

## 10. Transit and Freight Rail

### 10.1. Chapter Overview

#### 10.1.1. Introduction

The Northern Branch study area is currently served by limited freight service along the Northern Branch line, and extensive bus service, providing local and commuter service to Manhattan. NJ TRANSIT commuter rail lines are also located to the west of the study area, providing commuter service to Hoboken (and midtown Manhattan by connecting service at Secaucus Junction). The Hudson-Bergen Light Rail (HBLR) is located at the very south end of the study area. Previously, between the 1850's and the early to mid-1900's the railroad provided the majority of freight and passenger service, aside from the occasional stagecoach, and the startup of the bus system. As such, the impact to both freight and passenger travel is combined in this section to determine the impact associated with the reinstatement of passenger rail service on overall passenger and freight traffic.

#### 10.1.2. Summary of Findings

There is little difference between the two Build Alternatives in terms of their potential for impact to transit and freight rail service. Impacts are confined primarily to freight rail service and are the result of the required shift in freight operations from daytime service to overnight service. Impacts to transit service are primarily modifications of existing bus service to reduce duplication and improve operational efficiency. The specific impacts associated with the Build Alternatives are as follows:

- Both Build Alternatives will add ridership to the existing Hudson-Bergen Light Rail service (HBLR) operated by NJ TRANSIT, but the increase in ridership will not cause the HBLR service to exceed its capacity or lead to crowding.
- Both Build Alternatives will result in identical changes to freight service.
  - During the construction phase, both Build Alternatives will result in temporary impacts to freight delivery service through temporary closure of sidings currently serving freight customers. NJ TRANSIT would work with NYS&W, CSX and affected freight customers to develop mitigation plans during the construction period.
  - As a result of the need to temporally separate freight service and light rail service, both Build Alternatives will result in the shifting of freight deliveries to overnight hours from their current daytime service. Although this change may have operational or fiscal impacts on freight customers, no mitigation is proposed.
- The proposed passenger rail service for both Build Alternatives duplicates NJ TRANSIT bus line #127, #165, #166, and #168, and Red & Tan Route #14. NJ TRANSIT would coordinate with the bus providers to identify changes in the bus routes that would improve access to the stations and/or reduce duplications in service.
- No changes will occur on the existing Pascack Valley Line commuter rail service operated by NJ TRANSIT.

### 10.2. Methodology

Preliminary design drawings were used to identify potential physical impacts to freight rail infrastructure, and mapping of existing bus service routes and proposed station locations was used to determine existing bus service and the potential for duplication.

### 10.3. Environmental Review

Transit and freight services are regional issues that are best assessed on a network basis. On an individual, site-by-site basis, station sites and right-of-way improvements are not the source of impacts that may affect the existing transit and freight network. Additionally, as the existing transit and freight networks are regional in nature, discussion by municipality focuses on a level of detail that may obscure or complicate the discussion of potential impacts. Consequently, the following environmental review addresses each type of transit service and freight service, comparing their existing operation, future No Build operation, and operation under each of the Build Alternatives.

#### 10.3.1. Existing Conditions

##### 10.3.1.1. Bus Transit Service

Several bus routes serve the study area, providing local and commuter service. NJ TRANSIT buses provide service along the north-south corridors of Dean Street, Engle Street, Grand Avenue, and Broad Avenue. Bus routes within the study area that operate east-west, connecting western Bergen County with New York City, operate along Fort Lee Road, Palisade Avenue, and Route 4. The private line Red & Tan/Coach USA also operates several bus routes through the study area, primarily up the Grand Street/Dean Street/Engle Street north-south corridor. Table 10-1 presents an overview of the routes that traverse the study area in the vicinity of station areas, and their frequency (trips/hour).

