APPENDIX B: Public Outreach Materials
I-87 MULTIMODAL CORRIDOR STUDY
FACT SHEET # 1

STUDY PURPOSE

The I-87/Autoroute 15 corridor provides a direct international connection between the largest metropolitan area in the United States (New York City) and the second largest metropolitan area in Canada (Montreal) through the La-colle/Champlain border crossing. The corridor, through its connections to crossing highways and to other modes, serves a broad area that includes the Mid-Atlantic states, New England and Eastern Canada representing a total population of approximately 80 million people.

Growth in trade and tourism has placed increased demands on this vital corridor. Between 1996 and 1999, truck traffic at the US-Canada border crossing increased 40%. In 1999, the I-87 Champlain border crossing handled over 800,000 trucks carrying $14 billion worth of goods, making it the fifth busiest US Canada border crossing. In addition, nearby rail border crossings carried nearly $2 billion value of freight in 2000. The growth in traffic during this period and new security concerns have led to slower processing of vehicles at the border, resulting in extended delays which have presented problems for continued economic growth and security.

In order to address this growth and realize the potential of the corridor and region, a comprehensive study has been initiated by the New York State Department of Transportation (NYSDOT) to identify and assess initiatives and opportunities to improve transportation services for all users of the corridor. The I-87 Multimodal Corridor Study (“the Study”) will integrate with the findings of the recently completed “New World Economy” report. This NYSDOT-sponsored report prepared by the University Transportation Research Center, examines the impact that urbanization, economic activity, geography, and transportation constraints have had on the I-87 corridor. The report discusses transportation issues and opportunities, and examines connections the corridor provides, both locally and globally. The Study will analyze recommended transportation initiatives and rank them in terms of their ability to enable New York State to respond to changing economic forces and trends.

STUDY AREA

The I-87 Multimodal Corridor Study area extends along I-87 from the Tappan Zee Bridge to Montreal, a distance of over 300 miles. It includes important east-west connectors and other modal corridors (e.g., passenger rail, rail freight, marine, and air).

Primary and secondary study areas have been established for this vast corridor. The primary study area extends from the vicinity of Thruway Exit 21A to the Champlain border crossing, and includes highways (I-87, Routes 9 and 22 and east-west connectors) and non-highway modes (rail lines, airports and marine ports) ranging between those points. The secondary study area focuses on I-87 from Exit 9 to 21A, and Autoroute 15 to Montreal.
The Study is divided into two phases. The first involves an inventory of existing transportation system conditions, integration of the findings from the "New York and the New World Economy" report, and identification of key corridor issues and emerging opportunities. The second phase will involve the prioritization of initiatives based on global economic potential, feasibility, and the ability to meet the other goals and objectives. Project scoping will also be performed during this second phase to develop a list of improvements that will facilitate the implementation of initiatives.

Goals and Objectives have been developed at the outset of this study to guide the development and assessment of corridor initiatives. Performance measures are being developed to objectively measure the extent to which each proposed initiative satisfies these goals and objectives. This helps analyze the strengths and weaknesses of each initiative and identify the most appropriate ones to recommend for further analysis.

Public outreach will be a very important element of the study and will be approached on two levels. A Study Advisory Group (SAG) comprised of State, Quebec and local agencies, U.S. and Canadian inspection agencies, representatives from various modal groups and local chambers of commerce and economic development agencies and other key groups was formed. The SAG will meet with the consultant and the Department of Transportation throughout the course of the study to comment on the focus of the study, assist in obtaining information and suggest transportation improvements in the corridor. The general public will be able to follow the study and offer comments through the interactive website.

**STUDY APPROACH**

Visit www.i87multimodalstudy.org

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### Study Schedule

The study is on a fast-track schedule. There will be a preliminary list of study ideas developed by the late Fall 2003. Periodic SAG meetings will be held at key stages of the study.

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△ Public Meeting  ★ Study Advisory Group Meetings
Important Dates:

- Sept 12, 2003: Study Advisory Group Meeting
- Fall 2003: “Long List” of Initiatives
- Winter 2003: Preliminary Phase 2 Results
- Spring 2004: Final Report

Current Study Activities

- Development of initiatives is progressing. A report of the long list of improvement concepts will be completed this fall.
- High Speed Rail Pre-Feasibility Study is in its final stages.
- Close coordination with Quebec Transportation Ministry is ongoing.

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ECONOMIC ZONE MEETINGS HELD

Over the past three months, the study team has met with small groups of economic development and transportation sector leaders for each of the three study zones — the Northern Zone (Clinton, Essex, Warren and Washington counties), Central Zone (Albany, Rensselaer, Saratoga and Schenectady), and Southern Zone (Greene, Columbia, Ulster and Dutchess counties).

The goal of this aspect of the study was to work with public and private sector representatives within the study area to identify economic development trends, projections and goals for each zone; highlight factors important in achieving those goals; and assess the relative importance of improvements to the corridor’s transportation network among those factors.

The input from this process will help define those improvements to the corridor’s transportation network that would provide the greatest support for both regional economic growth and the effectiveness of I-87 as a key trade corridor.

The meetings identified both near- and long-term improvements that would provide needed support to each region’s key business sectors. Suggested improvements included new interchanges, better signage for key attractions on the Northway, and methods to increase the overall competitiveness of the regions. Many non-transportation issues (e.g., natural gas, sewer/water connections, etc.) were also discussed.

Economic Zone Meeting Findings:
Overall, the population and total employment trends in the three zones have been positive.

HIGH SPEED RAIL PRE-FEASIBILITY

A pre-feasibility study of high speed rail within the I-87 Corridor is being conducted as part of the overall Corridor Study. Currently in its final stages, the pre-feasibility study has involved close coordination with the Ministry of Transportation Quebec, which is conducting a similar study from Montreal to the New York border.

The goal of the study is to determine the feasibility of 150 mph service in the Corridor. It involves the review of various speed regimes and run times, as well as potential ridership demand. The study will also entail a preliminary review of issues such as double-tracking needs, freight/passenger conflicts, grade crossing elimination issues, and possible need to deviate from existing route along new track.

ORIGIN & DESINATION STUDY

The study team has recently completed an Origin & Destination survey of passenger cars at the I-87 border crossing with Canada. The survey was completed over a four day period.

The survey consisted of a short interview where the driver was asked to provide the trip origin and destination, purpose and frequency of the trip. The interviewer also noted the vehicle classification and the number of occupants.

Approximately 4,600 interviews were completed during the four-day survey period (August 21-August 24).

The results of the survey will provide a better understanding of the types of travellers using this border crossing and travelling in the I-87 Corridor.
ECONOMIC MEETINGS HELD
Continued from Page 1
Economic zone meeting participants felt that the Corridor is economically stronger than others in the State that have or are seeking similar Trade and High-Priority Corridor designations.

