Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
SWUTC/07/473700-00091-1		

4. Title and Subtitle	5. Report Date
NORTH AMERICAN TRANSPORTATION CORRIDOR NETWORK	July 2007
	6. Performing Organization Code

7. Author(s)	8. Performing Organization Report No.
Juan C. Villa and Christopher W. Rothe	Report 473700-00091-1

9. Performing Organization Name and Address	10. Work Unit No. (TRAIS)
Texas Transportation Institute Texas A&M University System College Station, Texas 77843-3135	11. Contract or Grant No. DTRS99-G-0006

12. Sponsoring Agency Name and Address	13. Type of Report and Period Covered
Southwest Region University Transportation Center Texas Transportation Institute Texas A&M University System College Station, Texas 77843-3135	14. Sponsoring Agency Code

15. Supplementary Notes

Supported by a grant from the U.S. Department of Transportation, University Transportation Centers Program.

16. Abstract

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17. Key Words	18. Distribution Statement
North American Transportation, Transportation Corridors, NAFTA	No restrictions. This document is available to the public through NTIS: National Technical Information Service 5285 Port Royal Road Springfield, Virginia 22161

19. Security Classif.(of this report)	20. Security Classif.(of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	109	

Form DOT F 1700.7 (8-72)

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NORTH AMERICAN TRANSPORTATION CORRIDOR NETWORK

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Research Report Number SWUTC/07/473700-00091-1

North American Transportation Corridors Workshop and Website

Sponsored by

Southwest Region University Transportation Center

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July 2007

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ACKNOWLEDGMENTS

The authors recognize that support for this research was provided by a grant from the U.S. Department of Transportation, University Transportation Centers Program to the Southwest Region University Transportation Center.

The authors also wish to acknowledge Stephen Blank, Co-Chair, North American Transportation Competitiveness Research Council and Senior Fellow, North American Center for Transborder Studies, Arizona State University and Center for Energy, Marine Transportation and Public Policy, Columbia University, for being the project monitor and for his expertise. Additional thanks are due to Eduardo Aspero, Barry E. Prentice, Rosalind Wilson, and Stephen Blank for presenting during the North American Transportation Corridor Network Webinar. The webinar would not have been possible if not for the technical expertise of Gary Thomas from the Texas Transportation Institute.

ABSTRACT

Trade flows across the three North American countries have increased substantially since the implementation of the North American Trade Agreement (NAFTA), but there is no movement toward developing a true North American Transportation Corridor Network. This report examines two types of North American transportation corridor networks. The first is a transportation infrastructure network that spans across the three North American countries, including highways, railroads, and port of entries which are all part of a large multimodal transportation network. The second type of networks analyzed, is a research network that is a collection and collaboration of organizations, individuals, and research that have the goal of improving transportation in North America. Through this research project, a group of transportation experts from the United States, Mexico and Canada was assembled through a webinar to discuss issues related to a North American transportation corridor plan. The formation of a North American transportation center is recommended to research and educate government officials on the current and projected state of transportation in North America.

EXECUTIVE SUMMARY

Trade flows across the three North American countries have increased substantially since the implementation of the North American Trade Agreement (NAFTA). Border crossing issues at the U.S.-Mexican and U.S.-Canadian borders have gained a lot of attention, especially after Septmber 11, 2001 However the international trade corridor concept has not been addressed at the North American level. Some cities are promoting specific projects and building partnerships to attract carriers of goods and promote economic development in the region, but there is no movement toward developing a true North American Transportation Corridor Network.

The North American Transportation Corridor Network can be divided into two separate networks. The first is a transportation infrastructure network that spans across the three North American countries. This network includes highways, railroads, and port of entries which are all part of a large multimodal transportation network. Federal governments, as well as interest groups, have identified specific corridors for funding and planning purposes; however there currently is not a continental-wide plan.

The second is a research network that is a collection and collaboration of organizations, individuals, and research that have the goal of improving transportation in North America. Numerous research institutes, universities, and journals exist, publishing numerous papers and articles on transportation.

A North American Transportation Corridor Plan could help alleviate some of the problems in North American transportation as well as coordinate efforts. By having a coordinated plan for all three NAFTA countries, valuable resources could be properly allocated to improve international transportation. Coordinated efforts will utilize the strengths and current projects of each country to reduce inefficiencies. In addition, North American transportation corridors will alleviate some congestion that is plaguing North American trade. However, if the corridors are not seamlessly coordinated between the three countries then they will have little effect on international transportation and trade.

Transportation improvements can foster economic expansion. While economic growth is not guaranteed with transportation improvements, under the right circumstances economic growth will occur, assuming the existence of the proper economic climate. With less congestion and delays, trade would become more efficient among North American countries. Just-in-time inventories could be more widely used and reliable. The cost of shipping would be reduced and the environmental impact for international trade could be reduced. These planning and infrastructure improvements would be a boost to all three national economies.

To achieve a North American transportation corridor plan several steps must be taken. A continental transportation plan must have the full support of all three federal governments in order to be effective. The federal governments must not only support the idea but be willing to cooperate and fund continental transportation projects. In order to gain support from the federal governments, constituency groups must be formed to promote the concept of a North American transportation plan. Finally, a North American transportation center should be formed to research and educate government officials on the current state and projected state of transportation in North America. The center would also research and recommend specific improvements that would best utilize investment dollars. The center would consist of transportation experts from all three countries and from all three federal governments.

It would be imperative that each country have input and influence over the research and recommendations to ensure that all countries are represented. Such a center would provide valuable research and insight into the transportation needs of North America.

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CHAPTER 1: INTRODUCTION

1.1 BACKGROUND

Trade flows across the three North American countries have increased substantially since the implementation of the North American Trade Agreement (NAFTA). Border crossing issues at the U.S.-Mexican and U.S.-Canadian borders have gained a lot of attention, especially after September 11, 2001. However the international trade corridor concept has not been addressed at the North American level. Some cities are promoting specific projects and building partnerships to attract carriers of goods and promote economic development in the region, but there is no movement toward developing a true North American Transportation Corridor Network.

The objective of the North American Transportation Corridor Network is to identify what is currently being done to improve North American transportation. By discovering what is currently being done by all stakeholders to improve transportation, a holistic perspective can be gained of how the North American transportation system is evolving. The North American Transportation Corridor Network also seeks to identify issues and potential solutions to improve the North American transportation system.

These objectives were achieved via a webinar with transportation experts on July 3, 2007, to discuss the current state of North American transportation corridors and necessary steps to improving transportation in North America. A website has also been established to share the findings and conclusions, as well as many resources related to North American transportation, with any who are interested in North American transportation.

1.2 NORTH AMERICAN TRANSPORTATION CORRIDOR NETWORKS

The North American Transportation Corridor Network can be divided into two separate networks. The first is a transportation infrastructure network that spans across the three North American countries. This network includes highways, railroads, and port of entries which are all part of a large intermodal transportation network. Federal governments, as well as interest groups, have identified specific corridors for funding and planning purposes, however there currently is not a continental-wide plan.

The second is a research network that is a collection and collaboration of organizations, individuals, and research that have the goal of improving transportation in North America.

Numerous research institutes, universities, and journals exist, publishing thousands of papers and articles on transportation. The North American Corridor Network strives to collect papers and research relevant to a North American transportation plan and identify key players.

1.3 ORGANIZATION OF REPORT

The report is broken into four major sections. The first two sections relate to the two North American Transportation Corridor Networks: transportation infrastructure and research networks. The following two sections report the findings from the research and webinar, including final conclusions and next steps.

Chapter 2 examines the transportation infrastructure network to determine the current state of North American transportation and transportation planning. Government infrastructure programs are identified and examined. Railroad companies are individually identified and a composite map of the largest North American railroads is provided. Then the five largest North American ports of entry are identified and described.

Chapter 3 identifies numerous entities involved in North American transportation and relevant research papers and journal articles. Chapter 4 provides a summary of the North American Transportation Corridor Network Webinar, a summary of the presentations, and main points from the open discussion. Chapter 5 discusses the conclusions from the research and the webinar, identifying what is currently being done and the most important steps to improve North American transportation.

CHAPTER 2: TRANSPORTATION INFRASTRUCTURE NETWORK

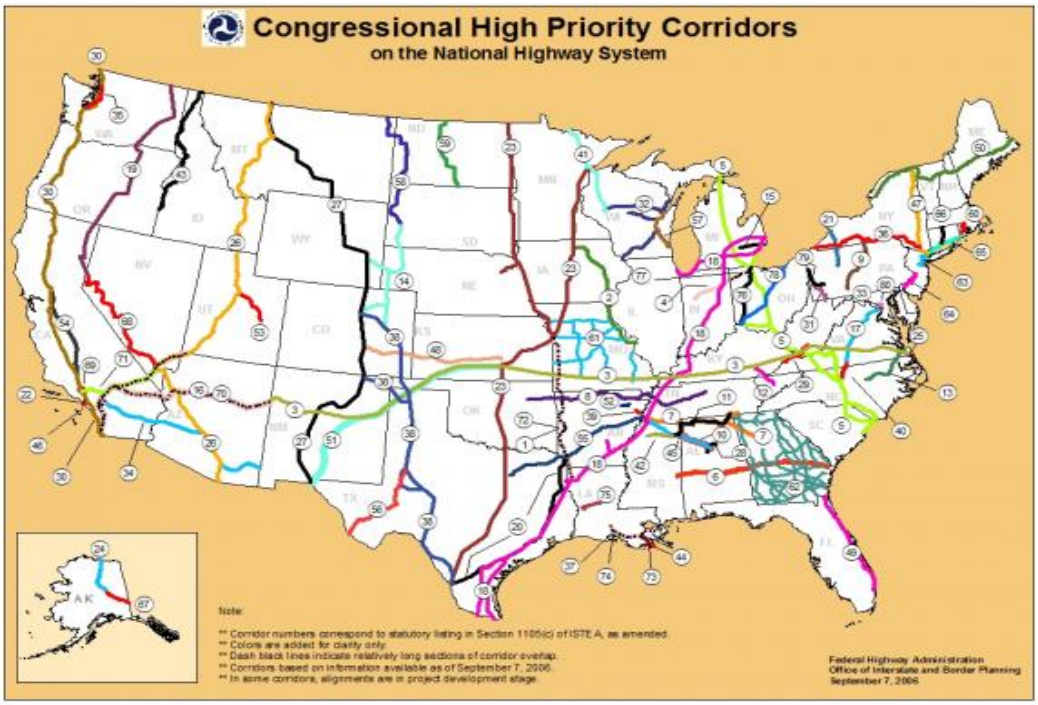
The transportation infrastructure consists of highways, railroads, and ports of entry that connect the three countries.

2.1 HIGHWAYS

Highways are crucial to North American transportation. They account for over 70 percent of the value of U.S. merchandise shipments with Canada and Mexico. The network of highways spans across all three countries and connects major metropolitan areas. Both commercial vehicles and passenger vehicles benefit from international highways.

In the United States the National Highway System (NHS) High Priority Corridors program began with the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). The ISTEA designated 21 corridors, however additional legislation has increased the total to over 80 corridors (see Figure 1). ISTEA authorized funding for fiscal years 1992 through 1997 for some specific high priority corridor segments. ISTEA was followed by TEA-21 which authorized funding for fiscal years 1998 through 2003 then SAFETEA-LU which provides funds for these high priority corridors.

