs also include $23 million for connection to the Calais/St. Stephen Bridge.

Key Problems and Issues

Because of the large drop in traffic between 1992 and 1995 the number of border crossing delays and associated traffic congestion has lessened considerably. However, any increase in traffic to 1992 levels will cause several problems in the region.

The most important issue in the area involves traffic flows into and out of the Calais/St. Stephen crossing. $31 million in total long term investment needs for the crossing itself and for connectors have been identified. However, before work can begin on an alternate route to the crossing, the parties must agree on the best option.

Another investment issue concerns the condition of Federal Inspection Service border crossing station facilities. Many of the buildings at smaller crossings are in need of repair, and some require improvements to covered inspection areas. FIS personnel would also like more direct radio communication links between Canadian and American staffs on each side of a crossing, and this would require investment in radio systems.

Other key issues in this region include the level of staffing available, and hours of service for some crossings. Another issue involves which crossings are designated for commercial use.

Because of the isolated nature of many of the crossings in this region there are also a number of opportunities for changes in procedures and the use of technology. Joint US-Canadian inspection facilities on one side of the border would seem to be a reasonable arrangement at many of these crossings. Even more important, is the opportunity for use of remote inspection technology to eliminate staffing at some crossings. Other possibilities include the use of border crossing permits for frequent travelers — eliminating the need for routine screenings at remote locations.

Individual Crossings

Information on traffic levels, travel data (for four specific crossings only), and key issues is provided in this section. More detailed information is provided for each of the crossings that were visited during the study. For other locations, a summary of questionnaire results is provided in Appendix C.

Calais/St. Stephen

Traffic

The Calais location actually consists of two unique but nearby crossings. US Customs groups the St. Stephen and Milltown crossings to arrive at one reported num-

ber for traffic entering the US. However, Statistics Canada reports data on entries to Canada for the two individual crossings. Based on the Canadian entry data, it appears that the St. Stephen crossing accounts for 67 percent of the auto volume and about 40 percent of the truck volume.

Figure 21 summarizes the bidirectional traffic flows over time for autos, trucks and total vehicles at each of the top three crossings. This Figure also shows the percentage changes in volume over the 1984-1995 and 1992-1995 time periods for autos and trucks.

For Calais, Figure 21 indicates that traffic has grown from 2.1 million total vehicles in 1984 to 3.3 million in 1995. The Figure also indicates that auto and truck traffic, respectively, grew 55 percent and 64 percent between 1984 and 1995. However, between 1992 and 1995 auto traffic declined 16 percent and truck traffic fell by 5 percent. The rate of decrease for autos was about half the region's decline of 30.2 percent during this time period. For trucks the decline of 5 percent was in contrast to the region's net gain of 10.2 percent in truck traffic.

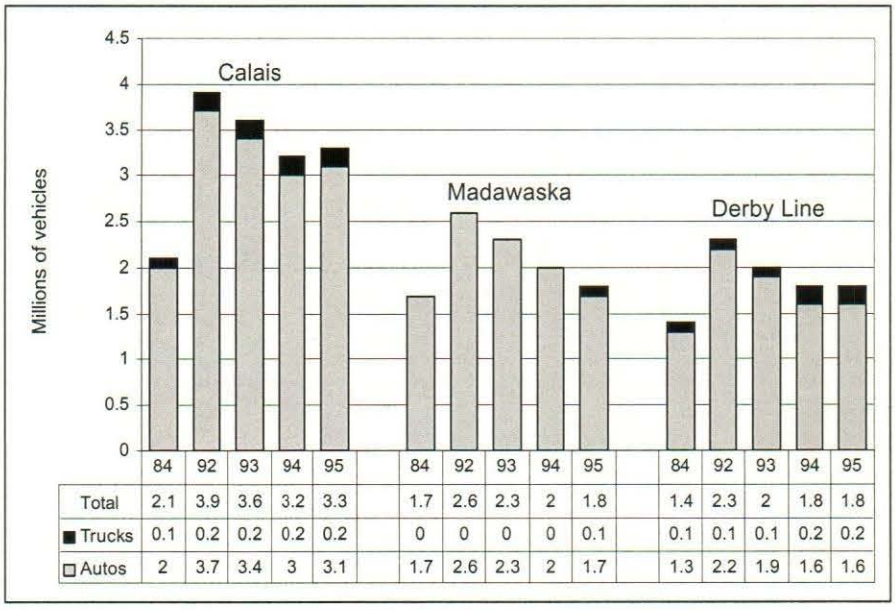
Total inbound traffic to the US at Calais was 1.6 million autos and 0.1 million trucks. The total vehicle traffic entering the US at Calais in 1995 represents 1.4 percent of all entries to the US from Canada and Mexico, and 4 percent of all entries from Canada. Calais ranks seventh in auto traffic entering the US on the Canadian border. The truck volume ties for the ninth busiest US-Canada crossing.

Travel Data

Travel data for the St. Stephen crossing was provided by Statistics Canada. The number of person trips reported is for Canadians returning to Canada and for Americans visiting Canada. As such, the data includes only the inbound trip to Canada and cannot be related to the total number of vehicles crossing on a bidirectional basis. The data also represents total persons in the car, not the number of cars. These data were gathered in a survey of travelers at the border, with sample percentages applied to the total person trip information gathered on a census basis by Canada Customs. The data are for 1995.

These data show that there were 2.4 million person trips at the St. Stephen crossing (excluding Milltown), with 82 percent of the person trips being those by Canadians visiting the US. For Canadians visiting the US using this highway crossing, 67 percent of the origin-destinations were New Brunswick/Maine. For Americans visiting Canada 38.2 percent were Maine/New Brunswick. Massachusetts/New Brunswick accounted for 8 percent of the trips.

For Canadians visiting the US, the main trip purpose was holidays or vacations. Interestingly, there was no indication that shopping was a significant factor. This may be due to a reluctance to reveal such activity to authorities, or to the last position that this choice occupies on the questionnaire. Seventy-five percent of the visitors considered Maine to be a destination, and 54 percent of the C$124.4 million in expenditures were made in Maine. However, 19.7 percent of the expenditures were made in Florida. The average visitor spent C$62.65 per visit, with 58.1 per-



	Calais					Madawaska					Derby Line				
	84	92	93	94	95	84	92	93	94	95	84	92	93	94	95
Total	2.1	3.9	3.6	3.2	3.3	1.7	2.6	2.3	2	1.8	1.4	2.3	2	1.8	1.8
■ Trucks	0.1	0.2	0.2	0.2	0.2	0	0	0	0	0.1	0.1	0.1	0.1	0.2	0.2
□ Autos	2	3.7	3.4	3	3.1	1.7	2.6	2.3	2	1.7	1.3	2.2	1.9	1.6	1.6

Figure 21: Changes in bidirectional vehicle traffic at the top New England region crossings

cent of visitors spending less than C$50 and 15.8 percent spending C$50-199. 82.8 percent of the Canadian visits were same day.

Of the 448 million Americans visiting Canada, 58.1 indicated they were on holiday or vacation. As was the case with Canadians visiting the US, there was almost no indication that shopping was a reason for travel. Maine was the origin for 40 percent of the trips, with Massachusetts the source for another 13 percent. US expenditures totalled $66.7 million, with 41 percent occurring in Nova Scotia and 38 percent in New Brunswick. Americans spent an average of US$149 per trip.

Issues

Key issues at Calais relate to the volume of traffic moving through the central business districts of both communities, and the inability to process this traffic without severe congestion. The volume of trucks carrying hazardous goods is also a concern. While the decrease in traffic levels since 1992 have somewhat reduced the scope of the problem, any increase in traffic will lead to more serious problems.

Madawaska, Maine

The Madawaska location is in fact just one crossing, a bridge over the St. John River on US Route 1. In 1995 1.7 million autos used this crossing, along with less than 0.1 million trucks, for total vehicle traffic bidirectionally of 1.8 million. Unlike the other major crossings in the region, Madawaska traffic grew just 3 percent between 1984-1995 (see Figure 21). During this time the overall eastern bor-

der experienced growth of 39 percent in auto traffic, and the New England region experienced 26 percent growth. Much of this decline was in the 1992-1995 period when auto traffic declined 33 percent, double the rate of decline at Calais, but similar to the overall regions decline in auto traffic. Truck traffic grew at two thirds of the rate seen in the overall region between 1984-1995, but declined 19 percent from 1992-1995 while overall truck traffic in the region was growing 10 percent.

Total inbound traffic to the US at Madawaska was 0.9 million autos and considerably less than 0.1 million trucks. The total vehicle traffic entering the US in 1995 was 8 percent of all entries to the US from Canada and Mexico, and 2 percent of all entries from Canada. The combined inbound movements at Madawaska are not sufficient to rank it as one of the top fifteen crossings for combined North American entries to the US. However, Madawaska does rank 13th for auto traffic entering the US from Canada.

Traffic at this crossing is primarily related to local shopping and commuters, with some tourist traffic as well. Commercial traffic is primarily related to timber, lumber and paper, with a good deal related primarily to the Fraser Paper Company. While short delays are possible this is an infrequent occurrence. There is some concern about summer overtime hour availability on the US side. On the Canadian side there is insufficient space between the primary inspection area and the highway, and there are some problems with overtime budgets.

Derby Line, Vermont

The Derby Line group of crossings consists of Derby Line I-91, Derby Line Route 5, Highwater and Beebe. Again, the Canadians report on each of these locations but the US combines all four crossings into one set of numbers. Based on the Canadian entry data it appears that the two Derby Line crossings account for about 45 percent of the traffic each and that the remaining 10 percent is split between Highwater and Beebe.

Traffic

During 1995 1.6 million autos and 0.2 million trucks used these combined crossings on a bidirectional basis, as shown in Figure 21. Virtually all of the trucks used the Derby Line I-91 crossing. Derby Line auto traffic grew 25 percent from 1984 to 1995, but declined 27 percent from 1992 to 1995, leaving total auto traffic up about 0.3 million vehicles from 1984. The growth in auto traffic from 1984-1995 was slower than that seen on the entire eastern border during this period, and the decline in traffic from 1992-1995 was faster than that seen on the overall eastern border. The Derby Line changes in auto traffic were similar to those seen across the New England region. The relatively small levels of truck traffic changed at rates similar to those on the eastern border.

Total inbound traffic to the US at Derby Line was 0.8 million autos and 0.1 million trucks. The total vehicle traffic entering the US at Derby Line in 1995 was about one percent of all entries to the US from Canada and Mexico, and 2 percent

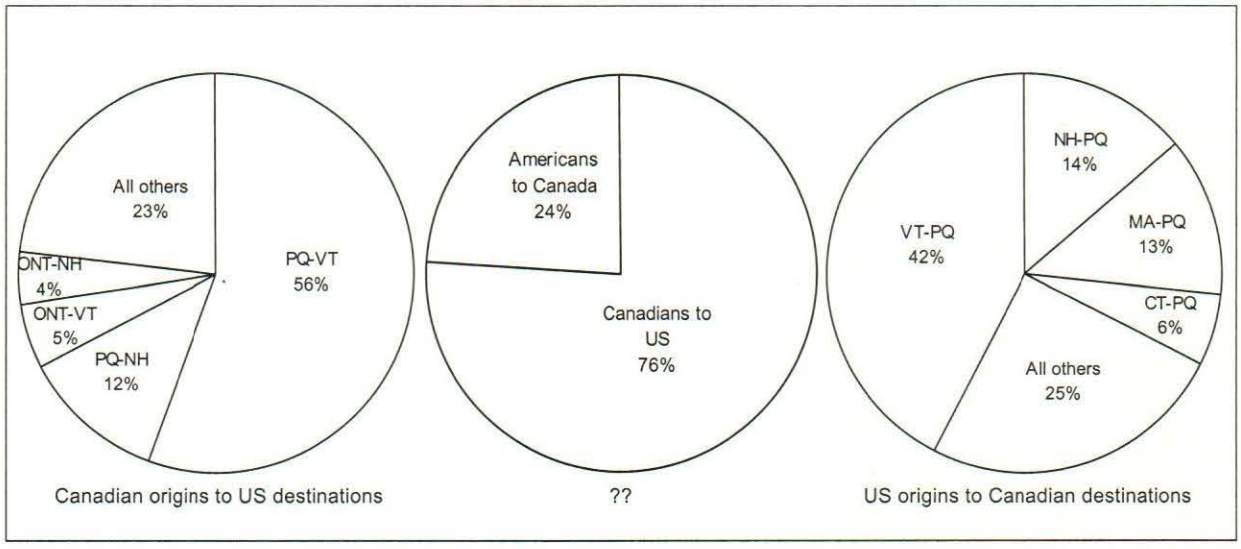


Figure 22: Derby Line/Rock Island origin-destination patterns

of all entries from Canada. Derby Line ranks 14th for auto traffic from Canada entering the US, and 13th for trucks.

Travel Data

Figures 53-59 summarize the automobile travel data for the Derby Line/Rock Island crossing. The data is based on surveys of returning Canadians and Americans visiting Canada. As such, the data do not relate to the number of vehicle crossings because they do not include the round trips and measure persons rather than vehicles. The data are for 1995.

Figure 22 indicates that there were 1.7 million person trips at these crossings, with Canadians accounting for 76 percent of them. For Canadians visiting the US, 56 percent of the travelers were from Quebec to Vermont. Another 12 percent were Quebec to New Hampshire. Sixteen percent of trips involved US destinations outside the border area into states such as Massachusetts and New York. For the much smaller number of Americans visiting Canada, 43 percent of the trips were from Vermont to Quebec, with 14 percent from New Hampshire to Quebec. Another 19 percent of crossings involved citizens from Massachusetts and Connecticut.

There are two interesting points in the origin-destination data. First, there is a fairly significant number of New Hampshire persons using Vermont crossings, and a significant number of Canadians visiting New Hampshire via crossings in Vermont and Maine. This illustrates New Hampshire's potential interest in border crossing issues despite the fact that they have only one crossing. The other interesting point is the number of Massachusetts, Connecticut and new York residents using these border crossings.

Figure 23 indicates that for Canadians visiting the US, (1.289 million person visits) some 66 percent stated the trip purpose was holidays/vacation. Shopping was again a very small percentage of the responses given, calling into question the veracity of the answers to this question on these surveys. Vermont was the destination for 63 percent of the Canadians, and Vermont, Maine and New Hampshire combined were the destination for 87 percent of the visitors. Canadians using this crossing spent C$83.8 million in the US during 1995, or an average of C$65. In terms of where the money was spent, 26 percent was spent in Vermont, and 77 percent was spent in the three border states in New England. Massachusetts and Florida each received another 6 to 7 percent. Some three-quarters of the visits were same day, and 13 percent being more than two nights.

Figure 24 has information on American visits to Canada, a much smaller number of just 411,000 person visits. Americans had longer visits to Canada, with just half the trips being same-day, and some 30 percent being for two nights or more. This points out the more tourist oriented nature of the American visits compared to the Canadians, although a smaller percentage of 51 percent indicate the main trip purpose was holidays/vacations. Quebec was the destination for 93 percent of visitors and was the location of spending for 92 percent of the US$57.5 million in total spending.

Issues

Because Derby Line consists of several crossings, the nature of the traffic and issues varies somewhat. The Derby Line/I-91 crossing is the major crossing. It is primarily a tourist crossing; commercial traffic is primarily from within 100 miles. Origins and destinations are generally between New England and New York/Conneticut and Montréal. There are some summer primary inspection delays, amounting to about 15 minutes for autos. In contrast, the Derby Line/Route 5 crossing is much more local traffic, generally local residents making one-day trips with very few delays. The Beebe crossing has primarily local traffic with very few delays. This crossing is a candidate for reduced hours.

Other Crossings

The other crossings in the region are primarily used by local traffic. Appendix C contains summaries of information on these crossings.

These crossings have very low traffic levels and are generally used by local tourists, shoppers, and commuters. Some crossings are also used as alternate routes when the major crossings may be more congested. There is not any significant long distance truck traffic at these locations, but there is locally important commercial traffic. Many of the crossings operate on a commercial permit system. While not of significant international importance because of the distances between crossings, each one is important to the local community.

Key issues at these crossings relate to the high costs of operating the facilities under current approaches. Many of the crossings have substandard buildings, no

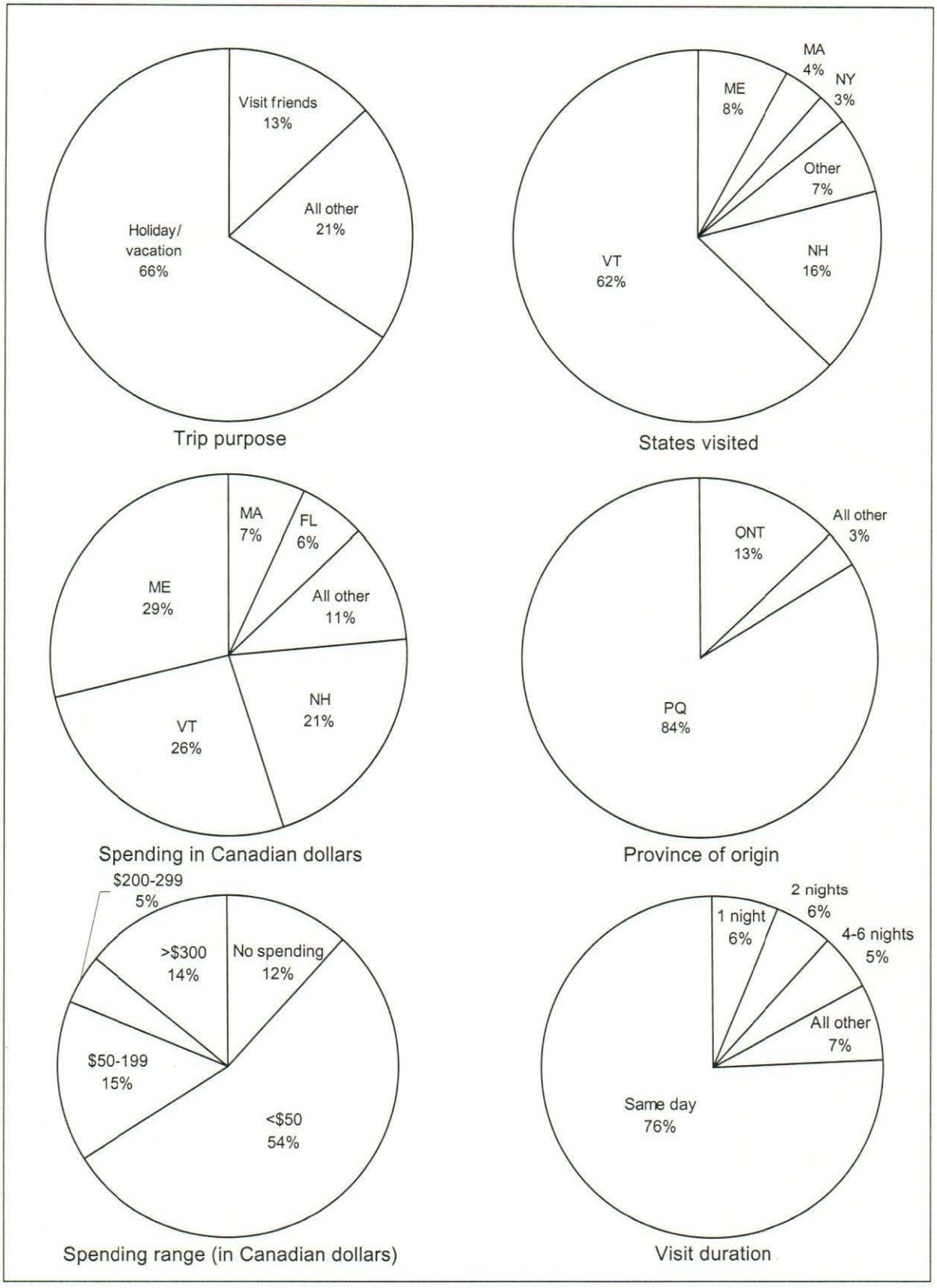


Figure 23: 1995 profile of Canadian visitors at Derby Line/Rock Island

covered primary inspection, and no commercial facilities. However, before major improvements are made there need to be decisions on the use of joint facilities at these smaller crossings.

There are promising opportunities for joint US-Canadian facilities, and for other steps to maximize local service while reducing costs. There already are two joint facilities on this border, and these should be studied for the feasibility of expanding the concept to other locations. In many cases the Canadian FIS personnel indicate there is good potential for this concept. FIS on both sides also indicate a strong desire for better radio communication between the sides at isolated outposts. They indicate there would be a considerable safety benefit for officers on both sides if they were in closer communication. Other approaches which need to be implemented include greater use of video monitoring, and pass systems for passenger vehicles. Both these systems could increase hours of service and reduce any budgetary need to close crossings.

CHAPTER 5

The St. Lawrence Region

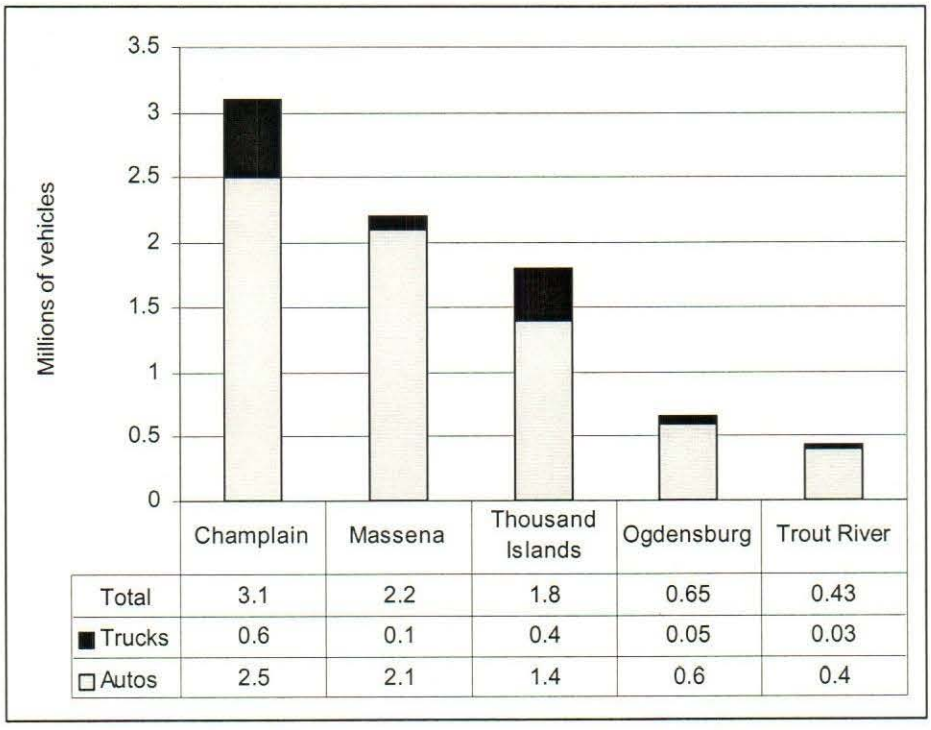
The St. Lawrence region, which includes all New York crossings except those on the Niagara frontier, consists of 13 staffed crossings. However, US Customs groups a number of these crossings and only reports crossing level data for a total of five locations in eastern New York.

Traffic

As Figure 15 indicates, there were 6.9 million auto crossings and 1.1 million truck crossings in this region in 1995. This is 13 percent of the auto and 14 percent of the truck crossings on the eastern US-Canada border. In comparison with the New England region, the auto traffic is about one half the level, and the truck traffic is only slightly lower. Auto traffic in the St. Lawrence region grew by 49 percent between 1984 and 1995 but fell by 23 percent between 1992 and 1995 (Figures 16 and 17). The auto traffic growth is almost twice as strong as in the New England and Niagara regions; the decline in auto traffic was similar to that seen in those regions.

Figure 15 shows that trucks comprised 14 percent of total border crossing traffic in the St. Lawrence region, compared with 9 percent in the New England region, and identical to the proportion in the Michigan/Ontario region. Between 1984 and 1995 truck traffic grew by 49 percent, and by 20 percent between 1992 and 1995, generally in line with growth in the other regions.

Figure 24 shows the region's 1995 auto, truck and total vehicle bidirectional traffic levels. The St. Lawrence region's busiest total traffic crossing area was Champlain, with 3.1 million vehicles. This traffic consisted of 2.5 million autos and 600,000 trucks. The second busiest crossing was at Massena, with 2.2 million total vehicles, 2.1 million of them autos. The Thousand Islands crossing was the third busiest, with 1.4 million autos, and 400,000 trucks.



	Champlain	Massena	Thousand Islands	Ogdensburg	Trout River
Total	3.1	2.2	1.8	0.65	0.43
■ Trucks	0.6	0.1	0.4	0.05	0.03
□ Autos	2.5	2.1	1.4	0.6	0.4

Figure 24: 1995 St. Lawrence region crossings by vehicle type

The top three crossings in this region account for 87 percent of the region's total traffic and 93 percent of truck crossings. Ogdensburg and Trout River crossings account for 600,000 and 400,000 vehicles respectively, almost all cars.

Nature of Traffic

While there are no travel data that directly correlate with the St. Lawrence region, there are some all modes travel data from Statistics Canada for Canadian visits to the US with a Quebec origin. For Americans visiting Canada there also are data for New York origins in general.

These data, which include all modes of travel including air (Tables 2 and 3 in Chapter 2), show that Canadians make more cross-border trips than do Americans. For Canadians visiting the US, 55 percent made same-day trips, 97 percent of them by auto. Vermont was the origin of 48 percent of the Quebec visits, and New York 38 percent. Vermont and New York each received 45 percent of the spending on same-day trips. For one-night-plus trips, 69 percent were by auto. New York was the destination 20 percent and Vermont 17 percent of the time. Maine and other Northeast states accounted for another 25 percent of the total. Quebec residents spent $1.2 million in the US, 42 percent of that in Florida.

For Americans visiting Canada from New York and other eastern states (Tables2 and 3), the data are less specific and not as useful. Visits and spending primarily occur in Ontario and Quebec. However, it should be noted that this includes eastern New York as well as Niagara regions.

Investment Needs

Appendix D summarizes border crossing investment needs for the region. For the St. Lawrence region there are $190 million in identified investments, evenly split between New York and Ontario. $178 million of this is identified as long-term. The biggest projects are replacing the Thousand Islands bridge and providing a new Massena-Cornwall bridge. New York also indicates a need for $86 million in corridor projects that would benefit the eastern New York region on highway routes 11, 30, 52 and 56.

Perhaps the most important highway issue in this region is that of corridor roads. In northern New York there has been a long history of debate over state commitments to these facilities. For instance, the Ogdensburg Bridge and Port Authority has long argued that the state committed to a four-lane road south of its crossings when the bridge was built in 1960. There also has been a long debate over the need for a four lane highway in Ontario between this bridge and Ottawa, with current plans calling for Route 416 being widened to the west of this crossing. The state's long-term corridor investment document indicates a need for upgrades to Routes 11, 30, 52 and 56. This is generally an issue for all the crossings in eastern New York, except for Champlain, because traffic using these crossings does not have good freeway access to southern parts of the state or to the east.

The key Champlain crossing is served by LaColle Route 15, which connects to Canadian freeways to the northeast and southwest; and to I-87 to the south, which connects to a complex of other US Interstate freeways to the south, east and west. These limited access highways are among the important trade corridors that are vital to the US and Canadian economies, but the capacity and condition of these roads and much of the Interstate system varies considerably. Substantial investments are required to meet both current and projected needs.

Another issue involves the need for new bridges at Thousand Islands and Massena. Because of weight restrictions there have been some local demands for new crossings, although the current bridges have substantial excess roadway capacity. The whole issue of crossing construction costs is also significant. For instance, the state of New York has periodically demanded that construction loans from the early 1960s, such as at Ogdensburg, be paid back much faster than the current pace. Other issues related to the crossings in this area include ones dealing with ownership of and authority over the land and crossings. At Massena, the crossing cuts through an Indian reservation, and there have been occasional shutdowns of the facility because of disputes with the Canadian federal government.

Declines in auto traffic between 1992 and 1995 substantially reduced the number and severity of delays, and current staffing on both sides of the border appears to

have been adequate. However, should traffic volumes return to earlier levels, problems with staffing and delays are likely to return.

Individual Crossings

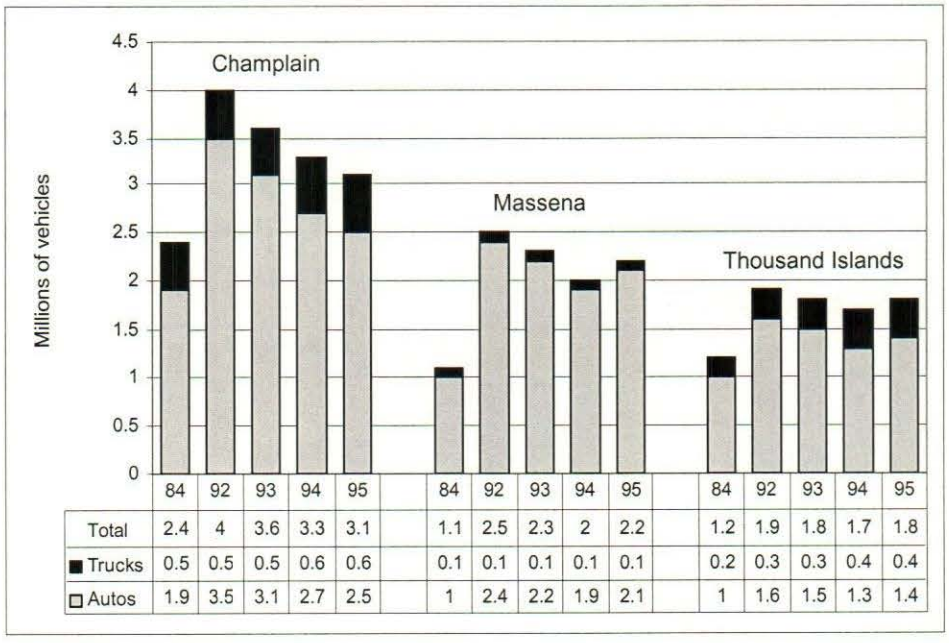
Champlain, New York

Traffic

The Champlain crossing group consists of five distinct crossings, but 63 percent of the auto volume and 99 percent of the truck volume use the I-87/LaColle Route 15 crossing. Almost all of the remaining traffic crosses at either LaColle Route 221 or Route 223.

Figure 24 summarizes the bidirectional changes in actual volumes over time, and the percentage changes over two time periods, for the three most important crossings in the region. From 1984 to 1995 the Champlain areas bidirectional auto traffic grew 31 percent, a considerably slower rate than that seen in the St. Lawrence region as a whole (Figure 25). From 1992 to 1995, auto traffic declined 29 percent, a somewhat greater decline than the region's overall 23 percent reduction. Truck traffic grew 24 percent from 1984 to 1995, compared with the region's 49 percent growth.

Trucks accounted for 19 percent of the total vehicles at this group of crossings compared with the total region's 14 percent. All of these trucks used LaColle Route 15 and I-87, where trucks comprise 27 percent of the total vehicles.



	Champlain					Massena					Thousand Islands				
	84	92	93	94	95	84	92	93	94	95	84	92	93	94	95
Total	2.4	4	3.6	3.3	3.1	1.1	2.5	2.3	2	2.2	1.2	1.9	1.8	1.7	1.8
■ Trucks	0.5	0.5	0.5	0.6	0.6	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.4
□ Autos	1.9	3.5	3.1	2.7	2.5	1	2.4	2.2	1.9	2.1	1	1.6	1.5	1.3	1.4

Figure 25: Top St. Lawrence region crossings

Inbound traffic to the US at Champlain totaled 1.2 million autos and 300,000 trucks. The total vehicle traffic entering the US at Champlain in 1995 was 1 percent of all entries to the US from Canada and Mexico, and 3 percent of all entries from Canada. Champlain ranks ninth for truck traffic entering the US from all of North America, accounting for 3 percent of all trucks entering the US. For auto traffic entering from Canada alone, Champlain is the 11th busiest crossing, and it is the sixth busiest truck entry point on the Canadian border.

Issues

There are few significant issues at the crossings themselves. However, as traffic levels increase, possibly as a result of gambling casino traffic, problems with delays and staffing will likely return.

As noted, though, the I-87/LaColle Route 15 connects with the complex of Interstate highways serving the US and connecting to Mexico. Tapping and maintaining this entry system is important to this region.

Massena, New York

Traffic

In 1995, 2.1 million autos and 100,000 trucks used this crossing of the St. Lawrence River, for a total bidirectional volume of 2.2 million (Figure 24). Auto traffic at this crossing grew 113 percent from 1984 to 1995, compared with the region's overall 49 percent growth, and the eastern border's overall 39 percent growth. Between 1992 and 1995 auto traffic declined 12 percent, only half the rate of decline seen in the overall eastern New York region (Figure 25). The small volumes of truck traffic generally grew at the same rate as that of the overall region during both time periods.

Total inbound traffic to the US at Massena was 1.0 million autos and fewer than 100,000 trucks. The total vehicle traffic entering the US at Massena in 1995 was 1 percent of all entries to the US from Canada and Mexico, and 3 percent of all entries from Canada. Massena ranks 12th for auto traffic entering the US on the Canadian border, and 15th for trucks.

Issues

One of the key issues involving this bridge is the need for redecking, as well as the potential need for a new bridge. The redecking has an estimated cost of $10 million, while a new bridge would have an estimated cost of $60 million. New York has classified both projects as long-term needs.

The redecking issue is the ability of the current bridge to carry heavy logging trucks. In the past, trucks weighing up to 110,000 pounds were routinely allowed to cross. However, several years ago plans were made to restrict trucks to 72,000 pounds but more recent studies have indicated 80,000 pounds would be acceptable with heavier limits for 48 hour advance-notice loads.

In the past, a new bridge off the Indian reservation has been considered in order to deal with traffic levels and relieve the Indian reservation from traffic problems. The current situation leads to large traffic flows through the reservation.

Should traffic grow significantly, there may be a need for the addition of toll booths on the Canadian side, though permission from the Mohawk Indians would be required. There are no current plans to expand. While there were a number of delays in the 1990-1992 period, recent declines in traffic of 12 percent have reduced these problems.

Thousand Islands, New York

Traffic

The Thousand Islands location is a single crossing consisting of several bridges. In 1995, bidirectional auto traffic was 1.4 million vehicles and truck traffic totaled 400,000 — 22% of the 1.8 million vehicles (Figure 24).

Auto traffic at this location grew 36 percent between 1984 and 1995, but declined by 15 percent between 1992 and 1995 (Figure 25). These changes are very similar to the pattern on the entire eastern border during that time. Compared with the St. Lawrence region as a whole, the growth was below average for 1984 and 1995, but the traffic declines in the late 1992-1995 period was less than average. For trucks, the 104 percent growth from 1984 to 1995 was the strongest in the region and well above the growth rate on the overall eastern border.

Total inbound traffic to the US at Thousand Islands was 700,000 autos and 200,000 trucks, accounting for 1 percent of all entries to the US from Canada and Mexico, and 2 percent of all entries from Canada. The fairly large levels of truck traffic at this crossing make it the 11th busiest crossing for trucks in North America. Thousand Islands is the 7th busiest truck crossing on the Canadian border.

Issues

The key issue at the Thousand Island Bridge involves the potential medium-term need for redecking and the long-term need for several new bridge spans.

Currently there are no significant delay problems.

CHAPTER 6

The Niagara Region

The highway crossings in the Niagara region consist of four very busy bridges within 25 miles of each other over the Niagara River. From south to north, these are the Peace Bridge connecting Fort Erie, Ontario and Buffalo; the Whirlpool and Rainbow Bridges connecting Niagara Falls, Ontario and New York; and the Lewiston (NY)-Queenston (ON) Bridge.

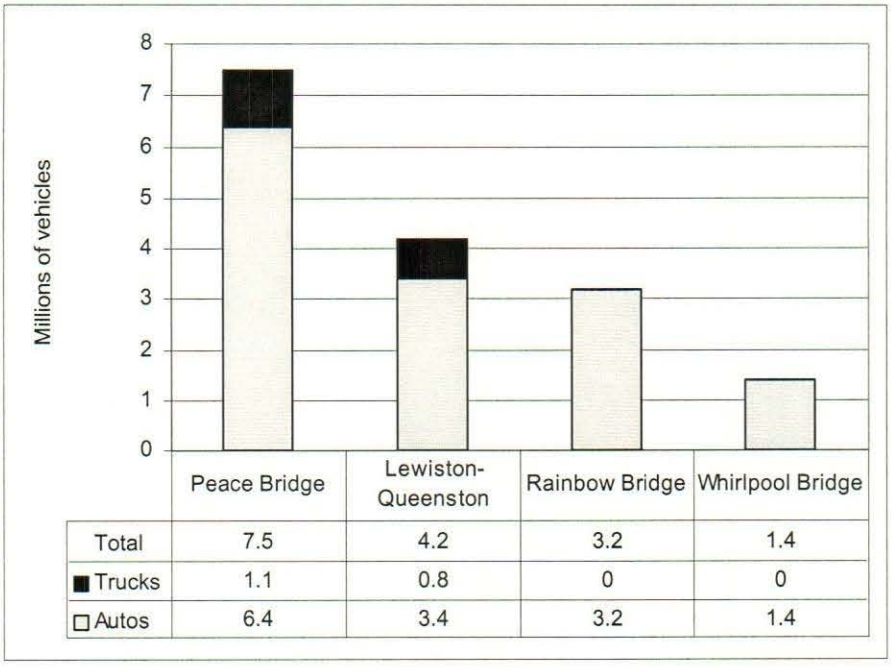
Traffic

As indicated in Figure 16, 16.3 million vehicles — 14.4 million autos and 1.9 million trucks — used these crossings in 1995. These crossings account for 68 percent of the auto traffic, and 61 percent of the truck traffic using New York's borders with Canada. The Niagara crossings handled 26 percent of the auto traffic and 24 percent of the truck traffic crossing the entire eastern border in 1995.