Northern Zone: Key transportation initiatives in the Northern Zone include conversion and development of the former Air Force base to Plattsburgh International Airport; development of the “Port of Excellence” at the Champlain/Lacolle border crossing; implementation of the NEXUS/FAST programs; passenger and freight rail improvements; accessibility to ferry services; truck rest stops; vehicle turnouts on scenic roadways; bilingual signage and Intelligent Transportation Systems (ITS). Traditional manufacturing has declined, while the paper, pharmaceutical, and transportation equipment manufacturing subsectors have surged. Wholesale/retail trade, finance-insurance-real estate (FIRE), and service sectors have also grown.

Central Zone: Key transportation initiatives in the Central Zone include better access to Albany International Airport and to the Port of Albany; commuter peak management; access to planned high-tech industry locations; congestion management on shared freight and passenger rail lines; intermodal freight improvements; and ITS on the Northway. The manufacturing sector has experienced a significant decline while the wholesale/retail trade, finance-insurance-real estate (FIRE), and service sectors have grown.

Southern Zone: Key transportation initiatives of interest to the Southern Zone include passenger and commuter rail, cross-river transit (e.g., Newburgh-Beacon Ferry), increased highway capacity, management of toll plaza congestion, and improvements to Stewart Airport. Key sectors expected to grow in the future include nanotechnology (synergy with Capital District nanotech growth), and advanced manufacturing (e.g., high-tech, biotech).

STUDY WEBSITE INFO
The study website has now been “live” for over three months. For the last month the website received over 2,000 visitors. Most visited pages included the Study Overview and meeting minutes of the first study advisory group meeting. Additionally, all study documents and materials including meeting minutes are and will be posted on the website for viewing and downloading.

Over the coming weeks, new material to be posted on the website include the Existing Conditions Report, results of the Origin & Destination Survey, the first of two study newsletters, an updated Frequently Asked Questions section and an overview of the High Speed Rail Pre-Feasibility portion of this study.

Please visit the study website at www.dot.state.ny.us/i87study.

Champlain/Lacolle Border Summit
Members of the study team participated in the second annual Champlain/Lacolle Border Summit on June 16th in Montreal, Quebec. The meeting, organized by the Quebec-New York Corridor Coalition, brought together a broad range of public and private sector interests from both sides of the border, as well as the continued high-level attention by government agencies, from the local to the national level.

Presentations by the Paul Cellucci, the US ambassador to Canada, and Quebec Transport Minister, Yvon Marcoux, both emphasized the importance of facilitating the US-Canadian linkage at Champlain/Lacolle, including the significance of this connection to the economies of Quebec and New York. They also mentioned the ongoing I-87 Multimodal Corridor Study, an update of which was provided by the study team in one of the conference’s well-attended technical workshops.
I-87 Multimodal Corridor Study
Corridor Study- Fact Sheet #3

December, 2003

www.dot.state.ny.us/i87multimodal

Important Dates:
• Next SAG Meeting - March 2004
• Completion of HSR Pre-Feasibility Study Report - January 2004
• Final Study Report - May 2004

Current Study Activities
• Development of Improvement Concept Packages
• Development of Short-Term / Long-Term Corridor Improvement Strategy
• Completion of HSR Pre-Feasibility Study Report

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NEW YORK STATE DEPARTMENT OF TRANSPORTATION
PIN S002.01 D015222

Development of Improvement Concepts and the Short-/Long-Term Corridor Improvement Strategy

Phase 2 of the I-87 Multimodal Corridor Study will have two simultaneous and interrelated components: (1) further development and assessment of selected improvement concept “packages,” and (2) development of a Short- and Long-Term Strategic Plan for the I-87 Corridor. The results of both components will be included in the Study’s final report.

The seven improvement packages, drawn from the “Long List of Improvement Concepts” developed at the end of Phase 1 and selected for further development, are aimed at identified needs in the corridor’s four travel market – commuter, intercity, freight, and recreational. Selection of improvement concepts was based on the following:

• Constraints screening;
• Overall “scoring” in assessment process;
• “Early-start” potential; and
• Fit within Phase 2 time and cost limits.

Further discussion of these factors and improvement concept selection is presented on Page 2 of this Fact Sheet.

Development of the Phase 2 Improvement Concept Packages will involve very preliminary level engineering, technical and environmental assessments. The Short- and Long-Term Strategic Plan will identify critical activities and next steps, the appropriate agencies that should be involved, and potential funding sources. As the Study Team develops the Improvement Packages, some elements of the Short-/Long-Term Plan may be integrated into them.

PHASE 2 PROCESS FLOW CHART

Long List of Improvement Concepts

Initial Improvement Concept Ranking

Short-/Long-Term Corridor Improvement Strategy

Further Development of Improvement Packages

FINAL REPORT
The Long List Report, released to the Study Advisory Group (SAG) in October 2003 and available on the project website (http://www.dot.state.ny.us/i87study), presented over 80 improvement concepts to address problems and opportunities identified in the I-87 corridor during Phase 1 of the Study. Screening Procedures established in the Study’s first months and subsequently revised to reflect input from Phase 1, were used to identify a “short list” of improvement concepts for detailed consideration in Phase 2. These procedures, which were reviewed with the SAG, also defined ways in which selected improvement concepts could be grouped or linked together to form improvement “packages,” organized around corridor-wide “Smart Corridor” themes.

The selection of concepts for inclusion in improvement “packages” was based on the following:

- **Study Constraints** -- their appropriateness for this Study, based whether they are already being handled sufficiently by NYSDOT or other agencies in the corridor.
- **Consistency with Goals & Objectives** -- how well they “scored” on the detailed Goals & Objectives and screening criteria established at the start of the Study.
- **Effectiveness** -- how well they would potentially address specific problems identified in the four corridor travel markets.
- **Smart Corridor Role** -- their ability to support one or more of the “Smart Corridor” themes.
- **SAG Support** -- the extent to which a particular concept received very strong support or opposition by SAG members.

The selected concepts were also assessed based on their “package potential.” The “package potential” reflects how effectively each concept would work with and support other similar concepts. Those thought to be strongly connected to other concepts and goals were further noted.

- Whether they were necessary “early start” type projects that would need to be in place before other improvements could be implemented or which would make later improvements more effective.
- Whether they could be meaningfully moved forward within Phase 2 time and budget limitations.

The enclosed table provides a summary of this screening process. Concepts have been grouped as follows:

- Proposed for inclusion in Phase 2 improvement packages;
- Already being studied or advanced by NYSDOT or another agency; and
- Will be addressed in the Short-/Long-Term Strategic Plan along with the concepts in the other two groupings.

