

# PASSAIC COUNTY

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## MOVING PASSAIC COUNTY

### TRANSPORTATION ELEMENT OF THE PASSAIC COUNTY MASTER PLAN

**FINAL PLAN**

OCTOBER 2012

Prepared By:

Passaic County Department of Planning and Economic Development  
with assistance from  
Parsons Brinckerhoff



## MOVING PASSAIC COUNTY

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**2012**

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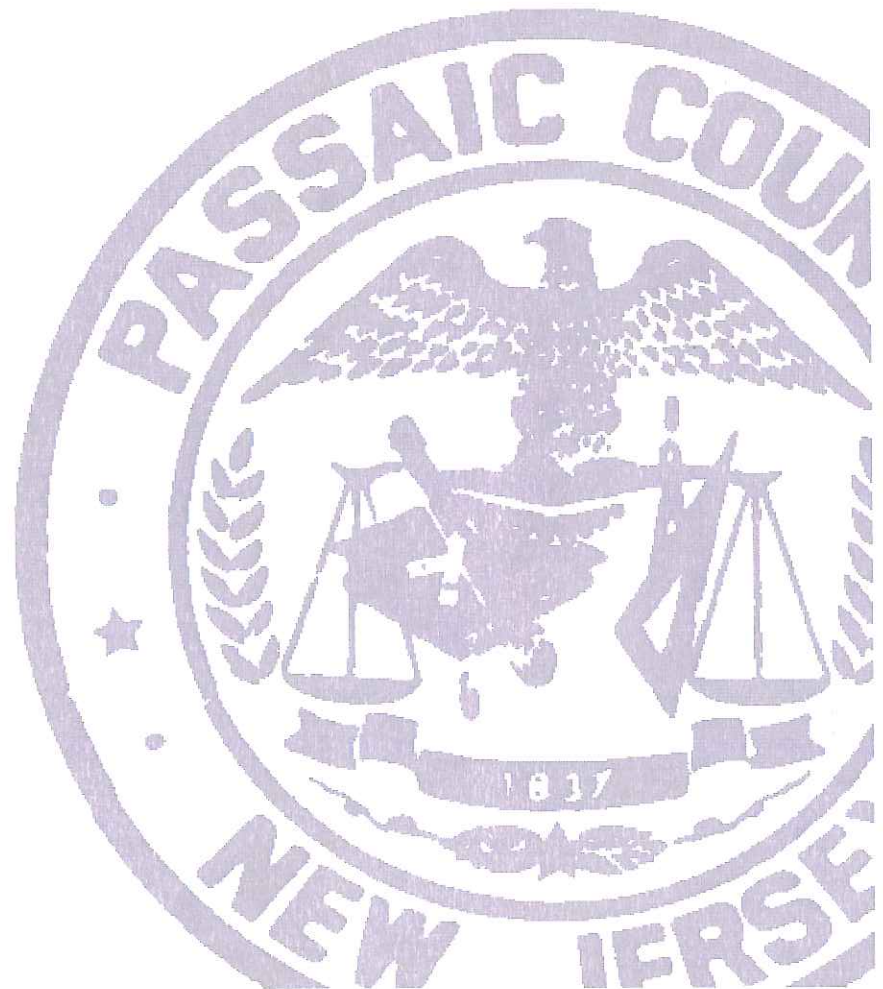


## PASSAIC COUNTY TRANSPORTATION ELEMENT

This Transportation Element of the Passaic County Master Plan was adopted by the Passaic  
County Planning Board  
at a public meeting held on October 18, 2012



Michael La Place, AICP/PP  
Planning Director / Planning Board Secretary



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# Section 1 - Executive Summary

## Moving Passaic County

*Moving Passaic County* outlines the policies, priorities, and projects developed as part of the Transportation Element Update of the Passaic County Master Plan. The Transportation Element addresses all aspects of the transportation system including pedestrians, bicyclists, motor vehicles, public transportation, waterway accessibility, air travel access and freight movement. The plan outlines a vision for a more cohesive transportation system that maximizes investment, promotes efficiency and provides more choice. Recommendations reflect priorities of local, state and regional stakeholders along with strategies that support economic development, environmental sustainability and mobility needs throughout the County.

## Background

The demands on the County's transportation system have changed dramatically since the Transportation Element was last prepared in 1982. Population growth and shifts in employment have created more congested traffic conditions. County and local roadways have been critical in meeting the need for more local trips and intra-county commuting. Competition between traditional bus services and non-traditional jitney service in the more urbanized areas of the County has further intensified traffic congestion. A growing priority to redevelop around transit centers, e-commerce, telecommuting and flexible work hours help to mitigate the existing conditions and meet future growth.

Land use policies have also changed the role of the County's transportation system in new ways since the 1980s. The limitations on development set forth by the Highlands Water Protection and Planning Act of 2004 and the subsequent *Highlands Regional Master Plan* (2008) could increase development pressures in the more urbanized portions of the County. Existing infrastructure will need to operate more efficiently in order to advance policy goals and support the local and regional economies.

## The Public Planning Process

The planning process for *Moving Passaic County* combined a comprehensive analysis of the county transportation network with an extensive local dialogue about transportation needs and priorities. This work began with a review of current and future land use plans and initiatives that informed a scenario analysis tool used to gauge the impact of future land use policies on the transportation system through the year 2035. Mapping was a key tool in communicating with the public and interested stakeholder groups. These maps were used to present technical findings related to each transportation mode throughout the planning process and record comments from the public as they related to specific transportation facilities.

## Plan Goals

The plan is intended to achieve four broad goals:

1. Bring the County's transportation system in line with current and anticipated future needs;
2. Help the County become more transit-friendly and reduce reliance on the automobile;

3. Integrate transportation with local land-use plans to better support each community’s vision for its future;
4. Work toward the creation of “Complete Streets” so that our roadways better serve all users, including pedestrians, bicyclists, transit users, senior citizens, and persons with disabilities.

## **Key Themes**

Six key themes define the framework for this plan:

- **Complete Streets**
- **Bicycle, Pedestrian and River Access**
- **Moving Goods and People**
- **Public Transportation**
- **Motor Vehicle Circulation**
- **Scenic and Historic Byways**

These themes were used to structure the data gathering and analysis for the plan, as well as to organize the findings and recommendations presented in the master plan. The themes were widely shared with the public and stakeholder organizations, and used to identify needs and gaps in the transportation system. The first, Complete Streets, is an overarching theme that runs throughout the plan and is incorporated in a new corridor classification system and design guidelines for County roadways.

## **Scenario Planning**

Testing the impact of various infrastructure, demographic, land use, and policy changes was achieved through scenario planning that enabled the project team to a range of potential outcomes. Two scenarios were tested using the North Jersey Regional Transportation Model-Enhanced (NJRTM-E), the travel

demand model for northern New Jersey. The first scenario shifted future population and employment growth into redevelopment and reinvestment areas highlighted during the municipal interview process and identified in municipal master plans and redevelopment plans. Results of the first scenario provided a baseline of the affects of future growth on the existing transportation system. The second scenario promoted Transit Oriented Development (TOD) for new population and employment centers through higher levels of mass transit use and more efficient access to mass transit facilities for pedestrians and bicyclists. The second scenario also included measures that would add efficiency to the roadways in the form of Intelligent Transportation Systems (ITS) techniques such as traffic signal coordination. The scenario planning tool demonstrated the potential impacts of the land use policies promoted in the Transportation Element and some of the issues that require further analysis in order to meet future demands. An additional benefit of scenario planning was the dialogue developed between the County, NJTPA and NJ Transit on the role public transportation plays in the long range goals for Passaic County.

## **Complete Streets**

The goal of Complete Streets is to provide more access and choice to residents, commuters and visitors. Complete Streets ultimately make it easier to walk through a local downtown, bike to a park, drive to work safely, or easily connect to a train or bus. Building and maintaining an efficient transportation system requires meeting the needs of all transportation users, with an emphasis on strengthening the connection between transportation and land use. The Complete Streets Guidelines (see Appendix A) provide the



# I. Executive Summary

mechanism for designing improvements along County roadways based on the context of the surrounding communities. The guidelines also take into account the impacts of flooding by promoting the principles of “Green Streets” to help limit the impacts on the environment while creating safe and attractive public places in our communities. The remaining sections of the Transportation Element provide countywide priorities that provide the context for using the Complete Streets Guidelines.

## **Bicycle, Pedestrian and River Access**

Enhanced bicycle and pedestrian travel provides an avenue to address energy independence, public health and the environment by creating more sustainable places to live and work. The diverse landscape of urban, suburban and rural communities that make up the County pose a wide array of needs and barriers to bicycling and pedestrian access. Identifying issues and trends in the areas of safety, public health, access, and connectivity help in developing the proper policies and goals for the future.

The Bicycle, Pedestrian and River Access section outlines priority corridors that will create a cohesive county-wide framework of pedestrian, bicycle, and river access, while the Complete Streets Guidelines provide the template for designing facilities. Creating a network of on- and off-road trails provides the means to expand access to key recreational assets such as the Morris Canal Greenway, Appalachian Trail and the various waterways that define Passaic County. These connections open new recreational opportunities for residents and visitors and create a foundation to promote economic development through tourism.

## **Public Transportation**

The Public transportation system in Passaic County covers all sixteen municipalities through a coordinated network of buses, commuter rail lines and para-transit services. The system provides access to jobs, shopping, medical facilities, educational institutions, recreational destinations, and also supports a large commuter population that either lives or works outside of the County. Connections to large business and residential centers such as Newark, Jersey City and New York City makes the public transportation system a key asset to leverage as the County grows in population and employment.

New Jersey Transit (NJT) operates two passenger rail lines and provides bus service on over 30 bus lines as the primary transit agency in the County. The public transportation system is augmented by private and locally operated buses. Several shuttle systems service the elderly, individuals with special needs, low-income residents, and individual businesses. Many of the recommendations in this plan look to strengthen the existing system to underserved areas while providing new or enhanced service to potential redevelopment areas that would increase the efficiency of the system and create new centers of activity.

