

State of Connecticut
Department of Transportation

**IMPLEMENTATION
OF CONNECTICUT
RAIL SERVICE INTO
PENN STATION NEW YORK**

August 1, 2007

CONNECTICUT SERVICE TO NEW YORK PENNSYLVANIA STATION

The implementation of commuter rail service into Pennsylvania Station (Penn Station) is not only a laudable goal but it also presents opportunities to provide significant mobility improvements for the residents of and visitors to this region. Improvements to the region's economy will also occur as a result of the additional rail service and traffic congestion along the I-95 corridor will realize some relief.

There are however, institutional, technical and fiscal challenges that must be addressed and resolved. This requires the collaborative effort of several jurisdictions and railroad operators. This report explores the potential options and obstacles involved in expanding commuter rail service to Penn Station in Manhattan.

OVERVIEW

On June 13, 2007, Governor Rell requested the Department of Transportation (Department) to "complete a full review of every available option and potential obstacle for service for the thousands of Connecticut commuters who travel every day into New York City to locations near Penn Station." The Governor also asked the Department to "study the feasibility of purchasing double-decker rail cars to be used for service from Connecticut stations into Penn Station." This paper presents three recommended strategies for implementation for service expansion on the New Haven Line (NHL) through the existing Hell Gate Line into Penn Station New York (PSNY), including the use of double-decker rail cars.

The NHL is a commuter rail service operating in Connecticut and New York State between New Haven and Grand Central Terminal (GCT) on the East Side of Manhattan with three connecting branch lines. MTA Metro-North Railroad (MNR) operates the NHL service for the Department under a service contract. NHL and other MNR train service do not operate to or from PSNY. Access to PSNY from NHL and other MNR train service at GCT currently requires multiple subway transfers or a 20 – 30 minute walk.

PSNY, which is located on the West Side of midtown Manhattan and owned by Amtrak, serves Amtrak intercity passengers and rail commuters from Long Island and New Jersey. It is estimated that "23 percent of Metro-North riders have jobs on the West Side, but arrive daily in Grand Central Terminal."¹ It is possible to operate service from the NHL directly to PSNY via existing infrastructure on Amtrak's Hell Gate Line that splits from the NHL at New Rochelle, New York. Adding train service to PSNY in the AM peak is currently a challenge due to capacity constraints (high level of train congestion) at PSNY. The crowded operating conditions at PSNY are anticipated to change in 2013, when Long Island Rail Road (LIRR) is expected to complete the East Side Access (ESA) project. The ESA project will provide direct one seat service for LIRR passengers into GCT, which by diverting passengers to GCT, could reduce the volume of LIRR trains operating into PSNY in the future.

MNR is preparing an Environmental Impact Statement (EIS) for "Penn Station Access" (PSA) for NHL trains and other MNR service with Department participation. The PSA study examines preliminary alternatives for improving access from the New Haven and Hudson Lines to PSNY on the West Side of Manhattan. As part of the PSA DEIS effort, off-peak/weekend NHL service to PSNY via the Hell Gate Line, and NHL weekday service to PSNY via the Hell Gate Line with new station stops at Co-Op City, Parkchester, and Hunts Point were analyzed.

OPPORTUNITIES TO IMPROVE SERVICE

Commuter rail service to and from PSNY from the NHL will significantly improve mobility in the region. Improved access to PSNY would provide convenient connections and reduce travel time to the West Side of Manhattan, Long Island, New Jersey, and other regional and long distance destinations. Both

¹ PlaNYC 2030: A Greener, Greater New York, Page 80, April 22, 2007.

New Jersey Transit (NJT) and LIRR customers could switch trains at PSNY to access the NHL and other MNR service, which would result in greater connectivity via rail and would reduce roadway congestion in those areas as well. This type of service would also provide the opportunity for reverse commutation to destinations in the Department's service area to support economic development and provide employment opportunities. Direct service to PSNY would divert passengers traveling on the NHL who have a destination near PSNY from GCT trains and provide an alternative to enter and exit New York. This paper discusses the challenges and steps to be taken to implement commuter rail service between Connecticut and PSNY.