Finalized List of Improvement Packages (refer to table below for components of each package) includes the following:

1. Intelligent Transportation Systems/Commercial Vehicle Operations (ITS/CVO)
2. I-87 Corridor Transportation Management Center (TMC)
3. Luther Forest Access Improvement
4. Capital Region Intermodal
5. Northway Capital District Improvements
6. Recreation Services
7. High Speed Rail/Rail Commuter Shed

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### Initial Improvement Concept Ranking Overview

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<th>Low</th>
<th>Medium</th>
<th>High</th>
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<td><img src="chart" alt="Market Codes: C= Commuter; P=Priority; R= Recreation; F= Freight" /></td>
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**CONCEPTS PROPOSED FOR INCLUSION IN PHASE 2 PACKAGES**

**PACKAGE #1: ITS/CVO**

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<th>Focus</th>
<th>Goals &amp; Objectives</th>
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**PACKAGE #2: I-87 TRANSPORTATION MANAGEMENT CENTER**

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<td>ITS-13</td>
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**PACKAGE #3: LUTHER FOREST CONNECTOR**

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**CONCEPT PACKAGE RANKING MATRIX continued on Page 3.**
## I-87 Multimodal Corridor Study

Concept Package Ranking Matrix continued from Page 2.

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<td>Expand Terminal and Air Cargo Facility at Albany International</td>
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* Note: Builds on HSR Pre-Feasibility Study Findings

## I-87 Multimodal Corridor Study

### Concept Package Ranking Matrix continued from Page 3.

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<th>Market Codes: C=Commuter; M=Mobility; R=Recreation; F=Freight</th>
<th>Primary Market Focus</th>
<th>Goals &amp; Objectives</th>
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### Other Short-/Long-Term Strategic Plan Concepts

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<th>Primary Market Focus</th>
<th>Goals &amp; Objectives</th>
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I-87 Multimodal Corridor Study
Corridor Study - Fact Sheet #4

www.dot.state.ny.us/i87multimodal

July, 2004

Important Dates:
• Annual Quebec-New York Border Summit Meeting— to be held late September or early October. For more information visit: www.quebecnewyorkcorridor.com

Current Study Activities:
• Completion of Tech Memo #4
• Development of Final Report: Corridor Strategic Plan
• Development of the I-87 Study Newsletter: “The Four Smart Transportation Concepts”

For more information contact:
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Albany, NY 12232-0429
mrasheed@dot.state.ny.us

Or email the study team:
info@i87multimodalstudy.org

Phase II Projects Defined
Phase II of the I-87 Multimodal Corridor Study has two simultaneous and interrelated components: (1) development and assessment of selected “short list” projects focused on near-term support of the smart corridor concept and (2) development of a Strategic Plan and Vision for the I-87 Corridor. The results of the short list project assessments are summarized in this Fact Sheet and presented in more detail in “Technical Memo #4: Smart Corridor Concepts”, while the Corridor Strategic Plan will be presented in the Study’s Final Report.

The Phase II short list projects have been chosen based on a variety of measures including:
1. Ability to result in immediate in positive pay-offs
2. Ability to jump-start related or additional programs in the region
3. Cutting-edge projects which can be used as demonstrations of:
   • Tested applications or
   • Innovative technologies
4. Consistency with the study’s goals and objectives.

Details of each of these projects are summarized in this Fact Sheet.

Study Advisory Group Meeting Held in June
The 4th meeting of the Study Advisory Committee (SAG) was held in mid-June in Albany. This meeting was attended by over 50 SAG members. Mr. Timothy Gilchrist, Director of NYSDOT’s Office of Policy and Strategy, began with a presentation that explained the importance of this Study for NYSDOT. Consultant Project Managers, Dr. William Crowell of Parsons and Mr. Thomas Karis of Clough Harbour, followed with an overview of the Phase II projects and a discussion of the overall strategic vision for the corridor that is being developed as a component of this Study.

Study Process

Phase I
Establish Study Goals & Objectives
Collect Available Corridor Data
Establish Existing Corridor Conditions
Develop “Long List” of Corridor Concepts
Refine “Short List” of Project Concepts
Define, Assess & Prioritize Concepts & Complete Strategic Plan

Phase II
THE CORRIDOR STRATEGIC PLAN

The overall goal of the strategic plan is to develop a “smarter” corridor. The strategic plan will identify opportunities to manage and improve the overall mobility of the corridor for the movement of people and goods via a variety of modes. The plan focuses on the corridor’s four principal travel markets:

- **Intercity Passenger** – longer distance trips made for a variety of personal and business trip functions. With longer distance comes a broader range of modal options (air, rail, auto, bus).
- **Commuter** – shorter daily journey-to-work trips, usually by car and compressed along routes leading to and from major employment centers.
- **Tourist** – trips to the Corridor’s important recreational and natural areas attracting travelers from throughout the Northeast and beyond.
- **Trade** – involves truck, rail and other freight trips, including those along the corridor and those across the Champlain-Lacolle-Rouses Point crossings, facing heightened security requirements.

Development of the strategic plan started with the identification and evaluation of potential projects for the corridor and an evaluation of corridor needs and opportunities. An initial “Long List” of potential projects was developed during the first phase of the study. These projects were identified through meetings with the Study Advisory Group, technical working sessions, focus meetings with various agencies and groups, and by the study team through research and evaluation of existing conditions within the corridor.

The Long List was then evaluated based on the overall goals of the study. The initial evaluation of the list of projects did not consider projects currently being developed or implemented by NYSDOT, other agencies, or constituencies. Additionally, some Long List projects had already been explored sufficiently, and were not subject to further analysis. Instead, the focus of Phase II of the Study was to identify specific projects that could "jump start" or develop synergistic relationships with projects already being considered in the corridor. The final Corridor Strategic Plan, which will be released in September 2004, will tie together on-going efforts in the I-87 corridor and the priority implementation projects identified during Phase II into a coherently, "Smart Corridor" vision that integrates existing and cutting-edge technology to serve the needs of the corridor’s travel markets.

The following pages of this Fact Sheet present a brief overview of the priority implementation projects identified by the Study Team during Phase II.

---

### PHASE II PROJECTS DEFINED

#### US-CANADA BORDER QUEUE DETECTION SYSTEM

**Related Corridor Vision:** Smart/Safe Traveler and Smart Highway

**Project Description:** This project would enhance the existing system to inform northbound travelers in advance about queue duration (length of waiting line at the border), which can be 1.5 miles or greater.

Key project components would include:

- Queue Detectors to detect waiting lines in highway lanes.
- Flashing Beacons to warn motorists of impending queues.
- Variable Message Signs (VMS) to inform drivers about queue duration, with bilingual (English-French) messages.
- TRANSMIT readers (using E-Zpass) to estimate traffic speeds and queue duration.
- A tie-in to the Information Exchange Network (IEN) to make information available to drivers at kiosks or on-line.

#### TRUCK PARKING SUPPLY MONITORING

**Related Corridor Vision:** Smart Freight and Smart/Safe Traveler

**Project Description:** This project will use electronic signage and detection systems to inform truck drivers about parking availability at two existing I-87 rest areas, and identify trucks entering the parking area to check for possible outstanding violations. This project can help reduce truck overcrowding at the rest areas which often also results in trucks parking along the shoulders and ramps.