**Table 10-1: Existing Bus Routes and Frequencies**

Station Area	Nearest Bus Stop	Bus Route	Frequency (weekdays)	
			AM Peak Hour*	PM Peak Hour**
91 <sup>st</sup> Street	Fairview Ave/Broad Ave	NJT 83 – Hackensack to Journal Sq	2	3
	Fairview Ave/Broad Ave	NJT 127 – Ridgefield to PABT	2	4
Ridgefield	Broad Ave/Hendricks Causeway	NJT 127 – Ridgefield to PABT	2	4
	Broad Ave/Pleasantview Terrace	NJT 165 – Westwood to PABT	2	3
	Broad Ave/Pleasantview Terrace	NJT 166 – Cresskill to PABT	3	3
	Broad Ave/Pleasantview Terrace (off-peak service only)	NJT 168 – Paramus to PABT	0	0
Palisades Park	Broad Ave/Columbia Ave	NJT 83 – Hackensack to Journal Sq	2	3
	Broad Ave/Columbia Ave (Limited)	NJT 127 – Ridgefield to PABT	0	1
	Broad Ave/Columbia Ave	NJT 166 – Cresskill to PABT	15	7
	Grand Ave/Central Blvd	Coach 11A – Stony Point (Rockland County) to PABT	2	1
	Grand Ave/Central Blvd	Coach 21T – New Milford (Rockland County) to PABT	2	2
Leonia	Broad Ave/Fort Lee Rd	NJT 166 – Cresskill to PABT	12	7
	Broad Ave/Fort Lee Rd	NJT 751 and 755 – Bergen Mall (Paramus) to Edgewater Commons Mall (Edgewater)	2	2
	Broad Ave/Fort Lee Rd	NJT 756 – Englewood Cliffs to Fort Lee	1	1
	Broad Ave/Fort Lee Rd	NJT 182 – Hackensack to GWB Bus Terminal	3	3
	Grand Ave/Fort Lee Rd	Coach 21T – New Milford (Rockland County) to PABT	2	2
	Grand Ave/Fort Lee Rd	Coach 11A – Stony Point to PABT	2	1

**Table 10-1: Existing Bus Routes and Frequencies (continued)**

Station Area	Nearest Bus Stop	Bus Route	Frequency (weekdays)	
			AM Peak Hour*	PM Peak Hour**
Englewood Route 4	Van Nostrand Ave/Grand St	NJT 166 – Cresskill to PABT	18	10
	Van Nostrand Ave/Grand St	NJT 756 – Paramus to Fort Lee	2	2
	Route 4/Grand Ave	NJT 171 – Paterson to GWB Bus Terminal	2	2
	Route 4/Grand Ave	NJT 175 – Ridgewood to GWB Bus Terminal	2	2
	Route 4/Grand Ave	Coach 21T – New Milford (Rockland County) to PABT	2	2
	Route 4/Grand Ave	Coach 11A – Stony Point (Rockland County) to PABT	2	1
Englewood Town Center	Palisade Ave/Dean St (Engle Street)	NJT 166 – Cresskill to PABT	10	6
	Palisade Ave/R.R.Crossing	NJT 756 – Paramus to Fort Lee	2	2
	Palisade Ave/ R.R.Crossing	NJT 178 – Hackensack to GWB Bus Terminal	2	2
	Palisade Ave/R.R. Crossing	NJT 780 – Passaic to Englewood	2	2
	Palisade Ave/Grand Ave	Coach 14ET – Westwood to PABT	2	2
	Palisade Ave/Grand Ave	Coach 20 – West Nyack (Rockland County) to PABT	3	2
	Palisade Ave/Grand Ave	Coach 84/84L – Rockleigh (Rockland County) to GWB Bus Terminal	2	1
	Palisade Ave/R.R.Crossing	NJT 186 – Dumont to GWB Bus Terminal	3	3
Englewood Hospital	Hospital/Dean St (Engle Street)	NJT 166 – Cresskill to PABT	10	6
	Hospital/Dean St (Engle Street)	Coach 14ET – Westwood to PABT	2	2
	Hospital/Dean St (Engle Street)	Coach 20 – West Nyack (Rockland County) to PABT	3	2
	Hospital/Dean St (Engle Street)	Coach 84/84L – Rockleigh (Rockland County) to GWB Bus Terminal	2	1
	Hospital/Dean St (Engle Street)	NJT 780 – Passaic to Englewood	2	2
Tenafly Town Center	Highwood Ave/Washington Ave (Railroad Station)	NJT 166 – Cresskill to PABT	11	7
	Piermont Rd near Jay St	Coach 84/84L – Rockleigh (Rockland County) to GWB Bus Terminal	2	1
	West Clinton Ave/Piermont Rd	Coach 14ET – Westwood to PABT	3	2
	West Clinton Ave/Piermont Rd	Coach 20T – West Nyack (Rockland County) to PABT	5	2
Tenafly North	Union Avenue (Cresskill)	Coach 20T – West Nyack (Rockland County) to PABT	4	2
	River Edge Rd and Jefferson Ave	Coach 84/84L – Rockleigh (Rockland County) to GWB Bus Terminal	2	1

