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NEW JERSEY – PENNSYLVANIA
LACKAWANNA CUT-OFF
PASSENGER RAIL SERVICE RESTORATION PROJECT

ENVIRONMENTAL ASSESSMENT

Prepared by:
NEW JERSEY TRANSIT

December 2006

Pursuant to the National Environmental Policy Act of 1969, as amended, 42 U.S.C § 4332(2)(C); Section 4(f) of the Department Transportation Act of 1966, as amended, 49 U.S.C. § 303; the Federal Transit Laws, 49 Chapter 53; Section 106 of the National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470(f); Section 404, Clean Air Act; Executive Order 11990 (Protection of Wetlands); Executive Order 11988 (Flood Plain Management); and Executive Order 12898 (Environmental Justice).

Proposed Action: The proposed action would restore passenger rail service using existing and abandoned rail right-of-way between Scranton, Pennsylvania and Port Morris, New Jersey, a distance of 88 miles, where it would connect with NJ TRANSIT's Morristown Line. The proposed project would involve the construction of a single-track commuter rail line with passing sidings. Stations are proposed to be located in Scranton, Tobyhanna, Pocono Mountain, Analomink, East Stroudsburg, and Delaware Water Gap Visitors Center in Pennsylvania, and in Blairstown and Andover in New Jersey. An overnight train storage yard is proposed in Scranton and a maintenance-of-way facility is proposed in Greendell, New Jersey. The trains will operate on approximately 45-minute headways during peak periods and 2 to 3 hour headways in the off-peak hours. There will be nine eastbound and nine westbound trains per day.

EXECUTIVE SUMMARY

ES.1 Purpose and Need

The *New Jersey - Pennsylvania Lackawanna Cut-Off Passenger Rail Service Restoration Project Environmental Assessment (EA)* is being sponsored by NJ TRANSIT, in coordination with the Federal Transit Administration (FTA), the Pennsylvania Department of Transportation (PennDOT), the Counties of Morris, Sussex and Warren in New Jersey (NJ), and the Counties of Monroe and Lackawanna in Pennsylvania (PA). This Environmental Assessment is considering the restoration of passenger rail service in Northwest New Jersey and Northeast Pennsylvania along a corridor commonly referred to as the Lackawanna Cut-Off.

This draft EA is being issued by NJ TRANSIT for the purpose of receiving public comment prior to finalizing the document. The final document will be submitted to the Federal Transit Administration for approval and potentially a Finding of No Significant Impact.

The purpose of this project is to implement a passenger rail service that would effectively and efficiently improve travel in the Northeast Pennsylvania/Northwest New Jersey to New York City corridor. The project would utilize existing transportation rights-of-way to limit environmental impacts while benefiting the region's economy by providing a new modal option for travelers. The project would reinforce existing activity centers, improve access to employment centers and increase transit usage in the corridor so that the region can proactively address its existing travel concerns and projected growth.

The study area has experienced many changes over the past decade in terms of the number of residents, residential development, traffic congestion, commutation patterns and recreational visitation. The entire study area grew by nearly 13 percent from 1990 to 2000 and is forecasted to grow by another 27 percent by 2030. The most significant growth occurred in Pike County, which grew by 65 percent, and Monroe County, which grew by 45 percent in the 1990-2000 period, adding approximately 43,000 residents to the population. Projections indicate that by 2030 Monroe County would grow another 100 percent to more than 278,000 residents.

Accompanying this residential growth has been dramatic increases in automobile use on area roadways, resulting in increasing highway congestion and increasing travel times. Also, the proximity of the study area to the growing employment opportunities in Morris County and other New Jersey locations has influenced commuting patterns and, as a result, congestion levels in the study corridor. The largest increase was in the number of commuters to New York City, up from just over 1,000 commuters in 1990 to over 4,000 commuters by 2000, an increase of 274 percent. Based on the increasing population projections presented in the previous section, this commuting trend is anticipated to continue into the future.

Traffic volumes on the bridge over the Delaware River on Interstate 80, one of the primary highways in the study corridor, have also continued to increase. Between 1997 and 2002 daily volumes rose 19 percent, from 45,000 vehicles to 53,500 vehicles per day. The Northerly Crossings Corridor Congestion Mitigation Study estimates that this trend will continued, with eastbound AM peak hour volume projected to increase by approximately 15% between 2004 and 2010, then an additional 46% increase between 2010 and 2030.

In general, transit usage within the study area is low since there is very limited service coverage and a lack of intermodal connectivity. The exception is transit service provided to Manhattan, which is provided by frequent bus service. In 2000, approximately half of work trips between northeast Pennsylvania and Manhattan were via transit and between 1990 and 2000 the number of commuters to New York City from the study area increased by 264 percent.

Based on the above trends and projections and previous feasibility studies, and project scoping process activities,,it was determined that the major transportation problems in the study area and the entire corridor include:

- Weak links between activity centers and attractions;
- Poor accessibility to New Jersey and New York City work destinations;
- Underutilized transportation right-of-way;
- Disruption of communities and environment from transportation improvements;
- Lack of corridor mobility;
- Uncoordinated modal network of private and public transportation services that are segregated by state boundaries rather than market boundaries; and,
- Untapped economic development potential in the region.

ES.2 Alternatives Considered

Numerous modal alternatives, service options and station sites have been analyzed and screened throughout the project development process that led to the preparation of this EA. The Northwest New Jersey-Northeast Pennsylvania Major Investment Study (2000) examined in detail a short list of alternatives identified in previous feasibility studies and recommended a Build Alternative involving the restoration of rail service. The two alternatives discussed in this EA are the No-Build Alternative and the Build Alternative, passenger rail service in the Lackawanna Cut-Off corridor.

ES.2.1 No-Build Alternative

The No-Build Alternative consists of all existing transportation facilities, as well as services likely to exist in the future study year, without the restoration of rail service. This alternative would be used as a basis for comparison to the Build Alternative in the EA.

The No-Build includes "committed" improvements, which typically includes the projects in the Transportation Improvement Program (TIP) or other local capital programs, plus other minor transit service expansions or adjustments. The No-Build Alternative reflects conditions in the future if no new actions are taken from the proposed project.

The No-Build Alternative for the Lackawanna Cut-Off Project includes the existing transportation network, as well as any roadway and transit projects that would be completed by 2030. Planned projects on the NJTPA TIP/LRTP and the PENNDOT TIP in the Lackawanna Cut-Off No-Build Alternative include:

- NJ TRANSIT Access to the Region's Core (ARC) project, consisting of new trans-Hudson rail tunnels and a new passenger station under 34th Street in Manhattan, which includes additional peak and off-peak direct rail service to Midtown Manhattan from existing stations on both the Morris & Essex and Montclair-Boonton Lines;

- NJ TRANSIT new commuter rail equipment procurement;
- NJ TRANSIT new Morris & Essex Line rail station and park-and-ride in Mount Arlington, adjacent to Interstate 80 and Howard Boulevard, Morris County, NJ;
- Sparta Stanhope Road roadway/bridge improvements, Sussex County, NJ;
- US Route 206 roadway improvements, Sussex County, NJ;
- Hope Road/County Route 521 roadway/bridge improvements, Warren County, NJ;
- Interstate 80 Truck Weigh Station, Eastbound, Knowlton Township, MP 1.55 – 2.75, Warren County, NJ;
- Interstate 80 Delaware Water Gap Visitors Center, Warren County, NJ;
- Interstate 80 Welcome Center at the Delaware Water Gap, Monroe County, PA;
- Marshalls Creek Bypass project , Monroe County, PA;
- Interstates 80 and 380 Interchange project, Monroe County, PA; and,
- Scranton Intermodal Center, Lackawanna County, PA.

ES.2.2 Build Alternative

The Build Alternative is a passenger rail service that would operate from Scranton, PA to Hoboken, NJ, a distance of 133 miles; and from Andover, NJ to New York Penn Station, a distance of approximately 60 miles. From stations west of Andover, service would terminate in Hoboken, NJ or transfers would be available at existing stations along the line for NJ TRANSIT Midtown Direct service to New York City. From Andover, service would either terminate in Hoboken or New York Penn Station.

The study area for the Build Alternative is the area in which new rail service would be introduced, from Scranton, PA to Port Morris, NJ. The study area is 88 miles in length and extends from Scranton in Lackawanna County, PA, into Monroe County, PA, and through the New Jersey Counties of Warren, Sussex and Morris to Port Morris. The Build Alternative rail services east of Port Morris to both Hoboken and New York Penn Station would be extensions of existing NJ TRANSIT Morris & Essex Line or Montclair-Boonton Line trains.

The 28-mile portion of the Build Alternative corridor in New Jersey, from Port Morris to the Delaware River Bridge, is known as the Lackawanna Cut-Off. The Lackawanna Cut-Off is currently an inactive railroad alignment. In Pennsylvania, the Build Alternative from the Delaware River Bridge to Scranton is approximately 60 miles in length. The majority of the Pennsylvania alignment is an active railroad with both freight service and limited recreational passenger service.

The Build Alternative involves the construction of eight new stations, a yard facility, and a maintenance-of-way facility. Major infrastructure elements would include the restoration of track in New Jersey, track upgrade in Pennsylvania, where needed, a connection at Port Morris to the Morristown Line, installation of a new signal and communication system, grade crossing improvements, and rehabilitation to existing structures, where needed. Each station would consist of a high level platform with a canopy and a passenger waiting shelter. Provisions for general lighting, landscaping and illuminated walkways would create a pedestrian friendly environment. Parking would be provided at the proposed stations. The new facilities are:

Scranton Yard Facility: A yard facility would be built in Scranton, west of the proposed station site. The yard facility would be used for vehicle storage, light maintenance, fueling and cleaning. The yard would include covered storage tracks and an employee welfare facility. A 30-space, employee parking lot would be provided at the site.

Scranton Station: The terminus of the line in the City of Scranton would be a regional station located in conjunction with a proposed Intermodal Transit Center (ITC) along Lackawanna Avenue. The ITC is a separate project being proposed by the City of Scranton. Parking for the proposed station would occur at the ITC and would consist of approximately 30 surface parking spaces. The proposed station would be situated on Lackawanna Avenue along the northernmost track immediately east of Bridge 60 (the railroad bridge over the Lackawanna River) and to the east of the Cliff Street underpass.

Tobyhanna Station: The Tobyhanna Station site is located in Coolbaugh Township and is part of a site owned by numerous public and private entities including the Lackawanna County Railroad Authority. The site is adjacent to the former rail station; the building is still in place and is in use as the local historical society rail museum. A 102-space surface parking lot would be provided at this location, and it would be situated on the vacant side and rear portions of this site. Access to this site would be from Church Street.

Pocono Mountain Station: The Pocono Mountain Station site is located in Coolbaugh Township and is part of a site currently vacant that was formerly utilized as a summer camp. An industrial complex is proposed for the parcel; however, this is a separate project and is not included in this EA. The proposed station site, which would include a 1,000-space surface parking lot, is located northwest of this multi-phased planned development. Access to this site would be from PA Route 611.

Analomink Station: The site for the Analomink Station is located along PA Route 191 in Stroud Township. PennDOT and Stroud Township own the two parcels that comprise the proposed site. While the Township-owned portion is currently vacant, the parcel under PennDOT ownership is used for roadway maintenance materials storage. The station site would include a 250-space surface parking lot. Access to this site would be from PA Routes 191 and 447.

East Stroudsburg Station: The proposed location of this station in the Borough of East Stroudsburg is south of the original railroad station that has been restored and is reused as the Dansbury Depot Restaurant. The site is located on the western side of the right-of-way, bordered on the west by Crystal Street. A 228-space surface parking lot, which would continue south of Bridge Street, is planned for this station. Access to this site would be from Crystal Street and Bridge Street.

Delaware Water Gap Station: The proposed location of this station is south of the right-of-way at PA Route 2028 (River Road) in Smithfield Township. The parking area would be located at the Delaware Water Gap Visitors Center, located southwest of Interstate 80. The Commonwealth of Pennsylvania is currently constructing improvements to the existing visitors center. This station assumes this project would modify those plans to include a park-and-ride facility. The planned park-and-ride facility would be a five-level parking garage containing approximately 900 parking spaces. Pedestrian access to the station platform to the site would be along PA Route 2028. This project would include improvements along PA Route 2028 to permit pedestrian access. Access from Interstate 80 would be direct via PA Route 2028.

Blairstown Station: The Blairstown Station is located on Hope Road (County Route 521) in Blairstown Township, NJ. A 230-space surface parking lot would be situated on a site that is currently in private ownership. The former station building and freight house is intact on this site. Access to this site would be from County Route 521.

Greendell Maintenance-of-Way Facility: A maintenance-of-way facility is included as part of the project in Greendell, New Jersey, utilizing the former station building and site at that location for storage of materials for signal maintainers. This proposed facility would be located entirely in a publicly-owned right-of-way.

Andover Station: This station site is located in Andover Township, NJ on the south side of Roseville Road in the vicinity of where the road curves to the north to intersect with Andover Mohawk Road. The site is undeveloped and completely located within the rail right-of-way. A 125-space surface parking lot would service this station. Access to this site would be from Roseville Road (County Route 613).

ES.3 Summary of Environmental Consequences

An evaluation was completed of the effects of the project on the built and natural environment. Project effects were assessed for either the proposed station areas or the proposed project corridor, depending upon the environmental category evaluated. A station area is defined as the area within a one-quarter mile (1,320 feet) radius of a proposed station site. A proposed station site includes the station platform, station building and associated parking lots. The project corridor is defined as the former (DL&W) rail right-of-way from Scranton (Lackawanna County, PA) into Monroe County, PA, and through Warren, Sussex and a portion of Morris counties in New Jersey. A summary of the findings is presented below in Table ES-1.

Table ES-1: Summary of Potential Environmental Impacts

ASSESSMENT CATEGORIES	PROPOSED PROJECT	FUTURE ACTIONS/MITIGATION
Land Acquisitions and Displacements (3.1)		
Land Acquisitions	The full and partial acquisition of 11 properties would be required under the proposed project. Property acquisition would occur at the following proposed station sites and yard facility: • Scranton Yard Facility • Pocono Mountain • Tobyhanna • Analomink • East Stroudsburg • Delaware Water Gap • Blairstown	Property would be acquired at fair market value via negotiations or condemnation pursuant to 49 CFR Part 24 "Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs".
Land Use, Zoning, and Consistency with Local Plans (3.2)		
Land Use	The proposed project would not substantially change existing land uses and land use patterns. Parcels that are acquired and converted to accommodate the proposed project would modify existing land uses. Since these uses are generally considered to be compatible with surrounding uses and the sites are relatively small, adverse impacts to land use patterns are not anticipated.	No mitigation required.
Zoning	The project conforms to existing uses.	NJ TRANSIT would confer and coordinate all proposed actions with local municipalities.
Consistency with Local Plans	Consistent with plans.	No mitigation required.

Table ES-1: Summary of Potential Environmental Impacts (continued)

ASSESSMENT CATEGORIES	PROPOSED PROJECT	FUTURE ACTIONS/MITIGATION
Community Facilities (3.3)		
Emergency Services (Police, Fire, Medical Response)	A potential increase in response time due to the reactivation of passenger service is expected. This would only occur when a train is passing through an active at-grade crossing. The limited frequency of service and short duration of time it would take for the train to pass the grade crossing would reduce likelihood of significant impacts.	NJ TRANSIT would work with the local municipalities to develop appropriate grade crossing protection measures and spread awareness regarding the new rail service to emergency service providers, especially in Scranton and East Stroudsburg, PA, where there are existing marked pedestrian crossings of the right-of-way; in Stanhope and Green Township, New Jersey, where there would be new grade crossings; and in Smithfield Township, East Stroudsburg, Paradise, Coolbaugh, Gouldsboro, Covington and Scranton, PA, where there would be an increased frequency of grade crossing closures.
Schools	The proposed project would not result in the increase in school enrollment or a need for additional bus service.	NJ TRANSIT would work with the local municipalities to develop appropriate grade crossing protection measures and spread awareness regarding the new rail service to school bus operators.
Libraries	The proposed project would not impact library service.	No mitigation required.
Parks	The proposed project would not result in any use or impacts of parks, or impacts to the users of the parks. In addition, no parks would be impacted during construction.	No mitigation required.
Cultural Resources (3.4 & 3.5)		
Historic Resources	There may be opportunities to reduce potential impacts to sensitive resources in the study corridor. However, the proposed project would not adversely affect any historic resources within the Area of Potential Effect (APE) for the project.	Consultation among New Jersey State Historic Preservation Office, Pennsylvania State Historic Preservation Office and NJ TRANSIT would result in requirements and specifications to be followed to reduce any potential impacts which include: • Construction plans to be followed by contractors to mitigate noise, vibration and dust impacts on resources during construction; • Rehabilitation of stations, tunnels, bridges and other structures in accordance with Secretary of the Interior's standards; • Development of an interpretive exhibit of the Roseville Tunnel; and, • Adaptive reuse of the Blairstown Station and Freight House and the Greendell Tower.

Table ES-1: Summary of Potential Environmental Impacts (continued)

ASSESSMENT CATEGORIES	PROPOSED PROJECT	FUTURE ACTIONS/MITIGATION
Cultural Resources (3.4 & 3.5) Cont.		
Archeological Resources	Potential effect of archaeological resources at seven of the proposed station, maintenance and yard sites. Further field-testing is necessary before final impacts can be determined.	Phase 1B archeological testing is recommended during the preliminary/final engineering phase at both of the proposed maintenance and yard sites and the following proposed station sites: • Scranton • Tobyhanna • Pocono Mountain • East Stroudsburg • Delaware Water Gap • Blairstown • Andover Phase 1B testing would determine presence or absence of resources. If resources are discovered, archeological evaluation may be warranted.
Visual Resources (3.6)		
Visual	No negative effects to visual resources are expected. A potential for minimal modifications to immediate visual character of two station areas is possible but would not result in significant impact to overall visual quality.	Best management practices would be utilized during project construction to minimize any minor impact to sensitive resources in the corridor.
Transportation (3.7)		
Transportation	Project-related vehicular traffic increases would result in impacts at the following stations sites: Tobyhanna, Pocono Mountain, East Stroudsburg, Delaware Water Gap and Blairstown. This is a result of passengers accessing the station areas. Several transportation benefits would result from the reactivation of rail service on the Lackawanna right-of-way including the addition of a new mode of transportation to destinations in northeastern New Jersey and New York City, as well as a reduction of regional vehicular trips.	Impacts would be minimized by utilization of the following mitigation measures: • Tobyhanna: PA Route 423 EB (AM Peak) and WB (PM Peak) at Route 611 – Signal timing change from 95 to 60 second cycle; • Pocono Mountain: PA Route 611 / Route 196 at PA Route 940 (AM and PM Peak) – Signal timing change from 100 to 150 second cycle; • East Stroudsburg: Crystal Street at Analomink (PM Peak) – Geometry modification and install a two-phase, 100-second cycle traffic signal; and, • Delaware Water Gap: Interstate 80 ramp at PA Route 2028 – Retime traffic signal with two-phase, 80-second cycle (AM) and 70-second cycle (PM) and traffic signal warning flasher sign on off ramps.
Air Quality (3.8)		
Air Quality	No significant negative effects to air quality are expected as a result of the proposed project. The project would not cause exceedances of the NAAQS, and would be consistent with the State Implementation Plans.	Mitigation is not required, as the proposed project would not cause a significant impact to local air quality and would result in a net benefit to regional air quality.

Table ES-1: Summary of Potential Environmental Impacts (continued)

ASSESSMENT CATEGORIES	PROPOSED PROJECT	FUTURE ACTIONS/MITIGATION
Noise and Vibration (3.9)		
Noise and Vibration	As a result of the proposed project, impacts as a result of wayside and whistle noise are expected. There are 448 residences situated within the Impact distance and 38 residences within the Severe Impact distance. The implementation of "Quiet Zones" would eliminate all of the sever impacts and many of the impacts. Impacted sites under FTA guidelines are not considered to be significant impacts as defined by NEPA.	Mitigation measures that could be utilized include "Quiet Zones" at grade crossings within the vicinity of the residential areas.
Energy (3.10)		
Direct and Indirect Energy Expenditure	The projected direct and indirect energy expenditures as a result of the proposed project are marginal when compared to the overall statewide figures for New Jersey and Pennsylvania.	No mitigation required because the projected increases are not considered significant and should be easily managed by existing New Jersey and Pennsylvania power resources.
Safety and Security (3.11)		
Safety and Security	The reinstitution of passenger rail service would not result in any significant impacts.	Prior to construction and operation, NJ TRANSIT and the Delaware Lackawanna Railroad Company would agree to a safety protocol. NJ TRANSIT police would provide patrols at all stations and along the rail alignment. NJ TRANSIT would coordinate and work closely with municipal police departments. As part of the proposed project, protection at all grade crossings in the project area would be enhanced to include modern active gates, flashers and audible warnings.
Physical Resources (3.12)		
Physical Resources	Minor excavation and grading would temporarily disturb existing soils and vegetation at each proposed station and yard site. No adverse impacts are anticipated to the physical environment. Typical excavation, construction and soil erosion techniques would be implemented during future construction phases.	Prior to construction further geotechnical studies would be performed to determine what soil erosion prevention techniques would be implemented. A Soil Erosion and Sediment Control Plan would be developed during future project phases.

Table ES-1: Summary of Potential Environmental Impacts (continued)

ASSESSMENT CATEGORIES	PROPOSED PROJECT	FUTURE ACTIONS/MITIGATION
Water Quality (3.13)		
Right-of-Way	Areas of flowing water are located within the inactive right-of-way in New Jersey. The existing drainage and surface water that flow within the existing right-of-way would be redirected. Overall water quality impact along the project corridor is anticipated to be minimal. Where impervious surface is created, Best Management Practices (BMP's) would be implemented.	Permits would be obtained from New Jersey Department of Environmental Protection in order to redirect the flowing water from the right-of-way.
Stations	As a result of additional impervious surface causing an increase in stormwater runoff, minimal impacts to water quality are expected at the following proposed station site(s): • Tobyhanna • Pocono Mountain • Analomink • Delaware Water Gap • Blairstown • Andover Where impervious surface is created BMP's would be implemented.	Additional stormwater detention / retention basins would be constructed. Also, various trash screenings and natural pollutant filtration techniques would be implemented. Soil Erosion and Sediment Control Plans/Water Encroachment and Obstruction Permits would be developed, with approval anticipated. The approximate permit review time is three months.
Bridges	Temporary construction impacts may occur to rivers and streams during the rehabilitation of structures.	BMP's and containment mechanisms would be utilized during project construction. If necessary permits may be obtained from the NJDEP (Individual Permit average review time: 181 days, and Stream Encroachment average review time: 84 to 120 days), Army Corps of Engineers (Nationwide Permit average review time: 3-6 months and Joint Permit average review time: 6-9 months) and Pennsylvania Department of Environmental Protection (Water Obstruction and Encroachment (average review time: 30 days), Individual (average review time: 6-9 months) and General Permits (average review time: 30 days). Coordination with the National Wild & Scenic Rivers System and NJ Wild and Scenic Rivers Program would be necessary for the Delaware River Bridge rehabilitation.

Table ES-1: Summary of Potential Environmental Impacts (continued)

ASSESSMENT CATEGORIES	PROPOSED PROJECT	FUTURE ACTIONS/MITIGATION
Wetlands (3.14)		
Right-of-Way	Significant impacts to wetland complexes located adjacent to the existing right-of-way are unlikely. Approximately six acres of wetlands would be impacted along the project corridor. The locations are: • Milepost (MP) 72, Knowlton Twp.– 0.1 acres • MP 64 & 65, Blairstown Twp. and Frelinghuysen Twp. – 0.3 acres • MP 62 & 63, Frelinghuysen Twp.– 0.4 acres • MP 61, Frelinghuysen Twp.– 0.1 acres • MP 56, Green Twp.– 1.0 acres • MP 52.50, Byram Twp.– 0.5 acres • MP 52, Byram Twp.– 2.0 acres • MP 47.80, Byram Twp. and Stanhope Borough– 1.6 acres	A formal wetland delineation would be conducted during the preliminary/final engineering phase to determine the amount of wetlands affected and the exact location. Permits would be obtained from the PADEP and NJDEP. If necessary, wetland areas that have been disturbed would be replaced at a ratio that generally ranges from 2:1 to 4:1. This range is determined by the NJDEP or the PADEP. BMP's would be utilized during construction.
Stations	A small area of wetlands is present within the potential footprint of disturbance at the following station areas: • Tobyhanna: MP 107.50 – 0.2 acres • Andover: MP 53 – 0.2 acres	Same as above.
Bridges	Minor temporary disturbances may occur to surrounding wetlands during rehabilitation or replacement of bridges, culverts and stone arches.	Same as above.
Floodplains (3.15)		
Floodplains	The alignment is located intermittently within the 100-year flood zone of several different water bodies. No significant disturbances are expected because the proposed rail alignment is an existing rail corridor. The proposed Delaware Water Gap station platform is within the 100-year floodplain. The proposed Analomink Station is within the 500-year floodplain.	Prior to construction the following permits would be obtained: • A Water Obstruction and Encroachment Permit from PADEP. • A Stream Encroachment Permit issued from the Land Use Regulation Program under the Flood Hazard Control Act, N.J.S.A. 58: 16A from NJDEP.
Endangered Species (3.16)		
Endangered Species	Direct impacts to threatened and endangered species are not expected.	At the request of the US Fish and Wildlife Service, NJ TRANSIT has committed to perform wildlife surveys for Bald Eagle, Bog Turtle, Indiana Bat, and Northeastern bulrush during the Preliminary/Final Engineering Phase.

Table ES-1: Summary of Potential Environmental Impacts (continued)

ASSESSMENT CATEGORIES	PROPOSED PROJECT	FUTURE ACTIONS/MITIGATION
Hazardous Waste (3.17)		
Hazardous Waste Impacts	Minimal impact overall; however, further hazardous waste investigations are necessary during the preliminary/final engineering phase for all potential station sites, the maintenance-of-way and yard areas, and areas of the rail alignment anticipated for disruption or excavation.	In the event that contaminated soil is encountered during project construction it would be removed to an approved off-site disposal facility. Detailed mitigation plans will be prepared dependent upon the findings of more in-depth investigations to be conducted during the preliminary/final engineering phase.
Environmental Justice (3.18)		
Environmental Justice (EJ)	No disproportionate impact would affect EJ populations.	No mitigation is required.
Construction (3.19)		
Construction	Temporary short-term construction-induced impacts are expected, but would cease with completion of construction.	To mitigate overall effects during construction, the proposed project would be planned, designed, scheduled and staged to minimize disruption to the surrounding traffic, abutting neighborhoods, and environment. BMP's pertaining to construction operations would be applied to minimize the duration and severity of any effects.
Cumulative Impacts (3.20)		
Cumulative Impacts	The proposed project does not have the potential to result in significant secondary impacts.	No mitigation is required.

Source: Edwards and Kelcey, 2006

PREFACE

This project has been developed based upon the findings of numerous studies undertaken in recent years to identify and evaluate transportation solutions in the study area, which have included:

- Morris and Sussex Counties, *Lackawanna Cut-Off Right-of-Way Use and Extension Study* (1989);
- New Jersey Department of Transportation (NJDOT), *Interstate 80 Corridor Needs Assessment Study* (1991);
- Lackawanna and Monroe Counties, *Transportation Options in the Pocono Corridor* (1995);
- Morris County, *Northwest New Jersey-Northeast Pennsylvania Major Investment Study (MIS)* (2000).

In response to the findings of the Northwest New Jersey-Northeast Pennsylvania Major Investment Study and other studies, NJ TRANSIT initiated the Lackawanna Cut-Off Study and environmental assessment with the purpose of completing the necessary federal requirements for the project to be eligible for advancement.

NJ TRANSIT has undertaken a proactive outreach program, which includes coordination with the involved counties, periodic update meetings with the local municipalities along the corridor, community open houses at key milestones to inform a wide audience of information regarding the project and fact sheets to highlight key issues and study progress for the general public and the project mailing list. NJ TRANSIT conducts frequent coordination meetings with the Project Technical Advisory Committee (TAC), comprised of the following agencies:

- Delaware River Joint Toll Bridge Commission
- FTA
- Lackawanna County Regional Planning Commission
- Monroe County Planning Commission
- Morris County Department of Transportation Management
- NJDOT
- NJ TRANSIT
- NJTPA
- PennDOT
- Pennsylvania Northeast Region Rail Authority (formerly the Monroe County Railroad Authority and the Lackawanna County Railroad Authority)
- Sussex County Planning Department
- Warren County Planning Board

This draft EA is being issued by NJ TRANSIT for the purpose of receiving public comment prior to finalizing the document. The final document will be submitted to the Federal Transit Administration for approval and potentially a Finding of No Significant Impact.

1.0 PURPOSE AND NEED

1.1 Introduction

The *New Jersey - Pennsylvania Lackawanna Cut-Off Passenger Rail Service Restoration Project and Environmental Assessment* (Lackawanna Cut-Off EA) is being sponsored by NJ TRANSIT, in coordination with the Federal Transit Administration (FTA), the Pennsylvania Department of Transportation (PennDOT), the Counties of Morris, Sussex and Warren in New Jersey (NJ) and the Counties of Monroe and Lackawanna in Pennsylvania (PA). The Lackawanna Cut-Off Study considers the restoration of passenger rail service in northwest New Jersey and northeast Pennsylvania along an existing rail corridor commonly referred to as the Lackawanna Cut-Off.

1.1.1 Document Purpose

The Lackawanna Cut-Off EA has been prepared to identify and document existing environmental conditions in the corridor and assess potential impacts and mitigation measures for a proposed Build Alternative involving the restoration of passenger rail service.

The Lackawanna Cut-Off EA has been prepared pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, 42 U.S.C § 4332(2)(C); Section 4(f) of the Department Transportation Act of 1966, as amended, 49 U.S.C. § 303; the Federal Transit Laws, 49 Chapter 53; Section 106 of the National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470(f); Section 404, Clean Air Act; Executive Order 11990 (Protection of Wetlands); Executive Order 11988 (Flood Plain Management); and Executive Order 12898 (Environmental Justice).

1.1.2 Project Overview

The Lackawanna Cut-Off Project is a proposed passenger rail service that would operate from Scranton, PA to Hoboken, NJ, a distance of 133 miles, and from Andover, NJ to New York Penn Station, a distance of approximately 60 miles. This project involves reactivating 88 miles of the former Delaware, Lackawanna and Western Railroad mainline from Scranton, PA to Port Morris, NJ. The 28-mile portion of the corridor in New Jersey, from Port Morris, NJ to Delaware River Bridge, is known as the Lackawanna Cut-Off. Rail service would continue east of Port Morris along NJ TRANSIT's Morris & Essex Line or Montclair-Boonton Line, making stops at some existing stations.

Using the Lackawanna Cut-Off service, transfers would be available at existing stations along the Morristown Line to NJ TRANSIT Midtown Direct service to New York City; or transfers would be available at the existing Hoboken terminal to the NJ TRANSIT Hoboken Division of commuter rail, NJ TRANSIT Hudson Bergen Light (HBLR), Port Authority Trans-Hudson (PATH) rail services to Manhattan, private ferry service to Manhattan, or local bus services.

1.2 Project Purpose

The purpose of this project is to implement a passenger rail service that would effectively and efficiently improve travel in the Northeast Pennsylvania/Northwest New Jersey to New York City corridor. The project would utilize existing transportation rights-of-way to limit environmental impacts while benefiting the region's economy by providing a new modal option for travelers. The project would reinforce existing

activity centers, improve access to employment centers and increase transit usage in the corridor so that the region can proactively address its existing travel concerns and projected growth.

1.3 Project Need

Transportation problems and concerns in the project study area were identified through review of area trends and projections, previous feasibility studies, consultation with the project's Technical Advisory Committee, and input from the project's scoping process. Transportation problems identified in the corridor include:

- Weak links between activity centers and attractions;
- Poor accessibility to New Jersey and New York City work destinations;
- Underutilized transportation right-of-way;
- Disruption of communities and environment from transportation improvements;
- Lack of corridor mobility;
- Uncoordinated modal network of private and public transportation services that are segregated by state boundaries rather than market boundaries; and,
- Untapped economic development potential in the region.

These problems are described in detail below.

1.3.1 Weak Links between Activity Centers and Attractions

Highway congestion is the result of a lack of transportation options. The Lackawanna Cut-Off study area does not have the depth of transportation modal options, such as public transportation, to service the demand between activity centers. From their origination point, study area travelers must drive considerable distance to access either a highway or a bus park-and-ride lot. There are therefore both limited transportation choices in the study as well as inconvenient connections to the existing network choices.

1.3.2 Poor Accessibility to the New Jersey and New York City Work Destinations

As detailed in Table 1.7.3, the number of people commuting from the study area to the employment centers of New Jersey and New York City has grown significantly in recent years, and would continue to do so over the coming decades. However, transportation services for existing and projected commuters from the study area are limited. The passenger rail network that serves the concentrations of work locations in Manhattan and northern New Jersey does not extend into the study area. Most commuters drive a private single occupant vehicle, primarily utilizing Interstate 80 to reach their employment destination or to access the existing rail system. Interstate 80 has experienced significant traffic growth that has resulted in increasing travel time for users.

The other major mode of travel for the region's commuters is intercity bus service. Martz/Trailways is the primary provider of these services, although there are several other smaller private intercity bus providers. To accommodate the tremendous growth in commuting to New York City described above, Martz has continually added additional buses to their fleet and expanded their service plan to accommodate this growth. Unfortunately, these private bus providers must also utilize Interstate 80 as well as other approaches into Manhattan that are severely congested in many places. The Express Bus Lanes (XBL) into New York City are near capacity currently, with limited room for growth for future demand.

By virtue of the increasing demand and increasing congestion, access from the study area to work destinations in New York and northern New Jersey has degraded to a poor level.

1.3.3 Underutilized Transportation Right-Of-Way

The 88-mile rail right-of-way under consideration in the Lackawanna study is an underutilized transportation right-of-way, which is located in a congested highway travel corridor with no other existing alignment options. This right-of-way is therefore an important asset and could provide an opportunity to expand transportation service to the study area region.

The Lackawanna Cut Off project alignment provides a unique opportunity to implement an infrastructure project on right-of-way that is publicly owned and controlled, unlike many other rail projects that depend on utilizing right-of-way currently owned by private freight railroad companies that have goals other than providing passenger services. In 2001, the New Jersey Department of Transportation purchased the abandoned railroad right-of-way between Delaware Water Gap and Lake Hopatcong from a private owner for $21 million. The Commonwealth of Pennsylvania paid $4 million to New Jersey for the bridge over the Delaware River and the right-of-way to Slateford Junction. The newly formed Pennsylvania Northeast Region Rail Authority owns the railroad right-of-way between Slateford Junction and Scranton.

This intact, 88-mile right-of-way, all under governmental jurisdiction, but not being utilized for passenger service, represents an underutilized public asset located in an area with identified transportation problems.

1.3.4 Disruption of Communities and Environment from Transportation Improvements

Because virtually all commuter travel in the study area is currently via the single occupant vehicle, if new modes of travel are not pursued, the only option would be to expand the highway network. The cost of adding one lane of new interstate highway in each direction is about $20 million to $50 million per mile, depending upon the number of bridges, physical constraints, land availability and the cost of the land. Environmental mitigation could add millions more and each mile of optional sound barrier costs between $2 million and $10 million. In addition to the cost, transportation improvements involving land acquisition, building bridges and constructing noise walls would be extremely disruptive to the unique natural environment of this study area, which passes through the Delaware Water Gap National Recreation Area, past many local and state parks and over the Delaware River, a National Wild and Scenic River. In addition, the corridor is dotted with historic communities immediately adjacent to Interstate 80 including Delaware Water Gap, Stroudsburg and East Stroudsburg, to which a major highway construction project would be disruptive and create significant permanent impacts to their character. Therefore, a significant transportation concern in the study area is to avoid disruption to the environment and local communities.

1.3.5 Lack of Corridor Mobility

Traffic congestion on Interstate 80 in northern New Jersey, particularly in areas of Morris County and at the Delaware River bridge crossings, often reach congested or failing conditions. This means stop and go traffic or traffic moving at very slow speeds. Due to the terrain, air quality restrictions, and relatively dense development along the Interstate from Morris County eastward, it is not financially or environmentally feasible to add highway lanes. Since very little can be done to increase roadway capacity, there are few ways to improve conditions in the future for motorists in the Interstate 80 corridor.

In 2000, the Port Authority of New York and New Jersey estimated the amount of truck traffic in northern New Jersey, especially on Interstate 78 and 80, would double over the next ten years, and triple within the

next 15 years. Another one million licensed drivers are projected for the State of New Jersey during the same period. These growth trends would further impede mobility in the corridor.

1.3.6 Public Transportation Segregated By State Boundaries Rather Than Market Boundaries

While trip makers in the project study area cross multiple county and often several state boundaries (Pennsylvania-New Jersey-New York) to reach their destinations, the existing transit network is limited to state boundaries, and thus does not serve this growing interstate market. NJ TRANSIT is the statewide transit provider in New Jersey, and Monroe and Lackawanna Counties each have their own transit system for intra-county travel. Interstate transit travel is a transportation deficiency in the study area that needs to be addressed.

1.3.7 Untapped Economic Development Potential in the Region

The Pocono Mountain region of Monroe County is a travel destination for many in the New York and northern New Jersey area seeking recreational opportunities at area National Parks, resorts, ski slopes, shopping venues and second homes. Nearly 15 percent of the tourism dollars spent in Pennsylvania are used in the Northeastern Pennsylvania region. Approximately one million residents from the New York/New Jersey area visit the project study area annually. In addition to its many recreational attractions such as the Steamtown National Historic site, the Scranton metropolitan area, located just over 125 miles from New York City, has a large educated labor pool. The area has been targeted by many as a suitable location for back office functions for several industries. These attractive qualities of the study area could be further maximized from an economic development standpoint if there were more modal options for travelers.

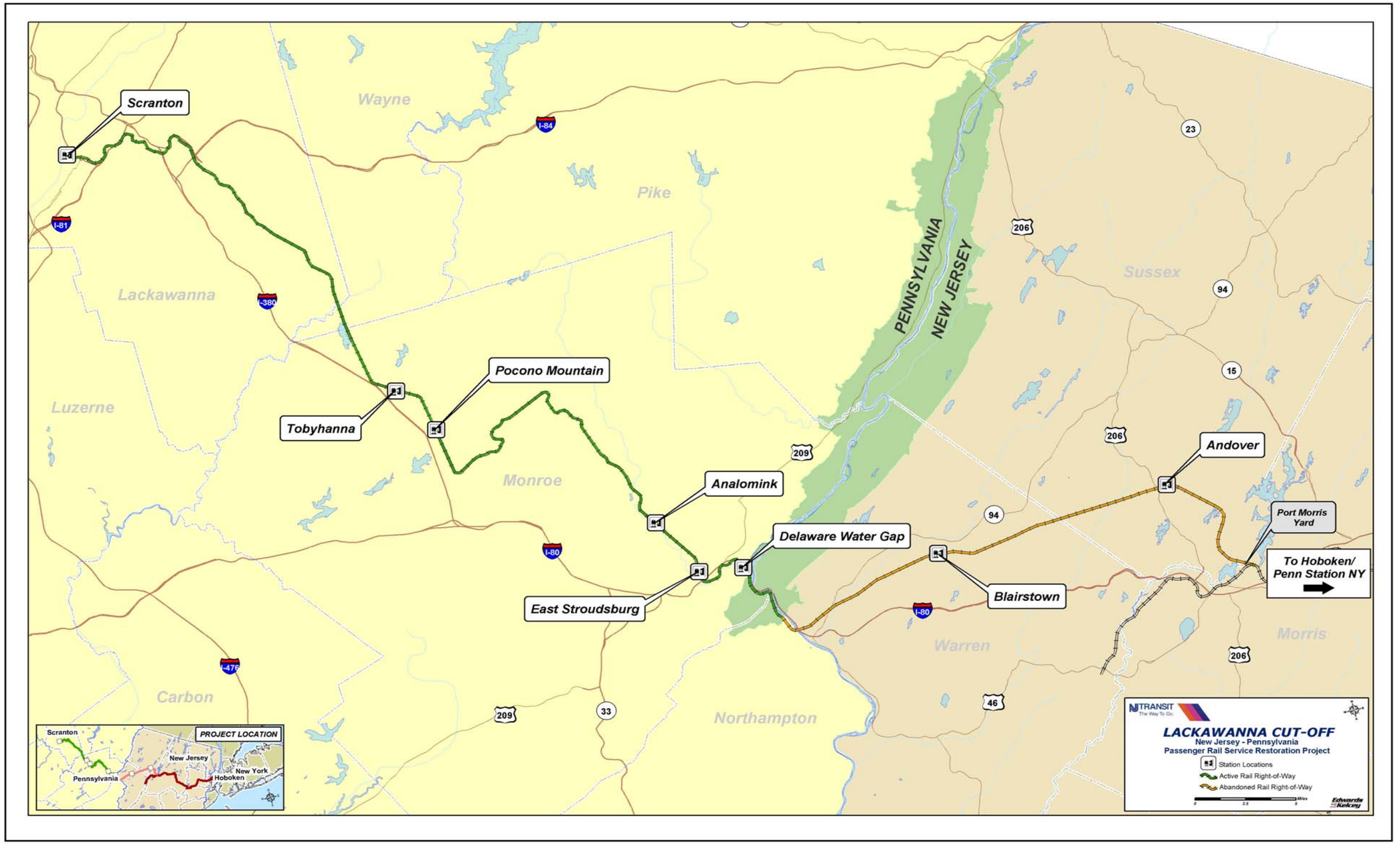
1.4 Study Area

The Lackawanna Cut-Off travel corridor extends from Scranton (Lackawanna County, PA), into Monroe County, PA, and through the New Jersey Counties of Warren, Sussex and Morris to Port Morris, NJ (Figure 1.4-1). At Port Morris, the Lackawanna Cut-Off service would utilize NJ TRANSIT's Morris & Essex or Montclair-Boonton Line for service terminating in Hoboken, NJ; or New York Penn Station for certain trains originating in Andover, NJ. The Lackawanna Cut-Off travel corridor from Scranton to Hoboken is approximately 133 miles in length.

Since existing service between Port Morris and Hoboken/New York Penn Station would not be changed, the Lackawanna Cut-Off EA is focused on the portion of the corridor in which new rail service would be introduced from Scranton east to Port Morris. This study area is 88 miles in length. The study area for this EA is approximately ¼ to a ½ mile on either side of the rail alignment, depending upon the environmental topic area under study.

The Delaware River Bridge to Port Morris segment follows a 28-mile route over the former Delaware, Lackawanna and Western Railroad's Cut-Off and across the Delaware River to Port Morris. This former railroad right-of-way is owned by the State of New Jersey. It has not had regular passenger rail service in over 25 years and tracks have been removed, although the railbed remains intact. In Pennsylvania, the Build Alternative from the Delaware River Bridge to Scranton is approximately 60 miles in length. The majority of the Pennsylvania alignment is an active railroad with both freight service and limited recreational passenger service.

Figure 1.4-1: Lackawanna Cut-Off Passenger Rail Service Study Area



Following is a list of the municipalities traversed by the study corridor. Communities noted with an asterisk (*) are also traversed by the proposed service from Andover, NJ to New York Penn Station.

Pennsylvania

Lackawanna County

- City of Scranton
- Borough of Dunmore
- Roaring Brook Township
- Elmhurst Township
- Moscow Township
- Covington Township
- Clifton Township

Wayne County

- Lehigh Township

Monroe County

- Coolbaugh Township
- Tobyhanna Township
- Mount Pocono Borough
- Paradise Township
- Barrett Township
- Pocono Township
- Stroud Township
- Borough of East Stroudsburg
- Smithfield Township
- Delaware Water Gap Borough

Northampton County

- Upper Mount Bethel Township

New Jersey

Warren County

- Knowlton Township
- Blairstown Township
- Frelinghuysen Township

Sussex County

- Green Township
- Andover Township*
- Borough of Andover*
- Byram Township*
- Borough of Hopatcong*
- Borough of Stanhope*

Morris County

- Roxbury Township*

The focus of much of the analysis in the EA pertains to the areas at the proposed stations, maintenance-of-way facility, and yard facility. Eight new stations are proposed as part of the Lackawanna Cut-Off service. From west to east, the proposed stations are as follows:

- Scranton (City of Scranton, Lackawanna County, PA);
- Tobyhanna (Coolbaugh Township, Monroe County, PA);
- Pocono Mountain (Coolbaugh Township, Monroe County, PA);
- Analomink (Stroud Township, Monroe County, PA);
- East Stroudsburg (Borough of East Stroudsburg, Monroe County, PA);
- Delaware Water Gap (Smithfield Township, Monroe County, PA);
- Blairstown (Blairstown Township, Warren County, NJ);
- Andover (Andover Township, Sussex County, NJ).

A yard facility would be built in the City of Scranton, west of the proposed station site, and a maintenance-of-way facility would be built in Greendell, NJ.

1.5 Area Development Pattern Description

The corridor is generally composed of rural land, low-density residential development and farmland. Two exceptions are Morris County, New Jersey and Scranton, Pennsylvania. Morris County serves as a residential and employment center with many residents commuting to jobs within the greater New York City area. Scranton, PA is an urban center, characterized by high-density business, residential and commercial development.

1.5.1 Lackawanna County

Lackawanna County, PA is primarily rural in character with the exception of the City of Scranton. Scranton is situated in the center of the County and set among rolling hills with scenic views. Scranton is a densely populated city that originated due to its proximity to the Lackawanna River, a natural corridor for travel and transport of goods. Scranton experienced booming growth with the advent of the industrial revolution and the locomotive. Railroads were the basis for the success experienced by Scranton in the early part of the 20th Century. The Scranton area has the largest deposits of anthracite coal in the world and supplied the nation with one of its most important energy sources for nearly 100 years. The City's population represents almost 40 percent of the County's population. The Scranton Station area under study is located in the central downtown area and is surrounded by a mix of commercial, office, municipal and residential areas, and Scranton University. Scranton is home to many recreational and tourism attractions, most notably, the Steamtown National Historic Park.

1.5.2 Monroe County

Monroe County, PA is predominantly rural with extensive open space due to the steep topography of the Pocono Mountains in the central portion of the County and the Delaware Water Gap National Recreation Area in the eastern portion. Over 20 percent of the County's lands are permanently protected open space and an even greater amount of open land is owned by resorts or held as Forest Reserve under Act 319 of the Commonwealth of Pennsylvania. This act provides a tax reduction to landowners as long as their land remains undeveloped. Therefore, over half of the County is open space with varying degrees of protection.

The traditional center for commercial activity in Monroe County is the County seat located in Stroudsburg. Adjacent is East Stroudsburg, a small commercial center that is also home to East Stroudsburg University and Pocono Medical Center. Other small villages are located throughout the County, such as Mount Pocono and Tobyhanna.

Monroe County has historically been known for its Pocono Mountains vacation and recreational uses, which continue to be important industries in the County. The uses include resorts/hotels, ski areas and entertainment/shopping destinations. Monroe County has the third largest tourism economy in Pennsylvania, along with the third largest labor force in tourism-related employment. Monroe County is home to the Delaware Water Gap National Recreation area, a significant open space development feature in the County, as well as major generator of tourism trips. In addition to tourism, the second home market is a significant component of the local economy that has affected the County's development pattern.

Expansion of the New York City metropolitan area has induced growth in virtually all portions of the County. Suburban sprawl has been identified as a problem and many local planning efforts are directed at concentrating growth in town centers and immediately adjacent fringes. The rapid growth of Monroe County has been particularly strong in the eastern region. The majority of growth in this region has been low-density single-family residential development.

1.5.3 Warren County

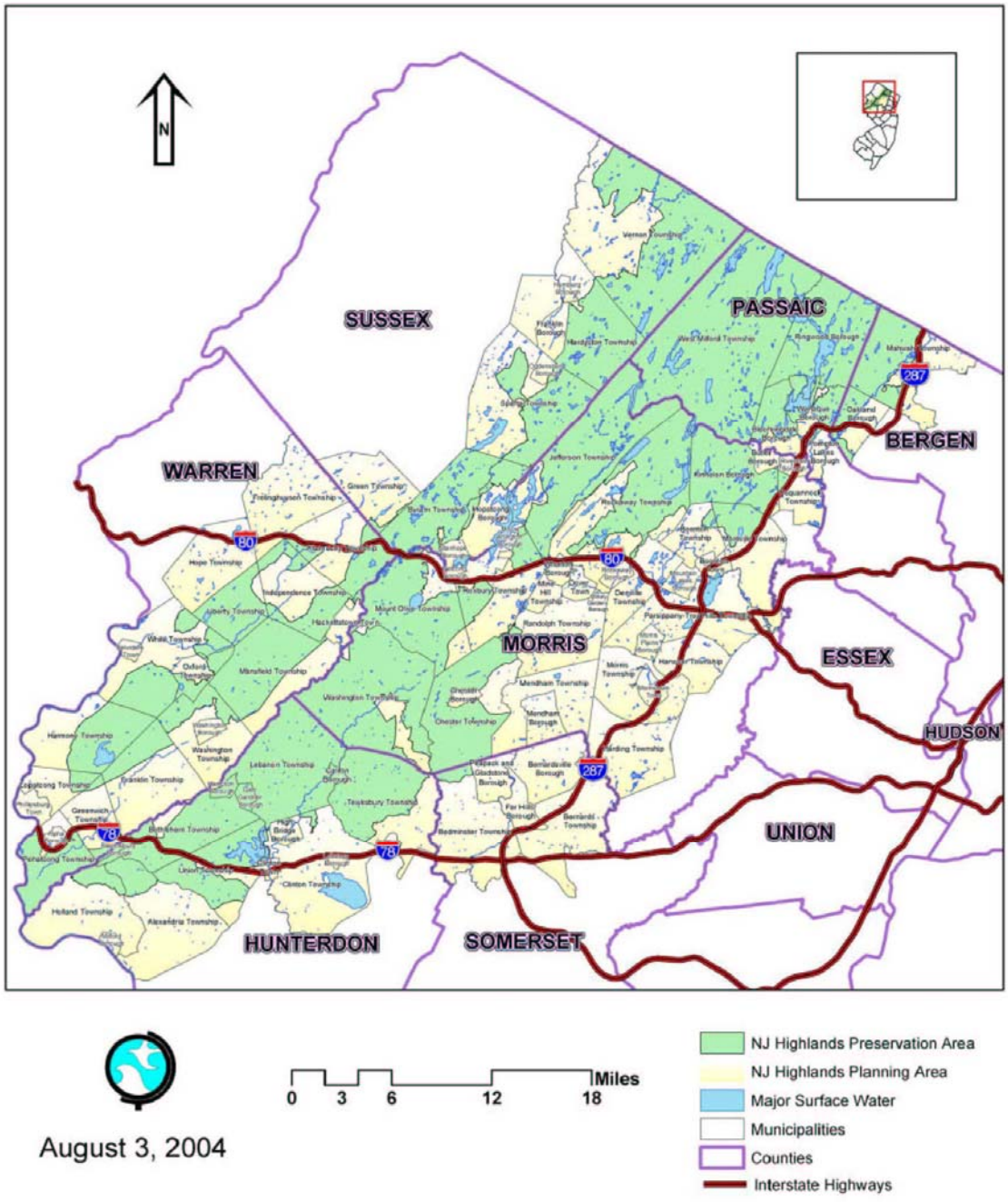
Warren County, NJ is predominately characterized by rural development with many small town centers. Major commercial centers are found in Hackettstown, Phillipsburg and Washington, located beyond the project study area to the south. The Delaware Water Gap National Recreation Area and Worthington State Forest are located in the northwestern portion of the County. The project study area crosses the northern portion of Warren County which is primarily rural in character. The Blairstown Station is located in Warren County; however, the town center of Blairstown is located approximately one mile to the north of the proposed station site.