Key project components would include:

- A non-invasive microwave detector (non-hazardous) at each rest area to count the number of trucks entering the truck parking area.
- A Variable Message Sign (VMS) on I-87 upstream of each rest area to alert truck drivers of parking availability and other VMS’s further away to also inform drivers.
- A tie-in to the Information Exchange network (IEN) to make information available to drivers at kiosks or on-line.

#### SAFE AND SECURE TRANSPORTATION PROGRAM SYSTEM DEMONSTRATION

**Related Corridor Vision:** Smart Freight

**Project Description:** This would be a demonstration project to create partnerships between government and private companies to improve freight inventory control, prevent theft, and improve States’ inspections of commercial vehicles and drivers. Their collective use of data and technology can reduce both public and private costs for security and inventory tracking.

Key project components would include:

- Petitioning “supply chain” owners and carriers using the corridor to participate in the demonstration program.
- A key goal would be to streamline the inspection and security process by eliminating the multiple transponders (for trucks) and databases used by federal and State agencies.
- Integrating the program with the Customs and Border Protection (CBP) programs for expedited border crossing, including FAST (Free and Secure Trade) program.
### I-87 Multimodal Corridor Study

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Key project components would include:</th>
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| **EXIT 20 IMPROVED ACCESS AND QUEUE DETECTION** | • Flushing beacons along the northbound side of I-87, south of Exit 20 to warn drivers of queues.  
• Two permanent Variable Message Signs (VMS) to offer alternative routes.  
• Making the information available to travelers at kiosks and online, via Information Exchange Network (IEN). |
| **I-87/ROUTE 9 CLOSED LOOP TRAFFIC CONTROL SYSTEM CAPITAL DISTRICT DEMONSTRATION PROGRAM** | • TRANSMIT system (reads E-Zpass, tags) on I-87 and alternate routes to assess vehicle speeds, travel times, and volume on the roadways.  
• The use of Variable Message Signs to both alert drivers and divert traffic between roadways when there are long delays due to accidents or other problems on the road.  
• Where feasible, increase the coordination of traffic signals in the affected area to improve traffic flow. |
| **ADIRONDACK CORRIDOR PASSENGER RAIL SERVICE IMPROVEMENTS** | • Extending one Empire service train daily to Schenectady and Saratoga Springs from Albany/Rensselaer.  
• By-pass of Saratoga Springs Yard to allow additional Empire Service to Schenectady and Saratoga.  
• Exploring minor service and schedule changes on existing bus routes to improve Albany/Rensselaer Station connectivity.  
• Extending the Ballston Spa siding to link with Saratoga Yard by-pass track, creating six miles of double-track capacity. |
| **KENWOOD INTERMODAL YARD EXPANSION** | • Creating longer and paved unloading tracks.  
• Relocating unused fuel tracks to create room for freight operations.  
• Expanding paved parking/storage areas for trucks and containers.  
• Relocating yard management and repair facilities.  
• Improving access from adjacent roadways, yard security and lighting. |
| **ELECTRONIC SEAL SCREENING AND TRACKING** | • Modifying the existing Commercial Vision Information and Screening Networks (CVISN) system to support container-tracking capabilities.  
• Using this modified CVISN equipment to detect E-Seal trucks as they pass highway checkpoints along I-87 and at the US/Canada border. |

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**Phase II Projects Defined (continued)**

**IMPROVED TRUCK ACCESS to “BUILD NOW NY” SITE**

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<th>Key project components would include:</th>
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| • Building a two-lane access road between County Route 28 and Luzerne Road, east of and parallel to I-87, to access the 40-acre “Build Now NY” site.  
• Improving access to two other parcels between County Route 28 and Luzerne Road.  
• Realign Big Boom Road to form a four-leg intersection with the new connector road. |

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**Related Corridor Vision:**

- Smart/Safe Traveler and Smart Highway
- Smart Freight
- Smart Public Transportation
- Smart Freight
- Smart Public Transportation
3-TIERED TOURIST KIOSK SYSTEM

**Related Corridor Vision:**
Smart/Safe Traveler

**Project Description:** This project would set up a system of information kiosks to provide real-time information to travelers about specific tourist destinations. This would include information about the availability of space on hiking trails, and allow visitors to reserve space at trail parking areas. The program would help promote the recreation and tourism industries vital to the region’s economy. Initial project components would include a 3-tiered system of kiosks:

- Tier 1 Kiosks located at rest areas along I-87 to give travelers real-time information about destinations in all tourism areas accessible from the I-87 corridor.
- Tier 2 Kiosks located at I-87 interchanges leading to major tourism areas to provide information on destinations within that area.
- Tier 3 Kiosks located at tourism and recreational destinations (e.g. trailheads) where agency staff would input information about conditions at that area.

ADIRONDACK TOURIST DESTINATION SIGNAGE PROGRAM

**Related Corridor Vision:**
Smart/Safe Traveler

**Project Description:** This project would provide a system of unified signage to direct travelers along I-87 within the Adirondacks to motorist services, shopping, lodging, and other attractions.

Key project components would include:

- Creating an Adirondack Signage Task Force to deal with the issues, problems, and needs of travelers in the Adirondacks.
- Placing “Distance to Service” signs at I-87 exit ramps, to direct travelers to services located greater than three-miles away (current signage covers a 3-mile proximity to interchanges).
- Route 73 Demonstration Signage Project, to create a uniform Adirondack tourist signage system.
- All information at key locations written in English and French and distances expressed in miles and kilometers.

NEAR-TERM VEHICLE INSPECTION STATION ON SOUTHBOUND NORTHWAY NEAR US/CANADA BORDER

**Related Corridor Vision:**
Smart Freight, Smart Highway and Smart/Safe Traveler

**Project Description:** This project will put in place New York’s first comprehensive Commercial Vehicle Information System and Networks (CVISN). This is an electronic screening system that can improve the inspection of commercial vehicles traveling along the I-87 corridor.

Key project components would include:

- Quick start-up of the CVISN electronic screening system at the High Peaks Rest Area in Essex County.
- CVISN would utilize an in-vehicle transponder system allowing some trucks to forego duplicative inspections, saving travel times.
- VMS to inform drivers of an active inspection ahead.
- Use of “Virtual Weight-in-Motion” system to detect commercial vehicles potentially bypassing the inspection station.
- Testing systems for eventual inclusion in a permanent inspection station near the US/Canada border.

### STUDY SCHEDULE

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**PROJECT REPORTS**

**FACT SHEETS**

**SAG MEETINGS**

**NEWSLETTER**
Status of Study Activities

The I-87 Multimodal Corridor Study Team, working closely with its Study Advisory Group (SAG), recently completed the first of the Study’s two phases. Earlier this spring, the Study’s Goals and Objectives were established in conjunction with the SAG. During the first phase of the study, the Study Team assessed overall conditions in the corridor, defined its most critical transportation needs and opportunities, and identified potential methods of addressing them. This effort resulted in a “long list” of possible improvement concepts to address critical corridor transportation needs. The elements of this long list are summarized in this newsletter. Under the next phase of the study, the long list of improvement concepts will be screened to select those that warrant more detailed consideration during the Study’s second phase or subsequent studies.