Figure 1. U.S. Congressional High Priority Corridors on the National Highway System



Source: U.S. Department of Transportation, Federal Highway Administration

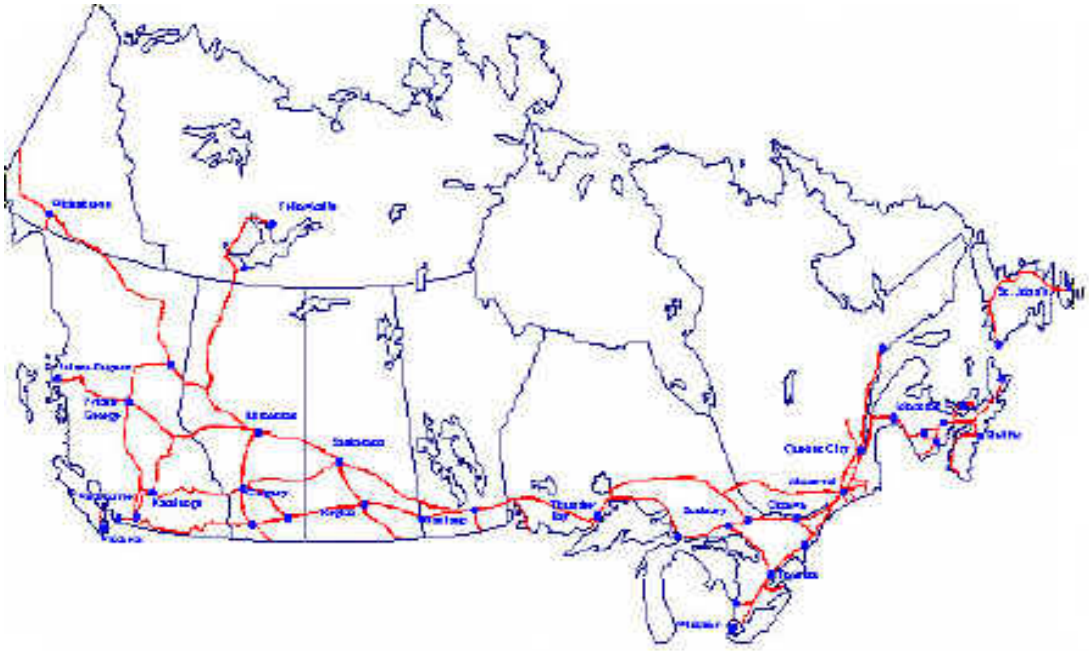
The Mexican national road network comprises more than 200,000 miles (352,000 km) of highway. This total includes the Federal, Regional, and Rural Networks. Fourteen Priority Corridors connect the main industrial areas with ports and border crossings extend for 12,000 miles (19,254 km) and comprise forty percent of the Federal Network (see Figure 2). Thirty percent of the total corridor length is made of toll-roads.

Figure 2. Mexico's Highway Corridors

Source: SCT, Programa Nacional de Infraestructrua

Canada also had a National Highway System (NHS) which was established during a multiyear study that began in 1987 and finalized in 1988. Nearly 25,000 km of highway were identified in the Canadian NHS (Figure 3). However, in late 1994 after long negotiations among various parties, no consensus was reached on how to fund a national highway program. Because of the lack of a consensus it was declared there would be no national highway program.

Figure 3. Canada's National Highway System



Source: Transport Canada

In 2001, the Government of Canada began a five-year program entitled the Strategic Highway Infrastructure Program (SHIP) which focused on projects of a national scope. SHIP focused not only on constructing new highways but also on maximizing existing highways.

Other planning organizations have come together to promote individual corridors. Most of these organizations are more regional in nature and consist of regional and local governments and business partners. Only a few of these organizations are concerned with corridors that actually span across North American into all three countries. See Appendix A: Other North American Corridors for other corridors along with details of each corridor and the supporting organizations.

2.2 RAILROADS

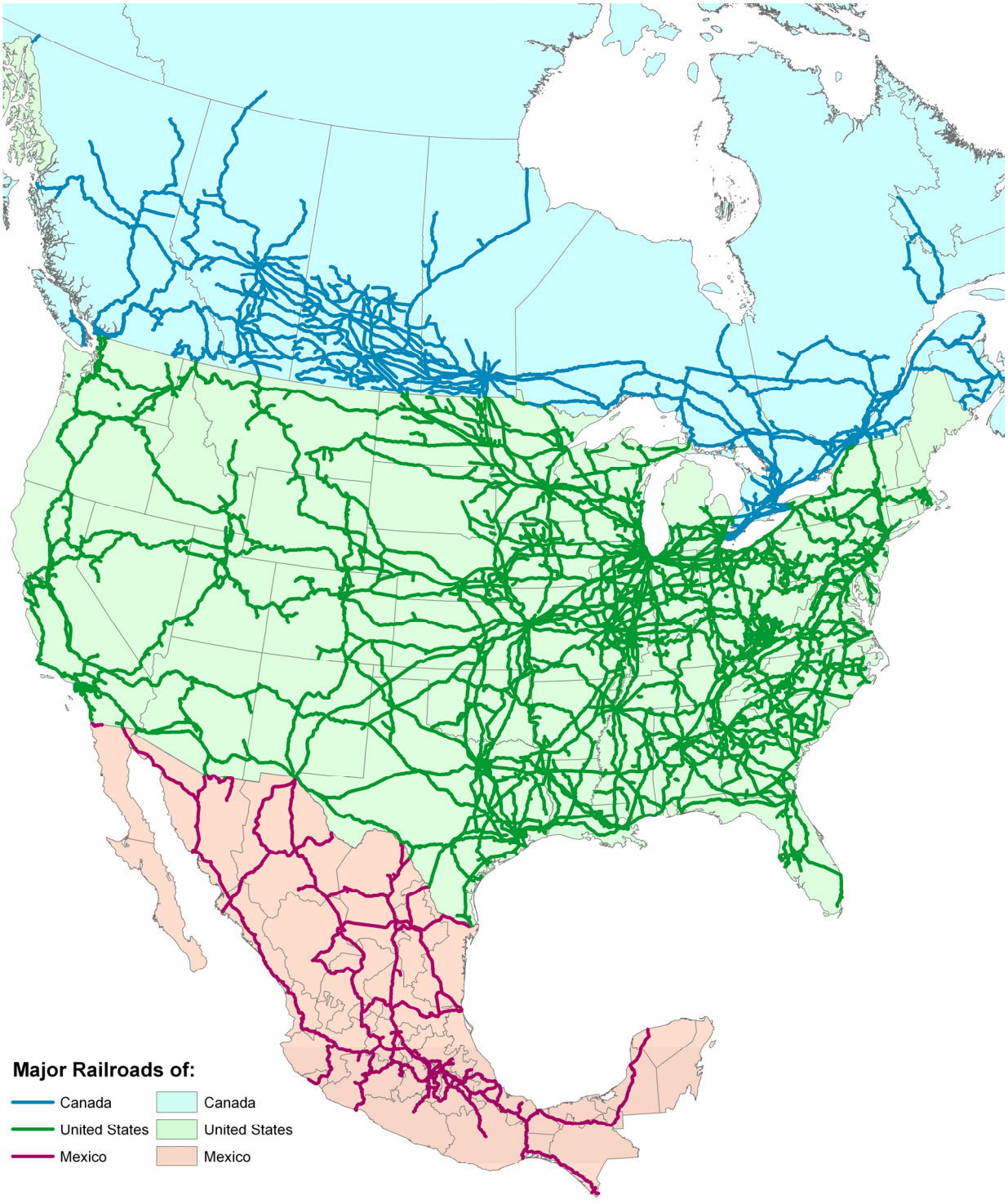
Railroads are vital to North American trade. Railroad is commonly used to ship larger or heavier items long distances. Natural resources, automobiles and automobile parts, metals and minerals, and agricultural products are the most common commodities that utilize railroads in North America. Railroads are also important in intermodal transportation, moving goods both to and from ships and commercial vehicles. There are numerous rail operators in North America

(see Figure 4). Below is a list of railroad organizations that operate in two or more of the North American countries.

- *Amtrak*: Amtrak is a passenger rail service that was created by Congress in 1970. Amtrak provides passenger service throughout the United States including numerous ports of entry on both the northern and southern borders.,More than 24 million passengers used Amtrak's rail service during Amtrak's fiscal year 2006.
- *BNSF Railway Company (BNSF)*: BNSF is a large rail network that covers much of central and western United States and connects to numerous lines in Mexico and Canada. BNSF has 32,000 route-miles and averages 220,000 freight cars on system. BNSF transports are large amount of coal and agricultural products. The rail network also utilizes intermodal transportation.
- *CN*: CN is the only railroad which crosses North America east-west and north-south. Thus it links the Atlantic ports to the Pacific and Gulf ports and all three North American countries. In the United States and Canada, CN has approximately 20,264 route-miles. CN transports primarily petroleum and chemicals, grain and fertilizers, coal, metals and minerals, forest products, intermodal and automotive.
- *Canadian Pacific (CPR)*: Canadian Pacific has rail lines in Canada and in the Northeast and Midwest regions of the United States. CPR contains 14,000 route-miles. The railway ships numerous commodities such as grain, coal, lumber, cars, agricultural equipment, home electronics, food and furniture.
- *CSX*: CSX covers most of the United States east of the Mississippi River. It provides connections to Canada and numerous Atlantic and Gulf Coast seaports. The CSX system has 21,000 route-miles of track in 23 states and the Canadian provinces of Ontario and Quebec. The company operates almost exclusively on a privately-owned rail infrastructure that is maintained by CSXT.
- *Ferrocarril Mexicano (Ferromex)*: Ferromex is the largest railroad in Mexico. It operates more than 5,000 miles of track covering 70 percent of the Mexican territory. It connects with two major US railroads at five border crossings. It operates in six major Mexican ports including Port of Manzanillo which has the highest container traffic in Mexico.

- *Genesee & Wyoming Inc. (GWI)*: GWI is a short line and regional freight railroad operator. While GWI does not connect all three North American countries, it operates in each country and connects urban areas and ports. GWI operates more than 6,800 miles of owned and leased track.
- *Kansas City Southern de Mexico, S.A. de C.V. (KCSM)*: KCSM operates 2,645 miles of track in northeastern and central Mexico and the Lazaro Cardenas and Tampico ports.
- *Kansas City Southern Railway Company (KCSR)*: KCSR operates 3,226 miles of track in the central and south central U.S.
- *Norfolk Southern Railway Company*: Norfolk Southern operates over 21,000 route-miles in 22 eastern states. The rail lines extend into to Ontario, Canada.
- *Texas Mexican Railway Company (Tex Mex)*: Tex Mex is now wholly owned by KCS and operates over 557 route-miles connecting KCSR and KCSM.
- *Union Pacific (UP)*: The Union Pacific Railroad is the largest railroad in North America and covers two-thirds of the United States. UP is the only railroad to serve all six major gateways to Mexico and also interchanges traffic with the Canadian rail systems. UP has 32,400 route-miles.

