2.10. ADIRONDACK CORRIDOR SERVICE IMPROVEMENTS

2.10.1. INTRODUCTION

The improvement project presented in this section - Adirondack Corridor Service Improvements - is focused on the Intercity and Tourist travel markets. The Empire Corridor between New York City, Albany and the Buffalo/Niagara Falls (see Figure 2.10-1) area is one of the more successful rail corridors in the country, particularly between Albany and New York City. Ridership on the Adirondack Corridor portion, between Albany, Plattsburgh, and Montreal, is considerably less, although passenger rail service to the Adirondack communities is important to their long-term vitality. The concepts discussed in this section look to build on those successes, focusing specifically on possible actions in the Capital District and along the Adirondack Corridor.

A variety of improvements have been identified to improve travel times, reliability and service quality as part of the High-Speed Rail Pre-Feasibility Study: New York City to Montreal, which was completed as part of the I-87 Multimodal Corridor Study. The proposed project looks at further actions to enhance rail service in the corridor, including improved public transportation links between the Albany/Rensselaer train station and major destinations in the Capital District. These and other actions to upgrade Empire and Adirondack Corridor rail service and to increase their effectiveness as part of a vital public transportation network are consistent with the multimodal goals of the corridor study and the Smart Public Transportation elements of its Corridor Strategic Plan.

2.10.2. EXISTING CONDITIONS

2.10.2.1. Empire and Adirondack Corridor Intercity Rail Service

Although the Capital District is presently served by both the Adirondack and Empire Amtrak services, upgrades to both of these services is necessary to enhance passenger rail service in the region and along the I-87 corridor as a whole. Adirondack Service between Albany and Montreal, with stops at Schenectady, Saratoga Springs, and various points within the Adirondack region, consists of only one train per day in each direction, and the travel time is more than seven hours. Although the Empire Corridor between New York City and Albany is one of Amtrak’s more successful rail lines, it does not serve the growing market for trips to and from residential and employment centers in Saratoga County.

Service improvements to these rail corridors, as well as the potential to expand passenger rail service beyond what currently exists, is limited by the present condition of Canadian Pacific (CP) Railway Canadian Main Line infrastructure between Schenectady and Rouses Point. The efficiency and reliability of both the track and signaling systems must be upgraded, new or extended sidings are needed in several locations, and a bypass of the Saratoga Springs Yard would be required to extend Empire Corridor service north to the recently reconstructed Saratoga Springs Station.

Several improvements to rail infrastructure in the corridor are already programmed or have been proposed as part of other initiatives. These include the following:
FIGURE 2.10-1
AMTRAK SERVICE IN NEW YORK STATE

Empire Corridor
(Niagara Falls to Penn Station)

Adirondack Corridor
(403(b) service to Montreal)

Montreal

Toronto

Niagara Falls

Buffalo

Rome

Syracuse

Utica

Schenectady

Lake Shore Limited

Poughkeepsie

Metro North Territory

Penn Station

North East Corridor
(Between NYC-Washington)
High Speed Rail Pre-Feasibility Study Maintenance Upgrade. In the I-87 Multimodal Corridor Study’s High-Speed Rail Pre-Feasibility Study, a broad range of improvement scenarios were tested to assess their effectiveness in increasing operating speeds and reliability and reducing travel time between Schenectady and Rouses Point. Similar improvements to the rail segment between Rouses Point and Montreal were simultaneously studied by the Ministry of Transportation Quebec (MTQ). Both studies concluded that a series of relatively modest improvements could significantly reduce travel times between Albany and Montreal. The “Maintenance Upgrade” alternatives identified for various areas between Albany and Rouses Point would produce time savings of 45 minutes, compared with the present schedule. The estimated capital cost for these improvements, which are summarized in Table 2.10-1, would be approximately $20 million. Combined with similar improvements within Quebec, travel time between Albany and Montreal could be cut by 3 hours.