An additional component of the study is a Pre-Feasibility Assessment of High Speed Rail Service in the New York City – Montreal Corridor (“HSR Study”). This component is being conducted in cooperation with the Québec Ministry of Transportation (MTQ), which is addressing corridor issues in the province of Québec. The study is looking at both European-type high-speed service (150 MPH) and more modest improvements to existing passenger rail service. Presently, the route has only one train per day and the trip takes over ten hours. The results of the studies by NYSDOT and MTQ to date are discussed below.

High Speed Rail Pre-Feasibility Study

The HSR Study discusses existing passenger rail operations in the corridor and compares them against possible improvement scenarios. The segment from New York City to Albany is already designated as a High Speed Rail Corridor, and is part of other on-going rail studies of the New York City - to - Albany corridor. The remaining section from Albany to the US-Canadian border is the focus of the HSR Study. The study’s final results will be included in the High Speed Rail Pre-Feasibility Study report to be released separately.

The Study is evaluating a variety of options for the Albany to Canadian border segment. These can be grouped into two broad categories:

- **Incremental Improvements** to Existing Service, which includes two sub-categories:
  - Moderate improvements, such as minor curve modifications and reduction in stops. The moderate improvements include utilization of existing Amtrak fleet cars or diesel motor unit (DMU) engines. DMU engines also provide the opportunity to improve commuter service between smaller urban areas.
  - Extensive improvements, such as tilt trains and corresponding curve improvements in addition to reduction in stops. The extensive improvements consider the use of jet train locomotives and tilt cars.
- **Full High-Speed Rail Service** - Full high speed rail service has the possibility to reduce travel times from the existing ten hours to four hours.

Present Albany-to-Montreal service takes 10 hours. Preliminary results from the HSR Study indicate possible time savings of 2-3 hours for the more modest improvement scenarios, to a 6-hour savings under the full 150-mph service between Albany and Montreal.

The ”Smart Corridor” Concept

Based on the analyses completed under Phase I of the Study, a number of characteristics have emerged:

- New York State has been a national leader in both developing transportation technologies and applying them as part of comprehensive networks (e.g., the Erie Canal, the New York State Thruway, etc.)
- Along with these developments, and in part because of them, certain transportation and trade patterns have formed over time. These extend back to the initial concentration of industry near ports and the dramatic expansion of the population and economy of New York City to the later dispersion of population and jobs outside of central cities and the increased reliance on over-the-road freight and passenger modes.
- From the past development of IBM and other international leaders in the technology field to recent achievements in nanotechnology and major re-investments by IBM and others, the corridor has confirmed its position on the high-technology stage. Every effort must be made to ensure that this critical aspect of the corridor’s economy is fully supported by its transportation network.
- There are a growing number of transportation technologies – some new and others variations on long-available ones – that are available to transportation planners to address the transportation demands of the 21st Century. However, the economics of air service, rail and waterborne freight, intercity rail passenger service, and virtually every other mode, are constantly evolving, and the way that the public and private sectors are involved in them is ever changing. Economic conditions change, and investments in transportation and trade will likely be needed.
- Transportation improvement philosophies with roots dating back to the 1950s and 1960s – e.g., if a highway is congested, just add lanes – cannot and should not be depended upon in isolation. Smart highway expansion, with real-time interactive management, priority treatments which adjust to and control congestion, takes full advantage of the available tools.
Preliminary Long List Of Improvement Concepts

The preliminary Long List of improvement concepts for the corridor includes a broad range of strategies to address existing and projected demands and opportunities on the corridor’s transportation network and services. The list is based on the Study Team’s review of the corridor’s existing transportation and economic conditions, and on extensive discussions with agencies and public and private entities involved in the corridor’s transportation and economic decision-making.

The concepts are grouped by traditional modes (highway, waterborne, air service, etc.) as an initial starting point for presentation purposes. The intent is to structure these concepts, individually and/or in combination, to advance the Smart Corridor Concept. The Concept is supported by four overarching corridor themes aimed at enhancing economic development; intercity, commuter and recreational travel; movement of goods; and quality of life.

The travel components involve vastly different markets:

- **Intercity Travel** – longer distance trips within the corridor are made for a variety of personal and business trip functions. With longer distance comes a broader range of modal options (air, rail, auto, bus).

- **Commuting Travel** – shorter journey-to-work trips, usually by car, are made on a daily basis, and compressed along routes leading to and from major employment centers. The speed and reliability of travel increases, longer travel markets (e.g., New York City to Albany) can become part of a regular commuter shed.

- **Recreational Travel** – the corridor includes important recreational and natural areas that attract travelers from throughout the Northeast and beyond.

Origin-Destination studies at the US/Canadian border confirmed that the majority of the auto travelers on I-87 heading into Canada are making some form of recreational trips.

- **Goods Movement** – Continued high post-NAFTA truck and rail volumes at the Champlain/Lacolle/Rouses Point border crossings make it one of the most important US-Canada freight gateways. Goods movement demand vary substantially by area, in terms of the types of goods moved and the variety of competing modes.

The structuring of the concepts around the themes will evolve and be refined throughout the remainder of this study. The four corridor themes include: Smart Highway, Smart/Safe Drivers, Smart Freight, and Smart Public Transportation.

- **Smart Highways**. As noted above, our understanding of the causes of highway congestion, especially when it occurs only during limited times of the day, has expanded significantly since the early days of highway expansion in the 1950s and 1960s. With this knowledge comes an equal expansion in the methods available to meet those congestion problems. While earlier solutions were often limited to simply expanding the number of highway lanes or making bigger interchanges, newer solutions focus on (1) better control over and management of highway capacity, including who uses it, when and how it’s used, and effective response to any problems that limit its use or effectiveness or safety; (2) supporting modes that can move people or goods most efficiently; and (3) achieving the movement of people and goods with a minimum of public and private costs, including minimizing environmental impacts.

Statewide, the number of registered vehicles has grown by roughly 19% [1.4 million vehicles] in the past ten years, and vehicle miles of travel (VMT) have grown by 21%. Census statistics for the Capital District, the corridor’s most congested area, indicate that over the 1990-2000 period, more people chose to drive alone to work while less carpooled or used transit. With these types of patterns, a Smart Highway approach is critical.

- **Smart/Safe Drivers**. Auto drivers always want advanced knowledge about construction, traffic problem areas, bad weather and similar information when planning their trips. Additional real-time information (e.g., warning about a recent accident causing delays in a given area) provide a further benefit, as do systems that provide prompt response when vehicles break down or accidents occur. Truckers need these same types of advanced and real-time information, since more reliable, safe and repeatable shipment plans mean significant time and cost savings. The nationwide 511 “Travel Info” program is looking to address a part of this need for all travel modes. The I-87 corridor is joining or developing a number of traveler information programs to address these needs, but it is behind others. The challenges are very different along, say, the High Peaks section of the highway compared with commuter-crowded sections of the Northway in rush hours.