Future development in much of the area near the Blairstown Station would be limited, as the area falls within the Highland Preservation Area. The Highlands Water Protection and Planning Act (Highlands Act) designates a preservation area where development would be significantly curtailed. The Highlands Region, which is over 800,000 acres, extends across seven counties (Bergen, Hunterdon, Morris, Passaic, Somerset, Sussex, and Warren) and 88 municipalities (Figure 1.5-1). The Highlands Preservation Area is approximately 398,000 acres of extraordinary natural resource value, of which 145,000 acres are undeveloped. The Highlands Act heightens environmental standards to protect some of New Jersey's most environmentally sensitive land. All major development in the Preservation Area is strictly regulated and would require NJDEP approval, unless otherwise exempted by the Highlands Act.

1.5.4 Sussex County

Sussex County, NJ is located in the northwest portion of New Jersey in the Highlands and Appalachian Ridge and Valley region that are characterized by steep topography. The population of Sussex County has more than doubled since the 1970's. Much of this growth has occurred in the eastern and southern portions of the County, while large portions of land in the western part of the County are preserved as state and federal parks. Planning initiatives in the County encourage that growth be directed into town centers such as Newton, Andover Borough, Byram, Stanhope and Hopatcong that are in close proximity to the Lackawanna rail line. Sussex County has outlined their land use policies and the highest priority is given to preserving and protecting open space and farmlands while directing growth toward town centers by providing developers with incentives. Currently, over 25 percent of Sussex County land is preserved as permanently protected open space in federal, state, and municipal lands, as well as farms preserved

Figure 1.5-1 New Jersey Highlands Water Protection and Planning Act Preservation and Planning Areas Map



through the Farmland Preservation Program. Similar to Blairstown Station, as mentioned above, future development in much of the area near the Andover Station would be limited, as that area falls within the Highland Preservation Area, created by the State of New Jersey's Highlands Act in August 2004.

1.5.5 Morris County

Residential development is the dominant land use in Morris County. The County is characterized by extensive residential development in the eastern portion of the County, particularly surrounding the major transportation corridors. Environmental constraints have limited development in the northwest portion of the County; where the majority of the County's vacant land (21 percent) is located. Development of large-lot, single-family residences is expected to continue in the northern and southwestern regions where land is still available for development. Commercial and industrial development have also occurred along the major transportation corridors with the development of large office parks, such as the Prudential Business Campus, and retail centers, such as the Rockaway Town Square Mall. Morris County's office space inventory of 25 million square feet ranks first in New Jersey. Much of this office space is located in the Parsippany, Morris Plains, Morristown and Morris Township area.

Among the many attractions in Morris County is the Morristown National Historical Park. Established in 1933 as the nation's first "National Historical Park", this National Park consists of four units, Jockey Hollow, Fort Nonsense, The New Jersey Brigade and The Ford Mansion that served as George Washington's military headquarters during his troops' harsh winter encampments in Morristown.

1.6 Existing Transportation Network

The following section describes the existing transportation network in the study corridor with regard to regional and local roadways, intercity bus, local bus and other access modes. Figure 1.6-1 provides a generalized view of major transportation features in the study area.

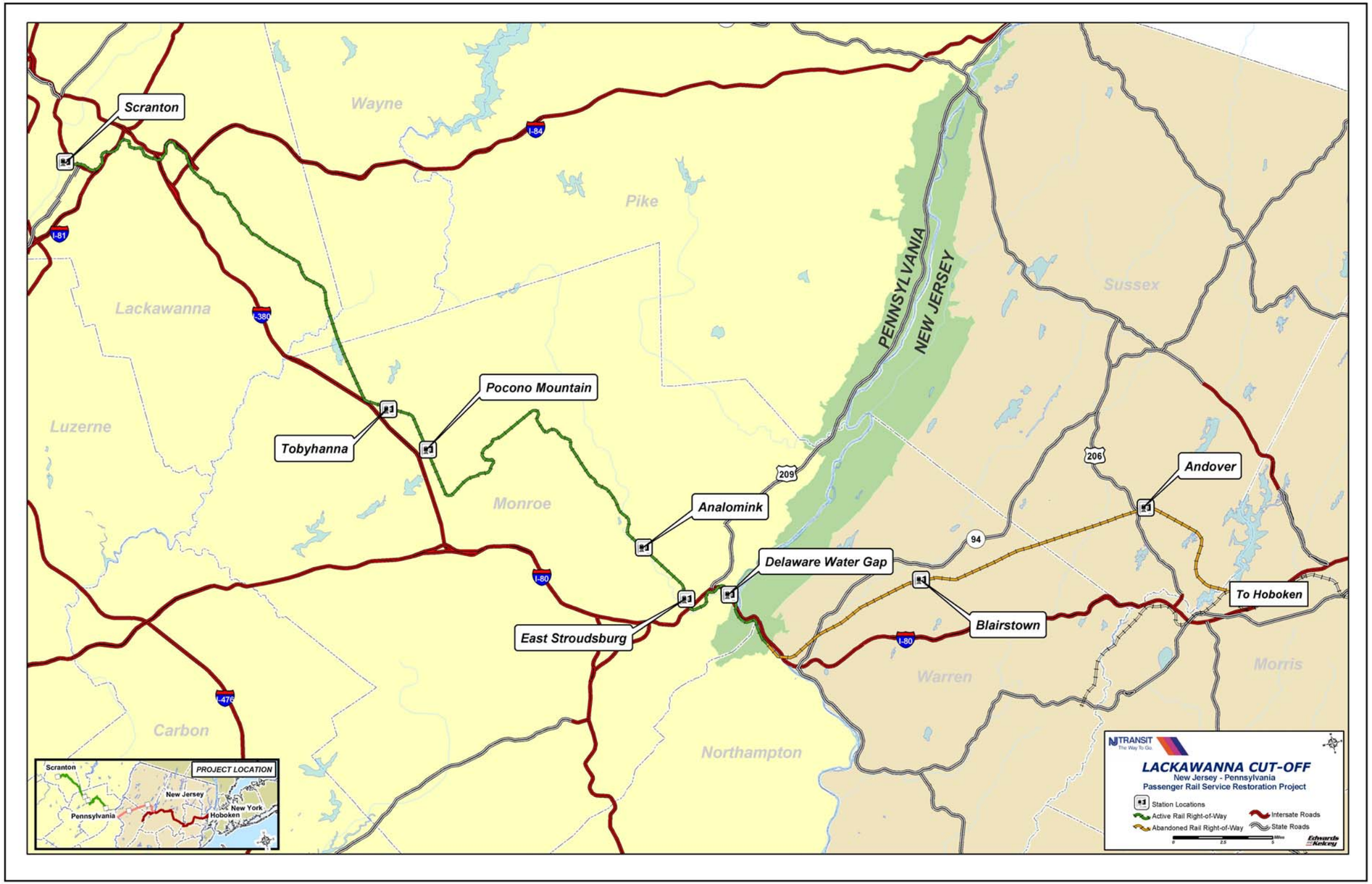
1.6.1 Roadway Network

The primary link between the study area counties and the northeast New Jersey and New York City area is Interstate 380 and Interstate 80. The following section summarizes the primary roadways found in the study area.

Lackawanna County

Scranton is located approximately 2.5 hours of driving time from Philadelphia and New York City when roads are uncongested. Goods movement is available by truck and rail and allows for overnight distribution of goods to significant portions of the Atlantic seaboard. Interstate 81 accommodates a significant portion of the regional through traffic, providing congestion relief for the downtown area to other parts of the greater Scranton metropolitan area, such as the Wilkes-Barre area to the south. Interstate 81 also provides access to Syracuse, Buffalo and Canada to the north and the Gulf Coast states to the south. Interstates 80 and 380 serve as direct links to New York City and Chicago. Interstate 84 connects northeastern Pennsylvania to the New England states and the Pennsylvania Turnpike Northeast Extension (I-476) allows convenient access to Philadelphia.

Figure 1.6-1 Lackawanna Cut-Off Existing Transportation Network



Downtown Scranton is an urban area characterized by a developed local roadway network, which evolved to accommodate local land use access and a relatively small proportion of local through travel. Regional accessibility to the proposed station site is considered to be good. The Central Scranton Expressway is located approximately 0.5 miles away, which provides access to Interstate 81, with subsequent connections to Interstate 380. The City is traversed by US 11, which is expected to be the major arterial by which vehicular trips would access the station area. Further, it is expected that the overpass from Interstate 81 to Jefferson Street would accommodate the majority of the site-induced vehicle flows accessing the site at the corner of Lackawanna Avenue and Bridge Street.

Monroe County

Interstate 80 is the primary east-west access road through the County, connecting to New Jersey and New York to the east and central and western Pennsylvania to the west. Interstate 380 traverses the western part of the County in a north-south orientation. Interstate 380 connects with Interstate 80 to the south and with Interstates 81 and 84 to the north for access to Scranton and New York State.

Transportation corridors in Monroe County extend primarily along the valleys and much of the development has occurred along secondary roads linked to Interstates 80 and 380. Expansion of the New York City metropolitan area has induced growth in virtually all portions of the County creating congestion on the Interstates as well as secondary State Routes such as PA Routes 611 and 940.

The main arterial roadways to access Tobyhanna Station are Church Street (PA Route 423) and PA Route 611, which intersect southwest of the station site. PA Route 423 provides access to the station site.

The major access route to the Pocono Mountain Station would be PA Route 611. PA Route 940 also affords Tobyhanna and Pocono Mountain Stations with access from points east, intersecting with PA Route 390 and PA Route 191. Regional access to the site from the Interstate 380 corridor is afforded via PA Route 940 to the west.

The site of the proposed Analomink Station is located along PA Route 191, just north of its intersection with PA Route 447. The site is located approximately five miles north of Interstate 80, which is the closest highway, accessed via PA Route 191. More localized access is provided via the regional road network including PA Route 55 to the north and US Business Route 209 to the south and east.

The proposed East Stroudsburg Station is located along the north side of Crystal Street, with access to the west by Analomink Street and to the east by Ridgeway Street and via a number of local roadways including Brown Street, Washington Street and Federal Street. US Business Route 209 would be used by commuters traveling either to or from the north of East Stroudsburg and commuters traveling from Interstate 80 at Exit 307 (PA Route 191 to BR 209). Regional access to the site is considered good due to the proximity to Interstate 80. Interchanges 307 and 308 along Interstate 80 are located approximately 0.75 and 0.5 miles away, respectively. Pedestrian access in East Stroudsburg is also good, as the area has been developed with pedestrian facilities, including sidewalks and crosswalks. The surrounding high density of the area and the location of East Stroudsburg University, within walking distance of the station, also support pedestrian use of the site.

The proposed Delaware Water Gap Station is located off of Interstate 80 at Exit 310. The site under consideration is located on River Road (PA Route 2028)/Tinkertown Road near Paper Mill Road. Parking for the station would be developed in conjunction with the existing Visitors Center and commuter/bus park-and-ride lot at this location, which recently underwent expansion and upgrading. While Interstate 80 functions as the major through-route, the main local roadways in the area are PA Route 2028/Tinkertown

Road and Broad Street. PA Route 2028/Tinkertown Road connects to North Water Gap; Broad Street connects the Interstate 80 ramps to PA Route 611 to the south.

Warren County

Interstate 78, Interstate 80 and US Route 46 represent the major east/west transportation routes across the County, with Interstate 80 being the major access route in the northern part of the County within the Lackawanna Cut-Off study area.

The proposed Blairstown Station area is located on Hope Road (Warren County Route 521) south of NJ Route 94. Warren County Route 521 provides a direct connection between Interstate 80 (Interchange 12) approximately 6 miles to the south and NJ Route 94 approximately 0.5 miles to the north. South of Interstate 80, Warren County Route 521 connects with Warren County Route 519, which connects to US Route 46 further to the south.

Sussex County

The major Sussex County travel corridors are Interstate 80, US Route 206, NJ Route 94, NJ Route 15, NJ Route 181 and Sussex County Route 517. The proposed Andover Station would be located on Roseville Road south of its intersection with Sussex County Route 613. A significant majority of the patrons who are expected to utilize the station would access the station area via US Route 206, located approximately 1 mile to the west, then via Sussex County Route 613 to Roseville Road.

Morris County

Morris County, New Jersey has a well-developed highway network which includes portions of the corridors of Interstate 80, US Route 46, US Route 202, NJ Route 10, eastern portions of NJ Routes 23 and 24 and the central portion of Interstate 287.

1.6.2 Local Bus Network

The County of Lackawanna Transit System (COLTS) provides local bus service in the Scranton metropolitan area. COLTS provides service on 26 weekday routes, with more limited service on Saturdays. A number of these routes have stops proximate to the planned station site. COLTS has a transfer program with the Luzerne County Transit Authority, which allows travel to Wilkes-Barre.

Monroe County Transit provides bus service throughout Monroe County. They provide local bus service and shared ride services on weekdays. Several existing bus routes serve the proposed East Stroudsburg Station area.

NJ TRANSIT provides funding for local bus service in Warren County. Some trips are extended to Easton, Pennsylvania to provide connections to the Lehigh and Northampton Transit Authority (LANTA) bus system. In Sussex County intra-county bus service is provided by the Sussex County Transit System. Weekday bus service is provided and route deviation is available for residents who live near the bus routes. In addition to the local NJ TRANSIT bus services that link Morris County to Essex and Passaic, Morris County sponsors local bus routes in concert with NJ TRANSIT. These include routes that connect with NJ TRANSIT rail service at Dover, Denville, Morris Plains, and Morristown.

NJ TRANSIT sponsors community shuttle programs that provide mini-bus and van services designed to improve transit in suburban areas. These services provide linkages between railroad stations and employment centers. In Warren County, these services link suburban residents to Hackettstown Station

on the Boonton Line, and provide shuttle service through downtown. In Morris County the service links rail riders with the major employers located near Convent Station. Services are also operated in the Summit area between Summit, Murray Hill, and Plainfield.

Private shuttle buses are also provided by several large companies from train stations to their offices, such as the shuttle service provided by Pfizer between the Morris Plains railroad station and their office complex nearby.

1.6.3 Intercity Bus Network

Several interstate bus services operate between northeastern Pennsylvania, northwestern New Jersey and New York City. These routes service park-and-ride lots and town centers, then run express via Interstate 80, terminating at the Port Authority Bus Terminal in Manhattan. This interstate service is generally oriented towards commuters, and offers more bus service during the rush hours.

Martz/Trailways and Greyhound are the major providers of private intercity bus service in the region, and have bus park-and-ride lots located in several places throughout the counties. The intercity bus terminal in Scranton (Martz and Greyhound) is currently located across Lackawanna Avenue from the proposed station site. There is a local proposal to create an intermodal facility adjacent to the proposed rail station that would provide for transfer between all modes, including rail, intercity bus, local bus, taxi, pedestrians, bicycles and automobiles. Martz Bus also has several stop locations in Monroe County, including along PA Route 611 in Mount Pocono, in Stroudsburg and in East Stroudsburg.

1.6.4 Commuter Rail Network

Approximately two dozen daily NJ TRANSIT trains operate from Dover directly into New York Penn Station, while a comparable volume of trains operate from Dover to Hoboken on the Morristown Line. In 1994, Boonton Line rail service was extended to Hackettstown in Warren County to serve new population growth. More than a dozen trains operate between Lake Hopatcong Station and Hoboken over the Montclair-Boonton Line on an average weekday.

There is no weekend service on the Boonton Line, but weekend service is provided from Dover to Hoboken/New York City on the Morristown Line. Approximately nineteen trains operate from Dover Station directly into New York City on weekends and holidays.

1.6.5 Freight Rail Network

The Delaware Lackawanna Railroad (DLRR) currently provides freight services to customers along the alignment in Pennsylvania, from the Delaware River Bridge to Scranton. A freight interchange with the Norfolk Southern is located at Slateford Junction. The DLRR serves local industries three days per week, on average. They also permit limited recreational passenger service over their alignment, some of which is occasional excursion service out of Steamtown in Scranton.

The Port Morris Junction, New Jersey to Slateford, PA segment follows a 28-mile route over the former Delaware, Lackawanna and Western Railroad's Cut-Off and across the Delaware River Bridge. This railroad right-of-way has been completely out-of-service since January 8, 1979, and the track has been removed, although the railbed remains intact. In 2001, the New Jersey Department of Transportation purchased the Lackawanna Cut-Off for use in this project.

1.6.6 Air Network

The Wilkes-Barre/Scranton International Airport is the major regional air provider. Located to the south of Scranton off of Interstate 81, the Airport provides convenient air travel for business and recreational needs for the region.

1.7 Trends and Projections

The study area has experienced many changes over the past decade in terms of the number of residents, residential development, commutation patterns, traffic congestion, recreational visitation and transportation network. More changes are anticipated for the future. These trends are described in Sections 1.7.1 through 1.7.5.

1.7.1 Population and Household Growth Trends

The study corridor in northwestern New Jersey and northeastern Pennsylvania has experienced significant growth in population and residential development. Lower housing costs and property taxes, particularly in northeastern Pennsylvania, are major factors in this growth trend, which is anticipated to continue into the future.

The entire study area grew by nearly 13 percent between 1990 and 2000 and is forecasted to grow by another 27 percent by 2030. The most significant growth occurred in Pike County, which grew by 65 percent, and Monroe County, which grew by 45 percent in the 1990-2000 period, adding approximately 43,000 residents to the population. This translated to more than 10,000 new households. Projections indicate that by 2030 Monroe County would grow another 100 percent to more than 278,000 residents. This is more than any of the other counties in the study area, with the exception of Morris County.

Table 1.7-1 demonstrates the growth in population and Table 1.7-2 demonstrates the growth in households in each county within the study area.

Table 1.7-1: Population Growth Trends

County	1990	2000	1990-2000 *(% Change)*	2030 *(Projected)*	2000-2030 *(% Change)*
Carbon, PA	56,800	58,800	4%	62,100	6%
Lackawanna, PA[1]	218,600	213,300	-2%	201,300	-6%
Monroe, PA	95,700	138,700	45%	278,200	101%
Pike, PA	28,000	46,300	65%	57,800	25%
Wayne, PA	39,900	47,700	20%	52,300	10%
Pennsylvania Subtotal	439,000	504,800	15%	651,700	29%
Warren, NJ	91,700	102,400	12%	150,900	47%
Sussex, NJ	130,900	144,200	10%	195,200	35%
Morris, NJ	421,300	470,200	12%	547,800	17%
New Jersey Subtotal	643,900	716,800	11%	893,900	25%
Study Area Total	**1,082,900**	**1,221,600**	**13%**	**1,545,600**	**27%**

Source: 1990 US Census; 2000 US Census; North Jersey Transportation Planning Authority (NJTPA) and New York Metropolitan Transportation Council 2030 NJ County Forecasts (adjusted); Monroe County Planning Commission and Division of Water Use Planning of Pennsylvania Department of Environmental Protection PA County Forecasts (estimated)

[1] Although the total county population shows a decrease, the population in most of the study area communities shows an increase.

Table 1.7-2: Household Growth Trends

County	1990	2000	1990-2000 *(% Change)*	2030 *(Projected)*	2000-2030 *(% Change)*
Carbon, PA	22,000	23,700	8%	24,900	5%
Lackawanna, PA	84,300	86,200	2%	81,000	-6%
Monroe, PA	34,200	49,500	45%	98,500	99%
Pike, PA	10,500	17,400	66%	21,900	26%
Wayne, PA	14,600	18,300	25%	20,200	10%
Pennsylvania Subtotal	165,600	195,100	18%	246,500	26%
Warren, NJ	34,000	38,700	14%	61,900	60%
Sussex, NJ	44,500	50,800	14%	76,300	50%
Morris, NJ	161,400	169,700	5%	209,200	23%
New Jersey Subtotal	239,900	259,200	8%	347,400	34%
Study Area Total	**405,500**	**454,300**	**12%**	**593,300**	**31%**

Source: 1990 US Census; 2000 US Census; North Jersey Transportation Planning Authority (NJTPA) and New York Metropolitan Transportation Council 2030 NJ County Forecasts (adjusted); Monroe County Planning Commission and Division of Water Use Planning of Pennsylvania Department of Environmental Protection PA County Forecasts (estimated)

1.7.2 Commuting Growth Trends

The proximity of northwestern New Jersey and northeastern Pennsylvania to the growing employment opportunities in Morris County and other New Jersey locations is a major factor influencing the growth trend in commuting in the study area. As depicted in Table 1.7-3, according to the US Census, commuting from the study area to Morris County, other New Jersey counties, and New York City has been an increasing trend. Commuting from northeastern Pennsylvania to New Jersey and New York increased 75 percent in the period from 1990 to 2000, to approximately 16,000 daily commuters from the study area. The largest increase was in the number of commuters to New York City, up from just over 1,000 commuters in 1990 to over 4,000 commuters by 2000, an increase of 274 percent. Based on the increasing population projections presented in the previous section, this commuting trend is anticipated to continue into the future.

Table 1.7-3: Commuting Growth Trends from Northeastern Pennsylvania*

Work County	1990	2000	1990-2000 *(% Change)*
Bergen, NJ	717	1,119	56.1%
Essex, NJ	854	1,353	58.4%
Hudson, NJ	411	738	79.6%
Morris, NJ	3,454	4,771	38.1%
Sussex, NJ	1,372	2,164	57.7%
Warren, NJ	1,187	1,635	37.7%
New York, NY	1,114	4,171	274.4%
Total	**9,109**	**15,951**	**75.1%**

** Includes Carbon, Lackawanna, Monroe, Pike and Wayne Counties*

Source: 1990 US Census; 2000 US Census

1.7.3 Traffic Congestion Growth Trends

Accompanying this residential growth has been dramatic increases in automobile use on area roadways, resulting in increasing highway congestion and increasing travel times. The primary highways in the area are Interstates 80 and 380. In 2002, daily traffic volume at the Interstate 80 Delaware Bridge was 53,500, up 19 percent from 45,000 in 1997. On a typical summer day, the number of vehicles crossing the bridge rises to 62,000, or 16 percent higher. In New Jersey, the Interstate 80 corridor experiences severe congestion during peak commuting hours. This congestion has contributed to New Jersey's failure to meet the air quality standards set by the US EPA for the region.

The Delaware River Joint Toll Bridge Commission conducted the Northerly Crossings Corridor Congestion Mitigation Study (Final Report, dated July 31, 2006) to look at access and infrastructure issues, environmental concerns, demographics and traffic patterns in the Interstate 80 corridor. The Northerly Crossings Corridor Congestion Mitigation Study estimates that this trend will continue, with eastbound AM peak hour volume projected to increase by approximately 15% between 2004 and 2010, then an additional 46% increase between 2010 and 2030.

In general, transit usage within the study area is extremely low since there is very limited service coverage and a lack of intermodal connectivity. The exception is transit service to Manhattan, which is provided by frequent bus service. In 2000, approximately half of work trips between northeast Pennsylvania and Manhattan were via transit. Travel times projected for bus service in the future are anticipated to continually increase due to increasing traffic delays on Interstate 80. Future demand would create the need for significant additional bus equipment to accommodate this demand. Conflicting with this demand need, however, are the capacity constraints through the Lincoln Tunnel Express Bus Lane (XBL). The XBL is reaching capacity, and in future years, is not anticipated to be able to accommodate the number of buses that wish to utilize the tunnel to reach Manhattan. More significant bus capacity improvements are limited by the throughput of the XBL and gate availability at New York City Port Authority Bus Terminal (PABT).

Improvements to increase the throughput at these "choke points" in the NJ bus transportation system are being separately considered by the Port Authority of NY and NJ. As part of their regular assessment of system performance and capital improvements and maintenance, NJ TRANSIT would continue to provide additional buses on existing routes where demand is high as long as capacity is available in the XBL and the PABT.

1.7.4 Recreational Growth Trends

Northeast Pennsylvania, including the Poconos and Scranton, has historically been known as a tourist and recreational destination. An increasing growth trend in visitation has been occurring in recent years, resulting in congested roadways during weekend, holiday and seasonal peak periods, as evidenced by the annually increasing volumes and delays at the Delaware River Bridge crossing at the Delaware Water Gap. The second home market is a strong factor in this growth as are recreational attractions in the Pocono area, such as skiing, hiking, biking, fishing and camping, and Scranton area tourist locations, including the Steamtown National Historic Site and the Electric City Trolley Station and Museum. These tourist and recreation destinations attract a majority of trips from the New Jersey and New York City market. The federal government has provided access to its national parks and sites – of which there are two along the study corridor (Steamtown National Historic Site and Delaware Water Gap National Recreation Area) – by means other than the private automobile a national priority. Passenger rail service in the Lackawanna Corridor would address this federal priority, as well as other regional recreational and visitation travel problems.

1.7.5 Transportation Impacts of New Rail Service Projects on Existing Rail System

Currently NJ TRANSIT is preparing environmental documents in conformance with federal requirements for five new rail service projects that would be extensions of the existing rail system and add to train operations on existing tracks and at existing stations. The projects are:

- Lackawanna Cut-Off EA
- Monmouth-Ocean-Middlesex (MOM) Draft Environmental Impact Statement (DEIS)
- West Trenton EA
- Access to the Region's Core (ARC) DEIS
- Northern Branch

In addition, NJ TRANSIT has stated that it intends to prepare a DEIS for the proposed West Shore Line in Bergen County.

Each of these proposed rail lines would have an impact on the existing rail system. The extent of the impact of each new service would depend on the anticipated ridership demand and the passenger and operating capacity of the segments of the existing system that would be used by those passengers. In addition, since all of the potential projects would attract passengers bound for Midtown Manhattan, the core system serving New York Penn Station would be affected.

Just as these proposed projects would add passengers to the existing rail system, growth on the existing lines would also increase ridership. Recognizing that investments to expand track, train handling and passenger capacity should consider the needs of the existing system and the potential new rail service projects, NJ TRANSIT is working to identify and implement core system improvements rather than have each of the new rail service projects individually plan improvements for the existing system. In the forefront of those efforts is the ARC DEIS, which is defining a plan and preparing the necessary environmental studies for a new trans-Hudson tunnel and expansion of New York Penn Station. The ARC DEIS is scheduled to be completed soon and funding is being sought to continue advancement of the project.

Other projects that are actively being advanced that would increase core rail system capacity are the Newark Broad Street Americans with Disabilities Act and Capacity Relief Project, Hudson Pocket Track, and acquisition of bi-level coaches. In addition, NJ TRANSIT has initiated its Strategic Rail Infrastructure and Operations Planning Study. That effort would further identify and evaluate capacity constraints and recommend a plan for phasing improvements.

Considering NJ TRANSIT's initiatives to address core system capacity needs, each of the proposed new rail service projects are being advanced based upon the premise that capacity would be available on a modified existing rail system to accommodate passenger demand. As a result, the train service plans for the proposed new rail services are not constrained by current capacity limitations. Instead, the service plans are being designed to provide attractive and practical service frequencies, to address line specific configuration attributes and to accommodate passenger demand. Over time, as new rail service projects and core system capacity investments are advanced, coordination of implementation schedules would be necessary to ensure the availability of capacity for expanding passenger demand.

1.8 Goals, Objectives and Evaluation Criteria

Goals and objectives were adopted for the *Northwest New Jersey-Northeast Pennsylvania Major Investment Study* based upon identified corridor problems and needs. The same goals and objectives were used to develop the evaluation criteria for use in screening the alternatives of this study. These goals, objectives and criteria are listed in the following table, along with criteria for measuring how well an alternative met the objectives.

Table 1.8.1 Study Goals, Objectives and Criteria

Goal	Objective	Criteria
Enhance Regional Mobility	• Improve links between employment, population and recreation centers • Improve connectivity of modes • Promote visitor attractions • Meet demand for public transportation	• Travel times • Linkages • Can be marketed as part of tourism packages • Number of riders
Improve Accessibility to Work Destinations	• Compete with the automobile • Serve the demand of workplace destinations • Promote the use of public transportation for work trips • Support compliance with Federal and State regulatory initiatives	• Convenience and dependability • Number of businesses accessible to the service • Transit's mode share of work trips • Ability to meet demands of Clean Air Act and State Implementation Plan
Enhance Existing Infrastructure	• Maximize existing transportation investments	• Use of rail rights-of-way/increase ridership on bus services
Promote Communities and the Environment	• Provide consistency with local or regional plans • Avoid community disruption • Promote improved air quality	• Environmental summary—consistency with local or regional plans, community disruption, air quality
Enhance Existing Transportation Services	• Provide complementary services • Increase public transportation ridership • Support coordinated transportation network • Adjust to changes in the market • Adjust to changes in regional goals	• Hours, days, markets • Transit's mode share of work and recreation trips • Feeder services for work/recreation trips • Difficulty in changing hours/days of service or rerouting service • Opportunities for further expansion
Promote Regional Development	• Create opportunities to increase federal and state investments • Create opportunities for creating public-private partnerships • Create opportunities for economic development	• Type of federal and state funding for which service is eligible • Economic incentives for private investment • Increase in jobs, tax revenues, private investment

Source: Edwards and Kelcey, 2006.

2.0 ALTERNATIVES CONSIDERED

Numerous modal alternatives, service options and station sites have been analyzed and screened throughout the project development process that led to this study. The alternatives development process was documented in detail in the *Description of Conceptual Alternatives,* March 2006 (Appendix Q).

2.1 Alternatives Development and Selection Process

2.1.1 Feasibility Studies

A long list of potential modal alternatives for this corridor was considered in the *Transportation Options in the Pocono Corridor Study* and the *Lackawanna Cut-Off Right-of-Way Use and Extension Study*, which included:

- Carpool/vanpool
- Bus/high occupancy vehicle (HOV)
- Guided bus
- Light rail transit
- Passenger/commuter rail
- Modified/advanced rail
- Maglev/monorail
- Commuter bus
- Multimodal (mix of rail and bus)
- Highway

A first level alternative screening was conducted in these studies. The *Lackawanna Cut-Off Right-of-Way Use and Extension Study* found major flaws with each of the alternatives examined except for commuter rail and recommended its advancement.

The *Transportation Options* study conducted a multi-step screening process, evaluating each of the alternatives against the evaluation criteria established for the study, which addressed the project needs, goals and objectives. The Rail Alternative was recommended as the Build Alternative as it performed best against the project goals.

2.1.2 Major Investment Study

The *Northwest New Jersey-Northeast Pennsylvania Major Investment Study (MIS)* examined in detail a short list of alternatives identified in the previous feasibility studies. The alternatives considered in the MIS include the following:

MIS No-Build Alternative

The MIS No-Build Alternative represented the levels of demand and the No-Build network anticipated to exist in the Year 2020. The No-Build network was based upon existing conditions in addition to committed changes assumed to occur between 1990 and 2020, such as the Secaucus Transfer Station, Newark International Airport Station on the Northeast Corridor Line, Hudson-Bergen Light Rail (Vince Lombardi Plaza to Bayonne), Howard Boulevard Rail Station and Park-and-Ride on the Boonton Line, Newark Elizabeth Rail Link from Newark Penn Station to Broad Street Station, Montclair Connection,

adoption of NJ TRANSIT's 2020 Morris and Essex Lines Montclair Connection Operating Plan, and increased commuter bus service in the Scranton-New York City corridor.

MIS Bus Alternative

The Transportation Systems Management Alternative, or Bus Alternative, represented a low-capital cost alternative that provides improvements to existing commuter bus service. It was also used to assess the effectiveness of the Rail Alternative. The Bus Alternative would provide commuter/intercity bus service between Scranton, Pennsylvania and Convent Station, (Morris County) New Jersey. The bus would have the same headway and stopping pattern as the rail line in the Rail Alternative. Passengers would transfer to NJ TRANSIT's Morristown Line to continue eastbound toward destinations in New Jersey and New York City. The bus would have a peak period headway of 60 minutes and off-peak headway of 180 minutes.

MIS Rail Alternative

The Build Alternative, referred to as the Rail Alternative, represented the implementation of a Scranton-Hoboken passenger rail service. Station stops between Scranton and Dover, NJ would be provided at Scranton, Mount Pocono, Analomink, and East Stroudsburg in Pennsylvania, Blairstown and Andover in New Jersey. Station stops east of Dover on the Morristown Line would be limited to major New Jersey employment destinations and transfer locations such as Morris Plains, Morristown, Convent Station, and Summit. It is anticipated that New York City bound passengers would transfer at Dover or Newark for Midtown Direct Service into Manhattan or to Port Authority Trans-Hudson (PATH) or ferry service at Hoboken.

MIS Multi-Modal Alternative

The Multi-Modal Alternative would provide rail service between Scranton and Hoboken during the AM and PM peak periods. During the off-peak periods, commuter bus service would serve the identical station stop pattern.

2.1.3 Selection of the Build Alternative

In August 1999, the findings of the MIS were presented to the Technical Advisory Committee and the public. As a result of these meetings, the MIS Rail Alternative was selected as the proposed Build Alternative. In light of the findings of the MIS, the North Jersey Transportation Planning Authority's (NJTPA) *Draft Final Regional Transportation Plan (December 2000)* included rail service on the Lackawanna Cutoff as a key alternative to single occupancy vehicle usage on Interstate 80.

2.2 Alternatives for Advancement

The *Northwest New Jersey-Northeast Pennsylvania Major Investment Study* resulted in a Build Alternative that proposed implementation of passenger rail service in the Lackawanna Cut-Off Corridor. NJ TRANSIT is proposing to carry a No-Build Alternative and a Build alternative for advancement into preliminary engineering; these alternatives are analyzed in this EA and are described in detail in the following sections.

2.2.1 No-Build Alternative

The No-Build Alternative consists of all existing transportation facilities as well as services likely to exist in the future study year without the restoration of rail service. This alternative would be used as a basis for comparison to the Build Alternative in the EA.

The No-Build includes "committed" improvements, which typically includes the projects in the Transportation Improvement Program (TIP) or other local capital programs, plus other minor transit service expansions or adjustments. The No-Build Alternative reflects conditions in the future if no new actions are taken from the proposed project.

The No-Build Alternative for the Lackawanna Cut-Off Project includes the existing transportation network, as well as any roadway and transit projects that would be completed by 2030 (Figure 2.2-1). The NJTPA's TIP includes two roadway/bridge projects in the study area. Both projects involve new bridge construction to replace existing one-lane bridges over the Lackawanna Cut-Off to improve roadway sight distances. One project is located in Sussex County (Sparta Stanhope Road) and the other is in Warren County (Hope Road-County Route 521). Included in PennDOT's State TIP are two projects in the Pennsylvania study area, the recently completed PA Welcome Center at the Delaware Water Gap and the Scranton Intermodal Center.

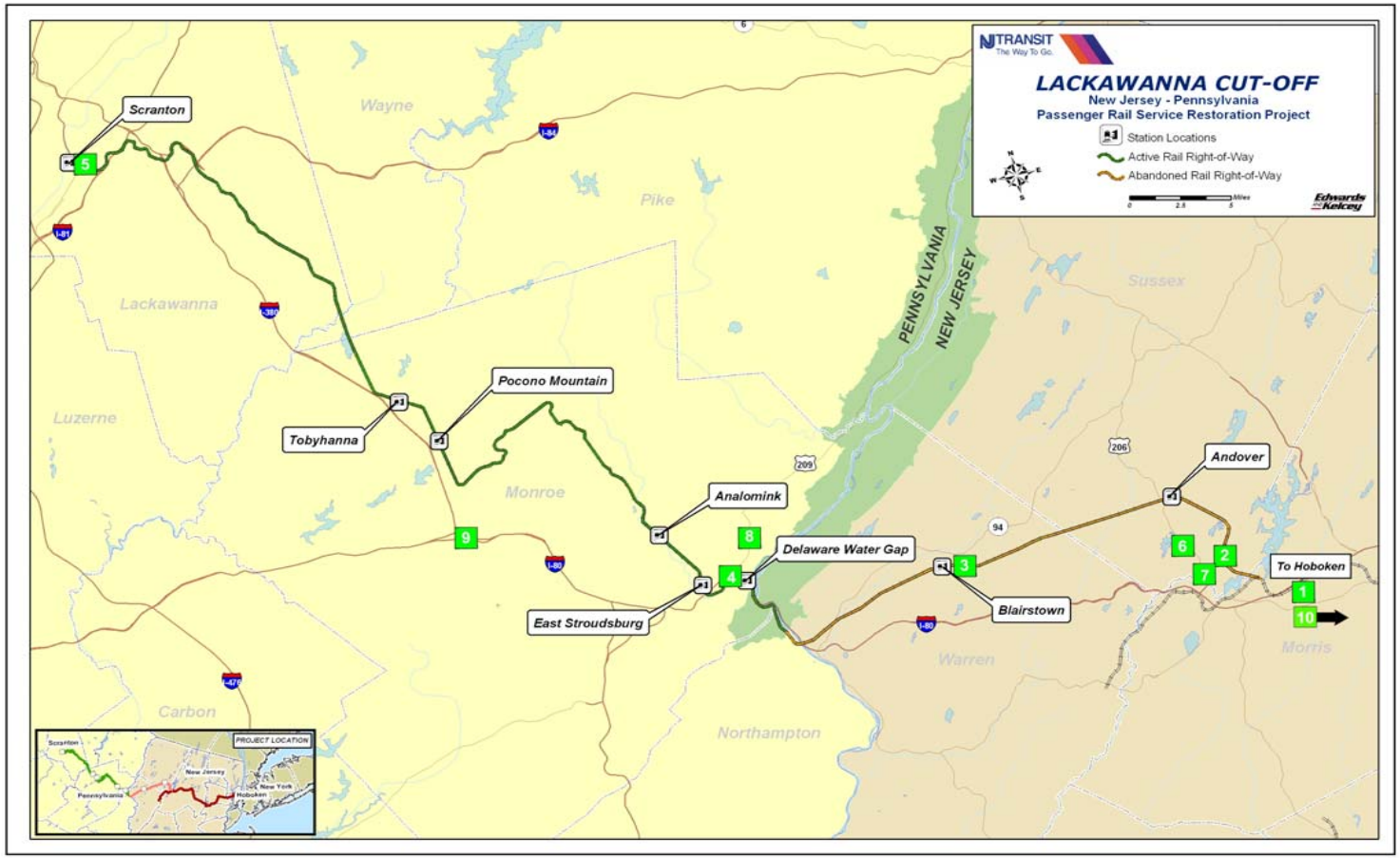
Regarding transit improvements, the No-Build Alternative includes the current rail system operated by NJ TRANSIT, as well as planned improvements to the system. The No-Build Alternative includes a planned improvement to NJ TRANSIT's network within the Lackawanna Cut-Off study area, a new NJ TRANSIT Morris & Essex Line rail station and park-and-ride in Mount Arlington, currently under construction, located adjacent to Interstate 80 and Howard Boulevard in western Morris County.

The No-Build Alternative also includes the Access to the Region's Core (ARC) project, which proposes to build new trans-Hudson rail tunnels and a new passenger station under 34th Street in Manhattan. The Build Alternative rail service plan in the ARC DEIS is assumed to be the No-Build rail service plan for the Lackawanna Cutoff EA. Any changes in rail service resulting from the Lackawanna Cut-Off project are developed in coordination with the ARC Build service plan as the base.

Also identified for the purposes of the No-Build Alternative are other projects in the region that would have an impact on travel in the study area. In New Jersey, these include roadway improvements to the south of the project study area along US Route 206 in Sussex County as well as NJ TRANSIT projects, such as the commuter rail equipment procurement. In Pennsylvania, these include two roadway improvement projects, the Interstates 80 and 380 Interchange project and the Marshalls Creek Bypass project.

The Long Range Transportation Plan (LRTP) for the region, the North Jersey Transportation Planning Authority, *Regional Transportation Plan, Access and Mobility 2030* (September 2005), contains current projects and future candidate projects that have been identified through the metropolitan planning process in Northern New Jersey and whose costs can be accommodated based upon the 25-year funding assumptions contained in the Plan. Projects in the Lackawanna EA study area are: Sparta Stanhope Road Bridge over the Lackawanna Cut-Off; and Interstate 80 Truck Weigh Station, Eastbound, Knowlton Township, MP 1.55 – 2.75. The Plan also includes potential transit investments that are under study. The Lackawanna Cut-Off is listed as one of strategic transit expansions, as a long term goal.

Figure 2.2-1: Lackawanna Cut-Off Passenger Rail Service Study No-Build Projects



1: New NJ TRANSIT rail station and park-and-ride facility at Mount Arlington
2: Construction of a new bridge at Sparta Stanhope Road over Lackawanna Cut-Off
3: Rehabilitation of the existing bridge County Route 521 Hope Road Bridge over Lackawanna Cut-Off to carry southbound traffic; construction of a new bridge to the east to carry northbound traffic.
4: Reconstruction and expansion of the existing Pennsylvania Welcome Center
5: Scranton Intermodal Center
6: Improvements to Route 206, Section, Cat Swamp Mountain, MP 99.7-100.3 and MP 101.15 – 101.35
7: Improvements to Route 206/CR 604, Section: Waterloo/Brookwood Roads, MP 98.38-99.70
8: Marshalls Creek Bypass
9: Reconstruction of Interstate 380 ramps to and from Interstate 80 eastbound
10: Access to the Region's Core

2.2.2 Build Alternative

The Build Alternative is a passenger rail service that would operate from Scranton, PA to Hoboken, NJ, a distance of 133 miles; and from Andover, NJ to New York Penn Station, a distance of approximately 60 miles.

The study area for the Build Alternative is the area in which new rail service would be introduced, from Scranton, PA to Port Morris, NJ. The study area extends from Scranton in Lackawanna County, PA, into Monroe County, PA, and through the New Jersey Counties of Warren, Sussex and Morris to Port Morris.

The Build Alternative involves reactivating 88 miles of passenger service over the former DL&W Railroad mainline from Scranton to Port Morris. The 28-mile portion of the corridor in New Jersey, from Port Morris to Delaware River Bridge, is known as the Lackawanna Cut-Off. The Lackawanna Cut-Off is currently an inactive railroad alignment. In Pennsylvania, the alignment from the Delaware River Bridge to Scranton is approximately 60 miles in length. The majority of the Pennsylvania alignment is an active railroad with both freight service and limited recreational passenger service.

Rail service east of Port Morris would operate via NJ TRANSIT's Morris & Essex or Montclair-Boonton Lines. Trains serving all new stations between Scranton and Andover would terminate in Hoboken, NJ. Additionally, Midtown Direct service would operate between the new Andover Station and New York Penn Station. This latter service was not an element of previous studies, and has subsequently been incorporated to provide added project benefits. Passengers west of Andover would be able to transfer to the Midtown Direct service at several existing stations east of Andover.

The Build Alternative rail services west of Port Morris would be extensions of existing NJ TRANSIT Morris & Essex Line or Montclair-Boonton Line trains. Thus, no new trains would be added along those lines; rather existing trains would be extended to service the new stations west of Port Morris.

2.2.2.1 Operations

The operating plan for the Build Alternative would have two components, with trains providing service from Scranton, PA to Hoboken, NJ and from Andover, NJ to New York Penn Station.

Scranton, Pennsylvania to Hoboken, New Jersey

Trains would consist of commuter rail coaches and a cab car propelled by a diesel locomotive. The trains would operate on approximately 45-minute headways during peak periods and two-three hour headways during off-peak periods. There would be nine eastbound and nine westbound trains. The first train would leave Scranton at approximately 4:00 AM and the last train would return to Scranton at approximately 1:00 AM. The trip times from Scranton to Hoboken would be approximately three hours and twenty minutes. Sample travel times are presented in Table 2.2-1.

West-of-Andover travelers to New York Penn Station could transfer at several locations along the alignment to NJ TRANSIT's Midtown Direct rail service, including at Dover and Newark Broad Street.

Table 2.2-1: Operating Plan Travel Times

Station Stop	Travel Time to Hoboken *(hours: minutes)*
Scranton	3:20
Tobyhanna	2:43
Pocono Mountain	2:38
Analomink	2:12
East Stroudsburg	2:06
Delaware Water Gap	1:58
Blairstown	1:42
Andover	1:29
M&E Service Territory	
Dover	*1:01*
Morris Plains	*0:49*
Morristown	*0:44*
Convent Station	*0:40*
Summit	*0:30*
Newark Broad Street	*0:14*
Hoboken	*0:00*

Source: NJ TRANSIT, 2005

Andover, New Jersey to New York Penn Station

Trains would consist of commuter rail coaches and a cab car propelled by a dual-mode locomotive. The dual-mode locomotive would permit trains to operate in both electrified and non-electrified service territories. This technology would enable these trains to operate over NJ TRANSIT's electrified territory into New York Penn Station. NJ TRANSIT is now working to develop and procure new dual power rail equipment that would be capable of operating on non-electrified rail lines, such as the Lackawanna Cut-Off and along electrified rail lines. This equipment would make it feasible to operate service to New York Penn Station. Development and acquisition of this equipment would enable system-wide NJ TRANSIT rail service to be increased and operate to midtown Manhattan with the completion of the Access to the Region's Core Project. This dual power rolling stock is anticipated to be available to provide the passenger service to Andover proposed as part of the Build Alternative.

By 2030, the trains would operate on approximately 30-minute headways during peak periods and two-hour headways during the off-peak periods. There would be ten eastbound and eleven westbound trains. The first train would leave Andover at approximately 5:00 AM and the last train would return to Andover at approximately 10:30 PM. The trip time from Andover to New York Penn Station would range from one hour and 55 minutes to two hours and one minute, depending upon the intermediate station stops.

The Andover trains would be extensions of dual-mode trains identified in the ARC DEIS Build Alternative service plan. They would be a combination of Morris & Essex and Montclair-Boonton Line trains that would terminate at Dover, Howard Boulevard or points west of Port Morris under the ARC plan. Selected trains would be extended to Andover to provide Direct Midtown service as described above.

2.2.2.2 Stations

New stations would be constructed as part of the Build Alternative. Each station would consist of a high level platform with a canopy and passenger waiting shelter. Provisions for general lighting, landscaping and illuminated walkways would create a pedestrian friendly environment. Parking would be provided at the stations. The proposed stations are described below.

Scranton Station

The terminus of the line in the City of Scranton would be a regional station located in conjunction with a proposed Intermodal Transit Center (ITC) along Lackawanna Avenue. This proposed station to be constructed in a rail right-of-way owned by the Pennsylvania Northeast Region Rail Authority would permit the rail service to interface with local and intercity bus services, allowing convenient transfer between modes. The ITC is a separate project being proposed by the City of Scranton included in the project No-Build Alternative. The proposed station would be situated on Lackawanna Avenue along the northernmost track immediately east of Bridge 60 (the railroad bridge over the Lackawanna River) and to the east of the Cliff Street underpass. Access to this site would be from Lackawanna Avenue.

Tobyhanna Station

The proposed Tobyhanna Station site is located in Coolbaugh Township and is part of a site owned by the Pennsylvania Northeast Region Rail Authority. The site is adjacent to the former rail station; the historic building is still in place and is in use as the local historical society rail museum. Parking at this location would be on the vacant side and rear portions of this site. Access to this site would be from Church Street.

Pocono Mountain Station

The proposed Pocono Mountain Station site is located in Coolbaugh Township and is part of a site that is currently vacant. The site, which was formerly used as a summer camp, is proposed to be developed by a private entity in phases as an industrial complex. A portion of the complex would be dedicated for use as the station site. The proposed station site is located northwest of this multi-phased planned development. Access to this site would be from PA Route 611.

Analomink Station

The site for the proposed Analomink Station is located along PA Route 191 in Stroud Township. PennDOT and Stroud Township own the two parcels that comprise the station site. While the Township-owned portion is currently vacant, the parcel under PennDOT ownership is used for roadway maintenance materials storage. Access to this site would be from PA Route 191 and PA Route 447.

East Stroudsburg Station

The proposed location of this station is west of the right-of-way, east of Crystal Street and south of the former railroad station building. Parking would be within the right-of-way along Crystal Street and would continue south of Bridge Street on two properties owned by rail entities. Access to this site would be from Crystal Street and Bridge Street.

Delaware Water Gap Visitors Center Station

The proposed location of this station is south of the right-of-way at PA Route 2028 (PA Route 2028) in Smithfield Township. The parking area would be located at the Delaware Water Gap Visitors Center, south of Interstate 80. The Commonwealth of Pennsylvania recently completed improvements to the existing visitors center. This station assumes modification to the Visitors Center to include a park-and-ride facility. Pedestrian access to the station platform from the site would be along PA Route 2028. This project would include improvements along PA Route 2028 to permit pedestrian access. Access from Interstate 80 would be direct via PA Route 2028.

Blairstown Station

The proposed Blairstown Station would be located on the north side of the right-of-way, west of Hope Road (County Route 521). Parking would be provided on a site that is currently in private ownership. The former station building and freight house are intact on this site. Access to this site would be from County Route 521.

Andover Station

This proposed station site is located in Andover Township on the south side of Roseville Road in the vicinity of where the road curves to the north to intersect with Andover Mohawk Road. The site is undeveloped and located within the railroad right-of-way owned by the State of New Jersey. Access to this site would be from Roseville Road (County Route 613).

2.2.2.3 Maintenance Facilities

A yard facility would be built in Scranton, west of the proposed station site. The yard facility would be used for vehicle storage, light maintenance, fueling and cleaning. The yard would include covered storage tracks and an employee welfare facility. This former multiple-track right-of-way would permit the construction of two storage tracks and a tail track parallel to the existing freight track. The proposed employee welfare facility could provide space for offices, crew locker rooms for male and female employees, and storage for cleaning, inspection and light maintenance material. Approximately 30 employee parking spaces would be provided at the site.