*Notes: (NJT) = New Jersey Transit Bus Route (Coach) = Coach USA/Rockland Coaches Bus Route .PM Peak Hour (5-6pm) for all stations. AM Peak Hours (8-9am) for North Bergen Junction, 91<sup>st</sup> Street, Ridgefield, Palisades Park, Leonia, Englewood Route 4, Englewood Town Center and Englewood Hospital. AM Peak Hour (7:30-8:30am) for Tenafly Town Center and Tenafly North Station.*

*Source: NJ TRANSIT; Coach USA/Rockland Coaches, 2011.*

### 10.3.1.2. Passenger Rail Transit

The Northern Branch Corridor is not directly served by passenger rail transit. NJ TRANSIT's Pascack Valley Line service, located west of the Northern Branch Corridor, provides commuter rail service between Spring Valley, New York (Rockland County), and Hoboken. The Hudson-Bergen Light Rail (HBLR) service begins in North Bergen at Tonnelle Avenue, at the extreme southern end of the study area, and continues southeast to Weehawken, Hoboken, Jersey City, and Bayonne.

### 10.3.1.3. Freight Service

#### Infrastructure

The Northern Branch study area extends for approximately 12 miles from North Bergen to Tenafly. For the southernmost two miles, the New York Susquehanna & Western Railway (NYS&W) operates adjacent to CSX, connecting the NYS&W Yard in North Bergen to Ridgefield Park, outside of the study area. NYS&W has one main track with siding tracks. NYS&W customers include a bulk loading facility and a transloading facility. North of 83<sup>rd</sup> Street the NYS&W diverts from the Northern Branch Corridor and follows the River Line, which runs west of the Northern Branch. (The Northern Branch Corridor is proposed to be located on the western portion of the NYS&W property. The Northern Branch tracks would then flyover the NYS&W tracks just south of 83<sup>rd</sup> Street, to join with the CSX Transportation (CSX) (formerly Conrail) tracks for the remaining ten miles.)

The Northern Branch Corridor right-of-way north of 83<sup>rd</sup> Street is generally 60 feet wide, with a single freight track, and drainage ditches along both sides. The condition of the existing railroad infrastructure can generally be described as fair, appropriate for the current 10 mile an hour speed designation and low volume freight operations. The corridor was formerly a two-track railroad in the southern portion, between North Bergen Yard and the Borough of Ridgefield, but was reduced to one track sometime in the past. Depending on customer location, the second track remains for use as a siding and/or for switch leads to industrial sidings off-property. North of the City of Englewood the line is generally single track. The tracks end at the New York State line where the right-of-way becomes a pedestrian and bicycle path, the Joseph B. Clarke Rail-Trail in the Town of Orangetown.

#### Operations – NYS&W

NYS&W has a bulk transload terminal in North Bergen, south of 69<sup>th</sup> Street and a large multi-modal and bulk distribution facility south of the study area, at the southern end of North Bergen. This is an active rail line which provides frequent service between the distribution facility and sites/connections in New Jersey, Pennsylvania and New York. Within the study area, there are three locations that are served by NYS&W trains. The Westside Transload facility is located at 43<sup>rd</sup> Road. It is a rail-based waste recycling facility, with a single thru-track for gondola car operations, and two adjacent bays for truck operations. It also includes a substantial air handling system that provides negative air to minimize air-borne pollutants. One-half mile to the north is the NYS&W bulk transload terminal which services a variety of trucking companies and receivers. Finally, just after the Northern Branch crosses over to CSX, the NYS&W provides service to the CSX Intermodal terminal, located at 83<sup>rd</sup> Street.

