1. Introduction and Purpose and Need

1.1. Introduction

The Federal Railroad Administration (FRA) and the New York State Department of Transportation (NYSDOT) are preparing a tiered Environmental Impact Statement (EIS) to evaluate proposed system improvements to intercity passenger rail services along the 463-mile Empire Corridor, connecting Pennsylvania (Penn) Station in New York City with Niagara Falls Station in Niagara Falls, New York (refer to Exhibit 1-1). In April of 2010, NYSDOT received a $1 million grant from FRA to conduct analyses of potential Empire Corridor improvements, including preparation of a Service Development Plan, Tiered EIS, and other necessary studies. In addition, Federal Highway Administration (FHWA) contributed $1.8 million to the Tier 1 EIS preparation, and New York State provided matching funds in the amount of $3.5 million (New York State rail funds).

The Empire Corridor connects New York City with the largest cities in New York State, extending north through Yonkers and Poughkeepsie, and turning west at Albany to extend through Schenectady, Utica, Syracuse, Rochester, Buffalo, and terminating at Niagara Falls. The Empire Corridor consists of three main segments:

- **Empire Corridor South**, extending 142 miles north from Penn Station to just north of Albany-Rensselaer Station;
- **Empire Corridor West**, extending 294 miles west from approximately one mile north of the Albany-Rensselaer Station to just east of the Buffalo-Exchange Street Station; and the
- **Niagara Branch**, extending 27 miles west from a point located just east of Buffalo-Exchange Street Station to Niagara Falls.

The Empire Corridor is one of eleven designated high-speed rail corridors nationwide. Key federal legislation relevant to the development of high-speed passenger rail service on the Empire Corridor includes:

- The **Transportation Equity Act for the 21st Century (TEA-21)** (PL 105-178, June 9, 1998), supplemented the nationwide list of five high-speed rail corridors authorized under the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) (PL 102-240, December 18, 1991). TEA-21 authorized the Empire Corridor, from New York City to Albany to Buffalo, New York, as a high-speed rail corridor. ISTEA defined “high-speed rail corridors” as corridors where trains operating at speeds of 90 miles per hours (mph) could be reasonably expected.

- The **Passenger Rail Investment and Improvement Act of 2008 (PRIIA)** (Division B, Title III of Public Law 110-432, 122 Stat. 4907, October 16, 2008), as the first passenger rail authorization since 1997, called for significant improvements in the nation’s intercity passenger rail, including the development of high-speed rail corridors. This act authorized the

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1/ FRA Agreement Number FR-IPR-0002-10-01-00, from 05/03/2010 to 05/31/2013.

2/ The five high-speed rail corridors authorized under ISTEA were: the Midwest, providing 3 links from Chicago, IL to Detroit, MI and St. Louis, MO and Milwaukee, WI; Florida, linking Miami with Orlando and Tampa; California, linking San Diego and Los Angeles with the San Francisco Bay Area and Sacramento via the San Joaquin Valley; Southeast, connecting Charlotte, NC, Richmond, VA and Washington, D.C.; and Pacific Northwest, linking Eugene and Portland, OR with Seattle, WA and Vancouver, British Columbia, Canada.
appropriation of funds to establish several new passenger rail grant programs, including capital investment grants to support intercity passenger rail service and high-speed corridor development. FRA consolidated these and other closely related programs into the High-Speed Intercity Passenger Rail (HSIPR) Program.

- The American Recovery and Reinvestment Act (ARRA) of 2009 (PL 111-5) (February 17, 2009) and the Transportation, Housing and Urban Development and Related Agencies Appropriations Act for 2010 (Division A of the Consolidated Appropriations Act, 2010
(PL 111-117)) provided funding for the formation of the federal High-Speed Intercity Passenger Rail program (HSIPR). The Empire Corridor was one of the high-speed rail corridors to receive funding in 2009, 2010, and 2011.