## **Motor Vehicle Circulation**

The Passaic County roadway systems is responsible for delivering people to work, educational opportunities, local goods and services, shopping, and recreational trips accounting for more 90% of trips made. The roadway system also moves approximately 97% of the goods moved in and through the County, making it the backbone of the local economy. The higher level roadways made up of interstate, U.S., state, and County roadways accounts for approximately 520 total lane-miles.

One-third of the higher level system is on County roadways, which makes the County system key in delivering both people and goods. Maintaining a safety and efficiency roadway system are key goals as the New Jersey and local economies recover. Capital improvements will need to be linked to land use decisions and incorporate technology such as Intelligent Transportation Systems (ITS) to ensure they maintain their reliability.

### **Moving Goods and People**

Goods movement is an essential asset of Passaic County. With \$57 billion<sup>1</sup> of freight flowing into, out of and within the County annually, Passaic County's freight system is vital to its economy and plays a key role as the County grows over the next 20 years. The goal of Moving Goods and People section of the plan is to direct the creation of a freight system that promotes economic activity and ease of freight movement in a safe and efficient manner. This can be done by identifying corridors that should consider priority treatments for freight access to freight activity centers and major shipping routes such as Interstate Routes 80 and 287.

It also includes supporting rail projects that will increase the opportunities to carry a larger percentage of freight by rail by upgrading facilities to industry standard and connecting them to regional trade partners. The Moving Goods and People section includes a profile of freight activity, an inventory of the existing freight system and recommendations for opportunities to expand access to the regional freight system.

### **Scenic and Historic Byways**

The Scenic and Historic Byways section of the plan outlines opportunities for protecting, promoting and enhancing transportation corridors that define the heritage and natural beauty of Passaic County. An inventory of each of the 26 byways highlights the importance of each corridor along with their outstanding scenic, natural, historic and/or cultural assets. The method for selecting routes sets the foundation for a future Heritage Tourism Element of the Passaic County Master Plan. The goals and objectives for the byways look to provide a framework for ongoing identification, protection and promotion of scenic and historic resources through on-going County processes. Scenic Byways Program at the state and federal levels hold potential for additional promotion and enhancements along each byway.

### **Conclusions**

*Moving Passaic County* provides a set of priorities and recommendations to build a comprehensive transportation network for the future of Passaic County. The key concepts focus potential investments in areas where they can positively impact the environment, economic development, efficiency of the existing transportation system, and quality of life for all Passaic County residents. The Complete Streets theme sits at the center of all concepts and sets the precedent for safely accommodating opportunities for all users and reinforcing the connection between land use and transportation.

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1 2007 TranSearch forecasted to 2010

# Section 2 - Introduction, Background and Trends

## Moving Passaic County

*Moving Passaic County* is the Transportation Element Update, which is intended to serve as a blueprint for the County's future transportation system including roads, air travel access, mass transit, waterway accessibility, bicycle and pedestrian facilities, and freight movement. This plan sets forth guidelines and priorities for future investments needed to ensure mobility for our residents, support economic vitality, and contribute to a high-quality of life throughout the County over the next several decades. The plan is the result of a broad collaborative effort involving local governments, area transportation agencies, major employers, interested organizations, and county residents.



Complete Streets are streets designed for all users, all modes and all ability levels. They balance the needs of drivers, pedestrians, bicyclists, transit vehicles, and goods movement, based on the roadway context.

## Plan Goals

The plan is intended to achieve four broad goals:

1. Bring the County's transportation system in line with current and anticipated future needs;
2. Help the County become more transit-friendly and reduce reliance on the automobile;
3. Integrate transportation with local land-use plans to better support each community's vision for its future;
4. Work toward the creation of "Complete Streets" so that our roadways better serve all users, including pedestrians, bicyclists, transit users, senior citizens, and persons with disabilities.

In the past, many standard transportation master plans have focused on accommodating automobile travel through investments in roadway capacity. In line with current thinking about the broader role of transportation in our communities, this plan takes a different approach. Viewing transportation as a cornerstone of community livability, it outlines recommendations for improving the fit between County roadways and their surroundings to enhance safety and quality of life. Instead of focusing on new highway capacity, the Transportation Element recommends a variety of strategies for expanding travel options, including walking, bicycling and transit use. The plan strengthens the link between transportation and land use, with special attention to the potential for transit-oriented development as well as freight transportation needs. It also identifies opportunities to foster tourism through attention to the county's scenic and historic byways. The goal is to improve the capacity and performance of the overall intermodal circulation system.



## Key Themes

Six key themes define the framework for this plan:

- **Complete Streets**
- **Bicycle, Pedestrian and River Access**
- **Public Transportation**
- **Motor Vehicle Circulation**
- **Moving Goods and People**
- **Scenic and Historic Byways**

These themes were used to structure the data gathering and analysis for the plan, as well as to organize the findings and recommendations presented in the master plan. The themes were widely shared with the public and stakeholder organizations, and used to identify needs and gaps in the transportation system. The first theme, Complete Streets, is an overarching theme that runs throughout the plan and is incorporated in a new corridor classification system and Complete Streets Guidelines for County roadways.

## Planning Process

The planning process for *Moving Passaic County* has combined a comprehensive analysis of the county transportation network with an extensive local dialogue about transportation needs and priorities. Technical findings and stakeholder input were integrated to produce a series of maps devoted to each of the major plan themes. These maps evolved over the course of the planning process as new information was generated, forming a record of current conditions and improvement priorities by location. Other facets of the technical work included a review of current and future land use plans and initiatives, to develop transportation models indicating how various investments could impact the transportation system in the future.

## Vision

Overall the vision of this plan follows many of the State’s initiatives and policies. The Plan supports and is consistent with the New Jersey State Development and Redevelopment Plan (SDRP) policies with regard to transportation, and the New Jersey Department of Transportation (NJDOT) Complete Streets Policy:

**Public Safety** – ensuring that Passaic County roadways are safe for all users

**Mobility** – roadways can support and deliver a decent Level of Service (LOS) to its users

**Fix-It-First** – ensuring that the Passaic County roadway system remains in a state of good repair

**Transportation and Environmental Protection** – solutions that are sustainable and environmentally friendly

**Multi-modal** – solutions that account for all modes of transportation

**Goods Movement** - importance of goods movement to the economy of New Jersey

The plan also supports and is consistent with New Jersey Future in Transportation (NJFIT) goals of balancing between ease of travel with public safety and quality of life, which includes implementation of Complete Streets and recognizes the linkage between land use decisions and transportation consequences.

## Public Involvement

The public was an integral part of the data gathering and needs assessment for the plan. The following avenues were used to engage stakeholders, local officials and the general public:

- In-depth interviews with local government representatives from each municipality to

## 2. Introduction, Background and Trends

identify transportation needs, economic development priorities, and opportunities for coordination;

- Two rounds of informal public meetings. During the first round, in November 2010, open houses were held in six locations, including West Milford, Totowa, William Paterson University in Wayne, the Passaic County Community College Wanaque Campus, the City of Passaic Senior Center, and the NJ Community Development Corporation in Paterson. During the second round, in April 2011, meetings were held in five locations, including West Milford, Pompton Lakes, Wayne, and the NJ Community Development Corporation in Paterson. The second set of meetings presented findings from the open houses and additional feedback on the five main themes.
- Discussions with partner organizations including NJ Transit, para-transit providers, the Passaic County History and Tourism Board, and local boards and commissions;
- Outreach meetings with major institutional users of the transportation system, including William Paterson University and Montclair State University;
- Telephone interviews with selected major employers;
- Information placed on the Passaic County website; and
- A Facebook page devoted to the plan.

### Plan Organization

The remainder of this plan is organized according to the six themes identified above: Complete Streets; Bicycle, Pedestrian and River Access; Public Transportation; Motor Vehicle Circulation; Moving Goods and People; and Scenic and Historic Byways.

Recommendations for each theme are presented at the end of each section in a table and/or maps that highlight priority areas throughout the County. The appendices provide additional information on the Complete Streets Guidelines, detailed guidance on "Green Streets" and results from transportation modeling scenarios outlined later in this section.

The next portion of this section outlines some of the **Background and Trends** that define transportation needs in each of the six key themes.



Students and faculty provide feedback on transportation issues during public open house meetings at William Paterson University.



Young students from Garrett Morgan Academy in Paterson learned about transportation planning while contributing their ideas for *Moving Passaic County*.

## Background

The context for the Transportation Element has changed dramatically since the last plan was prepared in 1982. Population and employment shifts have resulted in new traffic patterns focusing on local trips and intra-county commuting. Traffic congestion has increased, with a disproportionate burden of roadway travel on County and local roadways. Non-traditional jitney services are now competing with traditional transit service, and adding to congestion in older urban centers such as Paterson. Countering these trends are the growth of e-commerce, flexible work hours in some industries, and employees tele-commuting. Redevelopment of older central business and industrial districts is a growing priority, with new interest in housing near transit stations.

In addition to these physical and behavioral changes, the policy context for transportation planning has shifted significantly since the 1980s. The Highlands Water Protection and Planning Act of 2004 and the *Highlands Regional Master Plan*, approved in 2008, limit development in preservation areas within the county. This could increase development pressures in the remaining developable areas as the New Jersey economy recovers. The Highlands Master Plan may also limit expansion of transportation facilities, including paved trails, shoulder bike lanes and parking areas in the affected parts of the County. Addressing environmental concerns about climate change may also profoundly affect future transportation policies.