#### Operations – CSX

The CSX freight service on the existing Northern Branch rail line originates in the CSX North Bergen Yard, which is located south of 69<sup>th</sup> Street. Typically this services consists of one relatively short CSX freight train per day (running in each direction), moving at slow speed. The existing freight operator serves five local customers between North Bergen and Northvale at the New Jersey State line, the northern terminus of the Northern Branch rail line.

CSX operations are discussed as though they commence at the southern end of the corridor and deliveries are made daily to each customer. In reality, not all customers are serviced every day. A two-locomotive

train with a daily average of 15 loaded freight cars begins operation at the North Bergen Yard. The symbol given to this train by CSX is “C777”. The current track arrangement near 69<sup>th</sup> Street in North Bergen does not permit a progressive movement from the yard to the Northern Branch rail line. Therefore, a series of maneuvers are necessary for the train to access the Northern Branch rail line from the yard. Once on the Northern Branch rail line the C777 proceeds north to make deliveries.

The freight customers serviced by CSX are constantly changing. In 2006 there were eight customers, and as of 2009 there were five customers. Three of the CSX freight customers are within the Northern Branch study area: W.R. Grace in North Bergen, Colorite Polymer in Ridgefield, and Admiration Foods/Supreme Oil in Englewood. Two additional customers are north of Tenafly: Dykes Lumber (formerly J.J. Demarest Lumber) in Closter and Cove Distribution in Northvale. While daily deliveries vary depending on customer, deliveries begin and end at the southern end of the line. Based upon observations of train activity, it appears that an average of 50 to 80 cars of freight are delivered per week on the Northern Branch line. In addition, an average of 50 to 80 empty cars are returned to the North Bergen Yard per week. The train operates during the daytime, usually between the hours of 7:00 a.m. and 7:00 p.m., almost exclusively on weekdays.

W.R. Grace is located in North Bergen on the eastern side of the right-of-way, just north of the 83<sup>rd</sup> Street grade crossing and is serviced by the Grace Siding. Delivery of an average of two loaded tank cars per week is made to the facility. Switching at this site has been observed to take up to one hour. Empty cars that are to be removed from the site are picked up and added to C777’s train which then continues north to service additional customers.

Colorite Polymer is located in the Borough of Ridgefield and serviced by the Colorite Siding. When this plastics company located at Pleasant View Terrace needs a delivery, cars for customers in Englewood and points further north are cut from the train. This is to provide the necessary headroom to work the side track located at the plastics company, which is a facing point switch on the western side of the right-of-way. A runaround move is also needed to facilitate switching at this location. Two segments of the former second main track are in service here to provide runaround and car storage capability. This customer typically has seven cars on hand, situated on two parallel tracks. Observations indicate that CSX delivers three to four cars every third to fourth business day. Freight delivered to this customer is contained in tank and covered hopper cars. Observations indicate that this consignee is sometimes switched by C777 on its southward (return) trip.

The most intensive user of CSX rail freight service along the Northern Branch Corridor is Admiration Foods/Supreme Oil in Englewood, located in Englewood, just south of Englewood Avenue on the eastern side of the right-of-way, and serviced by the Supreme Oil Siding. Anecdotal observations indicate that this food production company receives on average seven cars per business day, with the vast majority being tank cars. Cars for this customer can be placed on three different tracks for unloading (two short side tracks plus the Englewood Runaround track). The side tracks are trailing point northward switches coming off of the north end of the Englewood Runaround. The Englewood Runaround also has a midpoint crossover near Linden Avenue. Switching maneuvers at this location are extensive and vary daily depending on customer requirements. Many of these maneuvers require the train to occupy the Englewood Avenue grade crossing.

On most days the C777 “turns” after working this customer and heads back to North Bergen Yard. On days when C777 continues north to Closter, the empty cars from the Englewood customer are left in the Englewood Runaround near Forest Avenue, then picked up later that day when C777 passes by on its southbound trip.