1.1.1. Tiered NEPA EIS

This EIS has been developed in accordance with the National Environmental Policy Act of 1969 (NEPA) and its implementing regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508); FRA’s Procedures for Considering Environmental Impacts (64 Federal Register [FR] 28545); and the New York State Environmental Quality Review Act (SEQR) and its implementing regulations (6 New York Codes, Rules and Regulations [NYCRR] Part 617). The FRA and NYSDOT are using a tiered process, as provided for in 40 CFR 1508.28, to complete the environmental review of the program. “Tiering” is a staged environmental review process applied to environmental reviews for complex projects, such as the Empire Corridor Program.

The initial phase (“Tier 1 EIS”) of this process addresses broad corridor-level issues and sets forth a package of follow-on studies, proposals, and projects. The Tier 1 EIS evaluates a range of alternatives to meet the program needs of reducing infrastructure constraints and accommodating existing and projected demand. It establishes specific performance objectives for:

- Increasing train frequency and on-time performance (OTP),
- Reducing train travel time and automobile trips along the corridor,
- Attracting additional passengers, and
- Minimizing interference with freight rail operations.

The Tier 1 EIS identifies broad-based operational changes and investments in infrastructure and rolling stock (locomotives and passenger coaches) necessary to achieve those performance objectives. The Tier 1 EIS will result in the following decisions and actions:

- Define the purpose and need for the proposed action including goals and objectives;
- Develop criteria and screen alternatives to eliminate those that do not meet the purpose and need of the proposed action;
- Identify the range of reasonable alternatives to be considered, consistent with the current and planned use of the corridor, existing services within and adjacent to the program area, and other planned improvements;
- Identify the general alignment(s) and general right-of-way requirements of the reasonable alternatives;
- Identify the infrastructure and equipment investment requirements for each of the reasonable alternatives;
- Identify the travel times, service schedule, frequencies, and stations serviced for the reasonable alternative(s);
- Identify environmental constraints and considerations and perform high-level environmental review and evaluation of the reasonable alternatives under consideration;
- Identify, in the Final Tier 1 EIS, a preferred High Speed Rail Empire Corridor Program, including
identification of the required individual capital improvements needed to achieve the program (selected alternative); and

- Select, in the Record of Decision, an Empire Corridor High Speed Rail Empire Corridor Program, including identified individual capital improvements and the timing and sequencing for their implementation.

If a Build Alternative is selected at the conclusion of the Tier 1 process, the Tier 2 NEPA document(s) will then evaluate in greater detail the component projects of the selected Empire Corridor Program alternative chosen in Tier 1. Tier 2 will include detailed analyses based on refined engineering designs and operational plans and will identify site-specific environmental consequences. If avoidance and minimization of impacts cannot be achieved, site-specific mitigation measures for the selected alternative will be developed. Input from the public and from reviewing agencies will be solicited during both tiers.

1.1.2. Corridor and Program History

The Empire Corridor has been a vital rail transportation route of national significance for almost 200 years. This transportation route extends north through the Hudson Valley region and west through the Mohawk Valley region, south of the Adirondacks and north of the Catskills, to Buffalo on Lake Erie. The corridor developed along the historic “Water Level Route” that followed the canal system connecting Lake Erie and the Hudson River to transport goods and services to and from New York City. For many decades, the railroad was operated by the New York Central Railroad as a four-track speedway between Albany and Buffalo, carrying passenger and freight trains along express and local tracks. The Niagara Branch, extending north from Buffalo along Lake Erie, the Niagara River, and into Canada at Niagara Falls, was operated as a two-track shared use corridor. The transportation afforded by the canals and railroads connecting to the Great Lakes helped to establish New York City as an international trade center and the Atlantic port for the Midwest, and to transform Buffalo into the state’s second largest city. This network also enabled growth and development of the other major metropolitan areas (including the five other largest cities in the state) along this route.