Auto traffic in the region grew 22 percent between 1984 and 1995, and declined by 23 percent between 1992 and 1995 (Figures 16 and 17). The decline was similar to those in the New England and St. Lawrence regions. A slight increase in Michigan/Ontario traffic is attributed to the opening of gambling casinos in Windsor, Ontario in 1995, offsetting other traffic declines. A similar traffic increase has begun in the Niagara region, as a result of 1995 casino openings at Niagara Falls, Ontario. The Niagara increase is likely to be smaller than at Detroit because fewer than half of the Niagara casino patrons come from the US.

Truck traffic in the region grew 57 percent between 1984 and 1995 with almost half of the increase (26 percent) from 1992 to 1995 (Figures 16 and 17). These growth figures track the New England and St. Lawrence regions closely. Truck traffic of 57 percent at Niagara compares with a 118 percent increase at the Michigan/Ontario region between 1984 and 1995.

Figure 26 shows the two-way auto, truck and total vehicle volumes for 1995 at each of these four crossings. The Niagara region crossings are among the busiest



	Peace Bridge	Lewiston-Queenston	Rainbow Bridge	Whirlpool Bridge
Total	7.5	4.2	3.2	1.4
■ Trucks	1.1	0.8	0	0
□ Autos	6.4	3.4	3.2	1.4

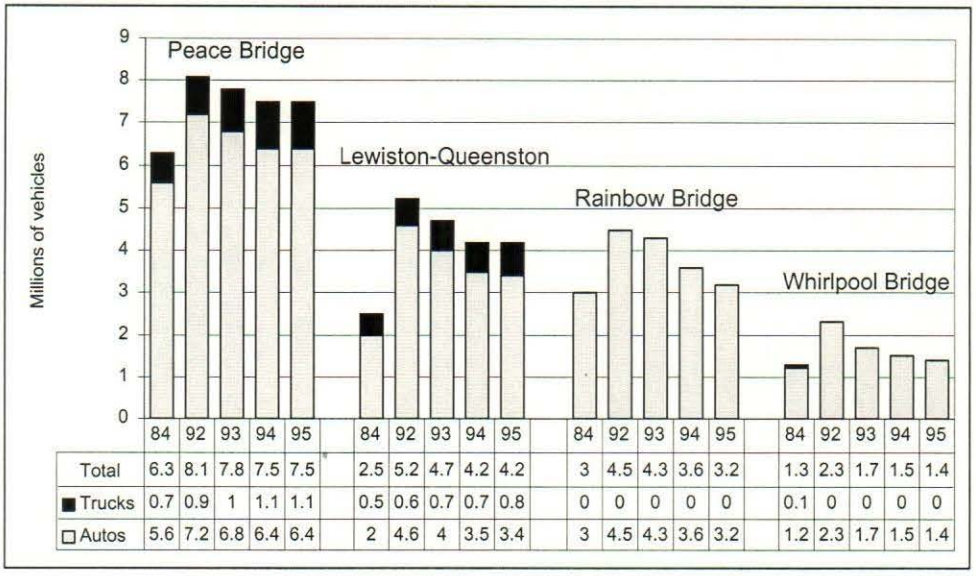
Figure 26: 1995 bidirectional traffic volumes in the Niagara region

in North America. As a metropolitan area, the total crossing activity of 16.4 million two-way vehicles is surpassed only by San Diego, El Paso and Detroit[1]. The Peace Bridge, which is operated by the Buffalo-Fort Erie Public Bridge Authority, is the busiest of the four Niagara crossings with 6.4 million autos and 1.1 million trucks for a total 1995 volume of 7.5 million vehicles.

The other three crossings in the area are administered by the Niagara Falls Bridge Commission and are within 10 miles of each other. Total volume at the three crossings was 8.8 million vehicles. The busiest of these three crossings is the Lewiston-Queenston Bridge with 4.2 million vehicles, including 800,000 trucks. The truck proportion at this location, 19 percent, is the second highest in North America, exceeded only by the Ambassador Bridge at 23 percent. Traffic at the other two bridges is almost entirely autos, with the Rainbow Bridge traffic totalling 3.2 million vehicles in 1995, and the Whirlpool Rapids Bridge carrying 1.4 million vehicles. (The Niagara Falls, Ontario casino is a few hundred feet from the Rainbow Bridge[2].)

Figure 27 shows the growth rates for traffic at the crossings. For autos traffic growth was strongest between 1984 and 1995 at the Lewiston-Queenston Bridge,

1. The Detroit metropolitan area includes Port Huron (59 miles north of downtown Detroit), where the Blue Water Bridge is located.
2. The Rainbow Bridge shows a 28 percent increase for January, 1997 through June 1997 versus the same period in 1996, compared to an overall increase of 3.3 percent for most eastern border crossings.



	Peace Bridge					Lewiston-Queenston					Rainbow Bridge					Whirlpool Bridge				
	84	92	93	94	95	84	92	93	94	95	84	92	93	94	95	84	92	93	94	95
Total	6.3	8.1	7.8	7.5	7.5	2.5	5.2	4.7	4.2	4.2	3	4.5	4.3	3.6	3.2	1.3	2.3	1.7	1.5	1.4
■ Trucks	0.7	0.9	1	1.1	1.1	0.5	0.6	0.7	0.7	0.8	0	0	0	0	0	0.1	0	0	0	0
□ Autos	5.6	7.2	6.8	6.4	6.4	2	4.6	4	3.5	3.4	3	4.5	4.3	3.6	3.2	1.2	2.3	1.7	1.5	1.4

Figure 27: Changes in bidirectional Niagara region traffic by crossing

with a 74 percent increase, compared with 14 percent at the Peace Bridge and 19 percent at the Whirlpool. Between 1992 and 1995 the largest traffic decline, 41 percent, was at the Whirlpool Bridge. Decreases at the Rainbow and Lewiston-Queenston during this period were in the mid to high 20's range, with the peace Bridge experiencing an 11 percent decline. These differences reflect the Lewiston-Queenston's close proximity to a major US discount shopping mall and greater sensitivity to Canadian shopping fluctuations.

Truck traffic changes were similar at both the Peace and Lewiston-Queenston bridges, with 60 to 70 percent increases from 1984 to 1995 and about a 25 percent increase between 1992 and 1995.

Nature of Traffic

Information on the nature of traffic by all modes at these crossings were obtained from Statistics Canada data, as well as auto-specific Statistics Canada data for the Peace Bridge and locally conducted origin-destination studies. With respect to the Statistics Canada person trip data, it should again be noted that this information does not correlate with the total number of bidirectional vehicle trips for three reasons. First, because the Statistics Canada data are for all modes not just auto. Second, because of the difference between vehicles and person trips. And, finally, because only one direction of travel is captured for each trip. These data are for the origins and destinations noted, but there is no way to know which border crossings were used in the case of auto trips, though it is likely that the most direct crossings were used.

Statistics Canada All-Modes Travel Data

The 1994 data for all modes of transport show Ontario person trips to New York state as a whole, and American person trips to Canada from New York in the case of same-day trips, and from New York and the eastern states in general in the case of one-night-plus trips. For New York, the data do not distinguish between the Niagara and St. Lawrence region border crossings. There were 18.2 million Ontario-origin same-day person-trips to the US by Canadians, with 42 percent of them having a New York state destination. These visitors spent an average of C$653.8 million in the US, 49 percent of it in New York. There were also 10.5 million Canadian person-trips of one-night-plus with an Ontario origin, with 19 percent of these having a New York destination. Auto travel accounted for 74 percent of these one-night-plus person trips by Canadians. In total, these visitors spent C$3.48 billion in the US with 11 percent of that in New York.

The data by mode of transport are even more general for Americans visiting Canada. There were 7 million same-day person-trips by New Yorkers to Canada in 1994, with 93 percent visiting Ontario. They spent US$259 million in Canada, with almost all of it in Ontario. There also were 4.1 million one-night-plus visits by Americans from New York to Canada, with 61 percent of them visiting Ontario. The New Yorkers spent US$1.26 billion in Canada, 47 percent of that in Ontario. Summaries of these data are presented in Tables 2 and 3.

Travel Data

More specific information on the nature of traffic is available for the Peace Bridge crossing. Of the 8.9 million person trips reported on by Statistics Canada, 53 percent were by Canadians visiting the US, with the remaining 47 percent by Americans visiting Canada (Table 6). This is a much higher percentage of Americans than at other crossings. The Peace Bridge also has the highest percentage of border state/province origin or destination traffic, at 92 percent.

While more Peace Bridge travel data are provided, it is not possible to generalize from this information about the other crossings because of the very different functions of the four bridges in the area. For the Peace Bridge, the figures indicate that Canadians and Americans are almost equal users of the crossing, unlike the other locations. For Canadians visiting the US, 49 percent visited New York, and 10 percent visited Pennsylvania. They spent an average of C$113 per person in the US, with 43 percent of that in Florida. Same-day trips accounted for just 66 percent of the trips. For Americans visiting Canada using this crossing, 78 percent were from New York, with a surprising 21 percent from Michigan. They spent US$315 million in Canada, with 96 percent of that in Ontario.

Local Studies

Additional information on the nature of traffic is available from the 1990 Cordon Line Survey conducted by the Buffalo Area Metropolitan Planning Organization and the Niagara Frontier Transportation Committee. This survey of 25 percent of

all vehicles crossing the four bridges during an October 1990 weekday and an August 1990 weekend examined origin-destination information and trip purpose. On the weekend, 46 percent of respondents drove Ontario-plated cars, 36 percent New York-plated and 18 percent other, mostly American. However during the weekday surveys, 70 percent of all vehicles had Ontario plates.

For the weekend, internal-internal (border area to border area) trips within the Niagara region ranged from a low of 31 percent at the Lewiston-Queenston Bridge to a high of 81 percent at the Whirlpool Rapids Bridge. At the same time, external-external traffic (starting and ending outside the Niagara region) ranged from a low of 2 percent at Whirlpool to a high of 28 percent at Lewiston-Queenston. The Peace Bridge on the weekend is also more locally oriented, with just 36 percent of trips having an origin or destination outside the Niagara area, compared with 69 percent at Lewiston-Queenston. Toronto was the origin or destination for 35 percent of all trips at Lewiston-Queenston, compared with 21 percent at the Peace Bridge. For all four bridges combined, internal-internal trips accounted for 53 percent of all trips.

On the weekday, internal-internal trips accounted for a low of 64 percent of all trips at Lewiston-Queenston, and a high of 93 percent at Whirlpool Rapids. At the Peace Bridge these trips made up 64 percent of all trips. External-external traffic ranged from a high of 16 percent at the Peace Bridge to a low of 1 percent at Whirlpool. For all four bridges combined, internal-internal trips accounted for 72 percent of all trips on the weekdays. This compares with 53 percent internal-internal for the weekend trips, reflecting the large number of tourists in August.

For trucks, the origin-destination data indicate that over half pass through and beyond Erie and Niagara counties. Thirty percent of the trucks using the two commercial crossings were empty. Seventy percent of the Peace Bridge trucks were carrying a single shipper's goods, compared with just 30 percent at the Lewiston-Queenston Bridge, suggesting that the Lewiston-Queenston Bridge carries a broader range of commodities than the Peace Bridge. UPS accounts for one-third of all US Customs "entries" at the Peace Bridge — but for just five actual trucks per day. Ontario-plated trucks were 61 percent of the vehicles at the Peace Bridge, and 54 percent at the Lewiston-Queenston. In terms of origin-destination during the weekday both bridges had external-external destinations in an average 63 percent of cases, with little variability between the two.

For Ontario-plated cars traveling to the US, shopping was the stated trip purpose for 47 percent of vehicles on an October Thursday. However, on an August Saturday shopping was the purpose for just 35 percent of the visits. On the weekday, work was the trip purpose for 9 percent of vehicles. Interestingly, at the Peace Bridge, shopping activity was the trip purpose in just 15 percent of the cases, or about one-third of the level reported at the Niagara Falls Bridge Commission bridges.

For US-plated trips to Canada, shopping was the stated trip purpose only 2 to 3 percent of the time regardless of day or season. On weekdays work was the trip

purpose in 12 percent of the cases, and on weekends in the summer, recreation was the purpose of 79 percent of the trips.

Readers desiring more information on the nature of traffic and other issues at these crossings are advised to consult the following reports:

- Parsons Brinckerhoff Quade & Douglas, Inc., Niagara Frontier US-Canada Bridge Study, March, 1993.
- IMC Consulting Group, Inc., International Travel Survey, September, 1991.
- Spring, Douglas, New York Department of Transportation, "A preliminary Assessment of Future Niagara Frontier Cross Border Traffic," February, 1996.
- Eric Mower and Associates, The Peace Bridge Economic Impact Research Study, March 6, 1995.

Investment Needs

Appendix D shows investment needs for state and provinces. The needs for New York list US$163 million in near- and long-term crossing needs in the Niagara region, with most of that being near-term. There are $29 million in current projects, primarily involving the Rainbow Bridge redecking and plaza construction. The largest crossing needs, listed as near term, are for Whirlpool redecking and Peace Bridge twinning. New York also lists 1.7 billion of corridor needs in the Niagara region, and $45 million in current projects. A total of $224 million of these needs are near term, with $183 million of this for the I-190 Niagara Thruway. The long-term needs are primarily for Route 219 ($400 million), Southtown Connector ($514 million), and Grand Island Bridge improvements ($255 million).

Replacement of the Grand Island Bridges, which are under the jurisdiction of the New York Thruway Authority, would seem to be the most critical. The Federal Highway Administration's National Bridge Inventory lists all four of these bridges as "functionally obsolete" and "structurally deficient." They consist of two pairs of two-lane, high level, one-way bridges that carry I-190 onto and off of Grand Island. The grades are steep, there are no shoulders, and they carry very heavy volumes of domestic and international truck and auto traffic. An accident that would close or reduce the lanes on any of these bridges would severely disrupt the traffic using these facilities. Large volumes of I-190 traffic from Lewiston and Niagara Falls into Buffalo and from the Queenston-Lewiston, Whirlpool, and Rainbow bridges would be diverted to the Queen Elizabeth Way (QEW) and the Peace Bridge.

On the Ontario side, US$88 million in crossing needs is shown for the region, almost all for the Whirlpool Bridge redecking and Peace Bridge twinning. These are shown as near term needs. Ontario also shows near term corridor needs of US$896 million and long-term needs of US$607 million. These are all for major limited access improvements on highways 401, 403, 407 and the Niagara section of the QEW.

Key Problems and Issues

The key issues for the Niagara region relate to the near-term availability of sufficient US and Canadian Customs and Immigration staff to process expected travel volumes at the border. While the declines in traffic from 1992 to 1995 have substantially lessened delays, there are still very significant current delays at peak days/times and any return to earlier traffic levels could cause serious delays. Data for the first half of 1997 show increases of 7 percent in both autos and trucks, with truck volumes at or near record levels. Traffic backups reminiscent of the early 1990s develop frequently, particularly from Canada into the US. The bridge operators attribute them largely to insufficient Customs and Immigrations staff on both sides of the border.

Another important issue is the total infrastructure capacity and condition of current bridges and corridors. Expected traffic growth in autos and trucks, independent of gambling traffic, supports the need for additional roadway capacity on the Peace Bridge. The Bridge management report that design for a second span is 30 to 40 percent complete, but several members of the Buffalo business community are urging construction of a completely new 6-lane bridge to replace the existing facility. There is also a need for redecking and/or reconstruction of the Whirlpool Rapids and Rainbow Bridges. Both facilities are in very constrained spaces over the Niagara Gorge making work extremely difficult and disruptive to daily traffic. (Work on the Rainbow plazas and redecking is under way.)

The other infrastructure needs relate to the major approach highways and corridors. Both on the Ontario side and the New York side there are major investment needs for limited access highways that carry the bulk of traffic to and from the bridges.

Another key corridor need relates to what is called the Route 219 Corridor in New York and Pennsylvania. Area officials believe there is a major need for a new corridor roadway that would link this region to Pennsylvania and the mid-southeastern US surrounding Washington, DC and West Virginia. A major proposal has been made to upgrade US 219. There currently are no north-south Interstate-type highways between I-79 and I-81.

The other major issue at the Niagara crossings relates to technology, and to institutional and staffing issues at the crossings. While major plaza work is planned on both sides of the Peace Bridge, the final design depends on the degree to which shared facilities between Canada and the US become feasible, and whether US pre-inspection of trucks can be conducted on the Canadian side. The true potential benefits of technology projects such as the North American Trade Automation Prototype (NATAP) also need to be analyzed before institutional issues can be truly sorted out. Finally, US staffing levels could be a significant problem, especially for the Immigration and Naturalization Service, if traffic volumes return to 1992 levels. Experiments with technology and joint port management could help to reduce these needs but the region and the eastern border will need its fair share of additional staff as traffic volumes return to 1992 levels.

An important factor that will influence traffic levels at the Niagara crossings is the level of cross-border gambling traffic. A temporary casino opened in the vicinity of the Rainbow Bridge on the Canadian side in December 1996 and this facility will undoubtedly influence traffic levels. The best forecasts are that this facility will generate 19,000 origins per day from the binational market area, generating an extra 3 million border crossings per year. While most of this volume will be at Niagara Falls Bridge Commission bridges, perceived and actual delays at these crossings will likely shift some volume to the Peace Bridge as well. Because much of this traffic will be at night during off-peak hours, bridge capacities are not as likely to be as critical an issue as Federal Inspection Service staff levels. Officials on both sides will have to increase night staffs. If this is done by reducing available personnel for day shifts, it will lead to daytime delays and will severely disrupt auto and truck traffic.

Individual Crossings

Following is more specific information on each of the four crossings.

Peace Bridge

Traffic

Figure 26 and 27 summarize the changes in traffic for autos and trucks at each of the four crossings. Total vehicle traffic at the Peace Bridge increased from 6.3 million in 1984 to 7.5 million in 1992. Auto traffic increased by 14 percent during this period, but then declined 11 percent between 1992 and 1995. By 1995 the decline appeared to have ended with the 1995 traffic equal to the 1994 level. This decline in traffic is thought to be related almost entirely to the reduction in Canadian shopping in the US. The changes in traffic levels at the Peace Bridge were not as great as in the region as a whole, nor were they as dramatic as the changes seen on the overall eastern border.

Truck traffic grew 70 percent from 1984 to 1995, just below the growth rate for eastern border overall, but stronger than at the Queenston-Lewiston Bridge. Truck traffic growth was flat between 1994 and 1995.

For movements to the US, the total vehicle traffic at the Peace Bridge represents 3 percent of all traffic entering from Canada and Mexico. The Peace Bridge crossing is the 11th busiest overall in North America, based on US-bound traffic. The total traffic represents 8 percent of all traffic entering the US from Canada and it is the third busiest crossing on the border. The Peace Bridge accounts for 7 percent of all truck traffic entering the US from Canada and Mexico, and 11 percent of all truck traffic entering from Canada. It is the fourth busiest truck crossing in North America, and the third busiest on the Canadian border.

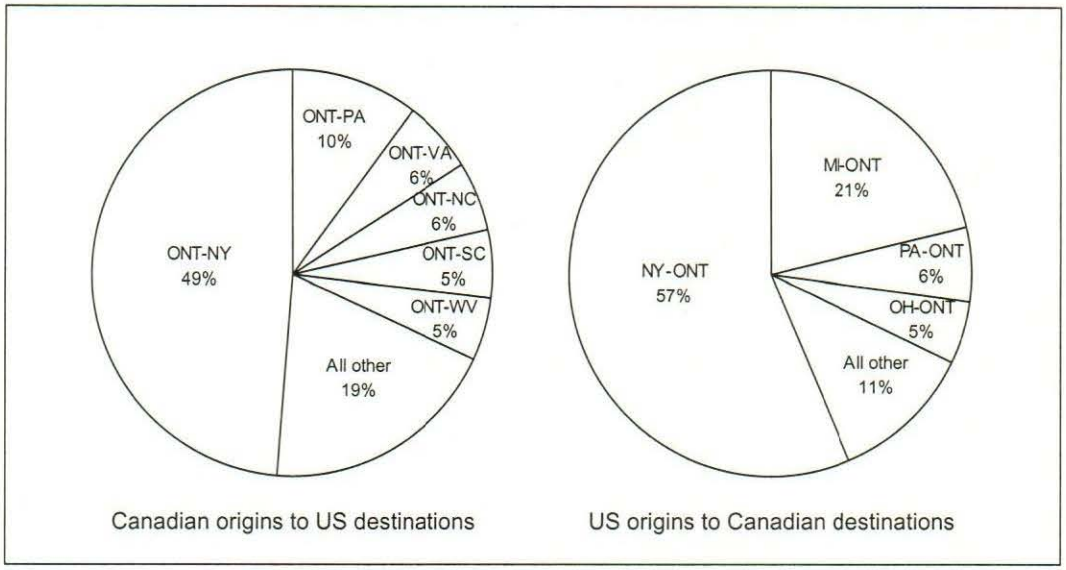


Figure 28: Origin-destination patterns of Canadian visitors to the Niagara region

Travel Data and Other Information

Statistics Canada travel data were obtained for the Peace Bridge and are summarized below. Additional information on the nature of traffic and origins-destinations is available from several other local sources and is summarized in the earlier section on the overall regions travel data.

The Statistics Canada travel data are portrayed in Figures 29 and 30. They indicate that 53 percent of the users of the bridge are Canadians, and 47 percent are American. This is a much larger percentage of Americans than found at other crossings, probably because of the large Canadian destination markets in the Niagara-on-the-Lake and Toronto areas. Of the Canadians visiting the US, 99 percent are from Ontario (Figure 29). They visited New York 49 percent of the time, and Pennsylvania 10 percent of the time. Virginia and West Virginia are destinations for 11 percent. North Carolina, South Carolina, Georgia and Florida accounted for another 18 percent. These visitors made same-day trips 67 percent of the time, with one-night stays 11 percent of the time and more than two-night stays accounting for 14 percent of person visits. While holidays and visiting friends was the stated purpose for 74 percent of person visits, 6 percent mentioned second homes. There seem to be flaws in these data, because fewer than 1 percent reported shopping as a reason. This was possibly due to being listed the last choice on the form. These visitors spent C$527.3 million in the US, but just 21 percent of it in New York. Florida received an estimated 44 percent of the expenditures. The average visitor spent C$113.

Figure 30 shows the same information for Americans visiting Canada via the Peace Bridge. New York was the origin for 58 percent of the visits, with 21 percent coming from Michigan. Another 5 percent were from Ohio. Almost all visited

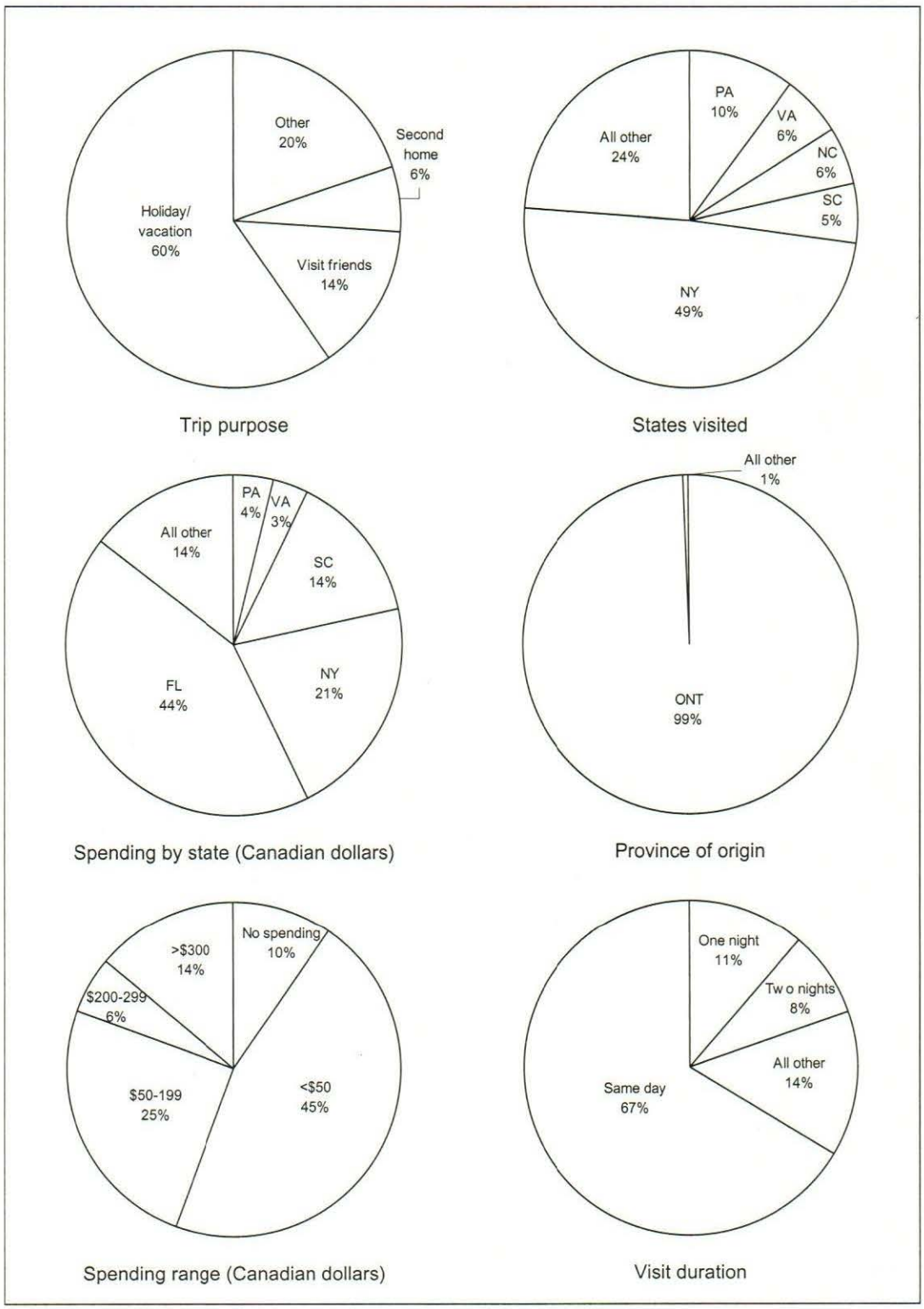


Figure 29: 1995 Canadian visitor profile for the Niagara region

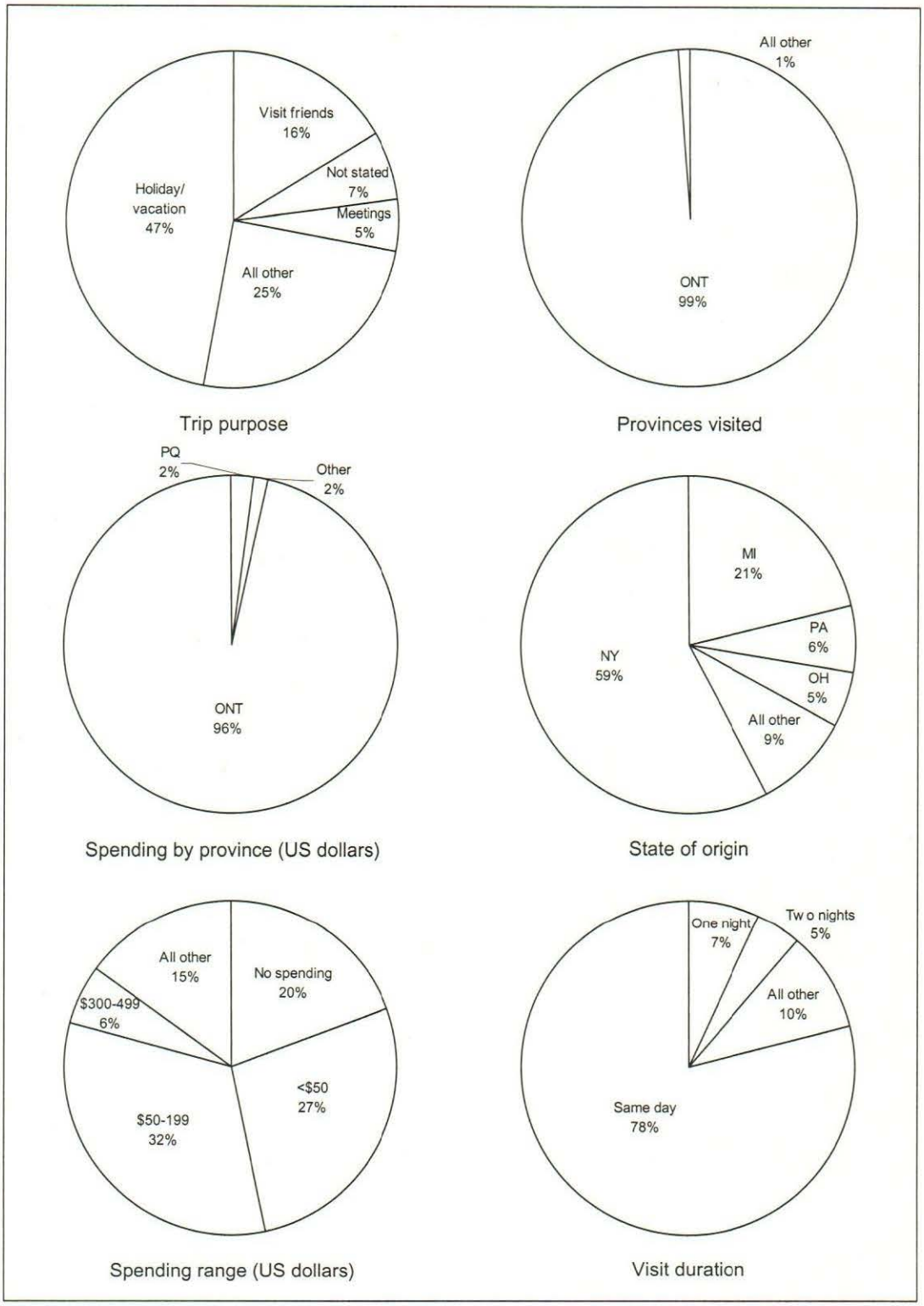


Figure 30: American visitor profile for the Niagara region

Ontario. Same-day visits, at 79 percent, were more frequent than for Canadians traveling to the US. Americans spent US$315 million, or US$75 per visit.

Issues

There are several key investment projects for the Peace Bridge over the next ten years. The capital cost for these projects is estimated at US$74 million plus the $70 million cost of a second span. Major projects include a new Canadian Customs facility, which will house FIS and brokers (C$12 million), a major revamping of the US plaza/gateway (US$50.4 million), a commercial vehicle processing center intended to clear US-bound trucks on the Canadian side (C$26 million), bridge coatings/rehabilitation (US$23.3 million), and a new span (US$70 million). However, some US$25 million of the US plaza costs can be saved if the Canadian side clearance facility, for US-bound trucks can go beyond simple pre-clearance preparation and staging and include actual clearance of trucks. This is a key issue, and requires implementation of the recently agreed-to accord between the US and Canada.

US federal funding will cover US$23.4 million of the US plaza project. A 1995 bond issue provides funding for the Canadian customs plaza, the coatings project, and the commercial vehicle processing center for US trucks on the Canadian side.

Another key issue relates to the success of the US NATAP truck processing pilot project currently being used at the Peace Bridge. Early statements on this project suggested truck primary inspection would be cut from an average of 53 seconds using the current line release system, to seven seconds under NATAP. Such a change would substantially reduce inspection booth requirements for US inbound processing, provided the NATAP program moves from prototype to implementation and a substantial proportion of trucks enroll.

The availability of FIS staff on the US side is also becoming a critical issue. While Peace Bridge staff indicated that delays have been substantially eliminated in recent years, US FIS indicated in interviews that they are barely getting by at current staff levels with temporarily reduced traffic volumes. US Customs is accomplishing this with use of overtime levels that they believe will be impossible to sustain because of burnout of officers. INS is unable to staff all of its assigned positions. Should traffic levels return to historic levels and begin growing again soon, there could be serious staff shortages leading to unacceptable delays.

Niagara Falls Bridge Commission

The Commission (NFBC) is responsible for the operation of the three Niagara Falls area bridges. While delays are also down substantially at the NFBC crossings due to reduced volumes, gambling traffic and a return to historic traffic levels could cause severe delay problems. Even at 1995 and 1996 volumes there were a significant number of weekend peak hour delays at these bridges and 1997 has brought even longer delays, with weekend back-ups of Canadian-bound vehicles extending as much as 3 miles back from the Lewiston-Queenston Bridge on occasion.

A key issue for these crossings is the availability of US and Canadian FIS staff and the flexibility to deploy INS staff to avoid delays. A pilot program on unified Customs/INS port management is underway at Buffalo. This may begin to address inefficiencies resulting from the two separate agencies. However, based on US Customs and INS interviews, there continues to be a need for more flexible staffing provisions in Customs union agreements. Shorter shifts at non-standard start times will be needed in the future unless staff levels are increased.

The NFBC staff believe delay objectives need to be set for each bridge, based on that facility's unique characteristics, and that delays should be measured. These data do not currently exist. Because of space limitations at these crossings the NFBC staff also believe off-site processing by FIS must be closely examined. There simply is not enough space for primary and secondary inspections on either side of these crossings.

On the Canadian side, an increasingly important issue relates to the current provisions under which the crossing operator or owner must provide space and facilities to Canadian FIS free of charge. This results in higher tolls, and is considered by NFBC staff to have the effect of a non-tariff barrier. At the Ogdensburg-Prescott bridge, the Authority gave the Canadian government the Canadian customs facility so the Authority would no longer have to maintain it. This issue was brought up at several locations across the border.

There are a number of investment needs at the NFBC bridges. Currently, the Rainbow Bridge is being redecked and the plaza being rebuilt, creating considerable congestion. The other major project is for Whirlpool Rapids Bridge redecking and plaza changes. The estimated cost is US$100 million.

Following is additional traffic information on each of the three crossings.

Lewiston-Queenston Bridge

The Lewiston-Queenston Bridge has experienced some of the strongest traffic growth in the country since 1984. From 1984 to 1995, auto traffic rose 74 percent to 3.4 million vehicles and truck traffic increased 60 percent to 800,000 vehicles. The auto traffic growth far outpaces both the regional and total eastern border growth rates. However, similar to other crossings on the border, from 1992 to 1995 auto traffic declined 25 percent, though truck traffic continued to grow, with a 24 percent increase from 1992 to 1995.

For US-bound movements, the total vehicle traffic at the Lewiston-Queenston Bridge represents 2 percent of all traffic entering from Canada and Mexico and 5 percent of all traffic entering the US from Canada. The Lewiston-Queenston Bridge is the seventh busiest crossing on the border. It accounts for 5 percent of all truck traffic entering the US from Canada and Mexico, and 7 percent of all truck traffic entering from Canada. It is the sixth busiest truck crossing in North America and the fourth busiest on the Canadian border.

Rainbow Bridge

The Rainbow Bridge is almost completely limited to auto traffic. The total traffic of 3.2 million vehicles is up 8 percent from 1984, a far slower growth rate than that seen in the region as a whole, or on the overall Canadian border. Since 1992, traffic is down 29 percent. Traffic also continued a steep drop between 1994 and 1995, while most other crossings' traffic remained level between 1994 and 1995. However, casino traffic has caused a 28 percent increase during the first half of 1997.

Rainbow Bridge traffic is 1 percent of all autos entering the US from Mexico and Canada, and 4 percent of all autos entering from Canada. It is the 10th busiest auto crossing on the Canadian border.

Whirlpool Rapids Bridge

The Whirlpool Rapids Bridge is also limited to auto traffic. The 1.4 million autos using the crossing is down from 2.3 million in 1992, a 41 percent decline. However, the 1995 volume is up 19 percent from 1984. Traffic continued to decline between 1994 and 1995. The bridge's US-bound traffic equals 1 percent of all autos entering the US from Mexico and Canada, and 2 percent of all autos entering from Canada. Data from the first half of 1997 show a 20 percent increase, apparently due to gambling traffic. Access to the Whirlpool Rapids Bridge is poor from the US side.

Work on the Rainbow Bridge plazas is underway and the Niagara Falls Bridge management plans to make the Whirlpool Rapids Bridge a commuter-only facility that can be used only by vehicles with authorization similar to "auto-pass."

CHAPTER 7

The Michigan/Ontario Region

The Michigan/Ontario region consists of two major crossings at Detroit-Windsor, a major crossing at Port Huron/Sarnia, and a significant crossing at Sault Ste. Marie. In addition there are several ferry crossings with minor volumes. Two of these are in the Port Huron/Sarnia area, and a third, which caters to trucks with hazardous loads, is at Detroit-Windsor.

Traffic

The Michigan/Ontario region has the highest levels of auto, truck, and total vehicle traffic of any of the regions or states on the Canadian border, and the most concentrated levels of traffic. This traffic represents 40 percent of all auto traffic on the eastern Canada-US border (Figure 16), and 10 percent of all border traffic including that on the Mexican border.