While many of these changes point to the importance of transit investment for the County's future, the transit system has not kept pace with increased travel demand. In recent years, funding for transit investments, as well as operations, has

become increasingly constrained. For both the transit and highway systems, fiscal pressures have resulted in a statewide and national emphasis on maintenance (Fix-It-First) and repairs over expansion of facilities. Although these factors may lessen as the economy recovers, it is likely that future public funding for transportation will continue to be constrained and there will be a need to "do more with less." Looking ahead, opportunities to invest in new or existing facilities must provide efficient connections to the surrounding land uses and other transportation choices. Creating centers of activity with safe mobility choices is the key to making the entire transportation system more efficient and reducing the burden of capital investment in the future.

A coordinated transportation network provides the framework for investment in Passaic County communities while staying connected to the resources needed for economic development and improvements to the quality of life of all residents.

## Population and Employment

In order to effectively plan for the County's transportation network, it is important to understand demographic conditions and population trends. The County's current population is close to 501,000, which represents about six percent of the state population. The North Jersey Transportation Planning Authority (NJTPA) projects that the county's population will grow to 609,000 by 2035, an increase of about 108,000 people or 22%. The existing investments and transportation services as well as the land use restrictions of the *Highlands Water Protection and Planning Act* dictate that most of the county's population growth will occur in the urban areas. The NJTPA projects that the bulk of the County's population growth will occur in the urban

## 2. Introduction, Background and Trends

areas, with approximately 42,000 new residents in Paterson, 23,000 in Passaic, and 21,000 in Clifton, as well as 13,000 in Wayne.

The American Community Survey (ACS) for 2007-2009 shows the County's median income at \$54,908. This is considerably below the income for the NJTPA region as a whole and for several neighboring counties (Table 2.1), underscoring the importance of affordable public transit, as well as pedestrian and bicycle options for meeting basic mobility needs.

An estimated 47.2% of the County population is white, 11.6% is African-American, and 4.6% is Asian, according to the ACS. Among all races, more than one-third of the population (35.2%) identified their ethnicity as Hispanic/Latino. The percentage of Hispanic/Latino residents is much higher than for New Jersey (16.3%) and the NJTPA region overall (18.2%), and is exceeded only by Hudson County (40.6%) among the surrounding counties. The high concentration of Hispanic/Latino residents indicates the importance of providing Spanish-language or bilingual information on transportation services.

The ACS puts the County's median age at 36.2, which is below that of the NJTPA region overall (39.2). There are about 161,000 total households in Passaic County, with 35% having at least one person under 18 years old and 25% having at least one person over 65 years old. These figures, while similar to the NJTPA region as a whole, show the importance of providing transportation alternatives to meet the needs of citizens with limited mobility options. The average household size is 3.02, which exceeds the state average (2.69) and is the highest of all the surrounding counties. Together with the low median age, the household size figure suggests a relatively high demand for school transportation in the County. Safe Routes to Schools programs and Complete Streets, including supportive investments in sidewalks surrounding schools, can help to meet some of this need. Land use planning that encourages community schools in walking distance of residences, and local regulations that promote walkway and trail connections between developments can also help to ensure that walking and biking are viable transportation choices for the

**Table 2.1: Median Income Compared to Surrounding Regions**

Median Income	
NJ	\$ 69,240.00
NJTPA	\$ 75,308.92
Bergen	\$ 82,435.00
Essex	\$ 32,522.00
Hudson	\$ 54,974.00
Morris	\$ 97,299.00
<b>Passaic</b>	<b>\$ 54,980.00</b>

Source : US Census Bureau, 2007-2009 American Community Survey

school trip. A number of corridors were identified as priority routes for bicycle and pedestrian travel in the **Bicycle, Pedestrian and River Access** section of this plan. Considering parts of the County are very rural, this translates to very dense urban areas that put an even larger emphasis on connected neighborhoods through bicycle, pedestrian and mass transit facilities.

An estimated 44.6% of Passaic County’s employed residents worked within the County. Another 47.9% worked in another New Jersey county, and the remaining 7.5% worked out of state. Table 2.2 shows the place of work for employed Passaic County residents as of 2007, showing a greater demand for jobs outside the County than any of the surrounding jurisdictions.

The New Jersey Department of Labor (NJDOLE) estimated the County’s total employment in 2006 at 201,500 jobs. This figure was projected to grow to 209,400 jobs by 2016. Industries with significant existing employment in the County include manufacturing, wholesale and retail

trade, educational services, health care and social assistance, and government, as well as other services. These industry sectors are anchored by three colleges and two universities, St. Joseph’s Regional Medical Center, the County of Passaic and several major non-profits.

Table 2.3 shows the NJDOLE’s projected trends in county employment by industry through 2016. Manufacturing is expected to decline from 22,650 jobs in 2006 to 17,500 in 2016. Decreases are also projected in wholesale trade and in transportation and warehousing. These trends could result in decreased freight trips originating or terminating in the County. This is a trend that Passaic County would like to see reversed. Passaic County would like to retain and grow freight-related jobs. The County advocates for growth through better rail freight connections and truck corridors/routes as detailed in the **Moving Goods and People** section of the plan.

The industries with the largest projected growth in absolute terms are health care and social assistance, educational services, accommodation

**Table 2.2: Employed Residents by Place of Work**

	Worked in State of Residence		Worked in County of Residence	
	Number	Percent	Number	Percent
NJ	3,606,187	86.9%	2,257,498	54.4%
NJTPA	2,761,087	88.9%	1,552,499	50.0%
Bergen	344,997	77.7%	246,870	55.6%
Essex	300,643	87.1%	182,940	53.0%
Hudson	218,808	71.5%	141,384	46.2%
Morris	228,955	92.3%	140,151	56.5%
<b>Passaic</b>	<b>204,611</b>	<b>92.5%</b>	<b>98,656</b>	<b>44.6%</b>

Source : US Census Bureau, 2007-2009 American Community Survey



## 2. Introduction, Background and Trends

**Table 2.3: Existing and Projected Employment by Industry, Passaic County (NJDOL)**

Industry Title	2006 Estimated Employment	2016 Projected Employment	Numeric Change	Percent Change	Outlook
Total Employment, All Jobs	201,500	209,400	7,900	3.9	Stable
Utilities	550	550	-50	-5.1	Declining
Construction	8,900	9,350	500	5.4	Growing
Manufacturing	22,650	17,500	-5,150	-22.7	Declining
Wholesale Trade	12,000	11,300	-700	-5.7	Declining
Retail Trade	24,700	24,800	100	0.3	Stable
Transportation and Warehousing	3,650	3,500	-200	-5	Declining
Information	2,700	2,500	-200	-6.6	Declining
Finance and Insurance	6,550	7,200	650	9.7	Growing
Real Estate and Rental and Leasing	2,400	2,650	250	10.3	Growing
Professional, Scientific, and Technical Services	7,600	8,200	550	7.5	Growing
Management of Companies and Enterprises	4,850	5,200	350	7.1	Growing
Administrative and Support and Waste Management and Remediation	12,700	13,850	1,200	9.3	Growing
Educational Services	21,350	23,650	2,300	10.7	Growing
Health Care and Social Assistance	23,450	27,450	3,950	16.7	Growing
Arts, Entertainment, and Recreation	1,150	1,650	500	42.2	Growing
Accommodation and Food Services	9,450	11,250	1,800	19	Growing
Other Services	8,250	9,700	1,450	17.5	Growing
Government	14,000	14,500	500	3.5	Stable
Total Federal Governemt	1,250	1,200	-50	-4.8	Declining
Total State Government	3,550	4,000	450	12.3	Growing
Total Local Governemt	9,200	9,300	100	1.2	Stable

Source : NJ Department of Labor - Industry Employment Projections

and food services, and administrative and support and waste management and remediation. Modest growth is also expected in finance and insurance, professional, scientific and technical services, arts, entertainment, recreation, and other services. The potential to accommodate some of these diverse growth industries in transit-oriented redevelopment sites should be explored. An example would be reintroducing a passenger rail station adjacent to the St. Joseph’s Regional Medical Center in the City of Paterson. The facility is currently undergoing a multi-million dollar reinvestment, aligns with a key growth industry and already stands as the County’s largest employer.

**Travel Characteristics**

Passaic County has the lowest share of workers commuting out-of-state among any of the surrounding counties. It underscores the importance of mobility strategies focused on intra-county commuters, such as maintaining viable bus services, making operational improvements to better connect

existing roadways, and creating a network of bicycle compatible roadways. Promoting mixed-use, transit-oriented developments that will allow more residents to live near their workplaces, can help build upon existing circulation systems and help introduce new ones. Promoting Complete Streets principles is key to allowing the County’s roadways system to support these intra-county trips.

The median commute time for Passaic County residents is about 27 minutes. An analysis of commute times indicates that that over 20% of the County’s work trips were under 15 minutes and 9% were under 10 minutes. This reinforces the need to strengthen local services and amenities along County roadways, such as local bus connections and cross-county projects such as the Passaic-Bergen Commuter Rail Service Restoration project discussed in the **Public Transportation** section of this plan. Some of these relatively short trips are also ideal candidates for future bicycle commuting, using **Complete Streets** and other expanded bicycle facilities proposed in this plan.

**Table 2.4: Means of Transportation to Work**

	<b>Drove Alone</b>	<b>Carpooling</b>	<b>Public Transportation</b>	<b>Walked</b>	<b>Bicycle</b>
	Percent	Percent	Percent	Percent	Percent
NJ	71.6%	9.0%	10.5%	3.3%	0.3%
NJTPA	72.4%	8.7%	9.8%	3.1%	0.2%
Bergen	70.4%	8.1%	13.3%	2.9%	0.2%
Essex	61.5%	9.5%	19.8%	4.4%	0.1%
Hudson	39.8%	8.7%	38.5%	9.1%	0.3%
Morris	79.6%	7.6%	4.6%	2.0%	0.1%
<b>Passaic</b>	<b>71.0%</b>	<b>8.7%</b>	<b>9.1%</b>	<b>4.0%</b>	<b>0.2%</b>

Source : US Census Bureau, 2007-2009 American Community Survey

## 2. Introduction, Background and Trends

The majority of Passaic County’s employed residents (71.1%) drove alone to work as listed in Table 2.4. Public transportation and carpooling had shares of 9.1% and 8.7% respectively and 4% walked to work. The number of people walking to work is the third highest in the region and underscores the importance of having a well connected and accessible pedestrian network in the County.