CSX Double-Tracking. NYSDOT and Amtrak have long-standing plans to double-track the 18-mile CSX Hudson Subdivision between Albany-Rensselaer and Schenectady, a mostly single-track route that is presently used by 12 Amtrak trains per weekday (six in each direction) as part of Amtrak’s Empire Service, as well as by the Adirondack Corridor service and Ethan Allen service to Vermont. One critical infrastructure element, the Albany-Rensselaer railroad bridge (Livingston Avenue Movable Bridge), is already double-track, but in need of signalization and significant rehabilitation work. Final design engineering for this bridge work remains to be done.

Table 2.10-1 – Proposed Improvements to Reduce Trip Time on Canadian Pacific Railway Canadian Main Line between Ballston Spa and Rouses Point

<table>
<thead>
<tr>
<th>Proposed Improvement</th>
<th>Start Mile Mile End Mile</th>
<th>Estimated Cost</th>
<th>Total Length</th>
<th>Estimated Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace Jointed Rail with Continuous Welded Rail</td>
<td>38.0 41.0</td>
<td>$2,400,000</td>
<td>12.2</td>
<td>$10,000,000</td>
</tr>
<tr>
<td></td>
<td>43.0 50.0</td>
<td>$5,600,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>118.9 119.0</td>
<td>$200,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>119.0 120.0</td>
<td>$800,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>120.0 121.0</td>
<td>$800,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>134.3 134.4</td>
<td>$200,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construct New Passing Siding</td>
<td>TBD</td>
<td>$3,000,000</td>
<td>TBD</td>
<td>$3,000,000</td>
</tr>
<tr>
<td>Tie Replacement / Track Surfacing / Curve Realignment</td>
<td>142.0 192.0</td>
<td>$6,000,000</td>
<td>50.0</td>
<td>$6,000,000</td>
</tr>
<tr>
<td>Bridge Replacement</td>
<td>29.5 29.6</td>
<td>$1,000,000</td>
<td>0.1</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Total Estimated Cost of Improvements</td>
<td></td>
<td>$20,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBD = To be determined</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Canadian Pacific Railway Capital Improvements. The primary focus of CP’s capital programs in the foreseeable future is three-fold:
To correct temporary slow-order conditions;

To maintain the existing capabilities of infrastructure between Schenectady and Rouses Point in terms of track capacity and Maximum Authorized Speed (MAS) for freight and passenger train service; and

To improve the efficiency and reliability of the signaling system and track structure.

These improvements will add considerably to the overall dependability of service, both freight and passenger. NYSDOT is assisting in the funding of this effort.

The Canadian Main Line track structure has nearly 50 percent jointed rail, which is necessarily more expensive to maintain than continuously welded rail (CWR) because track surfacing is required more frequently, with greater wear and tear to crossties and ballast due to the forces exerted at the bolted joints between rail sections. Subgrade and stabilization work on various track sections in the 2004 work season are expected to improve signal system and service reliability. These improvements were previously scheduled and are not part of the $20 million in proposed improvements identified in the High-Speed Rail Pre-Feasibility Study.

The freight traffic volume on the Canadian Main Line is comparatively small by U.S. mainline railroad standards. Therefore, CP plans on gradually installing CWR where economically justifiable on the Canadian Main, such as locations where jointed rail must be replaced. Installation of CWR helps reduce maintenance of way and signal operating expenses, while improving service reliability by reducing signal system failures that require trains to operate at restricted speed. The operation of an intercity corridor-style passenger service requires that on-time performance be in the 90-95 percent range in order to be acceptable to customers. To date, NYSDOT and CP Rail have invested in a $27 million program for infrastructure improvements along the Canadian Main Line, including the new Saratoga Springs passenger station, vertical clearance improvements for intermodal containers, and other system reliability improvements that will benefit both passenger and freight service.

CP and NYSDOT investments in the near term will improve operational reliability but not significantly alter the network configuration or capacity, although improving reliability does produce some increase in capacity through improved train flow over the network.

2.10.2.2. Capital District Commuter Rail Service

No regular commuter rail service currently exists within the Capital District, although Amtrak's intercity service on its Adirondack and Ethan Allen lines can be used to make some commuter or other trips between Albany and Saratoga County. As running times continue to improve on the Empire Line between New York City and Albany, an increasing number of persons living or working in the Capital District now use the train as a link to New York City and other points south.