- **Smart Freight**. In addition to expediting the movement of trucks along the corridor’s key highways, a key aspect of the corridor is its role as an international trade route. The events of September 11th have worsened the already serious truck delays at the Champlain border crossing. Already a number of Federal programs are looking to address these border delays, while others aim to reduce truck weighing and safety inspection delays. To make a corridor like I-87 stand out, every effort to maximize the benefits of the above programs are needed, as well as further public and private sector actions. Some of it involves simple priority treatment for vehicles participating in automated Customs clearance programs. Marketing efforts are often needed to clarify the potential cost savings and get greater shipper participation in...
Highway Improvement Concepts
Key issues:
• Traffic volumes and congestion;
• Safety and vertical clearances;
• Linkages to economic activity nodes.
Improvement concepts:
• Interchange 3 (Airport Connector)
• NYS Thruway Authority Albany Corridor
• NYS Route 73
• Adirondack Northway Exits 1 to 8
• Luther Forest Technology Campus Access
• Access Improvements to SUNY technology hub
• Northway Interchange 18 (Corinth Road)
• Rts. 4, 19, 149 from Northway Interchange 20 to Vermont state line
• Champlain/Lacolle Port of Excellence Improvements
• Tappan Zee Bridge/I-287-I-87 Corridor
• Commercial Vehicle Access Improvements to the Port of Albany
• Selkirk Yard Access Improvement

Intelligent Transportation Systems (ITS) Concepts
Key issues:
• Incident and congestion management;
• Communication along the Northway;
• Traveler information; and
• Corridor safety and security.

Improvement concepts:
• Fixed Automated Spray Technology
• Integrated Incident Management System
• Advanced Cell Phone Communication System
• Radio Broadcast Data System/Radio Data System Radio-based Communication
• Traveler Information Kiosks
• Coordinated Communication Vehicle ID/Screening
• Statewide Wireless Communication System
• Call Box Replacement/Expanded Cell Phone Service
• Electronic Data Distribution System
• HOT Lanes-congested highway segments
• “Supply chain” Container Security & Tracking System
• Traveler Info System: Albany-Saratoga Commuter Shed
• I-87 Transportation Management Center
• US Route 9 ITS Improvements

Waterborne Improvement Concepts
Key issues:
• Economic activity and trends within the shipping industry;
• Present condition and operational abilities of the corridor waterborne network’s physical infrastructure; and
• Linkages to multimodal or economic activity nodes within the corridor.
Improvement concepts:
• Port of Albany:
  • Security System Upgrade
  • Wharf Upgrades
  • Marine Yard Upgrades
  • Refrigerated Storage Capabilities
  • Container Handling Operations
  • Roll on/Roll off loading and unloading capabilities
• Hudson River Navigational Improvements, North of Coxsackie to Port of Albany
• Navigable Water Route Improvements north of Albany

Rail Improvement Concepts
Key issues:
• Reliability and safety (condition of infrastructure)
• Capacity and congestion (passenger vs. freight rail)
• Clearances (double stack container traffic)
• Connectivity (links to key economic activity nodes)

Border Crossing Improvement Concepts
Key issues:
• The importance of ensuring realization of planned and ongoing programs, and
• Enhancements that are needed to improve effectiveness of existing programs and facilities.
Improvement concepts:
• Port of Excellence Project
• FAST and NEXUS Marketing

The potential improvement concepts, summarized in this newsletter and described fully in a complete report available on the study’s website (http://www.dot.state.ny.us/i87study), will be screened to select those that warrant more detailed consideration in the study’s second phase or subsequent studies.

continued on page 4
Aviation Improvement Concepts

Key issues:
• Adequacy of service to all locations within the Aviation Study Area;
• Conformance with FAA design standards;
• Provision of basic general aviation services at all airports;
• Provision of sufficient terminal facilities at all commercial airports; and
• Adequacy of runways.

Improvement concepts:
• Essex County: New general aviation airport
• Plattsburgh International Airport:
  • New terminal building & facilities
  • Replace basic general aviation facilities
  • Retain subsidized air service
• Westport Airport:
  • Acquire airport from private owner
  • Improve runway & add new facilities
• Schroon Lake Airport:
  • Improve airfield & acquire property
  • Construct general aviation facilities
• Ticonderoga: Construct general aviation facilities
• Warren County/Glens Falls Airport: Extend runway
• Albany International Airport:
  • Extend Runway 19
  • Expand airport terminal/air cargo facility
• Stewart International Airport:
  • Expand/replace terminal bldg/facilities
  • Extend Runway 34
• Schenectady County: Construct corporate aviation facilities
• Lake Placid/Adirondack Regional:
  • Provide hangar facilities
• South Albany Airport: Provide hangar facilities

Rest Area Improvement Concepts

Key issues:
• Signage and traveler information;
• Consistency of spacing between rest areas, especially in the North Country;
• Rest area safety and security;
• Rest area facility condition and quality of services; and
• Commercial vehicle parking and services, including truck stop electrification.

Improvement concepts:
• Rest Area Network Improvements (including facility spacing and safety improvements, better signage and traveler information, commercial vehicle services, etc.) and
• Truck Stop Electrification

Intermodal Improvement Concepts

Key issues:
• Reliability and safety (condition of infrastructure)

Improvement concepts:
• Luther Forest Technology Campus Travel Demand Management Program;
• Transit Connection at Westport/Lake Placid Amtrak Station;
• Transit Access to Stewart International;
• BRT in the Capital Region

automated freight programs. Innovative programs that combine the needs of Customs security and inspection with technologies that also provide shipper’s goods tracking and “inventory velocity” needs hold great promise. Ways to better utilize air, rail and water to move freight also hold great promise and must be integral components of a Smart Corridor.

Smart Public Transportation. Increasing public transit use has historically been a challenge for smaller urban areas as well as suburban and rural areas. The “many-to-many” travel patterns in those areas pose a problem for modes that require more concentrated travel markets to operate efficiently. Further, potential transit users are often unaware of what services are available, where to get them, how much they cost, or whether they can get to a particular destination using transit. Various traveler information systems in the Greater New York City Area and the Capital District, and similar efforts across the country, have shown that by using a variety of media – computers, phone, informational kiosks, etc., potential travelers can obtain information, and a passenger base for services can be established. Transit providers can then plan ways to maximize the use of their services to satisfy a broader variety of travel markets, and make the critical transit linkages (e.g., bus-to-train) that can substantially expand the market areas that transit operators can serve. For longer distance, intercity trips, air and rail service can play important roles. The significance of their roles has changed over time, although not always in a positive manner. Finding ways to take greater advantage of these modes need to be fully considered.
OVERVIEW

The New York State Department of Transportation (NYSDOT) and the Ministère des Transports du Québec (MTQ) have undertaken a coordinated pre-feasibility study of the potential for high-speed rail (HSR) service in the New York City-to-Montreal corridor. Passenger train service in the corridor is presently very limited, with one train per day in each direction and a travel time of more than 10 hours. The purpose of this joint effort was to assess the feasibility of implementing true high-speed rail service throughout the corridor.