Passaic County’s mode shares for commuting are similar to those for the state and region, with the transit share slightly lower and the walk share slightly higher. The lower transit share points to the need to follow through on the County’s objective of creating better transit connections to capture a larger mode share through a number of initiatives, including TOD principles in those areas identified as redevelopment areas, reverse commute job opportunities and the application of Complete Streets.

One in six households in Passaic County had no car, and therefore relied on other transportation modes or on rides from others (see Table 2.5). This fact combined with a lower average household income, when compared to the state as a whole, highlights the essential role that transit services provide, and

the need to strengthen the system by making it more accessible and affordable to County residents.

### Scenario Planning

Scenario planning enabled the project team to evaluate a range of potential outcomes and visions by testing a mix of infrastructure, demographic, land use, and policy changes. The mix of changes was the outcome of the existing transit system, future transit enhancements, input from studies, visions plans and redevelopment plans to develop a likely mix of land use, demographics and infrastructure improvements. These scenarios were tested using the North Jersey Regional Transportation Model-Enhanced (NJRTM-E), the travel demand model for northern New Jersey.

Two scenarios were tested to determine the potential impacts on the transportation system. The first scenario (Future Baseline) shifted population and employment projections into redevelopment and reinvestment areas highlighted during the municipal interview and master plan review processes (see Map 2.1 at the end of this section). The Future Baseline accounted for a five (5) percent increase in mass transit service to simulate future

**Table 2.5: Cars Per Household**

	<b>PASSAIC COUNTY, NEW JERSEY</b>	
<b>Number of Vehicles</b>	<b>Number</b>	<b>Percent</b>
0 cars	26,685	16.9
1 vehicle	56,483	35.7
2 vehicles	52,257	33.1
3 vehicles	14,755	9.3
4 or more vehicles	7,838	5.0
<b>Total Households</b>	<b>158,018</b>	<b>100</b>

Source : US Census Bureau, 2007-2009 American Community Survey



system efficiencies. The purpose of this scenario was to align growth with local priorities and determine the baseline impacts on transit and roadway system as Passaic County grows. The second scenario promoted Transit Oriented Development (TOD) alternative for new population and employment centers. The transit system is enhanced to support several TOD policies in the vicinity of development areas including improved peak, off-peak and reverse commute services on both the bus and rail system; better access to park-and-ride facilities; better walk-to-transit options and Transportation Systems Management improvements including Intelligent Transportation Systems (ITS) enhancements in the form of coordinated signal systems. The process created a new dialogue with the NJTPA and NJTransit on potential expansion of mass transit service and a

tool to communicate long-term goals and needs for Passaic County. Table 2.6 provides a brief overview of the policies used to create the TOD Alternative. More detailed information on the parameters used to develop the scenarios, and the model results can be found in Appendix C.

The major findings are encouraging when the TOD Alternative is compared to the Future Baseline Scenario:

- Transit ridership in Passaic County increases by 5%;
- Total Vehicle Hours of Travel (VHT) are reduced by over 3%;
- Total Vehicle Miles of Travel (VMT) are reduced by almost 1%;

**Table 2.6: Scenario Planning - Mass Transit and Roadway Inputs**

	<b>Passaic County Base Future</b>	<b>TOD Alternative</b>
<b>Network</b>	Used NJTPA Plan 2035 Network	Same as Passaic County Base Future
<b>Trip Table</b>	Passaic County demographics: MCD growth placed into redevelopment zones --->>>	Same as Passaic County Base Future
<b>NJTPA Bus Improvements</b>	<b>NJTPA Based</b> 5% increase in service simulates improved service system-wide	Same as Passaic County Base Future
<b>Transit - Bus Improvements</b>	NA	1. Increase in <b>bus service</b> by 10% for peak and off-peak for bus lines near redevelopment zones
		2. <b>Park and Rides:</b> decreased access time (~1/3 or 1/2) for Ringwood, Clifton - Allwood Road, Willowbrook Mall, and Paterson
		3. Increased percentage zonal <b>walk access to transit</b> for redevelopment zones
<b>Transit - Rail Improvements</b>	NA	1. Increase <b>train service</b> by 10% on inbound peak on NJ Transit Montclair-Boonton Line and Main Line
		2. <b>Park and Rides:</b> decreased walk access time by 20% on stations within Passaic County (peak and off-peak) where redevelopment zones have access
		3. Increased percentage zonal <b>walk access to transit</b> for redevelopment zones
<b>Parking</b>	No Parking changes/charges	On Street parking charges increased in redevelopment zones - aim was to encourage more transit walk trips
<b>Highway Network Adjustments</b>	Small zonal access adjustments --->>>	Same as Passaic County Base Future

## 2. Introduction, Background and Trends

- The percent of Vehicle Hours of Travel (VHT) under severely congested conditions is reduced by 7.8%;
- The percent of Vehicle Miles of Travel (VMT) under severely congested conditions is reduced by 8.9%; and
- The TOD Alternative also generated a list of roadways under congested to use for further analysis and capital planning.

### Environmental Scan

In 2004, 35% of Greenhouse Gas (GHG) emissions at the state level were attributed to transportation activities. Transportation has a significant role to play in potentially mitigating the impact of climate change.

The 2004 Highlands Water Protection and Planning Act is a set of regulations designed to protect drinking water resources in the Highlands Areas of New Jersey. The Act constrains development/redevelopment and types of land uses in virtually half the county (Map 2.2 at the end of this section) and restricts transportation expansion that would lead to growth in these areas. Therefore the County must be creative in developing sustainable solutions and use Transportation Systems Management (TSM) techniques to optimize the existing transportation system for future traffic demand.

Land use patterns in Passaic County are varied, as depicted in Figure 2.1 on page 16. Land uses in the northern portion of the County are dominated by State and County parkland, preserved watershed lands, and agriculture, almost all of which is located in the Highlands Preservation Area. Land use in the southern portion of the County is more diverse and dominated by residential, commercial and industrial uses. The land use in this area constrains the

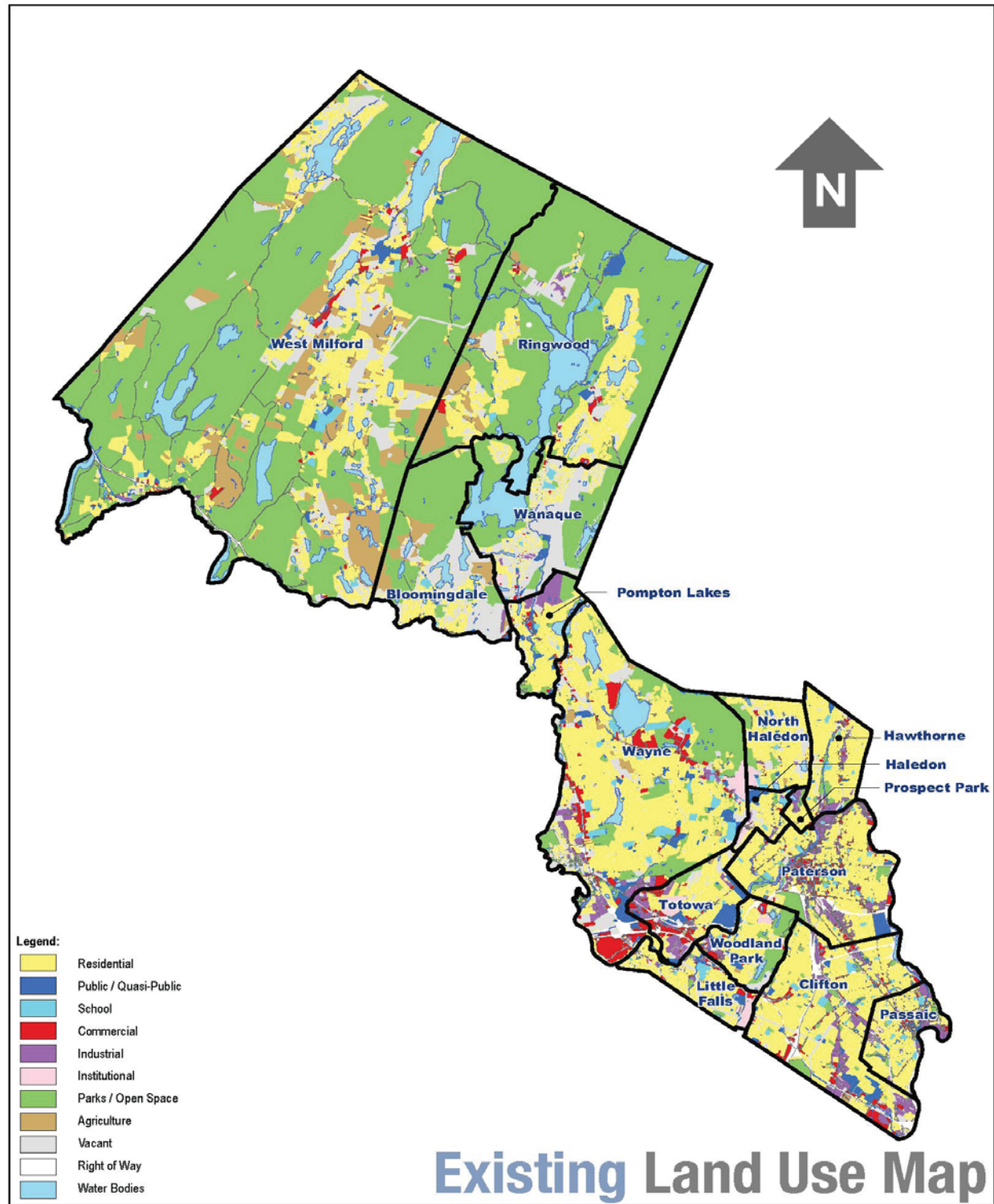
transportation network from expanding, creating higher levels of congestion.