Two CSX rail freight customers are located north of the study area. The CSX train continues north to Closter and Northvale once or twice per week. Following the deliveries made to these two customers the

train returns south with any empty cars retrieved from these businesses. Empty cars are then picked up from the food production company in Englewood. These empties are located at the southern end of the Englewood Runaround and require the train to utilize a turnout situated at Forest Avenue. The train continues south and picks up any empty cars that may have been left at the Ridgefield Runaround before returning to the North Bergen Yard.

### **10.3.2. Potential Impacts and Mitigation**

#### *10.3.2.1. No Build Alternative*

##### Bus Transit Service

Under the 2030 No Build Alternative, it is expected that all existing bus routes would continue to serve the study area, mostly likely with an increase in service to meet growing transit service demands in lieu of other transit options in the study area. NJ TRANSIT buses are expected to continue providing service along the north-south corridors of Dean Street, Engle Street, Grand Avenue, and Broad Avenue. Bus routes within the study area that operate east-west, connecting western Bergen County with New York City, are expected to continue to travel along Fort Lee Road, Palisade Avenue, and Route 4. The private line Coach USA is also expected to continue to operate several bus lines through the study area, primarily up the Grand/Dean/Engle Street north-south corridor. It is also expected that Coach USA would continue to operate buses from New York City Port Authority Bus Terminal and George Washington Bridge Bus Station to Rockland County through Bergen County.

It is also anticipated that without transit options, bus service will experience growing schedule issues as a result of roadway congestion stemming from growing numbers of personal vehicles and buses on the constrained study area infrastructure and capacity issues at the Port Authority Bus Terminal (PABT) and the George Washington Bridge (GWB) Bus Terminal in Manhattan. Expansion projects are planned at the PABT to accommodate additional bus service, but the improvements will not alleviate the anticipated traffic issues within the study area. NJ TRANSIT in coordination with North Jersey Transportation Planning Authority (NJTPA) and Coach USA, is conducting the “Northeast New Jersey Metro Mobility Study” to examine existing and future bus transit services to identify innovative and effective improvements to the services. The results of this study are anticipated to be available towards the end of 2011.

##### Passenger Rail Transit

No changes to passenger rail service are anticipated in the Northern Branch Corridor under the No Build Alternative. Given the development pattern and urban density of development in the study area, acquiring land for rail transit anywhere but within the Northern Branch Corridor would require significant real estate acquisition, displacement, and community disruption. The extreme southern sections of the study area would continue to be served by the HBLR, and the Pascack Valley Line would be available to the west of the corridor.

##### Freight Service

Rail freight operations and infrastructure are not expected to be affected under the No Build Alternative. Freight delivery by rail would continue along the Northern Branch Corridor while the demand for such service remains. Under this alternative, CSX is expected to maintain its current roster of rail freight customers along the corridor.

#### *10.3.2.2. Light Rail to Tenafly (Preferred Alternative)*

##### Bus Transit Service

*Impacts* – Table 10-1 above summarizes the location and frequency of NJ TRANSIT and private operator bus service relative to proposed station sites. All station sites are located within walking distance of an

existing bus stop used by either NJ TRANSIT or Red & Tan/Coach USA service. Although the majority of bus routes in the study area are oriented toward New York City and travel express once on the highways, local riders can still use the service to reach a proposed Northern Branch station if they are traveling within the study area. Local passengers on commuter lines cannot request a non-scheduled stop on service traveling in the peak direction.

Ridership modeling performed by NJ TRANSIT anticipates that a large number of bus trips would be generated at three station areas. Palisades Park would have approximately 220 bus transfers; Leonia would have approximately 1690 bus transfers, and Tenafly Town Center would have approximately 490 bus transfers.

The Northern Branch service under the Light Rail to Tenafly (Preferred Alternative) duplicates portions of NJ TRANSIT bus line #127, #165, #166, and #168, and Red & Tan Route #14. NJ TRANSIT would coordinate with the bus providers to identify changes in the bus routes that would improve access to the stations and/or reduce duplications in service. However, any adjustments to NJ TRANSIT bus schedules and routes will be undertaken at the discretion of NJ TRANSIT after a thorough review of existing ridership and travel demand patterns in the study area.