In 2000, the Capital District Transportation Authority (CDTA) conducted several marketing and feasibility studies as part of its Commuter Rail Demonstration Project. The project was an outgrowth of the Capital District Transportation Committee's (CDTC) New Visions long-range transportation plan for the region, and of the Regional Enterprise for a Vital Economy and Sustainable Transportation (REVEST) program developed in 1998. The demonstration project was ultimately discontinued because market demand for commuter rail in the district and the intended scale of a “demonstration” did not warrant the substantial capital investment and on-going operating subsidy it would have required.
These issues were explored further during a Capital District commuter rail technical workshop held in conjunction with the I-87 Multimodal Corridor Study in March 2004. The consensus of the workshop participants was that full-scale, independent commuter rail service in the Capital District had long-term merit but insufficient demand in the near-term to offset the substantial capital and operating costs. However, the same moderate infrastructure improvements and service modifications already planned or recommended in this study to improve Amtrak service for intercity passengers could also expand rail service opportunities between Saratoga County and Albany. Initial steps in this area could then serve as a possible starting point for commuter rail service in the Capital District in the future.

2.10.2.3. Albany-Rensselaer Station Transit Connectivity

The Albany-Rensselaer station is reasonably convenient for intercity passengers destined to or from downtown Albany. However, the station is presently not convenient for commuters who prefer a single-seat ride to work and convenient connecting transit to their destinations is not available. The Albany-Rensselaer station is located across the Hudson River from Albany destinations, and the stopping times at stations in the potential service territory north of Albany are not appropriate for weekday commuter trips.

Currently, two CDTA bus routes make regular stops at the Station and connect to downtown Albany: #14, Rensselaer 3rd Street/Amtrak; and #24, Albany-Troy via Rensselaer. A privately-owned bus company, Upstate Transit, operates morning bus service from Saratoga County to Albany, with the last stop at the Albany-Rensselaer Station. Upstate Transit does not stop at the station in the afternoon.

Route #14 service towards Albany stops at the Albany-Rensselaer Station every half-hour during the morning peak period. Similarly, the service from Albany stops at the station every half-hour during the afternoon peak period. Midday service is less frequent. Route #14 provides convenient service to the major downtown points, but does not connect to the outlying, more westerly nodes such as the State Office Campus, SUNY-Albany Uptown Campus, the Center for Environmental Sciences & Technology (CESTM), the Center for Stress & Anxiety Disorders (CSAD), the Center for Technology in Government (CTG), the International Sematech Center North, Crossgates Mall, and other academic, governmental, or commercial developments.

The other CDTA bus at the Albany-Rensselaer Station, Route #24, also provides good service to the Empire State Plaza and surrounding streets downtown, but not to points further west. It also stops at the station about every half-hour during peak periods -- to Albany in the morning peak, and from Albany during the afternoon peak period. Headways of 30 minutes are generally too long for commuter service, but the modest demand for service to and from the station is not sufficient to warrant more frequent service.

The Upstate Transit bus is of little use as a connector for the station because there is no service in the afternoon, and its potential morning service linkage is to the Station from downtown—
not the station-to-downtown connection needed by commuters. There is also taxi service to and from the station, with a fare to downtown of approximately $7.00.

### 2.10.3. PROPOSED IMPROVEMENTS

#### 2.10.3.1. Empire and Adirondack Corridor Intercity Rail Service

In addition to the track and signal improvements already planned by Canadian Pacific and NYSDOT, several intermediate and long-term infrastructure improvements are required to enhance intercity passenger service in the Capital District. In the intermediate term, the $20 million Maintenance Upgrade package discussed in Section 2.10.2.1 above and identified in the High-Speed Rail Pre-Feasibility Study, along with changes to Customs operations recommended as part of that study and similar system upgrades in Quebec, would reduce travel time between Albany and Montreal by roughly three hours.