Both population and employment densities are much higher in the southern portion of the County, indicating that there is less space available for expansion of land and key roadway facilities. This results in the need to focus on areas of redevelopment and utilizing strategies that can move people and traffic in a more efficient manner over the existing roadway system as opposed to building up the roadway system through capacity expansion.

Riverways and lakes were the arteries of industry in the past but have now become impacted by those same land uses. It is a major goal to reclaim these waterways to provide more recreational opportunities along these natural byways. This is anchored by the formation of the Great Falls National Historical Park in the City of Paterson. Reservoirs and lakes define the landscape of the northern portion of the County, providing opportunities for hiking and biking.

Transportation infrastructure is uniquely vulnerable to severe weather events in the Passaic River Basin. Passaic County suffers from the effects of regular flooding that destroys property, causes power outages and major interruptions to the transportation system for extended periods of time. The consequences of these events range from threats to public safety to the closure of schools and businesses. This plan should be coordinated with any sustainability plans developed through the state and regional level, as well as any County Master Plan Elements. Conducting a vulnerability assessment of transportation infrastructure will create stronger linkages between transportation and land use policies, to minimize existing and future flooding that disrupt the County's transportation system.

Figure 2.1 - Existing Land Use Patterns



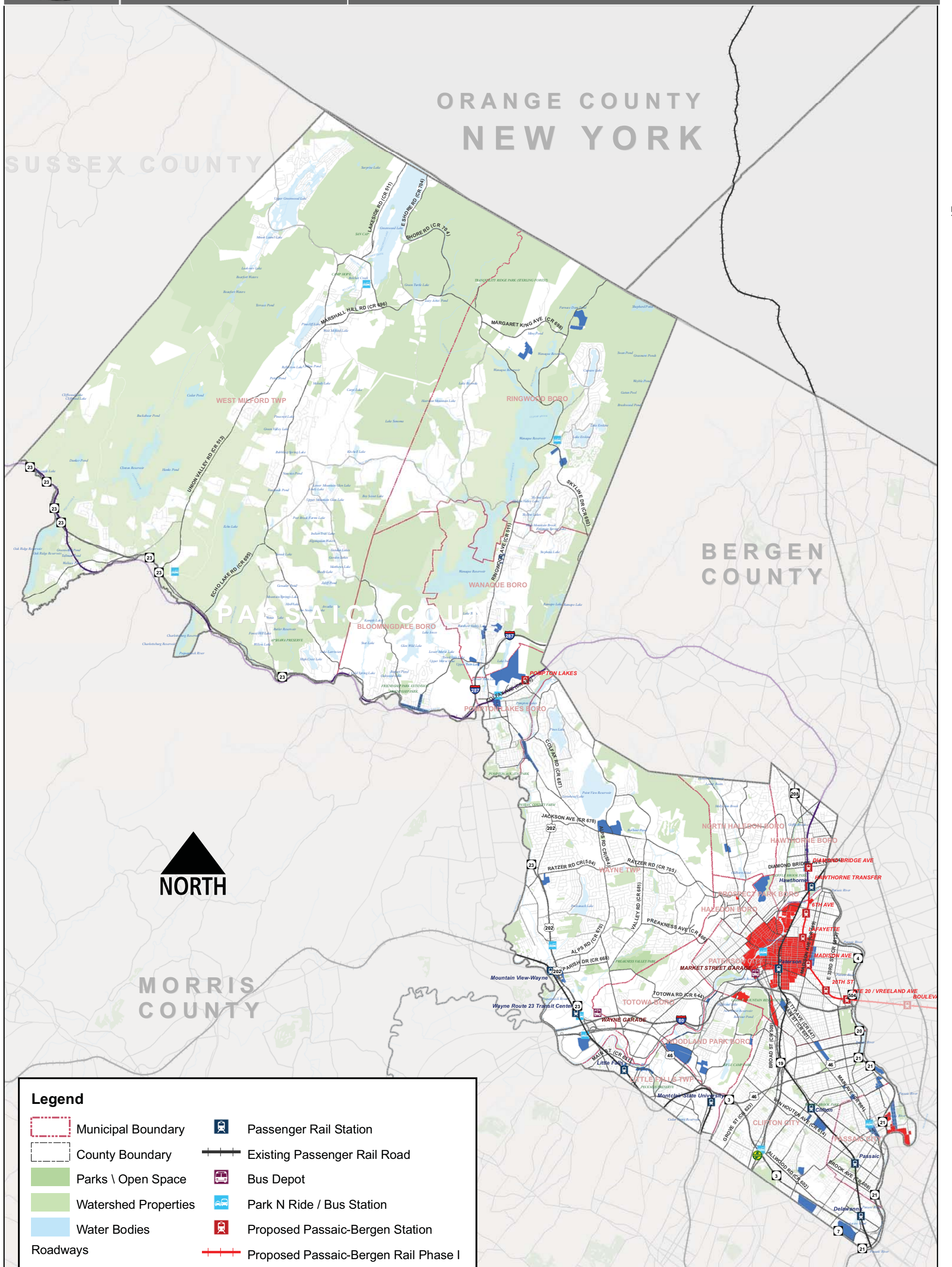






# INTRODUCTION, BACKGROUND AND TRENDS

# Map 2.1 Potential Development and Redevelopment Areas



**Legend**

Municipal Boundary	Passenger Rail Station
County Boundary	Existing Passenger Rail Road
Parks \ Open Space	Bus Depot
Watershed Properties	Park N Ride / Bus Station
Water Bodies	Proposed Passaic-Bergen Station
<b>Roadways</b>	Proposed Passaic-Bergen Rail Phase I
Major Highways	Proposed Passaic-Bergen Rail Phase II
County	Designated Redevelopment Area
Local	Potential Development Area



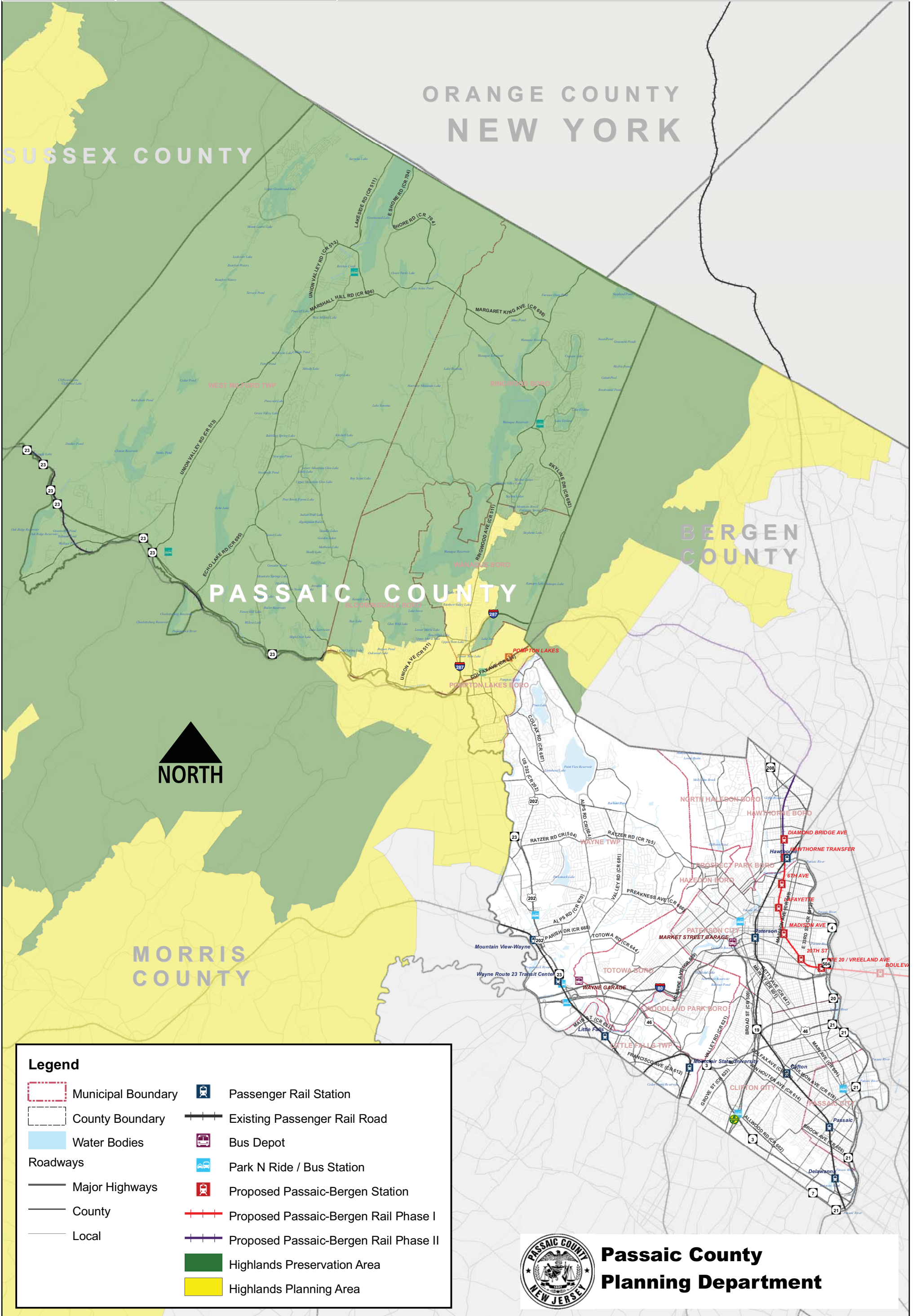
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# INTRODUCTION, BACKGROUND AND TRENDS

# Map 2.2 New Jersey Highlands Preservation and Planning Areas



**Legend**

- Municipal Boundary
- County Boundary
- Water Bodies
- Roadways**
  - Major Highways
  - County
  - Local
- Passenger Rail Station
- Existing Passenger Rail Road
- Bus Depot
- Park N Ride / Bus Station
- Proposed Passaic-Bergen Station
- Proposed Passaic-Bergen Rail Phase I
- Proposed Passaic-Bergen Rail Phase II
- Highlands Preservation Area
- Highlands Planning Area



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# Section 3 - Complete Streets

## Introduction

Complete Streets are streets for everyone. They are designed to provide safe access for all users including motor vehicles, pedestrians, bicycles, and transit riders. Users also include persons of all ages and abilities. Complete Streets make it easy to cross the street, walk to shops, bicycle to work, and operate motor vehicles safely. Meeting the needs of all users on County roadways is at the center of building and maintaining an efficient transportation system that strengthens the connection between transportation and land use. Complete Streets also reduce the conflicts with surrounding land uses, provide more efficient options, and add capacity to an already constrained transportation system. The Complete Streets Guidelines (see Appendix A) provide the mechanism for designing improvements based on the context of the surrounding communities. Development constraints along with the impacts of flooding demand that roadways perform more than just the function of transportation, and lead to an improved quality of life for all Passaic County residents. Implementing the principles of “Green Streets” (see Appendix B) can ensure roadways are safe and attractive public places in our communities while limiting the impacts on the environment.