Michigan/Ontario truck traffic totaled 3.8 million vehicles in 1995 (Figure 16). Trucks account for 14 percent of all vehicles at the Michigan/Ontario crossings. This truck traffic represents 48 percent of all truck traffic on the eastern Canada-US border, 37 percent of all truck traffic on the entire US-Canada border (Figure 16), and 24 percent of the total North American-wide border truck traffic. Michigan/Ontario truck volumes equal US-Mexico truck volumes.

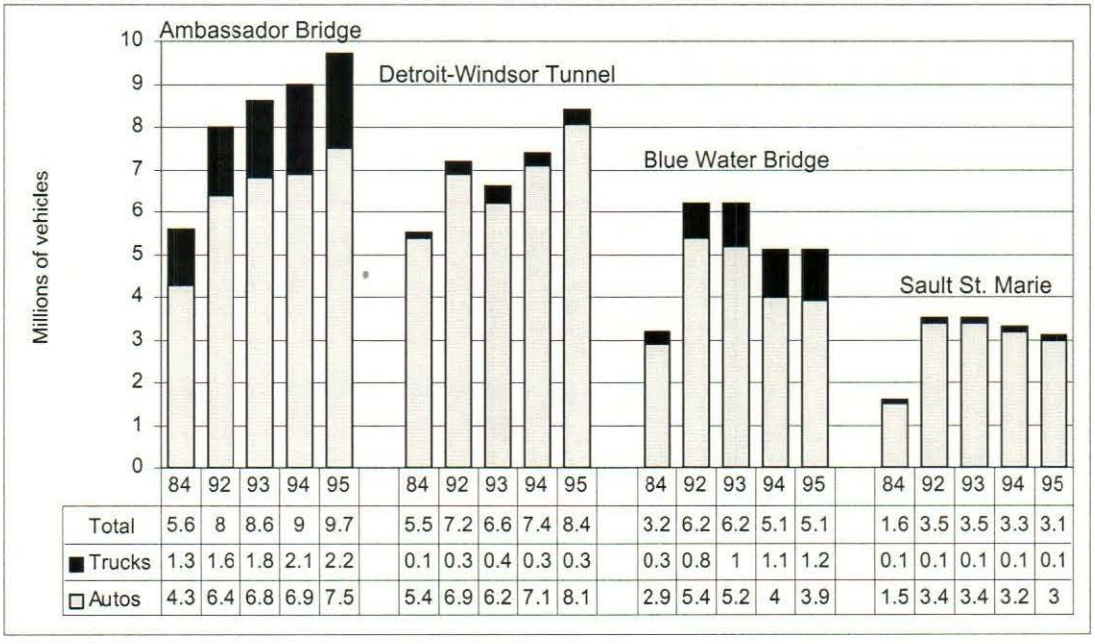
Michigan's auto traffic levels are the third highest of all the border states, with California and Texas substantially exceeding the Michigan auto volumes.

Traffic growth on the Michigan/Ontario border has also been some of the highest on the US-Canada border. Between 1984 and 1995 auto traffic grew 60 percent, almost double the rate at Niagara and somewhat higher than the 49 percent growth in the New England region (Figure 17). Of special interest is the continued growth in auto traffic, although at just a 2 percent level, between 1992 and 1995. This compares with decreases of 22 to 30 percent at the other three regions, and is largely attributed to Windsor gambling traffic.

Truck traffic growth in the region has also been substantial. Between 1984 and 1995 truck traffic grew 118 percent, approximately double the next closest region's growth (Figure 17). Between 1992 and 1995 truck traffic grew 35 percent, compared with 19 to 26 percent growth in the other regions (Figure 17).

Figure 31 shows 1995 two-way traffic levels at the region's four major highway crossings. The Ambassador Bridge has the US-Canada border's highest total vehicle traffic level at 9.7 million units, the second highest level of auto traffic on the US-Canada border with 7.5 million vehicles (Tables 2 and 3), and the highest truck traffic level of any crossing in North America, with its 2.2 million units — almost double the next closest crossing at Laredo, Texas. The Detroit-Windsor Tunnel is the second busiest crossing on the US-Canada border and it has the second highest volume of traffic in the Michigan region, at 8.5 million vehicles. It actually has the greatest volume of auto traffic, with 8.2 million vehicles, but carries very little truck traffic. Together, these two crossings which are less than two miles apart, had a total bidirectional 1995 traffic of 18.2 million vehicles, including 15.7 million autos. However, on the Mexican border, both San Diego and El Paso have considerably higher border auto volumes.

Figure 31 shows the growth in traffic at these crossings. Ambassador Bridge auto traffic grew 72 percent between 1984 and 1995, 16 percent of it between 1992 and 1995. Truck traffic grew by 79 percent and 38 percent, respectively, during the same periods. At the Detroit-Windsor Tunnel, auto traffic grew 51 percent between 1984 and 1995, 18 percent of it between 1992 and 1995.



	Ambassador Bridge					Detroit-Windsor Tunnel					Blue Water Bridge					Sault St. Marie				
	84	92	93	94	95	84	92	93	94	95	84	92	93	94	95	84	92	93	94	95
Total	5.6	8	8.6	9	9.7	5.5	7.2	6.6	7.4	8.4	3.2	6.2	6.2	5.1	5.1	1.6	3.5	3.5	3.3	3.1
■ Trucks	1.3	1.6	1.8	2.1	2.2	0.1	0.3	0.4	0.3	0.3	0.3	0.8	1	1.1	1.2	0.1	0.1	0.1	0.1	0.1
□ Autos	4.3	6.4	6.8	6.9	7.5	5.4	6.9	6.2	7.1	8.1	2.9	5.4	5.2	4	3.9	1.5	3.4	3.4	3.2	3

Figure 31: Changes in bidirectional border crossings in the Michigan/Ontario region

Both of Michigan's two other crossings have major traffic volumes as well. The Blue Water Bridge at Port Huron/Sarnia carried 5.1 million vehicles in 1995, including 1.2 million trucks, representing 24 percent of Michigan's total. Auto traffic grew 35 percent between 1984 and 1995, but declined 28 percent between 1992 and 1995. However, truck traffic continued to grow at this facility, by a remarkable 309 percent from 1984 to 1995, 44 percent of it in the last three years (Figure 31).

Michigan's fourth busiest crossing is the International Bridge between Sault Ste. Marie, Michigan and Sault Ste. Marie, Ontario. During 1995 two-way traffic totaled 3.1 million vehicles, with 3 million of them autos. Auto traffic grew 107 percent between 1984 and 1995, and decreased 11 percent from 1992 to 1995. Truck growth rates were 70 percent and 58 percent respectively (Figure 31).

Nature of Traffic

Data on the nature of traffic at these crossings comes from the all-modes Statistics Canada travel data, and from specific data on travel for the Blue Water Bridge at Port Huron/Sarnia. The all-modes data are not very instructive because they show Ontario-wide sources of traffic going to both New York and Michigan, but do not classify them by particular crossing. For same-day traffic, 50 percent of all Ontario-origin traffic had Michigan as a destination, with 96 percent of this traffic moving by auto (Table 2). For one-night-plus traffic, 14 percent of the Ontario origin traffic visited Michigan, compared with 19 percent visiting New York and 32 percent visiting the Southeast. For same-day American travel from Michigan, all visited Ontario (Table 3) as one would expect. For one-night-plus stays, data were obtained for Midwest origins only, and this indicates that 78 percent visited Ontario.

Specific crossing travel data for the Blue Water Bridge are shown in Figures 32 to 34. Generally this information shows that Canadians visiting the US accounted for 59 percent of the person-visits. Ontario/Michigan visits made up 75 percent of these person visits. For Americans visiting Canada, Michigan/Ontario person visits accounted for 78 percent of the total. New York/Ontario visits were another 8 percent of the total. For Canadians visiting the US, a total of C$200 million was spent in the US, 55 percent of it in Michigan, and 16 percent in Florida (Figure 33). Indiana, Ohio and Illinois each received 2 to 3 percent of expenditures. Same-day visits accounted for 72 percent of the total, with stays of more than two nights being another 9 percent. The average Canadian spent an average of C$73.

For Americans visiting Canada (visits of all purposes combined), Ontario was the destination for 98 percent of person visits, and was the recipient province for 96 percent of spending, totaling US$204.9 million (Figure 34). Same-day visits accounted for 64 percent of the total, with two-night-plus stays making up 28 percent.

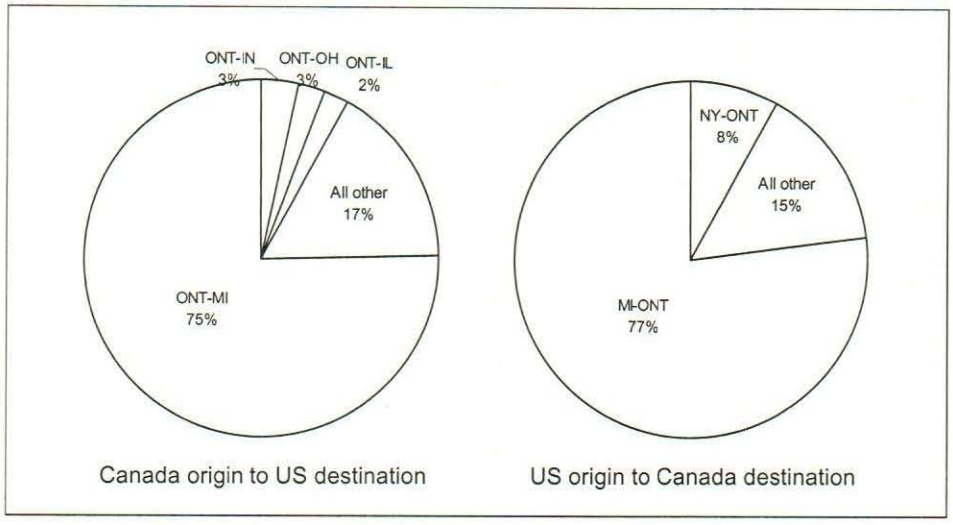


Figure 32: 1995 origin-destination patterns at the Blue Water Bridge

Investment Needs

Appendix D includes summaries of the investment needs for each state and province. For Michigan crossing projects, there are $44 million in current highway projects, primarily involving the Blue Water Bridge second span which is now open to traffic. This bridge cost $80 million, divided between Michigan and the Canadian Blue Water Bridge Authority. Michigan also lists $150 million of near and long-term highway needs. The principal needs are for direct freeway connections to the Ambassador Bridge ($107 million), redecking of the original Blue Water Bridge span ($15 million), and redecking of the Sault St. Marie International Bridge ($15 million). Michigan also lists $1.3 billion in corridor needs, including $1 billion for reconstruction of I-94 in Detroit, and $200 million for I-75 improvements in Detroit. Michigan also lists rail needs of $950 million, and marine lock needs on the Seaway-Lakes System of $225 million.

Ontario shows $28 million in near- and long-term needs for these Michigan crossings. This includes, primarily, the redecking of the International Bridge. The province also lists $900 million near term and $600 million in long-term needs for highways 401, 403, 407 and the Queen Elizabeth Way.

Key Problems and Issues

One of the most important issues on the Michigan/Ontario border involves the need for ramp and access improvements to Detroit area facilities, including key interstate corridor improvements in the immediate vicinity of the crossings. Designs have been completed for access ramps from the Ambassador Bridge to the Interstate system. Currently, there are no direct ramps from the freeways to the

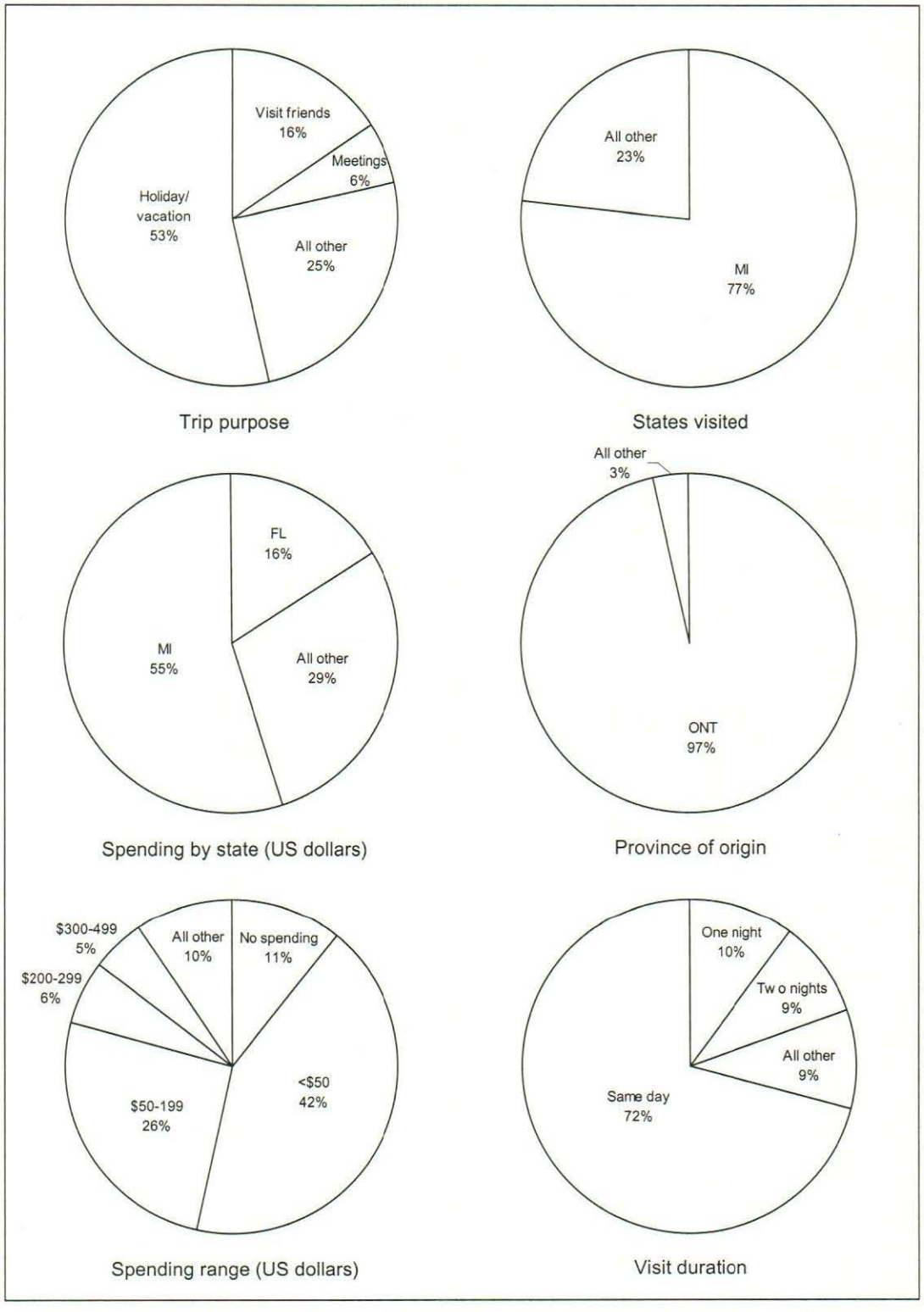


Figure 33: Profiles of 1995 cross-border Canadian visitors at Port Huron/Sarnia

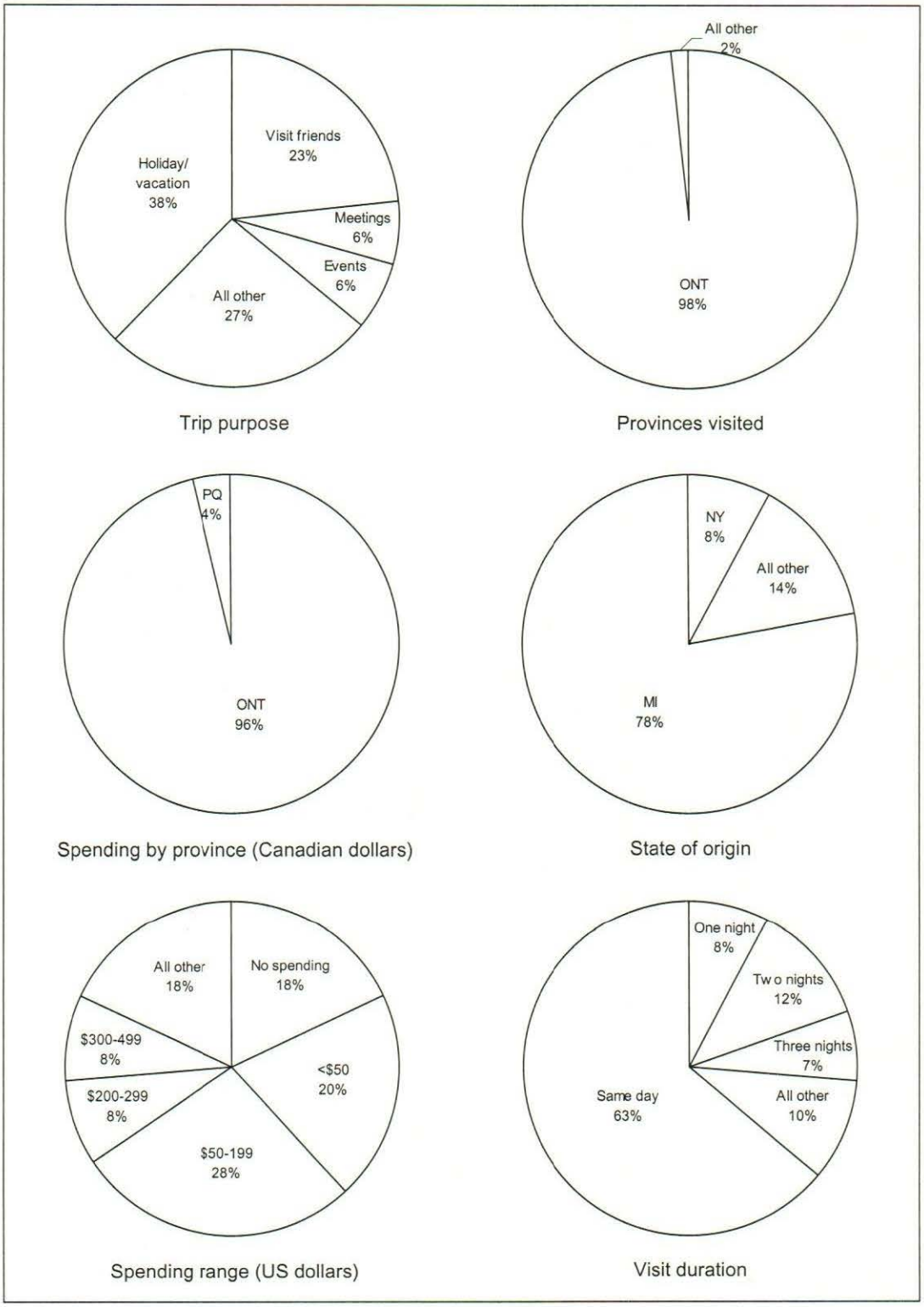


Figure 34: Profiles of 1995 cross-border American visitors at Port Huron/Sarnia

bridge, even though I-75 and I-96 pass within a few hundred feet of the bridge. The estimated cost of $107 million has not yet been funded.

Additional major under-funded needs are for improvements to corridor Interstates in the vicinity of the Detroit crossings. I-94 and I-75 each carry more than 100,000 vehicles per day, including a large number of trucks. International traffic accounts for a significant percentage of total traffic, especially within 5 to 10 miles of the crossings. The reconstruction plans for these Interstate freeways primarily involve this close-to-border area.

A number of improvements in Michigan/Ontario crossings have already been funded and in some cases completed in recent years. The Ambassador Bridge has undertaken major plaza improvements on both sides of its private facility, and the cities and management company operating the Detroit-Windsor Tunnel have also made major improvements to plazas on both sides. At the Blue Water Bridge, Michigan has spent some $50 million to finance ramp and plaza upgrades on the US side. The Michigan DOT and the Canadian Blue Water Bridge Authority have jointly funded the construction of the second span which is now open.

Crossing delays have not been a major issue in recent years, despite continued growth in traffic at the Detroit-Windsor crossings. This is in part because large traffic increases related to gambling have occurred primarily at off-peak hours. Staffing has also improved somewhat in recent years. Nonetheless, there are still delays at peak hours and any increase in regular shopping traffic, which has been down the last few years, would lead to a need for more FIS capability — either in the form of new processes or additional staff. It should also be noted, however, that the anticipated opening of Detroit gambling casinos sometime in 1998 or 1999 is likely to have some downside effect on gambling traffic between Windsor casinos and Detroit.

An additional major issue at the Michigan/Ontario crossings involves the future ownership and management structure at the International Bridge at Sault St. Marie. The facility is currently managed by an authority controlled by a Michigan majority. However, earlier agreements call for reversions of each half of the bridge to an entity in each country once bonds are repaid. A similar provision at the Blue Water Bridge led to separate entities owning and managing each half of that bridge beginning in the 1960's. The Michigan DOT took control of the US half, and, because Ontario did not want to assume responsibility for the Canadian side given toll restrictions on the US side, a Canadian entity called the Blue Water Bridge Authority was created by the federal government to take over the Canadian side. Michigan, Ontario, and Canadian federal officials are currently involved in a task force to determine the future ownership and management structure of the International Bridge.

Individual Crossings

Ambassador Bridge

Figure 31 shows the changes in traffic volume at the Ambassador Bridge since 1984. Auto traffic at the bridge has increased by 72 percent from 1984 to 1995, and 16 percent since 1992. The growth is more than double the average growth seen on the entire eastern border. More interestingly, the growth since 1992 compares with a 17 percent decline in traffic on the overall eastern border, and just a 2 percent growth rate in Michigan overall. The most important factor in this record since 1992 was the introduction of gambling in Windsor in 1995. While the Ambassador Bridge is not the primary crossing for gambling traffic, such trips helped offset a decline in same-day Canadian shopping trips to the US.

Truck growth at the Ambassador Bridge has been very strong and steady since 1984. Truck volumes have increased 79 percent since 1984. However, this growth was not as great as that seen on the overall eastern border, or as great as the overall 118 percent increase in Michigan/Ontario region truck traffic. During 1992-1995, truck traffic grew at an even faster pace, by 38 percent, despite the very high absolute truck volumes at the beginning of the period. During this period truck traffic increased at a somewhat faster pace than that seen on the overall border. These large increases in truck traffic, especially during the 1992-1994 period, were largely due to strong growth in the auto industry and continued specialization and integration of Canadian and US auto production and supply chain systems.

For inbound movements to the US, the total vehicle traffic at the Ambassador Bridge is 4 percent of all traffic entering from Canada and Mexico. The Ambassador Bridge is the fifth busiest border crossing in North America, based on inbound traffic. The inbound total vehicle traffic represents 11 percent of all traffic entering the US from Canada, ranking this as the busiest crossing on the US-Canada border. The Ambassador Bridge accounts for 13 percent of all truck traffic entering the US from Canada and Mexico, and 21 percent of all truck traffic entering from Canada. The Ambassador Bridge is the busiest truck crossing in North America.

Detroit-Windsor Tunnel

The Detroit-Windsor Tunnel is primarily an auto crossing, which carried 8.2 million cars and just 300,000 trucks in 1995 (Figure 31). While the proportion of trucks is quite small, the absolute number of trucks is quite high relative to many other crossings. Auto traffic is up 51 percent since 1984, 18 percent of it since 1992. Between 1994 and 1995, auto traffic increased by 1.0 million or 14 percent. Virtually all of this increase was due to gamblers traveling to new casinos in Windsor. Casinos have not been allowed in Detroit, but this will likely change by early 1998 when three Detroit casinos are expected to open. This is likely to lead to a decrease in tunnel traffic.

Inbound traffic of all vehicle types in 1995 was 4 percent of all traffic entering the US on the Canadian and Mexican borders. This made the tunnel the seventh busi-

est crossing in North America in 1995. In terms of the Canadian border alone, the tunnel accounts for 10 percent of all traffic entering the US, making it the number one ranked entry point to the US on the Canadian border for both autos and total vehicles.

Blue Water Bridge

The Blue Water Bridge, which is just 59 miles from downtown Detroit and some 35 miles from the northern Detroit suburbs, also serves as a major crossing for all vehicles, especially trucks. Auto traffic increased from 2.9 million to 3.9 million between 1984 and 1995 while total traffic at the Bridge increased from 3.2 million vehicles to 5.1 million. This growth was in line with that seen on the overall eastern border, but just half the growth rate of the Michigan region during this time period. From 1992 to 1995, auto traffic at the bridge declined, from 5.4 million to 3.9 million, or by 28 percent. Most of this decline occurred between 1993 and 1994, when auto traffic fell by 1.2 million. This decline was almost double the rate of decrease on the overall eastern border. The large decreases in traffic were due to the extensive use of this facility by Canadians shopping in the US, and the drop-off in this traffic following changes in the relative value of the Canadian dollar and other factors discussed in Chapter 2. It is also likely that bridge and plaza construction during 1994 and 1995 had a negative impact.

Perhaps most important is the large increase in truck traffic at the Blue Water Bridge between 1984 and 1995. This traffic quadrupled from 300,000 in 1984 to 1.2 million in 1995. This far exceeds the rate of growth in truck traffic at any other crossing on the Canadian Border. The increase was the result of several factors including increases in US-Canada trade concentrated in the mid-continent and in the auto industry; the completion of I-69, making this an attractive route between Chicago and Toronto; lower truck tolls than at the Ambassador Bridge; increasing congestion in the Detroit area; and construction of Highway 402 between Sarnia, Ontario, and Highway 401 at London, Ontario. The truck traffic increases were also very strong between 1992 and 1995, rising from 800,000 to 1.2 million, a 44 percent increase. This growth also far exceeded the overall eastern Canada border growth of 26 percent.

For inbound movements to the US, the total vehicle traffic at the Blue Water Bridge represents 2 percent of all traffic entering from Canada and Mexico. The Blue Water Bridge is the 14th busiest overall in North America, based on US-bound traffic. The total vehicle traffic represents 6 percent of all traffic entering the US from Canada, making this the fifth busiest crossing on the US-Canada border. The Blue Water Bridge accounts for 8 percent of all truck traffic entering the US from Canada and Mexico and for 12 percent of all truck traffic entering from Canada. The Blue Water Bridge is the third busiest truck crossing in North America and the second busiest crossing on the Canadian border.

Sault Ste. Marie

The Sault Ste. Marie crossing is primarily used by autos, although any trucks crossing the border into northern Ontario would also use this crossing. Total auto traffic of 3.0 million vehicles is up 107 percent from 1984 though it was down by a relatively modest 11 percent since 1992.

In terms of inbound traffic entering the US, this location represents 1 percent of all traffic entering from Canada and Mexico, and 4 percent of traffic entering from Canada. It is the eighth busiest entry point for autos on the Canadian border, and the ninth busiest for all vehicle types.

CHAPTER 8

State Traffic Levels

Figures 35-38 summarize traffic levels and growth for the 1984-1995 and 1992-1995 time periods for each state that borders with Canada or Mexico, with comparisons to wider border areas.

Figures 35 and 36 show total vehicles, both auto and truck. In 1995, the Michigan border accounted for 11 percent of North American border traffic. New York accounted for 10 percent, Texas for 34 percent, and California 22 percent of the total. Generally, there were similar growth levels across northern and southern state borders from 1984 to 1995. However, between 1992 and 1995, the northern border states had auto declines averaging 16 percent, while traffic on the Mexican border grew an average of 4 percent during this period. California border traffic also decreased 1 percent during the time period.

For truck traffic (Figures 37 and 38), Michigan accounted for 24 percent of all traffic, and New York 19 percent. Texas' truck traffic was equal to Michigan's, representing 24 percent of the total North American traffic. While truck traffic grew faster on the Mexican border from 1984 to 1995 than on the northern border, there were fairly similar growth levels from 1992-1995. For instance, Michigan and New York truck traffic grew 36 percent and 24 percent respectively, and Texas truck traffic also grew 29 percent.

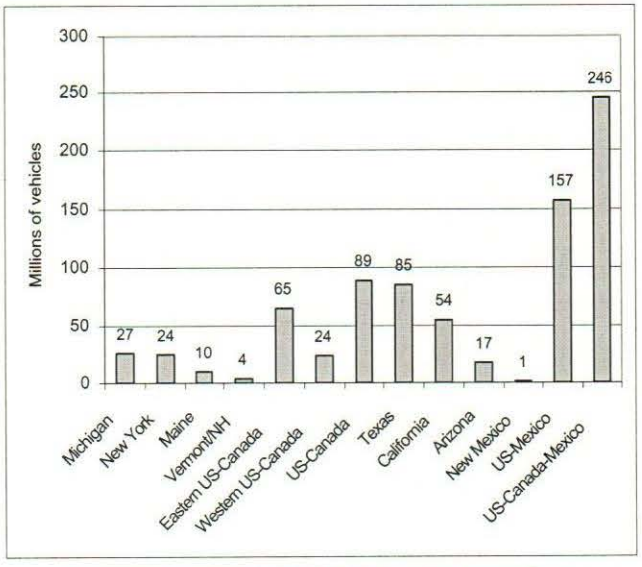


Figure 35: Total 1995 US border crossings

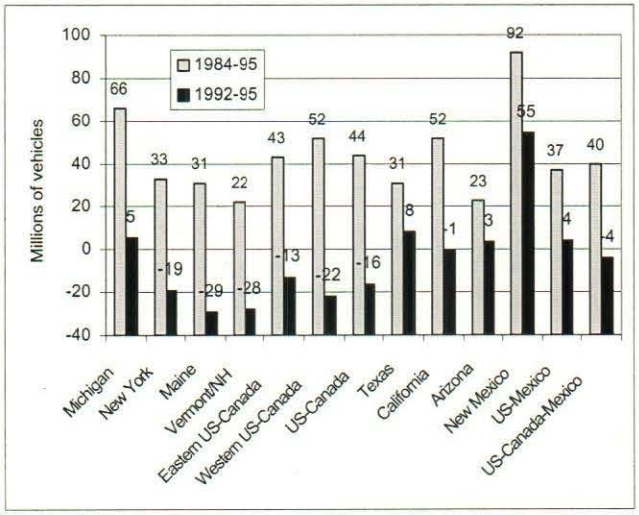


Figure 36: Overall change in border crossing volumes by state and region, 1984-95

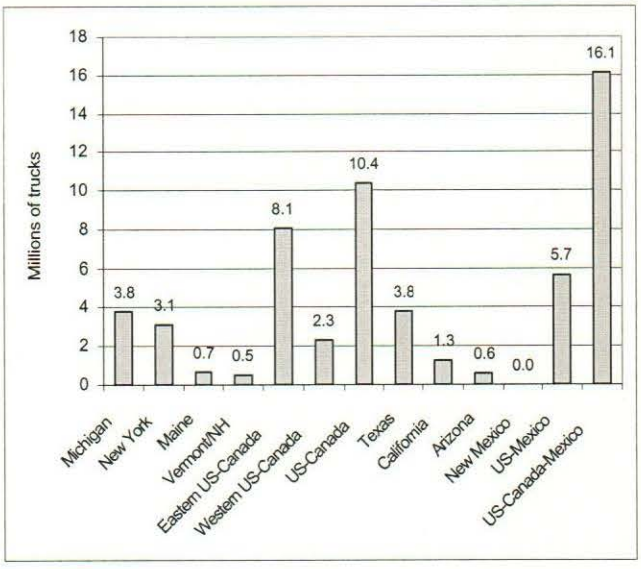
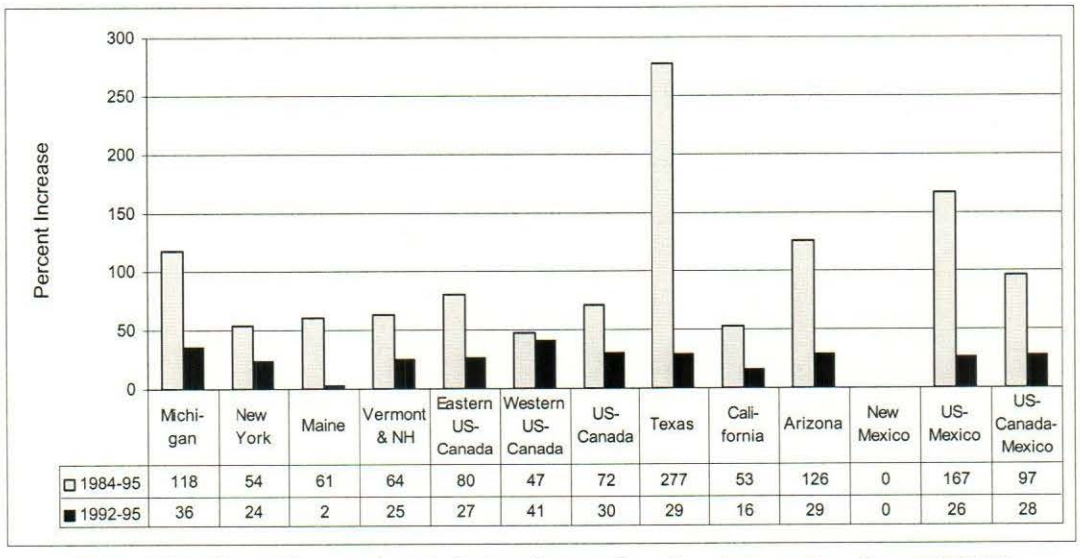


Figure 37: Total 1995 US border truck crossings



	Michigan	New York	Maine	Vermont & NH	Eastern US-Canada	Western US-Canada	US-Canada	Texas	California	Arizona	New Mexico	US-Mexico	US-Canada-Mexico
1984-95	118	54	61	64	80	47	72	277	53	126	0	167	97
1992-95	36	24	2	25	27	41	30	29	16	29	0	26	28

Figure 38: Overall growth rate in truck crossings by state and region, 1984-95

CHAPTER 9

Data Issues

This chapter reviews all data and sources used in the report, and discusses key issues relating to them. Recommendations are contained in the following chapter.

Several types of information were used in preparing this report. The first consisted of prior reports on border crossing problems and issues. The second was statistical information on matters such as trade, personal travel, and traffic levels. Finally, first hand information was gathered from several surveys, and from site visits to all major and some smaller crossings.

Prior Studies

One of the first tasks in the project was to assemble prior reports on border crossing issues. This information consisted of federal and/or state/provincial reports on border crossing activity, as well as reports conducted for individual crossing authorities or operators.

Some of the key reports included the US Department of Transportation's 1994 ISTEA 6015 study, the White House's 1994 Interagency Task Force on Border Infrastructure and Facilitation, various US General Accounting Office (GAO) reports on the US Customs Service and Immigration, and Naturalization Service (INS), US and Canadian government reports on border crossing technology, and the Canadian and US Border Accord document. Other federal reports on cross-border rail, seaway, and air travel were also used and studied.

Other key reports included those produced by federal, state and/or provincial coalitions on specific border crossing regions. Such reports included several on Michigan/Ontario crossings including the 1990 Detroit and St. Clair Rivers Crossing Study, and others on specific crossings such as the 1992 report of the Blue Water Bridge Task Force. Similar reports on the Niagara crossings included the 1991 and 1993 volumes entitled Niagara Frontier US-Canada Bridge Study and Ontario's

1993 report entitled Ontario's Roadway Links with the United States: Importance and Issues.

Two metropolitan planning organizations (MPO's), the Southeast Michigan Council of Governments and the Niagara Frontier Transportation Committee, have also commissioned a number of studies. Some of these reports include the 1991 International Travel Survey, and the 1990 Cordon Line Survey of Niagara area crossings.

Finally, a number of reports conducted for border crossing authorities, or, for specific crossing operators, were used. Examples include the Niagara Falls Bridge Commission report, A Traffic and Economic Study of the Impact of the Free Trade Agreement, and the 1995 bond prospectus for the Buffalo and Fort Erie Public Bridge Authority.

All of these reports were used by the study team. However, serious problems became apparent in trying to work with a variety of data sources. There is a lack of standard data, a lack of consistency in terminology, and a variety of methodologies employed in gathering data. Examples include the use of different techniques in gathering origin and destination data and a lack of consistency in gathering information on the extent of border crossing delays.

Statistical Data

Statistical data consisted primarily of material on trade levels, personal travel and traffic levels

Trade Data

One of the key pieces of information necessary to determine international trade corridors for goods movement is trade data by origin and destination. This information was obtained from Statistics Canada for the eastern US-Canada border, for the Port of Vancouver, and for the total US-Canada trade. Data were obtained for the years 1988 to 1995.

The specific information obtained included, for each Canadian port of entry, the annual Canadian dollar value of imports from the US by mode of transport, by province of clearance, by state of origin, by four digit commodity code. For Canadian exports to the US, similar information was obtained for each Canadian port of entry, by mode of transport, by state of destination, by province of origin and by four digit commodity code.

Statistics Canada did an excellent job in providing these data to the study team, but the information was not available by individual crossing. The study team had hoped to obtain the data by crossing so as to distinguish between the origin and destination of trade at, say, the Peace Bridge vs. the Lewiston-Queenston Bridge in the Buffalo area. However, it turned out the data were not usable at the crossing level. As such, the data could only be used at the port level, which for a number of

locations on the border means a combination of multiple crossings. This is especially true in Detroit and Buffalo.

As with prior studies, another problem with the trade data is that they overstate the role of the border states and provinces as origins and/or destinations for trade. This problem is due to the inherent difficulty in defining and establishing what origin and destination really mean, and inconsistencies in the way importers prepare Customs documentation. In many cases the importer or his agent completing documents does not know the true state or provincial origin.

This problem was more serious when each country relied on statistical reports for export origins and destinations. Import records maintained by each country were more thoroughly documented. However, after 1989, the US and Canada standardized terms and began exchanging import information and using the other countries' import documents as the source of information for exports. This somewhat reduced the problem with overstatements of border origins and destinations but it is still a major concern.