Use of highways and airports constructed over the last generation has eclipsed rail use in the Empire Corridor for longer distance trips between upstate and western New York to New York City. The construction of the New York State Thruway (Thruway), consisting of Interstate Route 90 from Buffalo to Albany and Interstate Route 87 from Albany to New York City located roughly parallel to the Empire Corridor, has increased the reliance on automotive travel. The area is also serviced by regional airports, providing service from Buffalo, Rochester, Syracuse, Utica, and Albany to New York City. Through the second half of the 20th century, multiple factors, including competition from highways and airports, contributed to the decline of the railroads that led to bankruptcy of most of the railroad companies in New York and the Northeast by the early 1970s. Starting in the 1960s, the New York Central Railroad (later Penn Central and Conrail) removed track infrastructure located along the Empire Corridor to reduce maintenance, operating and real estate property tax costs; creating a two-track system between Albany-Rensselaer Station and Buffalo, and a single track line on portions of the Niagara Branch.

In 1970, the Rail Passenger Service Act established the National Railroad Passenger Corporation (Amtrak) to provide intercity rail service in 46 states and the District of Columbia. Prior to the establishment of Amtrak, intercity passenger rail service was provided by the private railroad
freight companies. Amtrak assumed the common carrier obligations of private railroads in exchange for a right to priority access of their tracks for incremental cost.

The possibility of instituting high-speed rail service along the Empire Corridor has been the focus of studies dating back twenty years. Developments in recent years have advanced rail planning and funding at both the federal and state levels culminating in this Tier 1 EIS program to evaluate high-speed passenger rail service along the Empire Corridor. Exhibit 1-2 presents a timeline of the recent program planning and development milestones for high-speed rail in the Empire Corridor.

### 1.1.3. CSXT Agreements

CSX Transportation, Inc. (CSXT), a private freight railroad company, owns more than half of the Empire Corridor (Exhibit 2-1). While recognizing the Federal NEPA and New York state SEQR legal framework upon which the environmental review process must be based, this Tier 1 Draft EIS has been developed in consideration of two agreements between NYSDOT and CSXT (dated May 28, 2010), both crafted to preserve the independence and integrity of the EIS process: “Framework Agreement Concerning Certain Rights and Responsibilities with Respect to New York High Speed Rail Service in the Empire Corridor” and “Framework Agreement Concerning Certain Rights and Responsibilities with Respect to Other Rights and Responsibilities under the Framework Agreement Regarding the Empire Corridor.”

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>2010</td>
<td>FRA and NYSDOT initiate scoping of Tier 1 EIS.</td>
</tr>
<tr>
<td>2010</td>
<td>Northeast Corridor Infrastructure Master Plan: Recommends capital investment programs between New York City and Schenectady, including Positive Train Control and station improvements.</td>
</tr>
<tr>
<td>2009</td>
<td>FRA and NYSDOT initiate Tier 1 EIS to evaluate Empire Corridor high-speed rail intercity passenger service.</td>
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<tr>
<td>2009</td>
<td>New York State Rail Plan: Identifies the Empire Corridor High-Speed Intercity Passenger Rail (HSIPR) Program as a necessary investment to address critical capacity and bottleneck constraints.</td>
</tr>
<tr>
<td>2009</td>
<td>Empire Corridor receives ARRA funding as one of eleven high-speed rail corridors nationwide.</td>
</tr>
<tr>
<td>2006</td>
<td>High-Speed Rail Task Force Report: Focuses on the need for both short-range and long-range incremental improvements and development of an operating plan in the Empire Corridor.</td>
</tr>
<tr>
<td>2005</td>
<td>Hudson Line Railroad Corridor Transportation Plan: Analyzes freight and passenger operations on the Hudson Line through 2020, and identifies infrastructure improvements to increase passenger train speeds to 125 mph.</td>
</tr>
<tr>
<td>2004</td>
<td>High-Speed Rail Pre-Feasibility Study: New York City to Montreal; Part of the I-87 Multimodal Corridor Study; evaluates the feasibility of high-speed rail using Empire Corridor tracks from New York City to Albany.</td>
</tr>
<tr>
<td>1999</td>
<td>Empire Corridor receives TEA-21 authorization as a high-speed rail corridor.</td>
</tr>
<tr>
<td>1998</td>
<td>NYSDOT commissions first passenger demand forecasting project for Empire Corridor high-speed rail.</td>
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Rail” and “Agreement for Progressing a Tier 1 Environmental Impact Statement” (“Agreements”) (attached as Appendix J).