## Goals and Objectives

1. Adopt a Complete Streets Policy for Passaic County:
  - Modeled off the Complete Streets Policy adopted by the New Jersey Department of Transportation (NJDOT) in 2009;
  - Reflect the goals of the master plan as well as feedback received through the public planning process; and
  - Adopt a policy through both the Passaic County Planning Board and Passaic County Board of Chosen Freeholders that references the Transportation Element and Complete Streets Guidelines.
2. Adopt Complete Streets Guidelines for all County roadways in Passaic County:
  - Comply with all state and federal standards, including the American Association of State Highway Officials (AASHTO) and the NJDOT;
  - Ensure that Passaic County Engineering Department standard practices, design preferences and any other considerations are included in the design standards;
  - Update and/or augment the Roadway Classification System to reflect general land use goals and municipal priorities as needed;
  - Develop standard details for Complete Streets elements (such as intersection treatments, bicycle lane configurations and/or sign details); and
  - Submit the Complete Street Guidelines to NJDOT for endorsement.
3. Implement Complete Streets Guidelines in the Development Review Process:
  - Provide Complete Street Guidelines under the Planning Board portion of the Passaic County website with appropriate references on all development review applications;
  - Use the Complete Streets standards as a guide for applicants on the purpose



### 3. Complete Streets

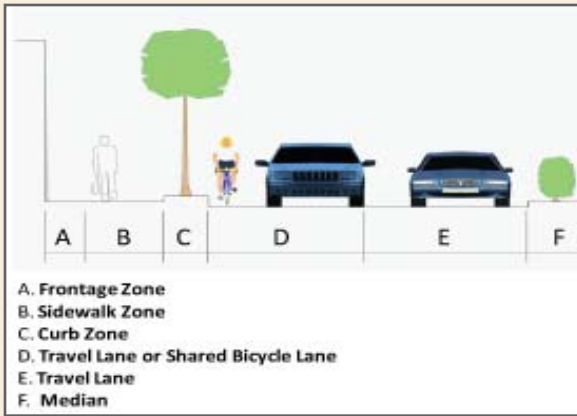
- and preference for any Complete Streets elements; and
  - Augment the Complete Streets Guidelines with standard practices and design details to address specific design issues in the development review process.
4. Implement Complete Streets Guidelines in the Capital Planning Process:
- Develop problem statements that detail any issues that should be addressed during the design process for all modes of transportation;
  - Track statistics and indicators that gauge the impact of improvements that address problem statements; and
  - Implement Complete Streets standards on all County-owned bridges that are maintained, repaired and/or redesigned (this includes providing river access and continuing on-street facilities).
5. Develop a comprehensive way-finding system and standards for the County:
- Incorporate priorities in each of the sections of this plan (i.e. bike routes, truck routes, historic destinations);
  - Design signs to be seen by motorists, bicyclists and pedestrians, using lighting where appropriate;
  - Install signage at priority intersections or activity centers and incorporate elements that promote or assist in branding Passaic County; and
  - Provide flexibility in order to update signs over time.
6. Implement the principles of “Green Streets”:
- Develop tools to help inform the public and municipalities about the benefits and applications of Green Streets;
  - Identify candidate roadways for Green Streets pilot projects; and
  - Include Green Streets in the capital planning and development review process, particularly in upstream and flood-prone areas; and
  - Develop more detailed guidance from the results of pilot projects.

### Complete Streets Guidelines

The Complete Street Design Guidelines provide standards and guidance to planners, developers, consulting engineers, and other interested parties in the preparation and design of roadway facilities under Passaic County jurisdiction.

The basis of these guidelines is formed from two policy documents: The “Complete Streets Policy” document adopted by the NJDOT in 2009 serves as the planning basis of the guidelines; “A Policy on Geometric Design of Highways and Streets” published by the American Association of State Highway and Transportation Officials (AASHTO) serves as the engineering basis of the guidelines. The guidelines are intended to be used by planners, developers, designers and engineers, as well as the general public in understanding intent and mechanism for implementing Complete Streets throughout Passaic County. The guidelines are not meant to be all inclusive with regard to the design of these facilities, but rather to outline design priorities and preferences that reflect the local land use goals and promote better transportation access for all users, including pedestrians and bicyclists.





Cross-sections help guide planners, developers and engineers on standards for Typical Design Elements along each County Roadway Classification



Complete Streets provide mobility for all users and safe connections to surrounding land uses



“Green Streets” help mitigate impacts on the environment as well as safe and attractive public places within communities

The guidelines use cross-sections to introduce typical design elements along County roadways. Each element carries various design priorities for one of five roadway classifications based on land use and transportation needs. A roadway classification design matrix provides a reference to AASHTO guidelines that govern the range of possibilities for each typical design element. The roadway classifications are outlined later in this section.

The guidelines should be used in conjunction with all other applicable standards and policies, including Passaic County Land Development Review Resolutions, Stormwater Management Policies, Development Agreement Resolutions, *New Jersey Highlands Regional Master Plan*, and any other applicable regulations. The guidelines should also reference all other sections of the Transportation Element to identify priority treatments for bicycle, pedestrian and river access, freight movement, scenic or historic resources, public transportation access, and motor vehicle access.

### Roadway Classification Definitions

A new County Roadway Classification System provides the framework for implementation of a Complete Streets approach in Passaic County. The classifications have been developed in conjunction with the Passaic County Planning and Engineering Departments, which have set goals for the design, function and appearance of County roadways. County roadways are grouped by common land use characteristics and development goals communicated during the public outreach process. Groupings are further defined by current and future needs to access transportation services. The classification standards represent the simplest and most unique set of requirements to facilitate both land use and transportation needs. The County roads

## 3. Complete Streets

have been categorized into five street types shown on Maps 3.1 and 3.2 at the end of this section:

- **Regional Street**
- **Highlands Regional Street**
- **Downtown Street**
- **Community Street**
- **Neighborhood Street**

The section on “Green Streets” provides guidance on how structural and non-structural measures can be implemented along County roadways. These measures can aid to reduce the quantity of stormwater that enters drainage systems during storm events, decrease the impacts of heat island effect in urban areas and beautify communities with continuous tree-lined streets. The following are brief descriptions of each of the Complete Streets classifications.

### Regional Streets

A Regional Street in Passaic County is a major travel route that handles the highest volume of traffic on County roadways, supporting all modes of transportation. Land uses along Regional Streets tend to be single-use but may have some mixed-uses in the more urbanized portions of the County. They are often used for longer intra-county trips and inter-county travel and provide access to major highways. They tend to be well served by public transit, including inter-county and interstate services, connecting major activity centers through the County. Regional Streets make up the majority of county roadways used for freight movement as highlighted in the **Moving Goods and People** section.

Regional Boulevards are similar to Regional Streets. However, travel speeds may be lower, parking may

be permitted and raised medians are a preferred design treatment.

### Highlands Regional Streets

Highlands Regional Streets serve the same type transportation needs as a Regional Street except they are located within the New Jersey Highlands Region. Highlands Regional Streets are characterized by single-use, low-intensity development that transitions between residential, commercial and rural settings. In many cases developments are separated by large natural areas and winding roadways. They are major travel routes that handle the most diverse traffic modes including cars, buses, trucks, bicycles, and pedestrians. Highlands Regional Streets are characterized by intra- and inter-county travel that result in longer regional trips. These streets are served by intra-county and inter-county/state bus travel so accommodations should be made to support easy transit access. Many of Highlands Regional Streets run adjacent to watershed property, lakes and forests, making them ideal “Green Streets”. The scenic and historic character of many of these streets makes way-finding elements paramount to their function in moving Passaic County residents and tourists alike.

These streets require different specifications due to the development rules that are part of the *Highlands Regional Master Plan*, as well as the rural nature of some of these streets. The Highlands Water Protection and Planning Act establishes the protection and restoration of natural resources as priority goals in the Highlands Region.

### Downtown Streets

Downtown Streets are County roadway corridors characterized by mixed-use commercial and

traditional downtown services and needs. Downtown Streets may include Central Business Districts (CBD) or Special Improvement Districts (SID) that use distinctive streetscape treatments such as lighting, signage or street furniture. Downtown Streets tend to be highly transit-oriented and experience high levels of pedestrian activity. These are typically high-volume, low-speed and undivided arterial roadways that have narrow lanes and are used by a mix of cars, delivery trucks and buses. Parking on Downtown Streets is curbside (parallel or angled) and often metered.

**Community Streets**

Community Streets provide connections for local communities to reach regional through-routes, local commercial areas and downtown centers. Traffic-calming techniques lower travel speeds and allow all users to share the road safely. Community streets provide the ideal environment to introduce a network of connected bicycle facilities throughout the County. Safe street crossings and access to mass transit for pedestrians shifts the focus from motor vehicles to people on these streets. Context sensitive solutions such as street trees and planting strips add place-making elements along Community Streets and provide an avenue for implementing “Green Streets” policies.