Another factor that overstates the role of border states and provinces is the fact that the origin-destination patterns depict the movement of money, which often does not coincide with the movement of the goods. For example, the shipper and receiver identified in the Customs manifest often reflect the corporate headquarters that controls the movement, not the locations from which the goods are picked up at and delivered to.

Personal Travel Data

While trade data are useful for analyzing the movement of goods, they do not address trade in services, which primarily involves the use of personal automobiles. Examples of services trade would be that related to personal travel for work, shopping, vacations and entertainment. Such trade is important because automobiles make up 85 to 95 percent of the traffic at most border crossings.

No comprehensive data on personal travel were available from US sources for US travelers returning to the US, or for Canadians entering the US. However, Canada, for purposes of balance-of-payments reporting to the International Monetary Fund, does survey a border-wide sample of returning Canadians and entering Americans. This sample provides information on where Americans visiting Canada go, what they do, and how long they stay. Similar information is produced for Canadians visiting the US.

Information provided includes the province or state of residence, the destination state or province visited, the purpose of the trip, the amount of money spent by state or province visited, and the length of stay. This information is extremely valuable in determining the origin and destination of auto traffic, although data for individual crossings are available for only a few locations. The information is also very helpful in determining on a national basis, and for specific crossings when available, where travelers using a crossing spent their money and how much they spent in each state or province.

It is also important to note that total person-visits by origin and destination are reported. This means that the visit of an Ontario resident to Michigan and then to Ohio on the same trip is counted as two person-visits. As a result, the number of person-visits is considerably greater than the actual number reported of persons visiting. It is important to keep this in mind in reviewing the information on personal travel.

The study team received border-wide aggregated information on travel for 1994. Separate reports were obtained for US visitors to Canada and for Canadian visits to the US. For each report, the data was also broken out by length of stay in the other country, with one category for same day visits and the other category for trips of one night or more. This information provides an excellent picture of overall US-Canada travel, but does not allow for an analysis of travel at individual crossings.

In order to analyze such travel, Statistics Canada was able to generate reports for several locations. Limitations related to the cost of this data, and the sample size not being sufficient at many locations. However, the study team reports for travel through the individual crossings of Calais/St. Stephens; Derby Line/Rock Island; Buffalo/Fort Erie; and Port Huron/Sarnia. These data represent a standardized set of information obtained with uniform methodologies, and are very useful in determining the origin-destination, trip purpose, and spending patterns of travelers using these key crossings.

However, there are several problems with the travel data. First, the sample size is very limited and the reliability, while satisfactory for border-wide analysis, is not as good for individual crossings. Second, the data on trip purpose seem suspect given that only a small percentage of persons report "shopping" as the major reason for their trip. Around half of persons report that "visits to friends or relatives" was the major purpose. This is the first item on the StatisticsCanada survey form and may lead to bias towards this answer, and away from "shopping," which is last on the list. There also may be a reluctance to report shopping to Canadian officials given perceived possible demands for payment of sales and GST taxes. Other reports have indicated a much higher percentage of shoppers.

Traffic Data

The other key type of statistical data obtained was for traffic levels on an annual basis. This information was obtained from Statistics Canada for vehicles entering Canada, and from US Customs for traffic entering the US.

For traffic entering Canada, data were provided for each of 61 individual crossings on the eastern US-Canada border, for Vancouver crossings, and for total US-Canada. These data were available for 1972 forward and was obtained for 1972, every other year from 1984 to 1992, and for every year from 1992 through 1995. For Canada-wide totals and for individual crossings the information was provided for autos, trucks, and total vehicles. For Canada-wide totals, the information was also provided separately for the number of US-plated vs. Canadian-plated autos; and

within each of these categories, for the number of autos that stayed less than one night (same day), one night, and more than one night.

While it was relatively easy to obtain the traffic information for vehicles entering Canada the same could not be said of obtaining the same information from US Customs for vehicles entering the US. The information could only be provided by fiscal year and quarter for 1984 forward, and not by calendar year, without large expenditures for programming. This fiscal year data then had to be converted to calendar year.

There were two other major problems with this information. First, in many smaller locations the data reflect estimates of traffic, as there are not traffic counters used at these locations. Second, US Customs does not report the data for smaller crossings as the Canadians do, but instead aggregates the data for up to five crossings and reports that as a crossing total, which is then further aggregated to a port level summary. As such, a major effort was necessary to determine which actual crossings were aggregated into one crossing name so as to be able to compare to the Canadian entry data and arrive at a two-way total traffic figure for a group of crossings. These problems are primarily limited to Maine, Vermont and eastern New York.

In order to produce comprehensive two-way traffic data, and because of the difficulties in converting US data to calendar years, only information for the years 1984 and 1992-1995 was used in this report. For reference purposes, traffic data for key US-Mexico crossings, and for total US-Mexico traffic, was also obtained. This information is reported on extensively in the traffic chapter.

US Customs also provided data on the number of trains and railroads cars entering the US at each rail crossing and this information is reported on in the traffic chapter. However, Canada could not provide similar information on rail entries to Canada. It did, however, provide information on the tonnage of cross-border traffic by commodity. As a result, for rail freight coming into the U.S. we had "number of rail cars by commodity," but for railcars entering Canada, the number of tons by commodity.

Survey and Site Visit Information

Surveys or interviews were conducted for sites visited and for non-site visit locations. In addition, a survey of shippers and carriers was conducted, and an investment needs survey was distributed to states and provinces.

Site Visits and Surveys Site Visits

At the beginning of the study the project team and client agreed on locations to be visited. For site visit locations members of the study team observed crossings and interviewed operators and/or federal inspection services (FIS) officials on one or both sides of the border. Questions related to the levels and types of traffic, delay levels, infrastructure needs, and institutional needs.

Survey Sites

For sites not being visited, survey questionnaires were sent out to operators and to FIS on each side of the crossing. For many if not most of these smaller land-only crossings there was no local operator as was the case at many larger crossings with waterway bridges. For these 42 crossings in Maine, Vermont and eastern New York the states and provinces were sent questionnaires to be completed. Answers were received from New York for all crossings not being visited. No other states or provinces returned questionnaires although some forwarded questionnaires to local FIS, or indicated there were no substantial changes from the 6015 study profiles that had been forwarded with the questionnaires.

The US Customs Service returned questionnaires for all 42 sites not visited by the study team. They provided excellent detail in their responses. The US INS returned questionnaires for 18 of the 42 locations.

Shipper/Carrier Perceptions

A survey on perceptions of border efficiency was forwarded to about 50 major shippers and carriers from various states and provinces. However, very few responses were received. A Canadian Chamber of Commerce survey of Canadian exporter perceptions of border issues was also analyzed.

Investment Needs

The Michigan Department of Transportation sent out a survey of investment needs to each state. This survey asked for budget needs for crossings themselves, plazas/intersections, and key highways and corridors.

One of the problems with gathering investment needs information is in the definition of needs. Without rigid definitions of terms, limitations on the distance from the border that needs relate to, and some discipline as to what constitutes a true need, agencies may overstate, or in some instances understate their actual infrastructure needs.

In gathering needs data it is important that standardized information be obtained on two dimensions. First, the location of the need must be categorized in terms of the above categories. Second, the budgetary status of the need must be stated. Budget categories include funded and completed in last two years, funded and under construction, funded awaiting beginning of construction, unfunded but sources identified, and unfunded with no known source of funds.

It is also important to note that highway agencies often do not know the needs or dollar amounts of need, on actual crossings or plazas. This is a problem where local authorities or operators exist. Likewise, local authorities or operators often do not know the needs for access streets, approach highways and corridor highways.

CHAPTER 10

Conclusions, Issues and Recommendations

Conclusions

- **US-Canadian trade is the largest bilateral trading relationship in the world— and it is projected to increase by as much as 180 percent by 2015** Merchandise trade between the US and Canada in 1995 totaled $272 billion, exceeding the US's $256 billion trade with the entire European Union and more than doubling the US's $110 billion trade with Mexico.

  US exports to Canada in 1995 totaled $127 billion, accounting for 22 percent of US worldwide exports of $585 billion. Canadian exports to the US totaled $145 billion, equal to 25 percent of Canada's Gross Domestic Product.

- **Seventy percent of US-Canadian trade crosses one of the 62 highway and rail crossings along the eastern border (from Sault Ste. Marie east).** In 1995, this trade accounted for 74 percent or $105 billion of Canada's 1995 exports to the US and 63 percent, or $69 billion, of US exports to Canada. Between 1988 and 1995, binational trade across the eastern border grew at an annual rate of 6.9 percent.

- **Although there have been and will continue to be year-to-year fluctuations in trade volumes, the long-term trend is for continued steady growth in trade across the eastern border.** Forecasts for this study show a range of likely increases of trade of between 4 and 7 percent per year (average annual growth rate) through 2015, with an overall increase of from 130 to 180 percent during the same period.

- **The economic benefits of US-Canadian trade extend far beyond the border states.** However, the international traffic disperses rapidly, making it difficult in most instances to identify corridors with high volumes and/or proportions of international truck or auto traffic more than approximately 100 miles from crossing points. Existing data, despite their deficiencies, indicate that a number of non-Canadian border states: California, New Jersey, Wisconsin, Texas, Ohio, Illinois, Indiana, Pennsylvania, Tennessee and Kentucky are major beneficiaries of US-Canadian trade.

- **Over the long term, auto volumes across the eastern border have risen at a steady rate,** making an increasingly important contribution to both national economies and especially to local economies at crossing points. Auto traffic crossing the eastern border increased by 16 million vehicles between 1984 and 1995. Though auto volumes slumped from 1992 to 1995, data for 1996 and 1997 indicate that auto volumes have resumed their historic upward trend.
- **Trucks continue to be the predominant transportation mode for US-Canadian trade,** although rail has increased its market share in some areas, particularly Canadian exports to the US. For Canadian exports, in 1995, trucks accounted for 67 percent of the value of that trade vs. 28 percent for rail. Comparable figures for 1988 were 82 percent truck and 12 percent rail. For US exports in 1995, trucks carried 92 percent, railroads 7 percent. In 1988 the figures were 85 percent truck, 12 percent rail.

  It should be noted, however, that data on trade flows by weight are sorely lacking. Trucks traditionally move high-value, lower weight items, whereas railroads have moved less valuable but heavier bulk goods. An important exception to this, however, is the increasing use of rail to ship completed autos. This understates the rail share of total tonnage moving across the border. It is likely that rail carries the majority of the ton-miles of freight between the two countries. Coupled with trends in intermodal container service, these factors indicate rail will likely continue to increase its share.
- **The automobile industry is the most important engine driving growth in US-Canadian trade**. Transport equipment accounted for nearly one-third of 1995 Canadian exports to the US and 25 percent of US exports to Canada; and a major share of the second-largest commodity group, machinery and electronics, is input to the production of cars and trucks.
- **Michigan/Ontario crossings account for a major share of total US-Canadian trade,** in large part due to the predominance of the automotive industry in that binational economic region. Forty-two percent of automotive-related trade in 1995 used those crossings, mainly at Sarnia/Port Huron and Detroit/Windsor. Canadian exports at the Michigan/Ontario crossing grew at the rate of 8 percent per year from 1988 to 1995 vs. 6 percent for all binational trade. For US exports the growth rates were 5 percent and 4 percent per year, respectively.

  At the Niagara crossings, the number two region in terms of trade volume, Canadian exports made up 18 percent of the total in 1995. For US exports the 1995 figure was 13 percent.
- **The nature of the economies on both sides of the border and the infrastructure in the Michigan/Ontario and Niagara regions is quite different from that in the regions east of the Niagara River.** In the Michigan/Ontario and Niagara regions, the crossings are in the hearts of large, heavily industrial regional economies. Hence the transportation infrastructure that supports international trade and travel is a complex network of roads and rail facilities fanning out from the crossings. To the east, economic development is less intensive along the border itself. Thus the international trade facilities leading

to crossing points tend to be fewer in number and more linear. Trade in these areas is concentrated on a smaller number of highways, and travels further before dispersing over a denser network of facilities.

- **Although there is not yet an infrastructure crisis at border crossing points and on facilities leading to them, pressure will continue to grow as trade and traffic volumes increase.** The dramatic increases in truck volumes that are expected over the next 20 years could easily turn existing deficiencies into major economic crises. At major crossings serious problems are likely to arise fairly soon as auto volumes return to their earlier rates of increase. Current deficiencies at many crossings include poor connections to the highway network, inadequate capacity for truck storage, obsolete equipment and insufficient inspection service staffing. Highway deficiencies in states and provinces include deteriorating roadways, obsolete bridges, inadequate bridge and roadway capacity, needed safety improvements and gaps in the highway system.

  Traffic increases are steady and inexorable, while infrastructure investments are lumpy and usually tardy. Given the long planning horizons typically required for major infrastructure projects, it is imperative that action be taken now so that when the current "breathing space" ends, the necessary projects are under construction or ready to begin.

Issues

- **Economic Cost.** The central issue is: Can local, regional and national economies afford to pay the large and growing costs resulting from infrastructure and institutional deficiencies that impact binational trade and travel? These deficiencies include problems at border crossing points as well as with facilities, primarily highways, that lead to and from those crossings. Increasingly, commercial and manufacturing interests require consistency and reliability in transportation, a need that is inconsistent with unpredictable delays with customs and immigration clearance, and with time (and money) lost because of inadequate — or nonexistent — facilities. This leads to the fundamental question of the cost of making necessary infrastructure improvements and how they will be paid for. The Reauthorization legislation under consideration by the U.S. Congress seems headed toward providing some, but certainly not all of, the funds that will be needed to begin some of the needed U.S. improvements. There is no parallel Canadian Federal funding program at this time, although there has been some discussion of the issue in the last year or so.
- **Institutional Questions.** What evidence there is, coming largely from discussions with trucking firms, indicates that the delay situation at most crossings has improved over the last few years. The border crossing services have acted to improve efficiency and to expedite traffic flows, especially for the frequent user, who is more likely to be aware of regulatory requirements. However, as traffic and trade volumes continue to grow, problems will escalate, suggesting that recent improvements should not be reason to lessen efforts to find even greater efficiencies. There sometimes seem to be institutional rigidities that

inhibit serious consideration of some proposals, such as off-site inspections and consolidation of some procedures in a single facility.

- **Infrastructure.** With a few exceptions, the actual border crossing facilities on both the US and Canadian sides are usually adequate for today's traffic. The major crossing deficiencies are in the Detroit/Windsor and Niagara areas, because of a combination of high volume and urban location, which often leads to unacceptable levels of congestion and delay. The third problematic crossing is at Calais, ME/St. Stephen, NB, where a funneling of international traffic through old narrow streets in the middle of the two towns has led to serious problems.

  From a shipper's or carrier's prospective, of course, what really matters is the total trip length and reliability of trip duration. This points to the importance of suitable facilities for the entire trip. This is why users are currently likely to highlight highway deficiencies as being greater impediments than shortcomings at crossings themselves. Hence, some carriers deem the condition of I-94 leading west from Detroit to be more important than delays at the Ambassador Bridge, and the shortcomings of US 201 in Maine are reported to overshadow the adequacy of the crossing facilities leading to Quebéc.

  Besides the condition of existing facilities, a very important issue is the absence of direct routes suitable for large trucks, the "missing links" in the highway system. (Users tend to feel that this is much less of a problem on the Canadian side.) Maps of designated truck routes, found in truckers' road atlases, show major voids in southern upstate New York, northern Pennsylvania and a lack of east-west routes in Maine.

  In terms of additional miles that trucks must travel because of the missing links, probably the most significant is the absence of a direct route from the Niagara crossings to the southeast, linking the border with such important destinations as Philadelphia, Wilmington and Baltimore.

- **International Trade and Transportation Corridors.** In the chapter on trade and transportation corridors a list of probable corridors was identified based on a broad definition of routes that carry large volumes of international truck traffic. However, from a user perspective, as opposed to a political perspective, there is, as yet, no satisfactory rigorous definition of international trade corridors on which to base critical decisions on infrastructure investment. The transportation and economic analysis on which such decisions should be based has not been completed. Suitable criteria for defining corridors, which were discussed above, can be suggested, but they then must be agreed upon. Only then can the analysis be completed to define corridors according to those criteria.

- **Data Deficiencies.** The other main reason it is difficult to define trade corridors on a transportation and economic basis is that sufficient statistical and survey evidence does not exist to do so. (In fairness, much of current data collection is not intended for that purpose.) Currently there is:

  - No consistent origin-destination data for eastern crossing traffic,
  - No objective way to measure delays at the crossings,

- No uniformity of existing data on both sides of the borders, or
- No methodology for measuring the economic impact of crossing delays in infrastructure deficiencies.

The absence of satisfactory origin-destination data is especially critical for determining investment priorities. Currently, what data do exist are reported at the provincial or state level, which is insufficient for the analytical purposes at issue here. In addition, existing data tend to overstate the value of US-Canada trade to border states, while undervaluing its significance to the rest of the country.

Recommendations

Data Gathering and Planning

- Upon the completion of Volume II of this report the EBTC will convene a conference to discuss data needs and problems. After the conference, and no later than the end of 1997, the EBTC will complete an action plan containing specific steps to be completed in 1998. That plan, which could be implemented by the EBTC with additional states and provinces, by a subgroup of the North Atlantic State Transportation Officials with additional states and provinces, or by another group or agency, would include the following elements:
- Biannual detailed origin-destination surveys should collect information on commodity, mode of travel, weight, value, actual origin, and destination by locality, and purpose of trip for US/Canada freight movements and detailed trip purpose, length of stay and similar information for personal cross-border travel.
- An objective study of crossing delay for each crossing where delays are considered to be an issue.
- Annual surveys of shippers, carriers and travelers to learn of key issues or concerns. This should include all modes and should include questions regarding entire cross-border trips, not just border crossing facilities and institutional arrangements.
- The establishment of an advisory panel of carriers and shippers to make recommendations to US and Canadian authorities on infrastructure needs and possible institutional changes that could be made by customs and immigration services. Again, this group should consider problems encountered at any point on an international trip.
- The Federal Railroad Administration and Transport Canada should conduct or sponsor a detailed study of US-Canadian rail traffic, including forecasts of rail volumes, an analysis of factors, including public policies, that are likely to impact future volumes, and an analysis of critical rail-related issues for local, state/provincial, and national governments.

Corridor Definition and Investment Needs

In addition to the action steps listed above, the body leading the data gathering and planning tasks should:

- Work with appropriate authorities to establish border-crossing and international trade and transportation corridor needs as a national and state/provincial priority so that the current breathing space is used to accelerate planning for critical investment needs. The pending reauthorization of ISTEA (NEXTEA) provides an ideal opportunity for movement on this issue.
- Establish a methodology to assess the economic cost of current deficiencies both in transportation infrastructure used by international trade and travelers, and in institutional arrangements at crossing points. This would enable officials to quantify the benefits of potential capital and other improvements.
- Complete detailed assessments of the cost of upgrading existing facilities or of building new ones.
- Using the benefits and costs obtained from the previous two efforts, complete a cost-benefit analysis of possible improvements.

Border Crossing Policies and Procedures

- The border crossing services in both countries should:
  - Continue to work with users to streamline "paperwork" requirements and reduce delays.
  - Accelerate the implementation of Intelligent Transportation Systems (ITS) at major crossing locations.
  - Be willing to seriously consider "non-traditional" institutional arrangements at or near crossings. These should include unified port management, inspection facilities away from crossing points and sharing of joint US-Canadian facilities. It is quite possible that some solutions that are assumed to be impossible are, in fact, not.
- The United States and Canada should establish 2012 as the target date for an open US-Canadian border and develop a detailed strategy for reaching that goal. Initial steps should include a cost-benefit analysis of opening the border and a study of how Western Europe moved from total war to nearly open borders in 50 years. It would be appropriate to observe the 200th anniversary of the start of the war of 1812 by opening completely the world's largest non-defended border.

APPENDIX A

Highway Crossing Volumes

Table A-1: Highway Crossing Volumes[a]