A maintenance-of-way facility is included as part of the project in Greendell, New Jersey, utilizing the former station building and site at that location for storage of materials for signal maintainers. This proposed facility would be located entirely in a publicly-owned right-of-way.

2.2.2.4 Infrastructure

In the New Jersey segment, the right-of-way from Port Morris to the Delaware River Bridge would require extensive clearing, grubbing and rehabilitation since there is no rail service or existing track over this segment. A single new track would be constructed for the length of the right-of-way from Port Morris to the Delaware River Bridge. It would be placed to allow for the construction of a second track in the future by a separate project, should two tracks be needed in the future. A two-mile passing siding would be constructed approximately four miles east of Blairstown Station. West of the Andover Station there will be an approximate 1,000-foot long second track. New construction would also occur at Port Morris where a connection to the existing Morristown Line would be re-established. A new signal and communication system would be installed throughout both the New Jersey and Pennsylvania segments of the project.

There are 68 existing structures; i.e., culverts, bridges, walls, etc., in New Jersey that would be utilized. These structures would require varying amounts of rehabilitation. The majority of these structures is constructed of reinforced concrete and has experienced deterioration that would require minor repairs, such as spall repair, fixing cracks in the concrete, pressure injecting grout in leaking joints and seal coating concrete adjacent to the roadways. Minor rehabilitation would be required in New Jersey on the Paulins Kill Viaduct and at the Roseville Tunnel. Paulins Kill Viaduct rehabilitation needs would be relatively minor, consisting of the rehabilitation of refuge bays and replacing railings at the top of the structure. Roseville Tunnel rehabilitation needs may include reinforcements and lining replacement.

The Delaware River Bridge spanning the Delaware River between New Jersey and Pennsylvania would require the most extensive structural rehabilitation work in the corridor since it has experienced deterioration from weather and water due to its location spanning the Delaware River. Major reconstruction would be required for the length of the bridge to replace the smaller arch components up to the top of the structure, including replacement of the entire deck of the structure.

In the Pennsylvania segment from the Delaware River Bridge to Scranton, the existing railroad track and infrastructure would be utilized, but would be upgraded where necessary. Three new two-mile sidings would be constructed, one east of East Stroudsburg Station and two between Analomink and Pocono Mountain Stations. There would be a six-mile long segment of double track for passing eastward from the terminus in Scranton. The existing structures in Pennsylvania would be utilized, with minor rehabilitation.

2.2.2.5 Demand Estimation

Ridership demand for the Lackawanna Cut-Off Study was estimated by NJ TRANSIT using the North Jersey Transit Demand Model (NJTDM). The model was modified and extended to include the study area for the Lackawanna Cut-Off Study, which includes counties in northeastern Pennsylvania. The model was updated with estimates and forecasts of population, households and employment for the Years 2000 and 2030 in the Pennsylvania portions of the study area, including Bucks, Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike and Wayne Counties.

Ridership forecasting assumptions include:

- PA county forecasts were developed by Pennsylvania Department of Environmental Protection (PADEP) Water Resources Division;
- NJ/NY forecasts used New York Metropolitan Transportation Council 2004 forecasts for NY counties and North Jersey Transportation Planning Authority 2004 forecasts for NJ counties;
- 2000 Census Journey to Work data was used to estimate trips to Manhattan and other major points from the Pennsylvania portion of the study area as a base; these were supplemented with 2002 bus survey data for riders to Manhattan;
- Future growth was then factored in to develop 2030 No-Build work trips;
- Non-work trips were factored in based upon 1990 relationships between work and non-work trips from the study area, and factored to 2000 using Census and other data;
- NJ TRANSIT rail fares were extended to Scranton;
- Parking costs were assumed to be $1 per day or less at stations, no capacity constraint;
- 2002 bus schedules (Martz, Lakeland, etc.);
- Travel times do not consider any capacity constraints on railroad;
- Updated highway network; and,
- ARC Build Alternative rail service plan was assumed in the No-Build Alternative.

Table 2.2-2 presents the ridership demand that resulted from the ridership modeling process.

Table 2.2-2: Weekday Ridership Estimates, 2030

Station	Total Eastbound Daily Boardings	AM Peak Period Eastbound Boardings	Off-Peak & PM Peak Eastbound Boardings
Scranton	40	35	5
Tobyhanna	150	140	10
Pocono Mountain	1,040	960	80
Analomink	250	235	15
East Stroudsburg	460	420	40
Delaware Water Gap	980	890	90
Blairstown	280	280	0
Andover	150	140	10
Total Lackawanna Line	**3,350**	**3,100**	**250**
Additional Riders on Existing NJ TRANSIT Line	*170*	*150*	*20*
Total Project	**3,520**	**3,250**	**270**

Source: NJ TRANSIT, 2006
Note: The AM peak period is a 6 AM – 10 AM arrival time in New York and key New Jersey destinations

2.2.2.6 Parking Requirements

Based on the ridership demand, parking facilities were identified for each station location. Table 2.2-3 presents the number of parking spaces proposed at each station.

Table 2.2-3: Proposed Station Parking Facilities

Station	Number of Parking Spaces
Scranton Yard	30
Scranton	30
Tobyhanna	102
Pocono Mountain	1,000
Analomink	250
East Stroudsburg	228
Delaware Water Gap	900
Blairstown	230
Andover	125
Total Number of Parking Spaces	**2,895**

Source: NJ TRANSIT, 2006

2.2.2.7 Costs

Capital Costs

A capital cost model was developed for the Lackawanna Cut-Off Passenger Restoration Project following the guidance contained in *Procedures and Technical Method for Transit Project Planning*, Section II.3, Estimation of Capital Costs, Federal Transit Administration, September 1998, as revised. The capital cost model is limited by the level of design detail available at this stage of project development. During the preliminary/final engineering phase, capital costs would be refined with the more detailed information

developed. In order to anticipate potential variances in assumptions made in the order-of-magnitude costs at this stage of project planning and actual implementation cost, a contingency cost is included. More detailed information on environmental mitigation and right-of-way, station and yard property acquisition would need to be quantified in the next phase of design, as well.

Unit costs included in the model have been developed based upon recent experience with the design and cost estimating of capital cost elements on other projects. Costs have been developed based upon NJ TRANSIT experience. The model has been prepared in 2006 dollars.

Capital costs to construct and implement the Lackawanna Cut-Off project were estimated and are summarized in Table 2.2-4.

Table 2.2-4: Capital Costs

Cost Item	Total (millions, 2006 dollars)
Track, Structures, Signals and Communications	$191
Stations	$41
Yard	$14
Equipment	$105
Environmental Mitigation / Land Acquisition	$5
Soft Costs	$90
Contingency	$80
Overhead and Profit	$25
TOTAL	**$551**

Source: Edwards and Kelcey, 2006.

Operating and Maintenance Costs

An operating and maintenance cost (O&M) model was developed for use in the Lackawanna Cut-Off Passenger Restoration Project. The O&M estimate has been prepared following the guidance contained in *Procedures and Technical Method for Transit Project Planning*, Section 2.4, Operating and Maintenance Cost, Federal Transit Administration, September 1990, as revised. The principals of this guidance were applied to prepare the O&M cost model for the Lackawanna Cut-Off Passenger Restoration Project, which was developed to a level of detail appropriate for the concept-level work performed in this study. The output of the demand forecasts and operating plans were used as input to the O&M cost model, in the form of operating statistics. Development of the model involves identifying costs that vary with service levels, and then attributing each variable cost to the service characteristics to which it is most closely tied. The O&M estimate includes incremental costs to extend ARC trains from Mount Arlington / Port Morris Yard to Andover.

Annual costs to operate and maintain the Lackawanna service were estimated and are summarized in Table 2.2-5.

Table 2.2-5: Annual Operating and Maintenance Costs

Cost Item	Total (millions, 2006 dollars)
Train Operations	$4.8
Train Maintenance	$5.3
Yard Operation and Maintenance	$1.9
Station Operations and Maintenance	$1.7
Maintenance-of-way	$8.1
Administration	$4.4
TOTAL	**$26.2**

Source: Edwards and Kelcey, 2006.

Revenue and Net O&M Costs

Annual fare revenues were estimated using the output of the demand forecasts and based upon existing NJ TRANSIT fare structure extended out to Scranton. Other notable assumptions include:

- Calculations are based upon fare policies in effect prior to July, 2005 (the date of the last NJ TRANSIT fare increase);
- Calculations reflect a typical mix of ticket types in the peak and off-peak periods by origin-destination station pairs, as was used as input to the demand forecasting model;
- Annual ridership figures were calculated based upon typical weekend and holiday service, and include recreational weekend riders;
- Revenue impacts for connecting modes (e.g., Newark City Subway, local distribution buses, etc.) are not included;
- Revenue estimates are in 2005 dollars (pre-July) and reflect 2030 ridership forecasts; and
- Non-farebox revenues (e.g., parking, advertising) were not included.

Annual passenger activity at proposed new stations in 2030 is 1,811,000 trips. The net annual change at proposed and existing stations together is 1,847,000 trips. The associated annual revenue figures are $14.54 million and $13.87 million, respectively. Although the existing NJ TRANSIT rail stations would experience a small net increase in ridership attracted by modest changes in service frequency, the impact would be a net reduction in revenue of $667,000 at those stations. This occurs because the growth occurs predominantly at the innermost, lowest-fare stations, while some of the outer stations lose riders that divert to the new stations. Fare impacts at existing stations also result from a shift between terminal destinations, New York Penn Station versus Hoboken Terminal.

A breakdown of the revenue estimates by station is presented in Table 2.2-6.

Based on the operating cost estimates previously presented, the farebox recovery rate on the Lackawanna Cut-Off is 55.5 percent. Taking all NJ TRANSIT rail lines into consideration, the recovery rate drops slightly to 52.9 percent. The shortfall of revenue to operating costs (i.e., the annual subsidy) is $12.3 million.

Table 2.2-6 Annual Rail Revenue

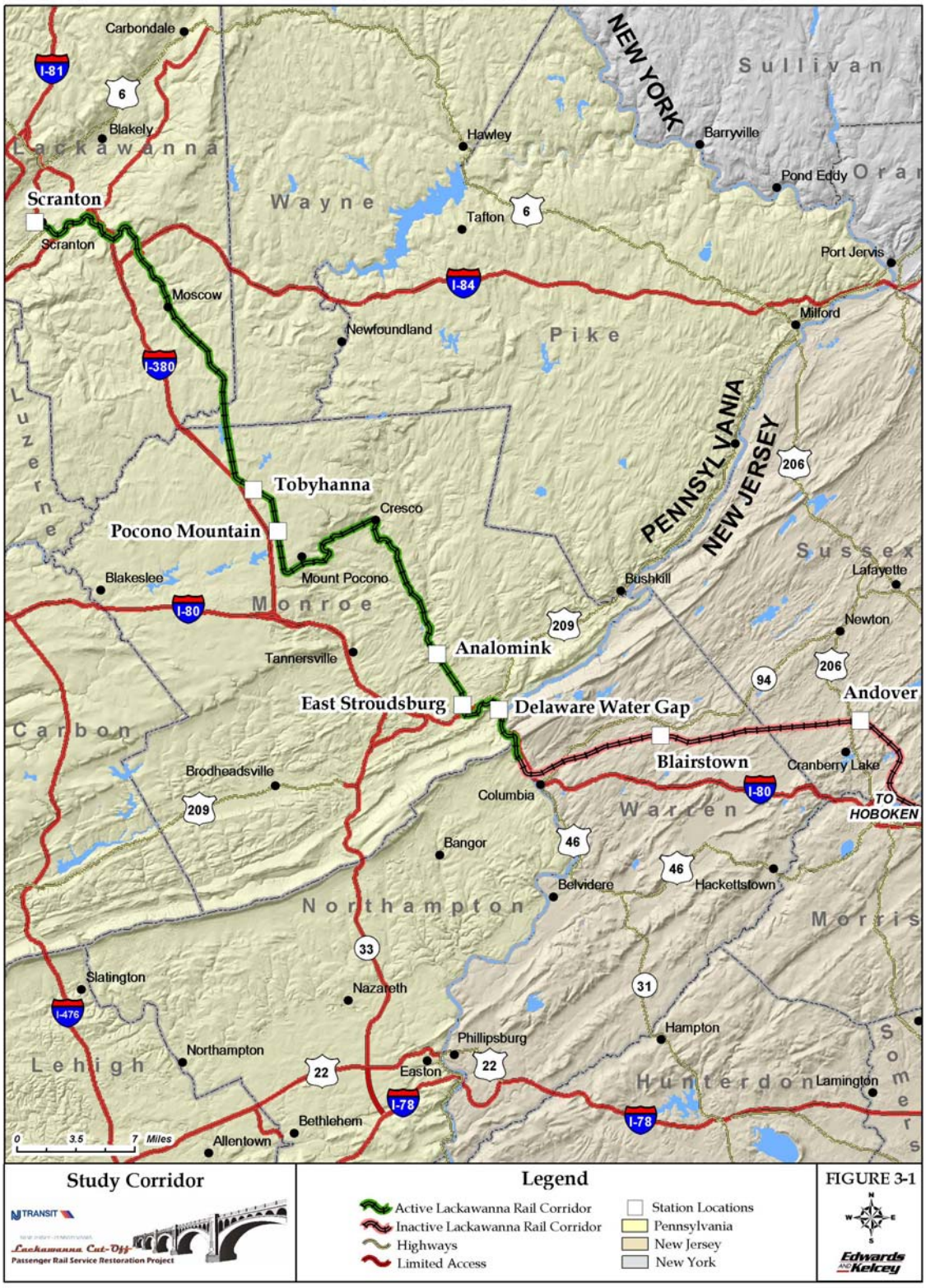
Station	Total (thousands, 2005 dollars)
Scranton	$ 200
Tobyhanna	$ 660
Mount Pocono	$ 4,692
Analomink	$ 1,120
East Stroudsburg	$ 2,009
Delaware Water Gap	$ 4,027
Pennsylvania Subtotal	$ 12,708
Blairstown	$ 1,238
Andover	$ 589
New Jersey Subtotal	$ 1,827
Lackawanna Cut-Off Total	$ 14,535
Balance of NJ TRANSIT stations	$ (667)
Net Rail System Total	**$ 13,868**

Source: NJ TRANSIT, 2005.

3.0 SUMMARY OF ENVIRONMENTAL EFFECTS

An evaluation was completed of the effects of the project on the built and natural environment. Project effects were assessed for either the proposed station areas or the proposed project corridor, depending upon the environmental category evaluated. A station area is defined as the area within a one-quarter mile (1,320 feet) radius of a proposed station site. A proposed station site includes the station platform, station building and associated parking lots. The project corridor is defined as the former Delaware, Lackawanna & Western (DL&W) rail right-of-way from Scranton (Lackawanna County, PA) into Monroe County, PA and through Warren, Sussex, and a portion of Morris Counties in New Jersey (Figure 3-1). A summary of major findings is presented below. Figure 3-2 through 3-12 depict the key environmental features in the study area.

Detailed description of the evaluations of the proposed project effects on land use and zoning, community facilities, historic resources, archaeology, traffic, air quality, noise and vibration, physical resources, water quality, wetlands, flood plains, endangered species, hazardous waste, environmental justice, and construction impacts can be found in the Appendices accompanying this document.


Carbondale
I-81
6
Blakely
Lackawanna
Scranton
Scranton
Wayne
Hawley
NEW YORK
Barryville
Sullivan
Pond Eddy
Tafton
6
Port Jervis
I-84
Moscow
Newfoundland
Pike
Milford
I-380
Luzerne
PENNSYLVANIA
NEW JERSEY
206
Tobyhanna
Cresco
Pocono Mountain
Sussex
Lafayette
Blakeslee
Mount Pocono
Bushkill
I-80
Monroe
209
Newton
Tannersville
Analomink
206
94
Andover
East Stroudsburg
Delaware Water Gap
Carbon
Blairstown
Cranberry Lake
Brodheadsville
Columbia
I-80
TO HOBOKEN
Warren
209
Bangor
46
46
Belvidere
Hackettstown
Northampton
Morris
33
Slatington
Nazareth
31
I-476
Hampton
Phillipsburg
Northampton
Lehigh
22
Easton
22
Hunterdon
Lamington
Somerset
I-78
I-78
Bethlehem
0 3.5 7 Miles
Allentown
Study Corridor
NJ TRANSIT
Lackawanna Cut-Off
Passenger Rail Service Restoration Project
Legend
Active Lackawanna Rail Corridor
Inactive Lackawanna Rail Corridor
Highways
Limited Access
Station Locations
Pennsylvania
New Jersey
New York
FIGURE 3-1
Edwards and Kelcey

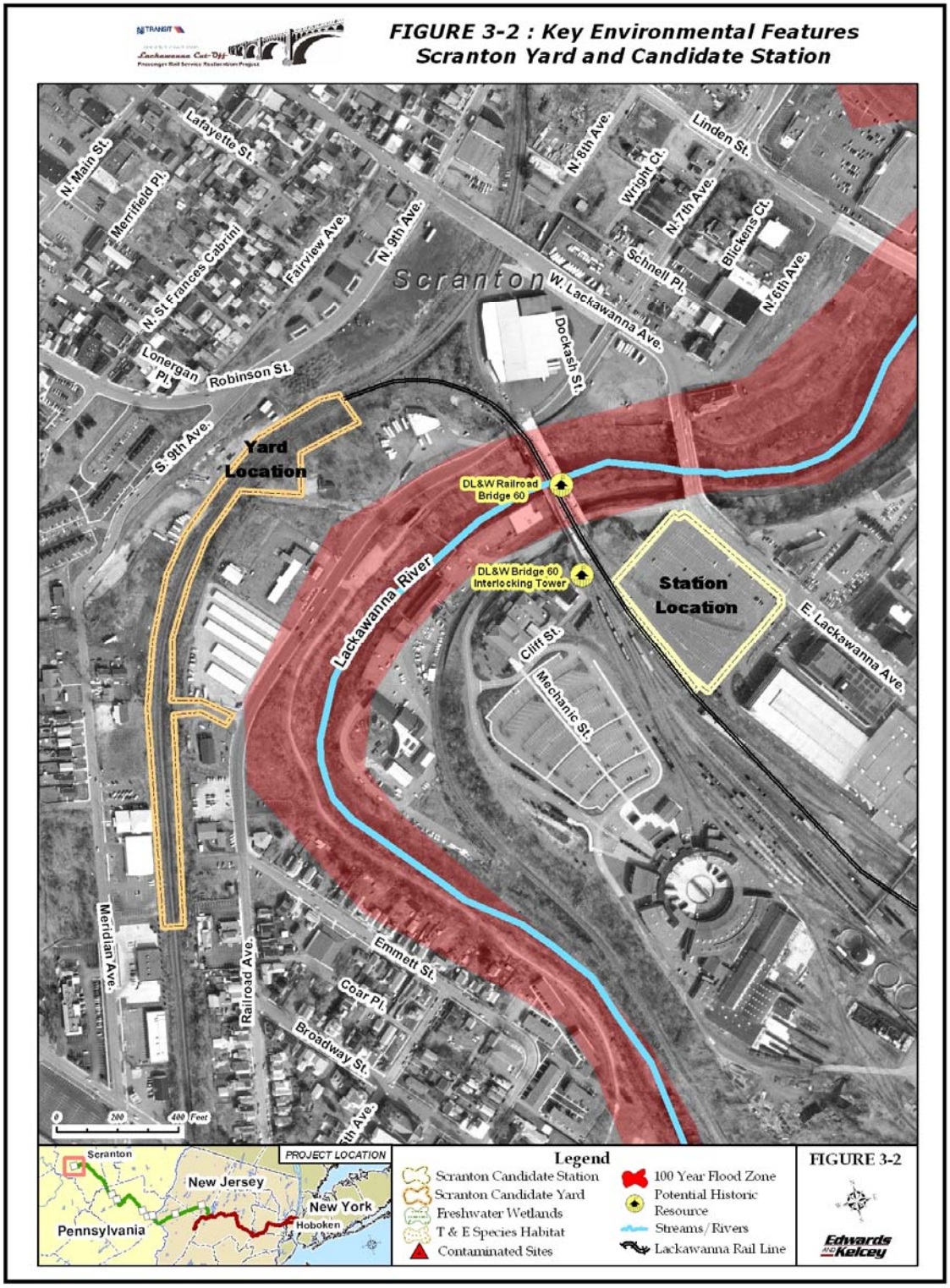


FIGURE 3-2 : Key Environmental Features
Scranton Yard and Candidate Station
Scranton
N. Main St.
Lafayette St.
Merrifield Pl.
N. St Frances Cabrini
Fairview Ave.
N. 9th Ave.
N. 8th Ave.
Linden St.
Wright Ct.
N. 7th Ave.
Blickens Ct.
Schnell Pl.
N. 6th Ave.
W. Lackawanna Ave.
Dockash St.
Lonergan Pl.
Robinson St.
S. 9th Ave.
Yard Location
DL&W Railroad Bridge 60
DL&W Bridge 60 Interlocking Tower
Station Location
Lackawanna River
Cliff St.
Mechanic St.
E. Lackawanna Ave.
Meridian Ave.
Railroad Ave.
Emmett St.
Coar Pl.
Broadway St.
0 200 400 Feet
PROJECT LOCATION
Scranton
New Jersey
New York
Pennsylvania
Hoboken
Legend
Scranton Candidate Station
Scranton Candidate Yard
Freshwater Wetlands
T & E Species Habitat
Contaminated Sites
100 Year Flood Zone
Potential Historic Resource
Streams/Rivers
Lackawanna Rail Line
FIGURE 3-2
Edwards and Kelcey

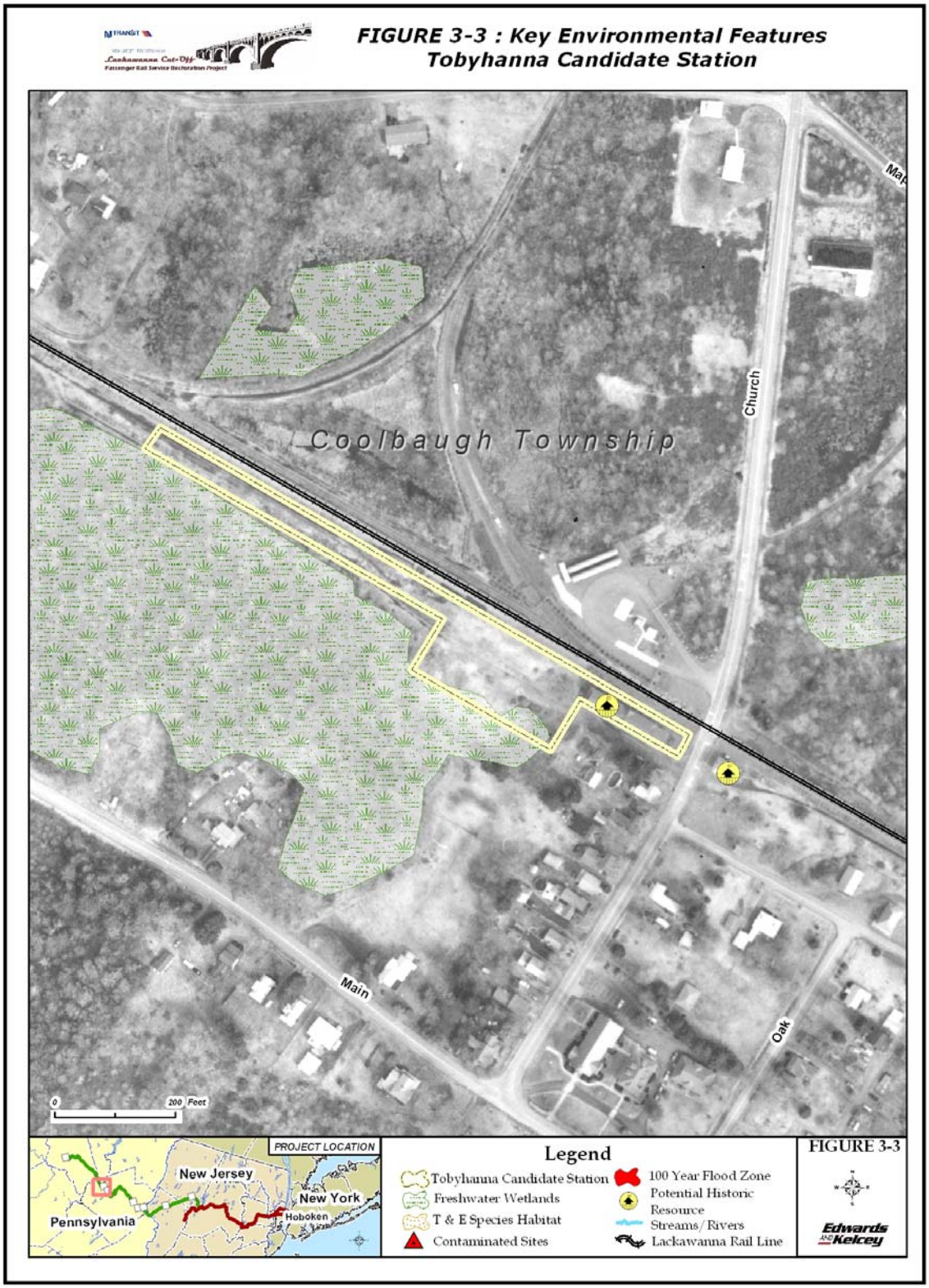


FIGURE 3-3 : Key Environmental Features
Tobyhanna Candidate Station
Coolbaugh Township
Church
Main
Oak
0
200 Feet
PROJECT LOCATION
New Jersey
New York
Pennsylvania
Hoboken
Legend
Tobyhanna Candidate Station
Freshwater Wetlands
T & E Species Habitat
Contaminated Sites
100 Year Flood Zone
Potential Historic Resource
Streams/ Rivers
Lackawanna Rail Line
FIGURE 3-3
Edwards and Kelcey

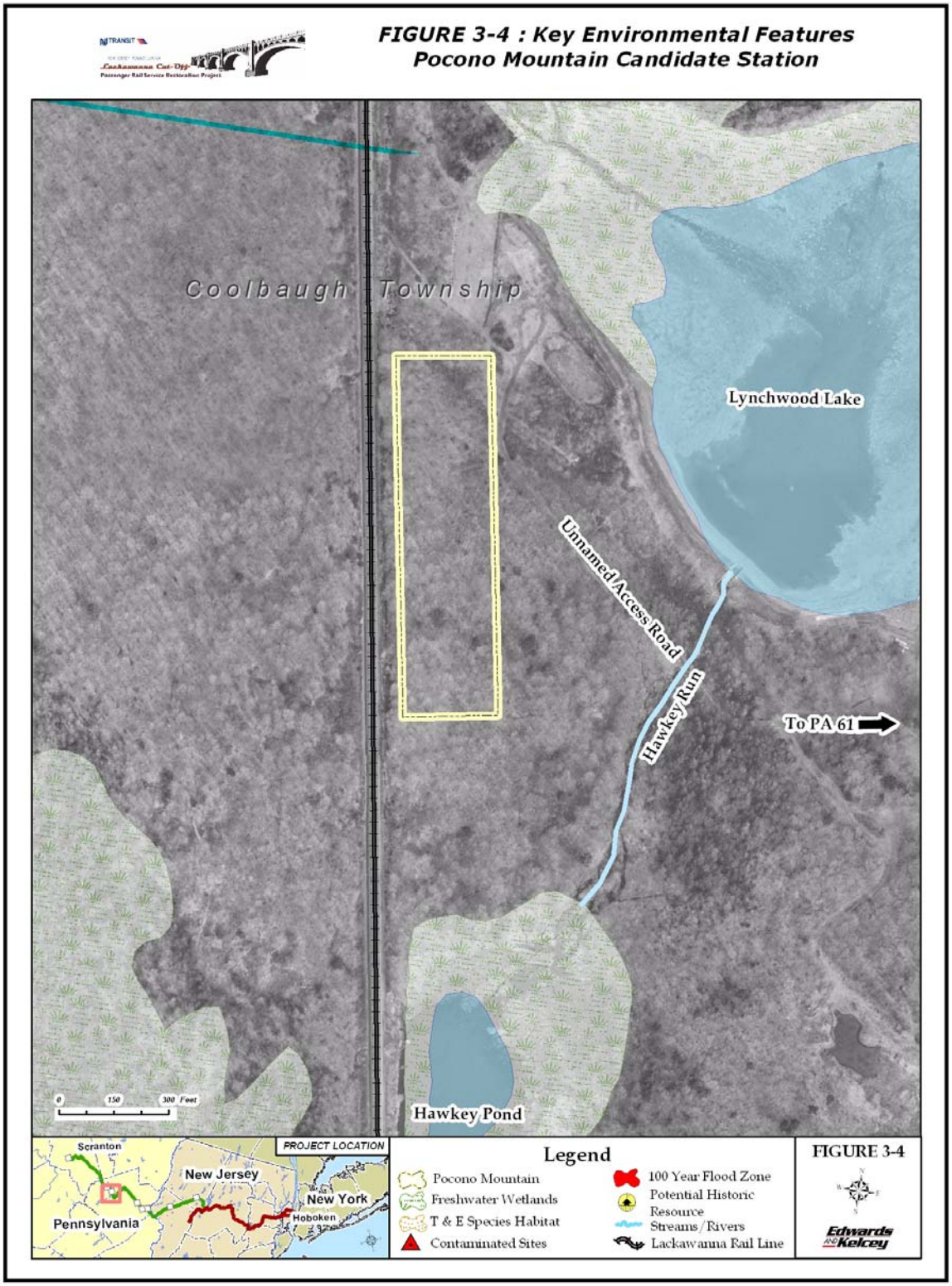


FIGURE 3-4 : Key Environmental Features
Pocono Mountain Candidate Station
Coolbaugh Township
Lynchwood Lake
Unnamed Access Road
Hawkey Run
To PA 61
Hawkey Pond
0
150
300 Feet
PROJECT LOCATION
Scranton
New Jersey
New York
Pennsylvania
Hoboken
Legend
Pocono Mountain
Freshwater Wetlands
T & E Species Habitat
Contaminated Sites
100 Year Flood Zone
Potential Historic Resource
Streams / Rivers
Lackawanna Rail Line
FIGURE 3-4
Edwards and Kelcey

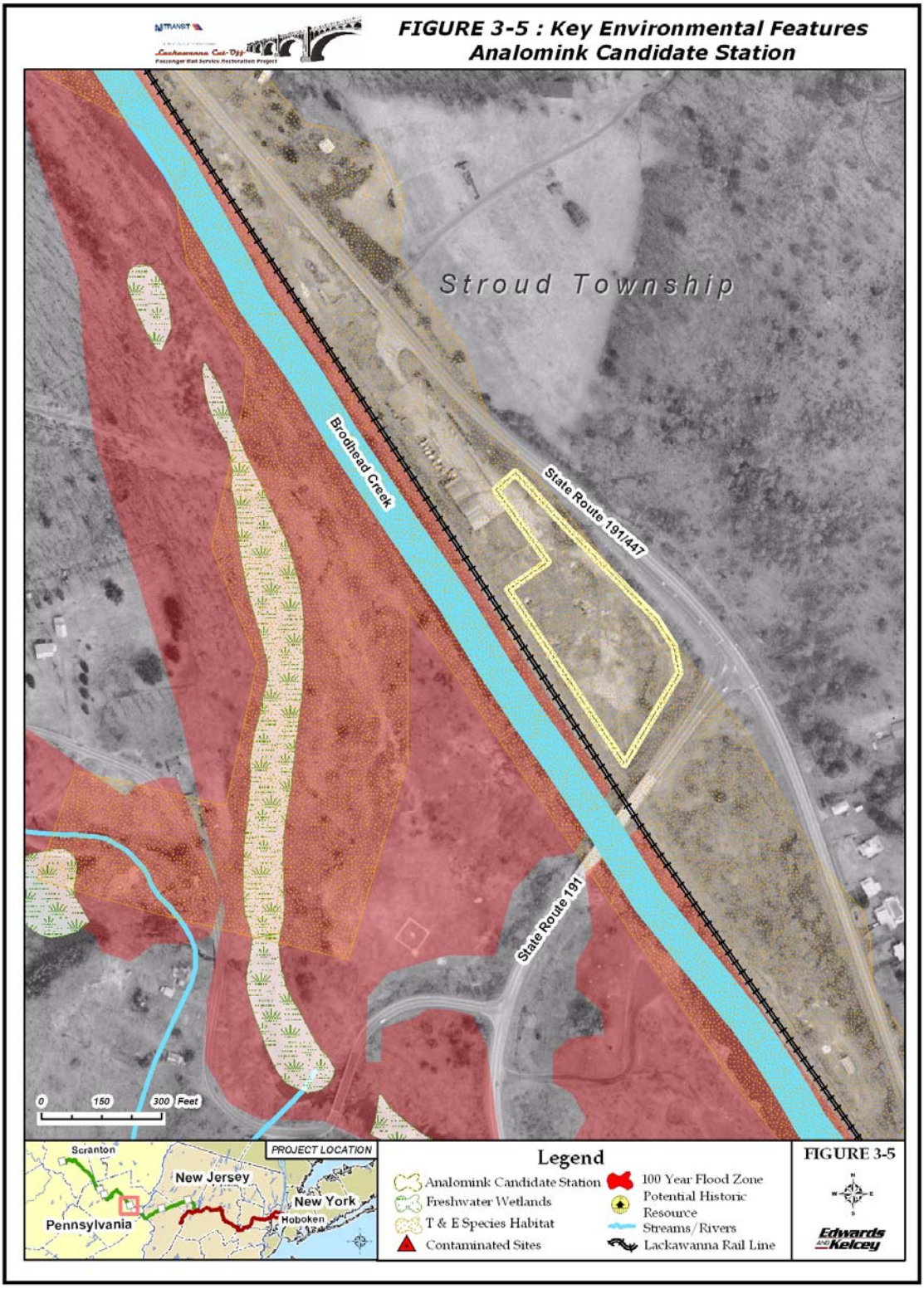


FIGURE 3-5 : Key Environmental Features
Analomink Candidate Station
Stroud Township
Brodhead Creek
State Route 191/447
State Route 191
0
150
300 Feet
PROJECT LOCATION
Scranton
New Jersey
New York
Pennsylvania
Hoboken
Legend
Analomink Candidate Station
Freshwater Wetlands
T & E Species Habitat
Contaminated Sites
100 Year Flood Zone
Potential Historic Resource
Streams/Rivers
Lackawanna Rail Line
FIGURE 3-5
Edwards and Kelcey

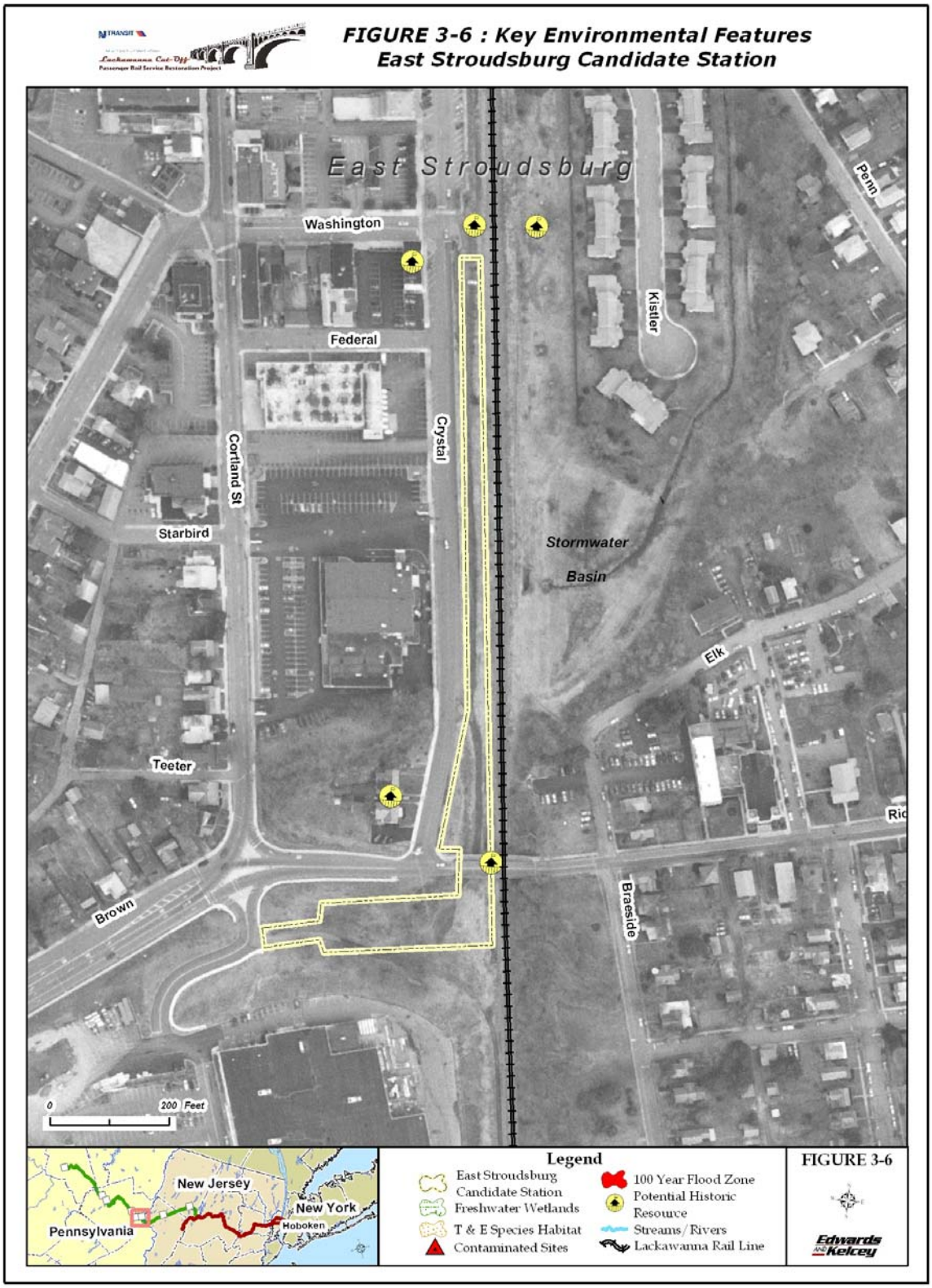


FIGURE 3-6 : Key Environmental Features
East Stroudsburg Candidate Station
East Stroudsburg
Washington
Federal
Crystal
Cortland St
Starbird
Teeter
Brown
Kistler
Penn
Stormwater
Basin
Elk
Braeside
0
200 Feet
New Jersey
New York
Pennsylvania
Hoboken
Legend
East Stroudsburg Candidate Station
Freshwater Wetlands
T & E Species Habitat
Contaminated Sites
100 Year Flood Zone
Potential Historic Resource
Streams/Rivers
Lackawanna Rail Line
FIGURE 3-6
Edwards and Kelcey

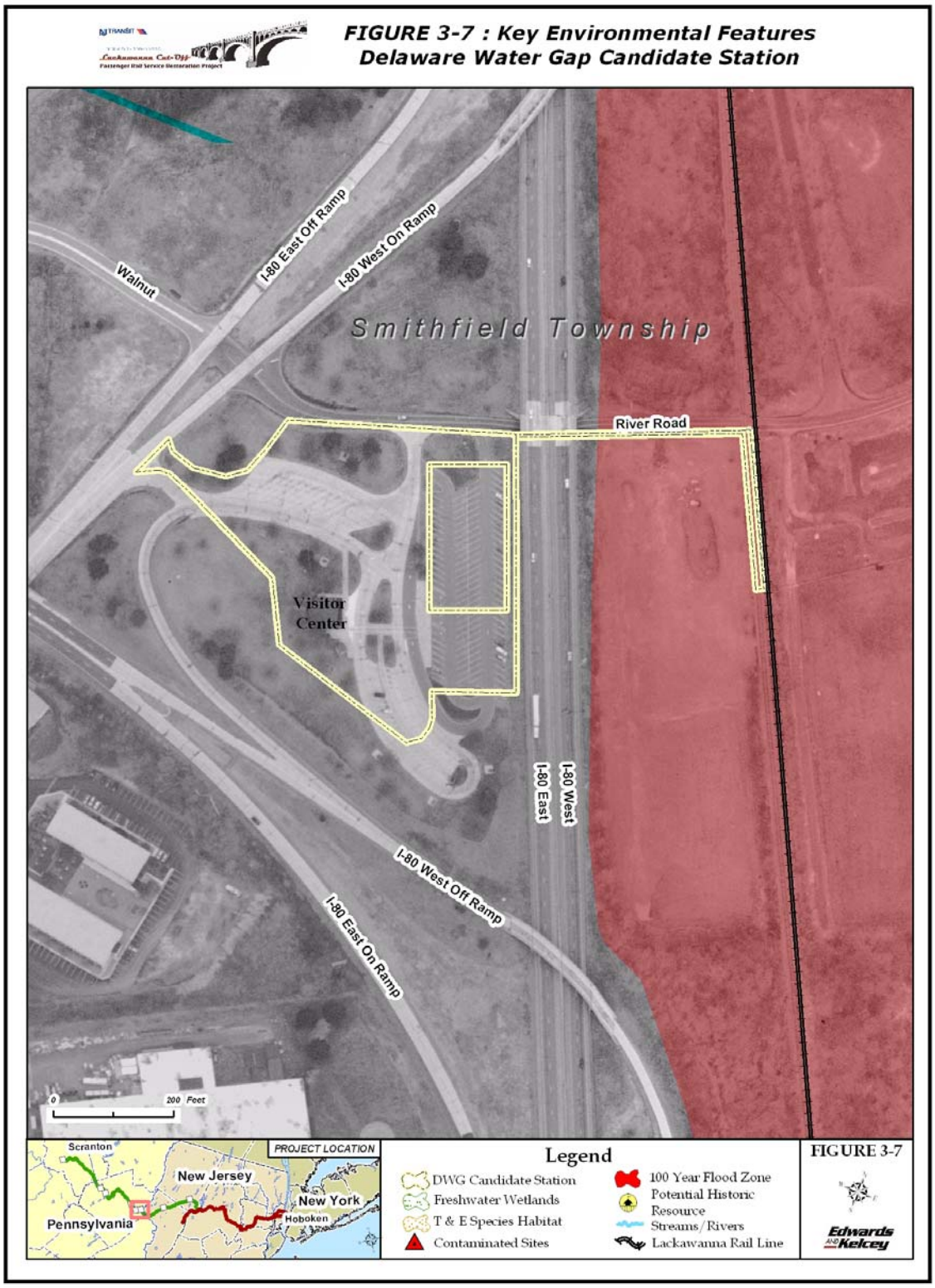


FIGURE 3-7 : Key Environmental Features
Delaware Water Gap Candidate Station
Walnut
I-80 East Off Ramp
I-80 West On Ramp
Smithfield Township
River Road
Visitor Center
I-80 East
I-80 West
I-80 West Off Ramp
I-80 East On Ramp
0
200 Feet
PROJECT LOCATION
Scranton
New Jersey
New York
Pennsylvania
Hoboken
Legend
DWG Candidate Station
Freshwater Wetlands
T & E Species Habitat
Contaminated Sites
100 Year Flood Zone
Potential Historic Resource
Streams/Rivers
Lackawanna Rail Line
FIGURE 3-7
Edwards and Kelcey

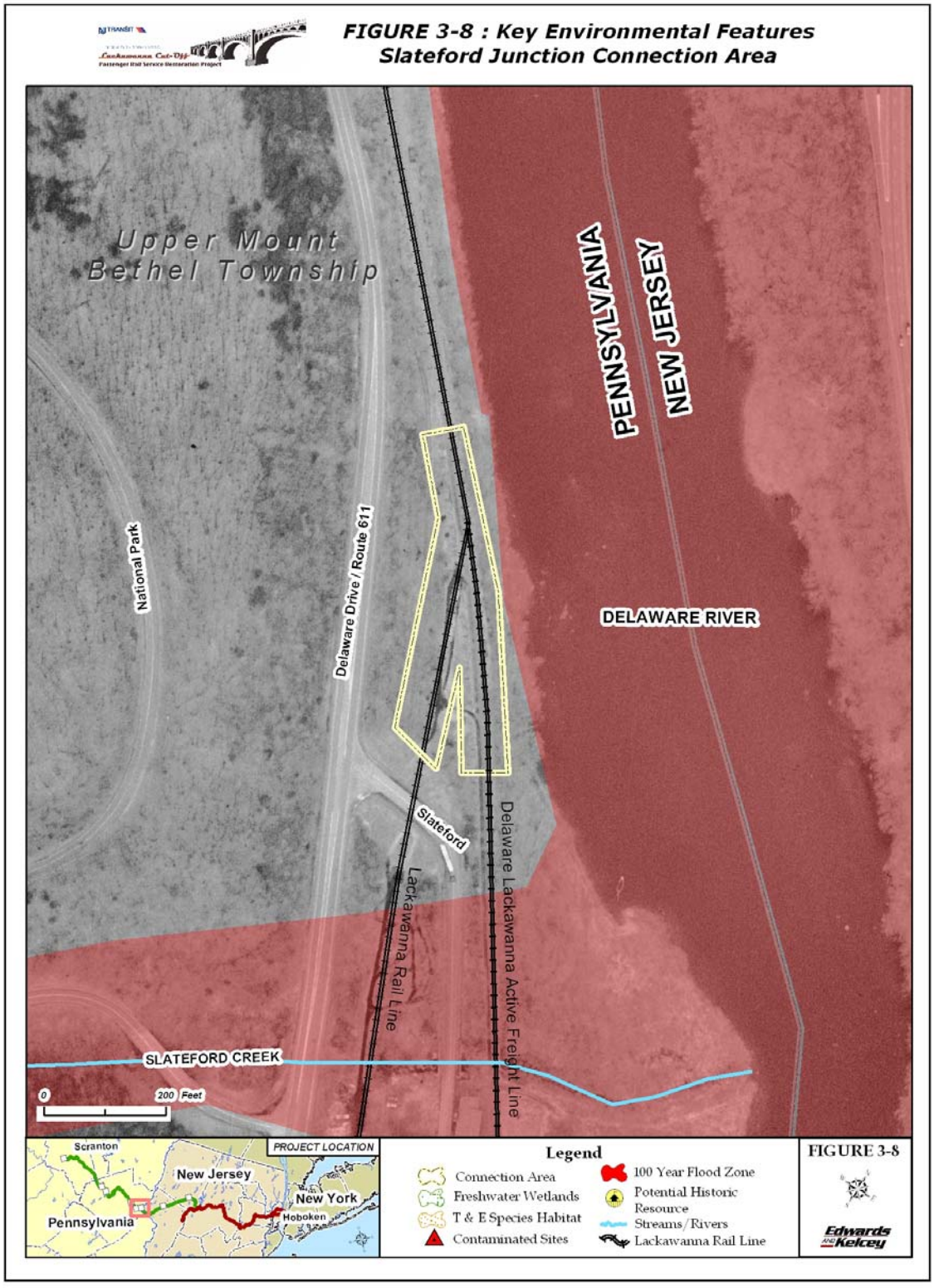


FIGURE 3-8 : Key Environmental Features
Slateford Junction Connection Area
Upper Mount Bethel Township
PENNSYLVANIA
NEW JERSEY
DELAWARE RIVER
National Park
Delaware Drive / Route 611
Slateford
Lackawanna Rail Line
Delaware Lackawanna Active Freight Line
SLATEFORD CREEK
0
200 Feet
PROJECT LOCATION
Scranton
New Jersey
New York
Pennsylvania
Hoboken
Legend
Connection Area
Freshwater Wetlands
T & E Species Habitat
Contaminated Sites
100 Year Flood Zone
Potential Historic Resource
Streams/Rivers
Lackawanna Rail Line
FIGURE 3-8
Edwards and Kelcey


FIGURE 3-9 : Key Environmental Features
Blairstown Candidate Station
Blairstown Township
Hope/CR 521
Hillview
0
200 Feet
PROJECT LOCATION
New Jersey
New York
Pennsylvania
Hoboken
Legend
Blairstown Candidate Station
Freshwater Wetlands
T & E Species Habitat
Contaminated Sites
100 Year Flood Zone
Potential Historic Resource
Streams/Rivers
Lackawanna Rail Line
FIGURE 3-9
Edwards and Kelcey