**Neighborhood Streets**

Neighborhood Streets are walkable roads that typically serve the residents or local businesses located along the street and no other users. These streets are not used as thoroughfares or for anything except local trips. The nature of a neighborhood street requires little in the way of improvements that would promote intra-municipal trips or regional facilities. The improvements made on these streets

are strictly for the residents or property owners directly along the street or in that neighborhood.

**Green Streets**

A Green Street is a transportation corridor that incorporates low-impact design elements and promotes non-vehicular forms of transportation (See appendices A and B for more details). These streets are ideal for the installation of structural and non-structural green infrastructure facilities for stormwater management. Green Infrastructure is defined by the US Environmental Protection Agency as, “An array of products, technologies, and practices that use natural systems – or engineered systems that mimic natural processes – to enhance overall environmental quality and provide utility services”.

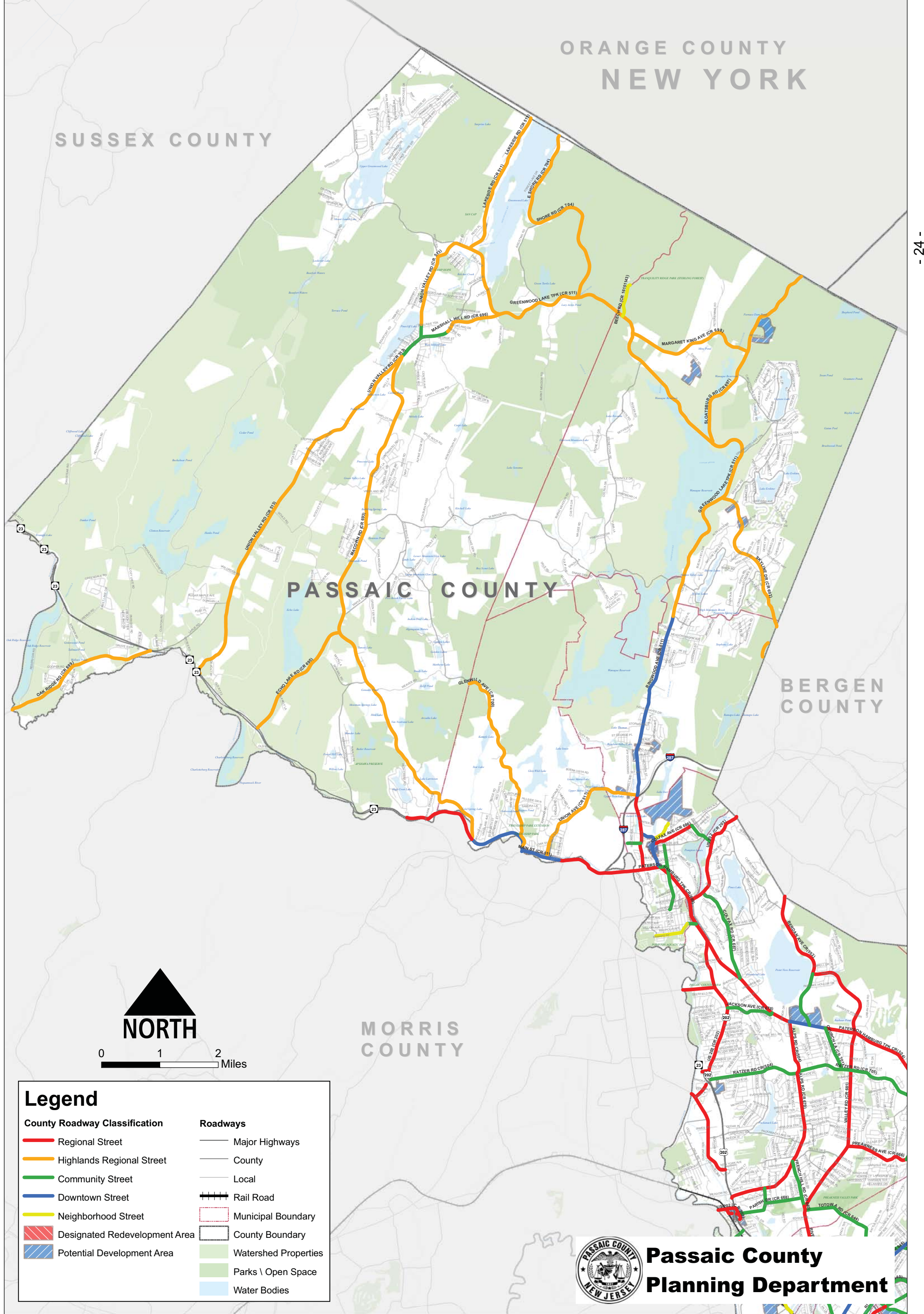
Low-impact development is a holistic view of green infrastructure in which an entire site, roadway, or region is designed to mimic natural processes, using smaller green infrastructure design elements.

Green Streets policies and practices apply to all of the Complete Streets classifications. Best Management Practices (BMP) can be developed for each classification as Green Streets projects are identified, implemented and maintained along County roadways.









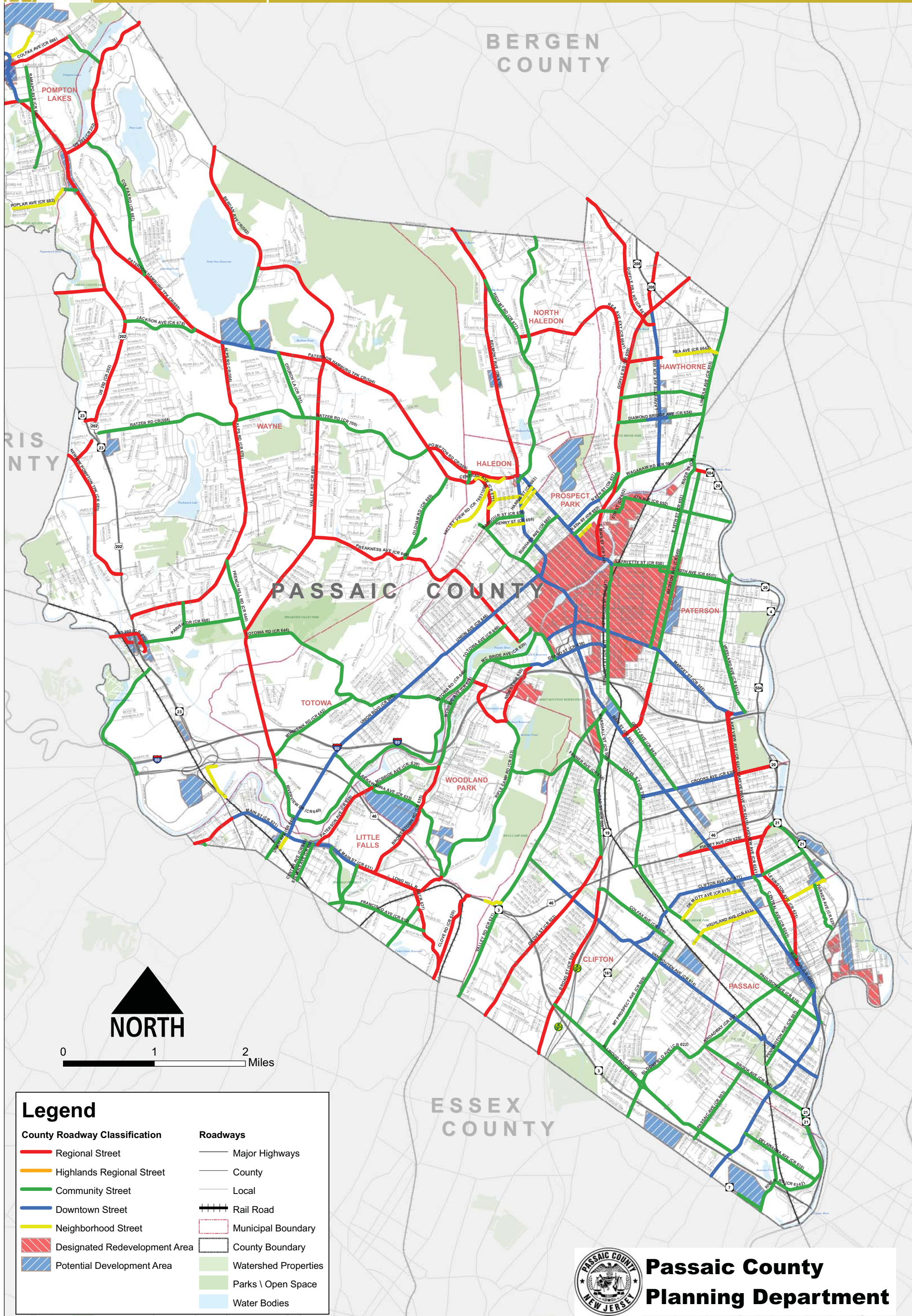
**Legend**

<b>County Roadway Classification</b>	<b>Roadways</b>
<span style="color: red;">—</span> Regional Street	<span style="border-bottom: 2px solid grey;"> </span> Major Highways
<span style="color: orange;">—</span> Highlands Regional Street	<span style="border-bottom: 1px solid grey;"> </span> County
<span style="color: green;">—</span> Community Street	<span style="border-bottom: 1px dashed grey;"> </span> Local
<span style="color: blue;">—</span> Downtown Street	<span style="border-bottom: 1px solid black; padding: 0 5px;">+ + + +</span> Rail Road
<span style="color: yellow;">—</span> Neighborhood Street	<span style="border: 1px dashed red;"> </span> Municipal Boundary
<span style="background-color: red; width: 15px; height: 10px; display: inline-block;"></span> Designated Redevelopment Area	<span style="border: 1px solid grey; width: 15px; height: 10px; display: inline-block;"></span> County Boundary
<span style="background-color: blue; width: 15px; height: 10px; display: inline-block;"></span> Potential Development Area	<span style="background-color: #d9ead3; width: 15px; height: 10px; display: inline-block;"></span> Watershed Properties
	<span style="background-color: #d9ead3; width: 15px; height: 10px; display: inline-block;"></span> Parks \ Open Space
	<span style="background-color: #d9ead3; width: 15px; height: 10px; display: inline-block;"></span> Water Bodies