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Maine	Entering US	East Port (1010301)	Truck	1252	4377	4654	4349	4497	259.185	2.742	23.562	0.914	0.06%
			Cars	214276	303888	310922	301952	304058	41.900	0.056	3.809	0.019	0.26%
			Total Vehicles	215528	308265	315576	306301	308555	43.162	0.094	3.924	0.031	0.25%
	Entering Canada	Campobello (225)	Truck	2072	2844	2998	3088	3124	50.772	9.845	4.616	3.282	0.06%
			Cars	197291	217817	212814	184670	182304	-7.596	-16.304	-0.691	-5.435	0.47%
			Total Vehicles	199363	220661	215812	187758	185428	-6.990	-15.967	-0.635	-5.322	0.42%
	Total Birectional		Truck	3324	7221	7652	7437	7621	129.272	5.539	11.752	1.846	0.05%
			Cars	411567	521705	523736	486622	486362	18.173	-6.775	1.652	-2.258	0.21%
			Total Vehicles	414891	528926	531388	494059	493983	19.063	-6.606	1.733	-2.202	0.20%
	Entering US	Jackman (1010401)	Truck	56999	76563	89429	98925	94928	66.543	23.987	6.049	7.996	1.18%
			Cars	176736	326657	279722	236164	225294	27.475	-31.030	2.498	-10.343	0.20%
			Total Vehicles	233735	403220	369151	335089	320222	37.002	-20.584	3.364	-6.861	0.26%
	Entering Canada	Daaquam (335)	Truck	12278	14551	16293	22755	20543	67.316	41.179	6.120	13.726	0.40%
			Cars	12798	26978	23663	26783	31333	144.827	16.143	13.166	5.381	0.08%
			Total Vehicles	25076	41529	39956	49538	51876	106.875	24.915	9.716	8.305	0.12%
		St. Aurellie (380)	Truck		8261	7856	5897	4154		-49.716		-16.572	0.08%
			Cars		14119	15460	14503	14854		5.206		1.735	0.04%
			Total Vehicles	0	22380	23316	20400	19008		-15.067		-5.022	0.04%
		St. Phamphil (375)	Truck	16479	16479	16479	16479	16479	0.000	0.000	0.000	0.000	0.32%
			Cars	43980	43980	43980	43980	43980	0.000	0.000	0.000	0.000	0.11%
			Total Vehicles	60459	60459	60459	60459	60459	0.000	0.000	0.000	0.000	0.14%
		Woburn (309)	Truck	14166	18627	24841	25901	25301	78.604	35.830	7.146	11.943	0.49%
			Cars	44102	116832	98613	65605	63066	43.000	-46.020	3.909	-15.340	0.16%
			Total Vehicles	58268	135459	123454	91506	88367	51.656	-34.765	4.696	-11.588	0.20%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Maine (Continued)	Entering Canada (Continued)	Armstrong-St (329)	Truck	33368	49225	57476	49595	51244	53.572	4.102	4.870	1.367	0.99%
			Cars	109197	138848	119205	87704	89534	-18.007	-35.517	-1.637	-11.839	0.23%
			Total Vehicles	142565	188073	176681	137299	140778	-1.253	-25.147	-0.114	-8.382	0.32%
		La Magnec	Truck										0.00%
			Cars										0.00%
			Total Vehicles										0.00%
		Total Canada	Truck	76291	107143	122945	120627	117721	54.305	9.873	4.937	3.291	2.28%
			Cars	210077	340757	300921	238575	242767	15.561	-28.757	1.415	-9.586	0.63%
			Total Vehicles	286368	447900	423866	359202	360488	25.883	-19.516	2.353	-6.505	0.82%
	Total Bidirectional		Truck	133290	183706	212374	219552	212649	59.539	15.755	5.413	5.252	1.33%
			Cars	386813	667414	580643	474739	468061	21.004	-29.869	1.909	-9.956	0.20%
			Total Vehicles	520103	851120	793017	694291	680710	30.880	-20.022	2.807	-6.674	0.28%
	Entering US	Vanceboro (101501)	Truck	1934	2140	2579	4134	5283	173.164	146.869	15.742	48.956	0.07%
			Cars	62880	154488	96092	78253	67680	7.634	-56.191	0.694	-18.730	0.06%
			Total Vehicles	64814	156628	98671	82387	72963	12.573	-53.416	1.143	-17.805	0.06%
	Entering Canada	St. Croix (231)	Truck	1412	1753	2148	3433	4768	237.677	171.991	21.607	57.330	0.09%
			Cars	56548	156710	115957	84690	74171	31.165	-52.670	2.833	-17.557	0.19%
			Total Vehicles	57960	158463	118105	88123	78939	36.196	-50.185	3.291	-16.728	0.18%
	Total Bidirectional		Truck	3346	3893	4727	7567	10051	200.389	158.181	18.217	52.727	0.06%
			Cars	119428	311198	212049	162943	141851	18.775	-54.418	1.707	-18.139	0.06%
			Total Vehicles	122774	315091	216776	170510	151902	38.881	-51.791	-99.982	-17.264	0.06%
	Entering US	Houlton (1010601)	Truck	50971	67952	78388	81755	78742	54.484	15.879	4.953	5.293	0.98%
			Cars	271602	700791	649208	528733	417166	53.595	-40.472	4.872	-13.491	0.36%
			Total Vehicles	322573	768743	727596	610488	495908	53.735	-35.491	4.885	-11.830	0.40%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Maine (Continued	Entering Canada	Forest City (234)	Truck	876	932	1092	426	485	-44.635	-47.961	-4.058	-15.987	0.01%
			Cars	4180	2933	3175	2893	2641	-36.818	-9.956	-3.347	-3.319	0.01%
			Total Vehicles	5056	3865	4267	3319	3126	-38.172	-19.120	-3.470	-6.373	0.01%
	Entering Canada (Continued)	Fosterville (235)	Truck	554	1866	1390	1695	1289	132.671	-30.922	12.061	-10.307	0.02%
			Cars	15389	25159	20415	17136	15157	-1.508	-39.755	-0.137	-13.252	0.04%
			Total Vehicles	15943	27025	21805	18831	16446	3.155	-39.145	0.287	-13.048	0.04%
		Bloomfield (228)	Truck	289	373	506	479	428	48.097	14.745	4.372	4.915	0.01%
			Cars	3093	5910	4439	4777	4243	37.181	-28.206	3.380	-9.402	0.01%
			Total Vehicles	3382	6283	4945	5256	4671	38.114	-25.657	3.465	-8.552	0.01%
		Woodstock (212)	Truck	47609	70664	68490	52940	64480	35.437	-8.751	3.222	-2.917	1.25%
			Cars	216032	519588	430114	311150	300840	39.257	-42.100	3.569	-14.033	0.78%
			Total Vehicles	263641	590252	498604	364090	365320	38.567	-38.108	3.506	-12.703	0.84%
		Foriecvillie	Truck										0.00%
			Cars										0.00%
			Total Vehicles										0.00%
		Total Canada side	Truck	49328	73835	71478	55540	66682	35.181	-9.688	3.198	-3.229	1.29%
			Cars	238694	553590	458143	335956	322881	35.270	-41.675	3.206	-13.892	0.84%
			Total Vehicles	288022	627425	529621	391496	389563	35.255	-37.911	3.205	-12.637	0.89%
	Total Bidirectional		Truck	100299	141787	149866	137295	145424	44.990	2.565	4.090	0.855	0.91%
			Cars	510296	1254381	1107351	864689	740047	45.023	-41.003	4.093	-13.668	0.32%
			Total Vehicles	610595	1396168	1257217	1001984	885471	45.018	-36.578	4.093	-12.193	0.36%
	Entering US	Fort Fairfield (1010701)	Truck	6695	11924	13545	15240	13581	102.853	13.896	9.350	4.632	0.17%
			Cars	149993	356222	308132	250794	208221	38.820	-41.547	3.529	-13.849	0.18%
			Total Vehicles	156688	368146	321677	266034	221802	41.556	-39.752	3.778	-13.251	0.18%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Maine (Continued)	Entering Canada	Andover (214)	Truck	6139	12954	14864	16358	18125	195.244	39.918	17.749	13.306	0.00%
			Cars	160553	442201	356774	278090	262800	63.684	-40.570	5.789	-13.523	0.05%
			Total Vehicles	166692									0.60%
		River De Chute(219)	Truck	2388	1201	590	684	859	-64.028	-28.476	-5.821	-9.492	0.02%
			Cars	13092	7167	5529	5962	5493	-58.043	-23.357	-5.277	-7.786	0.01%
			Total Vehicles	15480	8368	6119	6646	6352	-58.966	-24.092	-5.361	-8.031	0.01%
	Entering Canada (Continued)	Total Canada side	Truck	8527	14155	15454	17042	18984	122.634	34.115	11.149	11.372	0.37%
			Cars	173645	449368	362303	284052	268293	54.507	-40.295	4.955	-13.432	0.70%
			Total Vehicles	182172	463523	377757	301094	287277	57.695	-38.023	5.245	-12.674	0.66%
	Total Bidirectional		Truck	15222	26079	28999	32282	32565	113.934	24.871	10.358	8.290	0.20%
			Cars	323638	805590	670435	534846	476514	47.237	-40.849	4.294	-13.616	0.21%
			Total Vehicles	338860	831669	699434	567128	509079	50.233	-38.788	4.567	-12.929	0.21%
	Entering US	Van Buren (1010801)	Truck	3708	18706	21000	23075	20058	440.939	7.228	40.085	2.409	0.25%
			Cars	373341	889657	682018	490336	439068	17.605	-50.647	1.600	-16.882	0.38%
			Total Vehicles	377049	908363	703018	513411	459126	21.768	-49.456	1.979	-16.485	0.37%
	Entering Canada	St. Leonard	Truck	5781	21819	23055	23861	18277	216.156	-16.234	19.651	-5.411	0.35%
			Cars	267958	461187	382152	304202	285109	6.401	-38.179	0.582	-12.726	0.74%
			Total Vehicles	273739	483006	405207	328063	303386	10.830	-37.188	0.985	-12.396	0.69%
		Grand Falls (217)	Truck	1080	2441	2689	3076	2165	100.463	-11.307	9.133	-3.769	0.04%
			Cars	136594	401626	282263	177282	142291	4.171	-64.571	0.379	-21.524	0.37%
			Total Vehicles	137674	404067	284952	180358	144456	4.926	-64.249	0.448	-21.416	0.33%
		Total Canadian Side	Truck	6861	24260	25744	26937	20442	197.945	-15.738	17.995	-5.246	0.40%
			Cars	404552	862813	664415	481484	427400	5.648	-50.464	0.513	-16.821	1.11%
			Total Vehicles	411413	887073	690159	508421	447842	8.855	-49.515	0.805	-16.505	1.02%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Maine (Continued)	Total Bidirectional		Truck	10569	42966	46744	50012	40500	283.196	-5.739	25.745	-1.913	0.50%
			Cars	777893	1752470	1346433	971820	866468	11.387	-50.557	1.035	-16.852	0.76%
			Total Vehicles	788462	1795436	1393177	1021832	906968	15.030	-49.485	1.366	-16.495	0.74%
	Entering US	Madewaska (1010901)	Truck	4601	23790	23543	25650	20124	337.383	-15.410	30.671	-5.137	0.25%
			Cars	917967	1379120	1210818	1083193	909479	-0.925	-34.054	-0.084	-11.351	0.79%
			Total Vehicles	922568	1402910	1234361	1108843	929603	0.763	-33.738	0.069	-11.246	0.75%
	Entering Canada	Edmundston (213)	Truck	18156	16482	15004	15084	12412	-31.637	-24.694	-2.876	-8.231	0.24%
			Cars	785773	1226362	1093919	922975	839349	6.818	-31.558	0.620	-10.519	2.18%
			Total Vehicles	803929	1242844	1108923	938059	851761	5.950	-31.467	0.541	-10.489	1.95%
	Total Bidirectional		Truck	22757	40272	38547	40734	32536	42.971	-19.209	3.906	-6.403	0.20%
			Cars	1703740	2605482	2304737	2006168	1748828	2.646	-32.879	0.241	-10.960	0.76%
			Total Vehicles	1726497	2645754	2343284	2046902	1781364	3.178	-32.671	0.289	-10.890	0.73%
	Entering US	Fort Kent (1011001)	Truck	13694	14618	15845	16671	12704	-7.229	-13.093	-0.657	-4.364	0.16%
			Cars	25770	453322	420937	389983	315140	1122.9	-30.482	102.081	-10.161	0.27%
			Total Vehicles	39464	467940	436782	406654	327844	730.742	-29.939	66.431	-9.980	0.27%
	Entering Canada	Clair (216)	Truck	7823	8984	11931	15197	16374	109.306	82.257	9.937	27.419	0.32%
			Cars	247682	420861	385038	358550	342631	38.335	-18.588	3.485	-6.196	0.89%
			Total Vehicles	255505	429845	396969	373747	359005	40.508	-16.480	3.683	-5.493	0.82%
		Pohenegamook (331)	Truck	6084	3430	3389	2897	3664	-39.776	6.822	-3.616	2.274	0.07%
			Cars	17485	51147	52982	60275	64721	270.152	26.539	24.559	8.846	0.17%
			Total Vehicles	23569	54577	56371	63172	68385	190.148	25.300	17.286	8.433	0.16%
		Total Canadian side	Truck	13907	12414	15320	18094	20038	44.086	61.415	4.008	20.472	0.39%
			Cars	265167	472008	438020	418825	407352	53.621	-13.698	4.875	-4.566	1.06%
			Total Vehicles	279074	484422	453340	436919	427390	53.146	-11.773	4.831	-3.924	0.98%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Maine (Continued)	Total Bidirectional		Truck	27601	27032	31165	34765	32742	18.626	21.123	1.693	7.041	0.20%
			Cars	290937	925330	858957	808808	722492	148.333	-21.921	13.485	-7.307	0.31%
			Total Vehicles	318538	952362	890122	843573	755234	137.094	-20.699	12.463	-6.900	0.31%
	Entering US	Calais (1011501)	Truck	49842	87964	99117	112019	101743	104.131	15.664	9.466	5.221	1.27%
			Cars	1035000	1944413	1854386	1679869	1650900	59.507	-15.095	5.410	-5.032	1.43%
			Total Vehicles	1084842	2032377	1953503	1791888	1752643	61.557	-13.764	5.596	-4.588	1.42%
	Entering Canada	St. Stephen (211)	Truck	18418	46317	30321	24816	28061	52.356	-39.415	4.760	-13.138	0.54%
			Cars	731833	1056528	1002378	908816	992990	35.685	-6.014	3.244	-2.005	2.57%
			Total Vehicles	750251	1102845	1032699	933632	1021051	36.095	-7.417	3.281	-2.472	2.33%
		Milltown (230)	Truck	33927	41498	46807	50460	38152	12.453	-8.063	1.132	-2.688	0.74%
			Cars	236942	677731	589256	453195	462819	95.330	-31.711	8.666	-10.570	1.20%
			Total Vehicles	270869	719229	636063	503655	500971	84.950	-30.346	7.723	-10.115	1.15%
	Entering Canada (Continued)	Total Canadian side	Truck	52345	87815	77128	75276	66213	26.493	-24.599	2.408	-8.200	1.28%
			Cars	968775	1734259	1591634	1362011	1455809	50.273	-16.056	4.570	-5.352	3.77%
			Total Vehicles	1021120	1822074	1668762	1437287	1522022	49.054	-16.468	4.459	-5.489	3.48%
	Total Bidirectional		Truck	102187	175779	176245	187295	167956	64.361	-4.450	5.851	-1.483	1.05%
			Cars	2003775	3678672	3446020	3041880	3106709	55.043	-15.548	5.004	-5.183	1.35%
			Total Vehicles	2105962	3854451	3622265	3229175	3274665	55.495	-15.042	5.045	-5.014	1.33%
	Entering US	Lime stone (1011801)	Truck	6602	5258	6617	5528	6427	-2.651	22.233	-0.241	7.411	0.08%
			Cars	66004	101082	83899	63421	49852	-24.471	-50.682	-2.225	-16.894	0.04%
			Total Vehicles	72606	106340	90516	68949	56279	-22.487	-47.076	-2.044	-15.692	0.05%
	Entering Canada	Gillespie (237)	Truck	7232	6564	9009	6340	9367	29.522	42.703	2.684	14.234	0.18%
			Cars	75794	117402	100949	71019	63845	-15.765	-45.618	-1.433	-15.206	0.17%
			Total Vehicles	83026	123966	109958	77359	73212	-11.820	-40.942	-1.075	-13.647	0.17%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Maine (Continued)	Total Bidirectional		Truck	13834	11822	15626	11868	15794	14.168	33.598	1.288	11.199	0.10%
			Cars	141798	218484	184848	134440	113697	-19.818	-47.961	-1.802	-15.987	0.05%
			Total Vehicles	155632	230306	200474	146308	129491	-16.797	-43.774	-1.527	-14.591	0.05%
	Entering US	Bridge water (1012701)	Truck	5397	9764	9668	9521	9111	68.816	-6.688	6.256	-2.229	0.11%
			Cars	104698	179748	145496	165564	141271	34.932	-21.406	3.176	-7.135	0.12%
			Total Vehicles	110095	189512	155164	175085	150382	36.593	-20.648	3.327	-6.883	0.12%
	Entering Canada	Centreville (215)	Truck	5870	8867	7860	9098	9475	61.414	6.857	5.583	2.286	0.18%
			Cars	64493	169944	129793	97666	94508	46.540	-44.389	4.231	-14.796	0.24%
			Total Vehicles	70363	178811	137653	106764	103983	47.781	-41.848	4.344	-13.949	0.24%
	Total Bidirectional		Truck	11267	18631	17528	18619	18586	64.960	-0.242	5.905	-0.081	0.12%
			Cars	169191	349692	275289	263230	235779	39.357	-32.575	3.578	-10.858	0.10%
			Total Vehicles	180458	368323	292817	281849	254365	40.955	-30.940	3.723	-10.313	0.10%
Maine Total	US entry total		Truck	205725	347536	391114	426360	369188	79.457	6.230	7.223	2.077	4.61%
			Cars	3656355	6852566	6103474	5334570	4755443	30.060	-30.603	2.733	-10.201	4.13%
			Total Vehicles	3862080	7200102	6494588	5760930	5124631	32.691	-28.826	2.972	-9.609	4.16%
	Canadian entry total		Truck	242001	356132	365088	350559	349226	44.308	-1.939	4.028	-0.646	6.77%
			Cars	3440809	6301030	5468868	4481923	4378679	27.257	-30.509	2.478	-10.170	11.35%
			Total Vehicles	3682810	6657162	5833956	4832482	4727905	28.378	-28.980	2.580	-9.660	10.81%
	Total Bidirectional		Truck	447726	703668	756202	776919	718414	60.458	2.096	5.496	0.699	4.48%
			Cars	7097164	13153596	11572342	9816493	9134122	28.701	-30.558	2.609	-10.186	3.98%
			Total Vehicles	7544890	13857264	12328544	10593412	9852536	30.586	-28.900	2.781	-9.633	4.01%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Vermont/New Hampshire	Entering US	West Berkshire (1020301)	Truck	8738	6297	7168	8159	9168	4.921	45.593	0.447	15.198	0.11%
			Cars	127511	352810	298052	194992	175652	37.754	-50.213	3.432	-16.738	0.15%
			Total Vehicles	136249	359107	305220	203151	184820	35.649	-48.533	3.241	-16.178	0.15%
	Entering Canada	Abercorn (366)	Truck	5329	3895	4335	5587	5154	-3.284	32.323	-0.299	10.774	0.10%
			Cars	80475	203900	154985	99183	87155	8.301	-57.256	0.755	-19.085	0.23%
			Total Vehicles	85804	207795	159320	104770	92309	7.581	-55.577	0.689	-18.526	0.21%
		East Pinnacalle (369)	Truck	880	464	151	178	176	-80.000	-62.069	-7.273	-20.690	0.00%
			Cars	16554	37867	27865	22316	19405	17.222	-48.755	1.566	-16.252	0.05%
			Total Vehicles	17434	38331	28016	22494	19581	12.315	-48.916	1.120	-16.305	0.04%
		Frelichburg (332)	Truck	4309	2811	2649	2496	2470	-42.678	-12.131	-3.880	-4.044	0.05%
			Cars	44846	103763	75347	47778	42567	-5.082	-58.977	-0.462	-19.659	0.11%
			Total Vehicles	49155	106574	77996	50274	45037	-8.378	-57.741	-0.762	-19.247	0.10%
		Glen Sutton (371)	Truck	844	508	518	367	512	-39.336	0.787	-3.576	0.262	0.01%
			Cars	14744	17605	15677	11843	11210	-23.969	-36.325	-2.179	-12.108	0.03%
			Total Vehicles	15588	18113	16195	12210	11722	-24.801	-35.284	-2.255	-11.761	0.03%
		Total Canada	Truck	11362	7678	7653	8628	8312	-26.844	8.257	-2.440	2.752	0.16%
			Cars	156619	363135	273874	181120	160337	2.374	-55.846	0.216	-18.615	0.42%
			Total Vehicles	167981	370813	281527	189748	168649	0.398	-54.519	0.036	-18.173	0.39%
	Total Bidirectional		Truck	20100	13975	14821	16787	17480	-13.035	25.081	-1.185	8.360	0.11%
			Cars	284130	715945	571926	376112	335989	18.252	-53.071	1.659	-17.690	0.15%
			Total Vehicles	304230	729920	586747	392899	353469	16.185	-51.574	1.471	-17.191	0.14%
	Entering US	Becher falls (1020601)	Truck	16635	23127	23986	21604	22091	32.798	-4.480	2.982	-1.493	0.28%
			Cars	87323	144282	131946	114296	115285	32.021	-20.097	2.911	-6.699	0.10%
			Total Vehicles	103958	167409	155932	135900	137376	32.146	-17.940	2.922	-5.980	0.11%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Vermont/New Hampshire (Continued)	Enterin Canada	East Hereford (362)	Truck	12903	20170	18826	13161	12354	-4.255	-38.751	-0.387	-12.917	0.24%
			Cars	42260	53895	47522	37934	34538	-18.273	-35.916	-1.661	-11.972	0.09%
			Total Vehicles	55163	74065	66348	51095	46892	-14.994	-36.688	-1.363	-12.229	0.11%
		East Hereford (330)	Truck	3165	2164	4533	2862	3180	0.474	46.950	0.043	15.650	0.06%
			Cars	57817	144268	128730	112776	107442	85.831	-25.526	7.803	-8.509	0.28%
			Total Vehicles	60982	146432	133263	115638	110622	81.401	-24.455	7.400	-8.152	0.25%
		Chartievill (368)	Truck	1084	2661	2561	2289	1932	78.229	-27.396	7.112	-9.132	0.04%
			Cars	11146	15078	13114	12549	11851	6.325	-21.402	0.575	-7.134	0.03%
			Total Vehicles	12230	17739	15675	14838	13783	12.698	-22.301	1.154	-7.434	0.03%
		Hereford Rd (364)	Truck	1549	2056	3498	5884	8128	424.726	295.331	38.611	98.444	0.16%
			Cars	36541	54487	51010	48965	50842	39.137	-6.690	3.558	-2.230	0.13%
			Total Vehicles	38090	56543	54508	54849	58970	54.818	4.292	4.983	1.431	0.13%
		Total Canada	Truck	18701	27051	29418	24196	25594	36.859	-5.386	3.351	-1.795	0.50%
			Cars	147764	267728	240376	212224	204673	38.513	-23.552	3.501	-7.851	0.53%
			Total Vehicles	166465	294779	269794	236420	230267	38.328	-21.885	3.484	-7.295	0.53%
	Total Bidirectional		Truck	35336	50178	53404	45800	47685	34.947	-4.968	3.177	-1.656	0.30%
			Cars	235087	412010	372322	326520	319958	36.102	-22.342	3.282	-7.447	0.14%
			Total Vehicles	270423	462188	425726	372320	367643	35.951	-20.456	3.268	-6.819	0.15%
	Entering US	Derby Line (1020901)	Truck	46418	71239	70214	81235	87078	87.595	22.234	7.963	7.411	1.09%
			Cars	653447	1101936	960972	831654	793797	21.478	-27.963	1.953	-9.321	0.69%
			Total Vehicles	699865	1173175	1031186	912889	880875	25.864	-24.915	2.351	-8.305	0.72%
	Entering Canada	Beebe (367)	Truck	4814	882	600	890	514	-89.323	-41.723	-8.120	-13.908	0.01%
			Cars	79832	120241	103112	84272	84670	6.060	-29.583	0.551	-9.861	0.22%
			Total Vehicles	84646	121123	103712	85162	85184	0.636	-29.671	0.058	-9.890	0.19%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Vermont/New Hampshire (Continued)	Entering Canada (Continued)	Highwater (334)	Truck	3449	3096	3645	4117	4975	44.245	60.691	4.022	20.230	0.10%
			Cars	64296	119198	107891	89076	87388	35.915	-26.687	3.265	-8.896	0.23%
			Total Vehicles	67745	122294	111536	93193	92363	36.339	-24.475	3.304	-8.158	0.21%
		Rock Island (314)	Truck	36442	63786	65950	74980	84968	133.160	33.208	12.105	11.069	1.65%
			Cars	464006	384460	336976	291486	299215	-35.515	-22.173	-3.229	-7.391	0.78%
			Total Vehicles	500448	448246	402926	366466	384183	-23.232	-14.292	-2.112	-4.764	0.88%
		Rock Island (384)	Truck		686	466	353	456		-33.528		-11.176	0.01%
			Cars		434171	382972	335370	313025		-27.903		-9.301	0.81%
			Total Vehicles	0	434857	383438	335723	313481		-27.912		-9.304	0.72%
		Total Canada	Truck	44705	68450	70661	80340	90913	103.362	32.817	9.397	10.939	1.76%
			Cars	608134	1058070	930951	800204	784298	28.968	-25.875	2.633	-8.625	2.03%
			Total Vehicles	652839	1126520	1001612	880544	875211	34.062	-22.308	3.097	-7.436	2.00%
	Total Bidirectional		Truck	91123	139689	140875	161575	177991	95.330	27.419	8.666	9.140	1.11%
			Cars	1261581	2160006	1891923	1631858	1578095	25.089	-26.940	2.281	-8.980	0.69%
			Total Vehicles	1352704	2299695	2032798	1793433	1756086	29.820	-23.638	2.711	-7.879	0.72%
	Entering US	Norton (1021101)	Truck	9527	11479	12803	16969	21345	124.047	85.948	11.277	28.649	0.27%
			Cars	107716	201640	161628	132358	98030	-8.992	-51.384	-0.817	-17.128	0.09%
			Total Vehicles	117243	213119	174431	149327	119375	1.818	-43.987	0.165	-14.662	0.10%
	Entering Canada	Stan hope	Truck	8760	9358	9910	10826	11220	28.082	19.897	2.553	6.632	0.22%
			Cars	92035	191042	154886	125052	95408	3.665	-50.059	0.333	-16.686	0.25%
			Total Vehicles	100795	200400	164796	135878	106628	5.787	-46.792	0.526	-15.597	0.24%
	Total Bidirectional		Truck	18287	20837	22713	27795	32565	78.077	56.284	7.098	18.761	0.20%
			Cars	199751	392682	316514	257410	193438	-3.160	-50.739	-0.287	-16.913	0.08%
			Total Vehicles	218038	413519	339227	285205	226003	3.653	-45.346	0.332	-15.115	0.09%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Vermont/New Hampshire (Continued)	Entering US	High Gate (1021201)	Truck	72230	74934	91905	103076	101311	40.262	35.200	3.660	11.733	1.26%
			Cars	455859	603843	567167	479665	456876	0.223	-24.339	0.020	-8.113	0.40%
			Total Vehicles	528089	678777	659072	582741	558187	5.699	-17.766	0.518	-5.922	0.45%
	Entering Canada	Clarenceville (338)	Truck	1848	1109	890	1280	1971	6.656	77.728	0.605	25.909	0.04%
			Cars	49077	121590	100929	60895	66931	36.380	-44.954	3.307	-14.985	0.17%
			Total Vehicles	50925	122699	101819	62175	68902	35.301	-43.845	3.209	-14.615	0.16%
		Noyan (337)	Truck	2539	379	377	712	733	-71.130	93.404	-6.466	31.135	0.01%
			Cars	63230	112565	88645	64053	55908	-11.580	-50.333	-1.053	-16.778	0.14%
			Total Vehicles	65769	112944	89022	64765	56641	-13.879	-49.850	-1.262	-16.617	0.13%
		Morses line (374)	Truck	1612	811	785	1007	1131	-29.839	39.457	-2.713	13.152	0.02%
			Cars	13486	30779	26866	20169	18184	34.836	-40.921	3.167	-13.640	0.05%
			Total Vehicles	15098	31590	27651	21176	19315	27.931	-38.857	2.539	-12.952	0.04%
		Phillipsburg (328)	Truck	54283	88555	95061	106594	106737	96.631	20.532	8.785	6.844	2.07%
			Cars	334188	467384	427500	378113	389068	16.422	-16.756	1.493	-5.585	1.01%
			Total Vehicles	388471	555939	522561	484707	495805	27.630	-10.817	2.512	-3.606	1.13%
		Total Canada	Truck	60282	90854	97113	109593	110572	83.425	21.703	7.584	7.234	2.14%
			Cars	459981	732318	643940	523230	530091	15.242	-27.615	1.386	-9.205	1.37%
			Total Vehicles	520263	823172	741053	632823	640663	23.142	-22.171	2.104	-7.390	1.46%
	Total Bidirectional		Truck	132512	165788	189018	212669	211883	59.897	27.804	5.445	9.268	1.32%
			Cars	915840	1336161	1211107	1002895	986967	7.766	-26.134	0.706	-8.711	0.43%
			Total Vehicles	1048352	1501949	1400125	1215564	1198850	14.356	-20.180	1.305	-6.727	0.49%
Vermont/ New Hampshire Total	US entry total		Truck	153548	187076	206076	231043	240993	56.950	28.821	5.177	9.607	3.01%
			Cars	1431886	2404511	2119765	1752965	1639640	14.509	-31.810	1.319	-10.603	1.42%
			Total Vehicles	1585434	2591587	2325841	1984008	1880633	18.619	-27.433	1.693	-9.144	1.53%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Vermont/ New Hampshire Total (Continued)		Canadian entry total	Truck	143810	203391	214755	233583	246611	71.484	21.250	6.499	7.083	4.78%
			Cars	1464533	2612293	2244027	1841830	1774807	21.186	-32.059	1.926	-10.686	4.60%
			Total Vehicles	1608343	2815684	2458782	2075413	2021418	25.683	-28.209	2.335	-9.403	4.62%
		Total Bidirectional	Truck	297358	390467	420831	464626	487604	63.979	24.877	5.816	8.292	3.04%
			Cars	2896419	5016804	4363792	3594795	3414447	17.885	-31.940	1.626	-10.647	1.49%
			Total Vehicles	3193777	5407271	4784623	4059421	3902051	22.177	-27.837	2.016	-9.279	1.59%
Eastern New York	Entering US	Ogdensburg (1070101)	Truck	20721	25549	26759	29222	26757	29.130	4.728	2.648	1.576	0.33%
			Cars	195438	446661	359562	291071	307705	57.444	-31.110	5.222	-10.370	0.27%
			Total Vehicles	216159	472210	386321	320293	334462	54.730	-29.171	4.975	-9.724	0.27%
	Entering Canada	Prescott (439)	Truck	11892	18115	18254	19305	18816	58.224	3.870	5.293	1.290	0.36%
			Cars	175984	375517	306848	244717	245334	39.407	-34.668	3.582	-11.556	0.64%
			Total Vehicles	187876	393632	325102	264022	264150	40.598	-32.894	3.691	-10.965	0.60%
	Total Bidirectional		Truck	32613	43664	45013	48527	45573	39.739	4.372	3.613	1.457	0.28%
			Cars	371422	822178	666410	535788	553039	48.898	-32.735	4.445	-10.912	0.24%
			Total Vehicles	404035	865842	711423	584315	598612	48.158	-30.864	4.378	-10.288	0.24%
	Entering US	Massena (1070401)	Truck	30293	43572	53709	52401	51858	71.188	19.017	6.472	6.339	0.65%
			Cars	536225	1296151	1251054	1091829	1089300	103.142	-15.959	9.377	-5.320	0.95%
			Total Vehicles	566518	1339723	1304763	1144230	1141158	101.434	-14.821	9.221	-4.940	0.93%
	Entering Canada	Cornwall (409)	Truck	26571	27541	39292	35416	42923	61.541	55.851	5.595	18.617	0.83%
			Cars	433205	1056217	995037	803553	974118	124.863	-7.773	11.351	-2.591	2.52%
			Total Vehicles	459776	1083758	1034329	838969	1017041	121.204	-6.156	11.019	-2.052	2.33%
	Total Bidirectional		Truck	56864	71113	93001	87817	94781	66.680	33.282	6.062	11.094	0.59%
			Cars	969430	2352368	2246091	1895382	2063418	112.849	-12.283	10.259	-4.094	0.90%
			Total Vehicles	1026294	2423481	2339092	1983199	2158199	110.291	-10.946	10.026	-3.649	0.88%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Eastern New York (Continued)	Entering US	Alexandria Bay (1070801)	Truck	96779	155082	173444	190059	193166	99.595	24.557	9.054	8.186	2.41%
			Cars	536541	832939	776332	707202	720334	34.255	-13.519	3.114	-4.506	0.63%
			Total Vehicles	633320	988021	949776	897261	913500	44.240	-7.542	4.022	-2.514	0.74%
	Entering Canada	Landsdowne (456)	Truck	84261	133541	150820	164627	175962	108.830	31.766	9.894	10.589	3.41%
			Cars	443952	745929	689962	620684	619656	39.577	-16.928	3.598	-5.643	1.61%
			Total Vehicles	528213	879470	840782	785311	795618	50.624	-9.534	4.602	-3.178	1.82%
		Pt. Alexandria Ferry (458)	Truck	12	0	0	0	2	-83.333		-7.576		0.00%
			Cars	12464	15997	14449	13538	13772	10.494	-13.909	0.954	-4.636	0.04%
			Total Vehicles	12476	15997	14449	13538	13774	10.404	-13.896	0.946	-4.632	0.03%
		Total Canada	Truck	84273	133541	150820	164627	175964	108.802	31.768	9.891	10.589	3.41%
			Cars	456416	761926	704411	634222	633428	38.783	-16.865	3.526	-5.622	1.64%
			Total Vehicles	540689	895467	855231	798849	809392	49.696	-9.612	4.518	-3.204	1.85%
	Total Bidirectional		Truck	181052	288623	324264	354686	369130	103.881	27.893	9.444	9.298	2.30%
			Cars	992957	1594865	1480743	1341424	1353762	36.336	-15.117	3.303	-5.039	0.59%
			Total Vehicles	1174009	1883488	1805007	1696110	1722892	46.753	-8.527	4.250	-2.842	0.70%
	Entering US	Champlain (1071201)	Truck	217438	250539	272972	272960	269001	23.714	7.369	2.156	2.456	3.36%
			Cars	913741	1752613	1519738	1379161	1243502	36.089	-29.049	3.281	-9.683	1.08%
			Total Vehicles	1131179	2003152	1792710	1652121	1512503	33.710	-24.494	3.065	-8.165	1.23%
	Entering Canada	Lacoille Route 15 (351)	Truck	235720	241654	257670	269683	283906	20.442	17.485	1.858	5.828	5.50%
			Cars	907885	978358	938482	790023	773573	-14.794	-20.931	-1.345	-6.977	2.00%
			Total Vehicles	1143605	1220012	1196152	1059706	1057479	-7.531	-13.322	-0.685	-4.441	2.42%
		Lacoille Route 221 (381)	Truck		5671	8628	10377	9305		64.080		21.360	0.18%
			Cars		242884	211415	185787	168452		-30.645		-10.215	0.44%
			Total Vehicles	0	248555	220043	196164	177757		-28.484		-9.495	0.41%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Eastern New York (Continued)	Entering Canada (Continued)	Lacoille Route 223 (382)	Truck		1353	2155	2594	2582		90.835		30.278	0.05%
			Cars		328609	280450	212618	193624		-41.078		-13.693	0.50%
			Total Vehicles	0	329962	282605	215212	196206		-40.537		-13.512	0.45%
		Hermingford/ Dundoe (333)	Truck	3768	3556	3648	3964	4031	6.980	13.358	0.635	4.453	0.08%
			Cars	87159	186216	152554	116725	115894	32.968	-37.764	2.997	-12.588	0.30%
			Total Vehicles	90927	189772	156202	120689	119925	31.892	-36.806	2.899	-12.269	0.27%
		Covey Hill (365)	Truck	1045	1679	1605	1485	1300	24.402	-22.573	2.218	-7.524	0.03%
			Cars	21689	44561	37522	29215	30056	38.577	-32.551	3.507	-10.850	0.08%
			Total Vehicles	22734	46240	39127	30700	31356	37.926	-32.189	3.448	-10.730	0.07%
		Total Canada	Truck	240533	253913	273706	288103	301124	25.190	18.593	2.290	6.198	5.84%
			Cars	1016733	1780628	1620423	1334368	1281599	26.051	-28.025	2.368	-9.342	3.32%
			Total Vehicles	1257266	2034541	1894129	1622471	1582723	25.886	-22.207	2.353	-7.402	3.62%
	Total Bidirectional		Truck	457971	504452	546678	561063	570125	24.489	13.019	2.226	4.340	3.55%
			Cars	1930474	3533241	3140161	2713529	2525101	30.802	-28.533	2.800	-9.511	1.10%
			Total Vehicles	2388445	4037693	3686839	3274592	3095226	29.592	-23.342	2.690	-7.781	1.26%
	Entering US	Trout River (1071501)	Truck	8968	10604	18258	13853	15493	72.759	46.105	6.614	15.368	0.19%
			Cars	207027	395365	350227	270207	245665	18.663	-37.864	1.697	-12.621	0.21%
			Total Vehicles	215995	405969	368485	284060	261158	20.909	-35.670	1.901	-11.890	0.21%
	Entering Canada	Herdman (302)	Truck	3130	2600	2943	4577	7568	141.789	191.077	12.890	63.692	0.15%
			Cars	62461	108800	94891	72856	67822	8.583	-37.664	0.780	-12.555	0.18%
			Total Vehicles	65591	111400	97834	77433	75390	14.940	-32.325	1.358	-10.775	0.17%
		Trout River (352)	Truck	3265	4145	3708	3718	3224	-1.256	-22.220	-0.114	-7.407	0.06%
			Cars	64135	112306	87705	73718	65556	2.216	-41.627	0.201	-13.876	0.17%
			Total Vehicles	67400	116451	91413	77436	68780	2.047	-40.937	0.186	-13.646	0.16%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Eastern New Yrok (Continued)	Entering Canada (Continued)	Franklin Cent (324)	Truck	1360	1772	1651	2314	2589	90.368	46.106	8.215	15.369	0.05%
			Cars	11121	18609	14926	13696	18412	65.561	-1.059	5.960	-0.353	0.05%
			Total Vehicles	12481	20381	16577	16010	21001	68.264	3.042	6.206	1.014	0.05%
		Jamiesons (372)	Truck	455	328	226	403	399	-12.308	21.646	-1.119	7.215	0.01%
			Cars	3404	5772	5957	7445	9250	171.739	60.256	15.613	20.085	0.02%
			Total Vehicles	3859	6100	6183	7848	9649	150.039	58.180	13.640	19.393	0.02%
		Total Canada	Truck	8210	8845	8528	11012	13780	67.844	55.794	6.168	18.598	0.27%
			Cars	141121	245487	203479	167715	161040	14.115	-34.400	1.283	-11.467	0.42%
			Total Vehicles	149331	254332	212007	178727	174820	17.069	-31.263	1.552	-10.421	0.40%
	Total Bidirectional		Truck	17178	19449	26786	24865	29273	70.410	50.512	6.401	16.837	0.18%
			Cars	348148	640852	553706	437922	406705	16.820	-36.537	1.529	-12.179	0.18%
			Total Vehicles	365326	660301	580492	462787	435978	19.339	-33.973	1.758	-11.324	0.18%
Eastern New York Total		US Entry total	Truck	374199	485346	545142	558495	556275	48.658	14.614	4.423	4.871	6.94%
			Cars	2400530	4723729	4256913	3739470	3606506	50.238	-23.651	4.567	-7.884	3.13%
			Total Vehicles	2774729	5209075	4802055	4297965	4162781	50.025	-20.086	4.548	-6.695	3.38%
		Canadian entry total	Truck	371479	441955	490600	518463	552607	48.759	25.037	4.433	8.346	10.71%
			Cars	2223459	4219775	3830198	3184575	3295519	48.216	-21.903	4.383	-7.301	8.54%
			Total Vehicles	2594938	4661730	4320798	3703038	3848126	48.294	-17.453	4.390	-5.818	8.80%
		Total Bidirectional	Truck	745678	927301	1035742	1076958	1108882	48.708	19.582	4.428	6.527	6.91%
			Cars	4623989	8943504	8087111	6924045	6902025	49.266	-22.826	4.479	-7.609	3.01%
			Total Vehicles	5369667	9870805	9122853	8001003	8010907	49.188	-18.842	4.472	-6.281	3.26%
Western NY	Entering US	Peace Bridge (1090102)	Truck	347545	460695	488264	519869	566137	62.896	22.888	5.718	7.629	7.06%
			Cars	2781884	3593338	3385027	3162588	3127653	12.429	-12.960	1.130	-4.320	2.72%
			Total Vehicles	3129429	4054033	3873291	3682457	3693790	18.034	-8.886	1.639	-2.962	3.00%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Western New York (Continued)	Entering Canada	Fort Erie (410)	Truck	325874	434864	488745	543556	580430	78.115	33.474	7.101	11.158	11.25%
			Cars	2826585	3618256	3429937	3248147	3260303	15.344	-9.893	1.395	-3.298	8.45%
			Total Vehicles	3152459	4053120	3918682	3791703	3840733	21.833	-5.240	1.985	-1.747	8.78%
	Total Bidirectional		Truck	673419	895559	977009	1063425	1146567	70.261	28.028	6.387	9.343	7.15%
			Cars	5608469	7211594	6814964	6410735	6387956	13.898	-11.421	1.263	-3.807	2.78%
			Total Vehicles	6281888	8107153	7791973	7474160	7534523	19.940	-7.063	1.813	-2.354	3.07%
	Entering US	Rainbow Bridge (1090104)	Truck	1238	2230	3646	1230	558	-54.927	-74.978	-4.993	-24.993	0.01%
			Cars	1526296	2288674	2255776	1863993	1632768	6.976	-28.659	0.634	-9.553	1.42%
			Total Vehicles	1527534	2290904	2259422	1865223	1633326	6.926	-28.704	0.630	-9.568	1.33%
	Entering Canada	Rainbow (425)	Truck	8152	3	3	0	0	-100.000	-100.000	-9.091	-33.333	0.00%
			Cars	1459892	2245536	2062548	1699697	1598120	9.468	-28.831	0.861	-9.610	4.14%
			Total Vehicles	1468044	2245539	2062551	1699697	1598120	8.860	-28.831	0.805	-9.610	3.65%
	Total Bidirectional		Truck	9390	2233	3649	1230	558	-94.058	-75.011	-8.551	-25.004	0.00%
			Cars	2986188	4534210	4318324	3563690	3230888	8.194	-28.744	0.745	-9.581	1.41%
			Total Vehicles	2995578	4536443	4321973	3564920	3231446	7.874	-28.767	0.716	-9.589	1.32%
	Entering US	Whirlpool Rapids (1090105)	Truck	29952	4771	2750	3007	2529	-91.556	-46.992	-8.323	-15.664	0.03%
			Cars	563304	1196639	837240	767036	706723	25.460	-40.941	2.315	-13.647	0.61%
			Total Vehicles	593256	1201410	839990	770043	709252	19.552	-40.965	1.777	-13.655	0.58%
	Entering Canada	Whirpool (426)	Truck	31966	11803	8011	9163	9294	-70.925	-21.257	-6.448	-7.086	0.18%
			Cars	606678	1151745	832904	758830	683359	12.639	-40.668	1.149	-13.556	1.77%
			Total Vehicles	638644	1163548	840915	767993	692653	8.457	-40.471	0.769	-13.490	1.58%
	Total Bidirectional		Truck	61918	16574	10761	12170	11823	-80.905	-28.665	-7.355	-9.555	0.07%
			Cars	1169982	2348384	1670144	1525866	1390082	18.812	-40.807	1.710	-13.602	0.61%
			Total Vehicles	1231900	2364958	1680905	1538036	1401905	13.800	-40.722	1.255	-13.574	0.57%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Western New York (Continued)	Entering US	Lewiston Bridge (1090106)	Truck	286883	316237	330834	362691	379458	32.269	19.992	2.934	6.664	4.73%
			Cars	916587	2297935	1976365	1686895	1620074	76.751	-29.499	6.977	-9.833	1.41%
			Total Vehicles	1203470	2614172	2307199	2049586	1999532	66.147	-23.512	6.013	-7.837	1.62%
	Entering Canada	Queenston (427)	Truck	202855	312974	328867	378974	403205	98.765	28.830	8.979	9.610	7.82%
			Cars	1038066	2269677	2017599	1765151	1788832	72.324	-21.186	6.575	-7.062	4.64%
			Total Vehicles	1240921	2582651	2346466	2144125	2192037	76.646	-15.125	6.968	-5.042	5.01%
	Total Bidirectional		Truck	489738	629211	659701	741665	782663	59.813	24.388	5.438	8.129	4.88%
			Cars	1954653	4567612	3993964	3452046	3408906	74.400	-25.368	6.764	-8.456	1.49%
			Total Vehicles	2444391	5196823	4653665	4193711	4191569	71.477	-19.344	6.498	-6.448	1.71%
Western New York Total		US entry Total	Truck	665618	783933	825494	886797	948682	42.526	21.016	3.866	7.005	11.83%
			Cars	5858071	9376586	8454408	7480512	7087218	20.982	-24.416	1.907	-8.139	6.15%
			Total Vehicles	6523689	10160519	9279902	8367309	8035900	23.180	-20.911	2.107	-6.970	6.52%
		Canadian entry total	Truck	568847	759644	825626	931693	992929	74.551	30.710	6.777	10.237	19.25%
			Cars	5931221	9285214	8342988	7471825	7330614	23.594	-21.051	2.145	-7.017	19.00%
			Total Vehicles	6500068	10044858	9168614	8403518	8323543	28.053	-17.136	2.550	-5.712	19.03%
		Total Bidirectional	Truck	1234465	1543577	1651120	1818490	1941611	57.284	25.786	5.208	8.595	12.10%
			Cars	11789292	18661800	16797396	14952337	14417832	22.296	-22.741	2.027	-7.580	6.29%
			Total Vehicles	13023757	20205377	18448516	16770827	16359443	25.612	-19.034	2.328	-6.345	6.67%
New York Total		US entry total	Truck	1039817	1269279	1370636	1445292	1504957	44.733	18.568	4.067	6.189	18.77%
			Cars	8258601	14100315	12711321	11219982	10693724	29.486	-24.160	2.681	-8.053	9.29%
			Total Vehicles	9298418	15369594	14081957	12665274	12198681	31.191	-20.631	2.836	-6.877	9.90%
		Canadian entry total	Truck	940326	1201599	1316226	1450156	1545536	64.362	28.623	5.851	9.541	29.96%
			Cars	8154680	13504989	12173186	10656400	10626133	30.307	-21.317	2.755	-7.106	27.54%
			Total Vehicles	9095006	14706588	13489412	12106556	12171669	33.828	-17.237	3.075	-5.746	27.83%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
New York Total (Continued)		Total Bidirectional	Truck	1980143	2470878	2686862	2895448	3050493	54.054	23.458	4.914	7.819	19.02%
			Cars	16413281	27605304	24884507	21876382	21319857	29.894	-22.769	2.718	-7.590	9.29%
			Total Vehicles	18393424	30076182	27571369	24771830	24370350	32.495	-18.971	2.954	-6.324	9.93%
Michigan	Entering US	Ambassador Detroit (3380101)	Truck	717691	775352	862344	1001327	1075056	49.794	38.654	4.527	12.885	13.41%
			Cars	2114844	3116035	3287126	3402032	3632327	71.754	16.569	6.523	5.523	3.15%
			Total Vehicles	2832535	3891387	4149470	4403359	4707383	66.190	20.969	6.017	6.990	3.82%
	Entering Canada	Windsor Ambassador	Truck	533416	840485	956332	1088176	1158394	117.165	37.824	10.651	12.608	22.46%
			Cars	2245350	3333701	3502522	3522134	3859635	71.895	15.776	6.536	5.259	10.00%
			Total Vehicles	2778766	4174186	4458854	4610310	5018029	80.585	20.216	7.326	6.739	11.47%
	Total Bidirectional		Truck	1251107	1615837	1818676	2089503	2233450	78.518	38.222	7.138	12.741	13.92%
			Cars	4360194	6449736	6789648	6924166	7491962	71.826	16.159	6.530	5.386	3.27%
			Total Vehicles	5611301	8065573	8608324	9013669	9725412	73.318	20.579	6.665	6.860	3.96%
	Entering US	Wins-Det Tunnel (3380102)	Truck	82928	149083	224307	154051	131421	58.476	-11.847	5.316	-3.949	1.64%
			Cars	2818664	3410946	3152149	3617707	4174017	48.085	22.371	4.371	7.457	3.62%
			Total Vehicles	2901592	3560029	3376456	3771758	4305438	48.382	20.938	4.398	6.979	3.50%
	Entering Canada	Windsor Tunnel (453)	Truck	55381	147248	145668	145724	143672	159.425	-2.429	14.493	-0.810	2.79%
			Cars	2594760	3534586	3063674	3525184	3988564	53.716	12.844	4.883	4.281	10.34%
			Total Vehicles	2650141	3681834	3209342	3670908	4132236	55.925	12.233	5.084	4.078	9.45%
	Total Bidirectional		Truck	138309	296331	369975	299775	275093	98.897	-7.167	8.991	-2.389	1.71%
			Cars	5413424	6945532	6215823	7142891	8162581	50.784	17.523	4.617	5.841	3.56%
			Total Vehicles	5551733	7241863	6585798	7442666	8437674	51.983	16.512	4.726	5.504	3.44%
	Detroit Sub Total	US entry total	Truck	800619	924435	1086651	1155378	1206477	50.693	30.510	4.608	10.170	15.05%
			Cars	4933508	6526981	6439275	7019739	7806344	58.231	19.601	5.294	6.534	6.78%
			Total Vehicles	5734127	7451416	7525926	8175117	9012821	57.179	20.954	5.198	6.985	7.32%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Michigan (Continued)	Detroit Sub Total (Continued)	Canadian entry total	Truck	588797	987733	1102000	1233900	1302066	121.140	31.824	11.013	10.608	25.24%
			Cars	4840110	6868287	6566196	7047318	7848199	62.149	14.267	5.650	4.756	20.34%
			Total Vehicles	5428907	7856020	7668196	8281218	9150265	68.547	16.475	6.232	5.492	20.92%
		Total Bidirectional	Truck	1389416	1912168	2188651	2389278	2508543	80.547	31.188	7.322	10.396	15.64%
			Cars	9773618	13395268	13005471	14067057	15654543	60.171	16.866	5.470	5.622	6.82%
			Total Vehicles	11163034	15307436	15194122	16456335	18163086	62.707	18.655	5.701	6.218	7.40%
	Entering US	Bluewater Bridge (3380201, 3380202)	Truck	174563	447698	543489	609180	618479	254.301	38.146	23.118	12.715	7.71%
			Cars	1488078	2795503	2663200	2007243	2026424	36.177	-27.511	3.289	-9.170	1.76%
			Total Vehicles	1662641	3243201	3206689	2616423	2644903	59.078	-18.448	5.371	-6.149	2.15%
	Entering Canada	Sarnia (440)	Truck	110804	366463	445729	510991	549815	396.205	50.033	36.019	16.678	10.66%
			Cars	1423483	2622548	2571491	2036572	1895933	33.190	-27.706	3.017	-9.235	4.91%
			Total Vehicles	1534287	2989011	3017220	2547563	2445748	59.406	-18.175	5.401	-6.058	5.59%
	Total Bidirectional		Truck	285367	814161	989218	1120171	1168294	309.401	43.497	28.127	14.499	7.28%
			Cars	2911561	5418051	5234691	4043815	3922357	34.717	-27.606	3.156	-9.202	1.71%
			Total Vehicles	3196928	6232212	6223909	5163986	5090651	59.236	-18.317	5.385	-6.106	2.07%
	Entering US	Saulte St. Marie (3380301)	Truck	34196	36797	42616	52425	56015	63.806	52.227	5.801	17.409	0.70%
			Cars	731495	1715596	1813583	1654563	1594621	117.995	-7.051	10.727	-2.350	1.38%
			Total Vehicles	765691	1752393	1856199	1706988	1650636	115.575	-5.807	10.507	-1.936	1.34%
	Entering Canada	Sault (441)	Truck	35087	37753	44482	54349	61603	75.572	63.174	6.870	21.058	1.19%
			Cars	721854	1651431	1580026	1585985	1410318	95.374	-14.600	8.670	-4.867	3.66%
			Total Vehicles	756941	1689184	1624508	1640334	1471921	94.457	-12.862	8.587	-4.287	3.37%
	Total Bidirectional		Truck	69283	74550	87098	106774	117618	69.765	57.771	6.342	19.257	0.73%
			Cars	1453349	3367027	3393609	3240548	3004939	106.760	-10.754	9.705	-3.585	1.31%
			Total Vehicles	1522632	3441577	3480707	3347322	3122557	105.076	-9.270	9.552	-3.090	1.27%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Michigan (Continued)	Entering US	Ferries P.H.	Truck										0.00%
			Cars										0.00%
			Total Vehicles										0.00%
	Entering Canada	Sombra (499)	Truck	2013	3573	3981	3681	4349	116.046	21.718	10.550	7.239	0.08%
			Cars	34112	79318	64301	44388	45953	34.712	-42.065	3.156	-14.022	0.12%
			Total Vehicles	36125	82891	68282	48069	50302	39.244	-39.315	3.568	-13.105	0.11%
		Walpole (495)	Truck	19	0	0	0	0	-100.000		-9.091		0.00%
			Cars	26045	91259	70332	52465	53217	104.327	-41.686	9.484	-13.895	0.14%
			Total Vehicles	26064	91259	70332	52465	53217	104.178	-41.686	9.471	-13.895	0.12%
		Total Canada	Truck	2032	3573	3981	3681	4349	114.026	21.718	10.366	7.239	0.08%
			Cars	60157	170577	134633	96853	99170	64.852	-41.862	5.896	-13.954	0.26%
			Total Vehicles	62189	174150	138614	100534	103519	66.459	-40.558	6.042	-13.519	0.24%
	Total Bidirectional		Truck	2032	3573	3981	3681	4349	114.026	21.718	10.366	7.239	0.03%
			Cars	60157	170577	134633	96853	99170	64.852	-41.862	5.896	-13.954	0.04%
			Total Vehicles	62189	174150	138614	100534	103519	66.459	-40.558	6.042	-13.519	0.04%
Michigan Total	US entry total		Truck	1009378	1408930	1672756	1816983	1880971	86.350	33.504	7.850	11.168	23.46%
			Cars	7153081	11038080	10916058	10681545	11427389	59.755	3.527	5.432	1.176	9.92%
			Total Vehicles	8162459	12447010	12588814	12498528	13308360	63.044	6.920	5.731	2.307	10.80%
	Canadian entry total		Truck	736720	1395522	1596192	1802921	1917833	160.320	37.428	14.575	12.476	37.18%
			Cars	7045604	11312843	10852346	10766728	11253620	59.725	-0.524	5.430	-0.175	29.17%
			Total Vehicles	7782324	12708365	12448538	12569649	13171453	69.248	3.644	6.295	1.215	30.11%
	Total Bidirectional		Truck	1746098	2804452	3268948	3619904	3798804	117.560	35.456	10.687	11.819	23.68%
			Cars	14198685	22350923	21768404	21448273	22681009	59.740	1.477	5.431	0.492	9.89%
			Total Vehicles	15944783	25155375	25037352	25068177	26479813	66.072	5.265	6.007	1.755	10.79%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Eastern Canada Total		US entry total	Truck	2408468	3212821	3640582	3919678	3996109	65.919	24.380	5.993	8.127	49.85%
			Cars	20499923	34395472	31850618	28989062	28516196	39.104	-17.093	3.555	-5.698	24.76%
			Total Vehicles	22908391	37608293	35491200	32908740	32512305	41.923	-13.550	3.811	-4.517	26.40%
		Canadian entry total	Truck	2062857	3156644	3492261	3837219	4059206	96.776	28.592	8.798	9.531	78.69%
			Cars	20105626	33731155	30738427	27746881	28033239	39.430	-16.892	3.585	-5.631	72.66%
			Total Vehicles	22168483	36887799	34230688	31584100	32092445	44.766	-13.000	4.070	-4.333	73.37%
		Total Bidirectional	Truck	4471325	6369465	7132843	7756897	8055315	80.155	26.468	7.287	8.823	50.21%
			Cars	40605549	68126627	62589045	56735943	56549435	39.265	-16.994	3.570	-5.665	24.65%
			Total Vehicles	45076874	74496092	69721888	64492840	64604750	43.321	-13.278	3.938	-4.426	26.32%
Western Canada	Entering US	Blaine 7300429	Truck	182059	278307	287838	324036	368835	102.591	32.528	9.326	10.843	4.60%
			Cars	911082	2013381	1621820	1344157	1483343	62.811	-26.326	5.710	-8.775	1.29%
			Total Vehicles	1093141	2291688	1909658	1668193	1852178	69.436	-19.178	6.312	-6.393	1.50%
	Entering Canada	Pacific Highway	Truck	162494	193007	313306	348045	396807	144.198	105.592	13.109	35.197	7.69%
			Cars	1745470	2038841	1859727	1578293	1732356	-0.751	-15.032	-0.068	-5.011	4.49%
			Total Vehicles	1907964	2231848	2173033	1926338	2129163	11.593	-4.601	1.054	-1.534	4.87%
	Total Bidirectional		Truck	344553	471314	601144	672081	765642	122.213	62.448	11.110	20.816	4.77%
			Cars	2656552	4052222	3481547	2922450	3215699	21.048	-20.644	1.913	-6.881	1.40%
			Total Vehicles	3001105	4523536	4082691	3594531	3981341	32.663	-11.986	2.969	-3.995	1.62%
	Entering US	Blaine 7300430	Truck	0	0	0	0	0					0.00%
			Cars	1806844	3435109	3195434	2872931	2665907	47.545	-22.392	4.322	-7.464	2.32%
			Total Vehicles	1806844	3435109	3195434	2872931	2665907	47.545	-22.392	4.322	-7.464	2.16%
	Entering Canada	Douglas	Truck	0	28	9	1	0		-100.000		-33.333	0.00%
			Cars	0	2541005	2441477	2271448	2281997		-10.193		-3.398	5.91%
			Total Vehicles	0	2541033	2441486	2271449	2281997		-10.194		-3.398	5.22%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Western Canada (Continued)	Total Bidirectional		Truck	0	28	9	1	0		-100.000		-33.333	0.00%
			Cars	1806844	5976114	5636911	5144379	4947904	173.842	-17.205	15.804	-5.735	2.16%
			Total Vehicles	1806844	5976142	5636920	5144380	4947904	173.842	-17.206	15.804	-5.735	2.02%
	Other West Canada Total	Entering US	Truck	457594	580986	656445	750227	784716	71.487	35.066	6.499	11.689	9.79%
			Cars	4885559	9964323	8752839	7459472	6840640	40.018	-31.349	3.638	-10.450	5.94%
			Total Vehicles	5343153	10545309	9409284	8209699	7625356	42.713	-27.690	3.883	-9.230	6.19%
		Entering Canada	Truck	732253	544136	559747	646131	702184	-4.106	29.046	-0.373	9.682	13.61%
			Cars	4755741	8995702	7824513	6810987	6536023	37.434	-27.343	3.403	-9.114	16.94%
			Total Vehicles	5487994	9539838	8384260	7457118	7238207	31.892	-24.127	2.899	-8.042	16.55%
		Total Bidirectional	Truck	1189847	1125122	1216192	1396358	1486900	24.966	32.155	2.270	10.718	9.27%
			Cars	9641300	18960025	16577352	14270459	13376663	38.743	-29.448	3.522	-9.816	5.83%
			Total Vehicles	10831147	20085147	17793544	15666817	14863563	37.230	-25.997	3.385	-8.666	6.06%
Western Canada Total		Entering US	Truck	639653	859293	944283	1074263	1153551	80.340	34.244	7.304	11.415	14.39%
			Car	7603485	15412813	13570093	11676560	10989890	44.538	-28.696	4.049	-9.565	9.54%
			Total Vehicles	8243138	16272106	14514376	12750823	12143441	47.316	-25.373	4.301	-8.458	9.86%
		Entering Canada	Truck	894747	737171	873062	994177	1098991	22.827	49.082	2.075	16.361	21.31%
			Car	6501211	13575548	12125717	10660728	10550376	62.283	-22.284	5.662	-7.428	27.34%
			Total Vehicles	7395958	14312719	12998779	11654905	11649367	57.510	-18.608	5.228	-6.203	26.63%
		Total Bidirectional	Truck	1534400	1596464	1817345	2068440	2252542	46.803	41.096	4.255	13.699	14.04%
			Car	14104696	28988361	25695810	22337288	21540266	52.717	-25.693	4.792	-8.564	9.39%
			Total Vehicles	15639096	30584825	27513155	24405728	23792808	52.137	-22.207	4.740	-7.402	9.69%
Total US-Canada		Entering US	Truck	3048121	4049573	4560419	4966666	5149660	68.945	27.166	6.268	9.055	64.24%
			Car	28103388	49769920	45385666	40626669	38866386	38.298	-21.908	3.482	-7.303	33.75%
			Total Vehicles	31151509	53819493	49946085	45593335	44016046	41.297	-18.215	3.754	-6.072	35.74%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Total US-Canada (Continued)		Entering Canada	Truck	2957604	3893815	4365323	4831396	5158197	74.405	32.472	6.764	10.824	
			Car	26606837	47306703	42864144	38407609	38583615	45.014	-18.439	4.092	-6.146	
			Total Vehicles	29564441	51200518	47229467	43239005	43741812	47.954	-14.568	4.359	-4.856	
		Total Bidirectional	Truck	6005725	7943388	8925742	9798062	10307857	71.634	29.767	6.512	9.922	64.26%
			Car	54710225	97076623	88249810	79034278	77450001	41.564	-20.218	3.779	-6.739	33.76%
			Total Vehicles	60715950	105020011	97175552	88832340	87757858	44.538	-16.437	4.049	-5.479	35.76%
Texas	Entering US	Laredo Int, 6230401X	Truck	120085	0	0	0	0	-100.000		-9.091		0.00%
			Car	2456809	2647875	2718630	2835975	2318795	-5.618	-12.428	-0.511	-4.143	2.01%
			Total Vehicles	2576894	2647875	2718630	2835975	2318795	-10.016	-12.428	-0.911	-4.143	1.88%
	Entering Mexico		Truck	120085	0	0	0	0	-100.000		-9.091		0.00%
			Car	2456809	2647875	2718630	2835975	2318795	-5.618	-12.428	-0.511	-4.143	3.07%
			Total Vehicles	2576894	2647875	2718630	2835975	2318795	-10.016	-12.428	-0.911	-4.143	2.95%
	Total Bidirectional		Truck	240170	0	0	0	0	-100.000		-9.091		0.00%
			Car	4913618	5295750	5437260	5671950	4637590	-5.618	-12.428	-0.511	-4.143	2.02%
			Total Vehicles	5153788	5295750	5437260	5671950	4637590	-10.016	-12.428	-0.911	-4.143	1.89%
	Entering US	Laredo Juarez, 6230404X	Truck	0	0	0	0	0					0.00%
			Car	2178376	4359056	4372690	4024634	3406354	56.371	-21.856	5.125	-7.285	2.96%
			Total Vehicles	2178376	4359056	4372690	4024634	3406354	56.371	-21.856	5.125	-7.285	2.77%
	Entering Mexico		Truck	0	0	0	0	0					0.00%
			Car	2178376	4359056	4372690	4024634	3406354	56.371	-21.856	5.125	-7.285	4.50%
			Total Vehicles	2178376	4359056	4372690	4024634	3406354	56.371	-21.856	5.125	-7.285	4.34%
	Total Bidirectional		Truck	0	0	0	0	0					0.00%
			Car	4356752	8718112	8745380	8049268	6812708	56.371	-21.856	5.125	-7.285	2.97%
			Total Vehicles	4356752	8718112	8745380	8049268	6812708	56.371	-21.856	5.125	-7.285	2.78%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Texas (Continued)	Entering US	Laredo Import 6230402X	Truck	402	408723	428281	571108	660544		61.612	14928.6	20.537	8.24%
			Car	0	22521	47008	0	0		-100.000		-33.333	0.00%
			Total Vehicles	402	431244	475289	571108	660544		53.172	14928.6	17.724	0.54%
	Entering Mexico		Truck	402	408723	428281	571108	660544		61.612	14928.6	20.537	23.04%
			Car	0	22521	47008	0	0		-100.000		-33.333	0.00%
			Total Vehicles	402	431244	475289	571108	660544		53.172	14928.6	17.724	0.84%
	Total Bidirectional		Truck	804	817446	856562	1142216	1321088		61.612	14928.6	20.537	8.24%
			Car	0	45042	94016	0	0		-100.000		-33.333	0.00%
			Total Vehicles	804	862488	950578	1142216	1321088		53.172	14928.6	17.724	0.54%
	Entering US	Laredo Total	Truck	120487	408723	428281	571108	660544	448.228	61.612	40.748	20.537	8.24%
			Car	4635185	7029452	7138328	6860609	5725149	23.515	-18.555	2.138	-6.185	4.97%
			Total Vehicles	4755672	7438175	7566609	7431717	6385693	34.275	-14.150	3.116	-4.717	5.18%
	Entering Mexico		Truck	120487	408723	428281	571108	660544	448.228	61.612	40.748	20.537	23.04%
			Car	4635185	7029452	7138328	6860609	5725149	23.515	-18.555	2.138	-6.185	7.57%
			Total Vehicles	4755672	7438175	7566609	7431717	6385693	34.275	-14.150	3.116	-4.717	8.13%
	Total Bidirectional		Truck	240974	817446	856562	1142216	1321088	448.228	61.612	40.748	20.537	8.24%
			Car	9270370	14058904	14276656	13721218	11450298	23.515	-18.555	2.138	-6.185	4.99%
			Total Vehicles	9511344	14876350	15133218	14863434	12771386	34.275	-14.150	3.116	-4.717	5.20%
	Entering US	Columbia, 6230405X	Truck	0	0	0	0	0					0.00%
			Car	0	71605	78737	80431	57510		-19.684		-6.561	0.05%
			Total Vehicles	0	71605	78737	80431	57510		-19.684		-6.561	0.05%
	Entering Mexico		Truck	0	0	0	0	0					0.00%
			Car	0	71605	78737	80431	57510		-19.684		-6.561	0.08%
			Total Vehicles	0	71605	78737	80431	57510		-19.684		-6.561	0.07%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Texas (Continued)	Total Bidirectional		Truck	0	0	0	0	0					0.00%
			Car	0	143210	157474	160862	115020		-19.684		-6.561	0.05%
			Total Vehicles	0	143210	157474	160862	115020		-19.684		-6.561	0.05%
	Entering US	Columbia, 6230406X	Truck	0	33952	102643	96799	86697		155.352		51.784	1.08%
			Car	0	0	0	0	0		#DIV/0!			0.00%
			Total Vehicles	0	33952	102643	96799	86697		155.352		51.784	0.07%
	Entering Mexico		Truck	0	33952	102643	96799	86697		155.352		51.784	3.02%
			Car	0	0	0	0	0					0.00%
			Total Vehicles	0	33952	102643	96799	86697		155.352		51.784	0.11%
	Total Bidirectional		Truck	0	67904	205286	193598	173394		155.352		51.784	1.08%
			Car	0	0	0	0	0					0.00%
			Total Vehicles	0	67904	205286	193598	173394		155.352		51.784	0.07%
	Entering US	Columbia Total	Truck	0	33952	102643	96799	86697		155.352		51.784	1.08%
			Car	0	71605	78737	80431	57510		-19.684		-6.561	0.05%
			Total Vehicles	0	105557	181380	177230	144207		36.615		12.205	0.12%
	Entering Mexico		Truck	0	33952	102643	96799	86697		155.352		51.784	3.02%
			Car	0	71605	78737	80431	57510		-19.684		-6.561	0.08%
			Total Vehicles	0	105557	181380	177230	144207		36.615		12.205	0.18%
	Total Bidirectional		Truck	0	67904	205286	193598	173394		155.352		51.784	1.08%
			Car	0	143210	157474	160862	115020		-19.684		-6.561	0.05%
			Total Vehicles	0	211114	362760	354460	288414		36.615		12.205	0.12%
	Entering US	Laredo/ Columbia Area	Truck	120487	442675	530924	667907	747241	520.184	68.801	47.289	22.934	9.32%
			Car	4635185	7101057	7217065	6941040	5782659	24.756	-18.566	2.251	-6.189	5.02%
			Total Vehicles	4755672	7543732	7747989	7608947	6529900	37.308	-13.439	3.392	-4.480	5.30%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Texas (Continued)	Entering Mexico		Truck	120487	442675	530924	667907	747241	520.184	68.801	47.289	22.934	26.06%
			Car	4635185	7101057	7217065	6941040	5782659	24.756	-18.566	2.251	-6.189	7.64%
			Total Vehicles	4755672	7543732	7747989	7608947	6529900	37.308	-13.439	3.392	-4.480	8.32%
	Total Bidirectional		Truck	240974	885350	1061848	1335814	1494482	520.184	68.801	47.289	22.934	9.32%
			Car	9270370	14202114	14434130	13882080	11565318	24.756	-18.566	2.251	-6.189	5.04%
			Total Vehicles	9511344	15087464	15495978	15217894	13059800	37.308	-13.439	3.392	-4.480	5.32%
	Entering US	Other Laredo District	Truck	242587	475770	509262	574843	536411	121.121	12.746	11.011	4.249	6.69%
			Car	14076290	16686621	18161898	18781086	18000889	27.881	7.876	2.535	2.625	15.63%
			Total Vehicles	14318877	17162391	18671160	19355929	18537300	29.461	8.011	2.678	2.670	15.05%
	Entering Mexico		Truck	242587	475770	509262	574843	536411	121.121	12.746	11.011	4.249	18.71%
			Car	14076290	16686621	18161898	18781086	18000889	27.881	7.876	2.535	2.625	23.79%
			Total Vehicles	14318877	17162391	18671160	19355929	18537300	29.461	8.011	2.678	2.670	23.61%
	Total Bidirectional		Truck	485174	951540	1018524	1149686	1072822	121.121	12.746	11.011	4.249	6.69%
			Car	28152580	33373242	36323796	37562172	36001778	27.881	7.876	2.535	2.625	15.69%
			Total Vehicles	28637754	34324782	37342320	38711858	37074600	29.461	8.011	2.678	2.670	15.11%
	Entering US	Total Laredo District	Truck	363074	918445	1040186	1242750	1283652	253.551	39.764	23.050	13.255	16.01%
			Car	18711475	23787678	25378963	25722126	23783548	27.107	-0.017	2.464	-0.006	20.65%
			Total Vehicles	19074549	24706123	26419149	26964876	25067200	31.417	1.461	2.856	0.487	20.35%
	Entering Mexico		Truck	363074	918445	1040186	1242750	1283652	253.551	39.764	23.050	13.255	44.77%
			Car	18711475	23787678	25378963	25722126	23783548	27.107	-0.017	2.464	-0.006	31.44%
			Total Vehicles	19074549	24706123	26419149	26964876	25067200	31.417	1.461	2.856	0.487	31.93%
	Total Bidirectional		Truck	726148	1836890	2080372	2485500	2567304	253.551	39.764	23.050	13.255	16.00%
			Car	37422950	47575356	50757926	51444252	47567096	27.107	-0.017	2.464	-0.006	20.74%
			Total Vehicles	38149098	49412246	52838298	53929752	50134400	31.417	1.461	2.856	0.487	20.43%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Texas (Continued)	Entering US	El Paso 62402 CET (Contraband Enforcement Team)	Truck	0	12070	40210	29987	21256		76.106		25.369	0.27%
			Car	0	130747	14289	28112	60285		-53.892		-17.964	0.05%
			Total Vehicles	0	142817	54499	58099	81541		-42.905		-14.302	0.07%
	Entering Mexico		Truck	0	12070	40210	29987	21256		76.106		25.369	0.74%
			Car	0	130747	14289	28112	60285		-53.892		-17.964	0.08%
			Total Vehicles	0	142817	54499	58099	81541		-42.905		-14.302	0.10%
	Total Bidirectional		Truck	0	24140	80420	59974	42512		76.106		25.369	0.27%
			Car	0	261494	28578	56224	120570		-53.892		-17.964	0.05%
			Total Vehicles	0	285634	108998	116198	163082		-42.905		-14.302	0.07%
	Entering US	El Paso Del Norte Bridge, 6240202X	Truck	0	0	0	0	0					0.00%
			Car	4724974	4487408	3751997	4408157	4488696	-5.001	0.029	-0.455	0.010	3.90%
			Total Vehicles	4724974	4487408	3751997	4408157	4488696	-5.001	0.029	-0.455	0.010	3.64%
	Entering Mexico		Truck	0	0	0	0	0					0.00%
			Car	4724974	4487408	3751997	4408157	4488696	-5.001	0.029	-0.455	0.010	5.93%
			Total Vehicles	4724974	4487408	3751997	4408157	4488696	-5.001	0.029	-0.455	0.010	5.72%
	Total Bidirectional		Truck	0	0	0	0	0					0.00%
			Car	9449948	8974816	7503994	8816314	8977392	-5.001	0.029	-0.455	0.010	3.91%
			Total Vehicles	9449948	8974816	7503994	8816314	8977392	-5.001	0.029	-0.455	0.010	3.66%
	Entering US	El Paso Bridge Of The Americas, 6240203X	Truck	0	0	0	0	0					0.00%
			Car	6043465	6876378	8432815	8802147	8537231	41.264	24.153	3.751	8.051	7.41%
			Total Vehicles	6043465	6876378	8432815	8802147	8537231	41.264	24.153	3.751	8.051	6.93%
	Entering Mexico		Truck	0	0	0	0	0					0.00%
			Car	6043465	6876378	8432815	8802147	8537231	41.264	24.153	3.751	8.051	11.29%
			Total Vehicles	6043465	6876378	8432815	8802147	8537231	41.264	24.153	3.751	8.051	10.87%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Texas (Continued)	Total Bidirectional		Truck	0	0	0	0	0					0.00%
			Car	12086930	13752756	16865630	17604294	17074462	41.264	24.153	3.751	8.051	7.44%
			Total Vehicles	12086930	13752756	16865630	17604294	17074462	41.264	24.153	3.751	8.051	6.96%
	Entering US	El Paso Imports Int.	Truck	128939	387684	375737	332307	304113	135.858	-21.556	12.351	-7.185	3.79%
			Car	0	0	0	0	0					0.00%
			Total Vehicles	128939	387684	375737	332307	304113	135.858	-21.556	12.351	-7.185	0.25%
	Entering Mexico		Truck	128939	387684	375737	332307	304113	135.858	-21.556	12.351	-7.185	10.61%
			Car		0	0	0	0					0.00%
			Total Vehicles	128939	387684	375737	332307	304113	135.858	-21.556	12.351	-7.185	0.39%
	Total Bidirectional		Truck	257878	775368	751474	664614	608226	135.858	-21.556	12.351	-7.185	3.79%
			Car	0	0	0	0	0					0.00%
			Total Vehicles	257878	775368	751474	664614	608226	135.858	-21.556	12.351	-7.185	0.25%
	Entering US	Ysleta, 6240205	Truck	6442	0	0	0	0	-100.000		-9.091		0.00%
			Car	1906974	1887353	2347256	2649526	2918132	53.024	54.615	4.820	18.205	2.53%
			Total Vehicles	1913416	1887353	2347256	2649526	2918132	52.509	54.615	4.774	18.205	2.37%
	Entering Mexico	Ysleta, 6240205 (Continued)	Truck	6442	0	0	0	0	-100.000		-9.091		0.00%
			Car	1906974	1887353	2347256	2649526	2918132	53.024	54.615	4.820	18.205	3.86%
			Total Vehicles	1913416	1887353	2347256	2649526	2918132	52.509	54.615	4.774	18.205	3.72%
	Total Bidirectional		Truck	12884	0	0	0	0	-100.000		-9.091		0.00%
			Car	3813948	3774706	4694512	5299052	5836264	53.024	54.615	4.820	18.205	2.54%
			Total Vehicles	3826832	3774706	4694512	5299052	5836264	52.509	54.615	4.774	18.205	2.38%
	Entering US	Ysleta Imports, 6240208	Truck	0	142494	190791	211639	281373		97.463		32.488	3.51%
			Car	0	0	2	0	0					0.00%
			Total Vehicles	0	142494	190793	211639	281373		97.463		32.488	0.23%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Texas (Continued)	Entering Mexico	Ysleta Imports, 6240208	Truck	0	142494	190791	211639	281373		97.463		32.488	9.81%
			Car	0	0	2	0	0					0.00%
			Total Vehicles	0	142494	190793	211639	281373		97.463		32.488	0.36%
	Total Bidirectional		Truck	0	284988	381582	423278	562746		97.463		32.488	3.51%
			Car	0	0	4	0	0					0.00%
			Total Vehicles	0	284988	381586	423278	562746		97.463		32.488	0.23%
	Entering US	El Paso/ Ysleta Total	Truck	135381	542248	606738	573933	606742	348.174	11.894	31.652	3.965	7.57%
			Car	12688552	13381886	14546359	15887942	16004344	26.132	19.597	2.376	6.532	13.90%
			Total Vehicles	12823933	13924134	15153097	16461875	16611086	29.532	19.297	2.685	6.432	13.49%
	Entering Mexico		Truck	135381	542248	606738	573933	606742	348.174	11.894	31.652	3.965	21.16%
			Car	12688552	13381886	14546359	15887942	16004344	26.132	19.597	2.376	6.532	21.16%
			Total Vehicles	12823933	13924134	15153097	16461875	16611086	29.532	19.297	2.685	6.432	21.16%
	Total Bidirectional		Truck	270762	1084496	1213476	1147866	1213484	348.174	11.894	31.652	3.965	7.56%
			Car	25377104	26763772	29092718	31775884	32008688	26.132	19.597	2.376	6.532	13.95%
			Total Vehicles	25647866	27848268	30306194	32923750	33222172	29.532	19.297	2.685	6.432	13.54%
	Entering US	Presidio	Truck	4854	6181	5461	4744	4328	-10.836	-29.979	-0.985	-9.993	0.05%
			Car	329758	521173	535484	455009	492835	49.454	-5.437	4.496	-1.812	0.43%
			Total Vehicles	334612	527354	540945	459753	497163	48.579	-5.725	4.416	-1.908	0.40%
	Entering Mexico		Truck	4854	6181	5461	4744	4328	-10.836	-29.979	-0.985	-9.993	0.15%
			Car	329758	521173	535484	455009	492835	49.454	-5.437	4.496	-1.812	0.65%
			Total Vehicles	334612	527354	540945	459753	497163	48.579	-5.725	4.416	-1.908	0.63%
	Total Bidirectional		Truck	9708	12362	10922	9488	8656	-10.836	-29.979	-0.985	-9.993	0.05%
			Car	659516	1042346	1070968	910018	985670	49.454	-5.437	4.496	-1.812	0.43%
			Total Vehicles	669224	1054708	1081890	919506	994326	48.579	-5.725	4.416	-1.908	0.41%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Texas (Continued)	Entering US	Fort Hancock	Truck	0	22	0	0	0		-100.000		-33.333	0.00%
			Car	0	33638	33163	36011	134708		300.464		100.155	0.12%
			Total Vehicles	0	33660	33163	36011	134708		300.202		100.067	0.11%
	Entering Mexico		Truck	0	22	0	0	0		-100.000		-33.333	0.00%
			Car	0	33638	33163	36011	134708		300.464		100.155	0.18%
			Total Vehicles	0	33660	33163	36011	134708		300.202		100.067	0.17%
	Total Bidirectional		Truck	0	44	0	0	0		-100.000		-33.333	0.00%
			Car	0	67276	66326	72022	269416		300.464		100.155	0.12%
			Total Vehicles	0	67320	66326	72022	269416		300.202		100.067	0.11%
Texas Total		Entering US	Truck	503309	1466896	1652385	1821427	1894722	276.453	29.165	25.132	9.722	23.63%
			Car	31729785	37724375	40493969	42101088	40415435	27.374	7.133	2.489	2.378	35.10%
			Total Vehicles	32233094	39191271	42146354	43922515	42310157	31.263	7.958	2.842	2.653	34.35%
		Entering Mexico	Truck	503309	1466896	1652385	1821427	1894722	276.453	29.165	25.132	9.722	66.09%
			Car	31729785	37724375	40493969	42101088	40415435	27.374	7.133	2.489	2.378	53.42%
			Total Vehicles	32233094	39191271	42146354	43922515	42310157	31.263	7.958	2.842	2.653	53.89%
		Total Bidirectional	Truck	1006618	2933792	3304770	3642854	3789444	276.453	29.165	25.132	9.722	23.62%
			Car	63459570	75448750	80987938	84202176	80830870	27.374	7.133	2.489	2.378	35.24%
			Total Vehicles	64466188	78382542	84292708	87845030	84620314	31.263	7.958	2.842	2.653	34.48%
New Mexico	Entering US	Columbus	Truck	3407	1515	1241	1204	2440	-28.383	61.056	-2.580	20.352	0.03%
			Car	206524	255508	273956	294322	344853	66.980	34.968	6.089	11.656	0.30%
			Total Vehicles	209931	257023	275197	295526	347293	65.432	35.121	5.948	11.707	0.28%
	Entering Mexico		Truck	3407	1515	1241	1204	2440	-28.383	61.056	-2.580	20.352	0.09%
			Car	206524	255508	273956	294322	344853	66.980	34.968	6.089	11.656	0.46%
			Total Vehicles	209931	257023	275197	295526	347293	65.432	35.121	5.948	11.707	0.44%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
New Mexico (Continued)	Total Bidirectional		Truck	6814	3030	2482	2408	4880	-28.383	61.056	-2.580	20.352	0.03%
			Car	413048	511016	547912	588644	689706	66.980	34.968	6.089	11.656	0.30%
			Total Vehicles	419862	514046	550394	591052	694586	65.432	35.121	5.948	11.707	0.28%
	Entering US	Antelope Wells	Truck	0	74	22	25	6		-91.892		-30.631	0.00%
			Car	0	1605	1293	1683	1339		-16.573		-5.524	0.00%
			Total Vehicles	0	1679	1315	1708	1345		-19.893		-6.631	0.00%
	Entering Mexico		Truck	0	74	22	25	6		-91.892		-30.631	0.00%
			Car	0	1605	1293	1683	1339		-16.573		-5.524	0.00%
			Total Vehicles	0	1679	1315	1708	1345		-19.893		-6.631	0.00%
	Total Bidirectional		Truck	0	148	44	50	12		-91.892		-30.631	0.00%
			Car	0	3210	2586	3366	2678		-16.573		-5.524	0.00%
			Total Vehicles	0	3358	2630	3416	2690		-19.893		-6.631	0.00%
	Entering US	Santa Teresa	Truck	0	0	4641	2911	6612					0.08%
			Car	0	0	29412	39266	46759					0.04%
			Total Vehicles	0	0	34053	42177	53371					0.04%
	Entering Mexico		Truck	0	0	4641	2911	6612					0.23%
			Car	0	0	29412	39266	46759					0.06%
			Total Vehicles	0	0	34053	42177	53371					0.07%
	Total Bidirectional		Truck	0	0	9282	5822	13224					0.08%
			Car	0	0	58824	78532	93518					0.04%
			Total Vehicles	0	0	68106	84354	106742					0.04%
New Mexico Total	Entering US		Truck	3407	1589	5904	4140	9058	165.864	470.044	15.079	156.681	0.11%
			Car	206524	257113	304661	335271	392951	90.269	52.832	8.206	17.611	0.34%
			Total Vehicles	209931	258702	310565	339411	402009	91.496	55.395	8.318	18.465	0.33%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
New Mexico Total (Continued)		Entering Mexico	Truck	3407	1589	5904	4140	9058	165.864	470.044	15.079	156.681	0.32%
			Car	206524	257113	304661	335271	392951	90.269	52.832	8.206	17.611	0.52%
			Total Vehicles	209931	258702	310565	339411	402009	91.496	55.395	8.318	18.465	0.51%
		Total Bidirectional	Truck	6814	3178	11808	8280	18116	165.864	470.044	15.079	156.681	0.11%
			Car	413048	514226	609322	670542	785902	90.269	52.832	8.206	17.611	0.34%
			Total Vehicles	419862	517404	621130	678822	804018	91.496	55.395	8.318	18.465	0.33%
Arizona Total		Entering US	Truck	131417	230651	260645	282482	296342	125.497	28.481	11.409	9.494	3.70%
			Car	6884427	8140580	8646493	9581261	8336435	21.091	2.406	1.917	0.802	7.24%
			Total Vehicles	7015844	8371231	8907138	9863743	8632777	23.047	3.124	2.095	1.041	7.01%
		Entering Mexico	Truck	131417	230651	260645	282482	296342	125.497	28.481	11.409	9.494	10.34%
			Car	6884427	8140580	8646493	9581261	8336435	21.091	2.406	1.917	0.802	11.02%
			Total Vehicles	7015844	8371231	8907138	9863743	8632777	23.047	3.124	2.095	1.041	10.99%
		Total Bidirectional	Truck	262834	461302	521290	564964	592684	125.497	28.481	11.409	9.494	3.69%
			Car	13768854	16281160	17292986	19162522	16672870	21.091	2.406	1.917	0.802	7.27%
			Total Vehicles	14031688	16742462	17814276	19727486	17265554	23.047	3.124	2.095	1.041	7.03%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
California	Entering US	San Ysidro, 7250103	Truck	113092	54	0	0	0	-100.000	-100.000	-9.091	-33.333	0.00%
			Car	11196257	13252267	15239551	15875113	14281022	27.552	7.763	2.505	2.588	12.40%
			Total Vehicles	11309349	13252321	15239551	15875113	14281022	26.276	7.762	2.389	2.587	11.59%
	Entering Mexico		Truck	113092	54	0	0	0	-100.000	-100.000	-9.091	-33.333	0.00%
			Car	11196257	13252267	15239551	15875113	14281022	27.552	7.763	2.505	2.588	18.88%
			Total Vehicles	11309349	13252321	15239551	15875113	14281022	26.276	7.762	2.389	2.587	18.19%
	Total Bidirectional		Truck	226184	108	0	0	0	-100.000	-100.000	-9.091	-33.333	0.00%
			Car	22392514	26504534	30479102	31750226	28562044	27.552	7.763	2.505	2.588	12.45%
			Total Vehicles	22618698	26504642	30479102	31750226	28562044	26.276	7.762	2.389	2.587	11.64%
	Entering US	Otay Mesa, 7250601	Truck	0	388339	386355	439654	445770		14.789		4.930	5.56%
			Car	0	4095987	3750364	3205144	3549378		-13.345		-4.448	3.08%
			Total Vehicles	0	4484326	4136719	3644798	3995148		-10.909		-3.636	3.24%
	Entering Mexico		Truck	0	388339	386355	439654	445770		14.789		4.930	15.55%
			Car	0	4095987	3750364	3205144	3549378		-13.345		-4.448	4.69%
			Total Vehicles	0	4484326	4136719	3644798	3995148		-10.909		-3.636	5.09%
	Total Bidirectional		Truck	0	776678	772710	879308	891540		14.789		4.930	5.56%
			Car	0	8191974	7500728	6410288	7098756		-13.345		-4.448	3.09%
			Total Vehicles	0	8968652	8273438	7289596	7990296		-10.909		-3.636	3.26%
	Entering US	San Diego Total	Truck	113092	388393	386355	439654	445770	294.166	14.773	26.742	4.924	5.56%
			Car	11196257	17348254	18989915	19080257	17830400	59.253	2.779	5.387	0.926	15.48%
			Total Vehicles	11309349	17736647	19376270	19519911	18276170	61.602	3.042	5.600	1.014	14.84%
	Entering Mexico		Truck	113092	388393	386355	439654	445770	294.166	14.773	26.742	4.924	15.55%
			Car	11196257	17348254	18989915	19080257	17830400	59.253	2.779	5.387	0.926	23.57%
			Total Vehicles	11309349	17736647	19376270	19519911	18276170	61.602	3.042	5.600	1.014	23.28%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
California (Continued)	Total Bidirectional		Truck	226184	776786	772710	879308	891540	294.166	14.773	26.742	4.924	5.56%
			Car	22392514	34696508	37979830	38160514	35660800	59.253	2.779	5.387	0.926	15.55%
			Total Vehicles	22618698	35473294	38752540	39039822	36552340	61.602	3.042	5.600	1.014	14.89%
	Entering US	Other California/ Mexico	Truck	321778	187805	199817	217803	221096	-31.289	17.726	-2.844	5.909	0.00%
			Car	6215237	9529548	9549623	10567958	8674969	39.576	-8.968	3.598	-2.989	0.19%
			Total Vehicles	6537015	9717353	9749440	10785761	8896065	36.088	-8.452	3.281	-2.817	7.04%
	Entering Mexico		Truck	321778	187805	199817	217803	221096	-31.289	17.726	-2.844	5.909	7.71%
			Car	6215237	9529548	9549623	10567958	8674969	39.576	-8.968	3.598	-2.989	11.47%
			Total Vehicles	6537015	9717353	9749440	10785761	8896065	36.088	-8.452	3.281	-2.817	11.33%
	Total Bidirectional		Truck	643556	375610	399634	435606	442192	-31.289	17.726	-2.844	5.909	2.76%
			Car	12430474	19059096	19099246	21135916	17349938	39.576	-8.968	3.598	-2.989	7.56%
			Total Vehicles	13074030	19434706	19498880	21571522	17792130	36.088	-8.452	3.281	-2.817	7.25%
California Total	Entering US		Truck	434870	576198	586172	657457	666866	53.348	15.736	4.850	5.245	8.32%
			Car	17411494	26877802	28539538	29648215	26505369	52.229	-1.386	4.748	-0.462	23.02%
			Total Vehicles	17846364	27454000	29125710	30305672	27172235	52.256	-1.026	4.751	-0.342	22.06%
	Entering Mexico		Truck	434870	576198	586172	657457	666866	53.348	15.736	4.850	5.245	23.26%
			Car	17411494	26877802	28539538	29648215	26505369	52.229	-1.386	4.748	-0.462	35.04%
			Total Vehicles	17846364	27454000	29125710	30305672	27172235	52.256	-1.026	4.751	-0.342	34.61%
	Total Bidirectional		Truck	869740	1152396	1172344	1314914	1333732	53.348	15.736	4.850	5.245	8.31%
			Car	34822988	53755604	57079076	59296430	53010738	52.229	-1.386	4.748	-0.462	23.11%
			Total Vehicles	35692728	54908000	58251420	60611344	54344470	52.256	-1.026	4.751	-0.342	22.14%
Total US-Mexico	Entering US		Truck	1073003	2275334	2505106	2765506	2866988	167.193	26.003	15.199	8.668	35.76%
			Car	56232230	72999870	77984661	81665835	75650190	34.532	3.631	3.139	1.210	65.69%
			Total Vehicles	57305233	75275204	80489767	84431341	78517178	37.016	4.307	3.365	1.436	63.75%