CHALLENGES TO IMPROVED SERVICE

- Amtrak owns the Hell Gate Line and PSNY – The Department will need to negotiate and execute an operating and access agreement with Amtrak, as owner of the Hell Gate Line and PSNY, to initiate service.
- Capacity at PSNY – Current operators at PSNY include Amtrak, LIRR, and NJT. Due to current capacity constraints and projected increases in future demand, there will be considerable competition for peak period train operating slots (capacity) until after LIRR opens their planned service to GCT (currently scheduled for 2013), and later NJT planned service to the Farley Building. These two projects for growth of rail transportation into New York City will have an effect on the future changes to available capacity in PSNY.
- Union/Agreement Issues – Several different agreements will have to be developed with the operating railroads since service will be operating in Amtrak, NJT, and MNR territories.²
- Partnerships and Agreements between and among the Department, MTA, MNR, Amtrak, LIRR and NJT are necessary for the implementation of NHL service to PSNY.
- Operational Restrictions
 - Personnel – For any level of service expansion, the availability of personnel for train operations and mechanical servicing will have to be addressed.
 - Operating and Maintenance Costs – Costs directly related to additional train service expansion will increase.³
 - Rail Equipment – Additional rail equipment will be needed based on the service level.
 - Power Systems - The dual mode train equipment that Connecticut currently operates on the NHL is not capable of operating to PSNY. The design specifications of the next generation of M-8 rail cars in production for the NHL will allow for operation on the Hell Gate Line into PSNY. However, a short section of the Hell Gate Line leading into Harold that is still served by 25 Hz power will have to be equipped with third rail, since the M-8 equipment will not be able to operate on that section.
 - Capital Railroad Infrastructure – As owner of the Hell Gate Line, Amtrak may require construction of additional infrastructure improvements on the rail line to accommodate the increased service levels and to improve operating flexibility.

² Some possible items in the Agreement would include the roles and interaction of Amtrak Police and MTA Police, protocol for Amtrak and MNR Operating Divisions with regard to variety of operating issues, including rescuing disabled trains, response to a rules violation, etc., liability and claims responsibilities of MNR and Amtrak, trackage rights charges for the operation of service over the Hell Gate Line between New Rochelle and PSNY, rights to operate the projected number of trains for the proposed service, and incentive and penalty payments for on-time performance on the Hell Gate Line modeled on the MNR/Amtrak agreement on the NHL

³ Some of these costs include fuel, train crew, user's access fees due to mileage, associated risk charge, general and administrative charges, management fees, maintenance of stations, maintenance per mile, fees to access Amtrak lines and PSNY, and mechanical servicing.

PENN STATION NEW YORK SERVICE OPTIONS

STRATEGY ONE – Weekend Service into and through PSNY to Jets and Giants Football Games at the Meadowlands Sports Complex in New Jersey

The Department in conjunction with MNR has determined that a seasonal pilot service that would take riders into PSNY and on to Secaucus, New Jersey to the Meadowlands Sports Complex (MSC) for Giants and Jets football games would be beneficial for regional rail service integration. The MTA has been working with the Department, Amtrak, NJT, LIRR, and others on the details of this service that was announced in June and is planned to begin in 2009. Implementation of this service would be the responsibility of MNR in coordination with the Department.

The service would bring Connecticut and other NHL riders to football games and would follow Amtrak's Hell Gate Line to PSNY and the Northeast Corridor Line to Secaucus. NHL riders would have a one-seat ride to Secaucus Junction, New Jersey, where they would transfer to a shuttle train to MSC. Trains are expected to operate on approximately 10-12 Saturday and select Sunday game days (i.e., Sunday games starting at 1 PM) between August and mid-January. The service parameters will include trains originating in Connecticut and making stops at major stations. Under the joint ticketing component of this proposal, a single ticket would allow travel on MNR, MTA commuter rails, buses, subways, and NJT trains. The goal of this pilot initiative is to reduce highway congestion on event days. This service will benefit game attendees residing in the Department's service area. This pilot service would also be an important first step in addressing many of the initial challenges in implementing PSNY service for Connecticut riders.