CSXT has agreed to work with NYSDOT as the EIS is being developed by providing assistance and technical guidance, as well as documents and access to its property, as outlined in the Agreements. CSXT has also agreed to take into consideration the results of the EIS, as well as the views of the FRA, State of New York, Amtrak, the Port of New York/New Jersey and its customers, but at the same time, CSXT has stated that it has the obligation to preserve and grow its freight rail capacity and will maintain sole discretion to decide the safety and use of its property.

The position taken by CSXT and agreed to by NYSDOT in the Agreements will have to be considered in implementation of any selected alternative chosen by NYSDOT and FRA on property owned by CSXT. One principle set forth in the Agreements is that CSXT is entitled to compensation for the use, acquisition or diminishment in value of its property resulting from any project advanced as a result of the EIS. The development of the cost of alternatives must and will include the recognition of this principle, although the negotiation of the actual value of any compensation to CSXT is not part of this Tier 1 EIS, but will be developed if and when necessary as part of Tier 2 program advancement.

For these reasons, independent analysis by CSXT of the impacts to CSXT property will be extremely important and valuable to NYSDOT and FRA as the NEPA process continues. That analysis and the results of public hearings and comment on the Tier 1 Draft EIS will be reflected in the Tier 1 Final EIS.

1.2. Problem Statement

The existing Empire Corridor passenger rail service is negatively impacted by inadequate service levels, operational constraints, and delays resulting from pervasive conflicts with freight traffic. As a result, passenger rail service is not viewed by travelers as a viable, attractive transportation option, particularly to and from points west of Albany-Rensselaer Station.

Existing conditions limit Empire Corridor service. Simulated existing (2008, pre-recession) passenger service along Empire Corridor West indicates that passenger train on-time performance (OTP) is less than 48 percent, with an average train speed of approximately 50 mph and an average train lateness of almost 28 minutes. Simulated existing freight train performance along Empire Corridor West indicates over 38 train minutes of delay per 100 freight train miles operated, indicating congestion ahead, and a high variability in average freight train trip times, indicating service inconsistency. Furthermore, although maximum authorized speeds along portions of the Empire Corridor are 79 mph on the Buffalo to Hoffmans (west of Albany-Rensselaer) segment and 110 mph on the Hoffmans to New York City segment (refer to Exhibit 1-1), actual operating speeds along the majority of the rail corridor are considerably lower due to track conditions, alignment, and obsolete or inadequate track and signal systems which constrain capacity and speed.

Existing passenger rail service is infrequent relative to other available modes of transportation. For example, there is a strong travel market between New York City and Albany, and passenger rail captures only 11 percent of that travel market. Currently, thirteen weekday trips are available, with the earliest Albany-Rensselaer arrival time of approximately 9:30 a.m. This limited service

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does not accommodate business weekday schedules. Additionally, travel by rail between New York City and Buffalo is not a viable option for a business traveler, given the existing frequency of service and travel time. There are only four weekday trips between New York City and Buffalo. Furthermore, the trip from Buffalo to New York City can be made in less than two hours by air and under seven hours by car, compared to approximately eight hours by the existing Empire Corridor passenger service provided by Amtrak.

Despite these constraints and service limitations, ridership is growing. Ridership on the Empire Corridor has increased by 37 percent (387,304 passengers) over the past 10 years, to total more than 1.4 million passengers in 2011. Since 2001, ridership on the Buffalo to Albany-Rensselaer portion of the corridor has more than doubled, at the same time freight and commuter rail volumes have grown. Projections through 2035 indicate that freight traffic will continue to increase. Forecasts for the Metro-North Railroad’s Hudson Line through 2020 also indicate projected increases of 28 percent. Congestion is expected to worsen as demand for passenger, commuter, and freight rail grows.

Existing and forecasted socioeconomic and transportation market conditions in the Empire Corridor indicate an opportunity for an improved Empire Corridor passenger rail service to further grow, offering a viable, alternative mode of intercity travel in the Empire Corridor.