Figure 4. North American Railroads



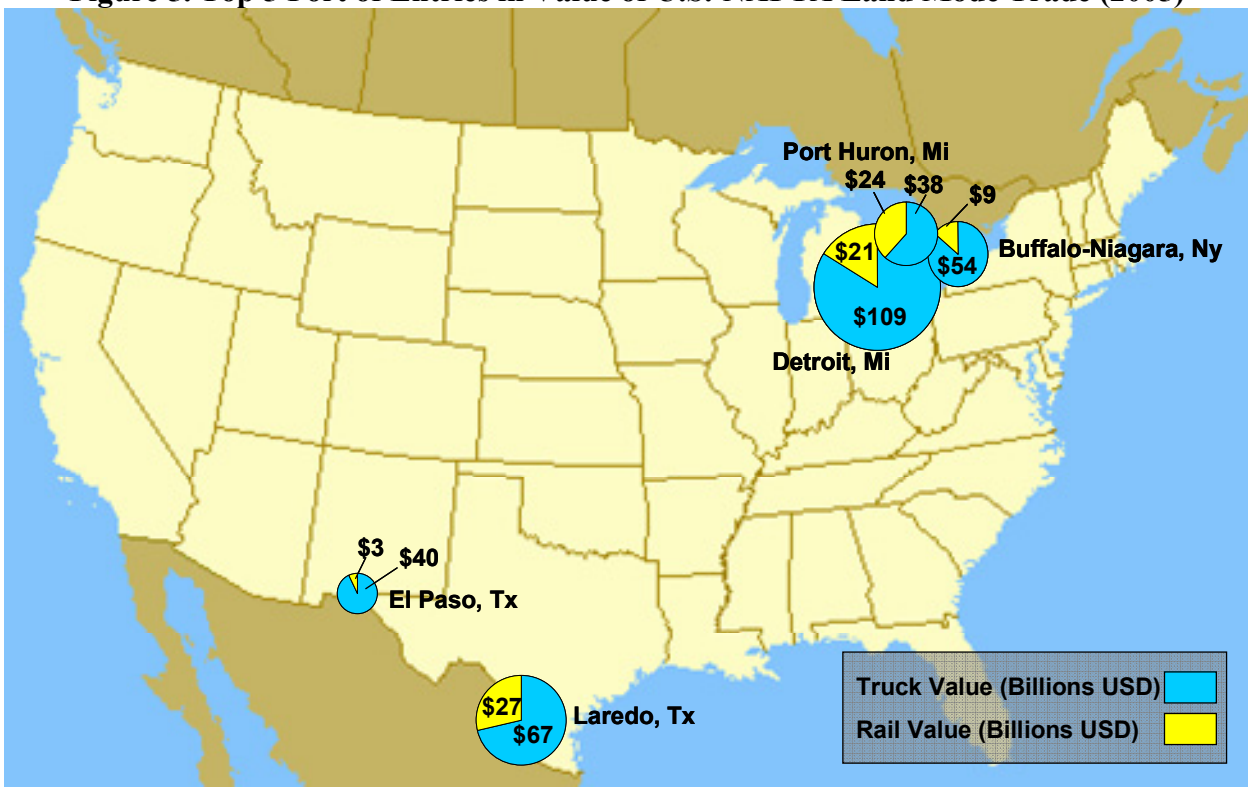
Source: Texas Transportation Institute

2.3 PORTS OF ENTRY

Ports of entry are the gateways into and out of countries that facilitate international trade. The majority of land ports of entry have both highway and rail crossings. It is also at the ports of entry where numerous inspections of the cargo, vehicles, and operators are executed. The five largest land ports of entry, in value of trade, in North America are listed below (2005). Figure 5 shows the five largest ports of entry in North America proportionally in terms of NAFTA land mode trade.

- *Port of Detroit, MI*: Detroit has the largest value of imports and exports of any land port in North America. Detroit was also the leading truck gateway in terms of value. Trade is nearly equal in terms of value of shipments going into the United States and into Canada. The two crossings in Detroit are the Windsor Tunnel and the Ambassador Bridge.
- *Port of Laredo, TX*: Laredo is the largest land port between the United States and Mexico. More trade travels into the United States through Laredo than into Mexico. The two main bridges in Laredo are the World Trade Bridge and the Columbia Bridge.
- *Port of Buffalo-Niagara, NY*: The Buffalo-Niagara Falls port of entry is a large gateway for trade between the United States and Canada. The two major crossings are the Peace Bridge and the Lewiston/Queenston Bridge.
- *Port Huron, MI*: Port Huron is a large port between the United States and Canada. More than the other major land ports in North America, Port Huron's trade is evenly distributed between truck, rail, and pipeline. Port Huron is the leading gateway for rail in terms of value. The main crossing at Port Huron is the Blue Water Bridge.
- *Port of El Paso, TX*: El Paso is located on the U.S.-Mexico border. The majority of goods transported through El Paso travel by truck. The two bridges in El Paso are the Bridge of the Americas and the Zaragoza Bridge.

Figure 5. Top 5 Port of Entries in Value of U.S.-NAFTA Land Mode Trade (2005)



Source: Texas Transportation Institute with information from the The Bureau of Transportation Statistics (BTS)

CHAPTER 3: RESEARCH NETWORK

In addition to the transportation infrastructure network, there is a network of research and organizations promoting transportation in North America. These entities have been broken down into several groups:

- Governmental Agencies
- Private/Commercial Organizations
- Papers/Research
- Conferences

3.1 GOVERNMENTAL AGENCIES

Numerous governmental agencies in each country oversee international trade. The agencies have varying degrees of interest in security, safety, and taxation.

- *Bureau of Transportation Statistics*: created to administer data collection, analysis, and reporting and to ensure the most cost-effective use of transportation-monitoring resources in the U.S.
- *Canada Border Services Agency*: ensures the security and prosperity of Canada by managing the access of people and goods to and from Canada.
- *Federal Highway Administration*: part of the U.S. Department of Transportation which promotes national mobility, national highway programs, and innovations for a better future.
- *Secretaria de Comunicaciones y Transportes (SCT)*: the Mexican federal transportation agency. Its mission is to provide Mexico with an infrastructure and communication network that allows the union of all Mexicans and connection with the rest of the world.
- *Transport Canada*: the federal transportation agency in Canada. Its mission is to develop and administer policies, regulations, and services for the best transportation system for Canada and Canadians – one that is safe and secure, efficient, affordable, integrated, and environmentally friendly.
- *Transportation Border Working Group (TBWG)*: a Canadian-U.S. group that consists of federal, state, and provincial departments of transportation from both

sides of the border, U.S. Customs and Border Protection, and the Canada Border Services Agency. Transport Canada and the U.S. Federal Highway Administration co-chair the TBWG.

- *U.S. Customs and Border Protection (CBP)*: the U.S. federal agency that has the main responsibility to secure America's borders. The primary objectives of the CBP are to guard the nation's borders, safeguard the American homeland, protect the public from terrorist and the instruments of terror, enforce the laws of the United States while fostering economic security through lawful international trade and travel, and serve the American People.
- *U.S. Department of Transportation*: the federal transportation agency in the United States. Its mission is to serve the United States by ensuring a fast, safe, efficient, accessible and convenient transportation system that meets our vital national interests and enhances the quality of life of the American people today and into the future.
- *U.S.-Mexico Joint Working Committee (JWC)*: a bi-national group that seeks to cooperate on land transportation planning and the facilitation of efficient, safe, and economical cross-border transportation movements. Both FHWA and SCT participate in the JWC along with other federal and state agencies.

3.2 PRIVATE/COMMERCIAL ORGANIZATIONS

Private and commercial organizations play a vital role in coordinating international transportation interests as well as collecting resources to lobby for additional transportation funding.

- *American Road & Transportation Builders Association*: the U.S. transportation construction industry's representative in Washington, D.C. Its mission is to advocating strong federal investment in the nation's transportation infrastructure to meet public demand for a safe and efficient business transportation network.
- *Border Trade Alliance*: a non-profit organization that serves as a forum for participants to address key issues affecting trade and economic development in North America.

- *CANAMEX Corridor Coalition*: promotes the CANAMEX corridor. The Coalition's Website (**http://www.canamex.org/**) includes informational maps and tables and a few statistics.
- *Central North American Trade Corridor Association*: a non-profit organization made up of communities, tribes, business and industry, universities, and non-government officials who are joining forces to leverage corridor resources, reverse out-migration, increase trade, enhance infrastructure, attract visitors and industry, and revitalize the economy.
- *Chartered Institute of Logistics and Transport in North America (CILTNA)*: an institute whose goal is "to promote, encourage and co-ordinate the study and advancement of the science and art of transportation in all its branches." The Chartered Institute of Logistics and Transport has over 30,000 members worldwide in 28 countries.
- ***I-95** Coalition Connection*: the official website of the I-95 Corridor Coalition (http://www.i95coalition.org/), which is an alliance of transportation agencies, toll authorities, and related organizations, including law enforcement, from the State of Maine to the State of Florida, with affiliate members in Canada.
- *Kansas City SmartPort: America's Inland Port Solution*: a non-profit economic development organization formed to promote and enhance the Kansas City metro area's status as America's Inland Port Solution.
- *Northwest Corridor Development Corporation*: sustains, enhances, and helps market the globally competitive infrastructure of Canada's Northwest Corridor, to increase the trade and economic potential of the region.
- *Ports-To-Plains Trade Corridor*: promotes the Ports-to-Plains Corridor to enhance international trade in North America by developing less congested ports of entry along the Texas/Mexico border and providing alternatives to other congested corridors that run through major metropolitan areas.
- *Trans-Texas Corridor*: a proposed multi-use, statewide network of transportation routes in Texas that will incorporate existing and new highways, railways and utility right-of-ways.

- *North American Transportation Competitiveness Research Council*: a group of research specialists in transportation, logistics and supply chain management from universities, think-tanks and companies in Canada, Mexico and the United States.

3.3 RESEARCH

North American international trade has been researched from many different perspectives. Research topics include border wait times, border efficiencies, benefits of international trade, trade growth, and many other topics. Below is a collection of research papers and articles relating to North American transportation as well as a few transportation research organizations.

- *Economic Impacts of Wait Times at the San Diego-Baja California Border*: San Diego Association of Governments California Department of Transportation, District 11; takes an in-depth binational macroeconomic look at the total economic impact of wait times at the San Diego-Baja California Border.
- *Evaluation of Travel Time Methods to Support Mobility Performance Monitoring: FY 2001 Synthesis Report*: TTI and Battelle Memorial Institute; the purpose of this study was to determine a benchmark border crossing delay measure for commercial vehicles. Seven ports of entry (POE) were surveyed – four on the U.S./Canada border and three on the U.S./Mexico border.
- *Improving U.S.-Mexican Competitiveness*, *Latin Business Chronicle*, written by Franklin L. Lavin: is a brief article on improving U.S.-Mexican Competitiveness discussing both the U.S. and Mexican challenges.
- *Increased Trade Spurs Growth in North American Freight Transportation*: BTS Special Report, a brief report of North American transportation and trade statistics for 2006.
- *Increasing the Capacity of Freight Transportation, RAND Corporation*: a summary of a workshop that was held on February 16, 2006, in Santa Monica, California, to identify examples of current and expected economic effects of capacity constraints on the freight transport system. It also highlighted specific physical, contractual, and regulatory constraints to the free movement of freight and charted a path toward

addressing the most pressing issues through public-sector, private-sector, and joint action.