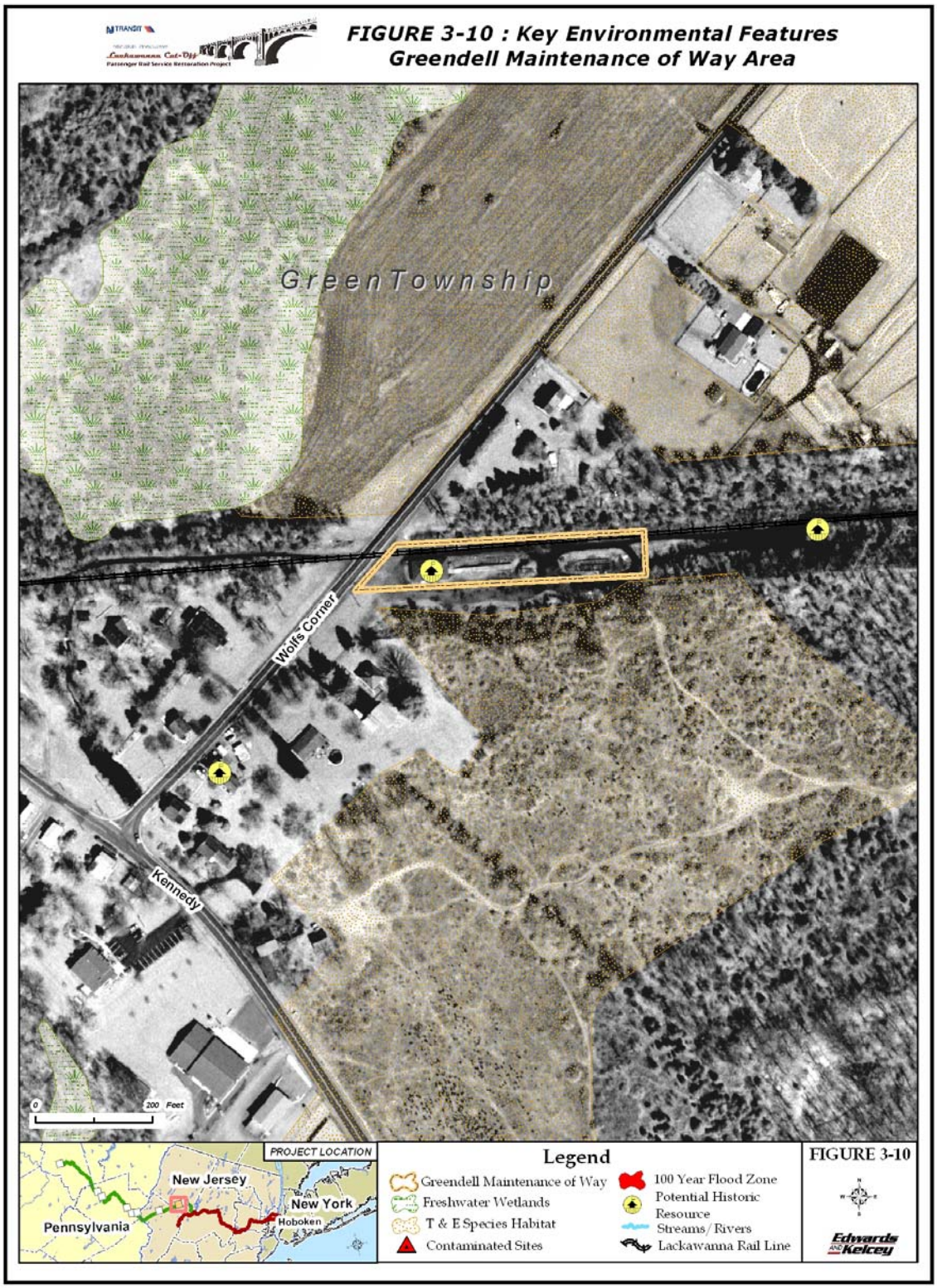


FIGURE 3-10 : Key Environmental Features
Greendell Maintenance of Way Area
Green Township
Wolfs Corner
Kennedy
0
200 Feet
PROJECT LOCATION
New Jersey
New York
Pennsylvania
Hoboken
Legend
Greendell Maintenance of Way
Freshwater Wetlands
T & E Species Habitat
Contaminated Sites
100 Year Flood Zone
Potential Historic Resource
Streams/Rivers
Lackawanna Rail Line
FIGURE 3-10
Edwards and Kelcey

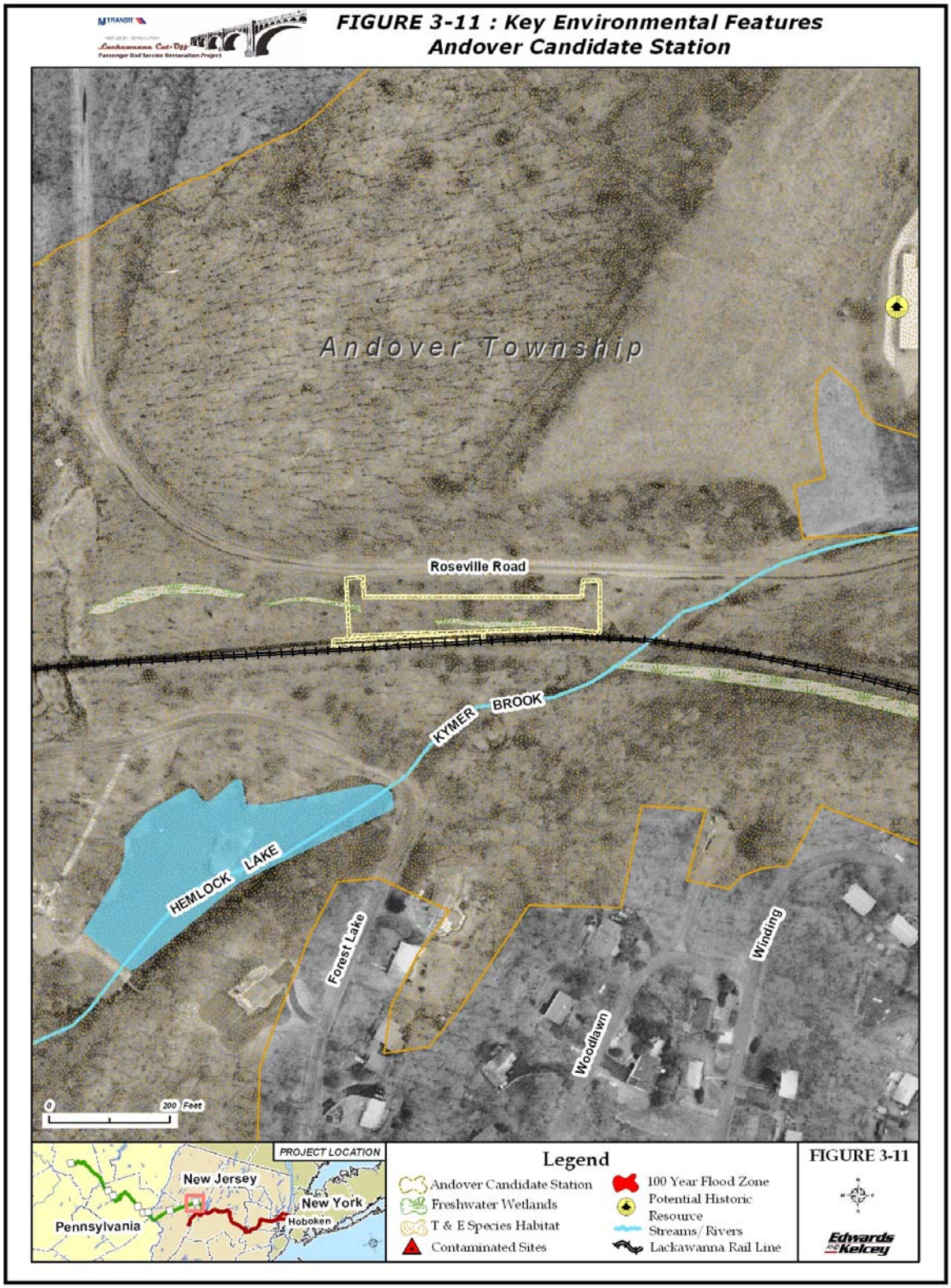


FIGURE 3-11 : Key Environmental Features
Andover Candidate Station
Andover Township
Roseville Road
KYMER BROOK
HEMLOCK LAKE
Forest Lake
Winding
Woodlawn
0
200 Feet
PROJECT LOCATION
New Jersey
New York
Pennsylvania
Hoboken
Legend
Andover Candidate Station
Freshwater Wetlands
T & E Species Habitat
Contaminated Sites
100 Year Flood Zone
Potential Historic Resource
Streams / Rivers
Lackawanna Rail Line
FIGURE 3-11
Edwards and Kelcey

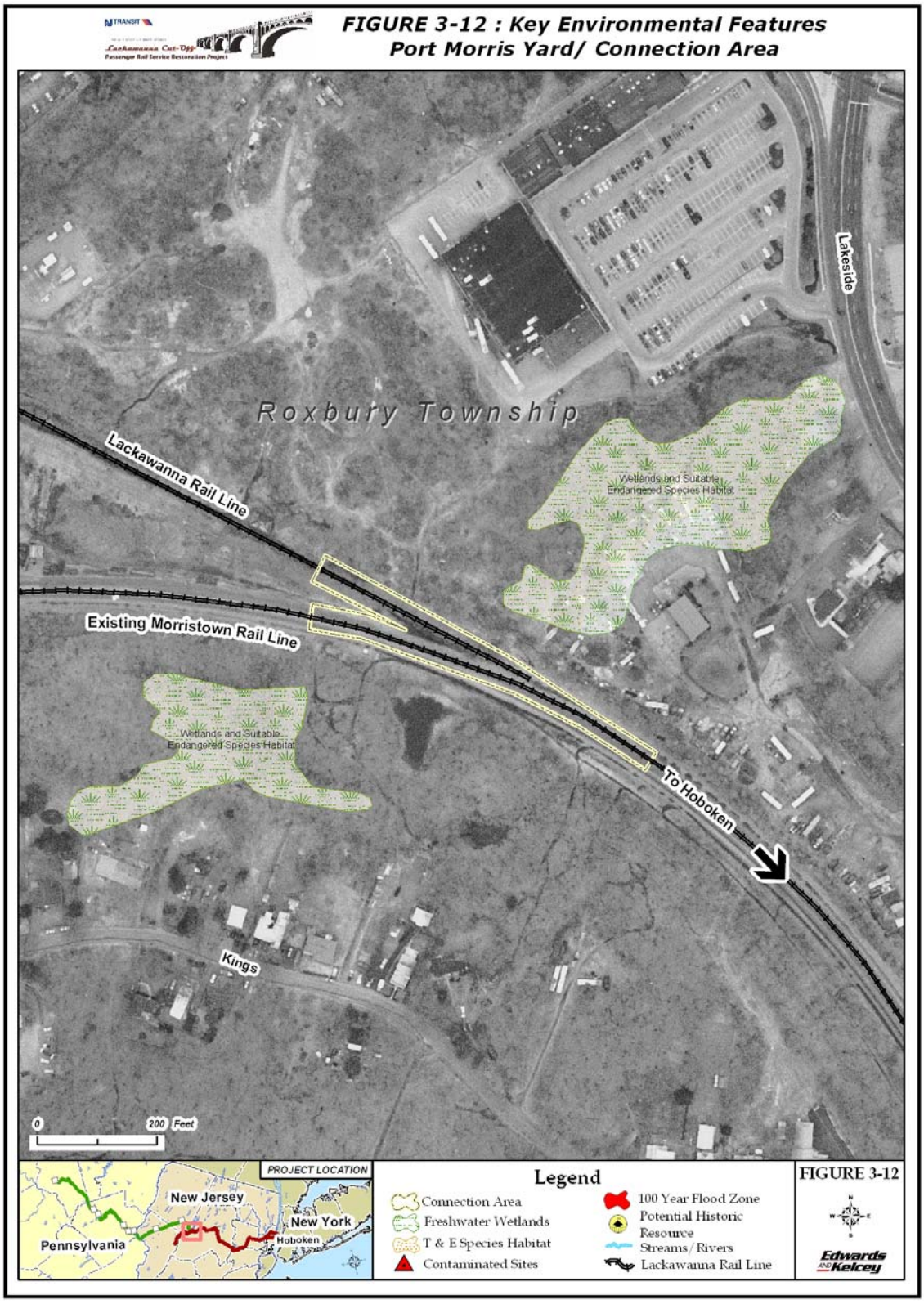


FIGURE 3-12 : Key Environmental Features
Port Morris Yard/ Connection Area
Roxbury Township
Lakeside
Lackawanna Rail Line
Existing Morristown Rail Line
To Hoboken
Wetlands and Suitable Endangered Species Habitat
Wetlands and Suitable Endangered Species Habitat
Kings
0
200 Feet
PROJECT LOCATION
New Jersey
New York
Pennsylvania
Hoboken
Legend
Connection Area
Freshwater Wetlands
T & E Species Habitat
Contaminated Sites
100 Year Flood Zone
Potential Historic Resource
Streams/ Rivers
Lackawanna Rail Line
FIGURE 3-12
Edwards and Kelcey

3.1 Land Use, Zoning and Consistency with Local Plans

3.1.1 Land Use

Land use refers to the activity that is occurring on land and within the structures that occupy it. Field visits were utilized to identify existing land uses located near the proposed station and yard area sites. An analysis of how these uses would or would not be impacted under the proposed project was conducted in order to compare land use conditions experienced under the No-Build and Build Alternatives. As shown in Table 3.1-1, the types of land uses surrounding the proposed station areas and yard facility include residential, retail, commercial, industrial, vacant land and parkland. As a result of the proposed project, the land use and land use patterns are not expected to significantly change.

Table 3.1-1: Station/Yard Area Land Use

Station/Yard Area (Municipality)	Setting	Land Uses
Scranton Yard Facility (City of Scranton)	Urban	• Existing multiple-track right-of-way • Light-industrial and auto-related uses • Single- and two-family residencies
Scranton (City of Scranton)	Urban	• Steamtown National Historic Site • Commuter bus facility and parking • Office buildings and large retail complex
Tobyhanna (Coolbaugh Township)	Village	• Former railroad station • Propane distribution facility • Large lot single-family residences
Pocono Mountain (Coolbaugh Township)	Rural	• Vacant parcel • Large lot single-family residences • Airport
Analomink (Stroud Township)	Rural	• Pennsylvania Department of Transportation highway maintenance facility • Vacant parcels • Single-family residences
East Stroudsburg (Borough of East Stroudsburg)	Urban	• Traditional downtown mixed-uses • Municipal parking • Government buildings
Delaware Water Gap (Smithfield Township)	Rural	• Parks and athletic fields • Park-and-ride facility and visitor center • Light industrial building
Blairstown (Blairstown Township)	Rural	• Construction equipment and vehicles storage • Vacant parcels • Single-family residences • Automobile repair facility
Greenville Maintenance-of-way Facility (Greenville Township)	Rural	• Vacant parcels • Single-family residencies
Andover (Andover Township)	Rural	• Vacant parcels • Single-family residencies

Source: Edwards and Kelcey Field Visits, 2005

As discussed in Appendix A: Land Use Technical Report, it is anticipated that the proposed restoration of passenger rail service within the existing railroad right-of-way would not substantially change existing land uses and land use patterns within any of the proposed station areas and facilities. Parcels that are acquired and converted to accommodate the station sites and facilities would modify existing land uses. Since these uses are generally considered to be compatible with surrounding uses and the sites are relatively small, adverse impacts to land use patterns are not anticipated.

Additionally, a qualitative induced growth analysis was utilized to determine whether the implementation of the proposed project would lead to increased development activity and a change in land use character. Induced growth is defined as any economic changes and/or development activity that would result from implementation of the proposed project. The analysis consisted of a review of land uses, zoning ordinances, comprehensive plans and other local policies, as well as the operating plan for the proposed rail service.

A significant amount of project-induced development is not anticipated to occur in the vicinity of any of the proposed station sites. The areas surrounding the proposed Scranton, Tobyhanna, and East Stroudsburg Station areas as well as the proposed Scranton Yard Facility are developed with commercial, residential, and light-industrial uses and contain few vacant parcels. Any development in these areas would result from the redevelopment of underutilized parcels and would be independent of the proposed project. The potential for development around the proposed Pocono Mountain, Analomink, Delaware Water Gap, Blairstown, and Andover Station areas is restricted because of the physical constraints of the land, the large lot zoning, stringent land development regulations and the lack of public infrastructure.

Since local growth policies are the primary determinant of growth, each municipality has jurisdiction over land use and zoning within their borders, and therefore they must approve future development plans for their community. A review of the local plans and policies revealed that the restoration of passenger service, as discussed in Section 3.1.3 and Appendix A: Land Use Technical Appendix, could help direct portions of growth into established and/or designated areas, thereby enhancing community character while preserving recreational and agricultural resources.

Furthermore, in August 2004, the State of New Jersey adopted the Highlands Water Protection and Planning Act (Highlands Act), which is a comprehensive law that would protect drinking water for over 5.4 million people and would preserve open space and other natural resources in northern New Jersey. The Highlands Act documents the geographical boundary of the Highlands Region and establishes the Highlands Preservation Area and the Highlands Planning Area. The Highlands Act sets environmental standards in the Highlands Preservation Area to be administered by the New Jersey Department of Environmental Protection (NJDEP) and creates a Highland Water Protection and Planning Council to develop a regional master plan for the entire Highlands Region.

The Highlands Region, which is over 800,000 acres, extends across seven counties (Bergen, Hunterdon, Morris, Passaic, Somerset, Sussex, and Warren) and 88 municipalities. The Highlands Preservation Area is approximately 398,000 acres of extraordinary natural resource value, of which 145,000 acres are undeveloped. All major development in the Preservation Area is strictly regulated and would require NJDEP approval, unless otherwise exempted by the Highlands Act. Additionally, local master plans for land in the Preservation Area would have to be consistent with the Highlands regional master plan. The Highlands Planning Area is the portion of the region that is not included in the Highlands Preservation Area. While the Highlands Act does not establish any new standards for the planning area, the Highlands regional master plan would provide an opportunity for enhanced development standards, transfer of development rights programs and smart growth initiatives to be implemented.

While the proposed rail alignment itself is exempt from the Highlands Act, a substantial portion of the surrounding area of the New Jersey section of the project corridor falls within the Highlands Region and is subject to the stringent development regulations set forth in the Highlands Act. Although the proposed Blairstown and Andover Station areas do not lie within the Highlands Region, the areas near both station sites and other sections of the project corridor are within the region, limiting any additional growth in these areas. Furthermore, the State of New Jersey, through the Highlands Act, has mandated a growth management plan, which severely confines development potential in the future, specifically in the New Jersey portion of the project corridor.

Along the Pennsylvania section of the project corridor induced growth is not expected. As discussed in Section 1.7.1, a growth trend was established in eastern Pennsylvania over the last 10 years and it is expected to continue. Therefore, if any growth occurs in the communities along the project rail alignment, it was determined that such growth would likely occur independent of the proposed project. It is possible that as a result of the restoration of the rail service, any new growth may be allocated to areas closer to proposed station sites. However, any new development would have to comply with local land use and zoning regulations.

Finally, a review of the proposed operating plans reveal that rail service along the Lackawanna Cut-Off corridor has been planned to have capacity for nine eastbound and nine westbound train, with 45-minute headways during peak period and two-to-three hour headways in the non-peak hours. It is not anticipated that an opportunity for significantly increased capacity exists due to the operation and schedule of freight and passenger trains along the project rail alignment. It is unlikely that this limited operating plan would induce significant development along the project corridor.

The restoration of passenger rail service would not result in any direct or indirect impacts to land use patterns.

3.1.2 Zoning

In Pennsylvania, the Municipalities Planning Code Act of 1968, P.L. 805, No. 247 as amended (MPC) confers upon municipalities the right to enact regulations and policies governing land use within their border, including the establishment of zoning ordinances. In New Jersey, the Municipal Land Use Law of 1975, N.J.S. 40:55D-1 et seq. (MLUL) confers upon municipalities the right to enact regulations and policies governing land use and development within their borders, including the establishment of zoning ordinances. Zoning information for this analysis was compiled from the zoning ordinance of each individual municipality.

Under the proposed project, major zoning changes to accommodate the proposed station areas are not anticipated. In New Jersey, NJ TRANSIT, as a state agency, is not bound by local zoning. However, NJ TRANSIT typically confers and coordinates all proposed actions with local municipalities. In Pennsylvania, the operator or owner of the proposed passenger rail service and the proposed station sites is subject to local zoning regulations. A review of local zoning regulations revealed that minor zoning modifications may be necessary as a result of the proposed new stations and facilities. Coordination between NJ TRANSIT and the local governing bodies is expected. Significant impacts to existing zoning are not anticipated as a result of the reinstitution of passenger rail service.

3.1.3 Consistency with Local Plans

This section presents the goals, objectives and policies of municipal, county and state planning entities, as well as known development/redevelopment activities planned within the study area.

The restoration of passenger rail service from Scranton in Lackawanna County, PA into Monroe County, PA, and through Warren and Sussex counties in New Jersey would be in keeping with goals, objectives and policies contained in planning reports and local, county and state plans within the project study area.

Policy objectives within the New Jersey State Development and Redevelopment Plan (NJSDRP) encourage transit and emphasize alternatives to the single-occupancy vehicle. In addition, the Pennsylvania Long Range Transportation Plan (LRTP) 2000-2025 and the Monroe County Comprehensive Plan strongly encourage the reinstatement of passenger rail service to promote extensions and infill of existing centers and overall commercial growth. Similarly, the City of Scranton, Stroud

Township, and Borough of East Stroudsburg Comprehensive Plans endorse the reintroduction of passenger rail service along the DL&W right-of-way.

Additionally, as discussed above in Section 3.1.1, the Highlands Act designates a preservation area where development would be significantly curtailed. The Highlands Act heightens environmental standards to protect some of New Jersey's most environmentally sensitive land and establishes the Highland Water Protection and Planning Council. The council is charged with creating a Highlands Region Master Plan, which pursuant to the Highlands Act is required to encourage a balanced transportation system that is consistent with smart growth strategies and principles and preserves mobility in the Highlands Region.

Construction of the proposed project would aid in achieving the goals and objectives discussed in the above-mentioned plans. Therefore, the proposed project is anticipated to be consistent with all state, county and local plans.

3.2 Land Acquisitions and Displacements

Implementation of the proposed project would require the acquisition of properties for the purpose of constructing station area parking facilities and an employee welfare building along the project rail alignment. Since the State of New Jersey and the Pennsylvania Northeast Region Rail Authority own the rail rights-of-way within their respective states, no property acquisition would be required for improvements made to the rail right-of-way under the Build Alternative. All properties or portions of properties that would be acquired under this proposed project would be purchased at fair market value by negotiations or condemnation pursuant to the guidelines set forth in 49 CFR Part 24 "Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs". As shown in Table 3.2-1, the proposed project calls for the acquisition of 11 properties, including portions of three parcels. These properties currently contain parking lots, vacant land and buildings, PennDOT facilities and a construction equipment and materials storage site. All property acquisition called for under this project would occur proximate to six of the eight proposed station sites, including the Pocono Mountain, Tobyhanna, Analomink, East Stroudsburg, Delaware Water Gap Visitors Center and Blairstown Station Areas and adjacent to the Scranton Yard Facility. The aggregate assessment value for the 11 properties that would be acquired under the proposed project is $400,394. Of these 11 properties, seven are publicly owned and are exempt from property taxation. The acquisition of the four privately held properties would result in the reduction of total property tax levied by six affected Lackawanna, Monroe and Warren County municipalities along the corridor equaling $10,963. However, as shown in Table 3.2-1, this represents less than 0.01 percent of the aggregate property tax levied by these four municipalities. See Figures 3-13 through 3-19 to identify the locations of property acquisitions under the proposed project.

Under this proposed project, all station platforms and shelters/canopies would be constructed within the existing railroad right-of-way, which is owned by public entities. In New Jersey, the Lackawanna Cut-Off right-of-way from Port Morris to the Delaware River Bridge is owned by the New Jersey Department of Transportation (NJDOT). The Delaware River Bridge and the right-of-way in Pennsylvania to Scranton are owned by the Pennsylvania Northeast Region Rail Authority. Operating agreements between NJ TRANSIT and the Pennsylvania Northeast Region Rail Authority would be necessary for the project service to operate over the Pennsylvania portion of the alignment. The proposed project would displace one business at the Blairstown Station area. However, no significant impact is expected because business relocation is subject to the requirements and guidelines set forth in 49 CFR Part 24 "Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs".

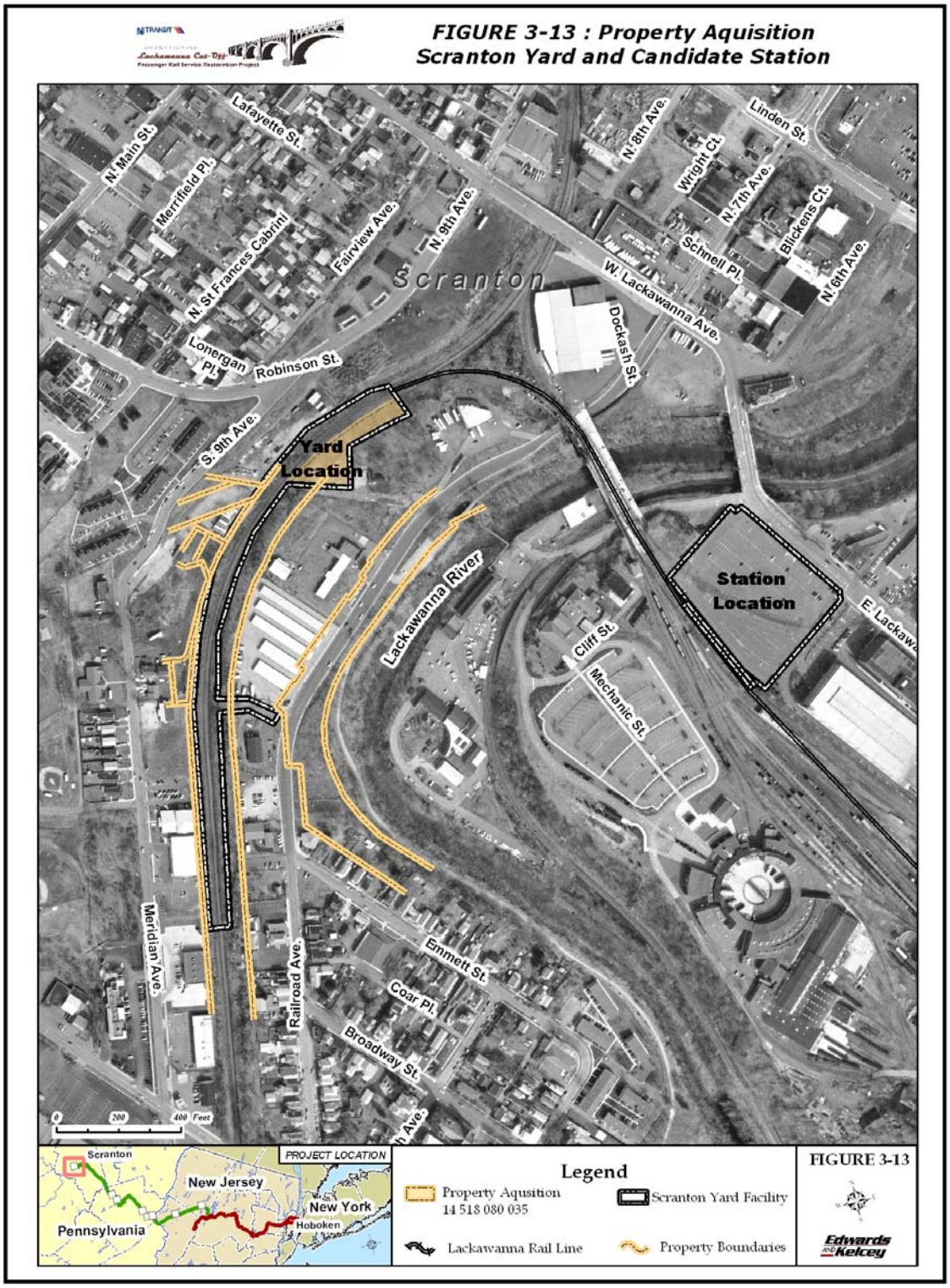


FIGURE 3-13 : Property Aquisition
Scranton Yard and Candidate Station
Scranton
Yard Location
Station Location
Lackawanna River
N. Main St.
Lafayette St.
Merrifield Pl.
N. St Frances Cabrini
Fairview Ave.
N. 9th Ave.
N. 8th Ave.
Wright Ct.
Linden St.
N. 7th Ave.
Blickens Ct.
Schnell Pl.
N. 6th Ave.
W. Lackawanna Ave.
Docksh St.
Lonergan Pl.
Robinson St.
S. 9th Ave.
Cliff St.
Mechanic St.
E. Lackawa
Meridian Ave.
Railroad Ave.
Emmett St.
Coar Pl.
Broadway St.
0 200 400 Feet
PROJECT LOCATION
Scranton
New Jersey
New York
Hoboken
Pennsylvania
Legend
Property Aquisition
14 518 080 035
Scranton Yard Facility
Lackawanna Rail Line
Property Boundaries
FIGURE 3-13
Edwards and Kelcey

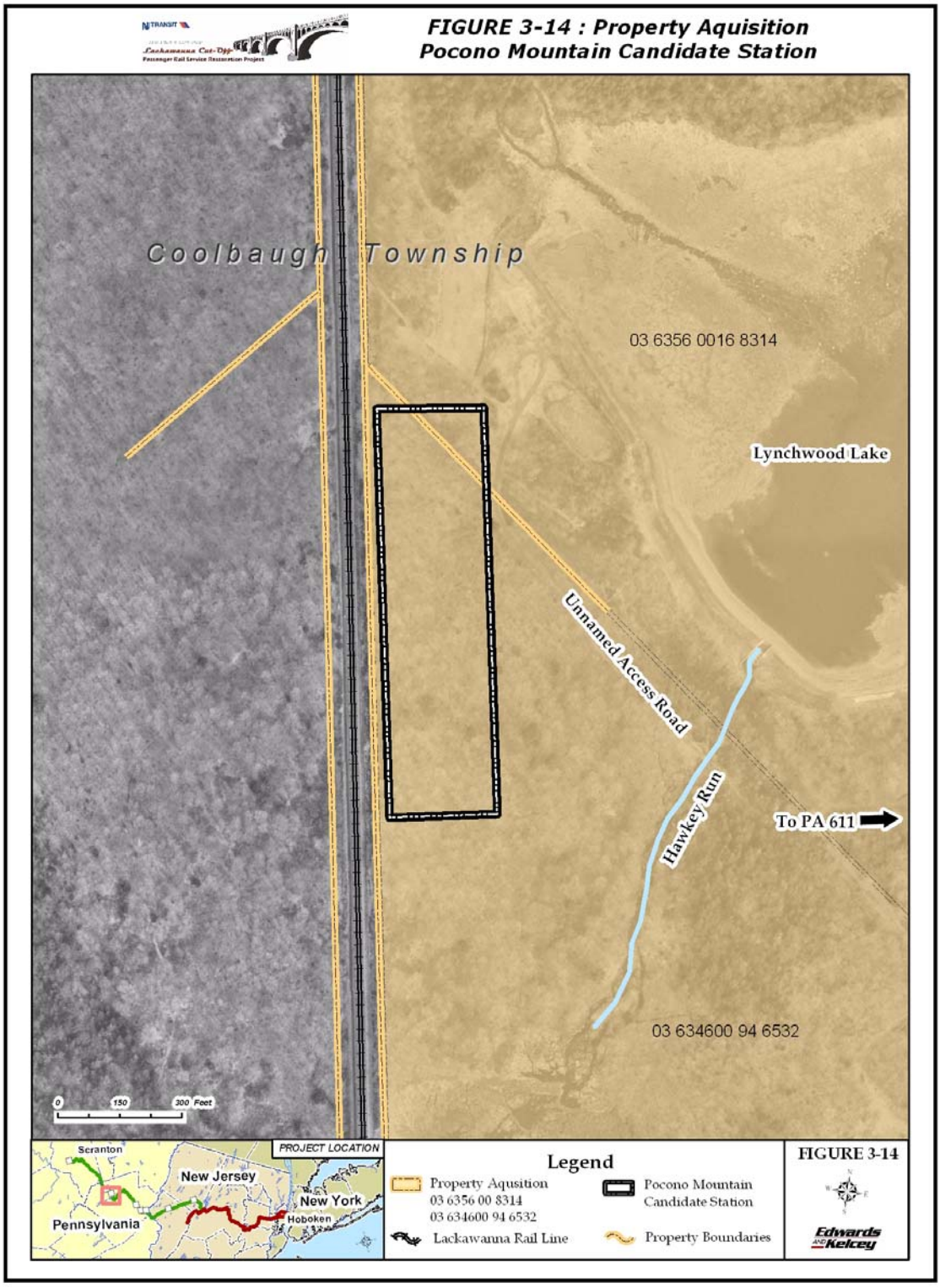


FIGURE 3-14 : Property Aquisition
Pocono Mountain Candidate Station
Coolbaugh Township
03 6356 0016 8314
Lynchwood Lake
Unnamed Access Road
Hawkey Run
To PA 611
03 634600 94 6532
0
150
300 Feet
PROJECT LOCATION
Scranton
New Jersey
New York
Hoboken
Pennsylvania
Legend
Property Aquisition
03 6356 00 8314
03 634600 94 6532
Pocono Mountain
Candidate Station
Lackawanna Rail Line
Property Boundaries
FIGURE 3-14
Edwards and Kelcey

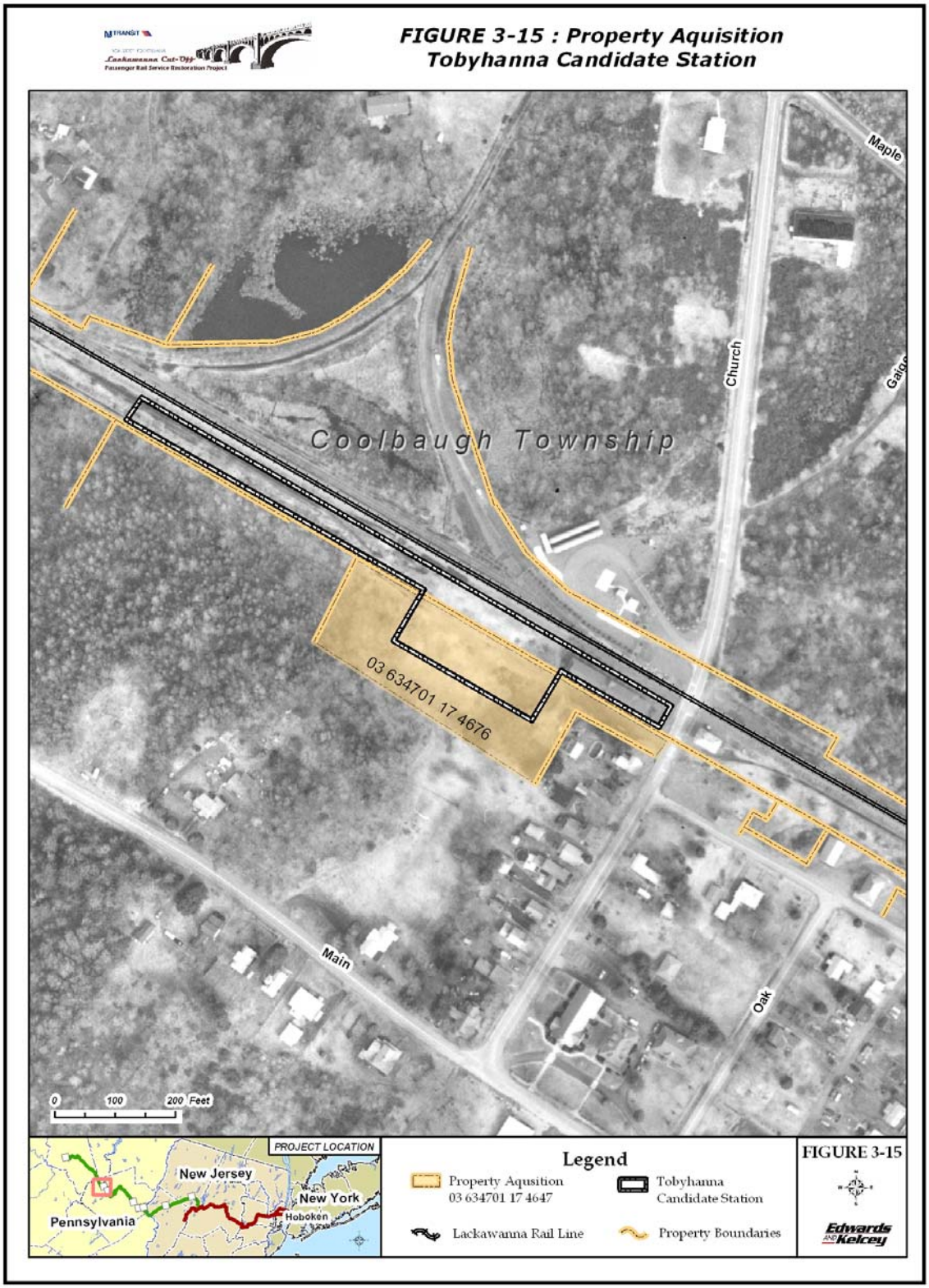


FIGURE 3-15 : Property Aquisition
Tobyhanna Candidate Station
Maple
Church
Coolbaugh Township
03 634701 17 4676
Main
Oak
0
100
200 Feet
PROJECT LOCATION
New Jersey
New York
Pennsylvania
Hoboken
Legend
Property Aquisition
03 634701 17 4647
Tobyhanna
Candidate Station
Lackawanna Rail Line
Property Boundaries
FIGURE 3-15
Edwards and Kelcey

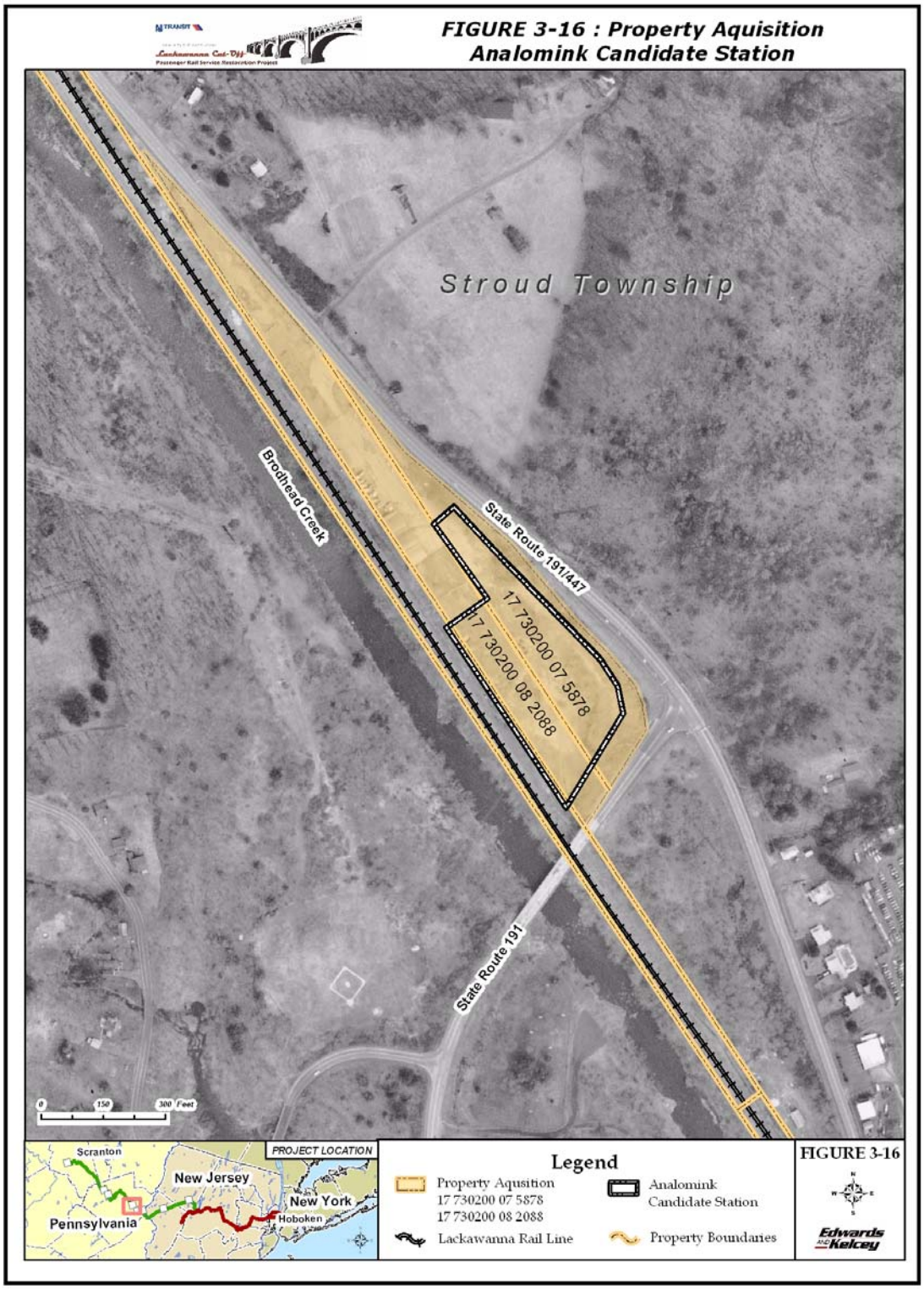
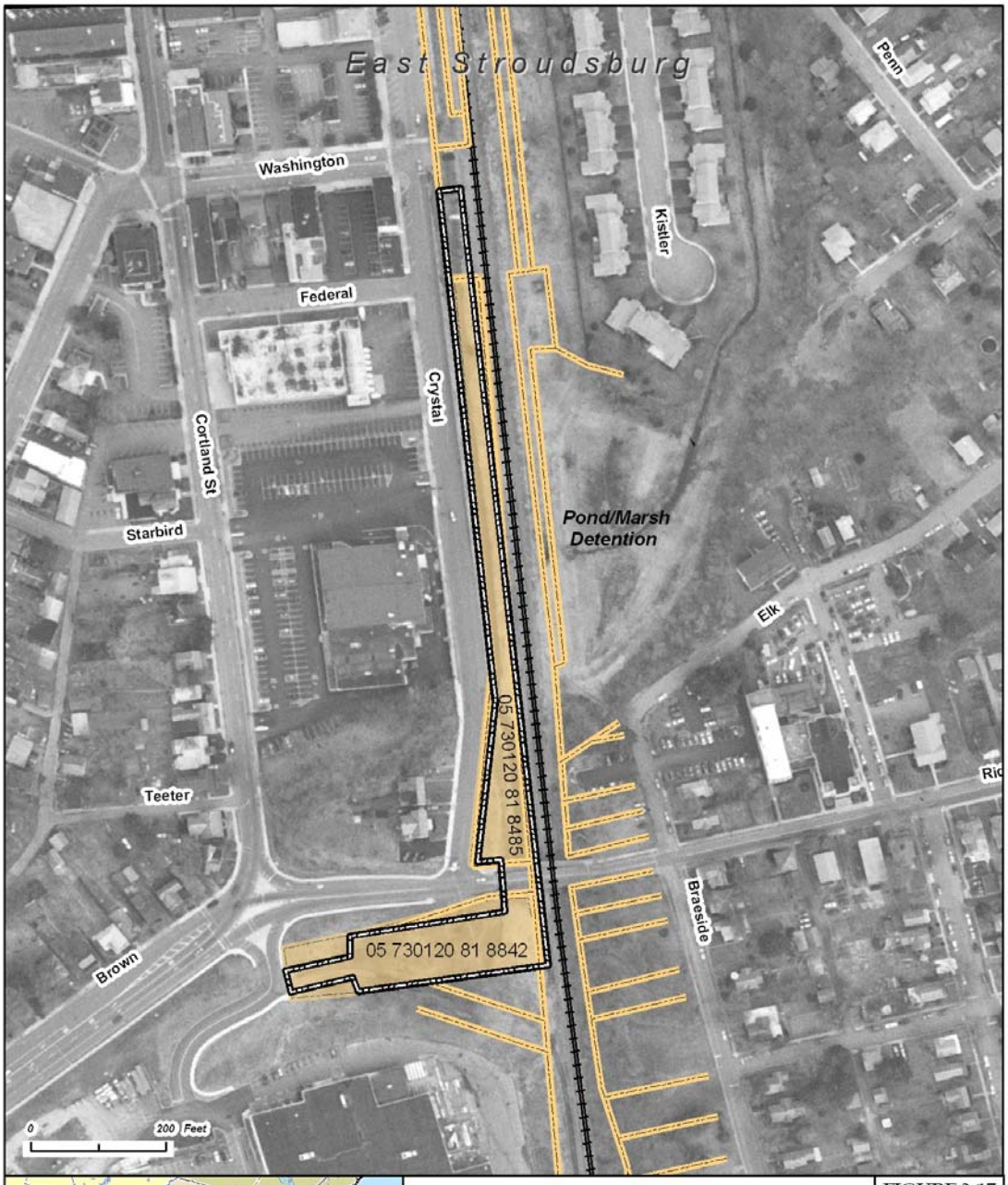


FIGURE 3-16 : Property Aquisition
Analomink Candidate Station
Stroud Township
Brodhead Creek
State Route 191/447
17 730200 07 5878
17 730200 08 2088
State Route 191
0
150
300 Feet
PROJECT LOCATION
Scranton
New Jersey
New York
Pennsylvania
Hoboken
Legend
Property Aquisition
17 730200 07 5878
17 730200 08 2088
Analomink
Candidate Station
Lackawanna Rail Line
Property Boundaries
FIGURE 3-16
Edwards and Kelcey

FIGURE 3-17 : Property Aquisition
East Stroudsburg Candidate Station



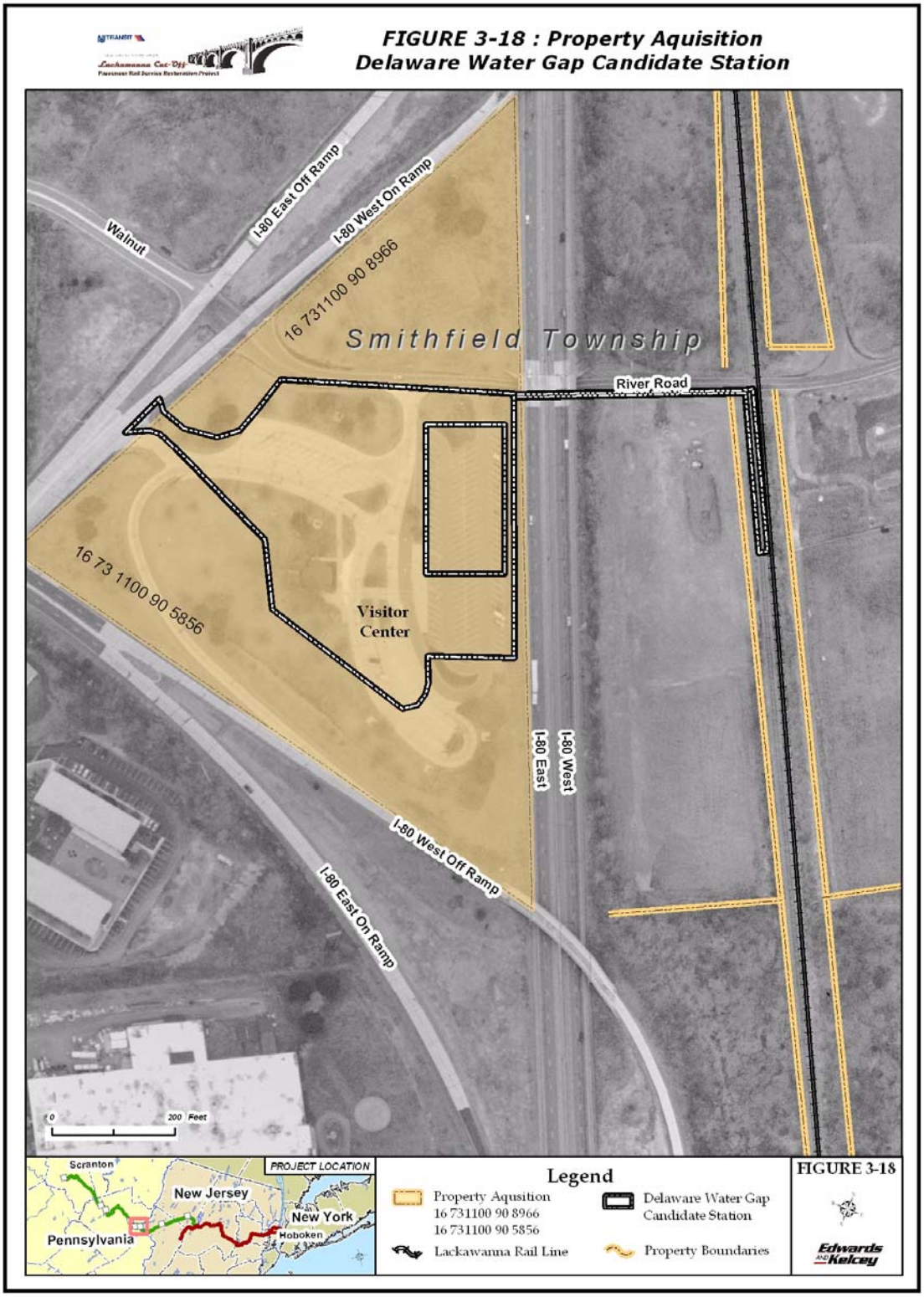


FIGURE 3-18 : Property Aquisition
Delaware Water Gap Candidate Station
I-80 East Off Ramp
I-80 West On Ramp
Walnut
16 731100 90 8966
Smithfield Township
River Road
16 73 1100 90 5856
Visitor Center
I-80 East
I-80 West
I-80 West Off Ramp
I-80 East On Ramp
0
200 Feet
Scranton
PROJECT LOCATION
New Jersey
New York
Pennsylvania
Hoboken
Legend
Property Aquisition
16 731100 90 8966
16 731100 90 5856
Delaware Water Gap
Candidate Station
Lackawanna Rail Line
Property Boundaries
FIGURE 3-18
Edwards and Kelcey

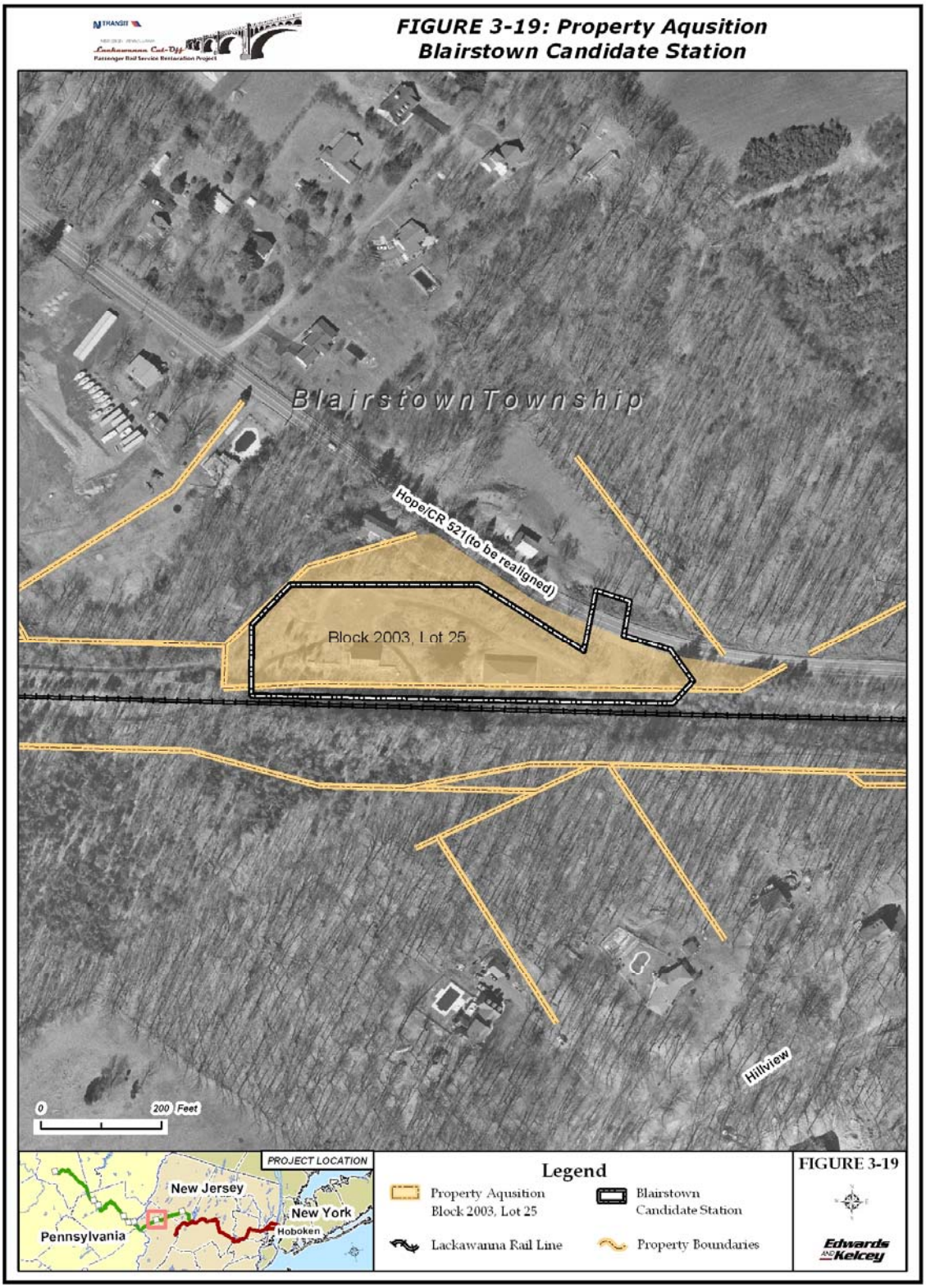


FIGURE 3-19: Property Aqusition
Blairstown Candidate Station
Blairstown Township
Hope/CR 521(to be realigned)
Block 2003, Lot 25
Hillview
0
200 Feet
PROJECT LOCATION
New Jersey
New York
Pennsylvania
Hoboken
Legend
Property Aqusition Block 2003, Lot 25
Blairstown Candidate Station
Lackawanna Rail Line
Property Boundaries
FIGURE 3-19
Edwards and Kelcey

Table 3.2-1: Land / Property Acquisition

Station Area (Municipality)	**Number of Lots to be Acquired**	**Parcel Numbers (PA) or Block / Lot Numbers (NJ)**	**Public Ownership or Private Ownership**	**Total Assessed Value**	**Total Municipal Tax Revenue Lost** (*Percent of Total Property Tax Levied by the Municipality*)
Scranton Yard Facility (City of Scranton)	1 property	14 518 080 035	Private	$38,200	$7,005[1] *(0.01%)*
Scranton (City of Scranton)	0 properties	NA	NA	NA	NA
Pocono Mountain (Coolbaugh Township)	2 properties (2 partial)	03 6356 00 8314 03 634600 94 6532	Private Private	$1,855	$236[1] (*<0.01%*)
Tobyhanna (Coolbaugh Township)	1 property	03 634701 17 4676	Public	$1,120	NA (lot exempt)
Analomink (Stroud Township)	2 properties	17 730200 07 5878 17 730200 08 2088	Public Public	$47,400	NA (2 lots exempt)
East Stroudsburg (Borough of East Stroudsburg)	2 properties	05 730120 82 8485 05 730120 81 8842	Public Public	$122,520	NA (2 lots exempt)
Delaware Water Gap (Smithfield Township)	2 properties (1 partial)	16 731100 90 8966 16 731100 90 5856	Public Public	$37,400	NA (2 lots exempt)
Blairstown (Blairstown Township)	1 property	Block 2003, Lot 25	Private	$151,900	$3,722[2] (*0.03%*)
Greendell Maintenance-of-way Facility (Greendell Township)	0 properties	NA	NA	NA	NA
Andover (Andover Township)	0 properties	NA	NA	NA	NA
Project Total	11 properties (3 partial)		4 Private 7 Public	$400,395	$10,963 (*<0.01%*)

Total Assessed Value and Total Municipal Tax Revenue Lost estimates are based upon the acquisition of portions of properties. These values may be a percentage of to overall value listed in the tax records.