Consequently, as a result of the population density and existing transit and mobility demands in the study area, the operation of the Northern Branch rail service under the Preferred Alternative will serve as a complement to existing bus service. By diverting drivers to rail service, the Northern Branch will help alleviate some of the traffic congestion that creates service inefficiencies for bus service. Although the rail service duplicates some public and one private bus service, the population density of the area and the need for transit access to the proposed stations represents an opportunity to adjust bus service to better meet the needs of the community. As a result, the Light Rail to Tenafly (Preferred Alternative) will not result in significant impacts to the operation of existing bus service in the study area.

*Mitigation* – None required.

#### Passenger Rail Service

*Impacts – Pascack Valley Line* - NJ TRANSIT's Pascack Valley Line will continue to serve rail transit customers in its service area. The ridership populations for the Pascack Valley Line and the Northern Branch service are geographically different. As a result, the proposed Northern Branch service will not adversely affect the viability of the Pascack Valley Line.

*Hudson Bergen Light Rail (HBLR)* - Twelve HBLR trains would pass through Tonnelle Avenue Station (the present northern terminus of the HBLR) in the peak hour. Of these 12 trains, ten would continue onto the Northern Branch, and two would start their service at Tonnelle Avenue without crossing onto the Northern Branch. The proposed 91<sup>st</sup> Street Station would be the southernmost station on the Northern Branch before the service transitioned onto the HBLR. A passenger count of 3,425 passengers would be on board the trains at 91<sup>st</sup> Street Station during the peak hour, leaving capacity for 750 passengers to board from the existing HBLR Tonnelle Avenue Station and south to Weehawken. The two HBLR trains departing from the existing Tonnelle Avenue Station in the peak hour would have capacity for 835 passengers.

Together, the Northern Branch-originating HBLR trains and the Tonnelle Avenue Station-originating HBLR trains would have capacity for 1,585 passengers after all Northern Branch passengers are accommodated. Existing ridership on the HBLR adds 490 passengers from Tonnelle Avenue to Weehawken, which would be the segment with the highest number of passengers. In 2030, the total non-Northern Branch ridership is expected to total 735 passengers. This number is below the projected capacity of the HBLR during the peak hour. Consequently, the Light Rail to Tenafly (Preferred Alternative) will not have an adverse effect on the capacity of the HBLR.

*Mitigation* – None required.

#### Freight Service

*Impacts* – As described in Chapter 3: Alternatives Considered, light rail service must be separated from freight service. The Northern Branch project proposes to separate light rail and freight service temporally; that is, light rail service will operate during the day and freight service will operate at night. At no point will freight vehicles and light rail vehicles be in motion on the Northern Branch at the same time.

Shifting freight service to overnight may result in the potential for economic impacts to freight providers and freight customers, and, without mitigation, may result in noise impacts along the Northern Branch Corridor (as discussed further in Chapter 12: Noise).

Providing overnight freight service and accommodating overnight freight deliveries requires the freight operator and possibly the freight customer to supply staff for an overnight shift. Overnight shifts are typically less desirable, and depending on the affiliation of staff, may require negotiation with employee unions. Overnight workers are often compensated more for their time as a result of the inconvenience of the shift. Additionally, overnight workers represent additional overhead hours for the freight customers and freight service providers. Establishments that typically close in the evening would remain open overnight, requiring climate control, lighting, and security, where necessary, equivalent to that which is provided during the day, at least in the areas of the buildings occupied by staff who would receive the delivery. Freight service providers may require overnight dispatchers and other service personnel in addition to those who work during the day supporting train operations and maintenance.

In addition, the construction phase of the Northern Branch project will likely result in temporary impacts to sidings used by freight customers, which will likely result in impacts to deliveries to freight customers. These impacts are temporary.