- *Library, Canada-U.S. Transportation Border Working Group*: a collection of transportation and trade-related research papers.
- *North American Freight Transportation: U.S. Trade with Canada and Mexico*, *BTS*: a statistical summary of trade between the U.S. and Canada and Mexico.
- *North American Transportation Statistics*: provides a central web-based source for North American transportation statistics for all three countries on common subjects. The statistics are calculated so they are comparable across modes and countries.
- *Shipping Exec: Transport Congestion Peril to Global Economy*, *The Manufacturer.com*: an article discussing the need for more infrastructure throughout the world because of increased trade.
- *Unfinished Business: A NAFTA Status Report*, by AIMS Market Studies: a paper discussing barriers of trade that still exist in North America. The paper shows that regional standards act as trade barriers and work needs to be done to further improve trade in North America.
- *U.S.-North American Trade & Freight Transportation Highlights*, *BTS*: a short paper highlighting trans-border freight data from the United States.
- *Working Papers on Freight Themes*, *FHWA*: a collection of working papers prepared to provide initial analysis and discussion of the trends and issues affecting freight transportation productivity in the United States and North America.

3.4 CONFERENCES

There are numerous conferences and events held year round to discuss the planning and development of North American transportation corridors. The length and agendas for each of these conferences varies depending on each organization's goals and resources. Below are some of the larger conferences held each year.

Border Trade Alliance (BTA)

The BTA's annual International Conference is scheduled to take place September 24 and 25, 2007 in Austin, TX. This year's discussions will focus on three topics concerning the U.S.'

borders: “secure travel, secure freight, and secure borders.” Additional information on this conference can be found at:
http://thebta.org/content/events/featured-event-presentations/

North America’s SuperCorridor Coallition (NASCO)

NASCO’s Moving America Forward Conference took place May 30th through June 1st, 2007 in Fort Worth, TX**.** The conference focused on critical issues related to logistics and supply chain management, transportation security and efficiency, technology innovations, the environment, inland ports, sustainable corridors, global economic trends, and many other issues – all of which will greatly enhance the trade competitiveness and quality of life in the three North American nations. A full report of the Conference can be found at:
http://www.nascocorridor.com/pages/news/conf_07_notes.html

NASCO’s 2008 conference is scheduled to take place in Guanajuato, Mexico, June 4 through June 6, 2008.

NASCO’s North America Works II conference took place from November 30 through December 2, 2006 in Kansas City, MO. Discussions at this conference focused on new development strategies being used to improve transportation on the mid-continental trade corridor to help North America face increased competition from Europe, China, and India. A summary of this conference can be found at:
http://www.kcmo.org/manager/international/report-web.pdf

The 2007 conference, America Works III, is scheduled to take place from October 18 through October 20, 2008, in Kansas City, MO. This year, discussions will underline the critical role that entrepreneurs and leadership play in North American competitiveness and transportation strategies as well as the importance of trilateral trade to the North American economy. Additional information on North America Works III can be found at:
http://www.kcmo.org/International.nsf/web/naw

NASCO's Inland Ports Across North America Conference (IANPA) is scheduled to take place September 6 and 7, 2007, in San Antonio, TX. The 2006 conference focused on different components of the rail industry. This year's conference will concentrate on the air cargo industry. The program will be geared towards shippers, freight forwarders, port authorities, developers, customs brokers, foreign trade zones, Third Partly Logistics Providers or 3PLs, equipment suppliers and others players in the supply chain. Additional information on the 2007 conference can be found at:
http://www.freetradealliance.org/articlesdetail.asp?id=3165&pageno

Chartered Institute of Logistics and Transport in North America (CILTNA)

CILTNA's annual Transportation Situation and Outlook Conference took place on June 11, 2007. At the conference, CILTNA presented its findings of a study it preformed in the field of transportation and forecasting. The report provides strategic information and covers the future of marine, rail, and trucking freight traffic flows and their impact on the various components of the transportation system. Additional information on this conference can be found at:
http://www.ciltna.com/

The Northwest Corridor Development Corporation (NCDC)

NCDC's 2007 Asia Pacific Shipping Forum is scheduled to take place November 13 through November 15, 2007, in Edmonton, AB. Discussions this year will focus on container trade, and how it relates to western Canada. More information on this conference can be found at: http://www.nwcorridor.com/Conference%20Information.php

Ports to Plains Trade Corridor Coalition

Ports to Plains holds an annual conference in order to promote the importance of the Great Plains Corridor and the increasing amount of north to south trade. Information on the 2006 conference, "Taking Care of Business," can be found at:
http://www.portstoplains.com/events_2006.html

The 2007 conference is scheduled to take place from September 19 through September 21, 2007, in Denver, CO. Additional information on this conference can be found at:

http://www.portstoplains.com/GPIC%20STD%20APR%2030%20FINAL%20PDF.pdf

American Road and Transportation Builders Association (ARTBA)

The 2007 ARTBA National Convention is scheduled to take place from October 9 through October 12, 2007, in Fort Lauderdale, FL. This year's convention will focus on ARTBA's Critical Commerce Corridors (3C) proposal and the future of the U.S.'s highway programs. Additional information on this conference can be found at: http://www.artba.org/meetings_events/2007/National/index.htm

Asia-Pacific Gateway and Corridor Initiative

The 2007 Asia-Pacific Gateway and Corridor International Conference took place from May 2 to May 4, 2007, in Vancouver, BC. The objective of this year's conference was to bring national and international experience together to discuss the Asia-Pacific Gateway and Corridor concept and to review the implications for transportation and infrastructure policies in order to realize development opportunities. Information on this conference can be found at: http://www.gateway-corridor.com/vancouverconference/

North American Transportation Corridor Network (NATCN)

This year, the NATCN hosted a webinar on July 3, 2007, at 12:00 PM (CST). Participants in the webinar discussed what is currently being done to improve transportation infrastructure in North America and identified the key issues regarding expanding and improving the network. The webinar in its entirety will be posted on the NATCN website soon.

CHAPTER 4: NORTH AMERICAN TRANSPORTATION CORRIDOR NETWORK WEBINAR

4.1 WEBINAR SUMMARY

The North American Trade Corridor Network Webinar was held on July 3, 2007, at 12:00 PM (CST). The webinar was hosted by TTI in conjunction with the Southwest Region University Transportation Center. Juan Villa, from TTI, hosted and moderated the webinar.

The two main objectives of the webinar were to:

- identify the current efforts being made to improve transportation in North America, and
- identify issues and potential solutions to improve the North American transportation system.

The webinar consisted of approximately 15 participants, four of whom gave short presentations on the current state of North American transportation. All of the participants were transportation experts from North America. The presentations and the participants represented all three countries.

The participants included:

- Eduardo Aspero, Pacer Stacktrain Mexico (Presenter)
- Barry Prentice, University of Manitoba (Presenter)
- Rosalind Wilson, Canadian Pacific Railway (Presenter)
- Stephen Blank, Pace University (Presenter)
- Bill Stockton, Texas A&M University and TTI
- Chris Rothe, TTI
- Crystal Jones, US DOT
- Curtis Morgan, TTI
- Felix Meunier, Transport Canada
- Francisco Conde, NASCO Corridor
- Jeff Warner, TTI

- Jim Kruse, TTI
- Juan Villa, TTI
- Kirk Fauver, FHWA
- Musharraf Zaman, University of Oklahoma and Oklahoma Transportation Center
- Rachel Connell, NASCO Corridor

4.2 PRESENTATIONS

During the webinar Eduardo Aspero, Barry E. Prentice, Rosalind Wilson, and Stephen Blank shared short presentations from their areas of transportation expertise. An open discussion proceeded after the presentations. A summary of each presentation and the ensuing discussion follows. For the complete the presentations, see the Appendix B: North American Transportation Corridor Network Webinar Presentations.

Eduardo Aspero from the Mexican Association of Intermodal Transport presented "Intermodal Transport between Mexico and North America Advances, Obstacles and Perspectives." The intermodal advances included new intermodal railroad services, new procedures of intermodal advances, new intermodal terminals in Mexico routes, new intermodal routes, and investments in infrastructure and railroads. Mr. Aspero also identified five obstacles: the truck drayage system, congestion at crossing bridges, difficulty extending container interchanges by railroad, limited infrastructure, and lack of harmonization of customs procedures. Opportunities to improve international transportation between Mexico and North America included simplifying measures and procedures, promoting schemes of certified service that will permit an agile transit of merchandise in all three countries, coordinating railroads operative policies, extending the infrastructure or railroad interchange at borders, increasing customs coordination among NAFTA countries, improving integration of intermodal transport, and establishing business development groups.

Barry E. Prentice, Ph.D., presented "Toward One North American Transportation Market: The Open Prairies Proposal". The presentation examined the inability to utilize cabotage in North America. Dr. Prentice proposes a North American experiment to allow a test of cabotage in North Central United States and South Central Canada, or the Open Prairies. The

experiment would be reversible with a sunset provision and would last between five and 10 years. The study area would be large enough to demonstrate the effects of cabotage. Evidence in the European Union suggests that there is no trade distortion or bias among countries that allow cabotage. The use of cabotage would also reduce the number of empty trucks and therefore traffic congestion. The main identified potential problem was taxes, but that should be solvable.

Rosalind Wilson presented North American Transportation from the Canadian Perspective. During the presentation Ms. Wilson explained that railroads are underused, especially by Mexico. Several possible explanations are:

- that the benefits are not understood,
- railroads' poor reputation,
- the use of brokers who understand trucks and sometimes own trucks,
- the lack of logistics companies that focus on rail,
- the requirement of smaller shippers to have cargo consolidation services which are not offered by rail,
- Canadian exports prefer to ship to the United States and then Asia
- rail challenges include the trade imbalance amongst countries, and
- infrastructure, and a lack of communication and coordination among railroad companies.

The final speaker, Stephen Blank, Ph.D., presented A North American Transportation Infrastructure Strategy. The presentation began with a brief historical description of how transportation challenges have been met. Traditionally, infrastructure has always been more of a local-state problem rather than a national issue. As a result, the efforts have been broken and divided. In the 1990s the United States started the national highway system. However, the number of corridors increased until there were too many corridors and the sense of a national system was lost. With the changing environment of NAFTA trade in the early 2000s, a "perfect storm" began to develop. The contributors to the building of the perfect storm include an over-reliance on aging infrastructure and transportation systems, the weakness in NAFTA for investing in transportation system upgrades, public policy and regulatory barriers, and a lack of

effectiveness of SPP and NACC to improve transportation. Dr. Blank concludes that no one is thinking of transportation in North American terms.

4.3 OPEN FORUM

During the open discussion, the participants discussed the following topics:

- The most important step is to support the idea of a regional strategy to the governments. With a regional strategy, common among the three countries, there would be more efficient to exploit.
- Constituencies of groups who think in continental terms must be built. A report won't change anything; it will likely sit on a desk somewhere.
- There is a strong need for a NAFTA-supported North American transportation center.
- There is a need to use more rail as trucks likely will not be able to continue to shoulder the additional growth in trade.
- Canada is not too interested in trading with Mexico due to the complexity of two international crossings.