A number of additional improvements are recommended to enhance corridor rail service:

- **Saratoga Springs Yard By-Pass.** An additional near-term expenditure of approximately $4.0 million is recommended for a 2.5-mile bypass of Saratoga Springs Yard that would improve passenger and freight service reliability by segregating freight and passenger operations at this key choke point.

- **Additional Empire Corridor Service to Saratoga Springs.** To provide better service to Saratoga Springs, making the new Saratoga Springs Station the end point of one round-trip train from the Empire Corridor Service (rather than the Albany/Rensselaer Station) would provide better service to the rapidly growing Saratoga County. The recommended Saratoga Springs Yard By-Pass, intended to provide overall improvement to passenger and freight operations in the corridor, would be required to make this Empire Service extension to Saratoga possible due to conflicts with freight operations without the by-pass. Otherwise, there would be no additional capital costs associated with this service change.

  It is recommended that the new Empire Service train out of Saratoga Springs would be one that would get passengers to Penn Station New York within the morning business hours of roughly 8:30 AM to 9:30 AM, and back to Saratoga Springs by roughly 8:00 PM to 9:00 PM. For example, a train leaving Saratoga Springs at 6:01 AM would arrive at Penn Station at 9:14 AM.

- **Ballston Spa Siding Extension.** In the long-term, additional capacity could be added to the Adirondack Corridor by extending the Ballston Spa controlled siding two miles to link with the Saratoga Springs Yard bypass track. Installation of extended controlled siding and associated signaling would cost approximately $3.0 million. This added capacity, combined with the Saratoga Springs Yard bypass track, would result in six miles of double-track capacity immediately south of the Saratoga Springs Station.

#### 2.10.3.2. Saratoga County Market Enhancement

As noted, the recommended 2.5-mile Saratoga Springs Yard bypass would make it possible to extend additional Empire Service between Albany and Saratoga Springs. With this service added, the number of trains operating between Albany and
Saratoga Springs each day would increase to three in each direction - one each from the existing Adirondack and Ethan Allen Services and a new third train from the Empire Service. In terms of commuters using these trains to travel to Albany, trains departing Saratoga for Albany would be leaving at roughly 6:00 AM (the new extended Empire Service) and 8:52 AM (Ethan Allen Service). (The Adirondack service from Montreal does not depart from Saratoga until 3:44 PM). Equivalent afternoon service would get travelers back to Saratoga Springs at 4:30 PM or 9:14 PM.

As discussed above, the purpose for this service extension is to better connect Saratoga County, the Capital District’s faster growing area, to New York City and other points served along the Empire Corridor. The capital and operating costs associated with this service change should be viewed in that context. However, although 3 trains per day substantially spaced apart is far from real commuter service, some riders could be attracted to the Amtrak service between Saratoga and Albany, particularly if Amtrak, CDTA and others marketed the service and considered offering commuter discounts for Saratoga-to-Albany passengers. The incremental cost of this commuter marketing would be minimal. The market response to this service also would help test the potential market for more extensive commuter rail service in this corridor in the future.

If the response to this service, and further marketing and feasibility studies, indicated a demand for commuter trips to and from Saratoga County, a number of possible additional steps could be considered at that time:

- **Additional Train Service.** Increasing train service between Saratoga County and Albany/Rensselaer would be required to build up and maintain a real commuter service market. As shown in the adjacent figure, this could provide, as an example, five trains per day in each direction between Albany and Saratoga by adding new commuter trains to existing Empire, Adirondack and Ethan Allen Service trains in the corridor. The additional expense of this type of service could only be offset by a commuter demand substantially larger than presently exists. However, over the next 10-20 years, these market conditions can change considerably, as population and employment continues to grow in Saratoga and other northern counties, as energy or other transportation costs increase, and as similar factors make rail travel more competitive.