1.3. Program Purpose

The purpose of the High Speed Rail Empire Corridor Program is to introduce higher passenger train speeds on the Empire Corridor and improve reliability, travel times, service frequency, and passenger amenities. The High Speed Rail Empire Corridor Program will improve passenger rail service along the corridor and, in so doing, attract additional passengers, increase travel choices, and contribute to a balanced, multi-modal transportation system.

Improved service along the Empire Corridor will better connect the principal population centers of western New York State with Albany and New York City, further enhancing connections to Northeast Corridor passenger rail service (Philadelphia and Washington) and other markets (Midwest and New England), and facilitating international travel to Canada. Its location within one of the most populated regions in the country, and well as its importance to national and international freight traffic, underscores the importance of the Empire Corridor to regional development. Providing time-sensitive and efficient service will, in turn, promote economic vitality, improve quality of life for residents, and reduce automotive travel and emissions.

1.4. Program Needs

This program is being undertaken to meet the following needs: reduce infrastructure constraints and accommodate existing and projected demand.

1.4.1. Reduce Infrastructure Constraints

The Empire Corridor is distinguished by its diversity of private and public ownership and mix of passenger and freight usage (refer to Exhibit 2-1 in Chapter 2). Empire Corridor West is the most
important and heavily used freight route in the state, carrying one of the highest volumes on the CSXT system nationwide. It is the major gateway to Canada; the Midwest; and the Port of New York/New Jersey, the third largest container port in the United States. Metropolitan Transportation Authority’s (MTA’s) Metro-North Railroad (Metro-North), operating the Hudson Line commuter rail service on the southern half of Empire Corridor South, is the busiest commuter railroad in the country.

Outside of the Northeast Corridor, Amtrak intercity passenger services run almost exclusively on railroads that are owned and controlled by private freight and commuter railroads. This can create delays due to freight and commuter train interferences, track work and slow orders, as well as other factors largely beyond the control of Amtrak. Freight trains generally operate at speeds slower than passenger trains, in accordance with FRA track class operating restrictions (refer to Section 2.4). Slower-moving freight trains have to move to sidings to let passenger trains pass or the faster-moving passenger train has to slow down behind the slower freight train. This does not allow for optimal usage of tracks. Overall, these problems in the Empire Corridor result in over 161,000 minutes of annual delay, according to analysis of data provided to NYSDOT by Amtrak. This represents more than seven hours per day of total train delay to Amtrak trains in the corridor.

Speed restrictions are one of the most common causes of delay along Empire Corridor South between Albany-Rensselaer and Penn Stations. The competing use of the rail system, particularly on the Hudson Line by users with different operating requirements (mix of speeds, loads, and types of equipment) can cause congestion that trickles throughout the system. The Hudson Line has the greatest variety of types of users, and a delay in Albany can cause a train further south to miss its window, creating cascading delays that affect other operators.

Passenger rail service in Empire Corridor West is also frequently delayed as a result of the volume of freight and passenger service that shares the corridor’s constrained infrastructure west of Albany-Rensselaer Station. While demand for service on the Empire Corridor has grown, the system is operating as a two-track system west of Schenectady, and is reduced to single-track on the more than 20-mile section between Hoffmans, west of Schenectady, and Albany. The single-track section requires that a train may have to wait at Schenectady Station or Albany-Rensselaer Station for up to 18 minutes if a train is traveling in the opposing direction.

Deferred infrastructure maintenance has resulted in areas of speed restrictions that further reduce capacity, including the Livingston Avenue Bridge between Albany-Rensselaer and Schenectady Stations, where speed is presently restricted to 20 mph. There are several yards and industrial lead tracks that also contribute to congestion and negatively affect travel times and reliability for both freight and passenger rail services. Infrastructure constraints on the Empire Corridor have been extensively documented in a number of planning studies. Key findings

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4/ In 2011, the Port of New York and New Jersey had the third highest cargo volume in the United States, following the Port of Los Angeles, with the highest cargo volume; and the Port of Long Beach, with the second highest cargo volume.

are noted as follows:

- **Northeast Corridor Infrastructure Master Plan** (2010) identifies major challenges to the reliability and convenience of both existing and proposed intercity passenger rail service in the Empire Corridor between New York City and Schenectady.⁶ Among the challenges identified are numerous chokepoints caused by obsolete or inadequate track and signal systems, which constrain capacity and speed. The Master Plan identifies the single-track sections of the segments between Albany and Schenectady as among the greatest points of conflict for intercity trains operating over the Empire Corridor. It indicates the need for a new Livingston Avenue Bridge and additional track and extended platform and yard facilities in the Albany-Rensselaer Station to alleviate current congestion and accommodate increased service. It also cites the need for improvements on freight-only infrastructure in this area to minimize conflicts between freight and intercity service. The Master Plan identifies capital investment programs by segment along the Empire Corridor from New York City to Schenectady to reduce or eliminate freight/passenger train conflicts, thus improving reliability and convenience of intercity passenger rail service. These improvements were based on specific projects identified in the *Hudson Line Railroad Corridor Transportation Plan* and the *New York State Rail Plan*.⁷ The programs identified included the following segments:
  - Empire Connection Improvements
  - Hudson Line Commuter and Intercity Improvements
  - Empire Corridor Improvements
  - Albany-Rensselaer Station and Yard Capacity Improvements
  - Positive Train Control
  - Station Improvements

- The *Hudson Line Railroad Corridor Transportation Plan* (2005),⁸ analyzes freight and passenger operations through 2020, and identifies infrastructure improvements to increase passenger train speeds to 125 mph. The plan analyzes the capacity of the system, identifies individual choke points, and cites specific improvements, such as track crossover switches, high-level platforms, and additional areas of track and yard capacity upgrades, to improve the flow of rail traffic.

- The New York State Senate High Speed Rail Task Force Action Program identifies the existing operational constraints on Empire Corridor West in its final report, *Connecting New York’s Future* (2006):  “In the Albany to Buffalo Corridor, increasing freight traffic, greater distances and variable operating and track conditions are the major constraints. Over the long term, freight service and a quality passenger service cannot coexist on the same tracks at speeds over 90 mph. Empire Corridor service will not compete successfully with air travel for trips between Buffalo and New York City without a new dedicated passenger rail guideway.”⁹

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1.4.2. Accommodate Existing and Projected Demand

As shown in Exhibit 1-4, Empire Corridor ridership has steadily increased over the past ten years. Rail ridership was approximately 1.4 million person-trips in 2011.\(^{10}\)

The *New York State Rail Plan* identifies the need to address capacity for projected increases in both the freight and passenger rail markets. The *New York State Rail Plan* notes: “Amtrak is seeing some of its largest percentage ridership increases along the Buffalo-Albany rail corridor despite the level of freight-related delay. With high gas prices, ridership is expected to keep growing; this increase will create pressure for more reliable service and, eventually, more frequency of passenger trains. At the same time, CSXT is expecting increases in freight rail business.”\(^{11}\)

The Vision for 2020 in the *New York State Rail Plan* calls for an intercity passenger rail system to transport double the ridership on the rail corridor between New York City and Albany, Albany and Buffalo, and between Albany and Montreal.

Studies forecast growth in both passenger and freight traffic. The *Hudson Line Rail Corridor Transportation Plan* (2005) anticipates that total rail traffic along the Hudson Line commuter rail line will increase by 28 percent by the year 2020.\(^{12}\) The United States Department of

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**Exhibit 1-4—Empire Corridor Ridership FY02 to FY11**

![Graph showing Empire Corridor ridership from FY02 to FY11](image)

Source: Amtrak, 2011. Note that Amtrak’s fiscal year operates from October 1 to September 30.

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\(^{10}\) 2009 is used as the base year for ridership analysis.

\(^{11}\) NYSDOT. *New York State Rail Plan – Strategies for a New Age*. 2009.

Transportation (U.S. DOT) forecasts growth of rail freight traffic by 88 percent by 2035, and cross border rail shipments are expected to triple by 2035. A Niagara Frontier Urban Area Freight Transportation Study estimates a major increase in rail freight shipments, from 47 million tons in 2004 to 93 million tons by 2035. The Association of American Railroads forecasts that freight traffic on the Empire Corridor will increase by 50 percent to 100 percent by 2035. A study of rail freight traffic by the Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) forecasts almost 100 percent (96.7%) growth in rail carload and intermodal traffic between 2004 and 2035. The growth in cross-border rail traffic was estimated by the Niagara Frontier Urban Area Freight Transportation Study to be 183.2 percent between 2006 and 2035.