CHAPTER 5: CONCLUSIONS

5.1 WHAT IS BEING DONE?

No existing organization focuses on analyzing the concept of a North American transportation corridor plan. Federal governments do not appear to be collectively working towards a continental plan. The United States has the National Highway System, but that does not extend beyond its borders. In addition, the NHS has added so many corridors that the plan has lost its identity as a national highway system. Mexico has a national highway system, but planning also stops at the U.S.-Mexico border. Canada, on the other hand, has scrapped the idea of a national highway system and currently has no national highway system or North American plan.

NAFTA, too, has failed to create a North American transportation corridor plan. While addressing many issues with North American trade, transportation has largely been ignored. There is no funding for NAFTA transportation or planning, and there is not a NAFTA transportation research institute or committee.

Unlike the federal governments and NAFTA, several private organizations have begun to support North American corridors. These groups include NASCO, Central North American Trade Corridor Association (CNATCA), Ports to Plains, Canamex Corridor Coalition, and others. However, each of these organizations is mainly focused on one or two converging corridors. In addition, these organizations are mostly working independently, thus providing at most a fragmented and uncoordinated plan.

5.2 A NORTH AMERICAN TRANSPORTATION CORRIDOR PLAN IS NEEDED

A North American Transportation Corridor Plan could help alleviate some of the problems in North American transportation as well as coordinate efforts. By having a coordinated plan for all three NAFTA countries, valuable resources could be properly allocated to improve international transportation. Coordinated efforts will utilize the strengths and current

projects of each country to reduce inefficiencies. In addition, North American transportation corridors will alleviate some congestion that is plaguing North American trade. However, if the corridors are not seamlessly coordinated between the three countries then they will have little effect on international transportation and trade.

Transportation improvements can foster economic expansion. While economic growth is not guaranteed with transportation improvements, under the right circumstances economic growth will occur, assuming the existence of the proper economic climate. With less congestion and delays, trade would become more efficient among North American countries. Just-in-time inventories could be more widely used and reliable. The cost of shipping would be reduced and the environmental impact for international trade could be reduced. These planning and infrastructure improvements would be a boost to all three national economies. As trade improves in North America, North American countries could remain competitive in the global market. With increased trade coming from Asia, North America could become less competitive if improvements to international corridors are not made.

Stephen Blank alluded to the development of a perfect storm. In other words, the reliance today on aging and insufficient infrastructure and transportation systems could lead to serious economic consequences for North American countries. As congestion mounts, delays increase, and trade becomes more unreliable, North America could face a transportation crisis that could cripple the economies. If transportation becomes such a hindrance to trade that international trade declines or levels off among North American countries, then North American countries will not be able to compete internationally. Economies would suffer from the reduced trade and inability to export goods. By having a coordinated transportation plan, this impending perfect storm could be avoided.

5.3 NEXT STEPS

To achieve a North American transportation corridor plan several steps must be taken. These steps include:

- Support the idea of a continental plan to the federal governments.
- Form constituencies who support a North American approach to transportation planning.
- Form a North American transportation center to cooperatively research and support a true North American transportation plan.

A continental transportation plan must have the full support of all three federal governments in order to be effective. The federal governments must not only support the idea but be willing to cooperate and fund continental transportation projects.

In order to gain support from the federal governments, constituency groups must be formed to promote the concept of a North American transportation plan. These groups will be responsible for educating governments and organizations on the benefits of a coordinated approach to international transportation planning.

Finally, a North American transportation center should be formed to perform research and educate government officials on the current state and projected state of transportation in North America. The center would also research and recommend specific improvements that would best utilize investment dollars. The center would consist of transportation experts from all three countries and from all three federal governments. It would be imperative that each country have input and influence over the research and recommendations to ensure that all countries are represented. Such a center would provide valuable research and insight into the transportation needs of North America.

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APPENDIX A: OTHER NORTH AMERICAN CORRIDORS

Corridor	Origin	Destination	Border Crossings	States	US Highway Miles	Rail Lines	NHS	Coalitions/Consortiums
I-35	Lazaro Cardenas, Mexico	Duluth, MN*	Laredo, TX Duluth, MN	Texas Oklahoma Kansas Missouri Iowa Minnesota	1,568	UP BNSF Ferromex	23	NASCO Keeptexasmoving Kansas City Smartport, Inc.
Great Plains International Trade Corridor or Central North American Trade Corridor and the La Entrada al Pacifico	Mexico City, Mexico	Port of Churchill, Canada	Laredo, TX Port of Raymond, MT	Texas Oklahoma North Dakota South Dakota Nebraska Montana Colorado/Kansas	NA	BNSF Ferromex	38 14 58 56	CNATCA Ports to Plains Corridor
CANAMEX	Mexico City, Mexico	Edmonton, Alberta, Canada Anchorage, AK	Nogales, AZ Sweet Grass, MT	Arizona Nevada Utah Idaho Montana	1,504	UP Ferromex	26	Canamex Corridor Coalition
I-69	Laredo, TX McAllen, TX Brownsville, TX	Quebec, Quebec, Canada	Laredo, TX McAllen, TX Brownsville, TX Port Huron, MI Sault Ste. Marie, MI	Michigan Illinois Indiana Kentucky Tennessee Mississippi Arkansas Louisiana Texas	1,606**	KCS BNSF UP	18 20	Keeptexasmoving
I-95	Miami, FL	Houlton, ME***	Houlton, ME	Florida Georgia South Carolina North Carolina Virginia District of Columbia Maryland Delaware Pennsylvania New Jersey New York Connecticut Rhode Island Massachusetts New Hampshire Maine	1,920		49 63 65 50	I-95 Corridor Coalition
I-5	Tijuana, Mexico Baja California, Mexico	Vancouver, British Columbia, Canada****	San Diego, CA Blaine, WA	California Oregon	1,381	BNSF UP	30 35	The Portland/Vancouver I-5 Transportation and Trade Partnership
Camino Real	Chihuahua, Mexico	Edmonton, Alberta, Canada Anchorage, AK	El Paso, TX Sweetgrass, MT	Texas Colorado New Mexico Wyoming Montana	NA	BNSF UP Ferromex	27	

*At Duluth, the freeway ends, and traffic is required to take two-lane Minnesota 61 along the shores of Lake Superior toward Thunder Bay, Ontario.
**Currently there are 355.81 miles with plans for an additional 1250 miles from Laredo to Indianapolis.
***From the Canadian border New Brunswick 95 can be taken to the Trans Canada 2
****Highway ends in Blaine Washington, but connects to Highway 95 in Canada which leades directly to Vancouver.
Source for US Highway Miles: Interstate-Guide.com, www.interstate-guide.com

APPENDIX B: NATCN WEBINAR PRESENTATIONS

AB.1 FULL PRESENTATION: INTRODUCTION

North American Transportation Corridor Network

Texas Transportation Institute
& Southwest Region University Transportation Center

July 3, 2007
12:00 PM CST

Texas Transportation Institute

Objectives

- Identify the current efforts being made to improve transportation in North America
- Identify issues and potential solutions to improve the North American transportation system

Texas Transportation Institute

Agenda

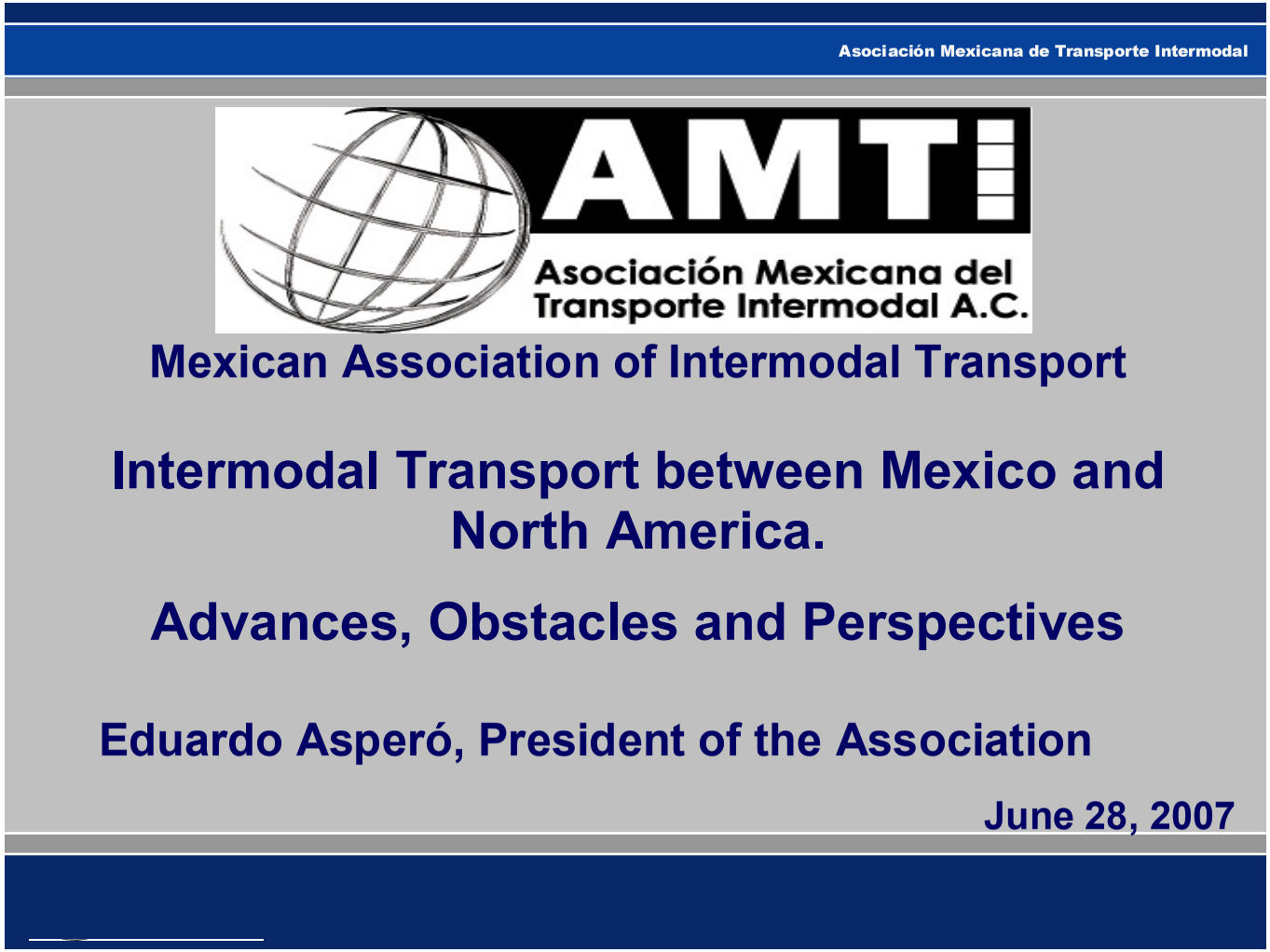
- Introduction
- Eduardo Aspero
- Barry E. Prentice Ph.D.
- Rosalind Wilson
- Stephen Blank
- Open forum
- Closing remarks

Texas Transportation Institute

Speakers

- ***Eduardo Aspero***, CEO of Pacer Stacktrain de Mexico since 2000. Has 27 years of experience in activities related with Maritime Transportation, Port Administration, Railroads and Intermodal activities in Mexico. He acted as Commercial Director of Ferrosur and National Coordinator of the Mexican Port Authorities. Currently is the President of the Mexican Association of Intermodal Transportation, which integrates 34 members including 4 Mexican, 3 North American and 1 Canadian railroads.
- ***Barry E. Prentice Ph.D., MCIT*** is a Professor of Supply Chain Management, at the I.H. Asper School of Business, University of Manitoba and the former Director (1996-2005) of the Transport Institute. His major research and teaching interests include logistics, transportation economics, urban transport and trade policy.
- ***Rosalind Wilson***, Director of Business Development Mexico, opened the Mexico office for Canadian Pacific in 2000 and played a key role in development of CPR's services to Mexico.
- ***Stephen Blank*** is Senior Research Fellow, North American Center for Transborder Studies at Arizona State University and Adjunct Research Scholar, Center for Energy, Marine Transport and Public Policy at Columbia University. He is Co-Chair, North American Transportation Competitiveness Research Council.