THREE CORRIDOR SEGMENTS

The New York City-to-Montreal rail corridor includes three segments, each the subject of separate planning studies:

• New York to Albany – this 141-mile segment is part of the Empire Corridor, a New York-to-Buffalo HSR corridor designated by the US Federal Railroad Administration (FRA). Improving service in this section of the corridor has been addressed in a number of previous and ongoing studies and projects separate from those discussed here.

• Albany to Rouses Point – NYSDOT’s High-Speed Rail Pre-Feasibility Study looked specifically at this 191-mile segment between Albany and the US-Canada border at Rouses Point.

• Rouses Point to Montreal – MTQ’s study examined the pre-feasibility of similar HSR service along the 41-mile Canadian Pacific (CP) and 48-mile Canadian National (CN) segments between Rouses Point and Montreal.

NYSDOT is concurrently carrying out the I-87 Multimodal Corridor Study to identify improvements to all elements of the transportation network in the I-87/Autoroute 15 Corridor in New York State and at the US-Canada border. This study is identifying and assessing opportunities to improve transportation services and facilities to realize the potential for economic growth in both the corridor and the region as a whole. The HSR studies by NYSDOT and MTQ were carried out within the context of this overall corridor study.

This brochure summarizes the results of the NYSDOT and MTQ HSR studies, and offers joint recommendations on the feasibility of high-speed rail service throughout the New York City-to-Montreal corridor.

JOINT HSR FINDINGS AND RECOMMENDATIONS

• Full HSR Service: Effective but Costly. Full 150 MPH HSR service between New York City and Montreal could reduce rail travel time between these two cities from the present 10:15 hours to 4:05 hours. The capital costs to implement this type of service along either the CN or CP segment in Quebec would be approximately $80-110 million (US dollars), while the equivalent costs for the 191-mile Albany-to-Rouses Point portion would be approximately $4 billion. The cost of additional rolling stock is not included in either estimate.

• Incremental Improvements in NY State and Quebec Should Be Further Investigated. During the pre-feasibility study, some more modest improvements along the Albany-to-Montreal corridor were identified that could provide substantial travel time savings and improve reliability at considerably lower costs. The comparisons shown later in this brochure of the time savings and costs of various incremental improvements, versus Full 150 MPH service, indicate that especially in the near-term, it would be worthwhile to pursue an incremental approach to service improvements to obtain more immediate results.

• HSR in the Corridor Has Merit. The NYSDOT and MTQ pre-feasibility studies indicate that the development of HSR in this corridor has merit. However, given Full HSR’s multi-billion dollar cost and lengthy (10+ year) implementation time, and the corridor’s environmentally sensitive Adirondack Park location, rail passengers would be better served by incremental improvements implemented in stages. Concurrently, New York State should investigate FRA requirements for the corridor to be designated as part of the US HSR network. This would provide a basis for both MTQ and NYSDOT to develop justification for future federal funding for HSR.

• Improvement to Customs Operations. Both the MTQ and NYSDOT studies, and similar studies for the Boston-
Montreal corridor, identified the need to improve the operations of Customs at the border as one of the most cost-effective travel time savers. The Customs stop presently averages approximately one hour but sometimes extends to almost two hours. One potential improvement that has been identified would allow Customs operations to occur at one of the stations in Montreal, in the same manner as airline travel. Both MTQ and NYSDOT will work with the appropriate federal agencies in both nations to evaluate the feasibility.

I-87 HIGH-SPEED RAIL PRE-FEASIBILITY STUDY: ALBANY TO ROUSES POINT

NYSDOT’s I-87 High-Speed Rail Pre-Feasibility Study examined the issues and impediments associated with implementing high-speed rail service in the corridor between Albany and Rouses Point. Two different approaches were taken to consider improving the speed of rail passenger travel in that segment:

- Implementing **Full HSR Service** throughout the corridor, with a dedicated HSR alignment, and
- **Incremental Improvements** to existing service and facilities.

**Full High-Speed Rail Service – Albany to Rouses Point**

This option identified the improvements needed to achieve a sustained speed of 150 MPH between Albany and Rouses Point, on a new high-speed railway alignment. This alignment would be exclusively for passenger trains, while the existing route would be used primarily as a freight artery, with some local passenger service possible as well.

The existing alignment has frequent and closely-spaced curves, which are required to travel through the area’s very hilly terrain. Providing sustained 150 MPH service requires construction of an almost entirely new alignment, including the replacement of several stations and the construction of a number of long bridges and several tunnels to provide the generally flat alignment that HSR operations require.

The existing alignment would be retained to access the Albany-Rensselaer station, and the new alignment would reconnect with the existing alignment at Rouses Point. Existing stations in Schenectady, Saratoga Springs, Fort Edwards, Westport, and Rouses Point would also be retained under the new alignment. The trains on this HSR alignment would have a tilt-body capability (like the Bombardier’s “JetTrain” equipment). Speeds higher than 150 MPH would require electrification; however, the study did not consider electrified service due to the high additional cost of electrifying the alignment. A Northway alignment was also analyzed but was determined to be unfeasible.

**Time Savings, Required Costs & Additional Riders.**

Under Full 150 MPH HSR service, time savings would be significant – close to 3 hours off the present 4:35-hour travel time between Albany and Rouses Point, and approximately 1 additional hour in time savings than the most comprehensive Incremental Improvement scenarios discussed below. The capital costs for full HSR service would be approximately $4 billion, with annual operating and maintenance costs of roughly $65 million.

A very preliminary estimate approximated ridership in the NYC-Montreal market at 500,000 to 700,000 passengers under the Full HSR scenarios, assuming HSR service is implemented in both New York State and Quebec. The preliminary estimates were based upon ridership gains identified in previous studies.

**Incremental Improvements To Existing Service**

This element of the study identified the incremental improvements needed to reach maximum authorized speeds of 79 MPH, 90 MPH, 110 MPH, and 125 MPH (the present level is 70 MPH, and the actual average speed is well below that). To attain these speeds would require varying levels of improvement to the existing single-track alignment – the former Delaware & Hudson Railway (D&H) section between Albany and Rouses Point, now a part of the CP Railway system. Nineteen scenarios were considered, and the following factors were varied:

- reducing the number of stops between Albany and Rouses Point (presently there are 9 stops);
- utilizing tilt-train equipment or other new technologies;
- increasing “superelevation” and permitted “underbalance” on existing track;
- increasing the Maximum Authorized Speed;
- upgrading signal systems and track crossing controls required for high-speed service;
- adding sidings – important for a single-track alignment; and
- upgrading key track segments that are now a source of delay.