Table A-1: Highway Crossing Volumes[a] (Continued)

State	Direction	Port	Vehicle type	Annual Directional Volume					Percent Growth		Average % Growth		% of 1995 Vehicle Entries[b]
				1984	1992	1993	1994	1995	1984-95	1992-95	1984-95	1992-95	
Total US-Mexico (Continued)		Entering Mexico	Truck	1073003	2275334	2505106	2765506	2866988	167.193	26.003	15.199	8.668	
			Car	56232230	72999870	77984661	81665835	75650190	34.532	3.631	3.139	1.210	
			Total Vehicles	57305233	75275204	80489767	84431341	78517178	37.016	4.307	3.365	1.436	
		Total Bidirectional	Truck	2146006	4550668	5010212	5531012	5733976	167.193	26.003	15.199	8.668	35.74%
			Car	112464460	145999740	155969322	163331670	151300380	34.532	3.631	3.139	1.210	65.96%
			Total Vehicles	114610466	150550408	160979534	168862682	157034356	37.016	4.307	3.365	1.436	63.98%
Total US-Canada and US-Mexico		Entering US	Truck	4121124	6325219	7065639	7732201	8016648	94.526	26.741	8.593	8.914	
			Car	84335618	122839339	123450099	122471325	115156276	36.545	-6.255	3.322	-2.085	
			Total Vehicles	88456742	129164558	130515738	130203526	123172924	39.247	-4.639	3.568	-1.546	
		Entering Canada and Mexico	Truck	4030607	6169149	6870429	7596902	8025185	99.106	30.086	9.010	10.029	
			Car	82839067	120306573	120848805	120073444	114233805	37.898	-5.048	3.445	-1.683	
			Total Vehicles	86869674	126475722	127719234	127670346	122258990	40.738	-3.334	3.703	-1.111	
		Total Bidirectional	Truck	8151731	12494368	13936068	15329103	16041833	96.791	28.393	8.799	9.464	
			Car	167174685	243145912	244298904	242544769	229390081	37.216	-5.657	3.383	-1.886	
			Total Vehicles	175326416	255640280	258234972	257873872	245431914	39.986	-3.993	3.635	-1.331	

a. Sources: U.S. Customs data provided to the study team (Canadian entries into the US and US-Mexico crossings) and StatisticsCanad a data provided to the study team (US entries into Canada).

b. For US entries, the value shown is the percentage of total entries from both Canada and Mexico. For Canadian entries the value s hown is the percentage of total US entries to Canada. For Mexican entries to the US, the value is the percentage of the total Mexican entries to the US. This is an estimate w hich assumes that total Mexican entries to the US are the same as total US entries to Mexico.