It is important to note that the freight service customers represent a variety of industries along the corridor, from industrial goods to food service, and the number of freight customers represents a small percentage of the total number of industrial and commercial businesses located along the length of the alignment from North Bergen to Northvale. The extent of the freight service impacts will vary depending on the business model for each freight service customer, as well as the types of delivery they receive, and whether staff is required to be present during switching or moving of rail cars. As a result, the impacts are isolated by individual enterprise, representing a case-by-case scenario, not an industry-wide or regional impact that would otherwise result in widespread changes to the local economy.

*Mitigation* – NJ TRANSIT would work with NYS&W, CSX and affected freight customers to develop mitigation plans for the construction period. No mitigation is proposed for the operations period.

#### *10.3.2.3. Light Rail to Englewood Route 4*

#### Bus Transit Service

*Impacts* – Table 10-1 above summarizes the location and frequency of NJ TRANSIT and private operator bus service relative to proposed station sites. All station sites are located within walking distance of an existing bus stop used by either NJ TRANSIT or Red & Tan/Coach USA service. Although the majority of bus routes in the study area are oriented toward New York City and travel express once on the highways, local riders can still use the service to reach a proposed Northern Branch station if they are traveling within the study area. Local passengers on commuter lines cannot request a non-scheduled stop on service traveling in the peak direction.



Ridership modeling performed by NJ TRANSIT anticipates that a large number of bus trips would be generated at two station areas. Palisades Park would have approximately 220 bus transfers; Leonia would have approximately 2340 bus transfers.

The proposed Light Rail to Englewood Route 4 Alternative duplicates portions of NJ TRANSIT bus line #127, #165, #166, and #168, and Red & Tan Route #14. NJ TRANSIT would coordinate with the bus providers to identify changes in the bus routes that would improve access to the stations and/or reduce duplications in service. However, any adjustments to NJ TRANSIT bus schedules and routes will be undertaken at the discretion of NJ TRANSIT after a thorough review of existing ridership and travel demand patterns in the study area.

Consequently, as a result of the population density and existing transit and mobility demands in the study area, the operation of the Northern Branch rail service under Light Rail to Englewood Route 4 will serve as a complement to existing bus service. By diverting drivers to rail service, the Northern Branch will help alleviate some of the traffic congestion that creates service inefficiencies for bus service. Although the rail service duplicates some public and one private bus service, the population density of the area and the need for transit access to the proposed stations represents an opportunity to adjust bus service to better meet the needs of the community. As a result, Light Rail to Englewood Route 4 will not result in significant impacts relative to the operation of existing bus service in the study area.

*Mitigation* – None required.

#### Passenger Rail Service

*Impacts – Pascack Valley Line* - NJ TRANSIT's Pascack Valley Line will continue to serve rail transit customers in its service area. The ridership populations for the Pascack Valley Line and the Northern Branch service are geographically different. As a result, the proposed Northern Branch service will not adversely affect the viability of the Pascack Valley Line.

*Hudson Bergen Light Rail (HBLR)* - Twelve HBLR trains would pass through Tonnelle Avenue in the peak hour. Of these 12 trains, 10 would continue onto the Northern Branch, and two would start their service at Tonnelle Avenue without crossing onto the Northern Branch. The proposed 91<sup>st</sup> Street Station would be the southernmost station on the Northern Branch before the service transitioned onto the HBLR. A passenger count of 2,198 passengers would be on board the train at 91<sup>st</sup> Street Station during the peak hour, leaving capacity for 1,257 passengers to board from the existing HBLR Tonnelle Avenue Station and south to Weehawken. The two HBLR trains departing from the existing Tonnelle Avenue Station in the peak hour would have capacity for 835 passengers.

Together, the Northern Branch-originating HBLR trains and the Tonnelle Avenue Station-originating HBLR trains would have capacity for 2,092 passengers after all Northern Branch passengers are accommodated. Existing ridership on the HBLR adds 490 passengers from Tonnelle Avenue to Weehawken, which would be the segment with the highest number of passengers. In 2030, the total non-Northern Branch ridership is expected to total 735 passengers. This number is below the projected capacity of the HBLR during the peak hour. Consequently, the Light Rail to Englewood will not have an adverse effect on the capacity of the HBLR.

*Mitigation* – None required.