- **New Wilton Area Station.** Construction of a new station in the Wilton area, located adjacent to I-87 in an area free from the space constraints that make building adequate park-and-ride capacity in downtown Saratoga Springs unfeasible. This station, which could serve commuters from throughout Saratoga County and points north, would also contain facilities for overnight layover of two or three sets of equipment, including a wye track to turn equipment, as well as space for bus, van, and limousine intermodal connections. The cost of this facility would be about $6 million, excluding land acquisition and roadway access.
In summary, the main intent of the service extension to Saratoga Springs is to directly connect that high-growth area to Empire Corridor service. Some Amtrak passengers from Saratoga who now use the Northway to travel to the Albany/Rensselaer Station would then be eliminated from that often-congested corridor. Any Saratoga-Albany commuters or other travelers who chose to use this service instead of driving would provide a further, although likely small, traffic benefit. However, any consideration of moving toward actual, more frequent commuter rail service in the corridor would require considerable further engineering and marketing study due to the major funding and institutional hurdles that such a service would face, and the significant ridership necessary to justify such a service.

### 2.10.3.3. Albany-Rensselaer Station Transit Connectivity

At the present time, personal autos and taxis handle virtually all trips to and from the Albany/Rensselaer station. Significant increases in bus service between the station and key Albany area destinations would be needed to expand the usefulness of these bus routes to train passengers. However, certain minor service modifications to existing CDTA bus routes would enhance connectivity with Amtrak's Empire service and expand bus service to employment centers to the west of downtown Albany. The schedules of the #14 and #24 bus services could be revised so that the buses stop as close as possible to the time of train arrivals. Also, particularly in the morning, the stop times for the Albany-bound buses of the two services are almost identical. Modifying this pattern could produce reduced waiting times for the service to downtown at no additional operating costs.

In order to provide transit service to and from the station for the westerly Albany sites like the State Office Campus, extension of the #14 service should be studied. Two alternatives could be considered: extending the existing service, or starting a new, peak-period only, “14B” service that would not stop in downtown but would go directly to a distribution loop in the westerly area. Additional studies of the feasibility of these service changes would be required, along with estimates of the capital and operating costs of the recommended changes.

### 2.10.4. Projected Costs

#### 2.10.4.1. Capital Costs

As discussed above, the capital costs for the intermediate improvements proposed as part of this project include $4 million for installation of a 2.5-mile bypass of Saratoga Springs Yard and $3 million for a 2-mile extension of the Ballston Spa controlled siding. In addition, a $20 million Maintenance Upgrade was recommended as part of the High-speed Rail Pre-Feasibility Study.

Long-term capital costs would include $6 million for a new intermodal facility at Wilton.

#### 2.10.4.2. Operating Costs

The extension of one round-trip Empire Service train from Albany to Saratoga Springs would result in a relatively minor change in overall Amtrak operating costs. Based on Amtrak’s per-mile operating cost and assuming 5-day per week service, the cost of operating this additional service would be approximately $800,000 - $900,000.
On a system-wide basis in 2002, according to Amtrak's annual report, its total operating expense per car-mile was $8.52. Service provided north of Albany-Rensselaer by the Adirondack is financed in part through funds provided to Amtrak by NYSDOT. In the year 2001, NYSDOT made a payment to Amtrak of $2.7 million for Adirondack service. Starting in fiscal year 2003-04, NYSDOT will pay 100 percent of the operating loss on this line, estimated at $4.11 million for 2003-04 and $4.5 million for 2004-05. Based on 175,200 train-miles per year, this payment by NYSDOT equates to $15.41 per train-mile, or $3.85 per car-mile, based on a four-car train. Therefore, including the payment made by NYSDOT, the Adirondack had a relatively good operating ratio of 1.10, according to data supplied by Amtrak to the Amtrak Reform Council for the Council's 2002 Report (Appendix V). Of state-supported Amtrak trains, only one route, Heartland Flyer (Oklahoma City/Fort Worth), had a more favorable operating ratio, 0.90.

Funding through the Federal Railway Administration's High-Speed Rail program would potentially be available for improvements within the Empire Corridor, due to the corridor's existing designation as an FRA High-Speed Rail corridor. (Request for a similar designation is being sought by NYSDOT for the Adirondack corridor.) Other sources include NYSDOT, which has helped fund many of the recent and on-going rail improvements in the corridor, and Amtrak. The participation of Amtrak in any funding program is difficult to predict, given its precarious financial standing and recent problems regarding its funding support for on-going rail system improvements.