Notes:
1. Calculated by applying municipality's overall millage rate to every $1,000 of total assessed value
2. Calculated by applying the municipality's tax rate to every $100 of total assessed value

Source: Municipal / County Tax Assessor Records and Tax Maps (2003-2004): Lackawanna County; Monroe County; Blairstown Township

No significant adverse impacts would occur as a result of the property acquisition required for this proposed project to be constructed.

3.3 Community Facilities and Parks

In this evaluation, consideration was given to the potential for the proposed project to affect the provision of services provided by community facilities. This generally occurs when a project either physically displaces or alters a community facility, or causes a change in population that could affect the service delivery of a community facility, as might happen if a facility is already over-utilized. As seen in more detail in Appendix B: Community Facilities Technical Report, police and fire departments, emergency medical responders, hospitals, schools, libraries and parks were included in this analysis.

A new residential population would not be introduced as a result of the restoration of passenger rail service and therefore, it is expected that existing community facilities would be sufficient to efficiently provide protection and service.
It is anticipated that there could be a minimal increase in the response times of emergency services due the reactivation of passenger rail service. However, this would only occur when a train is passing through an active grade crossing. All grade crossings would be designed to adhere to the Federal Railroad Administration (FRA) guidelines promulgated in the publication "Guidance on Traffic Control Devices at Highway-Rail Grade Crossings". The short duration of time it would take for eight-car trains to pass through a grade crossing coupled with the limited frequency of service reduces the likelihood of impacts. Additionally, NJ TRANSIT would work with the local municipalities to develop appropriate grade crossing protection measures and spread awareness regarding the new rail service to emergency service providers and school bus operators, especially in: Scranton and East Stroudsburg, PA, where there are existing marked pedestrian crossings of the right-of-way; Stanhope and Green Township, New Jersey, where there would be new grade crossings; and Smithfield Township, East Stroudsburg, Paradise, Coolbaugh, Gouldsboro, Covington and Scranton, PA, where there would be an increased frequency of grade crossing closures.

The management, operation and development of parklands involve multiple levels of government, and is specifically regulated under Section 4(f) of the United States Department of Transportation Act of 1966, Section 6(f) of the United States Secretary of the Interior Land and Water Conservation Funds Act (LWCFA) of 1965 and the NJDEP (NJDEP) Green Acres Program of 1961. The details of these acts are described in Appendix B, Community Facilities. Table 3.3-1 describes the parks identified within close proximity of the alignment.

Table 3.3-1 Parks Within Close Proximity of the Alignment

Park and Location	Distance to Alignment (Feet)	Encumberances
Steamtown National Historic Site	Adjacent	--
University of Scranton Fields, Scranton, PA*	70	--
Nay Aug Park, Scranton, PA*	70	LWCFA
South Main Street Playground, Elmhurst, PA	100	--
Gouldsboro State Park/Tobyhanna State Park, Gouldsboro/Tobyhanna, PA**	100	LWCFA
Unnamed local park, South Kistler Street, E. Stroudsburg, PA	80	--
Smithfield Township Park, PA Route 45067, Delaware Water Gap, PA	60	--
Delaware Water Gap National Recreation Area, Slateford/Delaware Water Gap, PA**	100	LWCFA
Knowlton Park, NJ Route 94, Columbia, NJ	100	Green Acres
Undeveloped Johnsonburg Swamp, Ramsey Road/Dark Moon Road, Frelinghuysen Twp., NJ**	100	Green Acres
Andover Borough Park, County Route 517, Andover, NJ	140	--
Carol O. Johnson Municipal Park, Roseville Road, Byram, NJ**	120	Green Acres
Undeveloped/unnamed municipal park, near Brookwood Road, Byram, NJ**	100	Green Acres

Source: Edwards and Kelcey, 2006.

The proposed project would not result in any use of parks, thereby not causing any direct impacts. The project would not alter the use of the parks and would not preclude any of the activities that currently take place at the parks along the alignment. In addition, construction of the project would not result in any impacts to parks. Access to the parks would not be altered by the project, and with the recommended grade crossing improvement near Smithfield Township Park (discussed in Section 3.9), none of the parks would be impacted by noise. Furthermore, most of the parks are bordered by tall trees, bushes, vegetation and rolling topography that would help to shield the rail service from view.

The proposed project would not result in any use of parks or unmitigated impacts to parks, including any parks encumbered under Section 6(f) of the LWCFA and NJDEP Green Acres. No significant impacts to community facilities are expected as a result of the reinstitution of passenger rail service.

3.4 Historic Resources

This section identifies the historic resources in the area of potential effect and also discusses the potential impact of the project on these resources. A detailed discussion of historic resources is included in Appendix C: Historic Resources Technical Report.

Historic resources are protected under federal law through Section 106 of the National Historic Preservation Act of 1966, as amended. Applicable State of New Jersey legislation governing the protection of these resources includes Chapter 268 of the New Jersey Register Law of 1970 and Executive Order 215.

The regulations developed under Section 106 of the National Historic Preservation Act require that prior to approval of federal funds or permits, agencies must consider a project's impacts on any district, site, building, structure, or object that is included in, or eligible for inclusion in the National Register of Historic Places (National Register), and give the Advisory Council on Historic Preservation an opportunity to comment on an undertaking. A project is considered to have an adverse effect on resources if it changes the quality or cultural characteristics (i.e. "character defining features") that render them eligible for listing on the National Register.

Historic properties of national, state and local significance may be nominated to the National Register of Historic Places and the New Jersey Register of Historic Places (New Jersey Register) following evaluation in accordance with an established set of criteria for determining the significance of potential historic resources. The National Park Service, which administers the National Register, has established criteria for the evaluation of the significance of potential historic and/or archaeological properties (i.e. evaluating their eligibility for listing in the National Register), as set forth in the guidelines (36 CFR 60.4).

The evaluation process is conducted at the state level by the State Historic Preservation Office and at the federal level by the National Register staff of the Department of the Interior. Listing in the New Jersey Register requires the approval of the New Jersey State Historic Preservation Officer (SHPO). Listing in the National Register requires the approval of both the SHPO and the Secretary of the Interior. The SHPO, acting on behalf of the Advisory Council on Historic Preservation, is responsible for historic reviews under Section 106 of the National Historic Preservation Act and other relevant federal legislation.

3.4.1 Definition of the Area of Potential Effect

The "Area of Potential Effect" (APE) is the area in which the *New Jersey - Pennsylvania Lackawanna Cut-Off Passenger Rail Service Restoration Project* would be most likely to have impacts on historic resources. The APE includes the area that may be affected by direct physical impacts, such as demolition or alteration of a resource, or by indirect contextual impacts, such as changes in the visual character of the surrounding neighborhood or in the view from a resource. The potential effects of temporary project actions (i.e., access roads, staging areas, construction noise, dust and vibration) were also considered in the determination of the APE.

The APE for historic resources for the *New Jersey - Pennsylvania Lackawanna Cut-Off Passenger Rail Service Restoration Project* includes the railroad right-of-way and the proposed station sites, yard facilities and other areas of construction activity, such as grade crossings. At the proposed station sites, the APE has been determined by line-of-sight to the areas of construction activity at the project site; those properties that are both within line-of-sight and are close enough to be affected by the project are included in the APE. In areas of the project where the work is limited to activities such as track installation or

rehabilitation, signal system installation and other typical railroad-related constructive activities, the APE is limited to the railroad-right-of-way.

The APE was determined in coordination with the New Jersey State Historic Preservation Office (NJ SHPO) staff on a field visit conducted on November 24, 2003. APE maps for sites in Pennsylvania were submitted to the Pennsylvania Historic and Museum Commission, which serves as the Pennsylvania State Historic Preservation Office (PA SHPO), on May 6, 2004 and were approved in letters dated December 11, 2003 and June 8, 2004. Project Initiation Letters (PILs) were submitted to both the NJ and PA SHPOs on May 6, 2004. NJ SHPO approved of the APEs, consulting parties and the Public Involvement Plan in a letter dated May 21, 2004. The PA SHPO approved the APEs, consulting parties and the Public Involvement Plan in a letter dated December 16, 2004. The FTA was forwarded the list of consulting parties for review on February 10, 2005 and was approved in a letter dated March 22, 2005. Copies of correspondence can be found in Appendix S.

3.4.2 Historic Background

The route of the *New Jersey - Pennsylvania Lackawanna Cut-Off Passenger Rail Service Restoration* project follows the route of the DL&W Railroad from Andover, Sussex County, New Jersey, to Scranton, Lackawanna County, Pennsylvania. This route includes the following historic rail corridors:

The DL&W Railroad (Scranton to the Delaware River Bridge)

The construction of the DL&W's southern division from Scranton to the Delaware River began in June 1852. It evolved from a plan by Seldon and George Scranton to connect their borough with New Jersey and thus boost the Scranton economy. When completed in May 1856, the line had a profound effect upon the Moosic and Pocono Mountains territory through which it ran. This relatively uninhabited area began to teem with activity as the railroad provided the opportunity to exploit it. Lumber and tanning interests expanded through that section of northeast Pennsylvania to the detriment of the woods. With the demise of those industries in the 1880s, ice harvesting followed. In the end, the railroad-fostered vacation business predominated.

DL&W (Lackawanna) Cut-Off (Delaware River Bridge to Port Morris)

The construction of the DL&W's (Lackawanna) Cut-Off (herein referred as the Cut-Off), originally called the New Jersey Cut-Off by the DL&W, began in 1908. The Lackawanna Railroad of New Jersey, the wholly owned subsidiary of the DL&W, was created to build the Cut-Off. The purpose of the Cut-Off was to reduce the length, grades, and curvature of a portion of the main line connecting Buffalo with New York City (via Hoboken). With its completion on December 24, 1911, at a cost of $11 million, the route had been shortened by over 11 miles in the section between Port Morris, Roxbury Township, NJ, and Delaware River Bridge, with the grades sharply reduced.

The 28-mile Cut-Off was, and remains, an engineering masterpiece. Grades do not exceed 0.5 percent; the total rise and fall over the 28 miles equals 11 feet. Originally there were no at-grade crossings; however, one was built in 1988. A total of 14 million cubic yards of fill was removed to create cuts, and 15 million cubic yards of fill were required to create embankments. The largest embankment (Pequest) required 6,625,000 cubic yards of fill, is over three miles long, and has a maximum height of 119 feet. Pequest is one of the largest man-made embankments in the world; it crosses US Route 206 near Andover, NJ.

Although reinforced structures had been in use for many years, the Cut-Off represented its first extensive use by a railroad. The two largest viaducts were over the Paulins Kill and the Delaware River. At the

time of construction, the Paulins Kill Viaduct, at 1,100 feet long and 115 feet high was the largest concrete bridge in the world. The 1,450-foot viaduct over the Delaware River and Interstate 80 is 64 feet above the water level and connects Columbia, NJ, with Slateford Junction, PA. Originally there were no tunnels planned on the route, but unusually soft rock, south of Andover, necessitated the construction of the Rosevi1le Tunnel, a 1,024-foot long, double-track tunnel 132 feet below the surface that is partially concrete lined.

Because the Cut-Off essentially follows the crests of the ridges, it avoided the population centers in the area. This routing resulted in the alignment's use as a predominantly through route for freight and passenger trains. Little local freight traffic was generated. Passenger service ceased operating in 1972, and the route was abandoned in 1979. Track removal took place in 1983. The stone ballast for a single track is generally intact along the entire line.

Old Main DL&W Railroad Historic District, NJ (Hoboken to Delaware River)

The Old Main DL&W Historic District extends from its eastern terminus at Hoboken Terminal (historically the Delaware, Lackawanna and Western's Hoboken Terminal), and continues along NJ TRANSIT's Morristown Line through Newark, Summit, Morristown, Denville and Dover. It travels through Wharton, Hopatcong Junction, and Netcong to Washington (Warren County). At Washington, it follows the historic route of the Warren Railroad to the Delaware River. The Lackawanna Cut-Off is a contributing resource to the Old Main DL&W Historic District. The DL&W Historic District has a SHPO Opinion of Eligibility for listing on the National Register of Historic Places (NRHP) dated on September 24, 1996. The District is eligible for listing for its associations with suburbanization, commuter and passenger traffic, freight traffic, engineering and architecture.

3.4.3 Inventory of Resources in Area of Potential Effect

Table 3.4-1 lists the National Historic Landmarks, resources listed on the State and National Registers of Historic Places (NRHP), and the resources with SHPO Opinions of Eligibility that are located in the APE for the entire project. In the APE for the project, there is one resource that is a National Historic Site, one resource that is listed on the State Register of Historic Places and NRHP, and four resources that have SHPO Opinions of Eligibility for NRHP listing. Refer to Appendix C: Historic Resources Technical Report for further detail and analysis.

Table 3.4-1 Listed and Eligible Resources in the Area of Potential Effect

National Historic Landmarks	**Location**
Steamtown National Historic Site	Scranton, Lackawanna County, PA
National and State Register Listed Resources	**Location**
Dansbury Depot (East Stroudsburg Railroad Station)	50 Crystal Street, East Stroudsburg, Monroe County, PA
Resources with SHPO Opinions of Eligibility	**Location**
DL&W Railroad Historic District from Scranton to the Delaware River Bridge	Mile 133.27 to Mile 74.10, Scranton to Slateford Junction, (Upper Mount Bethel Township) Pennsylvania
Old Main DL&W Railroad Historic District Port Morris Yard and Port Morris Interlocking Tower**	Hudson River, Hoboken, Hudson County, NJ to the Delaware River, Warren County, NJ
DL&W (Lackawanna) Cut-Off Delaware River Bridge, Paulins Kill Viaduct, Roseville Tunnel, Pequest Fill and Coursen Fill**	Port Morris, Roxbury Township, Morris County, NJ, to Delaware River Bridge.
Hope Road Bridge**	Hope Road (CR 521), Blairstown Township, Warren County, NJ

***** Also eligible for c*ontributing to the DL&W Railroad Route from Scranton to the Delaware River Bridge*
******Also eligible for c*ontributing to the DL&W Cut-Off*

Source: Lynn Drobbin and Associates, 2005

A total of 30 resources over 50 years of age were evaluated as part of this study; 17 of these resources (four are considered as part of complexes) were identified within the project APE for evaluation as potentially eligible for listing on the NRHP; 13 of the resources that were evaluated were considered not potentially eligible for NRHP listing due to a lack of integrity, unsympathetic alterations, or lack of historic and/or architectural significance.

Table 3.4-2 lists the resources that were evaluated as part of this study and that are considered potentially eligible for listing on the State Register of Historic Places and NRHP.

Table 3.4-2: Potentially Eligible Historic Resources in the Area of Potential Effect

Potentially Eligible Resources	**Location**
DL&W Railroad Bridge 60	DL&W Railroad over the Lackawanna River, Scranton, Lackawanna County, PA
Bridge 60 Interlocking Tower	DL&W Railroad near Cliff Street, Scranton, Lackawanna County, PA
Tobyhanna Station Complex (Tobyhanna Station and Tobyhanna Interlocking Tower)	DL&W Railroad Milepost 107.5, Coolbaugh Township, Monroe County, PA
Potentially Eligible Resources	**Location**
Former Tobyhanna Post Office (Veterans of Foreign Wars Post 509)	Goodwin & Oak Streets, Tobyhanna, Coolbaugh Township, Monroe County, PA
Camp Tegawitha Boat House	Pocono Mountain, Coolbaugh Township, Monroe County, PA
East Stroudsburg Interlocking Tower	Analomink Street/DL&W Railroad, East Stroudsburg, PA
East Stroudsburg Water Station	Crystal and Washington Streets, East Stroudsburg, Monroe County, PA
East Stroudsburg Freight Station Bumper Block	Crystal Street, East Stroudsburg, Monroe County, PA
Ridgeway Street Pony Truss Bridge	Ridgeway Street over DL&W, East Stroudsburg, Monroe County, PA
DL&W Railroad Company Houses*	343-345 Crystal Street and 331-333 Crystal Street, East Stroudsburg, Monroe County, PA
Henry Building	One Washington Street, East Stroudsburg, Monroe County, PA
Blairstown Station and Freight House**	Hope Road (CR 521), Blairstown, Warren County, NJ
Greendell Station Complex** Greendell Station and Greendell Interlocking Tower	Greendell, Green Township, Sussex County, NJ
Greendell General Store	6 Wolfs Corner Road, Greendell, Sussex County, NJ
Westby Farm	300 Roseville Road, Andover Township, Sussex County, NJ
Port Morris Yard**	Port Morris, Roxbury Township, Morris County, NJ
Port Morris Interlocking Tower**	Port Morris, Roxbury Township, Morris County, NJ

***** Also potentially eligible for c*ontributing to the DL&W Railroad Route from Scranton to the Delaware River Bridge*
******Also potentially eligible for c*ontributing to the DL&W Cut-Off*

Source: Lynn Drobbin and Associates, 2005

3.4.4 Effects Assessment

The proposed project would not adversely affect any historic resources in the APE for the project, as the resources do not meet the National Register Criteria for Adverse Effect. The proposed project would not cause the physical destruction of, or damage to, any historic resource nor would it require the removal of any historic resource from its historic location. Historic resources may be altered as a result of the proposed project, but these alterations would be consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines. The proposed project would not change the character or original intended use of an historic resource and would not change physical features within the property's setting that contribute to its historic significance. No visual, atmospheric or audible elements that diminish the integrity of any historic resources and its

significant historic features would be introduced as a result of the proposed project. Finally, the proposed project would not cause the neglect of a property, which would cause its deterioration. In addition, the proposed project would not transfer, lease, or sell an historic property out of Federal or state ownership or control without adequate and legally enforceable restrictions or conditions to ensure the long-term preservation of the property's historic significance.

Direct effects would include actual physical alterations to a historic resource, such as removal, repair, or replacement of historic fabric; alterations; and new construction. Direct effects also include the transfer of ownership of a resource. Other historic resources in the APE for the project may be affected by the proposed project but those effects would be indirect. Indirect effects would include the change in the setting or context of a resource by the construction of new elements near the resource. The following historic resources, identified in the APE, would be directly affected by the proposed project:

DL&W Railroad Route from Scranton to the Delaware River Bridge; Delaware, Old Main DL&W Railroad Historic District; Lackawanna and Western (Lackawanna) Cut-Off

Bridges on the DL&W Railroad would require varying amounts of rehabilitation. The majority of these structures are constructed of reinforced concrete and would require minor repairs, such as spall repair, fixing cracks in the concrete, pressure injecting grout in leaking joints, and seal coating concrete adjacent to roadways. Several bridges would require the construction of retaining walls, the replacement of timber cribbing or the extension of abutment walls. Several of these structures (see below, DL&W Cut-Off) would require rehabilitation.

The new station sites with high level platforms, parking areas, and new sidings on the DL&W would add new elements to the historic DL&W Railroad and its contributing structures, and may diminish the qualities that render the DL&W eligible for listing on the NRHP. However, the restoration of service on this line would be a beneficial effect, as the original use would be restored.

Delaware, Lackawanna and Western (Lackawanna) Cut-Off

The ***Roseville Tunnel*** is over 1,000 feet long and has experienced leaking at specific locations within the tunnel. The tunnel would require a re-profiling of the tunnel walls and ceiling to accommodate clearances for two tracks and the larger, modern trains, as well as to implement Federal Railroad Administration (FRA) standard clearances for railroad workers. A shotcrete lining would be installed over the natural exposed rock for the entire length of the tunnel to prevent water leakage and rock spalls. Lighting, a communications system and a ventilation system would also be installed.

The ***Paulins Kill Viaduct*** (Undergrade Bridge MP 70.63) is a 938-foot long, seven-span concrete arch and is an outstanding example of the DL&W's innovative use of concrete. The Paulins Kill Viaduct rehabilitation needs are relatively minor, consisting of the rehabilitation of refuge bays and replacement of railings at top of the structure. The viaduct would undergo cleaning and repairs to include the removal of vegetation and the removal of debris and fouled ballast. The deck would be cleaned, repaired and waterproofed, and cracked and spalling bridge surfaces would be cleaned and repaired by pressure grouting. The bridge railing would be removed and replaced, and the deck drainage system would be repaired. Concrete pier caps would be partially demolished and restored.

The ***Delaware River Bridge*** (Undergrade Bridge MP 72.10) is a nine-span, 1,450 feet long concrete arch, which spans the Delaware River between New Jersey and Pennsylvania and is an outstanding example of the DL&W's innovative use of concrete. This bridge would require the most extensive structural rehabilitation work in the DL&W rail corridor, since it has experienced deterioration from weather and water due to its location spanning the Delaware River. The entire bridge structure would have to be

replaced, including reconstruction of the smaller arch components up to the top of the structure, and replacement of the entire deck of the structure. The bridge would also undergo cleaning and repairs to include the removal of vegetation and the removal of debris and fouled ballast. The deck would be cleaned, repaired and waterproofed, and cracked and spalling bridge surfaces would be cleaned and repaired by pressure grouting. The bridge railing would be removed and replaced and the deck drainage system would be repaired. The embankment on the southern approach would be replaced.

Blairstown Station and Freight House

The site of the Blairstown Station and Freight House, currently privately owned, would be acquired by NJ TRANSIT for use as a station.

Greendell Station Complex (includes Greendell Interlocking Tower and Station)

The maintenance-of-way headquarters is proposed to be located in the former Greendell Station building. The building would be utilized for the storage of materials, such as extra gates, spikes, and electrical materials, and would include offices and rest rooms. The Interlocking Tower would not be affected by the proposed project.

3.4.5 Mitigation

Although there would be several impacts to historic resources, as described above in Section 3.4.4, the *New Jersey – Pennsylvania Lackawanna Cut-Off Passenger Rail Service Restoration Project* would have no adverse effect to the historic resources listed below with the following conditions:

DL&W Railroad Route from Scranton to the Slateford Junction, Pennsylvania; Old Main DL&W Railroad Historic District; DL&W (Lackawanna) Cut-Off

The New Jersey–Pennsylvania Lackawanna Cut-Off Passenger Rail Service Restoration Project will avoid the demolition or removal of historic properties. The project will, to the greatest extent possible, stabilize, rehabilitate, and/or reuse historic buildings and bridges that are located in each of the three historic districts.

All permanent improvements along the historic right-of-way would be designed to be compatible to the character defining features of the DL&W Railroad and other historic resources in the vicinity of the project. All rehabilitation of historic structures would be conducted in accordance with the *Secretary of the Interior's Standards.* Plans and specifications for the new stations, parking areas, bridges, and other associated improvements, would be reviewed and approved by either the PA or NJ SHPOs. The New Jersey–Pennsylvania Lackawanna Cut-Off Passenger Rail Service Restoration Project would use architecturally detailed concrete and glazed ceramic roof tiles for stations, platforms, and station canopies. Parking areas in the vicinity of the DL&W Railroad right-of-way, would have historic style railroad lighting and landscape buffer.

The New Jersey–Pennsylvania Lackawanna Cut-Off Passenger Rail Service Restoration Project would provide for the sensitive rehabilitation of existing overhead and undergrade concrete bridges. All bridge rehabilitation projects will be undertaken in accordance with the *Secretary of the Interior's Standards.* All new concrete and concrete repairs will match the existing historic concrete. Masonry analyses will be conducted to ensure that new concrete will match the historic concrete in configuration and detail, finish, color, texture and profile.

A number of mitigation measures could be implemented to minimize or eliminate minor temporary construction effects on historic resources along the project corridor. These temporary construction impacts may include noise and vibration and dust. Through consultation with the NJ SHPO and the PA SHPO, NJ TRANSIT would devise requirements and specifications to be followed by contractors during construction that would reduce potential noise impacts. This could include sound control devices that would be utilized on construction equipment and trucks, and the appropriate location of staging areas. The use of specific equipment, such as concrete cutters rather than pavement breakers, the installation of temporary noise barriers, and the rerouting of heavy equipment and truck movements, where practical, could possibly be used to reduce temporary noise and vibration effects.

The application of various control measures during construction activities would be employed to minimize the amount of construction dust generated. These may include applying water or other soluble moisture-retaining agents to dirt areas, cleaning construction equipment and adjacent paved areas that may be covered with dirt or dust, covering haul trucks carrying loose materials to and from construction sites, and treating materials likely to become airborne and contribute to air pollution, if left untreated.

If appropriate, a construction plan would be prepared by NJ TRANSIT and its contractors in coordination with the NJ SHPO and the PA SHPO to minimize potential construction impacts to historic resources.

Delaware, Lackawanna and Western (Lackawanna) Cut-Off

All rehabilitation work proposed for the ***Roseville Tunnel*** would be conducted in accordance with the *Secretary of the Interior's Standards.* The exterior rock faces of the tunnel portals would remain intact and not be altered. An interpretive exhibit explaining the significance of the tunnel with historic photos and maps would be created and placed at a location to be determined by NJ SHPO, in conjunction with NJ TRANSIT. Prior to the construction of the interior renovations to the tunnel, the original rock face of the tunnel would be recorded in accordance with the Historic American Engineering Record (HAER).

All rehabilitation work proposed for the ***Paulins Kill Viaduct*** would be conducted in accordance with the *Secretary of the Interior's Standards.* All plans and specifications for the bridge would be reviewed and approved by the NJ SHPO. The concrete sections of the bridge that would be removed, due to severe deterioration, would be replaced in-kind. A masonry analysis would be conducted to ensure that the new concrete would match the existing historic concrete in configuration and detail, finish, color, texture and profile.

All rehabilitation work proposed for the ***DL&W Railroad Viaduct over the Delaware River (Delaware River Bridge)*** would be conducted in accordance with the *Secretary of the Interior's Standards.* The concrete sections of the bridge that would be demolished due to severe deterioration would be replaced in-kind. All plans and specifications for the bridge repairs would be reviewed and approved by the NJ SHPO and PA SHPO. A masonry analysis would be conducted to ensure that the new concrete would match the existing historic concrete in configuration and detailing, finish, color, texture and profile.

Blairstown Station and Freight House

The former Blairstown Station and Freight House would be acquired by NJ TRANSIT and utilized for railroad operations or would be marketed for an adaptive reuse that would be compatible to the railroad use. Historic photographs of the station and the freight house, as available, would guide the rehabilitation of the Blairstown Station and Freight House. Plans and specifications would be reviewed and approved by the NJ SHPO. A masonry analysis would be conducted to ensure that any new concrete would match the existing historic concrete in configuration and detail, finish, color, texture and profile.

Greendell Station Complex (includes Greendell Interlocking Tower and Station)

NJ TRANSIT would utilize the former Greendell Station as a maintenance-of-way facility. If feasible, the Greendell Interlocking Tower would be marketed for an adaptive reuse compatible to the railroad use. The railroad station would be rehabilitated in accordance with the *Secretary of the Interior's Standards for Rehabilitation.* A masonry analysis of the concrete of the railroad station would be conducted to ensure that the new concrete would match the existing historic concrete in finish, color, detail, texture and profile. Historic photographs of the station would guide the exterior rehabilitation of the Greendell Station. The interlocking tower would be stabilized (roof secured and windows and doors boarded), until such time as a suitable adaptive reuse is found. The plans and specifications for the rail station rehabilitation and the stabilization of the interlocking tower would be reviewed and approved by the NJ SHPO.

Port Morris Interlocking Tower (in Port Morris Rail Yard)

The interlocking tower would be stabilized (roof secured and windows and doors boarded). The plans and specifications for the stabilization of the interlocking tower would be reviewed and approved by the NJ SHPO. If feasible, a new railroad use will be identified.

3.5 Archaeology

Preparation of the archaeological study involved using documentary, cartographic and archival resources. Repositories visited (either in person or by using their on-line electronic resources) or contacted include: the NJ SHPO in Trenton, NJ, the PA SHPO in Harrisburg, PA; PennDOT offices in Allentown, PA; the New York Public Library; and the library at Historical Perspectives. The current project research builds upon data collected for an earlier archaeological study that utilized much of the same APE, entitled *Northwest New Jersey-Northeast Pennsylvania MIS/EA, Morris County, 1999*. Historic research on the APE was conducted to provide an overview of the development history and context for the discussion of historic resources. Environmental factors considered in determining archaeological potential included topography, geology and soils, water availability and location, and historic period land use and development. Site walkovers were undertaken to determine existing conditions. Findings in this section are preliminary and would be reviewed with the NJ SHPO and the PA SHPO. Refer to Appendix D: Archaeology Technical Report for further detail and analysis.

The Lackawanna Cut-Off Passenger Rail Service Restoration project would utilize the existing rail corridor right-of-way for the reintroduction of passenger service. In New Jersey, this corridor is part of the DL&W Railroad Lackawanna Cut-Off Historic District, which has been deemed eligible for listing in the NRHP by the NJ SHPO March 22, 1994. In Pennsylvania, this corridor is part of the DL&W Railroad Line; which has been deemed eligible for listing in the NRHP by the PA SHPO December 9, 1996. Although not explicitly noted as contributing elements to these resources in the opinions, subsurface archaeological features associated with the railroad alignment may be eligible as contributing resources to portions of the alignment, which are, or may in the future be determined eligible for the NRHP.

3.5.1 Definition of the Area of Potential Effect

The APE is defined in 36 CFR 800.16(d) as "the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of the undertaking and may be different for different kinds of effects cause[d] by the undertaking."

The naturally occurring landform within the right-of-way in both states has been previously disturbed by construction of the railroad, much of which required grading and filling to create level surfaces. Since the original landform has already been altered, and reuse of the right-of-way should not involve any ground disturbance in areas that were not previously modified, no previously undocumented archaeological sites, outside of features related to the railroad itself, should be present within the APE. Thus, although the archaeological APE includes the entire railroad corridor, for the purposes of this study, the focus is limited to areas where new ground disturbance would occur from construction of stations, their associated parking lots, and maintenance facilities. Because construction plans are not final, the APE is considered to include the total land area of each proposed station or maintenance facility parcel.

3.5.2 Precontact Archaeological Sensitivity

None of the proposed station or maintenance facility properties have been subjected to prior archaeological field testing, and as such, no precontact period archaeological sites have been recorded within the boundaries of any of these parcels. However, based upon research and site walkovers conducted for this study, six of the proposed properties were determined to have precontact archaeological sensitivity. Three of the properties have sensitivity due to their proximity to natural water sources, soil characteristics, and apparent lack of modern disturbance on them. One of these three properties also is located in the immediate vicinity of an umber of other precontact sites, adding to its

sensitivity. Three additional properties may retain precontact sensitivity, based upon their proximity to natural water, but the level of modern disturbance currently is unknown. The precontact sensitivity of the station and facility sites is summarized in Table 3.5-1.

Table 3.5-1: Archaeological Sensitivity of Station and Maintenance Facility Sites

Location	Precontact Sensitivity	Comments	Historic Sensitivity	Comments
Scranton, PA Yard Site	Yes	Sensitivity is dependent on level of disturbance	No	Former use of the property would not leave a significant archaeological footprint
Scranton, PA Station Site	Yes	Sensitivity is dependent on level of disturbance	Yes	Historic depot and commercial stores formerly on property
Tobyhanna, PA Station Site	No	Property is not close enough to water source	Yes	Historic station complex on property
Pocono Mountain, PA Station Site	Yes	Property is adjacent to freshwater stream and has well drained soils	Yes	Possible remains of ice harvesting structures or features along railroad spur on property
Analomink, PA Station Site	No	Property is disturbed from grading	No	Property is disturbed from grading
East Stroudsburg, PA Station Site	Yes	Sensitivity is dependent on level of disturbance	No	Former historic structures located just outside APE
Delaware Water Gap Visitors' Center, PA Station Site	Yes	Property is adjacent to two previously recorded precontact sites and has well drained soils	No	Property was historically undeveloped
Blairstown, NJ Station Site	No	Property contains imported fill soil	Yes	Historic station complex on property, landscape fill feature may be considered a contributing resource to NRHP eligible Lackawanna Cut-Off Historic District
Greendell Maintenance-of-way	No	Property is disturbed from grading	No	Property is disturbed from grading
Andover, NJ Station Site	Yes	Property is adjacent to freshwater stream and has well drained soils	No	Property was historically undeveloped

Source: Historical Perspectives, 2005

3.5.3 Historical Archaeological Sensitivity

None of the proposed station or maintenance site properties have been subjected to prior archaeological field testing, and as such no, historic period archaeological sites have been recorded within the boundaries of any of these parcels. However, based upon research and site walkovers conducted for this study, four of the properties were determined to have historic period archaeological sensitivity, due to former uses of the properties during the nineteenth century. The historic period sensitivity of the station and maintenance sites is summarized in Table 3.5-1 above.

3.5.4 Effects Assessment

The project may potentially affect archaeological resources on all of the station and maintenance sites, except the Analomink Station site, which does not retain either precontact or historic period archaeological sensitivity. However, the presence of these archaeological resources cannot be ascertained at this stage, and as such, Phase IB field-testing is required before final impacts can be determined. On those properties where the level of disturbance presently is unknown, review of soil borings, if available in the future, might eliminate the need for a Phase IB testing program.

3.5.5 Mitigation

At all of the stations and maintenance sites, except the Analomink Station site, there are potential archaeological resources within the defined APE that could be affected by the undertaking. Phase IB archaeological testing is recommended during the preliminary/final engineering phase to determine the presence or absence of such resources. On those properties where the level of disturbance presently is unknown, review of soil borings, if available in the future, might eliminate the need for a Phase IB testing program. If archaeological resources are discovered, additional archaeological evaluation may be warranted to establish the significance of resources that might be directly impacted by the Build Alternative, to assess the effects on significant resources and to mitigate those effects in accordance with 36 CFR Part 800.

3.6 Visual

Visual resources are defined by the physical appearance, scale and character of an area. Components of visual resources include visually sensitive sites and significant view corridors located in the study area. Components of visual resources also include historic structures and districts, parks, open spaces and schools having a direct line of sight to the proposed project infrastructure. Field visits were utilized to analyze the potential impact of visual resources.

The proposed project would require the construction of: eight stations including platforms, passenger shelters and parking areas; the construction of a new single track in the New Jersey portion of the rail right-of-way; the upgrade of existing freight rail infrastructure where necessary in Pennsylvania to allow for utilization by passenger trains; the construction of track sidings located at several locations in the right-of-way within New Jersey and Pennsylvania; the construction of a yard facility in Pennsylvania including a second track, a canopy and an employee welfare building, and the rehabilitation of several bridge and tunnel structures.

As discussed in Appendix B: Community Facilities Technical Report and Appendix C: Historic Resources Technical Report, several parks, open spaces and historic resources are located adjacent to or in close proximity to proposed station areas. Several proposed station sites would be located proximate to unutilized or converted station structures historically used for passenger rail service, rail yards and parking structures including the Scranton, Tobyhanna, East Stroudsburg and Blairstown Stations. Table 3.6.1 describes the visual character of each of the project sites, with further detail described below.

Table 3.6-1 Station Area Visual Character

Station Area	Visual Character
Scranton Yard Facility	Proposed facility would be generally screened by topography and adjacent land uses. Train storage and maintenance area are located in existing rail right-of-way. It would be distant from visual resources. No adverse impact to visual character is anticipated.
Scranton	Proposed station site would be located across the railroad tracks from Steamtown National Historic Site, which is devoted to historic rail locomotives and provides seasonal rail excursions. The station site is located in Downtown Scranton. It anticipated that the proposed rail service and station site would have no adverse impact on the visual character of the area.
Tobyhanna	Proposed station area would be located adjacent to the former station building. Existing freight service uses the right-of-way. Visual resources are located a distance from proposed station area. No adverse impact to visual character is anticipated.
Pocono Mountain	Proposed station area would be located on the site of a former campground and screened from adjacent areas by vegetation. Existing freight service utilizes the right-of-way. Visual resrouces are located a distance from the proposed station area. No adverse impact to visual character is anticipated.
Analomink	Proposed station area would be located on a site currently utilized for recycling and infrastructure-related uses. Site is buffered from athletic fields located to the west. Existing freight service uses the right-of-way. It anticipated that the proposed rail service and station site would have no adverse impact on the visual character of the area.
East Stroudsburg	Proposed station area would be located nearby the former station building in a densely developed commercial area. Existing freight service uses the right-of-way. Introduction of station area elements as well as the restoration of passenger rail service would not have a substantial impact on the rail and transportation-related visual resources in the area.

Delaware Water Gap	Proposed station area would be located both north and south of Interstate 80 with the station platform situated north of Interstate 80 along the existing rail right-of-way and adjacent to municipal athletic fields and the parking component situated south of the Interstate 80 within a park-and-ride facility at the Delaware Water Gap Visitors' Center. The minimal infrastructure required for the project (including a station platform and canopy) as well as the infrequency of active trains would not result in substantial impacts to the visual character of the area north of Interstate 80. South of Interstate 80 parking would be provided in a parking structure that would be visually integrated with the existing visitors center.
Blairstown	Proposed station area would be located adjacent to the former station building. Due to topography and vegetation, the site is generally buffered from surrounding land uses. It would be distant from visual resources.
Greenville Maintenance-of-way	Proposed maintenance-of-way area would be located at the former station building. Due to topography and vegetation, the site is generally buffered from surrounding land uses. It would be distant from visual resources.
Andover	Proposed station area would be situated on a vegetated portion of the rail right-of-way. Distance from visual resources and the buffers created by natural vegetation would minimize any potential impacts to the visual character of the area.

Source: Edwards and Kelcey Field Visit, May 2005

The proposed Scranton and East Stroudsburg Station areas are located within commercial, downtown areas and would not negatively impact the visual character of the area. Similarly, the land use character of the area proximate to the Scranton Yard Facility, as well as the proposed site's distance and lack of view corridors to or from visual resources minimize potential impacts. The parking area for the Delaware Water Gap Visitor Center Station would be located on a site currently utilized as a regional park-and-ride facility and parking associated with the Delaware Water Gap National Recreation Area Visitor Center in Smithfield Township.

Despite being located in a relatively undeveloped area, significant negative impacts to the existing visual environment of the proposed Analomink Station area are not anticipated. Construction of this proposed station area would result in an improvement to the visual character of the site currently utilized for recycling and infrastructure-related uses. The proposed Pocono Mountain and Andover Station areas are wooded and undeveloped. In these locations, a slight modification to the immediate visual character is anticipated but would not result in a significant impact to the overall visual quality. As a result of topography, adjacent land uses and overall distance, the construction of these proposed station areas would not obstruct view corridors to / from significant visual resources and nearby residential areas. In addition, each of these proposed station areas would be landscaped and buffered from surrounding uses.

Within Pennsylvania, the DL&W corridor is an active rail line currently utilized for rail freight service. Introduction of the new rail and station infrastructure proposed under this project as well as the reintroduction of passenger trains along the project rail alignment would not create significant negative impacts on the existing visual environment.
As discussed in Section 3.4, the Lackawanna Cut-Off stretching from Port Morris, Roxbury Township, NJ to Delaware River Bridge provided numerous examples of engineering innovations and significant visual landscape features when opened in 1911 and that continue today. Through the utilization of concrete culverts and archways, rock cuts and extensive fills reaching heights exceeding more than 110 feet and lengths greater than three miles, the Lackawanna Cut-Off was constructed to eliminate tight curves, steep grades, physical barriers, as well as roadway and railroad grade crossings. The use of reinforced concrete for the construction of structures lining the corridor including towers, stations and viaducts was a new concept in the early Twentieth Century. Utilization of this portion of the rail alignment would restore and preserve many of the scenic corridors established with its construction in the early 1900s, which continued until it was abandoned in 1979.

The proposed stations and facilities would not significantly alter or obstruct view corridors to or from these visual resources. Therefore, no adverse visual impacts would occur as a result of this proposed project.

3.7 Transportation

3.7.1 Traffic

3.7.1.1 Traffic Methodology

This analysis presents the results of the traffic impact study conducted for the proposed project. The first step was the collection of relevant traffic data in order to ascertain current traffic conditions and operations near the proposed station sites. Site reconnaissance occurred at each station site to determine key intersections that might be impacted by the project. For these intersections, signal timing and phasing plans were obtained from the appropriate local, county and state authorities. Automatic Traffic Recorder (ATR) counts and Manual Turning Movement counts were conducted to discover current morning and evening peak period traffic flow patterns at key intersections.

The current traffic counts were used to determine existing traffic conditions in the study area and to serve as the No-Build for further evaluation. An annual 1.5 percent growth rate was applied to the current year traffic counts to estimate 2030 No-Build traffic volumes. Then, ridership projections and trip origins, provided through the demand forecasting model, were used to estimate project-related traffic at each station site. Project-related traffic was added to the 2030 estimates of No-Build traffic volumes. These estimates comprise the Build traffic scenario. It should be noted that for the purposes of this analysis, increased volumes due to the peak train were added to volumes occurring during the overall peak hour for the region regardless of when the peak train departs or arrives. Typically, the peak train in the morning departs significantly before the regional peak traffic hour begins. Combining the volumes attributed to the peak train with the regional peak hour volumes resulted in a conservative analysis.

Comparison of the No-Build and Build traffic estimates revealed which locations might experience a traffic impact due to the proposed rail service. Mitigation measures were developed for intersections where significant impacts are expected. It should be noted that the potential impacts identified in the analysis are the result of a series of conservative, worst case assumptions, which are not likely to occur. However, assessing the ability to mitigate these identified impacts under these worst-case conditions ensures that the potential impacts can also be mitigated under actual conditions. The following briefly outlines the impacts identified and the proposed mitigation measures for each station site. A more detailed explanation is available in Appendix E: Transportation Technical Report.

3.7.1.2 Traffic Impacts and Mitigation

Traffic mitigation and overall decreases in level of service would be discussed with the affected municipalities prior to the finalization of Environmental Assessment.

Scranton

The proposed project would generate approximately 11 vehicles accessing the proposed Scranton Station for the peak train, which would depart Scranton at 5:30 AM for arrival in Hoboken at 8:40 AM. Due to the relatively low traffic volumes resulting from implementation, the proposed station is not expected to impact traffic operations in the area.

Tobyhanna

The proposed project would generate approximately 43 vehicles accessing the proposed Tobyhanna Station for the peak train, which would depart Tobyhanna at 5:22 AM for arrival in Hoboken at 7:55 AM.

The results of the Highway Capacity Software (HCS) analysis suggest that project-related traffic increases would impact the intersection of PA Route 611 and PA Route 423 during both the morning and afternoon peak periods. During the morning peak period, delay on the eastbound approach of PA Route 423 is expected to increase by approximately 60 seconds. During the afternoon peak period, level of service (LOS) on the westbound approach is expected to decline from LOS C to LOS D. See Tables 3.7-1 through 3.7-3.

Table 3.7-1 2004 Existing Conditions – Tobyhanna

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
PA 611 with PA 423	EB	LT	1.02	142.2	F	0.47	28.8	C
		R	0.04	0.0	A	0.08	0.00	A
	WB	LTR	0.15	24.9	C	0.29	27.1	C
	NB	L	0.13	9.7	A	0.11	6.9	A
		T	0.09	9.4	A	0.09	6.8	A
	SB	L	0.10	9.4	A	0.03	6.5	A
		T	0.14	9.7	A	0.05	6.6	A
Prospect Street with Main Street	NB	LT	0.00	7.4	A	0.02	7.6	A
	EB	LR	0.39	12.9	B	0.22	11.5	B
Main Street with Church Street	SB	LT	0.01	8.2	A	0.01	7.6	A
	WB	LR	0.20	11.5	B	0.19	10.5	B

Source: Edwards and Kelcey, 2006

Table 3.7-2 2030 No-Build Conditions – Tobyhanna

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
PA 611 with PA 423	EB	LT	1.52	988.0	F	0.74	39.0	D
		R	0.05	0.0+	A	0.12	0.0+	A
	WB	LTR	0.31	26.5	C	0.50	29.4	C
	NB	L	0.21	10.3	B	0.16	7.2	A
		T	0.13	9.6	A	0.13	7.0	A
	SB	L	0.15	9.8	A	0.04	6.6	A
		T	0.21	10.1	B	0.08	6.7	A
Prospect Street with Main Street	NB	LT	0.01	7.6	A	0.04	7.8	A
	EB	LR	0.67	21.7	C	0.40	15.0+	C
Main Street with Church Street	SB	LT	0.03	8.8	A	0.02	7.9	A
	WB	LR	0.35	14.7	B	0.32	12.3	B

Source: Edwards and Kelcey, 2006

Table 3.7-3 2030 Build Conditions – Tobyhanna

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
PA 611 with PA 423	EB	LT	1.56	1046	F	0.78	42.4	D
		R	0.05	0.0+	A	0.12	0.0+	A
	WB	LTR	0.31	26.5	C	0.71	37.8	D
	NB	L	0.21	10.3	B	0.16	7.2	A
		T	0.13	9.6	A	0.14	7.0	A
	SB	L	0.16	9.8	A	0.04	6.6	A
		T	0.22	10.1	B	0.08	6.7	A
Prospect Street with Main Street	NB	LT	0.01	7.6	A	0.04	7.9	A
	EB	LR	0.72	24.7	C	0.40	15.3	C
Main Street with Church Street	SB	LT	0.04	8.9	A	0.02	7.9	A
	WB	LR	0.37	15.7	C	0.37	12.9	B

Source: Edwards and Kelcey, 2006

The proposed mitigation involves replacing the current 95-second cycle with a 60-second cycle. This measure would allow all intersection approaches to function at LOS C or better during both the morning and afternoon peak periods (See Table 3.7-4).

Table 3.7-4 2030 Mitigated Conditions – Tobyhanna

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
PA 611 with PA 423	EB	LT	0.83	18.3	B	0.30	7.1	A
		R	0.05	0.0+	A	0.13	0.0+	A
	WB	LTR	0.12	6.2	A	0.21	6.6	A
	NB	L	0.54	24.5	C	0.59	25.6	C
		T	0.35	20.0-	B	0.43	20.5	C
	SB	L	0.41	21.1	C	0.18	19.3	B
		T	0.55	21.6	C	0.30	19.7	B

Source: Edwards and Kelcey, 2006

Pocono Mountain

The proposed project would generate approximately 307 vehicles accessing the proposed Pocono Mountain Station for the peak train, which would depart Pocono Mountain at 5:26 AM for arrival in Hoboken at 7:55 AM. The intersection of PA Route 611 and PA Route 940 is expected to experience heavy delays under the No-Build scenario due to background traffic growth. For the southern portion of the intersection, the implementation of the Build scenario should not impact traffic operations significantly. However, the increased traffic resulting from the implementation of the proposed rail project is expected to further aggravate already congested conditions at the northern portion of this intersection. For example, during the morning peak period, increases in delay are expected for the eastbound approach and for the northbound through and right-turn movements. For the northbound approach, the anticipated increase in delay would trigger a decline from LOS E to LOS F. During the afternoon peak period, it is expected that the greater volume of traffic would increase delay on the southbound approach to the northern part of the intersection. See Tables 3.7-5 through 3.7-7.