AB.2 FULL PRESENTATION: EDUARDO ASPERO



I. Intermodal Advances

After the railroad privatization in Mexico in 1997, the intermodal transportation has advanced, creating better conditions for transportation in North America. This demonstrates through the following:

1. New intermodal railroad services
2. New procedures of intermodal advances
3. New intermodal terminals in Mexico routes
4. New intermodal routes
5. Investments in infrastructure and railroads

1. New Intermodal Railroad Services

Border crossing in:

Laredo, Tx	Nuevo Laredo, Tamps
Eagle Pass, Tx	Piedras Negras, Coah
El Paso, Tx	Cd. Juárez, Coah
Nogales, Arizona	Nogales, Son

Participation of Mexican and US railroads establishing equipment interchanges and providing unitary services:

UP, BNSF, CSX, NFS, KCSX with Mexican railroads, FXE, KCSM

1. New Intermodal Railroad Services

2. New Procedures of intermodal advances

Customs in US: AMS, Automated Manifest System

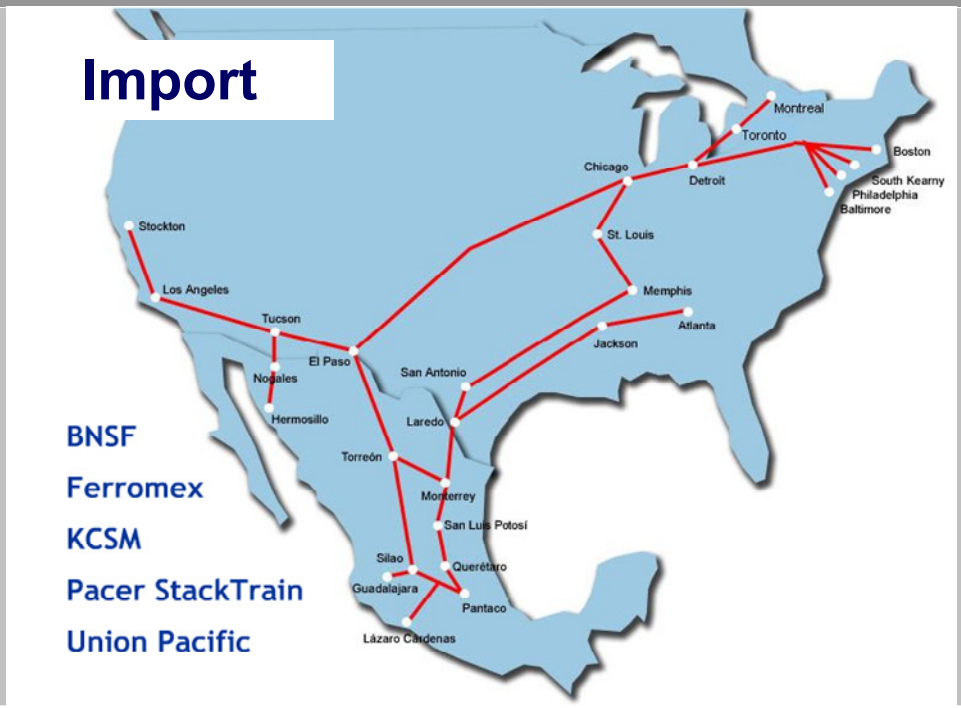
Customs in Mexico: Customs Operation Manual

EDI between UP and FXE and KCSM

3. New Intermodal Terminals in Mexico Routes

- Nuevo Laredo
- Monterrey
- San Luis Potosi
- Queretaro
- Cuautitlan
- Toluca
- Mexicali
- Torreon
- Silao
- Guadalajara
- Puebla

4. New Intermodal Routes



4. New Intermodal Routes

5. Investments in Infrastructure and Railroads

- Participation in the Mexican market of bimodal companies, like Schneider, HUB and Swift, moving loads between US and Mexico.
- Creation of regular net services, with itineraries and established rates that has given the basis for the FAK load growth and not only automotive from and to Mexico.

5. Investments in Infrastructure and Railroads

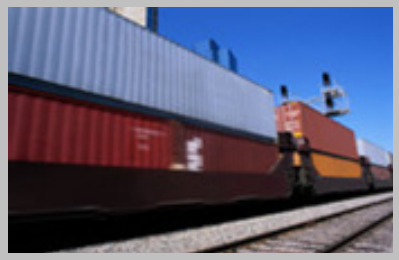
- Railroad infrastructure. Lengths of rail siding. Locomotives and communication equipment Systems
- Railroad equipment

Other actors investing in:

- Terminal equipment for container operations.
- Chassis porta - containers
- Computer and communication systems

5. Investments in Infrastructure and Railroads

The effect of these conditions, has been an important increase of the operated volume of containers by railroad between Mexico and North America, major traffic movement for the Automotive Industry and major movement of automobiles and containerized by railroad.



II. Obstacles

1. The means of transport in Mexico has been conformed by truck transportation, which reduces the possibility of massive interchange with the transportation system of North America.

2. Frequent congesting at crossing bridges for an agile interchange of loadings transported by railroad.

II. Obstacles

3. The possibility to extend container interchanges by railroad in an intermodal is complicated, due to:

   3.1 Limited intermodal railroad services:

   - UP Interchange in Laredo, El Paso and Nogales, mainly
   - BNSF in El Paso only.

   3.2 There exists a vicious circle where there are no intermodal services from origins in US and Canada to Mexico, where there are no volume and this does not grow due to the lack of dedicated services.

II. Obstacles

4. Limited infrastructure

   Only one border interchanges in each border crossing. Constant congesting.

5. Lack of harmonization of customs procedures. Customs in Mexico request yet excessive documentation and they have not advanced through paperless.

III. Opportunity Areas

- Increase and encourage the railroad intermodal transportation and other singled means of transport, like bi-level and tri levels, as well as transportation of tank containers, cover hoppers, through simplified measures and proceedings facilitation, that will promote the infrastructure investment, equipment and services in an efficient platform transportation in North America.
- Promote in three countries the schemes of the companies and certified services, that will permit an agile transit of merchandises.

III. Opportunity Areas

- That the railroads coordinate theri operative policies, in effect to make easy the operation of unitary trains, that coordinated with Authorities, operate with simplified measurement procedures.
- Extend the infrastructure or railroad interchange at borders, with, at least, two border lines in high volume specific points.
- Increase Customs measures between USA, Canada and Mexico, to count with only one NAFTA procedure.

III. Opportunity Areas

- Coordinate the politics of encouragement of intermodal transport in USA, Canada and Mexico, to look for a better integration and rationalization of the transports, to avoid congesting and pollution in the cities.
- Establish business development groups between associations of importers and exporters of the three countries, and the service associations, to link the offer and demand and create opportunity areas to reach a mutual benefit.

AB.3 FULL PRESENTATION: DR. BARRY PRENTICE

Toward One North American Transportation Market:

The Open Prairies Proposal

Dr. Rich Beilock, University of Florida

Bob Dolyniuk, Manitoba Trucking Association

Dr. Barry Prentice, University of Manitoba

Large markets … specialization

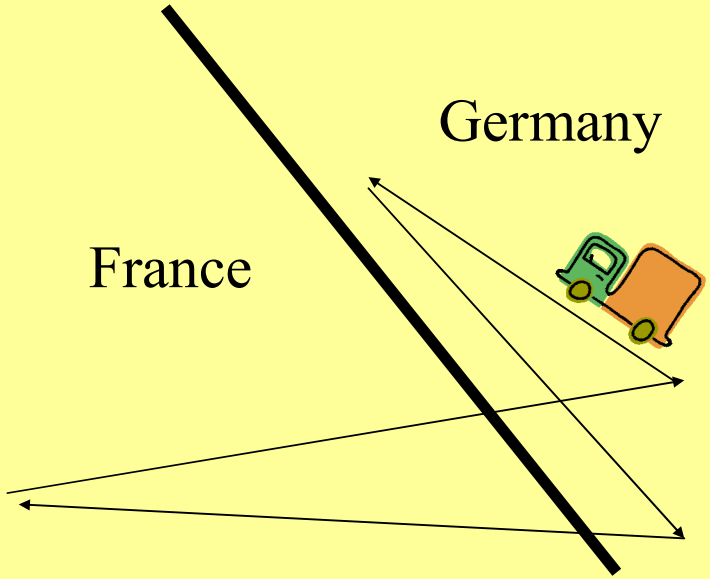
NAFTA and EU Trading Blocs

Formed to exploit efficiencies inherent in larger markets

Freest possible movement of:

Information, Goods & Services

Factors of production



Cabotage for trucking in Europe: no evidence of disproportionate bias or favour to any country.

Francine Lafontaine and Laura Valeri. *The De-regulation of International Trucking in the European Union: Form and Effect*. University of Michigan, April 2005.

Effectively, no Cabotage

"U.S. Customs regulations allow for Canadian-based vehicles to transport domestic shipments (point-to-point in the U.S.) when the shipment is incidental to .... an international movement. … Because the INS regulation prohibits this type of move, in effect, the U.S. Customs regulation is moot at the present time."

Highway Star Magazine May 2005

Implications, relative to EU

- Less efficient production….more costly, less flexible transport
- As more empty mileage…
  - More fuel consumption/unit production
  - More pollution
  - More congestion
  - Higher infrastructure costs
  - Lower safety

North American Cabotage Experiment

- Reversible ~ sunset provision
- Over large enough area to demonstrate effects.
- Limited…small shares of both economies

Open Prairies Proposed Area

Canadian Provinces
(AB, SK, MB)

U.S. Upper Great Plains
(MN, ND, SD, MT, WY, ID)

	U.S	Canada
Vast areas:	13%	20%
Population/economy:	1%	17%

Potential Problems

National security ….. NO

Weight/length ….. NO

Hours of Service …. NO

Taxes …. Yes, but should be solvable.

Measurement

- Study to establish a base case
- Longitudinal carrier studies
- Final impact study 5 years/10 years

Summing Up

Efficiency argument is clear.