One challenge in implementing the first expansion strategy is that the electric rail equipment on the NHL is not presently capable of operating into PSNY because of the different overhead catenary power systems. MTA and MNR with the Department have been in discussions with NJT to operate NJT train equipment for this pilot service that can operate on the different overhead catenary power systems between New Haven and New Jersey.

This strategy will increase operating and maintenance costs. There are union issues and agreements related to train operations, service/maintenance, costs and payments that would have to be coordinated and developed among the agencies.

STRATEGY TWO – Off-Peak and Weekend Service

A proposed second strategy would include year-round off-peak and weekend service into PSNY. This type of service would be beneficial to discretionary travel for Connecticut riders to the West Side of Manhattan, Long Island, and New Jersey for visits to shops, shows, and museums and provide connection to Amtrak intercity passenger service at PSNY. Rail customers from New York City, Long Island and New Jersey will also benefit by having a new weekday and weekend service for traveling to Connecticut stations and other state venues. MNR currently estimates that service could be initiated in the 2010-2011 timeframe.

All of the same union, institutional, and operating restrictions identified in "Strategy One" above also apply to "Strategy Two". The main obstacles associated with this strategy will be reaching an agreement with Amtrak and modifying labor agreements to allow operating crews to enter new territories. There will also be an increase in capital and operating and maintenance costs associated with ticket selling, communications, train crews, etc. During the off-peak and weekend is when most trains are inspected and serviced so the expense for this service strategy may be similar as full weekday service. Capital costs will also increase if a decision were made to purchase additional rail

cars to support this service.

STRATEGY THREE – Commutation during Peak Periods to/from PSNY

A proposed third strategy would introduce year-round daily service to and from PSNY with potential station stops at Co-Op City, Parkchester and Hunts Point (all in the eastern part of the Bronx). These stations will generate significant additional commuter options and ridership.

Under this service alternative, MNR estimates the annual number of trips to and from PSNY on the NHL would be approximately 8.5 million (29,000 in a weekday) with a 2.5 million total increase in annual trips on MNR. MNR estimates 1.4 million trips per year would be diverted from auto and 5.6 million NHL trips would be diverted from GCT service. Time savings per trip would vary depending on the origin and destination stations, but could be as great as 30 minutes. The proposed PSNY service would increase AM peak period service to Manhattan from the NHL by 40 percent from the current service.⁴

All of the same union, institutional, and operating restrictions identified in “Strategy One” and “Strategy Two” above also apply to “Strategy Three”. Similar to the off-peak and weekend strategy, the critical obstacle to implementing this alternative will be reaching an agreement with Amtrak. A significant discussion point will be capacity constraints that exist at PSNY. Amtrak owns PSNY and it is currently the only point of access for LIRR and NJT to midtown Manhattan. “Penn Station New York is the most heavily used railroad facility in the nation, serving more than 340,000 arriving and departing rail passengers on over 840 train trips on an average weekday.”⁵ “By 2010, NJ TRANSIT, LIRR, and Amtrak anticipate the number of daily trips to increase overall by 26 percent to nearly 432,000.”⁶ “This growth in service will exacerbate the current operating resource constraints with respect to platform train assignments and train capacity; interlockings at Penn Station New York entrances; yard capacities; passenger waiting areas, station platform access, availability, and dwell times.”⁷

In addition to the obstacles identified in “Strategy Two”, obstacles associated with implementing this strategy include: the need for a larger fleet along with an increase in operating and maintenance costs; the need to hire additional personnel to operate, maintain, and service the trains; and an additional capital commitment. Additional rail equipment would be needed depending on the service level. Infrastructure improvements may be needed during this strategy of expansion to improve operating flexibility and traffic flow on the Hell Gate Line. The Department and MNR would work with Amtrak to assess the improvements that would be needed. Finally, there will be challenges with train scheduling and dispatching with the additional train service provided during the commuter rush periods on the NHL.