Table 3.7-5 2004 Existing Conditions – Pocono Mountain

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
PA 611/PA 196 with PA 940 (Northern)	EB	LTR	0.99	106.3	F	1.04	158.6	F
	WB	LT	1.04	180.3	F	0.91	72.5	E
	NB	DefL	0.98	116.0	F	0.92	67.7	E
		TR	0.66	24.5	C	1.04	140.3	F
	SB	LTR	0.92	57.1	E	0.85	45.0	D
PA 611 with PA 940 (Southern)	EB	LTR	0.82	71.2	E	1.04	216.4	F
	WB	DefL	0.34	41.7	D	0.35	41.8	D
		T	0.04	39.0	D	0.02	38.9	D
	NB	LTR	0.53	33.1	C	0.76	38.9	D
	SB	DefL	N/A	N/A	N/A	0.44	11.7	B
		LTR	0.43	4.6	A	0.30	4.0	A

Source: Edwards and Kelcey, 2005

Table 3.7-6 2030 No-Build Conditions – Pocono Mountain

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
PA 611/PA 196 with PA 940 (Northern)	EB	LTR	1.46	870.8	F	1.53	1010	F
	WB	LT	1.54	1022	F	1.34	667.2	F
	NB	DefL	1.44	848.1	F	1.46	883.3	F
		TR	0.97	68.6	E	1.54	997.8	F
	SB	LTR	1.36	693.3	F	1.25	500.9	F
PA 611 with PA 940 (Southern)	EB	LTR	1.21	466.1	F	1.53	1029	F
	WB	DefL	0.53	44.8	D	0.53	44.9	D
		T	0.06	39.2	D	0.03	38.9	D
	NB	LTR	0.78	40.3	D	1.12	278.0	F
	SB	DefL	0.51	12.1	B	0.68	18.2	B
		LTR	0.67	7.4	A	0.44	4.7	A

Source: Edwards and Kelcey, 2006

Table 3.7-7 2030 Build Conditions – Pocono Mountain

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
PA 611/PA 196 with PA 940 (Northern)	EB	LTR	1.79	1473	F	1.53	1010	F
	WB	LT	1.54	1022	F	1.34	667.2	F
	NB	DefL	1.44	848.1	F	1.46	883.3	F
		TR	1.12	264.8	F	1.54	997.8	F
	SB	LTR	1.36	693.3	F	1.73	1363	F
PA 611 with PA 940 (Southern)	EB	LTR	1.21	466.1	F	1.53	1029	F
	WB	DefL	0.53	44.8	D	0.53	44.9	D
		T	0.06	39.2	D	0.03	38.9	D
	NB	LTR	0.78	40.3	D	1.12	278.0	F
	SB	DefL	0.51	12.1	B	0.81	23.7	C
		LTR	0.67	7.4	A	0.44	4.7	A

Source: Edwards and Kelcey, 2006

For each time period, the proposed mitigation involves replacing the existing 100-second cycle with a 150-second cycle. Although the intersection would continue to operate at LOS F, delays with the revised signal timing would be less than delay using the current 100-second cycle. See Table 3.7-8.

Table 3.7-8 2030 Mitigated Conditions – Pocono Mountain

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
PA 611/PA 196 with PA 940 (Northern)	EB	LTR	1.56	1074	F	1.53	1030	F
	WB	LT	1.54	1042	F	1.55	1060	F
	NB	DefL	1.46	897.9	F	1.47	915.8	F
		TR	1.04	144.4	F	1.27	535.6	F
	SB	LTR	1.16	352.6	F	1.25	503.5	F
PA 611 with PA 940 (Southern)	EB	LTR	0.70	62.1	E	1.38	775.9	F
	WB	DefL	0.31	51.1	D	0.47	62.2	E
		T	0.04	47.5	D	0.03	56.6	E
	NB	LTR	0.99	124.4	F	0.81	49.2	D
	SB	DefL	0.55	22.3	C	0.91	51.4	D
		LTR	0.71	14.7	B	0.43	5.5	A

Source: Edwards and Kelcey, 2006

Analomink

The proposed project would generate approximately 74 vehicles accessing the proposed Analomink Station for the peak train, which would depart Analomink at 6:38 AM for arrival in Hoboken at 8:40 AM. Due to the relatively low traffic volumes resulting from implementation at this station, the analysis showed that there were no significant impacts that would warrant mitigation. See Tables 3.7-9 through 3.7-11.

Table 3.7-9 2004 Existing Conditions – Analomink

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
PA 447 with PA 191	EB	LR	0.65	34.5	C	0.80	31.2	C
	NB	LT	0.28	8.7	A	0.87	33.4	C
	SB	T	0.42	9.7	A	0.32	13.4	B
		R	0.18	0.1	A	0.13	0.0	A

Source: Edwards and Kelcey, 2005

Table 3.7-10 2030 No-Build Conditions – Analomink

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
PA 447 with PA 191	EB	LR	0.95	84.4	F	1.18	359.7	F
	NB	LT	0.51	10.9	B	1.51	946.6	F
	SB	T	0.62	12.3	B	0.47	14.8	B
		R	0.26	0.1	A	0.19	0.1	A

Source: Edwards and Kelcey, 2006

Table 3.7-11 2030 Build Conditions – Analomink

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
PA 447 with PA 191	EB	LR	0.95	84.4	F	1.18	359.7	F
	NB	LT	0.51	10.9	B	1.51	946.6	F
	SB	T	0.62	12.3	B	0.47	14.8	B
		R	0.26	0.1	A	0.19	0.1	A

Source: Edwards and Kelcey, 2006

East Stroudsburg

The proposed project would generate approximately 110 vehicles accessing the proposed East Stroudsburg Station for the peak train, which would depart East Stroudsburg at 6:44 AM for arrival in Hoboken at 8:40 AM.

It is predicted that the PM peak period delay on the northbound approach to the intersection of Crystal Street and Analomink Street would increase from 68.6 seconds under the No-Build scenario to 1,084 seconds under the Build scenario. Furthermore, it is predicted that the PM peak period delay would increase at two other intersections: US Business Route 209 and North Crystal Street, and US Business Route 209 and Analomink Street. See Tables 3.7-12 through 3.7-14.

Table 3.7-12 2004 Existing Conditions – East Stroudsburg

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
Crystal Street with Analomink Street	WB	LT	0.05	8.0	A	0.18	8.5	A
	NB	LR	0.14	11.1	B	0.32	15.7	C
N. Crystal Street with Analomink Street	EB	LT	0.00	7.6	A	0.00	7.9	A
	SB	LR	0.24	11.5	B	0.24	12.6	B
Courtland Street with Analomink Street	SB	LT	0.01	8.1	A	0.01	8.7	A
	WB	LR	0.20	15.8	C	0.42	28.3	D
Courtland Street with N. Crystal Street	SB	LT	0.14	8.4	A	0.15	9.2	A
	WB	R	0.09	10.5	B	0.29	14.5	B
Courtland Street with Day/Washington Street	WB	TR	0.21	19.2	B	0.41	20.8	C
	NB	L	0.07	7.2	A	0.12	7.4	A
		TR	0.43	9.3	A	0.69	13.3	B
	SB	LR	0.47	9.8	A	0.89	31.1	C
Ridgeway Street with Prospect Street	EB	LTR	0.69	32.8	C	0.66	36.3	D
	WB	LTR	0.05	22.1	C	0.05	26.3	C
	NB	L	0.20	14.6	B	0.61	18.5	B
		TR	0.38	15.4	B	0.28	12.3	B
	SB	LTR	0.54	24.9	C	0.81	39.2	D
Courtland Street and Ridgeway/Brown Street	EB	L	0.32	13.6	B	0.53	15.2	B
		TR	0.38	2.9	A	0.32	2.7	A
	WB	T	0.51	22.1	C	0.89	47.8	D
	SB	LR	0.00	28.6	C	0.00	28.6	C
Washington Street with Brown Street	EB	T	0.48	7.5	A	0.57	8.3	A
	WB	T	0.26	6.3	A	0.50	7.8	A
	SB	L	0.12	19.8	B	0.29	20.8	C

Source: Edwards and Kelcey, 2005

Table 3.7-13 2030 No-Build Conditions – East Stroudsburg

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
Crystal Street with Analomink Street	WB	LT	0.08	8.5	A	0.30	9.6	A
	NB	LR	0.27	13.8	B	0.83	68.6	F
N. Crystal Street with Analomink Street	EB	LT	0.00	7.8	A	0.00	8.3	A
	SB	LR	0.41	14.7	B	0.45	18.4	C
Courtland Street with Analomink Street	SB	LT	0.02	8.6	A	0.01	9.7	A
	WB	LR	0.47	30.0	D	1.23	557.3	F
Courtland Street with N. Crystal Street	SB	LT	0.24	9.4	A	0.28	11.2	B
	WB	R	0.17	12.4	B	0.61	29.0	D
Courtland Street with Day/Washington Street	WB	TR	0.31	19.9	B	0.60	23.5	C
	NB	L	0.11	7.3	A	0.18	7.7	A
		TR	0.63	11.8	B	1.02	92.4	F
	SB	LR	0.79	18.8	B	1.68	1251	F
Ridgeway Street with Prospect Street	EB	LTR	1.02	135.9	F	0.98	100.4	F
	WB	LTR	0.08	22.4	C	0.07	26.6	C
	NB	L	0.37	16.9	B	1.10	249.9	F
		TR	0.55	17.8	B	0.41	13.7	B
	SB	LTR	0.80	35.0-	C	1.19	391.4	F
Courtland Street and Ridgeway/Brown Street	EB	L	0.47	14.7	B	0.78	20.0	B
		TR	0.56	3.9	A	0.47	3.3	A
	WB	T	0.75	29.7	C	1.31	598.0	F
	SB	LR	0.00	28.6	C	0.00	28.6	C
Washington Street with Brown Street	EB	T	0.71	10.1	B	0.84	14.0	B
	WB	T	0.38	7.0	A	0.74	12.0	B
	SB	L	0.18	20.2	C	0.43	21.8	C

Source: Edwards and Kelcey, 2006

Table 3.7-14 2030 Build Conditions – East Stroudsburg

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
Crystal Street with Analomink Street	WB	LT	0.08	8.8	A	0.30	9.6	A
	NB	LR	0.28	14.5	B	1.56	108.4	F
N. Crystal Street with Analomink Street	EB	LT	0.00	7.8	A	0.00	8.5	A
	SB	LR	0.53	17.1	B	0.48	19.6	C
Courtland Street with Analomink Street	SB	LT	0.02	8.6	A	0.01	10.0	A
	WB	LR	0.50	33.1	D	1.32	705.8	F
Courtland Street with N. Crystal Street	SB	LT	0.31	9.8	A	0.29	11.5	B
	WB	R	0.17	12.4	B	0.86	65.7	F
Courtland Street with Day/Washington Street	WB	TR	0.31	19.9	B	0.60	23.5	C
	NB	L	0.11	7.3	A	0.18	7.7	A
		TR	0.63	11.8	B	1.02	92.4	F
	SB	LR	0.96	57.4	E	1.68	1251	F
Ridgeway Street with Prospect Street	EB	LTR	1.02	135.9	F	0.98	100.4	F
	WB	LTR	0.08	22.4	C	0.07	26.6	C
	NB	L	0.37	16.9	B	1.10	249.9	F
		TR	0.55	17.8	B	0.41	13.7	B
	SB	LTR	0.80	35.0-	C	1.19	391.4	F
Courtland Street and Ridgeway/Brown Street	EB	L	0.47	14.7	B	0.78	20.0	B
		TR	0.56	3.9	A	0.47	3.3	A
	WB	T	0.75	29.7	C	1.31	598.0	F
	SB	LR	0.00	28.6	C	0.00	28.6	C
Washington Street with Brown Street	EB	T	0.71	10.1	B	0.84	14.0	B
	WB	T	0.38	7.0	A	0.74	12.0	B
	SB	L	0.18	20.2	C	0.43	21.8	C

Source: Edwards and Kelcey, 2006

The proposed mitigation for the intersection of Crystal Street and Analomink Street is to reconfigure the two existing T-intersections including modifications to the existing horizontal geometry and to install a two-phase 100-second cycle traffic signal. With the implementation of these measures, the northbound approach would function at LOS D while the eastbound, westbound, and southbound approaches would function at LOS E or higher. A two-phase, 60-second cycle is recommended for the morning peak period. See Table 3.7-15.

Table 3.7-15 2030 Mitigated Conditions – East Stroudsburg

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
Crystal Street with Analomink Street (signalized)	EB	LTR	0.28	14.5	B	0.21	10.4	B
	WB	LTR	0.60	20.4	C	0.97	63.4	E
	NB	LTR	0.24	12.9	B	0.77	47.1	D
	SB	LTR	0.55	17.6	B	0.75	49.9	D
Courtland Street with Day/Washington Street	WB	TR	0.28	14.5	B	0.21	10.4	B
	NB	L	0.60	20.4	C	0.97	63.4	E
		TR	0.24	12.9	B	0.77	47.1	D
	SB	LR	0.55	17.6	B	0.75	49.9	D

Source: Edwards and Kelcey, 2006

Delaware Water Gap

The proposed project would generate approximately 270 vehicles accessing the proposed Delaware Water Gap Station for the peak train, which would depart Delaware Water Gap at 6:07 AM for arrival in Hoboken at 7:55 AM. The implementation of the Build scenario would impact westbound traffic operations at the intersection of PA Route 2028 and the Interstate 80 entrance and exit ramps during the morning and afternoon peak periods. See Tables 3.7-16 through 3.7-18.

Table 3.7-16 2004 Existing Conditions – Delaware Water Gap

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
I-80 Ramps and PA Route 2028	NB	LT	0.01	7.6	A	0.01	7.7	A
	SB	LT	0.09	8.2	A	0.14	9.0	A
	WB	LT	0.51	21.4	C	0.63	34.2	D
	EB	LTR	0.05	10.4	B	0.08	12.5	B

Source: Edwards and Kelcey, 2005

Table 3.7-17 2030 No-Build Conditions – Delaware Water Gap

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
I-80 Ramps and PA Route 2028	NB	LT	0.01	7.9	A	0.01	8.0	A
	SB	LT	0.14	8.8	A	0.26	10.6	B
	WB	LT	1.05	211.8	F	1.54	1045	F
	EB	LTR	0.09	11.9	B	0.21	19.7	C

Source: Edwards and Kelcey, 2006

Table 3.7-18 2030 Build Conditions – Delaware Water Gap

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
I-80 Ramps and PA Route 2028	NB	LT	0.01	7.9	A	0.01	8.0	A
	SB	LT	0.40	10.7	B	0.26	10.6	B
	WB	LT	2.93	3557	F	2.27	2349	F
	EB	LTR	0.19	22.1	C	0.21	19.7	C

Source: Edwards and Kelcey, 2006

The proposed mitigation was the installation of a traffic signal at this intersection. Recent improvements at the visitor center have included this installation of the traffic signal. A two-phase, 80-second cycle is recommended for the AM peak period and a two-phase, 70-second cycle is recommended for the PM peak period. The traffic signal may not be visible to southbound traffic exiting the highway due to the curvature of the ramp. Because vehicles exiting the highway are likely to be traveling at high speeds, it is recommended that warning flashers be installed to alert drivers of the presence of the traffic signal. See Table 3.7-19.

Table 3.7-19 2030 Mitigated Conditions – Delaware Water Gap

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
I-80 Ramps and PA Route 2028 (signalized)	EB	LTR	0.12	21.5	C	0.10	13.9	B
	WB	LT	0.86	47.5	D	0.85	33.6	C
	NB	LTR	0.28	8.9	A	0.56	15.0	B
	SB	DefL	0.88	35.9	D	0.86	46.7	D
		TR	0.31	9.2	A	0.43	13.8	B

Source: Edwards and Kelcey, 2006

Blairstown

The proposed project would generate approximately 93 vehicles accessing the proposed Blairstown Station for the peak train, which would depart Blairstown at 7:08 AM for arrival in Hoboken at 8:40 AM. The implementation of the Build scenario would impact traffic operations at the intersection of NJ Route 94 and County Route 521 during both the morning and afternoon peak periods. Delay on the westbound approach is expected to increase by 60 seconds during the morning peak period. During the afternoon peak period, delay on the westbound approach would increase to the point of being immeasurable. During the afternoon peak period, the eastbound through movement is expected to experience a 500-second increase in delay. See Tables 3.7-20 through 3.7-22.

Table 3.7-20 2004 Existing Conditions – Blairstown

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
Route 94 and Route 521	NB	L	0.06	7.4	A	0.11	7.5	A
	WB	LT	0.45	16.1	C	0.65	26.5	D
	EB	T	0.48	15.5	C	0.47	18.3	C
		R	0.15	8.9	A	0.13	8.8	A

Source: Edwards and Kelcey, 2006

Table 3.7-21 2030 No-Build Conditions – Blairstown

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
Route 94 and Route 521	NB	L	0.09	7.5	A	0.16	7.7	A
	WB	LT	0.98	120.4	F	1.72	1342	F
	EB	T	0.82	37.8	E	0.91	80.9	F
		R	0.22	9.2	A	0.19	9.1	A

Source: Edwards and Kelcey, 2006

Table 3.7-22 2030 Build Conditions – Blairstown

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
Route 94 and Route 521	NB	L	0.09	7.5	A	0.23	7.9	A
	WB	LT	1.03	180.4	F	*	*	F
	EB	T	0.82	37.8	E	1.30	615.2	F
		R	0.33	9.9	A	0.19	9.1	A
Route 521 and Driveway	NB	LT	0.00	8.0	A	0.00	7.6	A
	EB	LR	*	*	*	0.19	13.4	B

** Highway Capacity Software did not calculate.*
Source: Edwards and Kelcey, 2005

The proposed mitigation for this intersection is the installation of a traffic signal. A two-phase, 60-second cycle is recommended for both the AM and the PM peak periods. See Table 3.7-23.

Table 3.7-23 2030 Mitigated Conditions – Blairstown

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
Route 94 and Route 521	NB	L	0.55	26.2	C	0.66	20.7	C
	WB	LT	0.39	6.1	A	0.57	13.2	B
	EB	T	0.41	6.1	A	0.42	11.5	B

Source: Edwards and Kelcey, 2005

Andover

The proposed project would generate approximately 45 vehicles accessing the proposed Andover Station for the peak train, which would depart Andover at 7:21 AM for arrival in Hoboken at 8:40 AM. Delay on the westbound approach to the intersection of US Route 206 and County Route 613 would increase by approximately 40 seconds during the afternoon peak period under the Build scenario. Normally, the mitigation proposed would be the installation of a traffic signal. The installation of a traffic signal in this location would cause problems at the signalized intersection to the south, US Route 206 and Smith Street. Moreover, the 225-foot length of the westbound approach is sufficient to accommodate the nine-vehicle westbound queue predicted by the HCS analysis for the Build scenario. Therefore, a traffic signal is not recommended for the intersection of US Route 206 and County Route 613. See Tables 3.7-24 through 3.7-26.

Table 3.7-24 2004 Existing Conditions – Andover

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
Route 206 and Route 517	NB	LT	0.01	10.3	B	0.00	9.4	A
	EB	LR	1.02	286.8	F	0.45	48.5	E
Route 206 and Route 613	SB	LT	0.05	8.8	A	0.07	9.4	A
	WB	LR	0.21	14.4	B	0.17	15.7	C

Source: Edwards and Kelcey, 2005

Table 3.7-25 2030 No-Build Conditions – Andover

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
Route 206 and Route 517	NB	LT	0.02	12.9	B	0.00	11.2	B
	EB	LR	4.32	6164	F	1.80	1645	F
Route 206 and Route 613	SB	LT	0.09	10.0+	B	0.15	11.4	B
	WB	LR	0.48	27.4	D	0.43	31.0	D

Source: Edwards and Kelcey, 2005

Table 3.7-26 2030 Build Conditions – Andover

Intersection	Approach	Mov't.	AM Peak Hour			PM Peak Hour		
			v/c ratio	Stopped delay (seconds)	LOS	v/c ratio	Stopped delay (seconds)	LOS
Route 206 and Route 517	NB	LT	0.02	12.9	B	0.00	11.2	B
	EB	LR	4.32	6164	F	1.80	1645	F
Route 206 and Route 613	SB	LT	0.19	10.6	B	0.26	13.4	B
	WB	LR	0.53	32.4	D	0.80	74.9	F
Roseville Road & Driveway	NB	LTR	0.00	7.2	A	0.03	7.3	A
	WB	LT	0.06	9.3	A	0.12	10.3	B
	EB	TR	0.09	9.0	A	0.09	10.2	B

Source: Edwards and Kelcey, 2005

3.7.1.3 Summary

Table 3.7-27 summarizes the project traffic impacts and the proposed mitigation for each station site.

Table 3.7-27 Traffic Summary Table

Station	Impact	Mitigation
Scranton	None	None
Tobyhanna	Rt. 611 & Rt. 423 – AM and PM peak	Change existing signal timing from 95-second cycle to 60-second cycle
Pocono Mountain	Rt. 611 & Rt. 940 – AM and PM peak	Change existing signal timing from 100-second cycle to 150-second cycle
Analomink	None	None
East Stroudsburg	Crystal Street & Analomink Street - PM peak	Geometry modifications; install traffic signal with two-phase, 100-second cycle; 60-second cycle recommended for AM peak period
Delaware Water Gap	River Rd. & I-80 Entrance/Exit ramps AM peak	Install traffic signal with two-phase, 80-second cycle
Delaware Water Gap	River Rd. & I-80 Entrance/Exit ramps PM peak	Install traffic signal with two-phase, 70-second cycle
Blairstown	Rt. 94 & Rt. 521 – AM and PM Peak	Install traffic signal with two-phase, 60-second cycle for both time periods
Andover	Rt. 206 & Rt. 613 – PM peak	None

Source: Edwards and Kelcey, 2005

3.7.2 Pedestrians, Parking, Transit and Rail

Pedestrians

The areas in the vicinity of the proposed stations in Pocono Mountain, Analomink, Delaware Water Gap, Blairstown and Andover have little to no pedestrian activity. The proposed Scranton, Tobyhanna and East Stroudsburg Station areas can be characterized by low to moderate levels of pedestrian activity.

Pedestrian accommodations were a consideration in the development of station plans for the proposed project. Pedestrian elements would be incorporated into the preliminary and final designs of the project. These elements may include appropriately placed sidewalks, lighting and signage. All pedestrian facilities would be fully complaint with the Americans with Disabilities Act (ADA).

The proposed project would not impact pedestrian circulation in the proposed station areas. Pedestrian circulation would be a consideration in the design of station plans.

Parking

Parking would be provided at the proposed stations to accommodate the estimated demand. Therefore, the proposed project would not result in any significant impact on the supply of parking spaces in the study area.

Transit

A number of public and transit providers operate service in the study area. The County of Lackawanna Transit System (COLTS) provides local bus service in the Scranton metropolitan area. Monroe County

Transit provides bus service throughout Monroe County. NJ TRANSIT provides local bus and community shuttle services in Warren, Sussex and Morris Counties. In Morris County, private shuttle buses are provided by several large companies between local rail stations and nearby office complexes.

Several interstate bus services operate between northeastern Pennsylvania, northwestern New Jersey and New York City. These routes service park-and-ride lots and town centers, then run express via Interstate 80, terminating at the Port Authority Bus Terminal (PABT) in Manhattan. This interstate service is generally oriented to commuters, and offers more bus service during the rush hours. Martz/Trailways and Greyhound are the major providers of private intercity bus service in the region and have bus park-and-ride lots located is several places throughout the counties. The intercity bus terminal in Scranton (Martz and Greyhound) is currently located across Lackawanna Avenue from the proposed station site. There is a local proposal to create an intermodal facility adjacent to the proposed rail station that would provide for transfers between all modes, including rail, intercity bus, local bus, taxi, pedestrians, bicycles and automobiles. Martz Bus also has several stop locations in Monroe County, including along PA Route 611 in Mount Pocono, Stroudsburg and East Stroudsburg.

Travel times projected for bus service in the future are anticipated to increase due to increasing traffic delays on Interstate 80. Future demand would create the need for significant additional private operator bus equipment to accommodate this demand. Conflicting with this demand need are the capacity constraints through the Lincoln Tunnel Express Bus Lane (XBL). However, XBL delays are expected to be reduced to more acceptable levels with implementation of the ARC project. It is beyond the scope of this EA to evaluate future XBL conditions.

The proposed project would provide a transit option for the study area in the future as demand exceeds capacity for bus service and travel times increase. Implementation of the proposed project operations would be planned to coordinate with area transit operations. No negative impacts from this proposed project to existing or future local or intercity bus services are anticipated.

Rail

Beyond the new connection to the Morris & Essex and Montclair-Boonton Lines in Port Morris, the proposed project would operate over the NJ TRANSIT passenger rail network to Hoboken, NJ or New York Penn Station. Implementation of the proposed project operations has been planned to work in conjunction with current and future NJ TRANSIT rail operations along these lines. No negative impacts from this proposed project to existing or future commuter rail services are anticipated.

The Delaware-Lackawanna Railroad Company (DLRC) operates freight rail service in the study corridor in Pennsylvania under a five-year operating agreement with the Lackawanna County Rail Authority (now the Pennsylvania Northeast Region Rail Authority). The operating agreement would expire in 2010. With the implementation of the proposed project, freight service in the corridor in Pennsylvania would have to be coordinated and timed with the passenger rail service. The implementation of the proposed project passenger rail service operations has been planned to work in conjunction with current and future freight rail service in the corridor. NJ TRANSIT has worked extensively with the freight railroads to coordinate the construction and operation of the proposed project. This coordination would continue through its implementation. The service levels of both the passenger rail and freight rail assumed in the proposed project would be relatively low. No negative impacts from this proposed project to existing or future freight rail services are anticipated. Benefits to freight rail may in fact be derived from the physical improvements to the railroad infrastructure, including passing sidings, signals and communications systems, which would be constructed as part of the proposed project.

3.8 Air Quality

This analysis presents the results of the air quality study conducted for the proposed Lackawanna Cut-Off Study. The effects of the project on air quality are analyzed pursuant to the Clean Air Act requirements and applicable air quality guidelines and standards, and analyzed using the US Environmental Protection Agency recommended models MOBILE6.2, CAL3QHC, CAL3QHCR, and SCREEN3. Refer to Appendix F: Air Quality Technical Report for further detail and analysis.

3.8.1 Existing Conditions

Six pollutants have been identified by the US EPA as a national concern: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter, sulfur dioxide (SO_2), and lead (Pb). National Ambient Air Quality Standards (NAAQS), Pennsylvania State standards and New Jersey State standards have been established for these major air pollutants. The representative ambient air quality levels along the study corridor compared to the NAAQS are shown in Table 3.8-1.

Table 3.8-1: Existing Ambient Air Quality in Pennsylvania and New Jersey

Pollutant	Averaging Period	Maximum Averaging Period Concentrations		
		Pennsylvania	New Jersey	NAAQS
Carbon Monoxide (CO)	1 hr.	3.0 ppm[1]	5.8 ppm [3]	35 ppm
	8 hr.	2.1 ppm[1]	3.5 ppm [3]	9 ppm
Ozone (O_3)	1 hr.	0.10 ppm[1]	0.12 ppm [4]	0.12 ppm
	8 hr.	0.09 ppm[1]	0.11 ppm [4]	0.08 ppm
Nitrogen Dioxide (NO_2)	1 yr.	0.015 ppm[1]	0.011 ppm [4]	0.053 ppm
Lead (Pb)	3 mos.	0.07 µg/m^3 [2]	0.23 µg/m^3 [5]	1.5 µg/m^3
Total Suspended Particulates	24 hrs.	69 µg/m^3 [2]	99 µg/m^3 [5]	260 µg/m^3
	1 yr.	27 µg/m^3 [2]	30 µg/m^3 [5]	75 µg/m^3
Inhalable Particulates (PM_{10})	24 hrs.	69 µg/m^3 [1]	54 µg/m^3 [7]	150 µg/m^3
	1 yr.	20 µg/m^3 [1]	24 µg/m^3 [7]	50 µg/m^3
Fine Particulates ($PM_{2.5}$)	24 hrs.	49 µg/m^3 [1]	42 µg/m^3 [3]	65 µg/m^3
	1 yr.	13 µg/m^3 [1]	13 µg/m^3 [3]	15 µg/m^3
Sulfur Dioxide (SO_2)	3 hr.	0.044 ppm [1]	0.048 ppm [4]	0.50 ppm
	24 hr.	0.030 ppm [1]	0.031 ppm [4]	0.14 ppm
	1 yr.	0.005 ppm [1]	0.005 ppm [4]	0.03 ppm

ppm = parts per million
(1) Scranton, Wilkes-Barre, PA Air Basin ; (2) Palmerton, PA Region 2 Non-Air Basin; (3) Morristown, Morris County, NJ
(4) Chester, Morris County, NJ; (5) New Brunswick, Middlesex County, NJ

Source: 2001 Air Quality Report, NJ DEP, Bureau of Air Monitoring and 2001 Ambient Air Quality Monitoring Report, Commonwealth of Pennsylvania DEP, Division of Air Quality Monitoring

Except for the eight-hour ozone standard, there were no reported violations of the national ambient air quality standards for any of the major pollutants in the study area. Monroe and Lackawanna Counties in Pennsylvania are classified as basic, once national or regional measures are implemented, those counties are expected to be in attainment. Warren County in New Jersey is in a marginal non-attainment area, and Sussex County and Morris County in New Jersey are in severe non-attainment areas.

3.8.2 Impacts

3.8.2.1 Microscale Analysis

Mobile Source

The intersection within the study corridor that is anticipated to experience the greatest peak hour volumes with associated congestion, LOS D, E, or F, was selected for detailed analysis. The location chosen was the intersection of PA Route 611 and PA Route 940 in Pocono Mountain, PA, with a PM peak hour volume in the Build scenario estimated to be approximately 6,265, and with several movements expected to operate at LOS F. It is assumed that if this intersection results in no impact from the project, then intersections with lower volumes or congestion would not be impacted. Table 3.8-2 shows the maximum predicted concentrations for CO, PM_{10} and $PM_{2.5}$, as compared to the existing and No-Build conditions. The total concentrations comply with the corresponding standards for each pollutant.

Station Parking

A worst-case analysis was performed at the largest station, Pocono Mountain, which would have a maximum parking capacity of 1,000 vehicles, with a maximum of 307 vehicles during the peak hours. The maximum one-hour CO levels would be 7.5 parts per million (ppm), and the eight-hour levels would be 4.7 ppm. The maximum 24-hour PM_{10} levels would be 91.9 micrograms per meters cubed ($\mu g/m^3$). The total concentrations comply with the corresponding standards for each pollutant.

Table 3.8-2: Predicted Mobile Source Air Quality Concentrations

Pollutant	Averaging Period	Maximum Predicted Concentrations		
		Existing	No-Build	Build
Carbon Monoxide (CO)	1 hr.	7.2 ppm	6.5 ppm	8.0 ppm
	8 hr.	4.5 ppm	4.0 ppm	5.0 ppm
Inhalable Particulates (PM_{10})	24 hrs.	72.8 $\mu g/m^3$	74.4 $\mu g/m^3$	74.6 $\mu g/m^3$
	1 yr.	25.4 $\mu g/m^3$	25.9 $\mu g/m^3$	26.0 $\mu g/m^3$
Fine Particulates ($PM_{2.5}$)	24 hrs.	51.7 $\mu g/m^3$	52.8 $\mu g/m^3$	52.9 $\mu g/m^3$
	1 yr.	14.0 $\mu g/m^3$	14.3 $\mu g/m^3$	14.4 $\mu g/m^3$
All concentrations include the maximum ambient concentrations, noted in Table 3.8-1. A persistence factor of 0.7 was used to convert one-hour CO concentrations to eight- hour concentrations.				

Source: Edwards and Kelcey, 2006

Scranton Yard Facility

The proposed rail service would originate in a new yard immediately west of the proposed Scranton Station. To accommodate operations, one locomotive at a time would idle in the proposed rail yard prior to beginning each service run. The results of the screening analysis showed that at the yard the maximum one-hour CO levels would be 6.5 ppm and the maximum eight-hour levels would be 4.0 ppm. The maximum 24-hour PM_{10} levels would be 122 $\mu g/m^3$. The total concentrations comply with the corresponding standards for each pollutant.

3.8.2.2 Mesoscale Analysis

A mesoscale, or regional, analysis was conducted to assess the net effects of the proposed rail service on the emissions of pollutants. The mesoscale analysis combines the effect of reduced vehicle-miles traveled

(VMT), increase rail miles traveled, and stationary source emissions associated with parking facilities and the rail yard facility.

Vehicle-Related Emissions: The proposed project was estimated to reduce vehicle-miles traveled (VMT) by 145,559 per day.

Locomotives in Service: Sixteen trains are scheduled to operate daily from Scranton, and an additional five trains are scheduled to operate daily from Andover, for an increase of rail miles traveled of 1,475 miles per day.

Parking Facilities: The project is proposed to provide a maximum parking capacity of 2,865 vehicles.

Scranton Yard Facility: 16 locomotives would idle for a maximum of one hour each per day.

At the regional level, a substantial number of commuters are projected to switch modes from driving to using the rail service; therefore, the proposed project would reduce the regional VMT, and consequently, the quantities of vehicular-emitted pollutants. However, new emissions resulting from locomotives would partially negate the benefits of reduced vehicle emissions. The net effects of each of these emissions (build compared to No-Build) are summarized in Table 3.8-3. While the Build Alternative would slightly increase NOx, PM_{10} and $PM_{2.5}$ emissions; CO and HC emissions would be slightly reduced.

3.8.3 Mitigation Measures

The project would not cause a significant impact to local or regional air quality; therefore, mitigation is not required. At the local level, the project would not cause or contribute to exceedances of the NAAQS. At the regional level, rail operations associated with this project would comply with any future State Implementation Plans, and any CO, PM, or ozone attainment or maintenance plans which may be adopted in the future.

Table 3.8-3: Net Effects of the Proposed Rail Service on Emissions (tons/day)

Pollutant	Highway Emissions	Locomotives in Service	Parking Facilities	Rail Yard Facility Idling	Net Effect
Hydrocarbons	-0.058	0.013	0.000	0.002	-0.043
Carbon Monoxide	-0.832	0.070	0.000	0.008	-0.754
PM_{10}	-0.005	0.005	0.000	0.001	0.001
$PM_{2.5}$	-0.005	0.005	0.000	0.001	0.001
Nitrogen Oxides	-0.050	0.071	0.000	0.009	0.030

Source: Edwards and Kelcey, 2006

3.9 Noise and Vibration

This analysis was prepared according to the FTA's most recent guidance manual for the assessment of noise and vibration impacts in transportation projects, *Transit Noise and Vibration Impact Assessment*, May 2006. Detailed methodologies for the noise and vibration analyses are described in Appendix G: Noise and Vibration Technical Report.

3.9.1 Noise

The classifications of No Impact, Impact, and Severe Impact as used in this section are defined as follows:

No Impact

The project would result in an insignificant increase in the number of people "highly annoyed" by the new noise.

Impact

The change in cumulative noise is noticeable to most people, but may not be sufficient enough to cause significant, adverse community reactions. The need for mitigation for impacted areas depends upon project-specific factors, such as the predicted level of increase over existing noise levels, the type and number of sensitive land uses affected, and the cost effectiveness of the mitigation.

Severe Impact

A significant percentage of people would be highly annoyed by the noise levels. This would be a significant impact under NEPA, and would typically require mitigation.

To determine the noise impacts from the proposed project the predicted project sound levels were compared to existing sound levels at noise sensitive locations throughout the corridor. For land uses involving primarily daytime activities, Category 1 and 3 uses, the descriptor L_{eq} is used, and for land uses where nighttime sensitivity is a factor, Category 2 uses, L_{dn} is used. These criteria do not apply to industrial or commercial areas since they are generally compatible with higher noise levels. Table 3.9-1 shows the range of project related sound levels that would cause an impact or severe impact in relation to the existing sound level.

Maps, aerial photography, and field review were used to identify sensitive land uses. Representative land uses were chosen for noise monitoring to determine existing ambient sound levels. Long-term, continuous 24-hour measurements were taken at four residences, and short-term, one-hour measurements were taken at seven institutional uses (i.e., parks and schools).

3.9.1.1 Wayside and Whistle Noise

Distances defining the impact and severe impact areas were estimated using the FTA detailed assessment guidelines and the FTA spreadsheet model. Project details including number of trains during the day and night, number of cars per train, speed, and topographic shielding were input into the model and compared to existing sound levels to determine the distances within which sensitive receptors would be impacted.

To account for the varying track usages, existing sound levels, and the service that would occur on the alignment, the corridor was divided into four segments: the Western Pennsylvania section – between Scranton and Pocono Mountain; the Eastern Pennsylvania section – between Pocono Mountain and the Delaware River; the Western New Jersey section – between the Delaware River and Andover; and the Eastern New Jersey section – between Andover and Port Morris. Within the New Jersey section several portions of the track are depressed or raised significantly compared with the neighboring sensitive receptors. This natural buffering blocks much of the wayside noise, thereby reducing the sound levels at the neighboring receptors. Table 3.9-1 shows the distances within which sensitive receptors in each section would be impacted.

Table 3.9-1: FTA Noise Impact Criteria (dBA)

Existing Noise Exposure*	Sound Level of Project Noise That Would Cause Impact/Severe Impact			
	Category 1 (in L_{eq}) or Category 2 (in L_{dn}) Sites		Category 3 Sites	
	Impact	Severe Impact	Impact	Severe Impact
47-48	53-59	>59	58-64	>64
49-50	54-59	>59	59-64	>64
51	54-60	>60	59-65	>65
52-53	55-60	>60	60-65	>65
54	55-61	>61	60-66	>66
55	56-61	>61	61-66	>66
56	56-62	>62	61-67	>67
57-58	57-62	>62	62-67	>67
59-60	58-63	>63	63-68	>68
61-62	59-64	>64	64-69	>69
63	60-65	>65	65-70	>70
64	61-65	>65	66-70	>70
65	61-66	>66	66-71	>71
66	62-67	>67	67-72	>72
67	63-67	>67	68-72	>72
68	63-68	>68	68-73	>73
69	64-69	>69	69-74	>74
70	65-69	>69	70-74	>74

* L_{eq} is used as the descriptor for Category 1 and 3 sites, and L_{dn} is used for Category 2 sites, where nighttime sensitivity is a factor.

Source: FTA's Transit Noise and Vibration Impact Assessment (May 2006).

Using the distances identified in Table 3.9-2, aerials, topographic maps, and field visits were examined to determine which residences would be located within the calculated impact distances (refer to Table 3.9-3). The analysis shows that without mitigation, approximately 448 residences would be impacted by the project, and 38 residences would be severely impacted by the project. The warning whistles cause a large number (234) of the impacts, and all of the 38 severe impacts.

Table 3.9-2: Impact Distances for Wayside and Whistle Noise for Residences

Section	Project Impact Distance (ft)			Project Severe Impact Distance (ft)		
	Wayside Alone	Near Station	Near Grade Crossing	Wayside Alone	Near Station	Near Grade Crossing
Western Pennsylvania	90	140	270	25	40	70
Eastern Pennsylvania	110	160	320	25	40	70
Western New Jersey (without natural buffering)	160	280	460	60	110	180
Western New Jersey (with natural buffering)	50	80	130	20	30	50
Eastern New Jersey (without natural buffering)	350	500	900	130	190	380
Eastern New Jersey (with natural buffering)	100	150	270	45	60	100

Source: Edwards and Kelcey, 2006

Table 3.9-3: Number of Residences within the Impact Distances for Wayside and Whistle Noise

Segment/Location	Number of Residences within Impact Distance	Number of Residences within Severe Impact Distance
Western Pennsylvania		
Wayside	95	0
Warning Whistles: *Church St., Main St. (Route. 507)*	23	0
Eastern Pennsylvania		
Wayside	86	0
Warning Whistles: *River Rd., Analomink St., Broad St., Burson St., N. Courtland St., Stokes Ave., Browns Hill Rd., Routes 191/390, Devils Hole Rd., Summit Ave.*	144	29
Western New Jersey		
Wayside	8	0
Warning Whistles: *Wolfs Corner Rd.*	10	4
Eastern New Jersey		
Wayside	25	0
Warning Whistles: *Brooklyn Rd.*	57	5
New Jersey and Pennsylvania Total	**448**	**38**

* Impact and Severe Impact are defined by FTA, the number of properties in the Impacted category does not include the properties in the Severely Impacted category.

Source: Edwards and Kelcey, 2006

Institutional facilities were analyzed in a similar manner. The distance between the facility and the right-of-way was used to determine if the facility would be impacted or severely impacted by the project. Table 3.9-4 shows the distances within which institutional facilities would be impacted. As shown in the table, the only institutional facility that would be impacted by the project is the park at Delaware Water Gap. The impact to this park, which is adjacent to the station, would be caused by the warning whistle.

3.9.1.2 Access Road Impacts

A worst-case analysis was performed at the largest station, Pocono Mountain, which would have a maximum parking capacity of 1,000 vehicles, using the FTA detailed assessment guidelines, Table 3.9-1, and the FTA spreadsheet model. With the addition of this traffic, residences within 35 feet of the access roadways would be impacted, and within 18 feet would be severely impacted; while parks and schools

within 17 feet would be impacted, and within six feet would be severely impacted. Topographic maps and field visits did not show any receptors within the above noted distances of the access roadways for any of the stations.

Table 3.9-4: Impact Distances for Wayside and Whistle Noise for Institutional Facilities

Location	Existing Sound Level	Project Impact Distance (in feet)		Distance from Tracks (feet)	Impact/ Severe Impact?
		Impact	Severe		
University of Scranton Field, Scranton, PA	58	14	6	70	No
Nay Aug Park, Scranton, PA	58	14	6	70	No
South Main Street Playground, Elmhurst, PA	47	25	8	100	No
Gouldsboro State Park/Tobyhanna State Park, Gouldsboro/Tobyhanna, PA	47*	30	10	100	No
Unnamed local park, South Kistler Street, E. Stroudsburg, PA	59	60	24	80	No
Notre Dame Elementary School, Ridgeway Street E. Stroudsburg, PA	54	90	30	250	No
Smithfield Township Park, PA Route 45067, Delaware Water Gap, PA	57	70	25	60	Impact
Delaware Water Gap National Recreation Area, Slatefor/Delaware Water Gap, PA	53*	20	8	100	No
Knowlton Park, NJ Route 94, Columbia, NJ	47	30	10	100	No
Undeveloped Johnsonburg Swamp, Ramsey Road/Dark Moon Road, Frelinghuysen Twp,, NJ	53*	20	8	100	No
Andover Borough Park, County Route 517, Andover, NJ	53	20	8	140	No
Carol O. Johnson Municipal Park, Roseville Road, Byram, NJ	53*	20	8	120	No
Undeveloped/unnamed municipal park, near Brookwood Road, Bynum, NJ	53*	20	8	100	No

**Existing sound levels from parks with similar locations and settings were used to approximate existing sound levels*
Source: Edwards and Kelcey, 2005

3.9.1.3 Station Area Impacts

Similarly, a worst-case analysis was performed at Pocono Mountain for noise impacts associated with parking. Residences within 35 feet of the station would be impacted, and within 22 feet would be severely impacted; while parks/schools within 20 feet would be impacted, and within 12 feet would be severely impacted. Topographic maps and field visits did not show any receptors within the above noted distances of any of the stations.

3.9.1.4 Scranton Yard Facility Impacts

A similar analysis was performed to determine if there would be any impacted sites associated with the operation of the yard in Scranton. For this area, using the FTA detailed assessment guidelines, Table 3.9-1, and the FTA spreadsheet model, it was estimated that residences within 190 feet of the center of the yard would be impacted, and within 90 feet of the center of the yard would be severely impacted. A review of aerial mapping and field visits showed that 12 residences would be impacted by operation of the yard, but no residences would be severely impacted.

3.9.2 Vibration

The major existing source of vibration in the corridor is truck and bus traffic on local roads, and the existing freight rail operations on the corridor in Pennsylvania. Since there is currently only infrequent service on portions of the alignment, existing vibration measurements are not used to determine the potential impact of the project.

A general vibration assessment was performed according to the procedures and impact curves identified in FTA's Noise and Vibration Assessment guidelines. The impact distance for residences would be 40 feet from the center of the tracks and for institutional and commercial buildings would be 25 feet from the center of the tracks. Using aerial photography and topographic maps, it was determined that No-Buildings were within the distances designated above. Therefore, no vibration impacts are anticipated to occur as a result of implementation of this project.

3.9.3 Mitigation Measures

Mitigation is required for severely impacted sites, but implementation depends upon several factors including sound level increases, number of impacted properties, and cost effectiveness. Impacted sites as defined under the FTA guidelines are not considered to be significant impacts as defined by NEPA.

Measures that would significantly reduce the wayside noise include installation of noise barriers, vehicle skirts and/or undercar absorption. Consideration of mitigation measures would be done in consultation with the affected residents and municipalities during the preliminary/final engineering phase of the project.

Since the Severe Impacts are caused by the warning whistles, one possible mitigation measure would be to establish "Quiet Zones" at grade crossings in the vicinity of residential areas. As required by the Federal Railroad Administration (FRA), the municipalities would be required to petition the FRA for Quiet Zone designations, in accordance with FRA's Interim Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossings (49 CFR Part 222 and 229). However, once approved, the project would pay for the design and installation of the Quiet Zones. Preliminary conversations with the communities have indicated their desire to have Quiet Zones incorporated into the project.

The implementation of Quiet Zones at the following seven intersections would eliminate all of the severe impacts and 182 impacts:

- Stokes Avenue (Gravel Place) in East Stroudsburg, PA;
- North Cortland Street in East Stroudsburg, PA;
- Burson Street in East Stroudsburg, PA;
- East Broad Street in East Stroudsburg, PA;
- Analomink Street in East Stroudsburg, PA;
- Wolf's Corner Road in Green Township, NJ; and
- Brooklyn Road in Stanhope, NJ

Therefore, the noise associated with the project would not cause any significant impacts.

3.10 Energy

This analysis assesses and compares the direct and indirect energy expenditures associated with the proposed project, in compliance with FTA impact analysis regulations (23 C.F.R. 771) and the New Starts Final Rule (49 C.F.R. 611). Indirect energy expenditure is the consumption of fuel required during construction activities. Direct energy expenditure is the operational consumption of fuel by roadway and rail vehicles under each alternative, as well as energy consumed by facilities and ancillary elements. The Build and the No-Build Alternatives must be compared for both the potential to recoup energy expended during construction (payback potential) and the potential for operational energy savings.

The standard comparative measure for energy expenditure is the British Thermal Unit (BTU). One BTU is the quantity of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

The annual statewide consumption of power from all energy sources in New Jersey and Pennsylvania are approximately 2,707 trillion BTUs and 4,780 trillion BTUs, respectively (U.S. Energy Information Administration 2000 data release). The annual statewide supply of power by utilities in New Jersey is approximately 104 trillion BTU's and in Pennsylvania is 2073 trillion BTU's (US EIA 2000 data release). NJ TRANSIT's annual energy consumption rate is 7 trillion BTU's, or 0.26 percent statewide consumption (FTA National Transit Database 2000 data release).

3.10.1 Indirect Energy Expenditure

Indirect energy expenditure for rail transportation projects is calculated from data regarding the length and type of the proposed right-of-way. This is generally accomplished with reference to numeric BTU conversion factors for planned at-grade or elevated rights-of-way promulgated jointly by the Federal Highway Administration (FHWA) and the California Department of Transportation (Caltrans) (FHWA/CA/TL-83/08, *Energy and Transportation Systems*). BTU conversion factors have not been developed for gauging construction energy expenditure for rail facilities, including stations and operations and maintenance facilities, due to the variegated nature of such facilities. For this reason, indirect energy expenditure has not been calculated for potential stations or yards.

Indirect energy expenditure for the proposed project is shown in Table 3.10-1. NJ TRANSIT does not foresee additional major capital construction in the study area under the No-Build Alternative. Therefore, indirect energy expenditure for the No-Build Alternative has not been calculated.

Table 3.10-1: One-Time Indirect Energy Expenditure for Build Alternative (BTU's in billions)

	Track Miles of Rail Construction			BTU's Consumed (in billions)
	At-Grade *(12.3 BTU/Mile)*	Structure *(55.5 BTU/Mile)*	At-Grade *(117.1 BTU/Mile)*	
Build	88	0	0	1,082

Source: Urban Transportation and Energy: The Potential Savings of Different Modes, Congressional Budget Office, September 1977

3.10.2 Direct Energy Expenditure

Direct energy expenditure by vehicles in operation is calculated from VMT data. VMT data are multiplied by BTU conversion factors promulgated by FTA for individual modes of transportation (*Reporting Instructions for the Section 5309 New Starts Criteria*, June 2003). These factors are based upon national energy-consumption averages and, for transit modes, take into account ancillary energy expenditures (e.g. signals, communication systems, tunnel ventilation, etc.).

The net change in direct energy expenditure as a result of the proposed project is shown in Table 3.10-2. To determine the net change expenditure, the difference between the No-Build Alternative regional VMT and the Build Alternative regional VMT was calculated. VMT and energy consumption for the other elements of the No-Build Network are beyond the purview of this document. Such issues would be addressed separately, in the respective environmental impact analysis documents for the projects to be undertaken as part of the No-Build Alternative. Additionally, because freight rail service would continue to operate within the study area rights-of-way in Pennsylvania, freight rail VMT is assumed to remain constant. Roadway freight VMT should also be unaffected by the proposed project.

Table 3.10-2: Annual Direct Energy Expenditure for No-Build and Build Alternatives

Mode	Net Change in Energy Expenditure (in billion BTUs)
Autos	775
Commuter Rail	40.3
Stations	1.2
Yard	8.7
Total	824.9
BTU expenditure calculated from VMT using the following FTA conversion factors - Auto 6,233, and Commuter Rail 100,000. BTU expenditure for facilities using the following FHWA/CalTrans BTU conversion factors - Stations 175 million; Yard 8.7 billion.	

Source: Transportation Energy Data Book, Edition 16, Oak Ridge National Laboratory, as referenced by FTA in Reporting Instructions for the Section 5309 New Starts Criteria, June, 2003.