Experiment/demonstration could hasten a decision.

Open Prairies merits consideration and, if enacted, close monitoring.

NORTH AMERICAN TRANSPORTATION FROM THE CANADIAN PERSPECTIVE

Rosalind Wilson
Director Business Development Mexico
Canadian Pacific Railway

CANADIAN PACIFIC Ingenuity.

Mexico City, DF
Tuesday July 3rd, 2007

AGENDA

CANADIAN PACIFIC

- Canada Mexico Trade
- Importance of Rail by Country
- Role of Rail in NAFTA
- Challenges from Canadian Rail Perspective:
  - external
  - internal
- Opportunities
- Conclusions

Overview of NAFTA Trade

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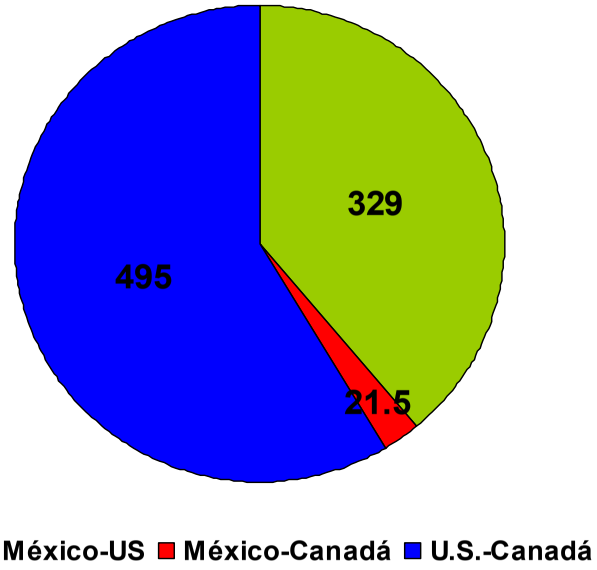
TRILATERAL TRADE 2006
(Billions of US$)



Source: INEGI, USDOC & Statistics Canada, using import stats from each country.

Canada Mexico Trade Growth

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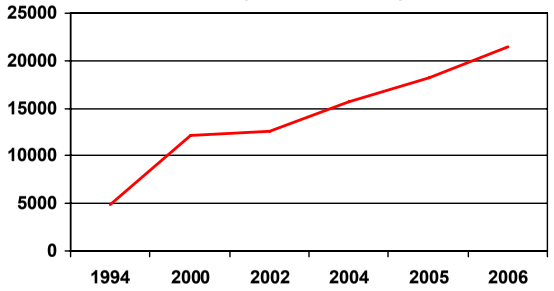
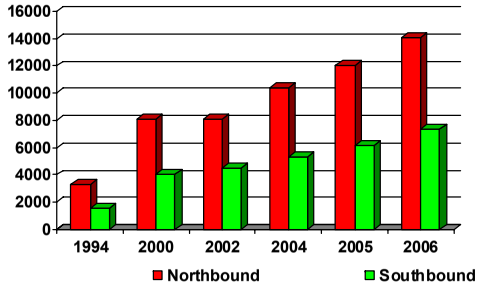
- Canada Mexico Trade is growing rapidly
- Trade balance 2 to 1 in favour of Mexico
- Canada Mexico Partnership (CMP)
- 2004 established clear goals: Increase trade by 50% and investment by 100% by 2010
- Investment focus: Investment brings trade (i.e. Bombardier)
- Above requires competitive North American Transportation System

CANADA MEXICO TRADE
(Billions US$)



TRADE BALANCE MEXICO-CANADA
(billions of US$)



Source: INEGI, USDOC y Statistics Canada, using import stats from each country

Importance of Rail by Country

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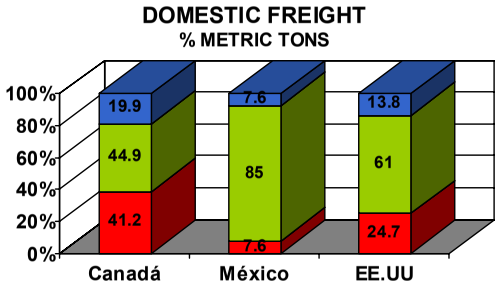
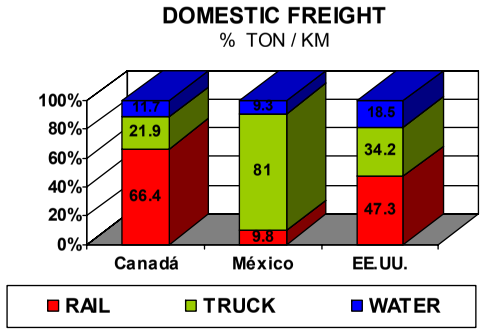




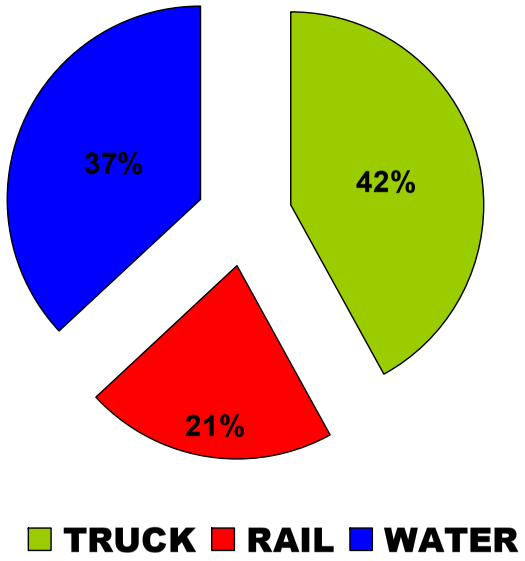
- Canada leads (geographic and commercial characteristics favour rail)
- U.S. follows – well balanced in terms of Ton/Km
- Mexico still has a long way to go (Recent SCT numbers show rail is gaining some ground vs. truck - Now 26.6% of all land transport both domestic and border)

Source: North American Transportation Statistics Data Base (2003)

Role of Rail in NAFTA

CANADIAN PACIFIC

TOTAL NAFTA TRADE BY MODE OF TRANSPORT
(% Metric Tons)



Source: North American Transportation Statistics Data Base (2005).

Role of Rail in Canada Mexico Trade

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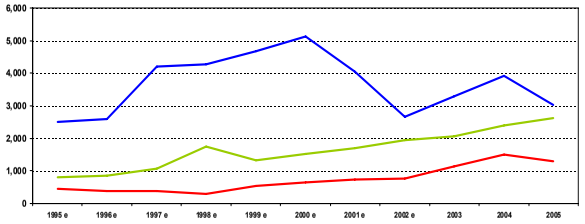
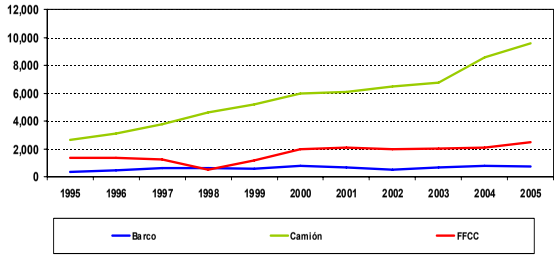
- NAFTA – Truckers Dream ?
- By Tons:
  - Water dominates (Bulk)
  - Truck beats rail but we're in the running (2004/5 Capacity Crisis)
- By Trade Value:
  - Sad but True – Rail is underutilized
  - Looks like shippers just don't trust rail with valuables

Mode of Transport (Canada Mexico Trade) by Metric Tons



Mode of Transport (Canada Mexico) By value of goods (USD's)



Rail Challenges: External

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- Benefits of Rail are little known and understood by shippers
  - Border Crossing advantage (Despacho Previo, servicio 'in-bond')
- Rail gets a bad wrap (General perception isn't good)
  - Canada: we're necessary but complicated to deal with
  - Mexico: rail 'almost' doesn't exist outside of captive shippers
- Shippers depend on brokers who understand trucks (few understand rail) and many own trucks
- Few logistics companies focus on rail (Door to Door including storage, transloading etc)
- Many smaller shippers require cargo consolidation services (LTL) – not offered by rail
- Canadian Exporters prefer U.S. then Asia – Why get caught up in 2 borders ? Perceived as complicated

Rail Challenges: Internal

CANADIAN PACIFIC

- Trade imbalance coupled with incompatibility of car type (car management dilemma)
- Infrastructure:
  - Plants rail access
  - Trans-loading terminals
  - Border (Inspection facilities i.e. frozen food, & other border issues)
  - Communication and coordination – RR's are often internally focused

Conclusions

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- Competitive transportation system is Key for NAFTA growth;
- Rail is an important player in the North American transportation system – though clearly underutilized;
- Perception is Rail's biggest challenge – we need to address this;
- Need more 'rail friendly' logistics and supply chain management companies;
- Infrastructure development Master Plan (Public and Private sector (trilateral) need to coordinate and cooperate)
  - Regulatory support from governments
  - Private sector investment
- Not everything requires investment – it's amazing what can be achieved through coordination

AB.5 FULL PRESENTATION: STEPHEN BLANK, PH.D.

Looking back…

- Transportation infrastructure in the US has historically been a private sector and local rather than national government responsibility
- National security reasons have produced exceptions, but not a fundamental change in this pattern

Transportation remained primarily a private and state-local responsibility in the US

Erie Canal – grandest infrastructure project in US history – built with state not federal support

Steamship industry: built without government support

Railroads: Government involvement (capital and some regulation) at front end, but private interests avoided government control

"Big companies, small government"

See difference with France, Prussia, Japan

Exceptions were the transcontinental railroad in the 1860s, the Alaska Highway during WWII and the creation of the Interstate Highway System in the 1960s. (Hint: Think National Security)

From East-West to North-South

- A North American economy
- From branch plants to North American divisions in the 1980s
- NAFTA a response to developments already underway in the North American economy

Intense post FTA-NAFTA growth

- Volumes increase but so also does deep, structural integration – complex cross-border supply chains
- Not trading partners – rather creation of an integrated North American production, supply and distribution system
- Bottom up growth, driven by markets, deregulation and corporate strategies

NAFTA and Transportation

- Focus mainly on regulatory harmonization
- Key failures to build more liberal regime
- Continuing issue in US of Mexican trucking
- NAFTA Working groups have modest impact
- No vision or design for a North American transportation infrastructure