1.5. Performance Objectives

NYSDOT identified performance objectives for the High Speed Rail Empire Corridor Program as measurable objectives that directly relate to the program purpose and need to reduce infrastructure constraints to accommodate existing and projected demand. These performance objectives include:

- Improve system-wide on-time performance (OTP) to at least 90 percent,
- Reduce travel time along all segments of the Empire Corridor,
- Increase the frequency of service (number of daily round trips) along Empire Corridor West beyond the existing four daily round trips,
- Attract additional passengers,
- Reduce automobile trips, thereby reducing highway congestion,
- Minimize interference with freight rail operations.

These six performance objectives are used to evaluate and rank the high-speed rail alternatives developed for the High Speed Rail Empire Corridor Program. The environmental impacts of these alternatives are also considered, as presented in this Tier 1 Draft EIS, and will be an important factor in selecting the alternative to be advanced.

1.6. Transportation-Related Goals

Broad-based transportation-related goals of the High Speed Rail Empire Corridor Program are described as follows.

14/ Niagara Frontier Urban Area Freight Transportation Study, as cited by New York State Rail Plan (2009).
• **Increase travel choices by providing additional commuting and travel options for residents and workers.** The program will provide increased intercity passenger rail access to major metropolitan areas and will provide additional commuting and other travel options for residents and workers. This improved transportation access will potentially boost both the number of jobs available and the ability of workers (particularly those without alternative means of transportation) to access work locations, thereby expanding available labor markets. The program’s proposed rail passenger amenities, including improved station operations, accessibility, and parking, will help to attract additional passengers and will contribute toward expanding travel choices in the Empire Corridor. A U.S. Conference of Mayors’ report indicates that the potential travel efficiency gains through high-speed rail can lead to business productivity increases: car and truck travelers will benefit from reduced road congestion; airport users will benefit from reduced airport congestion; and travelers without car access will benefit by traveling to places that were previously unavailable to them.\(^{19}\) Providing options for travelers and connecting the major metropolitan areas will improve the quality of life for Empire Corridor residents and workers.

• **Contribute to economic revitalization by accommodating forecasted growth in population and employment and corridor rail freight operations.** New York City is the nation’s largest economic center, and is one of the three largest economic centers in the world, along with London and Tokyo. Population growth, particularly growth in the New York metropolitan area, has brought corresponding growth in freight movement and commuter rail service levels. The U.S. Conference of Mayors’ report projects that economic benefits of New York City to Albany high-speed rail service to the Albany metropolitan area alone would range from $358 million (with 79/90 mph service) to $523 million (with 110 mph service) in business sales for incremental-medium service, and would reach nearly $2.5 billion with 220 mph service.\(^{20}\) Improving freight rail access in the corridor has national trade and economic implications as well, given the importance of the Buffalo and Niagara crossings, connections to the Port of New Jersey/New York and the Midwest, and freight movement on the line connecting to these markets.

• **Improve environmental quality by facilitating rail use and reducing reliance on automobile travel, thereby reducing fuel use and greenhouse gas (GHG) emissions.** Reducing reliance on automotive travel will provide benefits to air quality and will reduce greenhouse gas emissions. A 2006 study, *High Speed Rail and Greenhouse Gas Emissions*,\(^{21}\) calculated emissions saved and generated through institution of high-speed rail nationwide. The net reduction in greenhouse gas emissions due to high-speed rail service along the Empire Corridor was estimated to be almost half of one billion pounds annually of carbon dioxide emission. Benefits would accrue from not only diverting passenger trips from other modes, but also by facilitating freight rail use and future growth in rail. For each one percent increase in long-haul freight that changes from truck to rail, fuel savings would be approximately 111 million gallons per year and annual greenhouse gas emissions would fall by 1.2 million tons.