3.10.3 Potential for Payback and Energy Savings

As can been seen in Table 3.10-3, the net change in energy expenditure under the Build Alternative over the No-Build Alternative is the consumption of an additional 824.9 billion BTUs annually. For this reason, the proposed project would neither allow for payback of the one-time indirect energy expenditure from construction activities of 1,082 billion BTUs nor produce continuing energy savings. However, the projected indirect and direct energy expenditures of the Build Alternative are marginal when compared to the overall statewide figures for New Jersey and Pennsylvania; the one-time indirect 1,082 billion BTU construction expenditure represents 1.04 percent of annual New Jersey industrial energy consumption and 0.05 percent of annual Pennsylvania energy consumption. Additionally, the projected increase in direct energy expenditure as a result of the proposed project represents 0.30 percent of annual New Jersey statewide figures (2,707 trillion BTUs) and 0.17 percent of annual Pennsylvania statewide figures (4,780 trillion BTUs).

Table 3.10-3: Summary of Energy Expenditure for Build Alternative (BTU's in billions)

Alternative	Indirect Energy Expenditure	Annual Direct Energy Expenditure
Build	1,082	824.9

Source: Edwards and Kelcey, 2005

3.10.4 Mitigation/Coordination

Due to the small sizes of the projected increases in comparison with statewide figures, the projected increases are not considered significant and should be easily managed by existing New Jersey and Pennsylvania power resources. Therefore, no substantial energy impacts are foreseen, and no mitigation is warranted.

3.11 Safety and Security

This section examines safety issues posed by the construction and operation of the proposed project, as well as security concerns.

3.11.1 Project Corridor

Project Corridor Safety

The FTA requires each state with fixed rail guideway transit systems to develop and implement a Safety and Security Program Plan (SSPP) standard (*State Safety Oversight of Rail Fixed Guideway Systems*, 49 CFR, Part 659). The State of New Jersey requires each rail transit system within the State to develop and implement an SSPP that meets the requirements of the state standard (*New Jersey Department of Transportation Fixed Guideway Safety Oversight Standard*, NJAC 16:53 E-4). This project would follow NJ TRANSIT SSPP standards.

The DLRC currently operates freight service along the Pennsylvania segment of the project corridor, serving its current customers with one train per day, and the proposed project assumes that this service would continue. Safety of passengers, operators, railroad workers, and residents is a primary concern of both NJ TRANSIT and the DLRC. Because the combined number of freight trains and passenger trains under the Build Alternative is not particularly high, it is possible to run them both on the same tracks. This is acceptable because pursuant to 49 CFR Part 238, *Passenger Equipment Safety Standards*, the FRA certifies the commuter passenger coaches as crash worthy, and thus are able to operate on the same track with freight trains.

Throughout the Northwest New Jersey-Northeast Pennsylvania MIS and the Lackawanna Cut-Off Passenger Rail Service Restoration Project EA, NJ TRANSIT and DLRC have met on numerous occasions to discuss the project and project-related safety issues. Specifically, federal railway worker safety requirements for both the freight and passenger tracks, during both construction and later ongoing maintenance activities, must be assured. Prior to construction and operation, NJ TRANSIT and DLRC would have agreed upon a safety protocol.

For some time, a single freight train per day making a small number of local deliveries has been the sole rail use of the right-of-way in Pennsylvania. No regular passenger rail service is operated in the project area, and project area residents are generally not accustomed to frequent or moderate-speed train movements along the right-of-way. The proposed project would increase the number and frequency of trains using the right-of-way. Since project area residents are accustomed to less frequent train movements along the right-of-way, vehicle and pedestrian safety issues are a consideration at grade crossings, in parks, and in downtown areas.

As part of the proposed project, all grade crossings would be designed to adhere to the FRA guidelines that were promulgated in the recently released "Guidance on Traffic Control Devices at Highway-Rail Grade Crossings" (November 2002). As a result, protection at all grade crossings would be enhanced to include modern active gates, flashers and audible warnings. It is also likely that NJ TRANSIT, local railroad authorities and local municipalities, separately or in cooperation, would undertake a public information campaign or campaigns in the project area to brief local residents on the implementation of rail service and safety issues to bear in mind when in close proximity to the right-of-way. Such information campaigns have been successful in promoting safety in several major U.S. cities that recently have implemented new rail services. NJ TRANSIT currently undertakes a Rail Safety Education Program wherein railroad officials visit local schools to discuss right-of-way safety and train operations.

Through the adherence to regulations laid out by the FRA and the State of New Jersey, no impacts to safety and security along the project corridor would occur as a result of this proposed project.

3.11.2 Proposed Station Area

Station Area Safety

The proposed passenger rail service would increase vehicular traffic in the vicinity of the proposed station areas, particularly as it introduces turning movements from roadways into and out of the proposed parking lots. At these locations, physical improvements, such as additional signage, would be implemented as necessary. Pedestrian activity would increase near the proposed station areas, particularly where patrons would walk from the rail platform to their cars or local destinations. Within existing town centers, such as the Borough of East Stroudsburg, there is generally a network of sidewalks in place to guide pedestrian movement; at station locations outside existing town centers, sufficient lighting and secure pedestrian passages would be provided to safely direct patrons from the train to their cars.

Station Area Security

Security at stations is also a project consideration. Currently, NJ TRANSIT police perform random patrols at all stations and along all rights-of-way in the NJ TRANSIT rail system. This practice is expected to continue. In addition, NJ TRANSIT would work closely with municipal police departments along the project corridor to ensure that security needs are met.

Another area of security concern is the Scranton Yard Facility, where the passenger coaches would be stored and where maintenance would be performed. To ensure the personal safety of customers and the security of the facility and rolling stock, rail yard access would be stringently controlled. Security measures may include one or a combination of the following: security fencing; closed circuit camera monitoring; guard stations at vehicular and pedestrian entrances; positive identification requirements to enter; and other means as deemed necessary and useful.

As a result of the above-mentioned security measures, no impacts to safety and security at the proposed station sites would occur as a result of this proposed project.

3.12 Geology, Soil, and Topology

In New Jersey, the rail alignment is located within two physiographic provinces known as the Highlands Province and the Valley and Ridge Province in Morris, Sussex and Warren Counties (refer to Appendix H: Geology, Soils, and Topology Technical Report). The Highlands province is approximately 980 square miles consisting of mountainous terrain and deep valleys ranging from 10 to 25 miles in width.

In August 2004, the Highlands Water Protection and Planning Act (Highlands Act) was adopted by the State of New Jersey. A geological boundary was established designating Highlands Preservation and Planning Areas through seven counties and 88 municipalities throughout northern and central New Jersey. The Highlands region provides millions of gallons of drinking water daily to New Jersey residents. This act protects drinking water resource areas and preserves open space in the Highlands Region from development. The Highlands also contain exceptional natural resources habitats, recreational areas, agricultural lands and significant historical sites. Approximately 10 miles of the project's right-of-way is located in the Highlands Planning Area through Warren and Sussex Counties. The Lackawanna Cut-Off project is exempt from the Highlands Act regulations as is stated in Section 30 Exemptions and Grandfathering, Number 12 with "the reactivation of rail lines and rail beds existing on the date of enactment of this act". For more information on the Highlands Water Protection Planning Act visit: http://www.nj.gov/dep/highlands/.

The Valley and Ridge province is approximately 17 miles wide consisting of steep slopes, ridges and broad valleys. In Pennsylvania, the existing rail alignment is located within five physiographic provinces known as the Great Valley, Blue Mountain, Glaciated Low Plateau, Glaciated Pocono Plateau and Anthracite Valley sections within Northampton, Monroe, Wayne and Lackawanna Counties (refer to Appendix H: Geology, Soils, and Topology Technical Report).

In Morris County, New Jersey, metamorphic, igneous and sedimentary rocks are present along the project corridor. The underlying sedimentary rocks include, Precambrian gneiss and granite, Mesozoic Jurassic siltstone, shall, shale, sandstone conglomerate, Mesozoic Jurassic basalt, Cambrian limestone sandstone, Silurian - conglomerate shale limestone and sandstone. Steep slopes, linear ridges and broad valleys comprised of Silurian Rocks, Ordovician Marinsburg Formation, Cambrian Ordovician, Pre-Cambrian formations characterize Sussex and Warren counties. Northampton County in Pennsylvania consists of Ordovician geologic formation consisting of shale, limestone, dolomite, sandstone, shale quartzite and phyllite. Monroe County consists of the Devonian and Silurian geologic formations. The Devonian formation, which includes red sandstone, gray shale, black shale, limestone and chert makes up most of the states geological formation. The Silurian formation, which forms a small band in the southern part of the County, consists of red and gray sandstone, conglomerate, shale and limestone. Lackawanna County has three types of geologic formations that include Devonian, Mississippian and Pennsylvanian.

The alignment connects to the existing M&E rail line at Port Morris Yard in Morris County where the existing soil was formed in young glacial till. The general soils in the vicinity of the project are the Rockaway-Hibernia-Urban land soil unit. The general soils near the project alignment in Sussex County include the Washington-Wassaic-Rock outcrop, Rockaway Rock outcrop-Whitman and Hazen-Palmyra-Fredon associations. The Washington-Wassaic-Rock outcrop is characterized by gently sloping to steep, deep and moderately deep, well-drained loamy soils and limestone outcroppings. Warren County's soils were formed from glacial till or weathered bedrock. The general soil unit in the area along the rail alignment is Bath Nassau consisting of gently sloping to very steep, shallow and deep, well drained and somewhat excessively drained loamy soils. The soils in the vicinity of the railroad alignment in Northampton County consist of the Conotton-red hook–urban land association. In Monroe County, the Wyoming-Chenango-Pope association is found on nearly level to slightly sloping lands adjacent to the

right-of-way and tend to be deep and well to excessively drained underlain by glacial outwash and alluvium. The Wellsboro-Lackawanna-Morris soil association is also adjacent to the right-of-way and is characterized by deep, well drained to somewhat poorly drained soils in level and gently sloping areas. The general soils in Wayne County consist of Wellsboro-Lackawanna-Morris and Volusia-Mardin-Lordstown types. These soils are in the vicinity of the proposed alignment. Lackawanna County Wellsboro-Morris-Oquaga Association consisting of soils formed in glacial till derived from sandstone and shale on broad rolling uplands.

The topography along the project corridor surrounding the alignment in New Jersey ranges from 300 feet to 900 feet in elevation. The topography along the project corridor in Pennsylvania has elevations ranging from approximately 320 feet to 1,940 feet.

Given the limited construction activity required for the Build Alternative, impacts to geology, soils and topography along the project corridor are not expected to occur therefore mitigation would not be necessary.

3.13 Water Quality

Overall, concerns regarding water quality within the study corridor are anticipated to be minimal due to the inherent nature of the project (i.e. reusing an existing railroad infrastructure). Reactivating rail service on the existing rights-of-way would require limited additional construction and would create minimal additional impervious surface above what already exists. Rail yards, station sites and associated parking facilities would create the majority of additional impervious surfaces. Many of these locations would be constructed at historic station sites and previously disturbed sites, some of which currently consist largely of an impervious surface. Any excess stormwater runoff resulting from impervious surfaces associated with the project is mitigable through the use of wet ponds, stormwater infiltration or detention facilities and bio-retention Best Management Practices (BMP) as outlined by the NJDEP Land Use Regulation Program and PADEP Office of Water Management. Potential impacts to surface water resources would be minimized during several project construction phases to eliminate bare soil exposure and the implementation of sediment control and soil erosion plans. Nonstructural storm water runoff prevention measures include but are not limited to minimizing disturbance to native vegetation and areas susceptible to soil erosion, minimizing soil compaction, maximizing protection to natural drainage features and decreasing the time of concentration and velocity of runoff, as well as limiting the amount of impervious surface created by a project. When nonstructural stormwater management strategies are not adequate to curtail even the slightest increase of runoff, structural devices such as stormwater retention basins and floatable trash collection devices must be implemented. PADEP is currently in the process of drafting stormwater management rules.

The project would not result in adverse impacts to rivers and streams. In two locations along the inactive portion of the alignment in New Jersey, however, water was observed flowing on the rail bed itself through various earth cuts. In these locations the flow of water would need to be redirected off of the rail bed and back into drainage swales that once lined the right-of-way (refer to Appendix I: Water Quality Technical Report).

In both New Jersey and Pennsylvania surface water features are classified according to their existing and/or projected water quality. While both states retain separate and distinct classification designations they rely on fundament water quality indicators such as the potential or use as a viable public drinking water supply and the ability to support viable fisheries. The NJDEP lists and classifies major rivers, creeks, streams and tributaries according to the Surface Water Quality Standards document N.J.A.C. 7:9B. The PADEP, Bureau of Watershed Conservation publication of *Title 25, Environmental Protection, Chapter 93, Water Quality Standards,* identifies and regulates selected watercourses that are provided additional protection and that exhibit exceptional water quality and other environmental features. A list of all surface waters and the corresponding water quality classification unique to each state is included in Appendix I: Water Quality Technical Report.

Major rehabilitation work is proposed for the Delaware River Bridge to prevent further structural decay. In addition, many other bridges and culverts would require concrete resurfacing and minimal reconstruction to repair and protect structures from the elements. While this work presents a potential for impacts to water quality, BMPs and environmental containment mechanisms would be applied to all rehabilitation and construction sites to minimize if not eliminate any impacts to water quality. Any new structures (bridges/culverts) over waterways or modification of existing substructures would require evaluation for scour protection. Selection of substructure design options and counter measures would need to be sensitive to environmental impacts.

The Delaware River is listed on the National Wild and Scenic Rivers System from the northern boundary of the Delaware Water Gap National Recreation Area south to Washington's Crossing just north of

Trenton, NJ. The proposed project corridor traverses approximately five miles through the area classified as Zone 3 of the National Wild and Scenic River System. Section Seven of the Federal Wild and Scenic Rivers Act of 1968 (16 USC 1271-1278), as amended, prohibits the issuance of a federal permit for any project that may impact a river with values qualifying it for protection under the Act. In addition, compliance with the New Jersey Wild and Scenic Rivers Program (N.J.S.A. 3: 8-45 et seq.) is required. The Delaware River Basin Commission administers water quality regulations pertaining to the Delaware River and its tributary watersheds therefore permits would be required for any activities in or along the Delaware River, such as the rehabilitation of the Delaware River Bridge.

Through the strict adherence to regulations laid out by the PADEP and NJDEP, as well as the utilization of BMPs no adverse impacts to water quality would occur as a result of this proposed project.

3.14 Wetlands

The Pennsylvania Department of Environmental Protection (PADEP) and the US Army Corps of Engineers jointly regulate wetland activities in the Commonwealth of Pennsylvania. The federal Clean Water Act, Section 404 and the state Chapter 105 under the Dam Safety and Waterway Management Rules and Regulations govern wetland activities. Construction within areas that contain freshwater wetlands may require joint permit applications.

The New Jersey Department of Environmental Protection's Land Use Regulation program primarily regulates wetlands in the State of New Jersey. NJDEP has adopted the federal wetlands program and thus is the lead regulating agency. USACOE and NJDEP both have jurisdiction over tidal wetlands, navigable waters and wetlands located within a within 1000 feet of navigable waterways. The state protects wetlands and transition areas under the New Jersey Freshwater Wetlands Protection Act (N.J.S.A. 13:9B). The federal Clean Water Act, Section 404(33 U.S.C. 1344) is enforced by the US Army Corps of Engineers (USACOE) and regulates navigable waters, tributaries of navigable waters and wetlands.

Freshwater wetland areas were initially identified adjacent to and within the right-of-way boundaries using the NJDEP Geographic Information Systems (GIS) freshwater wetlands mapping information and US Fish and Wildlife Services (USFWS) National Wetland Inventory (NWI) freshwater wetland mapping. A freshwater wetland assessment of the entire alignment was performed during which time additional unmapped linear wetland areas were identified crossing, parallel and within the existing right-of-way property boundaries. Official jurisdictional wetland boundaries were not determined due to the size of the project and the enormous cost to perform jurisdictional wetlands delineations along more than 133 miles of right-of-way and at the potential station, yard, and connection areas. Formal wetland delineations would occur during the preliminary/final engineering phase (refer to Appendix J: Wetlands Technical Report).

In Pennsylvania, no wetlands were identified within the maintained right-of-way; however, several wetland complexes were identified adjacent to the existing right-of-way embankments toe of slope. A field review was performed on the inactive segment of the alignment from the Delaware River Bridge to the alignment's point of connection with the Lackawanna freight line in Slateford Junction, Northampton County. No wetland complexes were found within this segment of the alignment. The proposed Delaware Water Gap, East Stroudsburg, Analomink, and Scranton Stations as well as the proposed Scranton Yard Facility do not have any wetlands present within the potential area of disturbance. The Tobyhanna Station has a small area of wetlands present within its potential footprint of disturbance. Less than one acre of wetlands would most likely be disturbed during construction.

In both States, structures along the existing alignment including bridges, culverts and stone arches may have to be rehabilitated or replaced. Minor temporary wetland disturbances may occur to surrounding wetland complexes and transition areas during rehabilitation or replacement activities.

In New Jersey, wetlands disturbances may occur along the right-of way where unmapped linear wetlands were identified parallel to and within the right-of-way along the project corridor. Construction activities within the existing right-of-way would unlikely disturb any wetland complexes located adjacent to or present at the right-of-way embankments toe of slope. The specific amount of wetlands and exact location would not be known until a formal wetland delineation and survey are performed along the project corridor. The proposed Blairstown Station area has no wetlands presents within the potential area of disturbance. The proposed Andover Station area has a small isolated linear wetland area present within the potential area of disturbance. The wetland area is most likely under an acre in size although the exact

amount would not be known until a formal wetland delineation and survey are performed at the site. Approximate wetland acres of impact in both States are presented in the Table 3.14-1.

Table 3.14-1: Potential Wetland Acres of Impact

POTENTIAL WETLAND ACRES OF IMPACT: Pennsylvania	
Location	***Approximate Acres of impact***
MP 107.50, Tobyhanna Station	0.2 acre
Pennsylvania Subtotal	**0.2 acre**
New Jersey	
Location	***Approximate Acres of impact***
MP 72, Knowlton Township, near Stark Road	0.1 acre
MP 64 and 65, Blairstown and Frelinghuysen Townships, east of Blairstown Station	0.3 acre
MP 62 and 63, Frelinghuysen Township, Lanning Road	0.4 acre
MP 61, Frelinghuysen Township, West of Mott Road	0.1 acre
MP 56, Green Township, Located between milepost 56 and 57	1.0 acre
MP 53, Byram Township, Andover Station	0.2 acre
MP 52.50, Byram Township and Andover Twp	0.5 acre
MP 52, Byram Township, Roseville Rd. to Roseville Tunnel	2.0 acres
MP 47.80, Stanhope Borough and Byram Township	1.6 acres
New Jersey Subtotal	**6.2 acres**
New Jersey and Pennsylvania Total	**6.4 acres**

Source: NJDEP Morris, Sussex, and Warren Counties Freshwater Wetlands Geographic Information Systems data; Edward and Kelcey Field Visits, 2004-2005
**Additional temporary wetland disturbances may occur where structures would be rehabilitated, see Appendix J: Wetlands Technical Report*

The PADEP and the U.S. Army Corps of Engineers (USACOE) jointly regulate wetland activities in the State. A PADEP programmatic general permit would most likely be acquired. State wetland mitigation criteria include area ratios, function and value replacement and siting criteria. The area ratio criteria states that the wetland shall be replaced at a minimum area of replacement acres to affected acres at a 1:1 ratio. PADEP may additionally require the area ratio to exceed 2:1 based upon the determination of the affected wetlands functions and values.

In New Jersey, disturbances to wetland areas along the project corridor and at potential station areas would require an Individual Permit (IP) application. Mitigation ratios for lost acreage would be at a 2:1 or 4:1 ratio depending on the wetlands resource value classification and amount of impacted acreage. Permit applications would need to be submitted to the NJDEP's Land Use Regulation Program.

Pre-application meetings would be initiated with the necessary regulatory agencies during the preliminary /final engineering phase. These meetings would also establish mitigation requirements and help to avoid lengthy design changes and setbacks during the permit application process.
No impacts to wetlands would occur as a result of the proposed project that cannot be mitigated through replacement working with PADEP and NJDEP. Refer to Appendix J: Wetlands Technical Report for further detail and analysis.

3.15 Floodplains

The Pennsylvania Department of Environmental Protection (PADEP) is the regulating agency responsible for floodplain activities throughout the state. Federal and state legislation protecting floodplains include the National Environmental Policy Act of 1969, Executive Order 11988, Floodplain Management, Clean Water Act, Section 404, Dam Saftey and Encroachment Act (PL 1375, No. 325), Clean Streams Law (PL 1987, No. 3941) and the Floodplain Management Act (PL 851, No. 166).

The New Jersey Department of Environmental Protection (NJDEP) is the governing body that regulates floodplain activities throughout the state. New Jerseys' floodplains are protected by several state and federal acts including the National Environmental Policy Act of 1969, Executive Order 11988, Floodplain Management, Clean Water Act, Section 404 and the Flood Hazard Control Act (NJAC 7.13).

Floodplains along the project corridor in New Jersey were identified using the Federal Emergency Management Agency (FEMA) Flood Insurance Program GIS Q3 Flood Data. FEMA Flood Insurance Rate Maps (FIRM) were also used to identify floodplains throughout the study corridor. Pennsylvania floodplain areas were identified using PADEP's GIS Floodplains of Northampton, Monroe, Wayne and Lackawanna Counties (refer to Appendix K: Floodplains Technical Report).

In Pennsylvania, the alignment is located intermittently within the 100-year flood zone of several different water bodies. The right-of-way is elevated in some locations where the existing floodplain is located below the alignment through a bridge or culvert. The proposed Delaware Water Gap Station platform is within the 100-year floodplain of the Brodhead Creek/Delaware River. This area would disturb approximately 0.2 acre of the 100-year flood zone for the station platform. The proposed visitors center, parking garage and additional parking areas south of Interstate 80 are not within the 100-year flood zone. The Analomink Station area is located within Brodhead Creek's 500-year flood zone. A Water Obstruction and Encroachment Permit would be required for activities in floodplain areas from the PADEP. Construction and staging area activities would be contained within the existing right-of-way.

In New Jersey, floodplain areas are located adjacent to and through the project's alignment. The alignment is located intermittently within the 100-year flood zone of several different water bodies throughout the alignment. In some locations, the right-of-way is elevated and the associated river/stream flows underneath the alignment through a bridge or culvert. The right-of-way is elevated in some locations where the existing floodplain is located below the alignment through a bridge or culvert. Construction activities in floodplain areas would require a Stream Encroachment permit issued by the New Jersey Department of Environmental Protection.

Mitigation measures would include using structures to cross floodplains instead of fill material, providing adequate flow circulation, reducing grading requirements and preserving natural drainage when possible. Significant impacts to floodplains as a result of the proposed project are not anticipated.
Pre-application meetings would be initiated with the necessary regulatory agencies during the preliminary/final engineering phase. These meetings would also establish mitigation requirements and help to avoid lengthy design changes and setbacks during the permit application process.

3.16 Endangered Species

In accordance with Section Seven of the Federal Endangered Species Act of 1973, (87 Stat. 884 as amended; 16 USC 1531 et seq.) federal agencies may not undertake any actions that would further endanger any species identified as threatened or endangered on the Federal List. The Federal Threatened and Endangered Species Act is administered by the United States Fish and Wildlife Service (USFWS).

In accordance with 25 Pennsylvania Code 9.314 the State has undertaken the responsibility of identifying, locating and protecting the threatened and endangered species of the State. The lists of rare, threatened, endangered, vulnerable and species of special concern are defined in 17 Pennsylvania Code 45.11 et al. Procedures set forth in 25 Pennsylvania Code 245.231 and 232 must be followed in the preparation of an Environmental Assessment. Pennsylvania Code 89.74 identifies procedures that must be undertaken to avoid impacts to protected species. The Pennsylvania Acts and Statutes pertaining to the protection of Federal and State threatened and endangered species are administered by the Pennsylvania Department of Conservation and Natural Resources through the Pennsylvania Natural Diversity Index which is responsible for all flora and Invertebrate fauna, the Pennsylvania Fish and Boat Commission which is responsible for aquatic and herpetile fauna and the Pennsylvania Game Commission which monitors terrestrial fauna, birds and mammals.

In accordance the New Jersey State Endangered Plant Species Act of 1989 (N.J.S.A. 13:1B-15.151), the Endangered and Nongame Species Act of 1973 (N.S.S.A. 23:2A-13), the list of endangered species (N.J.A.C. 7:25-4.13), and the list defining the status of Indigenous, Nongame wildlife species of New Jersey (N.J.A.C. 7:25-4.17(a)), Federal and State agencies can not undertake any action that would further imperil any species identified on the Federal and State threatened and endangered species list. Additionally, certain aspects of private projects may be limited or restricted in a way so that during and/or after construction the project does not adversely affect threatened and endangered species. The New Jersey Acts pertaining to threatened and endangered species are administered by the New Jersey Department of Environmental Protection Division of Parks and Forestry, Office of Natural Lands Management, National Heritage Program (NHP) and the Endangered and Nongame Species Program (ENSP).

Requests for information pertaining to threatened and endangered species occurring within the vicinity of the rail corridor and station areas were submitted to the USFWS (New Jersey and Pennsylvania field offices), the Pennsylvania Department of Conservation and Natural Resources, Pennsylvania Game Commission, the Pennsylvania Fish and Boat Commission and the NJDEP Natural Heritage Program. A summary as well as copies of all correspondence regarding threatened and endangered species is provided in Appendix S.

Information returned from the aforementioned agencies was reviewed and compiled to identify areas of potential concern for threatened and endangered flora or fauna species along the corridor and station and rail yard locations. Reactivating the currently inactive Lackawanna Cut-Off right-of-way located in New Jersey is anticipated to have more of an effect on critical habitat for threatened and endangered species than the Pennsylvania portion, which maintains active freight service.

The portion of the corridor located in Pennsylvania is not expected to have a significant effect on the surrounding environment due to the active freight service operating along the existing corridor. Areas that may require construction for drainage improvements, new rail sidings and new stations would require surveys to identify habitat suitable to the species of concern noted in Appendix L: Endangered Species Technical Report. Species of concern identified and known to inhabit the area around the corridor within Pennsylvania include one Pennsylvania Candidate fauna species, four federally listed fauna species and

one federally listed flora species. The timber rattlesnake (*Crotalus horridus*, PA candidate) is the only fauna species known to utilize the active rail corridors as habitat to for its basking and denning sites. These species accounts are further described in Table 3.16-1 as well as in Appendix L: Endangered Species Technical Report.

Table 3.16-1: Threatened and Endangered Species of Particular Concern

Common Name	Scientific Name	State	Federal Status	State Status	Occurrence
Vertebrates					
Bald Eagle	*Haliaeetus leucocephalus*	PA	T	E	in vicinity
Barred Owl	*Stirix varia*	NJ		T	in vicinity
Red-shouldered hawk	*Buteo lineatus*	NJ		EB	in vicinity
Red-headed woodpecker	*Melanerpes erythrocephalus*	NJ		T	in vicinity
Great blue Heron	*Ardea herodias*	NJ		SC	in vicinity
Coopers Hawk	*Accipiter cooperii*	NJ		T	in vicinity
Boblink	*Dolixhonyx oryzivorus*	NJ		T	in vicinity
Savannah sparrow	*Passerculus sandwichensis*	NJ		T	in vicinity
American Bittern	*Botaurus lentiginosus*	NJ		EB	in vicinity
Bob cat	*Lynz rufus*	NJ		E	in vicinity
Indiana bat	*Myotis sodalis*	NJ/PA	E	E	in vicinity
Wood turtle	*Clemmys insculpta*	NJ		T	in vicinity
Bog Turtle	*Clemmys mulenbergii*	NJ/PA	T	E	in vicinity
Blue-spotted salamander	*Amystoma laterale*	NJ		E	in vicinity
Longtailed salamander	*Eurycea I. Longicauda*	NJ		T	in vicinity
Timber rattlesnake	*Crotalus H. Horridus*	NJ/PA		E	on site / PA
Invertebrates					
New England bluet	*Enallabma laterale*	NJ		TNC	in vicinity
Herbards noctuid moth	*Erythroecia hebardi*	NJ		TNC	in vicinity
Vegetation					
Northeastern bulrush	*Scirpus ancistrochaetus*	PA	E	E	in vicinity
Few-Seeded Sedge	*Carex oligosperma*	PA		T	in vicinity
Bog Sedge	*Carex paupercula*	PA		R	in vicinity
Blunt Manna-grass	*Glyceria obtusa*	PA		E	in vicinity
Common Labrador-tea	*Ledum groenlandicum*	PA		R	in vicinity
Oakes' Pondweed	*Potamogeton oakensianus*	PA		E	in vicinity
Smith's Bulrush	*Schoenoplectus smithii*	PA		E	in vicinity
Canada Hawkweed	*Hieracium lakmii*	NJ		E	on site / NJ
Shrubby St. John's-Wort	*hypericum prolificum*	NJ		E	on site / NJ

Notes: Key to Status Codes of Threatened and Endangered Species of Particular Concern table.

E	Endangered species – species whose prospects for survival within the state are in immediate danger due to one or many factors; loss of habitat, over exploitation, predation, competition, disease.
T	Threatened species – A species that may become endangered if conditions surrounding the species begin to deteriorate.
R	Rare species – A species that may become threatened or endangered if natural environment continue to be degraded
EB	Endangered breeding population – a species whose breading population within the state is in immediate danger due to one or many factors; lose of habitat, over exploitation, predation, competition, disease.
SC	Special concern – a species that warrants special attention that exhibits some level of decline in population.
TNC	The Nature Conservancy has developed a ranking system for rare species. The species noted with the TNC are considered rare or may have at one time inhabited parts of the state. These species have no state status but are recognized by the Natural Heritage Program.

Source: Natural Heritage data responses from governing agencies, 2005

As the corridor crosses through the New Jersey Skylands region, it traverses four Natural Heritage Priority sites. Natural Heritage Priority sites consist of critical habitat areas that have been designated in an effort to preserve their unique biological diversity. These areas often contain an abundance of threatened and endangered flora and fauna species. Protection of these critical habitats is essential for the continued survival of these species. The above-mentioned agencies report 17 threatened and endangered fauna species and 14 flora species known to inhabit lands in and around the vicinity of the rail corridor.

Two of these flora species, Canada Hawkweed (*Hieracium kalmii*, state endangered) and Shrubby St. John's-Wort (*Hypericum prolificum*, state endangered) have been observed growing on the railroad embankment at various locations. In addition, the floodplains in and around the vicinity of the Delaware River Bridge would require surveys for species of concern. These species are further described in Appendix L: Endangered Species Technical Report.

The information provided by the above-mentioned agencies therefore demonstrates that the corridor traverses areas where threatened and endangered species are known to inhabit. Upon the request of the USFWS, NJ TRANSIT has committed to perform wildlife surveys for Bald Eagle, Bog Turtle, Indiana Bat and Northeastern bulrush. The New Jersey Field office of the USFWS has conferred that these surveys are to be conducted during the preliminary/final engineering phase when the project has advanced to a point in which such studies would be current for the USFWS to evaluate the potential for impacts on these species.

Direct impacts to threatened and endangered species are not permitted (mitigation is not acceptable). Approval for projects that adversely impact the habitat of potential threatened and endangered species may be obtained if creation of additional habitat is feasible. Projects that adversely impact potential threatened and endangered species habitat are generally not approved until alternative measures are proven to be more detrimental to existing habitat or economically unfeasible.

Impacts to threatened and endangered species as a result of the proposed project are not anticipated; detailed surveys would be conducted during the preliminary/final engineering phase.

3.17 Hazardous Waste

A Phase I environmental screening to determine the potential presence of hazardous substances or petroleum products on proposed station sites was conducted utilizing reports prepared by Environmental Data Resources, Inc. (EDR) in August 1999 and September 2004. EDR utilized USEPA, PADEP and NJDEP databases, as well as site plans and available Sanborn maps to identify potentially hazardous waste sites located within one mile of the proposed station areas, which may represent a current or potential threat of contamination to the subject sites. In addition, site visits were conducted to search for evidence of surface contamination. It should be noted that preliminary hazardous waste EAs were carried out as part of this study. Therefore, no testing, sampling or analytical evaluations of air, surface or subsurface soils, or surface water and ground water conditions were conducted.

As discussed in Appendix M: Hazardous Waste Technical Report, preliminary hazardous waste database reviews and site inspections identified two proposed station areas where hazardous contaminants could be located. According to the PADEP database, Leaking Underground Storage Tanks (LUST) containing B-Tex and heating oil are located at the proposed Scranton Station area. Similarly, the proposed Tobyhanna Station area is located within approximately 0.25 mile of the Tobyhanna Army Depot. The former United State Army facility is contained on numerous environmental databases including the National Priority List (NPL), the Comprehensive Environmental Response, Compensation and Liability Information System (CERLIS), Corrective Action Activity (CORRACTS) and the Resource Conservation and Recovery Information System (RCRIS).

While database reviews identified hazardous waste sites located within one mile of four proposed station areas (Tobyhanna, East Stroudsburg and Delaware Water Gap Station areas) and the Scranton Yard Facility, distance from these facilities would make it unlikely that contamination would migrate or significantly impact the proposed station area sites. The proposed Scranton Yard Facility is located approximately 0.25 mile from the nearest environmental database listed LUST site. The Tobyhanna Army Depot is located approximately 0.25 mile from the proposed Tobyhanna Station area. As a result of past and present activities conducted at the site, the property has been placed on numerous environmental databases including the NPL or "Superfund" List. Although the site is located some distance from the proposed station, it is recommended that further analysis of this property be undertaken. The proposed East Stroudsburg Station area is located more than 0.50 mile from four LUST sites, including three "orphan" sites. Located within immediate vicinity of the proposed Delaware Water Gap Station area, the Rock Tenn Company is listed in the "orphan" summary as having a Small Quantity Generator (SQG) and is registered with the Toxic Release Inventory System (TRIS), which identifies entities that release toxic chemicals into the air, water or land in reportable quantities. The company's proximity to a tributary of the Delaware River, which runs adjacent to the proposed station area, and its location within the same floodplain as the station site could facilitate the movement of hazardous waste in the direction of the proposed station. While it is not anticipated that the scale of contamination would be large enough to represent a substantial impact it is recommended that the background of this facility be investigated to determine if the company has received any violations for contaminating the soil or waters of the tributary. No sites posing a potential threat of contamination were located within one mile of the proposed Pocono Mountain, Analomink and Andover Station areas during initial database reviews and site inspections.

While the threat of hazardous waste contamination at the proposed station sites is minimal and not expected to cause impacts during project construction or operation, it is recommended that additional hazardous waste analyses be completed at each proposed station site, the proposed yard site and areas of the rail line proposed for disruption or excavation during the preliminary/final engineering phase. Additional procedures are to be implemented by NJ TRANSIT to ensure workers are not exposed to

significant levels of hazardous waste during construction. The *NJ TRANSIT Guidelines for Project Management and Administration,* November 1995, outlines these procedures including schedules for preliminary subsurface investigations, an on-site sampling program and remedial actions. If remediation is unachievable an alternate site would be selected. Additionally, the proposed fueling facility would be designed and constructed in accordance with applicable PADEP and federal regulations. The facility would include contamination and spill protection and would meet applicable standards.

3.18 Environmental Justice

On February 11, 1994, President William J. Clinton signed Executive Order 12898: "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations". The Executive Order requires that each Federal agency, to the greatest extent allowed by law, administer and implement its programs, policies, and activities that affect human health or the environment so as to identify and avoid "disproportionately high and adverse" effects on minority and low-income populations.

In order to clarify and expand upon Executive Order 12898 for purposes of federally funded transportation activities, in April 1997, the USDOT issued an *Order to Address Environmental Justice in Minority Populations and Low-Income Populations*. The USDOT Order offers guidance to best administer Executive Order 12898 under USDOT authority and procedures based upon existing law, including Title VI of the Civil Rights Act of 1964 and the Intermodal Surface Transportation Efficiency (ISTEA) Act of 1991 and its successor laws. The USDOT order addresses persons belonging to five minority classifications: African/African American; Hispanic Latino; Asian; Native American Indian and Alaskan native; and Native Hawaiian or other Pacific islander. This guidance was further clarified in the USDOT 2000 circular, *Overview of Environmental Justice*.

This section summarizes the findings of Appendix N: Environmental Justice Technical Report, which analyzes the proposed Lackawanna Cut-Off Rail project's potential impacts in terms of their effects on minority and low-income populations to identify any disproportionately high and adverse impacts on those populations. Appendix N follows the guidance of the USDOT 1997 Final Order and 2000 clarifications, as well as the US EPA's 1998 *Guidance for Incorporating Environmental Justice in EPA's NEPA Compliance Analyses*.

The USDOT Final Order specifies that, "In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures that would be taken and all offsetting benefits to the affected minority and low-income populations may be taken into account." Appendix N and this section, therefore, focus on identifying any significant adverse impacts, which cannot be mitigated.

3.18.1 Impact Assessment Methodology

Executive Order 12898 informs analysts that relevancy lies in the identification of disproportionate impacts to minority and low-income populations, not in the size of these target populations. The USDOT's clarifications in 2000 specifically caution that the size of minority and low-income populations not be used as a governing factor in environmental justice analyses. Instead, impacts accruing to low-income and minority populations must be compared with impacts accruing to non-target populations to determine whether a disproportionate impact exists. However, it is permissible for target-population size to be identified and used as one factor of a larger analysis.

To identify relative concentrations of minority and low-income individuals, data on race/ethnicity, median household income, and poverty were examined for census block groups within an approximately 1,000-foot radius of sites proposed for station areas. These data were compared with data on race/ethnicity, median household income, and poverty for each of the seven municipalities containing these proposed station areas, and for Lackawanna, Monroe, Warren and Sussex Counties. For purposes of the environmental justice impact analysis, the project corridor was defined as the aggregate of the census block groups identified within approximately 1,320 feet (1/4 mile) of proposed sites for stations and the yard facility. Based on the total length of the project corridor and the representative location of proposed station and yard facility locations along the alignment, it was determined that analyzing populations

proximate the stations and yard facility would provide a definitive indication of whether a disproportionate share of impacts would affect environmental justice populations with the reactivation of rail service. If it were determined that any environmental justice target population was disproportionately impacted in relation to all other populations along the rail corridor, further analysis would be conducted. Bureau of the Census 2000 data were used in all cases (see Table N-1 in Technical Appendix N).

For purposes of comparison, target-population concentrations were taken to be cases in which 50 percent or more of residents were reported to belong to a minority or low-income category. This threshold is based upon guidance provided by the Council on Environmental Quality in the document titled *Environmental Justice, Guidance Under the National Environmental Policy Act*.

To probe for the presence of disproportionate impacts, interrelationships between the identified concentrations of minority and low-income individuals and the proposed project's significant environmental effects were then qualitatively assessed. As recommended in the USDOT 2000 clarifications, this assessment dealt with minority and low-income populations separately.

3.18.2 Summary of Environmental Effects

An analysis of the data on race, ethnicity, income, and poverty in the proposed project area, makes it clear that modest concentrations of minority populations and of low-income populations live in close proximity to a number of proposed station areas. While the minority and low-income population levels proximate to proposed station areas and the yard facility reach 16 percent and 23.5 percent, respectively, populations do not reach the 50 percent threshold. Therefore no target populations are present within the delineated study areas.

Impacts to minority and low-income populations are expected to be no greater than those impacts experienced by other members of the general population who also live in significant numbers within close proximity to the right-of-way. Both target populations would also share equally with the general population in the benefits that would be generated by the proposed project. Therefore, no environmental justice-related impacts would result from the proposed project. Mitigation is not warranted.

3.19 Construction

Under the proposed project, temporary short-term construction-induced impacts may occur within communities adjoining the project rail alignment and the proposed station and yard sites. The nature and extent of the proposed work varies along the project corridor and consists of the reconfiguration and installation of trackage; replacement and rehabilitation of bridges and viaducts; and construction of stations, parking areas, and a yard facility (refer to Appendix O: Construction Impacts).

The presence of construction vehicles and the operation of construction equipment would introduce air, traffic, noise, and vibration impacts to the project corridor. Traffic conditions would be modified due to roadway closings and detours that are required to conduct track work at intersections, which would temporarily impact local traffic, emergency service providers and pedestrians. To minimize impacts to the community and to provide adequate emergency services during construction, NJ TRANSIT would coordinate temporary roadway closings with municipalities to mitigate construction-induced impacts. Since some road closings would impact businesses, NJ TRANSIT would contact these businesses prior to road closings in order to provide them with sufficient preparation time.

Also, to ensure the integrity of the historic resources along the project corridor, protective measures would be included in the construction specifications to monitor noise, dust, and vibration. All rehabilitation work proposed for historic resources would be conducted with the Secretary of Interior's Standards for Rehabilitation in consultation with the NJ SHPO and the PA SHPO.

Potential temporary construction-induced impacts to water quality, soils, vegetation and wetlands could result from the excavation, grading and filing activities necessary for the construction of the proposed station and yard areas and the rehabilitation or replacement of rail structures. Additionally, prior to construction further investigation of hazardous materials, archeologically sensitive areas and endangered species would be conducted to ensure that potential impacts would be minimized or avoided, if any are determined to exist.

Construction impacts are temporary, and would cease with the completion of construction. To minimize overall adverse impacts during construction, the proposed project would be planned, designed, scheduled and staged to minimize disruption to existing traffic, abutting neighborhoods and the environment. Contractors would be required to make considerable efforts to avoid staging equipment and traversing areas beyond the construction site boundaries. Although some impacts would be unavoidable, applying best management practices pertaining to construction operations would minimize the duration and severity of these effects.

More specifically, project-related construction impacts and proposed mitigation measures could include:

Historic and Archaeological Resources

Construction related impacts to historic structures identified in Appendix C: Historic Resources Technical Report could include the effects of noise, dust and vibration generated from construction activity.

With minimal project-related construction activity expected to occur at the proposed Scranton Station area, anticipated levels of construction-induced noise and vibration would not likely affect the Steamtown National Historic Site. Similar situations would exist in Blairstown Township and the Borough of East Stroudsburg where there are potentially eligible historic resources within both station areas. The construction of the proposed station platforms and parking facilities would cause migration of fugitive dust and could impact these resources through the exposure of soil at construction sites and the transport

of dust-producing materials. However, the minimal levels of construction activity at the proposed station areas would have low potential for impact to these resources.

Protective measures in the construction specifications to monitor noise, dust, and vibration would ensure that the integrity of the resource-eligible DL&W Railroad Historic District, and the resource-eligible Old Main DL&W Historic District. Additionally, all rehabilitation work proposed for the Delaware River Bridge, the Paulins Kill Viaduct, the Roseville Tunnel, and the Greendell Station Complex, which are part of the resource-eligible DL&W Lackawanna Cut-Off, would be conducted with the Secretary of Interior's Standards for Rehabilitation and in consultation with the New Jersey State Historic Preservation Office (NJ SHPO) and the Pennsylvania Historic Preservation Office (PA SHPO).

Construction of the proposed project may potentially affect archaeological resources on all of the proposed station and maintenance sites with the exception of the proposed Analomink Station area. Further investigation of archeologically sensitive areas would be performed during the preliminary/final engineering phase. At that time, limits of construction disturbance would be established in order to minimize or avoid potential impacts to intact archeological resources, if any are determined to exist.

Mitigation

A number of mitigation measures could be implemented to minimize or eliminate any minor construction impacts on historic resources along the project corridor. Through consultation with the NJ SHPO and the PA SHPO, NJ TRANSIT would devise requirements and specifications to be followed by contractors during construction that would reduce potential noise impacts, including details pertaining to sound control devices that would be utilized on construction equipment and trucks and the appropriate location of staging areas. The use of specific equipment, such as concrete cutters rather than pavement breakers, the installation of temporary noise barriers, and the rerouting of heavy equipment and truck movements, where practical, could possibly be used to reduce temporary noise and vibration effects. The application of various control measures during construction activities would be employed to minimize the amount of construction dust generated, such as applying water or other soluble moisture-retaining agents to dirt areas, cleaning construction equipment and adjacent paved areas that may be covered with dirt or dust, covering haul trucks carrying loose materials to and from construction sites and treating materials likely to become airborne and contribute to air pollution if left untreated.

Procedures would be developed for addressing unanticipated discovery, evaluation and mitigation of archaeological resources during construction of the proposed project. These issues would be appropriately addressed through a Memorandum of Agreement between NJ Transit and the NJ SHPO and the PA SHPO.

Parkland

Construction of the project would not significantly impact adjacent parklands. Contractors would be required to avoid using adjacent parkland for staging equipment or for access to the construction site. All parklands will remain open and fully operational during construction of the project.

Mitigation

Through coordination between NJ TRANSIT and its contractors construction impacts will not occur to adjacent parklands.

Traffic, Parking, Transit, Pedestrians and Freight Rail

Construction of the proposed project would temporarily affect local traffic and pedestrian movement, as well as on-street parking at specific locations along the corridor. While most construction activity would occur within the rail right-of-way and have little or no impact on nearby roadways, varying amounts of construction would be required at the grade crossings between the western and eastern limits of this proposed project. Construction at these locations would result in the temporary closure of the crossing and necessitate short-term traffic and pedestrian detours. Several of these temporary detours would likely generate traffic delays that would cease following the reopening of the roadway.

The construction of two of the proposed station areas may temporarily impact traffic movements and on-street parking on adjacent roadways. Elements of the proposed East Stroudsburg Station area and the proposed Tobyhanna Station area would be constructed adjacent to roadway rights-of-way. Areas outside of the rail right-of-way would be temporarily utilized for equipment staging and storage, as well as necessary construction activities. Furthermore, pedestrian circulation on sidewalks lining the East Stroudsburg Station area may be briefly impeded as a result of construction activity. Construction of the platform at the proposed East Stroudsburg Station area may temporarily impact on-street parking, as well as vehicular flow along Crystal Street.

Minor temporary impacts to traffic movement along PA Route 423 and Goodwin Street would potentially result from the construction of the passenger drop-off area and the parking lots at the proposed Tobyhanna Station area.

Construction activities at these proposed station areas would possibly result in the temporary closure of roadway and sidewalk segments, as well as the short-term displacement of on-street parking. Short-term traffic delays would likely be an effect associated with the closure of roadway segments. These delays would cease with the reopening of the roadway segment following the completion of construction in the area.

Construction of the proposed project would temporarily affect Delaware Lackawanna Railroad Company (DLRC) freight operations. Construction of the proposed facilities would follow, with only minimal periods of interruption to freight activity. All construction would be carefully coordinated with DLRC to minimize impacts to rail freight operations.

Mitigation

Mitigation measures to minimize or eliminate construction induced impacts on specific grade crossings and freight operations, as well as the potential construction effects on station area vehicular and pedestrian circulation and on-street parking would be comprised of several components. Initially, extensive coordination would need to occur between NJ TRANSIT and DLRC, the New Jersey Department of Transportation (NJDOT), the Pennsylvania Department of Transportation (PENNDOT) and local governments to plan, schedule and stage proposed construction activities in a manner that would minimize temporary delays or stoppage of freight operations and vehicular traffic. A Maintenance and Protection of Traffic (MPT) plan would be developed and implemented by NJ TRANSIT through considerable consultation with NJDOT, PENNDOT, and the municipalities that are to be impacted. The action plan would list measures that would be utilized during the construction stages of the proposed project expected to result in temporary grade crossing and roadway lane closures. These measures include, but would not be limited to construction during off-peak hours, when viable, public notification of future closures and detour routes, the use of well-positioned closure and detour warning signs and the appropriate scheduling and coordination of all construction activities that would occur at the same grade crossing or within the same area.

A considerable amount of coordination is necessary between NJ TRANSIT and DLRC to minimize the temporary, construction-related impacts that would affect rail freight operations. This coordination would entail discussions pertaining to construction scheduling and staging for the necessary upgrading of the existing trackage and grade crossings. Each of these construction activities would occur during the early stages of project construction to reduce the duration of time that construction would impact rail freight.

Community Disruption

Several localized impacts would occur to communities adjacent to the right-of-way, particularly proximate to construction staging areas. Impacts could include short-term traffic, air, and noise impacts due to the presence of construction equipment and trucks. Temporary roadway closings in order to rehabilitate and lay trackage at grade crossings would alter travel patterns for local residents, as well as local emergency service providers. Pedestrian activity may be altered during construction as well. Short-term roadway closings and construction activity may also divert traffic from and impair access to local businesses. Adverse impacts associated with construction, however, would be offset by the overall benefits of the proposed project. Short-term gains to the local economy would be experienced by the influx of workers utilizing local services and purchasing goods within the project corridor during construction.

Mitigation

NJ TRANSIT would coordinate temporary roadway closing with municipalities and notify local businesses of possible access restrictions in order to mitigate possible construction induced impacts. A Maintenance of Traffic Plan, as discussed above, would be developed through consultation between NJ TRANSIT, NJDOT, PENNDOT, and the local government to assure access to all areas of the municipality is maintained.

Air Quality

Air quality impacts during construction would be limited to short term, increased fugitive dust and mobile source emissions. These impacts would cease with the conclusion of construction.

Fugitive dust is airborne particulate matter, generally of a relatively large particulate size. Construction-related fugitive dust is generalized by concrete demolition, haul trucks, concrete trucks, delivery trucks and earth-moving vehicles operating around the project corridor. This would be due primarily to particulate matter being resuspended ("kicked-up") by vehicle movement over paved and unimproved surfaces, dirt tracked onto paved surfaces from unpaved areas at access points, and material blown from areas of exposed soils. Generally, the distance particles drift from their sources depends on their size, emission, height, and wind speed. Small particles (30- to 100-micron range) can travel several hundred feet before settling to the ground, depending on wind speed (one micron equals 0.000001 meter). Most fugitive dust, however, is made up of relatively large particles (i.e., particles greater than 100 microns in diameter). Given their relatively large size, these particles tend to settle within 20 to 30 feet of their source.

Carbon Monoxide is the principal pollutant of concern when considering localized construction induced air quality impacts of vehicles. While the presence of construction trucks and equipment would slightly increase CO levels in the area, these emissions would not be significant compared with the emissions from vehicle traffic. Some emissions of CO from motor vehicles increase with decreasing vehicle speed. A reduction of roadway capacity and the increased queue lengths caused by a disruption of traffic during construction could result in a small, short-term elevation of localized CO concentrations.