APPENDIX B

Rail Crossing Volumes

Table B-1: Rail Crossing Volumes[a]

Region	State	Crossing	Type	1984	1992	1993	1994	1995 (Jan-Sep)	1995 (Full Year)	% Growth, 1984-95	Average growth, 1984-95	% of total entry from Canada and Mexico[b]
Eastern Canada	Maine	Jackman, 1010401X	Trains	775	698	755	637	294	392	-49.42	-4.49	0.95%
			Rail Cars	50539	24020	28004	26324	17050	22733	-55.02	-5.00	1.24%
		Vanceboro, 1010501X	Trains	633	436	415	423	232	309	-51.13	-4.65	0.75%
			Rail Cars	35662	13985	15309	15104	9529	12705	-64.37	-5.85	0.69%
		Houlton, 1010601X	Trains	15	0	0	0	0	0	-100.00	-9.09	0.00%
			Rail Cars	58	0	0	0	0	0	-100.00	-9.09	0.00%
		Fairfield, 1010701X	Trains	104	0	0	0	0	0	-100.00	-9.09	0.00%
			Rail Cars	1308	0	0	0	0	0	-100.00	-9.09	0.00%
		Van Buren, 1010801X	Trains	148	0	0	0	0	0	-100.00	-9.09	0.00%
			Rail Cars	1975	0	0	0	0	0	-100.00	-9.09	0.00%
		Madawaka, 1010901X	Trains	0	254	255	293	211	281			0.67%
			Rail Cars	0	3879	5442	4719	2996	3995			0.22%
		Calais, 1011501X	Trains	5	297	246	253	173	231	4513.33	410.30	0.56%
			Rail Cars	0	3406	3625	4137	2885	3847			0.21%
	Maine Subtotal		Trains	1680	1690	1669	1598	983	1311	-21.98	-2.00	3.19%
			Rail Cars	89542	45425	52235	50439	33518	44691	-50.09	-4.55	2.44%
	Vermont	West Berkshire 1020301X	Trains	562	227	238	237	128	171	-69.63	-6.33	0.42%
			Rail Cars	8355	1605	1732	1359	1299	1732	-79.27	-7.21	0.09%
		Derby Line, 1020901X	Trains	587	291	252	250	176	235	-60.02	-5.46	0.57%
			Rail Cars	19557	4548	4207	3474	2519	3359	-82.83	-7.53	0.18%
		Norton, 1021101X	Trains	362	350	346	432	446	595	64.27	5.84	1.45%
			Rail Cars	17198	12628	12759	13094	13868	18491	7.52	0.68	1.01%

Table B-1: Rail Crossing Volumes[a] (Continued)

Region	State	Crossing	Type	1984	1992	1993	1994	1995 (Jan-Sep)	1995 (Full Year)	% Growth, 1984-95	Average growth, 1984-95	% of total entry from Canada and Mexico[b]
Eastern Canada	Vermont (Continued)	Highgate Sprngs, 1021201X	Trains	732	661	723	719	343	457	-37.52	-3.41	1.11%
			Rail Cars	29475	20872	22650	22859	13904	18539	-37.10	-3.37	1.01%
	Vermont Subtotal		Trains	2243	1529	1559	1638	1093	1457	-35.03	-3.18	3.55%
			Rail Cars	74585	39653	41348	40786	31590	42120	-43.53	-3.96	2.30%
	Eastern New York	Champlain, 1071201X	Trains	1055	1195	1180	1259	961	1281	21.45	1.95	3.12%
			Rail Cars	30177	32808	36034	43390	31295	41727	38.27	3.48	2.28%
		Trout River, 1071501X	Trains	521	674	755	804	611	815	56.37	5.12	1.98%
			Rail Cars	20650	35116	39949	43017	36875	49167	138.10	12.55	2.68%
	Eastern New York Subtotal		Trains	1576	1869	1935	2063	1572	2096	32.99	3.00	5.10%
			Rail Cars	50827	67924	75983	86407	68170	90893	78.83	7.17	4.96%
	Western New York	Peace Bridge, 1090102X	Trains	1576	1436	1463	1577	1073	1431	-9.22	-0.84	3.48%
			Rail Cars	71869	78448	80391	77628	50119	66825	-7.02	-0.64	3.65%
		Whirlpool Rapids, 1090105X	Trains	1401	2085	2423	1938	1348	1797	28.29	2.57	4.38%
			Rail Cars	45051	52226	76873	78581	62002	82669	83.50	7.59	4.51%
	Western New York Subtotal		Trains	2977	3521	3886	3515	2421	3228	8.43	0.77	7.86%
			Rail Cars	116920	130674	157264	156209	112121	149495	27.86	2.53	8.16%
	New York State Subtotal		Trains	4553	5390	5821	5578	3993	5324	16.93	1.54	12.96%
			Rail Cars	167747	198598	233247	242616	180291	240388	43.30	3.94	13.13%
	Michigan	Detroit Tunnel (Rougemere Yd.) 3380104X	Trains	6332	4165	4672	4735	3114	4152	-34.43	-3.13	10.11%
			Rail Cars	160561	165273	181940	227222	156494	208659	29.96	2.72	11.39%
		Saulte St. Marie, 3380301X	Trains	625	412	474	519	376	501	-19.79	-1.80	1.22%
			Rail Cars	18156	9801	13764	18118	14025	18700	3.00	0.27	1.02%

Table B-1: Rail Crossing Volumes[a] (Continued)

Region	State	Crossing	Type	1984	1992	1993	1994	1995 (Jan-Sep)	1995 (Full Year)	% Growth, 1984-95	Average growth, 1984-95	% of total entry from Canada and Mexico[b]
Eastern Canada	Michigan (Continued)	Port Huron, 3380203X	Trains	2396	2343	2596	3488	2810	3747	56.37	5.12	9.12%
			Rail Cars	138982	151072	169655	181599	162909	217212	56.29	5.12	11.86%
	Michigan Subtotal		Trains	9353	6920	7742	8742	6300	8400	-10.19	-0.93	20.45%
			Rail Cars	317699	326146	365359	426939	333428	444571	39.93	3.63	24.28%
Eastern Canada Subtotal			Trains	17829	15529	16791	17556	12369	16492	-7.50	-0.68	40.15%
			Rail Cars	649573	609822	692189	760780	578827	771769	18.81	1.71	42.14%
Western Canada	Montana, Idaho	333 DISTRICT TOTAL	Trains	624	732	780	763	658	877	40.60	3.69	2.14%
			Rail Cars	40393	46643	50567	49191	40261	53681	32.90	2.99	2.93%
	North Dakota, Minnesota	334 DISTRICT TOTAL	Trains	7766	6818	7963	8019	5869	7825	0.76	0.07	19.05%
			Rail Cars	608729	467705	492028	527338	390462	520616	-14.47	-1.32	28.43%
	Minnesota	336 DISTRICT TOTAL	Trains	3648	3073	3134	3360	2569	3425	-6.10	-0.55	8.34%
			Rail Cars	136641	115787	135383	147887	104185	138913	1.66	0.15	7.59%
	Washington	Blaine, 7300430	Trains	693	1016	1049	1119	967	1289	86.05	7.82	3.14%
			Rail Cars	33017	58498	61833	72965	51186	68248	106.71	9.70	3.73%
	Other Western Canada		Trains	1691	1797	1798	1873	1350	1800	6.45	0.59	4.38%
			Rail Cars	26126	27937	29229	32760	24792	33056	26.53	2.41	1.81%
	Washington	730 DISTRICT TOTAL	Trains	2384	2813	2847	2992	2317	3089	29.59	2.69	7.52%
			Rail Cars	59143	86435	91062	105725	75978	101304	71.29	6.48	5.53%
	Alaska	731 ALASKA DISTRICT Total	Trains	0	259	235	214	227	303			0.74%
			Rail Cars	0	0	0	0	0	0			0.00%
Western Canada Total			Trains	14422	13695	14959	15348	11640	15520	7.61	0.69	37.78%
			Rail Cars	844906	716570	769040	830141	610886	814515	-3.60	-0.33	44.48%

Table B-1: Rail Crossing Volumes[a] (Continued)

Region	State	Crossing	Type	1984	1992	1993	1994	1995 (Jan-Sep)	1995 (Full Year)	% Growth, 1984-95	Average growth, 1984-95	% of total entry from Canada and Mexico[b]
Total US-Canada			Trains	32251	29224	31750	32904	23289	31052	-3.72	-0.34	75.60%
			Rail Cars	1494479	1326392	1461229	1590921	1157713	1543617	3.29	0.30	84.29%
US-Mexico	Texas	Laredo Int, 6230401X	Trains	3319	0	0	0	0	0	-100.00	-9.09	0.00%
			Rail Cars	56924	0	0	0	0	0	-100.00	-9.09	0.00%
		Laredo Import 6230402X	Trains	0	4805	4365	5240	3838	5117			12.46%
			Rail Cars	0	106795	109311	119009	93545	124727			6.81%
		Laredo Total	Trains	3319	4805	4365	5240	3838	5117	54.18	4.93	12.46%
			Rail Cars	56924	106795	109311	119009	93545	124727	119.11	10.83	6.81%
		Laredo/Columbia Area Subtotal	Trains	3319	4805	4365	5240	3838	5117	54.18	4.93	12.46%
			Rail Cars	56924	106795	109311	119009	93545	124727	119.11	10.83	6.81%
		Other Laredo Dist.	Trains	640	1314	1446	1569	1302	1736	171.25	15.57	4.23%
			Rail Cars	33259	51557	58497	67793	51510	68680	106.50	9.68	3.75%
		TOTAL LAREDO DIST. 623	Trains	3959	6119	5811	6809	5140	6853	73.11	6.65	16.68%
			Rail Cars	90183	158352	167808	186802	145055	193407	114.46	10.41	10.56%
		El Paso 62402 CET	Trains	0	470	80	5	10	13			0.03%
			Rail Cars	0	1953	735	87	427	569			0.03%
		El Paso imports Int, 6240204X	Trains	861	758	701	879	690	920	6.85	0.62	2.24%
			Rail Cars	16331	20098	24612	26087	18628	24837	52.09	4.74	1.36%
		El Paso/Ysleta Total	Trains	861	1228	781	884	1273	1697	97.14	8.83	4.13%
			Rail Cars	16331	22051	25347	26174	19055	25407	55.57	5.05	1.39%
		Presidio	Trains	100	41	45	55	75	100	0.00	0.00	0.24%
			Rail Cars	4098	610	344	747	705	940	-77.06	-7.01	0.05%

Table B-1: Rail Crossing Volumes[a] (Continued)

Region	State	Crossing	Type	1984	1992	1993	1994	1995 (Jan-Sep)	1995 (Full Year)	% Growth, 1984-95	Average growth, 1984-95	% of total entry from Canada and Mexico[b]
US-Mexico (Continued)	Texas Subtotal		Trains	4920	7388	6637	7748	5915	7887	60.30	5.48	19.20%
			Rail Cars	110612	181013	193499	213723	164815	219753	98.67	8.97	12.00%
	New Mexico Subtotal		Trains	0	0	0	0	0	0			0.00%
			Rail Cars	0	0	0	0	0	0			0.00%
	Arizona Subtotal		Trains	582	654	558	492	318	424	-27.15	-2.47	1.03%
			Rail Cars	15237	25692	26035	18702	14052	18736	22.96	2.09	1.02%
	California	San Ysidro, 7250103	Trains	68	0	0	0	0	0	-100.00	-9.09	0.00%
			Rail Cars	323	0	0	0	0	0	-100.00	-9.09	0.00%
		Otay Mesa, 7250601	Trains	0	237	228	185	395	527			1.28%
			Rail Cars	0	3145	1898	1454	2090	2787			0.15%
		San Diego Total	Trains	68	237	228	185	395	527	674.51	61.32	1.28%
			Rail Cars	323	3145	1898	1454	2090	2787	762.75	69.34	0.15%
		Other California/ Mexico	Trains	476	251	256	341	169	225	-52.66	-4.79	0.55%
			Rail Cars	8036	5078	4628	5463	2815	3753	-53.29	-4.84	0.20%
		CALIFORNIA DIST.TOTAL	Trains	544	488	484	526	564	752	38.24	3.48	1.83%
			Rail Cars	8359	8223	6526	6917	4905	6540	-21.76	-1.98	0.36%
Total US-Mexico			Trains	6046	8530	7679	8766	7370	9827	62.53	5.68	23.92%
			Rail Cars	134208	214928	226060	239342	183772	245029	82.57	7.51	13.38%
Total US-Canada and US-Mexico			Trains	38297	37754	39429	41670	30806	41075	7.25	0.66	
			Rail Cars	1628687	1541320	1687289	1830263	1373485	1831313	12.44	1.13	

a. Sources: U.S. Customs data provided to the study team (Canadian entries into the US and US-Mexico border crossings) and Statisti csCanada provided to the study team (US entries into Canada).

b. 1995 full year entries are a percent of the total combined entries from Canada and Mexico.

APPENDIX C

Border Crossing Profiles

The following profiles of Eastern Border crossings have been completed for those facilities not discussed in either Volume I or earlier in this Volume. The information contained in the profiles were obtained from interviews with US and Canadian staff assigned to each crossing.

Beecher Falls, VT			
		East Herford, PQ (362)	East Herford, PQ (330)
Crossing Characteristics			
Location		Beecher Falls, VT	Beecher Falls, VT
Type of Crossing		Highway	Highway
Corridor Origin/Destination and Key Highways		No info	US 3/CAN 253
Significance/Uses			
Significance		Local	Local
Key Users		Local commuting and shopping	Locals commuting and shopping, some tourists
Commercial Users/Goods		Plastics, small package	Some wood
Crossing Data			
1995 Bidirectional Trade $			
Canada Imports		NA	NA
U.S. Imports		NA	C $24.7
1995 Traffic (000's)	Beecher Falls Area Bidirectional	Canandian Inbound	Canandian Inbound
Autos	320	34.5	107.4
Trucks	47.7	12.4	3.2
Total	367.7	46.9	110.6
1995 % of all Vehicles of Borderwide Total	0.15%	0.11%	0.25%
All Vehicles Growth %			
1984-1995	36.00%	15.00%	81.40%
1992-1995	20.50%	36.70%	24.50%
Recent Trends			
Future Growth Factors		Unknown	Unknown
Crossing Delays			
Auto/Truck Delays			
Nature/Cause of Delays		none	none
Extent of Delays		none	none
Time of Year/Day		none	none
Institution Issues			
FIS vs. Side		no info	no info
Toll Collection-US		none	none
Toll Collection-Canada		none	none
Investment Needs			
Crossing Itself-Canadian Side		none	none
Inspection/Toll Plazas		none	none
Corridors		none	none
Problems/Opportunities			
General Issues		none	none
Joint Inspection		none	none
Technology		none	none

Beecher Falls, VT (cont.)		
	Charterville	Herford Road
Crossing Characteristics		
Location		
Type of Crossing	Highway	Highway
Corridor Origin/Destination and Key Highways		VT 114 and CAN 141,147, 10 and 55
Significance/Uses		
Significance	Hunters/locals. Only N.H. Port of Entry	Locals and travelers to coasts
Key Users	Locals	Locals
Commercial Users/Goods	Loggers	none
Crossing Data		
1995 Bidirectional Trade $		
Canada Imports	C $.2	NA
U.S. Imports	NA	NA
1995 Traffic (000's)	Canadian Inbound	Canadian Inbound
Autos	11.8	50.8
Trucks	1.9	8.1
Total	13.7	58.9
1995 % of all Vehicles of Borderwide Total	0.03%	0.13%
All Vehicles Growth %		
1984-1995	12.70%	54.80%
1992-1995	22.30%	4.30%
Recent Trends	no info	no info
Future Growth Factors	unknown	unknown
Crossing Delays		
Auto/Truck Delays		
Nature/Cause of Delays	none	none
Extent of Delays	none	none
Time of Year/Day	none	none
Institution Issues		
FIS vs. Side	none	none
Toll Collection-US	none	
Toll Collection-Canada		
Investment Needs		
Crossing Itself-Canadian Side	none	none
Inspection/Toll Plazas	none	none
Corridors	none	none
Problems/Opportunities		
General Issues	none	none
Joint Inspection	none	none
Technology	none	none

Bridgewater, ME Area	
	Bridgewater
Crossing Characteristics	
Location	Bridgewater, ME; Centerville, NB; North of Houlton
Type of Crossing	highway
Corridor Origin/Destination and Key Highways	US #1 and NB 560 and 110. In U.S. to I-95 Corridor.
Significance/Uses	
Significance	local with some tourists
Key Users	locals/tourists
Commercial Users/Goods	Key for a few companies frozen vegetables, fertilizer, parts and Canadian potatoes
Crossing Data	
1995 Bidirectional Trade $	
Canada Imports	C $16.5
U.S. Imports	C $15.4
1995 Traffic (000's)	Bidirectional
Autos	236
Trucks	19
Total	255
1995 % of all Vehicles of Borderwide Total	0.10%
All Vehicles Growth %	
1984-1995	41.00%
1992-1995	30.90%
Recent Trends	auto down
Future Growth Factors	no info
Crossing Delays	
Auto/Truck Delays	some summer day-auto
Nature/Cause of Delays	because of just one inspector 4-12 shift on US side
Extent of Delays	5 minutes to one hour on U.S. side
Time of Year/Day	summer days
Institution Issues	
FIS vs. Side	INS Budget shortfalls cause safety problems on US side
Toll Collection-US	
Toll Collection-Canada	
Investment Needs	
Crossing Itself-Canadian Side	none
Inspection/Toll Plazas	Need covered auto secondary on U.S. side. Canadians constructing secondary garage.
Corridors	
Problems/Opportunities	
General Issues	
Joint Inspection	Canadian FIS like idea, would cut costs. But need new joint building
Technology	Should be remote at night to allow two staff in day

Champlain, NY Area			
	Champlain, NY Area	Champlain 87, NY	Champlain 89, NY
Crossing Characteristics			
Location		Lacolle 15, PQ	Lacolle 11, PQ
Type of Crossing		Highway	Highway
Corridor Origin/Destination and Key Highways		I 87 and 15	I 89 and 11
Significance/Uses			
Significance		International and regional	Regional
Key Users		Tourists and local traffic	Tourists/shoppers/ commuters
Commercial Users/Goods		Large numbers of long distance trucks	Limited
Crossing Data			
1995 Bidirectional Trade $			
Entering Canada		3982.3	NA
Entering U.S.		9137.7	NA
1995 Traffic (000's)	Champlain Bidirectional	Entering Canada	Entering Canada
Autos	2525.1	773.6	168.4
Trucks	570.1	283.9	9.3
Total	3095.2	1057.5	177.7
1995 % of all Vehicles of Borderwide Total	1.26%	2.42%	0.41%
All Vehicles Growth %			
1984-1995	29.60%	7.50%	NA
1992-1995	23.30%	13.30%	28.50%
Recent Trends			Auto declines
Future Growth Factors		Canadian economy and C$	Canadian economy
Crossing Delays			
Auto/Truck Delays			
Nature/Cause of Delays		Primary and secondary	Truck secondary
Extent of Delays		U.S. side 1-2 minutes for auto and 10 minutes for truck	Minimal-some truck
Time of Year/Day		Auto in summer, truck year	Summer
Institution Issues			
FIS vs. Side		none	none
Toll Collection-US		none	none
Toll Collection-Canada			
Investment Needs			
Crossing Itself-Canadian Side		none	none
Inspection/Toll Plazas		none	none
Corridors		none	none
Problems/Opportunities			
General Issues		2nd busiest commercial crossing in New York	none
Joint Inspection		none	none
Technology		none	none

Champlain, NY Area (Continued)			
	Hemingford, PQ	Dundee, PQ	Covey Hill, PQ
Crossing Characteristics			
Location	Mooers, NY	Fort Covington, NY	Cannon's Corner, NY
Type of Crossing	Highway	Highway	Highway
Corridor Origin/Destination and Key Highways	Route 22 and 11 and 219 in Quebec	Route 132 in Canada and 37/11 in U.S.A.	Rural roads only
Significance/Uses			
Significance	Local	Local	Local
Key Users	Local residents and farmers. Some tourist use in summer	Local including indian reservation	Local
Commercial Users/Goods	Canadian apple orchard	Little	Farm only
Crossing Data			
1995 Bidirectional Trade $			
Canada Imports	NA	NA	NA
U.S. Imports	NA	NA	NA
1995 Traffic (000's)	Combined Canadian inbound	Canadian Inbound	Canadian Inbound
Autos	115.9		30.1
Trucks	4.0		1.3
Total	119.9		31.4
1995 % of all Vehicles of Borderwide Total	0.27%		0.07%
All Vehicles Growth %			
1984-1995	31.90%		37.90%
1992-1995	36.80%		32.20%
Recent Trends	Auto down	Auto down	Auto down
Future Growth Factors	none	St. Refis Reservation gambling could impact	Unknown
Crossing Delays			
Auto/Truck Delays			
Nature/Cause of Delays	none	none	none
Extent of Delays	none	none	none
Time of Year/Day	none	none	none
Institution Issues			
FIS vs. Side	none	none	none
Toll Collection-US	none	none	none
Toll Collection-Canada			
Investment Needs			
Crossing Itself-Canadian Side	none	none	none
Inspection/Toll Plazas	none	none	none
Corridors	Approach on U.S. side needs rebuilding	Gambling could require improvements	none
Problems/Opportunities			
General Issues	none	none	none
Joint Inspection	none	none	none
Technology	Video remote processing NPR Pilot Sep-96	Could use radio contact with Canadian Customs	none

Eastport, Maine Crossings		
	Eastport, ME	Lubec, NB
Crossing Characteristics		
Location	Eastport, ME/Deers Island, NB	Lubec, ME-Campobello, NB
Type of Crossing	Ferry/Seaport	Bridge
Corridor Origin/Destination and Key Highways	Atlantic Canada/New England: US1, ME 190 to Islands	Mainland to Campobello Calais Island. Is 55 miles to north.
Significance/Uses		
Significance	Tourists and Local	Only Land Bridge to Island. Roosevelt Intl. Park on island.
Key Users	Tourists/Fisherman	Tourists-summer
Commercial Users/Goods	Tourist and Some Ferry Truck-Fish Feed by Truck	Fish Trucks
Crossing Data		
1995 Bidirectional Trade $		
Canada Imports		C$4.2
U.S. Imports		C$131.7
1995 Traffic (000's)		Bidirectional
Autos		486
Trucks	NA	494
1995 % of all Vehicles of Borderwide Total	NA	0.55%
All Vehicles Growth %		
1984-1995	NA	19.1%
1992-1995	NA	6.6%
Recent Trends	none	none
Future Growth Factors	C$ Value	not known
Crossing Delays		
Auto/Truck Delays	none-except ferry wait	auto in summer
Nature/Cause of Delays	none	primary inspection-U.S. side
Extent of Delays	none	5 minutes-early evenings
Time of Year/Day	none	summer-day and early evening
Institutional Issues		
FIS vs. Side	Immigration staff need in summer	
Toll Collection-US	none	none
Toll Collection-Canada	ferry tolls	
Investment Needs		
Crossing Itself-Canadian Side	none	none
Inspection/Toll Plazas	good condition; 1991 C$204,000 on Canadian side	good condition; 1991 C$1,054,000 on Canadian side
Corridors	none	none
Problems/Opportunities		
General Issues	none	none
Joint Inspection	no	no
Technology	no	no

Fort Fairfield, ME Area			
		Fort Fairfield	River de Chute
Crossing Characteristics			
Location		Fort Fairfield, ME; Andover, NB	Fort Fairfield, ME; River de Chute, NB; Near Fort Fairfield
Type of Crossing		highway/rail	highway
Corridor Origin/Destination and Key Highways		US Route #2 and TRANSCANADA Hwy and CAN 190	local US Route #1
Significance/Uses			
Significance		tourists and intercity local	local
Key Users		primarily shopping and local commerical	local shopping/visiting
Commercial Users/Goods		produce, logs, farm equipment and long hair potato trucks	some pulp trucks
Crossing Data			
1995 Bidirectional Trade $			
Canada Imports		NA	C $.9
U.S. Imports		NA	C $.6
1995 Traffic (000's)	Fort Fairfield Area Bidirectional	Entering Canada	Entering Canada
Autos	476.5	262.8	5
Trucks	32.6	18.1	1
Total	509.1	280.9	6
1995 % of all Vehicles of Borderwide Total	0.21%	0.58%	0.01%
All Vehicles Growth %			
1984-1995	50.20%	50.20%	58.90%
1992-1995	32.80%	38.80%	24.10%
Recent Trends		auto down	none
Future Growth Factors		no info	no info
Crossing Delays			
Auto/Truck Delays		none	none
Nature/Cause of Delays			
Extent of Delays		none	none
Time of Year/Day			
Institution Issues			
FIS vs. Side		No problems. Difficulty filling vacancies quickly.	Should be remote only.
Toll Collection-US		none	none
Toll Collection-Canada			
Investment Needs			
Crossing Itself-Canadian Side		none	none
Inspection/Toll Plazas		Canadian side needs replacement	none
Corridors		none	none
Problems/Opportunities			
General Issues		none	none
Joint Inspection		US believe unlikely but Canadians say great potential	yes, but remote better
Technology		should have remote at night	should be remote

Fort Kent, ME Area			
		Fort Kent	Estcourt
Crossing Characteristics			
Location		Fort Kent, ME; Clair, NB	Estcourt, ME; Pohenegamook,
Type of Crossing		highway bridge	highway
Corridor Origin/Destination and Key Highways		US Route 1 and ME 161 to NB 120. Montreal to Maine.	Local only
Significance/Uses			
Significance		primarily local but very important to region	wood workers trucks, hunters, no through traffic
Key Users		90% local, 10% tourist	wood workers
Commercial Users/Goods		wood mills, farmers	wood mills
Crossing Data			
1995 Bidirectional Trade $			
Canada Imports		C $14.8	NA
U.S. Imports		C $23.0	NA
1995 Traffic (000's)	Fort Kent Total Bidirectional	Entering Canada	Entering Canada
Autos	722	315.1	64.7
Trucks	33	12.7	3.6
Total	755	327.8	68.3
1995 % of all Vehicles of Borderwide Total	0.31%	0.82%	0.16%
All Vehicles Growth %			
1984-1995	137.10%	40.50%	190.10%
1992-1995	20.70%	16.50%	25.30%
Recent Trends		auto down	no info
Future Growth Factors		no info	no info
Crossing Delays			
Auto/Truck Delays		flooding can close	no, except when floods shut roads or hunting season
Nature/Cause of Delays		secondary	
Extent of Delays		< 5 minutes	15-20 minutes
Time of Year/Day		summer	hunting season
Institution Issues			
FIS vs. Side		none	none
Toll Collection-US		none	none
Toll Collection-Canada			
Investment Needs			
Crossing Itself-Canadian Side		may need new bridge	none
Inspection/Toll Plazas		none	none
Corridors		none	none
Problems/Opportunities			
General Issues		high water shutdowns	floods
Joint Inspection		no	no, explored before
Technology		license plate readers	no

Highgate Springs, VT Area			
		Clarenceville, PQ	Noyan, PQ
Crossing Characteristics			
Location		Alburg Springs, VT	Alburg, VT
Type of Crossing		Highway	Highway
Corridor Origin/Destination and Key Highways		VT 78 Lake Champlain shopping and recreation	US 2/VT 225 Lake Champlain recreation area.
Significance/Uses			
Significance		Regional/local relief valve for investments	Regional local relief valve for interstates
Key Users		Almost all auto; Montreal residents with cottages on Lake Champlain.	Local residents.
Commercial Users/Goods		Farmers/feed permit system	Grain feed
Crossing Data			
1995 Bidirectional Trade $			
Canada Imports		NA	NA
U.S. Imports		NA	NA
1995 Traffic (000's)	Highgate Springs Area Bidirectional	Canadian Inbound	Canadian Inbound
Autos	987	66.9	55.9
Trucks	211.9	2	0.7
Total	1198.9	68.9	56.6
1995 % of all Vehicles of Borderwide Total	0.49%	0.16%	0.13%
All Vehicles Growth %			
1984-1995	14.40%	35.30%	13.90%
1992-1995	20.20%	43.80%	49.90%
Recent Trends		No info	No info
Future Growth Factors		Unknown	Unkown
Crossing Delays			
Auto/Truck Delays			
Nature/Cause of Delays		U.S. side rare delays	primary
Extent of Delays		Rare but 5-10 minutes on U.S. side	5-10 minutes on U.S. side. 15 minutes on Canadian side.
Time of Year/Day		Weekends in summer	Summer and weekends
Institution Issues			
FIS vs. Side		none	Joint U.S./Canada facility
Toll Collection-US		none	none
Toll Collection-Canada			none
Investment Needs			
Crossing Itself-Canadian Side		none	none
Inspection/Toll Plazas		none	none
Corridors		none	none
Problems/Opportunities			
General Issues		none	none
Joint Inspection		none	none
Technology		none	none

Highgate Springs, VT Area (Continued)		
	Morses Line, VT	**Phillipsburg**
Crossing Characteristics		
Location	Morses Line, QU	Phillipsburg, QU
Type of Crossing	Highway	Highway
Corridor Origin/Destination and Key Highways	VT 207/235	Montreal/Boston-Stowe; CAN 10/20; and US 91/93/95
Significance/Uses		
Significance	Local only. Alternate to I-89.	Regional/national
Key Users	Local residents	Tourists/national travelers.
Commercial Users/Goods	Permit system on U.S. side. Agricultural goods/implements.	Some local and long distance trucks.
Crossing Data		
1995 Bidirectional Trade $		
Canada Imports	NA	C $2654.3
U.S. Imports	NA	C $5663.6
1995 Traffic (000's)		
Autos	18.2	389.1
Trucks	1.1	106.7
Total	19.3	495.8
1995 % of all Vehicles of Borderwide Total	0.04%	1.13%
All Vehicles Growth %		
1984-1995	27.90%	27.60%
1992-1995	38.90%	10.80%
Recent Trends	Decline in auto	Less decline in autos than others.
Future Growth Factors	Unknown	Unknown
Crossing Delays		
Auto/Truck Delays	none	none
Nature/Cause of Delays		primary
Extent of Delays	Almost never	Few. 5 minutes weekends
Time of Year/Day		Weekends/summer
Institution Issues		
FIS vs. Side	Private residence between station and border causes problems	none
Toll Collection-US	none	none
Toll Collection-Canada		
Investment Needs		
Crossing Itself-Canadian Side	none	no info
Inspection/Toll Plazas	none	no info
Corridors	none	no info
Problems/Opportunities		
General Issues	none	none
Joint Inspection	Testing some joint programs	none
Technology	Video technology on U.S. side to expand hours in process	none

Houlton Area			
		Forest City	Woodstock
Crossing Characteristics			
Location		Forest City in Houlton area	Houlton Area
Type of Crossing		highway bridge	highway
Corridor Origin/Destination and Key Highways		mostly local US1 and Can 122	mostly traffic 80/from the Atlantic Provinces I-95
Significance/Uses			
Significance		local only	international and national
Key Users		mostly shoppers/local and some limited tourism	tourist and locals
Commercial Users/Goods		very few-wood/logs	wide variety of traffic, both industrial and consumer
Crossing Data			
1995 Bidirectional Trade $			
Canada Imports		NA	C $467.20
U.S. Imports			C $1066.60
1995 Traffic (000's)	Houlton Area Bidirectional	Canandian Entry Only	Canandian Entry Only
Autos	740	2.6	301
Trucks	145.4	0.4	65
Total	885.4	3	366
1995 % of all Vehicles of	0.36%	0.01%	0.84%
All Vehicles Growth %			
1984-1995	45.00%	38.10%	38.60%
1992-1995	36.60%	19.00%	38.10%
Recent Trends		large drop in auto	large drop in auto
Future Growth Factors		none known	no info
Crossing Delays			
Auto/Truck Delays		none	some summer delays
Nature/Cause of Delays			primary
Extent of Delays		none	5-10 minutes
Time of Year/Day			weekend peaks/summer
Institution Issues			
FIS vs. Side		none	none
Toll Collection-US		none	none
Toll Collection-Canada			no info
Investment Needs			
Crossing Itself-Canadian Side		none	no info
Inspection/Toll Plazas		none	new Canadian commercial facility
Corridors		no known issues	no info
Problems/Opportunities			
General Issues		none	none
Joint Inspection		yes, to save but remote would	no need
Technology		Should be on remote system; would allow 24 hour Canadian plate reader	none

Houlton Area (Continued)		
	Bloomfield	**Orient**
Crossing Characteristics		
Location	Bloomfield,NB; Monticello, ME in Houlton area	Orient, ME; Fosterville, NB in Houlton area
Type of Crossing	highway	highway
Corridor Origin/Destination and Key Highways	Central Aroostook County; secondary roads off US Route 1 and CND 550	East New Brunswick; TransCanadian Highway and NB 122 and US Route 1
Significance/Uses		
Significance	local only	local only
Key Users	local residents	locals/tourists
Commercial Users/Goods	some farm machinery	logs/lumber
Crossing Data		
1995 Bidirectional Trade $		
Canada Imports		
U.S. Imports		
1995 Traffic (000's)	entering Canada only	entering Canada only
Autos	4	15
Trucks	0.4	1.3
Total	4.4	16.3
1995 % of all Vehicles of Borderwide Total	0.01%	0.04%
All Vehicles Growth %		
1984-1995	38.10%	3.10%
1992-1995	25.70%	39.10%
Recent Trends	auto down	auto down
Future Growth Factors	no info	no info
Crossing Delays		
Auto/Truck Delays	none	none
Nature/Cause of Delays		
Extent of Delays	none	none
Time of Year/Day		
Institution Issues		
FIS vs. Side	none	none
Toll Collection-US	none	none
Toll Collection-Canada		
Investment Needs		
Crossing Itself-Canadian Side	none	none
Inspection/Toll Plazas	should be remote	should be remote
Corridors		
Problems/Opportunities		
General Issues		
Joint Inspection	would cut costs	would cut costs
Technology	should be remote	should be remote

Jackman Area			
		Armstrong	St. Aurellie
Crossing Characteristics			
Location		Armstrong, QU; Jackman, ME	St. Aurellie, QE; Jackman area
Type of Crossing		highway	highway, private bridge
Corridor Origin/Destination and Key Highways		QU 173/US 201; Quebec/Boston direct route	Local workers and hunters
Significance/Uses			
Significance		tourists	local
Key Users		Bus/Auto and commercial	workers
Commercial Users/Goods		1/3 commercial	loggers, syrup
Crossing Data			
1995 Bidirectional Trade $			
Canada Imports		114.2	NA
U.S. Imports		364.8	NA
1995 Traffic (000's)	Jackman Bidirectional	Entering Canada	Entering Canada
Autos	468	90.0	15.0
Trucks	213	51.0	4.0
Total	681.0	141.0	19.0
1995 % of all Vehicles of Borderwide Total			
All Vehicles Growth %			
1984-1995	30.80%	1.30%	NA
1992-1995	20.00%	25.10%	15.10%
Recent Trends		no info	no info
Future Growth Factors		no info	no info
Crossing Delays			
Auto/Truck Delays		5-10 minutes	10-30 minutes.
Nature/Cause of Delays		no info	primary
Extent of Delays		no info	10-30 minutes
Time of Year/Day		summer only	opening days
Institution Issues			
FIS vs. Side		no	none
Toll Collection-US		no	plans to close and use control from Armstrong
Toll Collection-Canada			
Investment Needs			
Crossing Itself-Canadian Side		no info	private bridge
Inspection/Toll Plazas		no info	none
Corridors		no info	none
Problems/Opportunities			
General Issues		no info	none
Joint Inspection		no info	
Technology		no info	remote technology