**Time Savings, Required Costs & Additional Riders.**

Various combinations of these incremental improvements were evaluated to determine the estimated travel time savings that could be achieved. The range of time savings, relative to the present 4:35-hour travel time between Albany and Rouses Point (including 9 station stops), ranged from 14 minutes for a Maintenance Upgrade (MU) scenario that would provide track improvements to upgrade Amtrak’s existing Adirondack Service between Albany and Rouses Point, to 40 to 60 minutes for moderate curve improvements that
would also utilize the same rail equipment presently used by Amtrak, to approximately 2 hours for more extensive improvements to tracks, signals, and sidings, the use of new “tilt train” rail cars, and the elimination of existing stops between Albany and Rouses Point.

Capital costs for the MU scenario were approximately $20 million, the moderate improvement scenarios would cost approximately $40 million, and the more extensive improvement options ranged from $130 to $270 million. Annual maintenance costs under these scenarios would be roughly $15 to 30 million. The preliminary ridership projections, based upon previous studies, estimated 25,000 new riders in the corridor annually under the MU scenario, 75,000 to 100,000 new riders annually with moderate improvements, and 100,000 to 175,000 new riders annually under the more extensive Incremental Improvement scenarios, above the present level of 90,000 riders.

**COST EFFECTIVENESS: INCREMENTAL IMPROVEMENTS VS. FULL HSR**

The higher ridership estimate under the Full HSR scenarios reflects the faster travel times that service would provide. However, in terms of the capital cost required to produce those time savings, and the required costs per additional rider, the Incremental Improvement scenarios are more cost-effective than the Full HSR scenarios. As indicated in the chart on the last page of this brochure, the costs per minute saved are considerably lower under the Incremental Improvement approaches than for the Full 150 MPH HSR plan.

**MTQ STUDY OF HIGH SPEED RAIL SERVICE IN QUEBEC**

MTQ’s HSR study had a similar goal – to make an initial assessment of the feasibility of implementing HSR in the Montreal to New York City (and Boston) market. Working in consultation with NYSDOT, MTQ focused solely on the portion of the segment between Montreal and the US-Canada border at Rouses Point. The study looked at a range of improvements for two separate alignments within Quebec (see figure):

- The 48-mile **CN** alignment, on which Amtrak’s Adirondack Service presently travels to Gare Centrale (Central Station) in Montreal. Gare Centrale also hosts VIA Rail service, commuter trains and provides a direct link to the local subway.
- The 41-mile **CP Rail** alignment connects to the Lucien-L’Allier Station and hosts commuter rail operations and provides a direct link to the local subway.

Travel time from the US-Canada border to Montreal is almost two hours, including one additional stop on the periphery of Montreal before arriving at Central Station. This excludes a one hour stop at the border for Customs.

**Improvement Scenarios.** Like NYSDOT, MTQ evaluated the feasibility of both full HSR service and various incremental improvement scenarios. Full HSR service was considered under three operating scenarios – 200, 240 and 300 km/hr (roughly 125, 150 and 186 MPH). As with the NYSDOT study’s Full HSR scenarios, implementing that type of service would require some divergence from the existing alignment. The figure indicates the approximate areas where a 150 MPH HSR alignment would have to depart from the existing CP and CN alignments. As the existing alignments in Quebec are flat and straight compared to the CP alignment between Albany and Rouses Point, few departures from the existing alignments would be required to achieve HSR speeds.

Incremental upgrades to key track segments, similar to those considered by NYSDOT, were not evaluated in Quebec for any improvements less than 125 MPH (200 km/hr), as the Quebec segments comprise less than fifteen percent of the corridor length and are in relatively good condition.

**Time Savings, Required Costs and Additional Riders.**

Under existing operations, trains cross at Rouses Point, stop at the border for Customs and at St. Lambert on the outskirts of Montreal before arriving at Central Station. Under these conditions, it takes trains approximately two hours to travel from the US-Canada border to Central Station, excluding one hour for Customs operations. MTQ’s study projects that the travel time could be reduced to approximately 30-35 minutes, assuming $25-35 million worth of improvements to provide 125 MPH (200 km/hr) service along the CP or CN alignment, with no Customs stop between Montreal and Rouses Point.
The estimate does not include the cost for rail crossing improvements or modifications at the terminal stations to enable Customs operations.

The capital costs for 150 MPH HSR service along the CP or CN alignment were estimated at $80-110 million, or roughly $1.9-2.3 million per alignment mile. This compares with $21 million per mile for 150 MPH HSR service on the 191-mile segment from Albany to Rouses Point, which reflects the relatively flat and straight alignment in Quebec, with minimal required diverges from the existing alignment.

As discussed above, preliminary projections indicate that the New York City-to-Montreal ridership would range from 25,000 to 550,000 passengers, depending on the combination of improvements selected for the various segments of the corridor.

OVERALL COST-EFFECTIVENESS OF INCREMENTAL IMPROVEMENTS: ALBANY TO MONTREAL

The options described above for the Montreal-to-Rouses Point and Albany-to-Rouses Point segments of the corridor would require a wide range of capital investment. However, in terms of the investment required to reduce travel time and attract new riders, the incremental improvements could be considerably more cost-effective when compared against full 150 MPH HSR service. The figure above shows differences in travel times along various segments of the corridor under existing, incremental, and 150 MPH HSR conditions.

Therefore, NYSDOT and MTQ have mutually agreed that neither government will pursue 150 MPH HSR service in the corridor at this time, and will instead further investigate incremental improvements to the existing alignments and more efficient Customs operations as a near-term means of saving travel time and increasing reliability. In Quebec, additional consideration would be needed to determine if the CP or CN alignment would provide the most efficient service between Rouses Point and Montreal. Likewise, NYSDOT would pursue implementation of its $20 million Maintenance Upgrade scenario and will pursue an increase in the permitted underbalance, which together would lead to a time savings of roughly 45 minutes. Both governments will partner with the appropriate federal agencies to determine the feasibility and logistics of moving Customs operations away from the border, potentially saving an hour of travel time.

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200 CP-CN: Approx. 125 MPH, curve, crossing, & signal improvements, tilt train equipment, Rouses Pt.-Montreal service.

Scenario 17: 125 MPH, curve, crossing, & signal improvements, tilt train equipment, 3 stops Albany-Rouses Pt.

HSR: Full 150 MPH HSR service, 3 stops Albany-Rouses Pt., Rouses Pt.-Montreal service.

[2] In millions USD.

[3] MTQ has not undertaken a study of improvements comparable to NYSDOT’s MU Upgrade.

[4] Preliminary estimates were based upon ridership gains identified in previous studies.

For further information on this HSR study, or on the overall I-87 Multimodal Corridor Study, check NYSDOT’s I-87 Study website (http://www.dot.state.ny.us/i87study). Information about the MTQ study can be found on their website (http://www.mtq.gouv.qc.ca/fr/accueil/changement.asp).