Mitigation

A number of mitigation measures would be utilized to minimize or eliminate temporary air quality impacts created during the construction phase of the proposed project. The application of various control measures during construction activities would be employed to minimize the amount of construction dust generated, such as applying water or other soluble moisture-retaining agents to dirt areas, cleaning construction equipment and adjacent paved areas that may be covered with dirt or dust, covering haul trucks carrying loose materials to and from construction sites and treating materials likely to become airborne and contribute to air pollution if left untreated. In addition, the precautions to minimize traffic disruption in the area, as discussed above, would minimize the construction-related effect on mobile source emissions. This includes the implementation of a Maintenance and Protection of Traffic (MPT) plan.

Noise and Vibration

Construction activities required by implementation of the proposed project would have short-term noise impacts on receptors in the immediate vicinity of the construction sites. Noise levels during construction would include noise from construction and delivery vehicles traveling to and from the site and noise from operating construction equipment. However, blasting, a typical construction noise, would not be necessary for this project. The extent of impact from these sources would depend upon the nature of the construction (laying of track versus structure), the noise characteristics of the equipment operated and their duration of utilization, the construction schedule and the distance to the noise-sensitive receptors from the construction site boundary.

Noise:

Short-term construction noise impacts are expected in the immediate vicinity of construction sites, but are temporary in nature. In general, construction typically occurs during the daytime working hours of 7 AM to 6 PM. The noisiest equipment likely to be employed in the project area would be earth moving equipment (backhoe and dump truck) and groundbreaking equipment. Average noise levels measured in dBA at 50 feet for this equipment may approach the high-80's dBA. Based on typical usage factors of 0.3 (i.e., equipment is operated 30 percent of the time), a typical scenario of a crew operating 1 backhoe, 1 bull dozer and 1 dump truck can expect an hourly L_{eq} of 85 dBA at a distance of 50 feet. Based on a 6-dBA drop-off rate per doubling of distance, short-term construction noise levels associated with this operation would not exceed the 73 dBA beyond 200 feet from the point of construction.

Vibration:

Ground vibration induced by project construction is highly unlikely. Much of the construction is associated with laying of tracks, and the construction of the station platforms. None of these activities involves high vibration-generating equipment. Typical vibration levels for equipment likely to be used for this project do not exceed 90 VdB at a distance of 25 feet from construction. The criterion for fragile buildings is 100 VdB and 95 VdB for extremely fragile historic buildings. Construction industry practice typically sets ground peak particle velocity (PPV) at 1 inch per second at neighboring structures.

Mitigation

The magnitude of construction generated noise and vibration impacts along the project corridor would be reduced or eliminated by utilizing a number of mitigation measures. In addition to construction activity, coordination between NJ TRANSIT and local residents and businesses, proper use of construction equipment and maintenance of mufflers would suffice in mitigating construction noise. Compliance with

industry practices and FTA guidelines for historic structures should provide adequate protection to buildings in the corridor and their occupants from vibration effects.

Vegetation and Wildlife

The construction impacts to vegetative and wildlife resources that would be expected from the proposed project would be temporary in nature. The construction of new track within the New Jersey portion of the corridor as well as the rehabilitation of several rail bridges and viaducts along the entire corridor would necessitate construction activities including clearing, excavation, and filling. This construction activity would possibly disturb or destroy minimal areas of vegetation, including wetlands.

Additionally, along the New Jersey portion of the corridor, there are four National Heritage Priority sites. These areas often contain and abundance of threatened and endangered species. Potential impacts to critical habitat may be associated with the clearing and the earth moving construction required for installing new track within New Jersey and improvements to the existing right-of-way including modifications to all bridges and culverts and all earth-moving stabilization activities. During the preliminary/final engineering phase it is recommended that the New Jersey portion of the corridor be surveyed for the presence of threatened and endangered species.

Also, around the area of the Delaware River Bridge, where minor rehabilitation is required, species of concern may be present. The proposed Andover, and Blairstown Station areas, may be providing habitat for threatened and endangered species, and while it is not anticipated that reconstruction activities would affect either species; it is recommended that Best Management Practices be implemented during construction to ensure that habitat areas are not affected.

As a result of the of the active freight service operating through the portion of the corridor located in Pennsylvania, and the limited nesting and feeding habitats associated with the disturbed environments at most of the proposed sites, it is expected that construction activities related to this proposed project would affect minimal amounts of wildlife habitat. Additionally, background data would be provided from the Pennsylvania Department of Conservation and Natural Resources, the Pennsylvania Fish and Boat Commission, and the Pennsylvania Game Commission to help determine if any threatened and endangered species would be impacted by the construction of the proposed Pocono Mountain and Tobyhanna Station areas.

The proposed Scranton, Tobyhanna, East Stroudsburg, Delaware Water Gap, and Blairstown Station areas as well as the proposed Scranton yard facility have been disturbed and contain structures. Nominal areas of vegetation may be disturbed during the construction of the proposed Pocono Mountain and Andover Station areas, as vegetation lines the DL&W right-of-way in these areas. Construction-related impacts to vegetation would potentially occur at construction staging areas. These areas would be located carefully to avoid loss of mature vegetation. Additional disturbance to vegetation and associated with the proposed project would be minimal. The Pennsylvania section of the project corridor is currently utilized for active freight service and is generally maintained without significant vegetation in the right-of-way.

Short-term construction impacts would also result from the temporary increase of both noise and dust. These impacts would be minor and could temporarily affect fish and wildlife in the project area. It is expected that any fish or wildlife that may be displaced, as a result of the construction activity associated with this proposed project would return once construction ceased or identify another suitable habitat.

Mitigation

Mitigation measures to minimize potential construction-related affects on vegetation and wildlife would include cautious staging and construction practices in areas where mature vegetation and potential fish and wildlife habitats are present.

Physical Resources

Construction activities along the alignment would not impact existing soil conditions along the project corridor right-of-way. Soils along the proposed station and yard sites would be temporarily disturbed due to excavation and grading associated with construction activities.

Mitigation

Soil erosion reduction techniques would be implemented including silt fencing and the use of hay bales along the perimeter of the existing right-of-way. Further geotechnical studies would need to be performed prior to construction activities.

Water Quality

Surface Water:

Potential construction-induced impacts to water quality would likely be soil erosion and sedimentation resulting from excavation and grading activities necessary for the construction of proposed station and yard sites, and parking areas. Many of these locations, however, would be constructed at historic station sites and previously disturbed sites some of which currently consist largely of impervious surface. Exposed soils from these activities, as well as those that are stockpiled during construction could erode during rainfall events and be transported to the storm water and/or surface water systems within the project corridor. These impacts would be temporary and expected to cease with the completion of construction associated with the particular project elements. The magnitude of these potential impacts would be site specific and dependant upon soil type, weather conditions and underlying topography.

Pursuant to requirements developed for the New Jersey Pollutant Discharge Elimination System (NJPDES) Program administered through the New Jersey Department of Environmental Protection (NJDEP), the National Pollutant Discharge Elimination System (NPDES) Program administered through the United States Environmental Protection Administration (EPA), construction of the proposed project would require the issuance of Construction Activities General Stormwater Permits. These permits are required for all construction projects disturbing more than five cumulative acres. A Stormwater Pollution Prevention Plan (SWPPP) would be required under the NJPDES program. Additionally, for construction activities located within migratory fish waterways, certain restrictions would be required. While all other appropriate federal, state, county and local water quality regulations would be adhered to; additional permits would be obtained prior to construction. Specifically, as part of any permit approval, regarding construction activities located within migratory fish waterways, certain restrictions would be required and the construction schedule would be developed accordingly. Pennsylvania adheres to the regulations set forth in the NPDES but does not have a statewide pollutant discharge elimination system.

Groundwater:

Construction-related impacts to groundwater in the project corridor would be minor and temporary in nature. Excavation work that would be necessary for the construction of structures, parking areas,

platforms, and bridges could intersect the water table. While the presence of existing structures and impervious surfaces at many of these proposed locations would make it unlikely that construction activities would affect groundwater in most portions of the corridor, it is possible that potential contamination of groundwater could possibly occur as a result of leaking construction equipment and/or temporary on-site sanitary storage facilities.

Mitigation

To effectively minimize temporary construction-related impacts to surface water quality a number of erosion control measures would be utilized. A combination of silt fences, hay bale filters, inlet filters, stone rip-rap and temporary vegetative covers would be implemented to reduce potential sedimentation and the movement of soil-laden water from construction sites. All mitigation measures would be implemented in accordance with U.S. Soil Conservation Service, EPA, PADEP, and NJDEP standards, as well as Best Management Practices. A construction schedule would be developed to comply with all applicable restrictions for construction activities within a migratory fish waterway. Additionally, a comprehensive Erosion and Sediment Control Plan would be developed and coordinated with the PADEP, NJDEP, the counties and the municipalities. The specifics of the mitigation measures would be developed during the preliminary/final engineering phase of this proposed project.

Several mitigation measures would be implemented to minimize or eliminate impacts on ground water, throughout the construction phase of the proposed project. During excavation, any groundwater that is encountered would be pumped from excavated soils, filtered to remove suspended sediments and discharged to the storm water discharge system or to on-site infiltration ditches. This process would be temporary and would cease with the completion of excavation. Permits that would be required to undertake this dewatering process would be acquired from NJDEP or PADEP. Proper maintenance procedures on the construction site would avoid most leaks and mishaps associated with construction equipment. Any spills (oil, gasoline, diesel, brake fluid, transmission fluid, etc.) would be contained immediately and disposed of properly, off-site.

Wetlands

It is expected that minimal wetland areas in New Jersey and Pennsylvania would be impacted by construction activities under the proposed project. In New Jersey, construction activities within the existing right-of-way would unlikely disturb any wetland complexes located adjacent to or present at the right-of-way embankments toe of slope. A linear wetland area that is most likely under an acre in size is located within the potential footprint of disturbance of the proposed Andover Station area. Prior to construction, a formal wetland delineation and survey would be preformed at this site.

In Pennsylvania, wetlands were not identified within the maintained right-of-way; however, several wetland complexes were identified adjacent to the existing right-of-way embankments toe of slope. Although construction and staging activities would be contained within the existing right-of-way, minor temporary wetlands disturbances may occur to these surrounding wetland complexes and transition areas during rehabilitation or replacement activities of rail structures along the existing alignment. A small area of wetlands is present within the potential footprint of disturbance at the proposed Tobyhanna Station area. Prior to construction, a formal wetland delineation and survey would be preformed at this site.

Construction-related impacts to wetland resources could result from the passage of heavy machinery and construction personnel, from construction staging and from accidental spills and equipment cleaning activities. These activities could disturb or destroy negligible areas of wetlands vegetation or temporarily deteriorate wetland water quality by introducing additional runoff and sedimentation in the area.

Mitigation

Temporary signs and fences, such as orange snow fencing, may be used to limit unnecessary direct construction impacts to wetlands. Erosion and sediment control measures consisting of silt fences, hay bales, mats or temporary drainage systems would be used to ensure that indirect construction activity encroachment on wetlands is avoided. Implementation of spill prevention plans designed first to avoid spills and second to provide direction for the efficient and successful removal of spills would minimize or alleviate adverse impacts. Construction staging areas would be selected to avoid wetlands and their associated adjacent areas. Restricting washing activities to areas distant from wetlands and other sensitive resources would minimize or alleviate adverse impacts to these resources. Such measures, if necessary, would be selected and specified during the preliminary/final engineering phase.

Floodplains

Elements of the proposed project would be located within areas considered to be within the 100-year floodplain or the 500-year floodplain, as delineated by the Federal Emergency Management Agency (FEMA). The existing freight rail line and structures contained on most of the proposed station area sites make it unlikely that construction of the proposed project would have significant affects on floodplain areas within the study area. A temporary disturbance of flood plain areas is possible during replacement or rehabilitation activities of bridges and culverts along the corridor.

Mitigation

Any potential construction-related impact on floodplain areas and possible mitigation measures would be identified pursuant to Executive Order 11988. In addition, a NJDEP Stream Encroachment Permit issued from the Land Use Regulation Program under Flood Hazard Area Control Act, N.J.S.A. 58:16A would be obtained as well as a Water Obstruction and Encroachment Permit would be obtained from the PADEP.

Hazardous Waste

During the construction phase of a project there is potential to disturb soils contaminated with hazardous materials, exposing workers to unwarranted health risks. A Phase I environmental screening was conducted as part of this Environmental Assessment. The findings of the screening have been identified in Appendix M: Hazardous Waste Technical Report and were the result of database search, site inspections, and/or representations made by qualified individuals. The review recommended that further environmental investigation be conducted for each proposed station area and yard facility to determine the extent, if any, of hazardous waste contamination. However, contamination of a magnitude large enough to pose a problem is not anticipated.

If further investigation identifies sites where hazardous waste is present, engineering controls would be utilized to minimize temporary, direct exposure of these contaminants of varying degrees to workers and the public. Generally, this contaminated soil may be used on-site as fill material, provided that the soil is situated a minimum of two feet above the seasonal high water table and two feet below final grade. At most construction sites the proposed project includes the construction of structures or parking facilities, which would cap the site and eliminate direct exposure.

Additionally, NJ TRANSIT has established a routine practice for determining the conditions of site soils prior to the implementation of a project. Preliminary subsurface investigations to determine the presence of hazardous materials would take place during the 30 percent design phase of the project. In addition, a procedure applied during the pre-bidding stage of a contract requires that an on-site sampling program be

used to obtain primary data related to conditions at each site. Remediation, of the possible selection of an alternate site would be considered where contamination is found.

Mitigation

Construction of sites identified as containing hazardous waste would require further investigation and testing throughout the preliminary/final engineering and construction phases of the proposed project. Contractors would be required to handle, treat and dispose of hazardous materials encountered in a manner that would be in full compliance of all Federal, state and local regulations. Monitoring and remediation plans would be developed and approved by NJDEP or PADEP and other regulatory agencies and implementation of these plans would occur prior to construction. NJ TRANSIT, as well as those contractors that would potentially encounter such materials would develop an Emergency Response Plan.

3.20 Cumulative Effects and Indirect Impacts

This section provides a description of the cumulative effects and indirect impacts on a natural resource, ecosystem, or human community. To determine the cumulative effects of the proposed action combined with other past, present, and reasonably foreseeable major actions, it is necessary to take an overview approach to the projects implemented in the past, and planned for the future, in the project corridor. The methodology used in this analysis has been developed according to the guidance presented in the 1997 Council on Environmental Quality publication, *Considering Cumulative Effects Under the National Environmental Policy Act*, and other professional guidance publications on the assessment of cumulative impacts.

For the purposes of this EA, cumulative effects are defined as the impact on the environment from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal; public or private) or person undertakes such actions (40 CFR-1508.7). Indirect impacts are environmental impacts caused by the proposed project that occur later in time or are further removed in distance but still reasonably foreseeable (40 CFR-1508.8 (b)). Table 3.20-1 summarizes the indirect impacts and cumulative effects as a result of the No-Build and Build Alternatives. Significant direct impacts, indirect impacts and cumulative effects as a result of the proposed project are not anticipated.

Table 3.20-1: Summary of Indirect and Cumulative Impacts

	Past Action	**Direct/Indirect Impacts**	**Cumulative Effects**
Land Use, Zoning, Consistency with Local Plans	Over time, zoning regulations have separated incompatible uses.	**No-Build Alternative**: The No-Build Alternative would result in no indirect impacts. Development would continue to occur along the corridor in accordance with local land use policy, guidelines, and regulations. **Build Alternative**: A significant amount of project-induced development is not anticipated to occur in the vicinity of any of the proposed station sites. The areas surrounding the proposed Scranton, Tobyhanna, and East Stroudsburg Station areas as well as the proposed Scranton Yard Facility are developed and contain few vacant parcels. Any development in these areas would result from the redevelopment of underutilized parcels and would be independent of the proposed project. The potential for development at the proposed Pocono Mountain, Analomink, Delaware Water Gap, Blairstown, and Andover Station areas is restricted because of the physical constraints of the land, the large lot zoning, stringent land development regulations, and the lack of public infrastructure.	**No-Build Alternative:** Under the No-Build Alternative, land use and zoning changes, as well as the development and redevelopment of properties locally throughout the project corridor may continue to occur as a result of planned transportation improvements and local development policies. Major improvements, such as the Marshalls Creek Bypass, could influence the location and type of development that would occur along the project corridor. Planned residential and commercial development would also continue. Commuter rail would not contribute to these land use changes, either beneficially or adversely, under the No-Build Alternative. **Build Alternative:** For the Build Alternative, major transportation improvements could influence the location, density, and type of development. The planned Marshalls Creek Bypass could have more effect on land use changes especially at interchange locations. The proposed project would not result in significant land use changes. Any development would be in accordance with local land use policy, guidelines, and regulations.
Community Facilities and Parks	Overall increase in demand for services results in an increase in their cost.	**No-Build Alternative:** Under the No-Build Alternative, there would be no increase in the response time of emergency services and no indirect impacts to parks. **Build Alternative:** A minimal increase in the response times of emergency services due to reactivation of passenger rail service is anticipated. However, this would only occur when a train is passing through an active grade crossing. The short duration of time it would take for the train to pass through a grade crossing coupled with the limited frequency of service would reduce the likelihood of impacts. No indirect impacts are anticipated to occur to parks. ***Mitigation*** **-** NJ TRANSIT and local municipalities would develop appropriate grade-crossing protection measures to ensure continued circulation for emergency service vehicles and safe access to and from all community facilities.	**No-Build Alternative:** For the No-Build Alternative, other major transportation improvements, such as the Marshalls Creek Bypass, could affect response times for emergency services. No cumulative impacts are anticipated to occur to parks. **Build Alternative:** Under the Build Alternative, major transportation improvements could influence the response times for emergency services. No cumulative impacts are anticipated to occur to parks. ***Mitigation*** **-** Coordination between the applicable public agencies, local government, and emergency service providers would reduce the likelihood of adverse impacts.
Historic and Archaeological Resources	Previously, there was a chronic disregard for historic/cultural resources. Awareness and advocacy result from the demolition of key landmarks.	**No-Build Alternative:** The No-Build Alternative could cause impacts to some historic sites/structures and archaeological resources from increased traffic and noise. Continued development in some areas could also cause alterations of some historic sites or structures. **Build Alternative:** For the Build Alternative, no indirect impacts to historic sites and archaeological resources would likely result from the proposed project. ***Mitigation*** **–** No mitigation would be required.	**No-Build Alternative:** The No-Build Alternative could cause cumulative effects to some historic and archaeological resources in the project corridor. Increased potential for cumulative effects could result from privately held historic buildings near interchanges, which are subject to alteration depending upon the interests of the property owners. **Build Alternative:** Although it is not anticipated that adverse cumulative effects to historic and archaeological resources would result from the proposed project, other planned roadway improvements could cause cumulative effects to some historic and archaeological resources in the project corridor. All proposed projects are subject to the requirements of Section 106 of the National Preservation Act and extensive coordination with the NJ SHPO and PA SHPO, where applicable. ***Mitigation*** **-** As a result of Section 106 requirements, as well as NJ SHPO and PA SHPO coordination, any potential impacts would be mitigated.

Table 3.20-1 (continued)

	Past Action	**Direct/Indirect Impacts**	**Cumulative Effects**
Visual Resources	Wide variation in quality prior to zoning standards.	**No-Build Alternative:** The No-Build Alternative would result in no indirect impacts. Alterations of visual resources or view corridors are not expected. **Build Alternative:** The proposed stations and yard facility would not significantly alter or obstruct view corridors to or from these visual resources. Most of the proposed stations are located in developed areas or in areas where the physical features of the land minimize any visual impacts. Therefore, no adverse visual indirect impacts would occur as a result of this proposed project. ***Mitigation –*** No mitigation would be required.	**No-Build Alternative:** Under the No-Build Alternative, major transportation improvements, specifically the Marshalls Creek Bypass, could change the visual character of the project corridor. **Build Alternative:** Construction of the Build Alternative would cause no impacts to the visual character of the project corridor. It is anticipated that cumulative visual effects could result from the implementation of the planned roadway improvements. ***Mitigation –*** Since no impacts to visual character would result from the construction of the proposed project, no mitigation would be required.
Transportation	Auto use increased as transit service diminished.	**No-Build Alternative:** The No-Build Alternative would result in no indirect impacts. Continued development activity within the portions of the study corridor is expected, resulting in an increase in background traffic growth. **Build Alternative:** Under the Build Alternative, traffic is expected to increase as a result of the Tobyhanna, Pocono Mountain, East Stroudsburg, and Delaware Water Gap Station sites. ***Mitigation -*** Any indirect impacts would be minimized by utilization of mitigation measures, including adding new and modifying existing signals as well as redesigning two T-intersections at Crystal Street and Analomink Street to allow for a more efficient 4-way intersection near the proposed East Stroudsburg Station.	**No-Build Alternative:** The No-Build Alternative would result in cumulative effects to the transportation network, which serves the project corridor, specifically along the Pennsylvania portion. Based on the projected growth in some areas, traffic is expected to increase. The proposed transportation projects have been planned to reduce the cumulative effects of this growth on the transportation network. **Build Alternative:** The Build Alternative could result in cumulative effects. The proposed project would cause localized increases in traffic; however, mitigation efforts would minimize these conditions. In addition, the proposed project would provide a new mode of regional transportation that would remove vehicles from the area's regional roadways. The other planned roadway improvements would result in minimal transportation impacts beyond what is described in the No-Build Alternative. ***Mitigation –*** As described above, mitigation efforts would minimize localized increases in traffic. NJ TRANSIT would discuss mitigation measures to be implemented with municipalities prior to the finalization of the Environmental Assessment.
Noise and Vibration	Traffic generates locally concentrated noise; standards established to abate noise.	**No-Build Alternative:** The No-Build Alternative could result in minimal indirect effects as a result of increased traffic resulting from projected growth along sections of the project corridor. **Build Alternative:** As a result of the Build Alternative, impacts as a result of wayside and whistle noise are expected. There are 342 residencies situated within Impact distance, of which 33 residencies are within a Severe Impact zone. Impact sites under FTA guidelines are not considered to be significant impacts as defined by NEPA. ***Mitigation -*** Mitigation measures would be utilized to significantly reduce the wayside noise including noise barriers, vehicle skirts and/or undercar absorption. Potential mitigation for residences subject to Severe Impacts is to establish "Quiet Zones" at grade crossings within the vicinity of the residential areas.	**No-Build Alternative:** The No-Build Alternative could result in cumulative noise and vibration effects. The planned roadway projects would be subject to environmental review resulting in the consideration of mitigation efforts. **Build Alternative:** The Build Alternative could result in cumulative effects. The proposed project would cause an increase in noise; however, mitigation efforts would minimize these conditions. The other planned roadway improvements would result in not result in noise and vibration impacts beyond what is described in the No-Build Alternative. ***Mitigation –*** As described above, mitigation efforts would be utilized to reduce potential noise impacts.

Table 3.20-1 (continued)

	Past Action	**Direct/Indirect Impacts**	**Cumulative Effects**
Energy	Inefficient consumption of fossil fuels and increase demand create shortages.	**No-Build Alternative:** Under the No-Build Alternative, growth would continue as projected, resulting in increases in energy expenditures. The TSM Alternative for the proposed project could help minimize energy expenditures. **Build Alternative:** The projected indirect and direct energy expenditures of the Build Alternative are marginal when compared to the overall statewide figures for New Jersey and Pennsylvania. Due to the small sizes of the projected increases in comparison with statewide figures, the projected increases are not considered significant and should be easily managed by existing New Jersey and Pennsylvania power resources. ***Mitigation –*** No mitigation efforts would be required.	**No-Build Alternative:** Under the No-Build Alternative, increased indirect energy expenditures are anticipated as a result of the planned roadway improvements. It is expected that the consumption of energy resources becomes increasingly efficient, however direct energy expenditures may continue to increase as a result of growth. **Build Alternative:** Construction of the Build Alternative in addition to all other major actions planned for the project corridor would result in minimal impacts to direct and indirect energy expenditure. It is expected that the projected increases could be small in comparison with statewide figures; therefore, projected increases would not be considered significant. ***Mitigation –*** No mitigation efforts would be required.
Geology, Soil, and Topology	Regional urbanization greatly altered subsurface resources.	**No-Build Alternative:** The No-Build Alternative would result in no indirect impacts to geology, soils, or topology. Planned development within the project corridor would be conducted to avoid any adverse impacts to physical resources and would be in accordance to the regulations set forth in the New Jersey Highlands Water and Protection Act, where applicable. **Build Alternative:** The Build Alternative requires limited construction activity therefore indirect impacts to geology, soil, and topology along the project occur are not expected to occur. ***Mitigation –*** No mitigation efforts would be required.	**No-Build Alternative:** Under the No-Build Alternative, other major transportation improvements, such as the Marshalls Creek Bypass, could affect geology, soils, or topology due to additional excavation and grading associated with construction activities. **Build Alternative:** Construction of the Build Alternative, in addition to all other major actions would result in minimal geology, soil, and topology impacts beyond those described in the No-Build Alternative. ***Mitigation*** **-** BMPs and specific design standards would be required for all major actions.
Water Quality	Severe reduction in surface and groundwater quality.	**No-Build Alternative:** For the No-Build Alternative, growth could occur in some areas of the project corridor resulting in the creation of more impervious surfaces causing increased stormwater runoff. **Build Alternative:** The Build Alternative would result in a slight increase in impervious surfaces from new station structures and parking lots. ***Mitigation*** **-** Through strict adherence to regulations laid out by the PADEP and NJDEP, as well as the utilization of BMPs, no adverse indirect impacts to water quality would occur as a result of the proposed project.	**No-Build Alternative:** Other major transportation improvements under the No-Build Alternative could affect surface water quality and cause an increase in storm water runoff from impervious surfaces, especially in local jurisdictions with limited land use ordinances and stormwater management controls. **Build Alternative:** Construction of the Build Alternative in addition to all other major actions would result in minimal water quality beyond those described in the No-Build Alternative. ***Mitigation*** **-** BMPs and specific design standards would be required for all major actions.
Floodplains	Development occurred in floodplain and flood fringe areas	**No-Build Alternative:** The No-Build Alternative would have no indirect impact on floodplains. **Build Alternative:** The project corridor is adjacent to and in some locations located intermittently within the 100-year and the 500-year flood zones. Permits would be required by the PADEP and NJDEP. ***Mitigation*** **-** Mitigation measures would be utilized to minimize indirect impacts, and would include structures to cross floodplains instead of utilizing fill material, thereby providing adequate flow circulation, reducing grading requirements and preserving natural drainage when possible.	**No-Build Alternative:** Other improvements under the No-Build Alternative could affect floodplains due to construction activities. All development would occur in accordance with PA DEP and NJ DEP regulations. **Build Alternative:** Construction of the Build Alternative in addition to all other major actions could result in cumulative effects on floodplains. ***Mitigation*** **-** The PA DEP and the NJ DEP would regulate all actions and ensure measures are utilized to protect areas prone to flooding.

Table 3.20-1 (continued)

	Past Action	**Direct/Indirect Impacts**	**Cumulative Effects**
Wetlands	Whole filing/reduction in acreage of wetlands.	**No-Build Alternative:** The No-Build Alternative could cause indirect impacts to wetlands due to growth occurring along the project corridor. Impacts could occur in areas most suitable to development and could include wetland loss and potential degradation of wetland quality and function. All growth activities would be pursuant to federal and state wetland regulations. **Build Alternative:** Approximately 6.4 acres of wetlands would be disturbed as a result of the Build Alternative. The exact amount of disturbed acreage would not be known until formal wetland delineation and survey are performed during the the preliminary/final engineering phase. ***Mitigation*** **-** Mitigation ratios for lost acreage would be at a 2:1 or a 4:1 depending on the wetlands resource value classification and amount of impacted acreage.	**No-Build Alternative:** The No-Build Alternative could result in cumulative effects to wetlands. Other major transportation projects could disturb wetlands. However, the replacement design for wetland functions and values is a standard component of any transportation project; therefore, there it is an opportunity to expand the existing regional wetland base. **Build Alternative:** The Build Alternative could cause cumulative effects to wetlands. The proposed project would disturb approximately 6.4 acres of wetlands and other major transportation improvements could also cause some degradation of wetland quality and function. ***Mitigation*** **-** All projects are subject to USACOE and state regulations and the permitting process would stipulate measures to mitigate wetlands impacts.
Threatened & Endangered Species	Decrease in numbers and diversity of species from development.	**No-Build Alternative:** The No-Build Alternative could result in indirect impacts with regard to critical habitat. The potential indirect impacts of disturbance or habitat fragmentation from increased traffic and noise would not likely jeopardize the continued existence of any federal or state threatened or endangered species. **Build Alternative:** For the Build Alternative, effects to federal and state threatened and endangered species are not anticipated. Projects that adversely impact potential threatened and endangered species habitat are generally not approved until alternative measures are proven to be more detrimental to existing habitat or economically unfeasible. ***Mitigation*** **–** No mitigation efforts would be required.	**No-Build Alternative:** The major transportation improvements could affect threatened and endangered species through the project corridor. **Build Alternative:** No direct impacts to threatened and endangered species are expected as a result of the proposed project. Projects that adversely impact potential threatened and endangered species habitat are generally not approved until alternative measures are proven to be more detrimental to existing habitat or economically unfeasible. ***Mitigation*** **–** No mitigation efforts would be required.
Hazardous Materials	Unregulated pollution and storage of hazardous materials.	**No-Build Alternative:** The No-Build Alternative would not result in the exposure of hazardous materials. Environmental regulations prohibit dumping and mandate clean up activity. **Build Alternative:** Under the Build Alternative, the threat of hazardous waste contamination at the proposed station sites is minimal and not expected to cause a direct or indirect effect. ***Mitigation*** **-** If unanticipated hazardous materials are discovered during design or construction the appropriate remedial actions would be implemented.	**No-Build Alternative:** For the No-Build Alternative, cumulative effects from exposure to hazardous materials are not anticipated. Continued regulation, clean-up activity and incentives to redevelop brownfields would gradually slow pollution and provide for ongoing clean up of contaminated areas. **Build Alternative:** Construction of the Build Alternative in addition to all other major actions would result in minimal to no exposure to hazardous materials during construction. ***Mitigation*** **–** No mitigation efforts would be required.
Environmental Justice	Unfair disturbance to minority and low-income neighborhoods.	**No-Build Alternative:** The No-Build Alternative would not result in indirect impacts on minority and low-income neighborhoods. **Build Alternative:** Modest concentrations of minority populations and of low-income populations live in close proximity to a number of proposed station areas. Both minority and low-income populations would share equally with the general population in any positive or negative indirect impacts that would be generated by the proposed project. Therefore, no environmental justice-related impacts would result from the proposed project. ***Mitigation*** **–** No mitigation efforts would be required.	**No-Build Alternative:** Under the No-Build Alternative, all planned projects would have to comply with the regulations set forth in Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations", Title VI of the Civil Rights Act of 1964 and the ISTEA and its successor laws. **Build Alternative:** Under the Build Alternative, no adverse cumulative effects to minority and low-income populations are expected. All other planned projects would adhere to the regulations set forth by the federal government. Both minority and low-income populations as well as the general population would benefit from the improvements in access and mobility. ***Mitigation*** **–** No mitigation efforts would be required.

4.0 LIST OF PERMITS

Based on the project information collected to date, preliminary state and federal regulatory permits have been identified and may be required for project implementation. Pre-application meetings during subsequent design stages with these regulatory agencies are recommended to determine exactly what permits are necessary and the most efficient way to gain those approvals. Permit applications may then be prepared for the appropriate approvals during future project phases.

4.1 Pennsylvania

Wetlands

Minor disturbances to surrounding wetlands may occur due to bridge and culvert replacement along the right-of-way. No impacts are expected to occur within the existing alignment. Pre-application meetings are strongly encouraged by PADEP prior to final site plan design to assure that design engineers are aware of what would be permissible under the different potential permit applications. If any disturbances occur the following permits may be obtained:

- **General Permit-11 Maintenance, Testing Repair, Rehabilitation, or Replacement of Water Obstructions and Encroachments.** This permit would be obtained from the Pennsylvania Department of Environmental Protection (PADEP) for the rehabilitation and replacement work to the identified structures along the alignment. The Average review time is 30 days.

- **Pennsylvania State Programmatic General Permit (PASPGP-2)** may be required from the PADEP. This application may also be forwarded to the appropriate US Army Corps of Engineers (USACOE) office by PADEP for review. The Average review time is 30 days.

- A State **Chapter 105 Individual Permit** and/or a **Corps of Engineers Section 404 Individual Permit**, issued by the USACOE, may be required depending on the amount of wetland acres that are disturbed. The average review time is 105 days for the PADEP and six to nine months for the ACOE.

Floodplains

A **Water Obstruction and Encroachment Permit** would be required for activities in floodplain areas from the PADEP.

Army Corps of Engineers

The USACOE has jurisdiction over activities on the Delaware River and would need to be consulted depending on Delaware River bridge rehabilitation activities. An USACOE **Nationwide Permit 3 (NWP-3 Maintenance)** may be necessary for rehabilitation activities.

4.2 New Jersey

Wetlands

An **Individual Permit (IP)** from the New Jersey Department of Environmental Protection (NJDEP) Land Use Regulation program may be applied for covering any wetland impacts along the entire project corridor in New Jersey. Pre-application meetings are strongly encouraged by the NJDEP prior to final site plan design to assure that design engineers are aware of what would be permissible under the IP. The average review period is 181 days.

Floodplains

A NJDEP **Stream Encroachment Permit** issued from the Land Use Regulation Program may be applied for under the Flood Hazard Area Control Act, N.J.S.A. 58:16A. The Stream Encroachment permit may be applied for in conjunction with an Individual Freshwater Wetlands Fill IP. The average review time is 84 – 120 days.

Army Corps of Engineers

The USACOE has jurisdiction over activities on the Delaware River and would need to be consulted depending on Delaware River bridge rehabilitation activities. An USACOE **Nationwide Permit 3 (NWP-3 Maintenance)** may be necessary for rehabilitation activities. The Average review time is three to six months.

5.0 DISTRIBUTION LIST

US Senators

United States Senator for New Jersey, Frank Lautenburg, US Senator
United States Senator for New Jersey, Robert Menendez, US Senator
United States Senator for Pennsylvania, Bob Casey, US Senator-Elect
United States Senator for Pennsylvania, Arlen Spector, US Senator

US Representatives

New Jersey, 5th US Congressional District, Scott Garrett, US Congressman
New Jersey, 7th US Congressional District, Mike Ferguson, US Congressman
New Jersey, 11th US Congressional District, Rodney Frelinghuysen, US Congressman
Pennsylvania, 10th US Congressional District, Don Sherwood, US Congressman
Pennsylvania, 11th US Congressional District, Paul Kanjorski, US Congressman

Governors

Office of the Governor, Jon Corzine, Governor of New Jersey
Office of the Governor, Edward Rendell, Governor of Pennsylvania

State Legislators

New Jersey Senate, District 4, Fred Madden, NJ Senator, Transportation Committee - Vice Chair
New Jersey Senate, District 10, Andrew Ciesla, NJ Senator, Transportation Committee
New Jersey Senate, District 12, Ellen Karcher, NJ Senator, Transportation Committee
New Jersey Senate, District 16, Walter Kavanaugh, NJ Senator
New Jersey Senate, District 23, Leonard Lance, NJ Senator
New Jersey Senate, District 24, Robert Littell, NJ Senator
New Jersey Senate, District 25, Anthony Bucco, NJ Senator
New Jersey Senate, District 26, Robert Martin, NJ Senator
New Jersey Senate, District 32, Nicholas Sacco, NJ Senator, Transportation Committee - Chair
New Jersey Senate, District 40, Henry McNamara, NJ Senator, Transportation Committee
New Jersey Assembly, District 4, David Mayer, NJ Assemblyperson, Transportation Committee
New Jersey Assembly, District 8, Francis Bodine, NJ Assemblyperson, Transportation Committee
New Jersey Assembly, District 11, Sean Kean, NJ Assemblyperson, Transportation Committee
New Jersey Assembly, District 12, Michael Panter, NJ Assemblyperson, Transportation Committee
New Jersey Assembly, District 12, Jennifer Beck, NJ Assemblyperson, Transportation Committee
New Jersey Assembly, District 16, Christopher "Kip" Bateman, NJ Assemblyperson
New Jersey Assembly, District 16, Peter Biondi, NJ Assemblyperson
New Jersey Assembly, District 19, John Wisniewski, NJ Assemblyperson, Transportation Committee - Chair
New Jersey Assembly, District 22, Linda Stender, NJ Assemblyperson, Transportation Committee – Vice Chair
New Jersey Assembly, District 23, Marcia Karrow, NJ Assemblyperson
New Jersey Assembly, District 23, Michael Doherty, NJ Assemblyperson
New Jersey Assembly, District 24, Alison Littell McHose, NJ Assemblyperson
New Jersey Assembly, District 24, Guy Gregg, NJ Assemblyperson
New Jersey Assembly, District 25, Michael Patrick Carroll, NJ Assemblyperson
New Jersey Assembly, District 25, Richard Merkt, NJ Assemblyperson

New Jersey Assembly, District 26, Alex DeCroce, NJ Assemblyperson
New Jersey Assembly, District 26, Joseph Pennacchio, NJ Assemblyperson
New Jersey Assembly, District 32, Vincent Prieto, NJ Assemblyperson, Transportation Committee
New Jersey Assembly, District 33, Brian Stack, NJ Assemblyperson, Transportation Committee
New Jersey Assembly, District 34, Thomas Giblin, NJ Assemblyperson, Transportation Committee
New Jersey Assembly, District 37, Gordon Johnson, NJ Assemblyperson, Transportation Committee
New Jersey Assembly, District 40, Kevin O'Toole, NJ Assemblyperson, Transportation Committee
Pennsylvania Senate, District 2, Christine Tartaglione, PA Senator, Transportation Committee
Pennsylvania Senate, District 6, Robert Tomlinson, PA Senator, Transportation Committee
Pennsylvania Senate, District 9, Dominic Pileggi, PA Senator, Transportation Committee
Pennsylvania Senate, District 18, Lisa Boscola, PA Senator
Pennsylvania Senate, District 20, Lisa Baker, PA Senator-Elect
Pennsylvania Senate, District 22, Robert Mellow, PA Senator
Pennsylvania Senate, District 23, Roger Madigan, PA Senator, Transportation Committee - Chair
Pennsylvania Senate, District 29, James Rhoades, PA Senator, Transportation Committee
Pennsylvania Senate, District 32, Richard Kasunic, PA Senator, Transportation Committee
Pennsylvania Senate, District 33, Terry Punt, PA Senator, Transportation Committee – Vice Chair
Pennsylvania Senate, District 37, John Pippy, PA Senator, Transportation Committee
Pennsylvania Senate, District 41, Donald White, PA Senator, Transportation Committee
Pennsylvania Senate, District 43, Jay Costa, PA Senator, Transportation Committee
Pennsylvania Senate, District 46, J. Barry Stout, PA Senator, Transportation Committee – Minority Chair
Pennsylvania Senate, District 47, Gerald LaValle, PA Senator, Transportation Committee
Pennsylvania Senate, District 49, Jane Earll, PA Senator, Transportation Committee
Pennsylvania House of Representatives, 3rd District, John Hornaman, PA Representative-Elect, Transportation Committee
Pennsylvania House of Representatives, 5th District, John Evans, PA Representative, Transportation Committee
Pennsylvania House of Representatives, 6th District, Brad Roae, PA Representative-Elect, Transportation Committee
Pennsylvania House of Representatives, 17th District, Michele Brooks, PA Representative, Transportation Committee – Majority Subcommittee Chairman on Public Transportation
Pennsylvania House of Representatives, 33rd District, Frank Dermody, PA Representative, Transportation Committee – Minority Subcommittee Chairman on Public Transpotation
Pennsylvania House of Representatives, 38th District, Bill Kortz, PA Representative-Elect, Transportation Committee
Pennsylvania House of Representatives, 40th District, John Maher, PA Representative, Transportation Committee – Majority Subcommittee Chairman on Public Transportation
Pennsylvania House of Representatives, 48th District, Timothy Solobay, PA Representative, Transportation Committee
Pennsylvania House of Representatives, 51st District, Tim Mahoney, PA Representative-Elect, Transportation Committee – Minority Subcommittee Chairman on Railroads
Pennsylvania House of Representatives, 55th District, Joseph Petrarca, PA Representative, Transportation Committee – Minority Secretary
Pennsylvania House of Representatives, 59th District, Jess Stairs, PA Representative, Transportation Committee
Pennsylvania House of Representatives, 61st District, Kate Harper, PA Representative, Transportation Committee
Pennsylvania House of Representatives, 71st District, Edward Wojnaroski, Sr., PA Representative, Transportation Committee
Pennsylvania House of Representatives, 73rd District, Gary Haluska, PA Representative, Transportation Committee

Pennsylvania House of Representatives, 78th District, Dick Lee Hess, PA Representative, Transportation Committee
Pennsylvania House of Representatives, 79th District, Richard Geist, PA Representative, Transportation Committee – Majority Chairman
Pennsylvania House of Representatives, 94th District, Stanley Saylor, PA Representative, Transportation Committee
Pennsylvania House of Representatives, 97th District, John C. Bear, PA Representative-Elect, Transportation Committee – Majority Secretary
Pennsylvania House of Representatives, 100th District, Bryan Cutler, PA Representative-Elect, Transportation Committee
Pennsylvania House of Representatives, 105th District, Ronald Marsico, PA Representative, Transportation Committee
Pennsylvania House of Representatives, 112th District, Ken Smith, PA Representative-Elect
Pennsylvania House of Representatives, 113th District, Frank Shimkus, PA Representative-Elect
Pennsylvania House of Representatives, 114th District, Jim Wansacz, PA Representative
Pennsylvania House of Representatives, 115th District, Edward G. Staback, PA Representative
Pennsylvania House of Representatives, 118th District, Frank Carroll, PA Representative-Elect
Pennsylvania House of Representatives, 122nd District, Keith McCall, PA Representative, Transportation Committee – Minority Chairman
Pennsylvania House of Representatives, 126th District, Dante Santoni, Jr., PA Representative, Transportation Committee
Pennsylvania House of Representatives, 138th District, Craig Dally, PA Representative
Pennsylvania House of Representatives, 141st District, Anthony Melio, PA Representative, Transportation Committee
Pennsylvania House of Representatives, 144th District, Katherine Watson, PA Representative, Transportation Committee
Pennsylvania House of Representatives, 148th District, Michael Gerber, PA Representative, Transportation Committee
Pennsylvania House of Representatives, 151st District, Rick Taylor, PA Representative-Elect, Transportation Committee
Pennsylvania House of Representatives, 176th District, Mario Scavello, PA Representative, Transportation Committee
Pennsylvania House of Representatives, 189th District, John Siptroth, PA Representative, Transportation Committee

County Officials

Lackawanna County Board of Commissioners, Rober C. Cordaro, Commissioner Chairman
Monroe County Board of Commissioners, Donna Asure, Commissioner Chairman
Morris County Board of Chosen Freeholders, Margaret Nordstrom, Freeholder Director
Northampton County Council, John Stoffa, County Executive
Sussex County Board of Chosen Freeholders, Gary Chiusano, Freeholder Director
Warren County Board of Chosen Freeholders, Everett Chamberlain, Freeholder Director
Wayne County Board of Commissioners, Anthony Herzog, Commissioner Chairman

Municipal Officials

Andover Borough, NJ, Shirlee Bollard, Mayor
Andover Township, NJ, Tom Walsh, Mayor
Barrett Township, PA, Phil Dente, Chairman of the Board of Supervisors
Blairstown Township, NJ, Steven Lance, Mayor
Byram Township, NJ, Eskil (Skip) Danielson, Mayor

City of Scranton, PA, Chris Doherty, Mayor
Clifton Township, PA, Theodore Stout, Chairman of the Board of Supervisors
Coolbaugh Township, PA, Robert Zito, Chairman of the Board of Supervisors
Covington Township, PA, Thomas Yerke, Chairman of the Board of Supervisors
Delaware Water Gap Borough, PA, Walt Conway, Mayor
Denville Township, NJ, Gene Feyl, Mayor
Dunmore Borough, PA, Patrick Loughney, Mayor
East Stroudsburg Borough, PA, Armand Martinelli, Mayor
Elmhurst Township, PA, Robert Parkins, Chairman of the Board of Supervisors
Frelinghuysen Township, NJ, Thomas Charles, Mayor
Green Township, NJ, Roger Michaud, Mayor
Hopatcong Borough, NJ, Richard Hodson, Mayor
Knowlton Township, NJ, Frank Van Horn, Mayor
Lehigh Township, PA, Dan Cuccherini, Chairman of the Board of Supervisors
Moscow Borough, PA, Daniel Edwards, Mayor
Mount Pocono Borough, PA, Francis O'Boyle, Mayor
Paradise Township, PA, Dennis Keesler, Chairman of the Board of Supervisors
Pocono Township, PA, Patrick Ross, Chairman of the Board of Supervisors
Roaring Brook Township, PA, Anthony Jordan, Chairman of the Board of Supervisors
Roxbury Township, NJ, Martin Schmidt, Mayor
Smithfield Township, PA, Brian Barrett, Chairman of the Board of Supervisors
Stanhope Borough, NJ, Diana Kuncken, Mayor
Stroud Township, PA, Larry Sebring, Chairman of the Board of Supervisors
Tobyhanna Township, PA, John Kerrick, Chairman of the Board of Supervisors
Upper Mount Bethel Township, PA, Andrew Nestor, Chairman of the Board of Supervisors

Federal Agencies

Delaware Water Gap Recreational Area, William Laitner
Federal Emergency Management Agency, Steve Kempf, Regional Director, Region 2
Federal Emergency Management Agency, Patricia Arcuri, Acting Regional Director, Region 3
Federal Railroad Administration, Joseph Boardman, Administator
Federal Transit Administration - Region II, Rebecca Reyes-Alicea, Community Planner
Federal Transit Administration - Region III, Karen Roscher
Federal Transit Administration - Region III, Susan Borinsky, Regional Administrator
Federal Transit Administration, Region II, Letitia Thompson, Regional Administrator
Federal Transit Administration, Region II, Irwin Kessman, Director, Office of Planning and Program Development
National Park Service, Kip Hagen, Superintendent Steamtown NHS
US Army Corps of Engineers, James Haggerty, Chief-Eastern Permit Section
US Army Corps of Engineers, A. Forester Einarsen, Office of Environmental Policy
US Army Corps of Engineers, Samuel Reynolds, Chief, Application Section II
US Coast Guard, Environmental Management Division (G-SEC-3), Ed Wandelt, Chief
US Department of the Interior, Andrew Raddant, Regional Environmental Officer
US Department of the Interior, Fish & Wildlife Service, Clifford Day, Administrator, NJ Field Office
US Environmental Protection Agency, Office of Federal Activities, Anne Norton Miller, Acting Director
US Environmental Protection Agency, Alan Steinberg, Regional Administrator, Region 2
US Environmental Protection Agency, Donald Welsh, Regional Administrator, Region 3
US Department of the Interior, Fish & Wildlife Service - NJ Field Office, Darren Harris, Supervisor
US Department of the Interior, Fish & Wildlife Service, David Densmore, Project Leader, PA Field Office

US Department of the Interior, Office of Environmental Policy and Compliance, Willie Taylor, Director
US Department of the Interior, Michael Chezik, Regional Environmental Officer, Philadelphia Region
US National Park Service, Fran Mainella, Director

Regional Agencies

Delaware River Joint Toll Bridge Commission (DRJTBC), Frank McCartney, Executive Director
North Jersey Transportation Planning Authority, Joel Weiner, Executive Director
Northeastern Pennsylvania Alliance, Kurt Bauman
Northeastern Pennsylvania Alliance, Brian Langan
Pennsylvania Northeast Region Rail Authority, Robert Hay, Chairman
Pennsylvania Northeast Region Rail Authority, Larry Malski, Chief Operating Officer

State Agencies

New Jersey Department of Agriculture, Charles Kuperas, Secretary
New Jersey Department of Community Affairs, Susan Bass Levin, Commissioner
New Jersey Department of Environmental Protection, Lisa Jackson, Commissioner
New Jersey Department of Environmental Protection, Robert Cubberly, Land Use Regulation
New Jersey Department of Environmental Protection, Div. Of Parks & Forestry, Herbert Lord, Specialist
New Jersey Department of Transportation, Kris Kolluri, Commissioner
New Jersey Historic Preservation Office, Dorothy Guzzo, Administrator State Historic Preservation Office
New Jersey State Historic Preservation Office, Charles Scott
Pennsylvania Department of Conservation and Natural Resources, Justin Newell, Environmental Review Specialist
Pennsylvania DOT Bureau of Public Transportation, Edwin Marshall, Transportation Planning Manager
Pennsylvania DOT Bureau of Public Transportation, Toby Fauver
Pennsylvania DOT Bureau of Rail Freight, Ports & Waterways, Robert A. McNary
Pennsylvania Fish & Boat Commission, Div. Of Env. Services, Christopher Urban, Chief, Natural Diversity Section
Pennsylvania Game Commission, Bureau of Land Management, Kevin Mixon, Division of Env. Plng. & Habitat Protection
Pennsylvania Historical and Museum Commission, Barbara Franco, Executive Director

County Agencies

County of Lackawanna Transit System (COLTS), James Burke, Executive Director
Lackawanna County, James Finan, Director of Transportation
Lackawanna County Regional Planning Commission, Harry Lindsay, Executive Director
Monroe County Planning Commission, John Woodling, Director
Monroe County Transportation Authority, Peggy Howarth, Executive Director
Morris County DOT, Gerald Rohsler, Executive Director
Pike County Planning Commission, Peter Wolfhurst, Executive Director
Warren County Planning Board, David Dech, Director
Wayne County Department of Planning, Edward Coar, Director

Libraries

Albright Memorial Library (Scranton)
Green Ridge Branch Library (Scranton)
Providence Branch Library (Scranton)
Scranton Public Library (Scranton)

North Pocono Public Library (Moscow)
Pocono Mountain Public Library (Tobyhanna)
Hughes Library (Stroudsburg)
Kemp Library (East Stroudsburg University)
Smithfields Branch (Stroudsburg)
Catherine Dickson Hofman Library (Blairstown)
Warren County Library Headquarters (Belvidere)
Sussex County Library (Newton)
Dennis Memorial Library (Andover)
Morris County Library (Whippany)

Other Agencies/Organizations

Martz Lines, Ted Patton, Vice President
Norfolk Southern Corportation, James Klaiber, Manager - Corporate Affairs
Pocono Mountains Vacation Bureau, Robert Uguccioni, Executive Director
Tobyhanna Army Depot, Tracy Ellis, Commander

Note: This list will be updated between the Draft EA and the Final EA to reflect the upcoming changes to elected officials and committee appointments.

6.0 LIST OF PREPARERS

LIST OF FIRMS/AGENCIES

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