#### Freight Service

*Impacts* – As described in Chapter 3: Alternatives Considered, light rail service must be separated from freight service. The Northern Branch project proposes to separate light rail and freight service temporally; that is, light rail service will operate during the day and freight service will operate at night.

At no point will freight vehicles and light rail vehicles be in motion on the Northern Branch at the same time.

Shifting freight service to overnight may result in the potential for economic impacts to freight providers and freight customers, and, without mitigation, may result in noise impacts along the entirety of the Northern Branch corridor. That is, regardless of the fact that Light Rail to Englewood Route 4 terminates at the proposed Englewood Route 4 Station, the shift in freight service applies to the entire alignment (freight trains would not run during the day north of the proposed Englewood Route 4 Station.)

Providing overnight freight service and accommodating overnight freight deliveries requires the freight operator and possibly the freight customer to supply staff for an overnight shift. Overnight shifts are typically less desirable, and depending on the affiliation of staff, may require negotiation with employee unions. Overnight workers are often compensated more for their time as a result of the inconvenience of the shift. Additionally, overnight workers represent additional overhead hours for the freight customers and freight service providers. Establishments that typically close in the evening would remain open overnight, requiring climate control, lighting, and security, where necessary, equivalent to that which is provided during the day, at least in the areas of the buildings occupied by staff who would receive the delivery. Freight service providers may require overnight dispatchers and other service personnel in addition to those who work during the day supporting train operations and maintenance.

In addition, the construction phase of the Northern Branch project will likely result in temporary impacts to sidings used by freight customers, which will likely result in impacts to deliveries to freight customers. These impacts are temporary.

It is important to note that the freight service customers represent a variety of industries along the corridor, from industrial goods to food service, and the number of freight customers represents a small percentage of the total number of industrial and commercial businesses located along the length of the alignment from North Bergen to Northvale. The extent of the freight service impacts will vary depending on the business model for each freight service customer, as well as the types of delivery they receive and whether staff is required to be present during switching or moving of rail cars. As a result, the impacts are isolated by individual enterprise, representing a case-by-case scenario, not an industry-wide or regional impact that would otherwise result in widespread changes to the local economy.

*Mitigation* – NJ TRANSIT would work with NYS&W, CSX and affected freight customers to develop mitigation plans for the construction period. No mitigation is proposed for the operations period

#### **10.4. Summary of Potential Environmental Effects**

Table 10-2 summarizes the transit and freight impacts resulting from the implementation of the Build Alternatives. As the table indicates, there are no impacts related to bus or passenger rail transit. While both Build Alternatives result in less available capacity on the HBLR during the peak hour, neither would exceed the capacity of the HBLR service.

Both Build Alternatives do result in the potential for impacts to the freight service customers along the Northern Branch. These impacts are an unavoidable effect of the need to separate light rail service from freight service. In considering these impacts, it is important to bear in mind that freight providers are a small percentage of the total number of commercial and industrial businesses along the Northern Branch Corridor, and the effect of the switch to overnight service will affect each freight customer differently. As such, while the freight impacts resulting from the implementation of either Build Alternative cannot be mitigated, the impact is concentrated on a few operations, and those few may not find that the impact is great enough to result in actual adverse effects on their business operation.

**Table 10-2: Summary of Potential Impacts to Transit and Freight Service**

Alternatives	Transit and Freight Elements			
	Bus Transit	NJT Rail Service	HBLR Service	Freight Service
<b>Light Rail to Tenafly (Preferred Alternative)</b>	Duplication of three NJ TRANSIT routes and one Coach USA route. Duplicated routes may be adjusted in the future to provide additional station access.	No impact on Pascack Valley Line service.	No impact. Capacity remaining for 1,585 HBLR passengers after all Northern Branch riders are accommodated	Potential for temporary disruption of service during the construction phase. During revenue service, freight service shifts to evening. Potential for economic impacts to existing freight customers. NJ TRANSIT would work with NYS&W, CSX and affected freight customers to develop mitigation plans for the construction period. No mitigation is proposed for the operations period
<b>Light Rail to Englewood Route 4</b>			No impact. Capacity remaining for 2,092 HBLR passengers after all Northern Branch riders are accommodated	