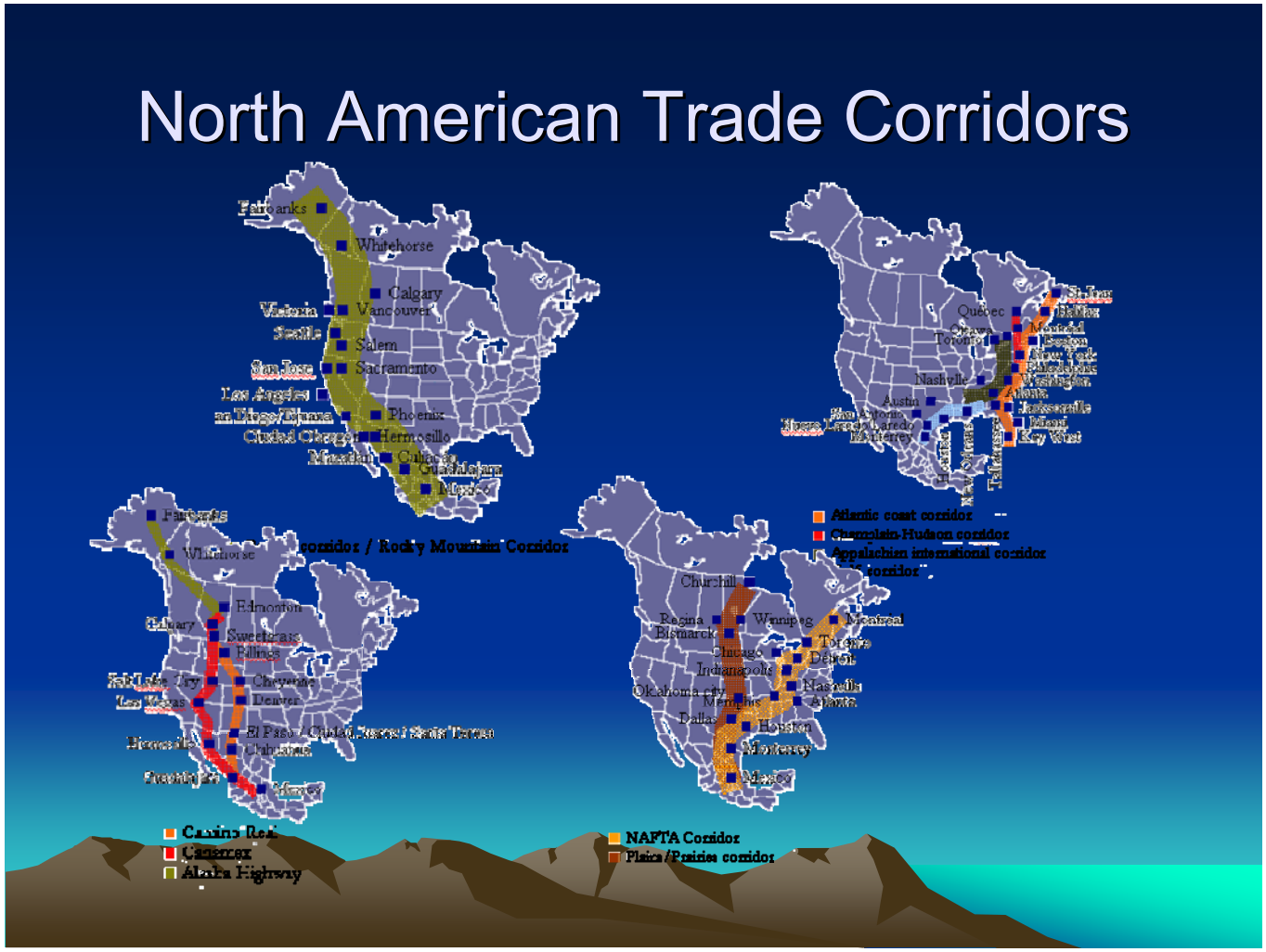
Response to north-south movement

Growing awareness of impact of increased North-South movement of goods on transportation and border infrastructure and on competitive environment for cities and communities along the trade routes: two important developments:

- Trade corridors
- US Highway legislation

Trade Corridors

- Trade corridors driven by entrepreneurs: transportation users and providers, urban leaders and local governments
- Being on a north-south channel means not only the opportunity to create new businesses that facilitate the flow, but also access to a whole new realm of opportunities for services, for cooperative ventures, for trade expansion


North American Trade Corridors
Fairbanks
Whitehorse
Calgary
Victoria
Vancouver
Seattle
Salem
San Jose
Sacramento
Los Angeles
San Diego/Tijuana
Phoenix
Ciudad Chihuahua
Hermosillo
Mazatlan
Culiacan
Guadalajara
Mexico
Quebec
Ottawa
Toronto
Nashville
Austin
San Antonio
Laredo
Monterrey
Atlanta
Jacksonville
Miami
Key West
Edmonton
Calgary
Sweetgrass
Billings
Salt Lake City
Cheyenne
Las Vegas
Denver
El Paso / Ciudad Juarez / Santa Teresa
Chihuahua
Nogales
Monterrey
Churchill
Regina
Bismarck
Winnipeg
Montreal
Toronto
Chicago
Detroit
Indianapolis
Oklahoma city
Memphis
Nashville
Atlanta
Dallas
Houston
Monterrey
Mexico
Atlantic coast corridor
Champlain-Hudson corridor
Appalachian international corridor
corridor
corridor / Rocky Mountain Corridor
Canamex Corridor
Alaska Highway
NAFTA Corridor
Plains / Prairies corridor

US highway legislation in the 1990s: Federal response to infrastructure needs

Washington did seek to respond to new north-south trade flows:

Intermodal Surface Transportation Efficiency Act (ISTEA) aimed at alleviating bottlenecks along highways and at border crossings

Create new North American “Super Corridors”

Three following bills during 1990s

Impact of Highway Legislation

- Congress rapidly increased the number of designated high priority corridors in subsequent legislation
- Highway funds were a pot into which Congressional etiquette encouraged everyone to dip his fingers: key role of earmarks
- Any sense of a coherent continental – or even national – plan evaporated in rush of demands by states, local communities and business associations for funds to build particular interests

Impact of Highway Legislation, II

What this story reveals, no surprise, is how difficult (outright impossible?) it is to build a rational, continental highway system from the bottom up

Organizing this process as a competition among Congressional districts for highway funds will not o produce a rational blueprint for a continental system

Meanwhile, railroad developments

- Consolidation, elimination of excess capacity
- Improved efficiency
- But how much longer-term planning?

Changing environment in early 2000s

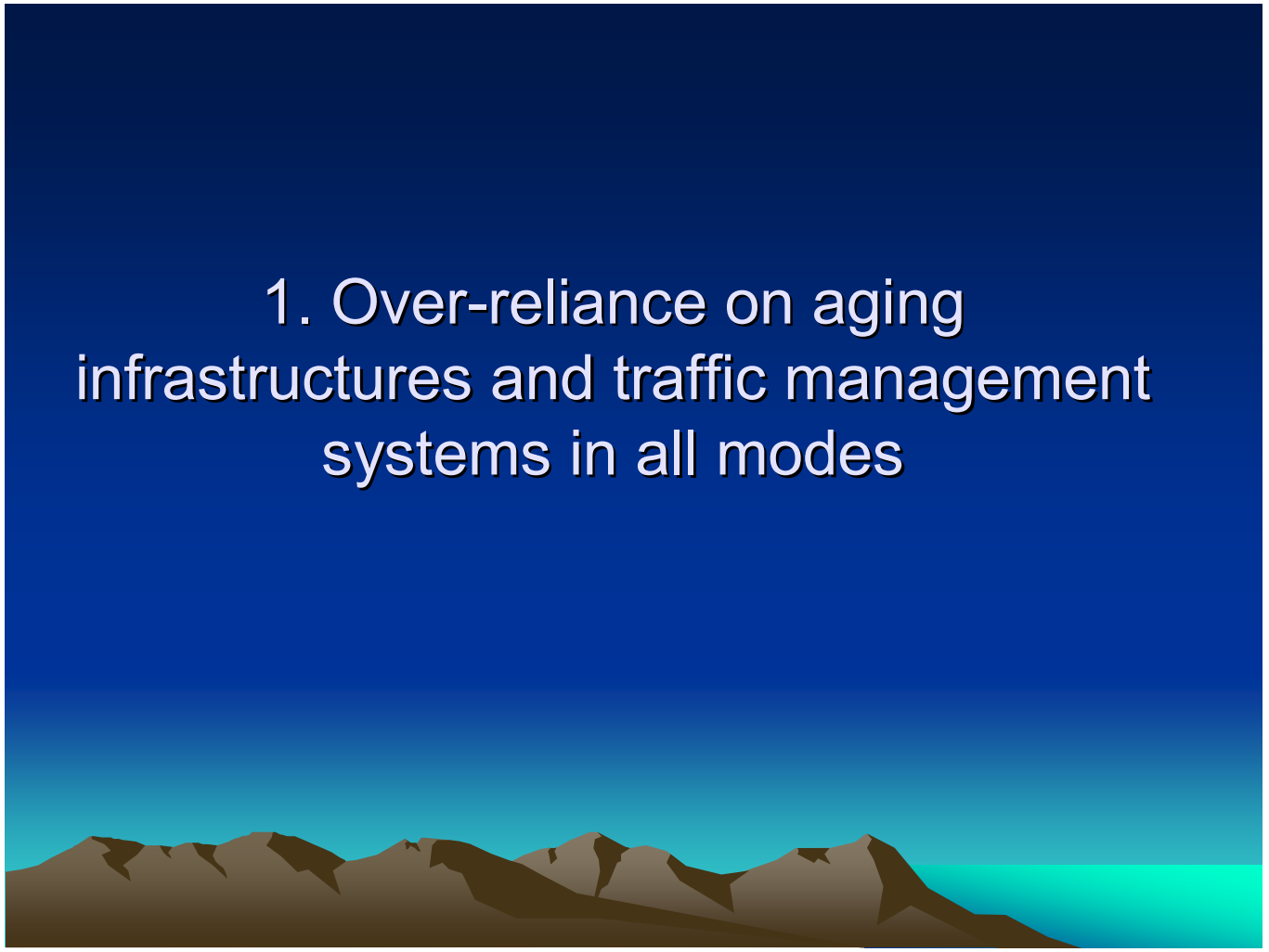
- 9-11 and borders
- Immigration and drugs
- Asian trade and gateways
- Competition between condos and containers

Transportation Infrastructure a growing concern

UPS CEO Mike Eskew: *"What's shocking, quite frankly, is the inability of our transportation infrastructure to keep up with the normal day--to-day stresses imposed upon it… Our highways, waterways, railroads and aviation network are simply not keeping up with ordinary demands."*

The erosion of North American transportation infrastructure A “perfect storm”?

Three forces are working together to erode the quality of the system and with it the competitive advantage the transportation system provides.


1. Over-reliance on aging infrastructures and traffic management systems in all modes

2. The weakness of local, national and North American governance processes for investment in transportation system upgrades

3. Public policy and regulatory barriers to effective adaptation of the transportation system

SPP and NACC

- Very limited focus on transportation
- SPP called for efforts to improve the safety and efficiency of North America's transportation system by expanding market access, facilitating multimodal corridors, reducing congestion, and alleviating bottlenecks at the border that inhibit growth and threaten our quality of life.
- Main focus on regulatory harmonization – no big picture or vision
- Few concrete recommendations

Elements of a North American Transportation Strategy

- A transportation strategy must rest on a clear vision of a continental, multi-modal transportation system that will meet North America's transportation, logistics and supply chain requirements over the next decades.
- Transportation systems can no longer be thought of primarily in national terms.
- Transportation systems cannot be viewed as separate silos – rail, road, water and air.
- Implementation is a critical element of a transportation strategy.

North American Transportation Infrastructure Competitiveness Research Council

- Impact of transportation infrastructure on North American competitiveness
- Build on existing foundation of transportation research by various institutions and government agencies
- Produce policy-oriented materials
- Build new constituencies