Jackman Area (Continued)			
	St. Pamphilie	Coburn	Daaquam
Crossing Characteristics			
Location	St. Pamphilie, ME; St.	Woburn, PQ; Coburn Gore,	Daaquam, PQ; Daaquam, ME;
Type of Crossing	highway	highway	private highway
Corridor Origin/Destination and Key Highways	local key shortcut	QU 27 with QU 161. Tourists to Maine coast and NB.	Local-must have permission of land/road owner
Significance/Uses			
Significance	mostly forestry, shopping, sportsman- big shortcut	local commuters and shoppers, some tourists	local paper company
Key Users	woodworkers, shoppers	locals for gasoline in the US, tourists skiing in winter	paper company
Commercial Users/Goods	timber/sportsman	wood industry	wood/paper
Crossing Data			
1995 Bidirectional Trade $			
Canada Imports	0.2		
U.S. Imports	NA		
1995 Traffic (000's)	Entering Canada	Entering Canada	Entering Canada
Autos	44.0	63	31
Trucks	16.0	25	21
Total	60.0	88	52
1995 % of all Vehicles of Borderwide Total	0.14%	0.20%	0.12%
All Vehicles Growth %			
1984-1995	NA	51.60%	106.90%
1992-1995	NA	34.80%	24.90%
Recent Trends	no info	no info	no info
Future Growth Factors	lumber mills expanding	no info	no info
Crossing Delays			
Auto/Truck Delays	none	some auto	none
Nature/Cause of Delays		primary	
Extent of Delays	none	5-10 minutes	none
Time of Year/Day		summer	
Institution Issues			
FIS vs. Side	none	some safety issues when just one person	none
Toll Collection-US	no info	no info	no info
Toll Collection-Canada			
Investment Needs			
Crossing Itself-Canadian Side	none	need wider truck lanes	none
Inspection/Toll Plazas		need radio communications between FIS on each side	none
Corridors	none	none	none
Problems/Opportunities			
General Issues	increase U.S. hours	none	none
Joint Inspection	none	possible	none
Technology	none	could use radio contact with Canadian Customs	none

Limestone Area	
	Limestone
Crossing Characteristics	
Location	Limestone, ME; Gillespie, NB
Type of Crossing	highway
Corridor Origin/Destination and Key Highways	Route 229 off US 1A between Presqueisce, ME and Caribou
Significance/Uses	
Significance	local shoppers and commuters, some tourists
Key Users	local
Commercial Users/Goods	wood, some farming supplies and logs
Crossing Data	
1995 Bidirectional Trade $	
Canada Imports	NA
U.S. Imports	NA
1995 Traffic (000's)	Bidirectional
Autos	114
Trucks	16
Total	130
1995 % of all Vehicles of Borderwide Total	0.05%
All Vehicles Growth %	
1984-1995	16.80%
1992-1995	43.80%
Recent Trends	long term decline due to air force base closing
Future Growth Factors	no info
Crossing Delays	
Auto/Truck Delays	no
Nature/Cause of Delays	
Extent of Delays	none
Time of Year/Day	
Institution Issues	
FIS vs. Side	none
Toll Collection-US	none
Toll Collection-Canada	
Investment Needs	
Crossing Itself-Canadian Side	none
Inspection/Toll Plazas	none
Corridors	none
Problems/Opportunities	
General Issues	hours to be cut on Canadian side
Joint Inspection	not realistic
Technology	pursuing remote for night

Norton, VT	
	Norton, VT
Crossing Characteristics	
Location	Stan Hope, PQ
Type of Crossing	Highway
Corridor Origin/Destination and Key Highways	Montreal/Maine coast and maritime coasts. I-91/93 and CAN 147.
Significance/Uses	
Significance	Regional
Key Users	Locals and tourists
Commercial Users/Goods	Lumber/paper/metal/AG. One of 3 Vermont commercial crossings.
Crossing Data	
1995 Bidirectional Trade $	
Canada Imports	C $556.5
U.S. Imports	C $244.5
1995 Traffic (000's)	
Autos	193.4
Trucks	32.6
Total	226
1995 % of all Vehicles of Borderwide Total	0.09%
All Vehicles Growth %	
1984-1995	3.70%
1992-1995	45.40%
Recent Trends	No info
Future Growth Factors	Unknown
Crossing Delays	
Auto/Truck Delays	
Nature/Cause of Delays	U.S. side when need to do secondaries.
Extent of Delays	5 minutes U.S. side, 5 minutes Canadian side
Time of Year/Day	Summer-U.S. and Canadian side.
Institution Issues	
FIS vs. Side	none
Toll Collection-US	none
Toll Collection-Canada	
Investment Needs	
Crossing Itself-Canadian Side	none
Inspection/Toll Plazas	Need covered truck secondary.
Corridors	none
Problems/Opportunities	
General Issues	none
Joint Inspection	none
Technology	none

Ogdensburg, NY	
	Ogdensburg, NY
Crossing Characteristics	
Location	Prescott, ONT.
Type of Crossing	Highway/bridge
Corridor Origin/Destination and Key Highways	Major link to USA for Ottawa 50 miles to north. Highway 2/16 in Canada and 37 in U.S.
Significance/Uses	
Significance	International and regional
Key Users	Auto traffic
Commercial Users/Goods	Metal, wood products, and
Crossing Data	
1995 Bidirectional Trade $	
Canada Imports	C $182.7
U.S. Imports	C $1169.5
1995 Traffic (000's)	
Autos	553
Trucks	45.6
Total	598.6
1995 % of all Vehicles Borderwide Total	0.24%
All Vehicles Growth %	
1984-1995	48.20%
1992-1995	30.90%
Recent Trends	Auto decline
Future Growth Factors	Not known
Crossing Delays	
Auto/Truck Delays	
Nature/Cause of Delays	Some primary auto
Extent of Delays	No significant delays
Time of Year/Day	Some summer
Institution Issues	
FIS vs. Side	none
Toll Collection-US	
Toll Collection-Canada	In early 90's Authority sold
Investment Needs	
Crossing Itself-Canadian Side	Good condition, Capacity of 800/hr. New toll booth technology in place.
Inspection/Toll Plazas	
Corridors	Investment in northern New York highways is long time issue. Four lane upgrades to HWY 17 to Ottawa long discussed.
Problems/Opportunities	
General Issues	none
Joint Inspection	none
Technology	none

Trout River, NY Area			
		Herdman, PQ	Trout River, PQ
Crossing Characteristics			
Location		Chateguay, NY	Trout River, NY
Type of Crossing		Highway	Highway
Corridor Origin/Destination and Key Highways		Montreal with NY/PENN, CAN 138/202, US 11 and Rte 374	Montreal QU 138 with US 30 and 11
Significance/Uses			
Significance		Primarily local	Primarily local resident
Key Users		Residents/shoppers/local farmers	Residents/shoppers/tourists
Commercial Users/Goods		Textile/lumber	Limited local
Crossing Data			
1995 Bidirectional Trade $			
Canada Imports		NA	NA
U.S. Imports		NA	NA
1995 Traffic (000's)	Trout River Area Bidirectional	Entering Canada	Entering Canada
Autos	406.7	67.8	65.6
Trucks	29.3	7.6	3.2
Total	436	75.4	68.8
1995 % of all Vehicles of Borderwide Total	0.18%	0.17%	0.16%
All Vehicles Growth %			
1984-1995	19.4%	14.9%	2.0%
1992-1995	34.0%	32.3%	40.9%
Recent Trends		Auto down	Auto down
Future Growth Factors		Due to Quebec changes in policy on various roads leading to border, expect increased activity at this location	Unknown
Crossing Delays			
Auto/Truck Delays			
Nature/Cause of Delays		Auto primary	none
Extent of Delays		Very few, if any	none
Time of Year/Day		Summer-weekend	none
Institution Issues			
FIS vs. Side		none	none
Toll Collection-US		none	none
Toll Collection-Canada			
Investment Needs			
Crossing Itself-Canadian Side		none	none
Inspection/Toll Plazas		none	none
Corridors		Improvements to Route 374 needed	Approach roads need reconstruction
Problems/Opportunities			
General Issues		none	none
Joint Inspection		none	none
Technology		none	none

Trout River, NY Area (Continued)		
	Franklin Cntr., PQ	Jamiesons
Crossing Characteristics		
Location	Churubosco, NY	
Type of Crossing	Highway	Highway
Corridor Origin/Destination and Key Highways	I-89, US 11 201/202 with CAN 209	138/202 CAN with US 11
Significance/Uses		
Significance	Primarily local	Local only
Key Users	Residents and some tourists	Residents
Commercial Users/Goods	Few local	Few only
Crossing Data		
1995 Bidirectional Trade $		
Canada Imports	NA	NA
U.S. Imports	NA	NA
1995 Traffic (000's)	Into Canada	Into Canada
Autos	18.4	9.3
Trucks	2.6	0.4
Total	21	9.7
1995 % of all Vehicles of Borderwide Total	0.05%	.02%
All Vehicles Growth %		
1984-1995	68.30%	150.00%
1992-1995	3.00%	58.20%
Recent Trends	Auto holding	Auto up
Future Growth Factors	Unknown	Unknown
Crossing Delays		
Auto/Truck Delays		
Nature/Cause of Delays	Auto primary	none
Extent of Delays	Some 5-10 minute Canadian ride. None on the U.S. side	none
Time of Year/Day	Summer-weekend	none
Institution Issues		
FIS vs. Side	none	none
Toll Collection-US	none	none
Toll Collection-Canada		
Investment Needs		
Crossing Itself-Canadian Side	none	none
Inspection/Toll Plazas	Building poor on Canadian side	none
Corridors	None-U.S. Route 11 recently reconstructed to border	none
Problems/Opportunities		
General Issues	none	none
Joint Inspection	none	none
Technology	Good candidate for automated pass lanes/video etc.	none

Vanceboro Area	
	Vanceboro
Crossing Characteristics	
Location	Vanceboro, ME; St. Croix, NB; 35 miles north of Calais
Type of Crossing	highway/rail bridge
Corridor Origin/Destination and Key Highways	New Brunswick and northeast U.S., US I-95, US 6 and CAN 4
Significance/Uses	
Significance	primarily local and regional
Key Users	local and tourist, some wood haulers
Commercial Users/Goods	wood/paper products
Crossing Data	
1995 Bidirectional Trade $	
Canada Imports	NA
U.S. Imports	NA
1995 Traffic (000's)	Bidirectional
Autos	142
Trucks	10
Total	152
1995 % of all Vehicles of Borderwide Total	0.17%
All Vehicles Growth %	
1984-1995	38.80%
1992-1995	51.80%
Recent Trends	large drop in traffic auto
Future Growth Factors	Canadians visiting US- C$ value
Crossing Delays	
Auto/Truck Delays	none normally
Nature/Cause of Delays	
Extent of Delays	none
Time of Year/Day	
Institution Issues	
FIS vs. Side	hardship station, safety of offices: only one office on duty so major problem can cause delay
Toll Collection-US	no information
Toll Collection-Canada	
Investment Needs	
Crossing Itself-Canadian Side	new bridge to open Nov/96
Inspection/Toll Plazas	major work in 1995
Corridors	no known issues
Problems/Opportunities	
General Issues	none
Joint Inspection	no need
Technology	none known

Van Buren, ME Area			
		Van Buren	Grand Falls Hamlin, ME
Crossing Characteristics			
Location		Van Buren, ME; St. Leonard, NB	Van Buren, ME; Grand Falls, NB
Type of Crossing		highway bridge	highway
Corridor Origin/Destination and Key Highways		Route 17 to Route 1 and I-95 in the U.S.	TRANSCANADA to 1A and I-95
Significance/Uses			
Significance		primarily local but 10-30% tourists	locals and tourist
Key Users		Tourists are often Europeans visiting Gaspe Peninsula	tourists and local
Commercial Users/Goods		logs to St. Leonard Mills	frozen foods and potatoes
Crossing Data			
1995 Bidirectional Trade $			
Canada Imports		C $17.6	C $8.6
U.S. Imports		C $1285.4	NA
1995 Traffic (000's)	Van Buren Total Bidirectional	Entering Canada	Entering Canada
Autos	866	285.1	142.3
Trucks	41	18.3	2
Total	907	303.4	144.3
1995 % of all Vehicles of Borderwide Total	0.74%	0.69%	0.33%
All Vehicles Growth %			
1984-1995	15.00%	10.80%	4.90%
1992-1995	49.50%	37.20%	64.20%
Recent Trends		major decline in auto traffic	major decline in auto traffic
Future Growth Factors		no info	no info
Crossing Delays			
Auto/Truck Delays		none	none
Nature/Cause of Delays			
Extent of Delays		none	none
Time of Year/Day			
Institution Issues			
FIS vs. Side		no problems	no problems
Toll Collection-US		no problems	no problems
Toll Collection-Canada			
Investment Needs			
Crossing Itself-Canadian Side		none	none
Inspection/Toll Plazas		recent primary booth improvements, poor building in Canada	none
Corridors		none	none
Problems/Opportunities			
General Issues		none	Recently went 16 hours in Canada
Joint Inspection		none	would be possible
Technology		none	"Pace" potential on Canadian side

West Berkshire, VT Area			
		Abercorn, PQ	East Pinnaclie, PQ
Crossing Characteristics			
Location		Richford, VT	East Richard, VT
Type of Crossing		Highway/Rail Freight	Highway
Corridor Origin/Destination and Key Highways		VT 105/105A/139/Pinnacle Rd/ CAN Route 10. Montreal to Eastern U.S.	VT 105/108 and CAN 237
Significance/Uses			
Significance		Local importance primarily, some regional tourism	Primarily local tourists/shoppers; some from Montreal
Key Users		Primarily local commuters	Primarily local commuters and shoppers
Commercial Users/Goods		Very little commercial traffic, mostly plastics and small packages.	Bicycle parts
Crossing Data			
1995 Bidirectional Trade $			
Canada Imports		C $2.6	NA
U.S. Imports		NA	NA
1995 Traffic (000's)	West Berkshire Bidirectional Total	Canandian Inbound Only	Canandian Inbound Only
Autos	336	87.2	19.4
Trucks	17.5	5.2	0.2
Total	353.5	92.4	19.6
1995 % of all Vehicles of Borderwide Total	0.14%	0.21%	0.04%
All Vehicles Growth %			
1984-1995	16.20%	7.60%	12.30%
1992-1995	51.60%	55.60%	48.90%
Recent Trends		Large decrease in autos	
Future Growth Factors		Unknown	Unknown
Crossing Delays			
Auto/Truck Delays			
Nature/Cause of Delays		Primary auto	U.S. none
Extent of Delays		Rare. 3 minutes, Canadian side; 10 minutes on U.S. side.	U.S. none
Time of Year/Day		Summer peaks-Canada; Summer/ski-U.S.	U.S. none
Institution Issues			
FIS vs. Side		short about two Customs positions	U.S. side staffed from Richford. Secondary required inspector from Richford.
Toll Collection-US		Overtime budget, reduced Canadian budget	Unmanned midnight to 8:00AM
Toll Collection-Canada		down Canadian	
Investment Needs			
Crossing Itself-Canadian Side		none	none
Inspection/Toll Plazas		U.S. Computer needs	none
Corridors		no info	none
Problems/Opportunities			
General Issues		none	none
Joint Inspection		no info	Would work per Canadians
Technology		no info	no info

West Berkshire, VT (Continued)		
	Frelichsburg, PQ	Glen Sutton, PQ
Crossing Characteristics		
Location		
Type of Crossing	highway	highway
Corridor Origin/Destination and Key Highways	Montreal/coasts but mostly local. CAN 10/237/213 and VT 105/108/18.	Locals and some tourists. CAN 105A/10/139 and 105/105A/242.
Significance/Uses		
Significance	Local but first 24 hour crossing east of Highgate Springs	local only
Key Users	Tourists/shoppers	Locals. Primarily used as alternative route around Jay Mountain.
Commercial Users/Goods	Some local trucks. Some long haul into Canada.	Cattle feed
Crossing Data		
1995 Bidirectional Trade $		
Canada Imports	C $1.4	C $20.8
U.S. Imports	NA	NA
1995 Traffic (000's)	Canadian Inbound	Canadian Inbound
Autos	42.6	11.2
Trucks	2.5	0.5
Total	45.1	11.7
1995 % of all Vehicles of Borderwide Total	0.10%	0.03%
All Vehicles Growth %		
1984-1995	8.40%	24.80%
1992-1995	57.70%	35.30%
Recent Trends		
Future Growth Factors	unknown	unknown
Crossing Delays		
Auto/Truck Delays	none	none
Nature/Cause of Delays	Truck due to lack of electronic processing on U.S. side.	none
Extent of Delays	Infrequent on U.S. side, 15-20 minutes.	No delays on U.S. side.
Time of Year/Day	Auto summer peak U.S., trucks year-round U.S.	none
Institution Issues		
FIS vs. Side	Some O.T. problems. Can only staff booths 50% of time. Safety concerns on U.S. side.	No permanent staff U.S. side. No inspection booths.
Toll Collection-US		Should reduce hours of service.
Toll Collection-Canada		
Investment Needs		
Crossing Itself-Canadian Side	none	none
Inspection/Toll Plazas	More O.T. $	Need a primary booth. None on U.S. side. Building on Canadian side in poor condition.
Corridors	none	none
Problems/Opportunities		
General Issues	none	none
Joint Inspection	None per U.S. Canadians say good opportunity.	no info
Technology	Need new equipment on U.S. side.	no info

Appendix D: Investment Needs

The following Tables summarize the transportation infrastructure investment needs for each state and province along the eastern US-Canada border. The following project categories are used in the Tables:

- *Current projects*: Those projects currently underway,
- *Near term needs*: Projects scheduled to be under construction by the year 2002, and
- *Long term needs*: Projects slated for construction between the years 2001 and 2015.

Maine investment needs

Category	Project	Costs (millions of US$)			
		Current projects	Near term needs	Long term needs	Total reported
Highway crossing projects	New Calais/St. Stephens Bridge[a]			$4	$4
Highway corridor needs	CP Rail corridor abandonment needs			$1	$1
	Miscellaneous corridor improvements		$21	$35	$56
Maine Total		**$0**	**$21**	**$40**	**$61**

a. Reflects half of project cost; other half allocated to New Brunswick.

Michigan investment needs

Category	Project	Costs (millions of US$)			
		Current Projects	Near term needs	Long term needs	Total reported
Highway crossing projects	International Bridge re-decking[a]			$15	$15
	International Bridge painting[a]	$2	$4	$2	$8
	International Bridge plaza improvements		$2		$2
	Blue Water Bridge re-decking/painting/plaza[a]		$15		$15
	Blue Water Bridge second span[a]	$40			$40
	Ambassador Bridge Access	$2	$7	$100	$109
	Advanced technology/ITS[a]	$1	$5		$6
Highway crossing projects subtotal		***$45***	***$33***	***$117***	***$195***
Highway corridor needs	I-69 improvements		$50		$50
	I-75 improvements		$200		$200
	I-94 improvements		$450	$550	$1,000
	CVO/ITS implementation	$3	$7	$50	$60
Highway corridor needs subtotal		***$3***	***$707***	***$600***	***$1,310***
Rail crossing projects	New Detroit Doublestack tunnel[a]		$90		$90
Rail corridor needs	Detroit freight intermodal terminal		$100		$100
	Detroit-Chicago high speed rail	$25	$150	$600	$775
	CN/CP corridor improvements		$50	$50	$100
Rail corridor needs subtotal		***$25***	***$300***	***$650***	***$975***
Marine	New Soo Lock		$250		$250
Michigan Total		**$73**	**$1,380**	**$1,367**	**$2,820**

a. Reflects half of project cost; other half allocated to Ontario.

New Brunswick investment needs

Category	Project	Costs (millions of US$)			
		Current Projects	Near term needs	Long term needs	Total reported
Highway crossing projects	New Calais-St. Stephen Bridge[a]			$4	$4
	Clair, NB-Fort Kent, ME		$7		$7
	St. Croix, NB-Vanceboro, ME		$1		$1
Highway crossing projects subtotal			***$8***	***$4***	***$12***
Highway corridor needs	Connector to Calais-St. Stephen Bridge			$23	$23
	NB Route 1 Upgrade		$18	$18	$36
	NB Route 95 Upgrade	$4		$19	$23
Highway corridor needs subtotal		***$4***	***$18***	***$60***	***$82***
New Brunswick Total		**$4**	**$26**	**$64**	**$94**

a. Reflects half of project cost; other half allocated to Maine.

New York investment needs

Category	Project	Costs (millions of US$)			
		Current Projects	Near term needs	Long term needs	Total reported
Highway crossing projects[a]	Peace Bridge access modifications		$24		$24
	Peace Bridge plaza/inspection/admin.			$50	$50
	Peace Bridge Twinning[b]		$35		$35
	Rainbow Bridge plaza reconstruction	$25			$25
	Whirlpool Bridge re-decking/plaza[b]		$50		$50
	Expand Lewiston-Queenston inspection[b]	$4		$2	$6
	Implement TDM strategies[b]			$2	$2
	Thousand Island Bridge re-decking[c]		$4		$4
	Thousand Island Bridge replacement[b]			$50	$50
	Ogdensburg Bridge repairs[b]			$4	$4
	Massena-Cornwall Bridge re-decking[b]			$5	$5
	Expand Massena-Cornwall inspection		$2		$2
	New Massena-Cornwall Bridge[b]			$30	$30
Highway crossing projects subtotal		***$29***	***$115***	***$143***	***$287***
Highway corridor needs[a]	Route 219 improvements			$400	$400
	Southtowns Connector improvements			$514	$514
	Lakeshore Expressway			$72	$72
	New Gateway Crossing (tunnel)			$120	$120
	I-190 Niagara Thruway improvements	$45	$183	$75	$303
	Grand Island Bridges improvements			$255	$255
	Whirlpool Bridge Connector to I-190		$22		$22
	Route 11 corridor improvements		$19	$50	$69
	Route 30 improvements	$1		$5	$6
	County Route 52 (Route 374) improvements			$5	$5
	Route 56 improvements	$6			$6
Highway corridor needs subtotal		***$52***	***$224***	***$1,496***	***$1,772***
New York Total		**$81**	**$339**	**$1,639**	**$2,059**

a. These corridor and crossing projects include bicycle and pedestrian improvements at the Niagara and St. Lawrence Bridges.
b. Reflects half of project cost; other half is allocated to Ontario.
c. Cost to re-deck Canadian portion is $12.5 million.

Ontario investment needs

Category	Project	Costs (millions of US$)			
		Current Projects	Near term needs	Long term needs	Total reported
Highway crossing projects[a]	International Bridge re-decking[b]			$15	$15
	International Bridge painting[b]	$2	$4	$2	$8
	International Bridge plaza improvements		$2		$2
	Blue Water Bridge second span[b,c]	$40			$40
	Advanced technology/ITS[b]	$1	$5		$6
	Peace Bridge Twinning[d]		$35		$35
	Rainbow Bridge plaza reconstruction	$25			$25
	New Whirlpool Bridge and plaza[d]		$50		$50
	Expand Lewiston-Queenston inspection[d]	$4		$2	$6
	Implement TDM strategies (Niagara)[d]			$1	$1
	Thousand Islands Bridge re-decking[d]		$4		$4
	Thousand Islands Bridge replacement[d]			$50	$50
	Ogdensburg Bridge repairs[d]			$4	$4
	Massena-Cornwall Bridge re-decking[d]			$5	$5
	Expand Massena-Cornwall inspection[d]		$2		$2
	New Massena-Cornwall Bridge[d]			$30	$30
Highway crossing projects subtotal		***$72***	***$102***	***$109***	***$283***
Highway corridor needs[a]	Highway 401 (Windsor to Toronto)		$195	$154	$349
	Highway 403 (Ancaster to Brantford)		$31		$31
	Highway 403 (Freeman to Trafalgar)		$158	$11	$169
	Highway 407 (Hwy 403 to Hwy 48)		$368	$420	$788
	QEW (Hamilton to St. Catharines)		$145	$23	$168
Highway corridor needs subtotal		***$0***	***$897***	***$608***	***$1,505***
Rail crossing projects	New Windsor Doublestack tunnel[b]		$90		$90
Ontario Total		**$72**	**$1,089**	**$717**	**$1,878**

a. These highway corridor and crossing projects include bicycle and pedestrian improvements at the Niagara and St. Lawrence Bridges.
b. Reflects half of project cost; other half allocated to Michigan.
c. Because this project is underway, only the remaining costs are reported.
d. Reflects half of project cost; other half allocated to New York.

Québec investment needs

Category	Project	Costs (millions of US$)			
		Current Projects	Near term needs	Long term needs	Total reported
Highway crossing projects	LaColle Rte. 15	$13			$13
Highway corridor needs	Stansted (55/143)	$3			$3
	Godmanchester (138)	$1			$1
	Locolle, M. Carmel (202)	$1			$1
Marine	Port rehabilitation/enlargement	$12	$78		$90
Québec Total		**$30**	**$78**	**$0**	**$108**

Vermont investment needs

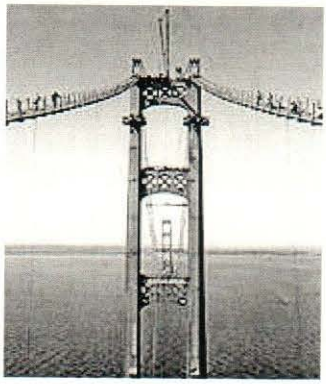
Category	Project	Costs (millions of US$)			
		Current Projects	Near term needs	Long term needs	Total reported
Highway crossing projects	Replace Mississquoi drawbridge (Route 78)		$30		$30
Highway corridor needs[a]	US-2		$15	$60	$75
	Vermont Route 78	$7	$15		$22
	Beebe Spur Bike Path	$1			$1
	Hwy Improvements (CP Rail abandonment)		$3		$3
Highway corridor needs subtotal		***$8***	***$63***	***$60***	***$131***
Rail corridor needs	CV Tunnel enlargement	$6			$6
Vermont Total		**$14**	**$63**	**$60**	**$137**

a. Vermont is also interested in the improvement of Route 133 in Québec.

Mackinac Bridge

LENGTHS

Total Length of Bridge (5 Miles)	26,372 Ft.	8,038 Meters
Total Length of Steel Superstructure	19,243 Ft.	5,865 Meters
Length of Suspension Bridge (including Anchorages)	8,614 Ft.	2,626 Meters
Total Length of North Approach	7,129 Ft.	2,173 Meters
Length of Main Span (between Main Towers)	3,800 Ft.	1,158 Meters

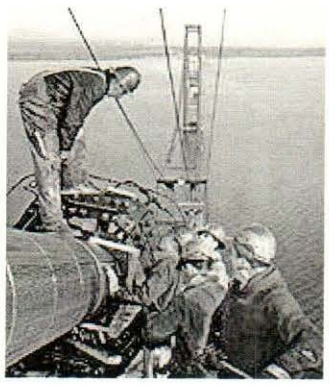


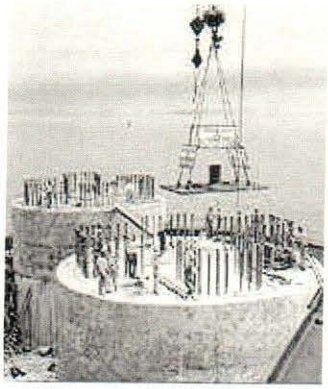
HEIGHTS AND DEPTHS

Height of Main Towers above Water	552 Ft.	168.25 Meters
Maximum Depth to Rock at Midspan	Unknown	Unknown
Maximum Depth of Water at Midspan	295 Ft.	90 Meters
Maximum Depth of Tower Piers below Water	210 Ft.	64 Meters
Height of Roadway above Water at Midspan	199 Ft.	61 Meters
Underclearance at Midspan for Ships	155 Ft.	47 Meters
Maximum Depth of Water at Piers	142 Ft.	43 Meters
Maximum Depth of Piers Sunk through Overburden	105 Ft.	32 Meters

CABLES

Total Length of Wire in Main Cables	42,000 Miles	67,592 km
Maximum Tension in Each Cable	16,000 Tons	14,515,995 kg
Number of Wires in Each Cable	12,580	
Weight of Cables	11,840 Tons	10,741,067 kg
Diameter of Main Cables	24 1/2 Inches	62.23 cm
Diameter of Each Wire	0.196 Inches	.498 cm



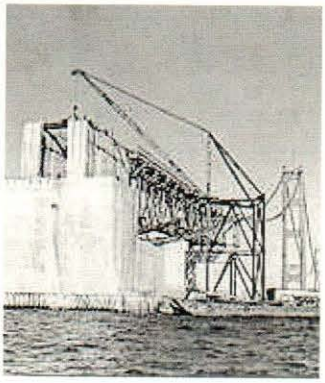


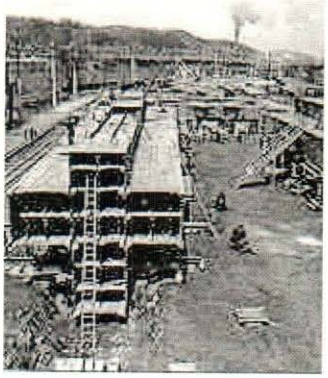
CONCRETE

Total Concrete in Bridge	466,300 Cu. Yds.	356,512 Cu. Meters
Total Concrete in Substructure	451,000 Cu. Yds.	344,814 Cu. Meters
Total Concrete in One Anchorage (No. 22)	91,600 Cu. Yds.	70,033 Cu. Meters
Total Concrete in One Pier (No. 19)	80,600 Cu. Yds.	61,623 Cu. Meters
Total Concrete in Superstructure	15,300 Cu. Yds.	11,698 Cu. Meters

WEIGHTS

Total Weight of Bridge	1,024,500 Tons	929,410,766 kg
Total Weight of Concrete	931,000 Tons	844,589 kg
Total Weight of Substructure	919,100 Tons	833,793,495 kg
Total Weight of Two Anchorages	360,380 Tons	326,931,237 kg
Total Weight of Two Main Piers	318,000 Tons	288,484,747 kg
Total Weight of Superstructure	104,400 Tons	94,710,087 kg
Total Weight of Structural Steel	71,300 Tons	64,682,272 kg
Weight of Steel in Each Main Tower	6,500 Tons	5,896,701 kg
Total Weight of Cable Wire	11,840 Tons	10,741,067 kg
Total Weight of Concrete Roadway	6,660 Tons	6,041,850 kg
Total Weight of Reinforcing Steel	3,700 Tons	3,356,584 kg





RIVETS AND BOLTS

Total Number of Steel Rivets	4,851,700
Total Number of Steel Bolts	1,016,600

DESIGN AND DETAIL DRAWINGS

Total Number of Engineering Drawings	4,000
Total Number of Blueprints	85,000

MEN EMPLOYED

Total, at the Bridge Site	3,500
At Quarries, Shops, Mills, etc.	7,500
Total Number of Engineers	350

IMPORTANT DATES

Mackinac Bridge Authority Appointed	June, 1950
Board of Three Engineers Retained	June, 1950
Report of Board of Engineers	January, 1951
Financing and Construction Authorized by Legislature	April 30, 1952
D.B. Steinman Selected as Engineer	January, 1953
Preliminary Plans and Estimates Completed	March, 1953
Construction Contracts Negotiated	March, 1953
Bids Received for Sale of Bonds	December 17, 1953
Began Construction	May 7, 1954
Open to traffic	November 1, 1957
Formal dedication	June 25-28, 1958
50 millionth crossing	September 25, 1984
40th Anniversary Celebration	November 1, 1997
100 millionth crossing	June 25, 1998

History of the Mackinac Bridge

A newspaper, the Lansing Republican, dated February 5, 1884, reprinted a story from the Grand Traverse Herald pointing out that the experiment to provide all-year service across the Straits by boat had failed, and that if a great east-west route were ever to be established through Michigan a bridge or tunnel would be required. The editor considered both as practicable; the only question in his mind was that of cost.

The dedication of the Brooklyn Bridge in 1883 gave Mackinac Bridge backers encouragement. A St. Ignace store owner in 1884 reprinted an artist's conception of the famous New York structure in his advertising and captioned it "Proposed bridge across the Straits of Mackinac."

On July 1, 1888, the board of directors of the famous Grand Hotel at Mackinac Island held their first meeting and the minutes show that Commodore Cornelius Vanderbilt said: "We now have the largest, well-equipped hotel of its kind in the world for a short season business. Now what we need is a bridge across the Straits." The great Firth of Forth Bridge in Scotland was under construction then and completed in 1889.

During the ensuing years there were a few farfetched ideas about the connection of Michigan's two peninsulas. In 1920 the state highway commissioner suggested a floating tunnel. He invited other engineers to suggest ideas for crossing the Straits. Mr. C. E. Fowler of New York City came forward with an ambitious project to solve the problem with a series of bridges and causeways that would start at Cheboygan, some 17 miles southeast of Mackinaw City, traverse Bois Blanc and Round Islands, touch the southern tip of Mackinac Island, and leap across the deep channel at St. Ignace.

In 1923 the Legislature ordered the State Highway Department to establish a ferry service at the Straits. Within five years traffic on this facility became so heavy that the late Governor Fred Green ordered the same agency to make a study of bridge feasibility. The report was favorable and its cost was estimated at 30 million dollars. Some strides to get the project underway were taken but it was eventually dropped.

Writing in the Michigan Alumnus-Quarterly Review, spring 1937, the late James H. Cissel, Secretary of the Mackinac Straits Bridge Authority, said:

"Early in 1934 the matter was again revived and proposed as a suitable P.W.A. project. In the extra session of 1934 the Legislature created the Mackinac Straits Bridge Authority of Michigan and empowered it to investigate the feasibility of such construction and to finance the work by issuance of revenue bonds. The Authority began its studies in May 1934 and has been continuously active since that date.

Although limited funds precluded full and complete preliminary studies, the Authority was able to reach the conclusion that it was feasible to construct a bridge directly across the Straits at an estimated cost of

not more than $32,400,000 for a combined two lane highway and one-track railway bridge. In its studies the Authority utilized soundings made by the War Department Engineers and was aided by the gratuitous counsel and advice of engineers and contractors experienced in work of this magnitude."

The Authority made two attempts between 1934 and 1936 to obtain loans and grants from the Federal Emergency Administration of Public Works, but P.W.A. refused both applications despite endorsement by the U.S. Army Corps of Engineers and the report that the late President Roosevelt favored the bridge.

Notwithstanding these setbacks, bridge backers resumed their efforts with their usual vigor. From 1936 to 1940 a new direct route was selected, borings were made, traffic, geologic, ice and water current studies of a very comprehensive nature were completed. A mole or causeway jutting 4,200 feet into the Straits from St. Ignace south was constructed. Preliminary plans for a double suspension span were drawn and the possibility of a bridge became very real. But the Armies of Europe began to march and bridge progress came to a halt. Finally, in 1947, the State Legislature abolished the Mackinac Straits Bridge Authority.

Again, the bridge backers swung into action and a citizens' committee was established to obtain legislation recreating a bridge authority. By 1950 the legislation was enacted, but it limited the newly created Authority to determine feasibility only. The law required the Authority to consult with three of the world's foremost long span bridge engineers and traffic consultants for advice on physical and financial feasibility.

In January of 1951 the Authority submitted a very favorable preliminary report, stating that a bridge could be built and financed with revenue bonds for $86,000,000 but because of the shortage of materials due to the Korean outbreak, legislation to finance and build the structure was delayed until early in 1952. Immediately, the Authority asked the Reconstruction Finance Corporation to purchase $85,000,000 worth of bonds.

While this agency was studying the request, a private investment banker became interested in the project, and offered to manage a group of investment companies which would underwrite the sale of the bonds. The Authority accepted the offer and was ready to offer its bonds for sale by March of 1953. There were not enough takers to guarantee successful underwriting. The money market had weakened.

In order to make the bonds more attractive, the Legislature passed an act during the Spring of 1953 whereby the operating and maintenance cost of the structure, up to $417,000 annually, would be paid for out of gasoline and license plate taxes. Another effort to finance with this added inducement in June of 1953 was likewise unsuccessful, but toward the end of the year the market recovered and $99,800,000 worth of Mackinac Bridge bonds were bought by investors all over the country. Contracts which had been awarded contingent upon this financing were immediately implemented.

The five-mile bridge, including approaches, and the world's longest suspension bridge between cable anchorages, had been designed by the great engineer Dr. David B. Steinman. Merritt-Chapman & Scott Corporation's $25,735,600 agreement to build all the foundations led to the mobilization of the largest bridge construction fleet ever assembled. The American Bridge Division of United States Steel

Corporation, awarded a $44,532,900 contract to build this superstructure, began its work of planning and assembly. In U.S. Steel's mills the various shapes, plates, bars, wire and cables of steel necessary for the superstructure and for the caissons and cofferdams of the foundation, were prepared. The bridge was officially begun amid proper ceremonies on May 7 & 8, 1954, at St. Ignace and Mackinaw City.

The bridge opened to traffic on November 1, 1957 according to schedule, despite the many hazards of marine construction over the turbulent Straits of Mackinac. The last of the Mackinac Bridge bonds were retired July 1, 1986. Fare revenues are now used to operate and maintain the Bridge and repay the State of Michigan for monies advanced to the Authority since the facility opened to traffic in 1957.