STRATEGY FOUR – Initiate limited Peak Service

A proposed fourth strategy would introduce two New Haven Line peak trains in each direction. The Department would contract with a rail provider to operate this service. All the same union, institutional and operating challenges outlined in the three previous Strategies would apply.

Double-decker Cars for a PSNY Service

It would be feasible to operate double-decker rail cars as currently used by NJT for service from Connecticut stations on the Hell Gate Line into PSNY. The double-decker cars with electric locomotives would carry approximately 30-40 more passengers per car than currently envisioned for the M-8 car capacity. A rail car manufacturer is currently under contract to build double-decker cars for NJT. The contract with NJT provides for a 100-car base order at a cost of \$243.0 million. Connecticut could conceivably “piggy back” onto NJT’s order and the cars could be manufactured and

⁴ Preliminary draft numbers from Metro-North Penn Station Access Preliminary Draft Environmental Impact Statement, agency review copy dated September 2006.

⁵ Access to the Region’s Core, Draft Environmental Impact Statement, New Jersey Transit, Page 17, Oct. 2003.

⁶ Access to the Region’s Core, Draft Environmental Impact Statement, New Jersey Transit, Page 17, Oct. 2003.

⁷ Access to the Region’s Core, Draft Environmental Impact Statement, New Jersey Transit, Page 17, Oct. 2003.

delivered to Connecticut in the next couple of years. However, additional locomotives would be needed to haul the double-decker cars. NJT is currently purchasing both dual mode and electric locomotives. It is possible that an option for additional locomotives could be obtained to meet the need for the PSNY service.

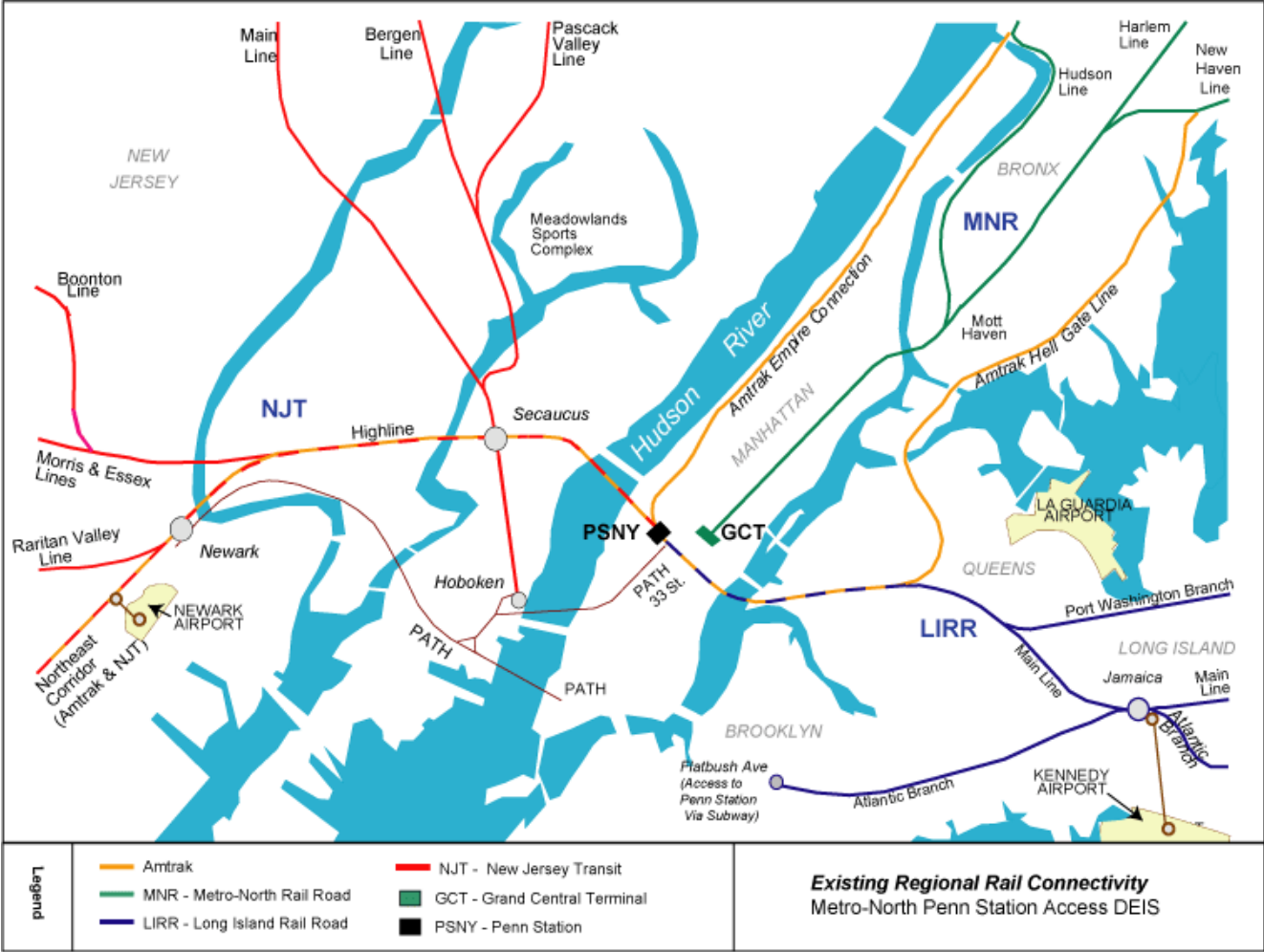
The following obstacles need to be addressed with respect to the operation of double-decker equipment:

- Maintenance Facilities: Consideration of a locomotive-hauled double-decker fleet separate from the M-8s would need to include the impact of developing and constructing maintenance facilities separate from the current maintenance facilities now planned for the M-8s, and ensuring that sufficient maintenance capacity would be available on the day the double-decker fleet arrives; and
- Separate Fleet for PSNY service: Two separate fleets would have to be supported for GCT and PSNY service generating significant additional costs and operating issues.

Conclusion

Access to PSNY from the NHL is a viable strategy to relieve increased congestion along the I-95 corridor and improve mobility in the region. The Department is committed to improving rail service along the NHL and other corridors in the further development of Connecticut's Regional Transit System. The strategies offered represent an aggressive timeline for implementation as presented in the "Schedule for NHL Expansion into PSNY." However, it should be noted that the strategies in this plan have many variables, issues and assumptions subject to discussion and change, and this study will be updated as progress developing the "Strategy One" pilot service brings added specifics to the variations and level of capital and operating costs that will be required.

Regional Rail Connectivity Map



Schedule for NHL Expansion into PSNY*

	ACTIVITY/YEAR	2007	2008	2009	2010	2011	2012	2013	\$\$ TBD
STRATEGY ONE (Pilot Service to MSC)	Access and Operating Agreement with Amtrak								
	Agreements with LIRR, NJT, and Amtrak on rail operations and scheduling								
	Agreement with NJT on operations of rail equipment								
	Initiate Pilot Service								
STRATEGY TWO (Off-peak and weekend Service to PSNY)	Access and Operating Agreement with Amtrak								
	Agreements with LIRR, NJT, and Amtrak on rail operations and scheduling								
	Acquire additional rail equipment								
	Initiate Service (weekday off-peak possibly later)								
STRATEGY THREE (Daily Service to PSNY)	Access and Operating Agreement with Amtrak								
	Agreements with LIRR, NJT, and Amtrak on rail operations and scheduling								
	Acquire additional rail equipment								
	Design and construct necessary infrastructure improvements on the Hell Gate Line								
	Design and construct improvements needed for new stops at Co-Op City, Parkchester, and Hunts Point stations (MNR costs)								
	Initiate Service (Post LIRR East Side Access)								
STRATEGY FOUR (2 Peak trains in each direction)	Access and Operating Agreement with Amtrak								
	Agreements with LIRR, NJT, and Amtrak on rail operations and scheduling								
	Acquire additional rail equipment								
	Initiate Service								

* Note: As Strategies are further developed, costs and schedules will be updated.