# COMPLETE STREETS

## Map 3.2 Complete Streets Classifications Southern Passaic County



0 1 2 Miles

### Legend

County Roadway Classification		Roadways	
<span style="color: red;">—</span>	Regional Street		Major Highways
<span style="color: orange;">—</span>	Highlands Regional Street		County
<span style="color: green;">—</span>	Community Street		Local
<span style="color: blue;">—</span>	Downtown Street		Rail Road
<span style="color: yellow;">—</span>	Neighborhood Street		Municipal Boundary
	Designated Redevelopment Area		County Boundary
	Potential Development Area		Watershed Properties
			Parks \ Open Space
			Water Bodies



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## Section 4 - Bicycle, Pedestrian and River Access

### Introduction

Bicycle and pedestrian travel has become more important as Passaic County finds ways to address energy independence, public health, the environment and creating more sustainable places to live and work. The diverse landscape of the County poses various challenges in addressing bicycling and pedestrian needs in urban, suburban and rural communities. Each of these types of communities has its own barriers and opportunities for bicyclists and pedestrians. Identifying issues and trends in the areas of safety, public health, access, and connectivity help in developing the proper policies and goals for the future. The Complete Streets Guidelines provide the template for designing facilities, but this section outlines “Priority Corridors” that will create a cohesive county-wide framework of pedestrian, bicycle and river access. Building upon assets such as the Morris Canal Greenway, the Passaic River, the Appalachian Trail, and an extensive network of on- and off-road trails provides the foundation for a more complete transportation system for visitors and residents.

### Issues

The process of identifying issues that pertain to bicycle, pedestrian, and river access involved various forms of public outreach and statistical research. The trends highlighted the major issues surrounding strengths, weaknesses and opportunities. The strongest themes were organized into the following categories of issues:

**Safety**– Bicycle and pedestrian safety is critical in promoting access that will become sustainable and reliable in the future. Identifying specific areas as well as types of improvements will increase the frequency in which these facilities are used and reinforce higher levels of bicycle and pedestrian activity in the future.

**Public Health** – Increasing bicycle and pedestrian activity can help address a number of public health issues such as inactivity, diabetes, and obesity. Providing better connections to jobs, residences, and public transportation can also reduce reliance on automobiles and ultimately improve air quality.

**Access** –Every trip starts or ends walking to or from a destination, making pedestrian access a first priority. Access to mass transit facilities such as bus stops and train stations expands bicycle and pedestrian service areas and expands mobility choices. A particular emphasis on individuals with physical and developmental disabilities can provide a higher degree of social justice. Providing more access to rivers at bridges and along riverwalks is an integral party of reclaiming the natural corridors that define the history of Passaic County. Amenities such as bicycle racks and way-finding signage enhance the access points for bicyclists and pedestrians throughout the County.

**Connectivity** – The bicycle and pedestrian system in Passaic County must be a cohesive network that provides connectivity to recreational opportunities, activity centers and other modes of transportation (such as public transit). Leveraging historic assets such as the Passaic River and the Morris Canal Greenway, along with the existing on- and off-road trails, provides the backbone for ecotourism and other economic development opportunities.

## 4. Bicycle Pedestrian and River Access

### Public Planning Process

The first step in analyzing existing conditions was to create an inventory of all existing and planned bicycle facilities, centers of activity, planned development or redevelopment projects, transportation hubs, and major attractions such as parks and other recreational facilities. This was accomplished through meetings with planners and policy makers for each of the municipalities, a series of public open house meetings and workshops, and a phone survey of major employers. Stakeholders such as the NY/NJ Trails Conference, cycling groups and others provided specific information on impediments to bicycle and pedestrian access as well as mapping of existing hiking and biking trails. Any formal plans, such as corridor studies, bicycle and pedestrian elements, or master plan elements at all levels, were collected to communicate local priorities and potential projects. The end result was a framework of Bicycle and Pedestrian Priority Corridors that were then tested with the public and local stakeholders to solicit additional feedback.

In addition to raising activity rates, increasing non-vehicular transportation can significantly improve air quality. New Jersey struggles to meet ambient air quality standards, with the northern most thirteen counties ranking 15th worst in the nation for smog, 17th for ozone and 21st for year-round soot or particle pollution. According to the North Jersey Transportation Planning Authority, Passaic County is in “nonattainment,” meaning it fails to meet the USEPA standards, for fine particulate matter (PM2.5) and ozone (O3). The County is also considered a maintenance area for carbon monoxide (CO) because standards have only recently been achieved. Passaic County received a “D” in the American Lung Association

2012 State of the Air report for eight high smog days from 2008 to 2010. The public health impacts of poor air quality resound with 24.1% of residents having cardiovascular disease, as well as 2.2% of children and 6.6% of adults having asthma. Promoting bicycling and walking as alternate forms of transportation can lessen the public health impacts of vehicular emissions and improve air quality in the Passaic County region.

### Bicycle and Pedestrian Priority Corridors

Bicycle and Pedestrian Priority Corridors include both existing and proposed facilities, and focus on bicycle and pedestrian issues when used with the Complete Streets Guidelines during the Development Review or Capital Planning/Engineering processes. Maps 4.1 and 4.2 at the end of this section depict the Bicycle and Pedestrian corridors, including on- and off-road facilities to create a network connecting downtown business districts, parks, riverfronts, and natural areas. Treatments in priority areas should bring attention to bicycle and pedestrian facilities in order to reinforce new patterns of behavior that promote safe access for bicycles and pedestrians. Many of the priority corridors are located in downtowns, where pedestrian access is key to any commercial areas. These locations should focus on interaction between motorists and pedestrians at street crossings and provide safe links to public transportation. All treatments should take into consideration the existing conditions and trends, and address specific bicycle and pedestrian issues identified through problem statements or research trends.



## Existing Conditions and Trends

### Bicycle and Pedestrian Safety

Multiple statewide initiatives have set the precedent for enhanced access and safety for pedestrians and bicyclists throughout New Jersey. This is underscored by the passage of the Complete Streets Policy by the New Jersey Department of Transportation “enabling safe access and mobility of pedestrians, bicyclists, transit users of all ages and abilities”. The adoption of a statewide Complete Streets Policy has brought a focus on design and provided leadership on how to engineer facilities that are more conducive to biking and walking. Reinforcing this policy is a new pedestrian crossing law requiring motorists to stop for pedestrians rather than yield (NJ Statute 39:4-36).

Certain County roadway corridors and intersections pose particular major safety issues. Maps 4.3 and 4.4 at the end of this section depict the county roadways and intersections that have the highest bicycle and pedestrian crash rates over the last three years (2008 – 2011). The cause of these crashes can vary greatly, and further investigation should be conducted along each corridor and intersection to determine the main causes. Road Safety Audits (RSA) bring together planners, engineers and local officials to investigate safety issues through a field visit and subsequent analysis. When completed, RSAs offer a comprehensive report on long-term and “quick fix” solutions. These projects can be eligible for the NJTPA Local Safety Program, which offers construction funding at high-crash locations and high-risk rural roads. The Passaic County Planning Department, Engineering Department and the City of Passaic recently partnered with the



Installations such as blinking pedestrian signage and “stop for pedestrian” signage in the roadway can assist in making intersections and mid-block crossings safer.



Pedestrian refuges provide a safe break at larger intersections and can help individuals with physical disabilities cross roads in a safe manner.



Painting bicycle lanes a bright color can make motorists more aware of bicycle traffic and create safer conditions.

## 4. Bicycle Pedestrian and River Access

Rutgers Center for Advanced Infrastructure and Transportation (CAIT) to complete an RSA along Main Avenue in the City of Passaic Central Business District. The Safe Routes to School (SRTS) and Safe Routes to Transit (SRTT) programs, sponsored by NJDOT, provide additional means to encourage local efforts to improve safety and educate communities about how bicyclists and pedestrians should interact with motorists. The Passaic County Complete Streets Guidelines provide standards that address safety, although unique treatments may be needed to call attention to improvements that aim to change a pattern of behavior. The NJTPA Bus Stop Safety Toolbox also provides more detailed guidance on how to design facilities that allow safer connections for pedestrians using public transportation.

### Public Health Trends

A key aspect of more bicycle and pedestrian activity are the inherent public health benefits of a more active lifestyle. Regular physical activity can prevent many chronic conditions, including heart disease, obesity and diabetes. The US Center for Disease Control (CDC) tracks several indicators related to activity in adults such as obesity, diabetes and inactivity rates. Passaic County experienced a decrease in inactivity rates between 2004 and 2008 but still ranked 6th highest in New Jersey counties in adults that have no physical activity or exercise other than at their job. Both obesity and diabetes rates in adults went up in the same period with the County ranking 15th and 8th in New Jersey counties for each category respectively. These trends point towards a more sedentary lifestyle in Passaic County .

An effective way of improving inactivity rates and the associated health risks is to increase access

to recreational opportunities, provide better connections to parks, and make communities more bicycle and pedestrian friendly. Programs such as SRTS also aid in educating communities on the benefits of a more active lifestyle. Providing more information such as park facilities, hiking and biking trails, and public transportation routes through ongoing coordination with stakeholder groups can help the public understand how to stay more active. Tracking these trends in the future may aid in determining the impacts in efforts to improve public health trends.

### Access and Connectivity

Success in implementation will be due in large part to the ability of residents and visitors to access destinations. As mentioned earlier, the environment for biking and walking varies greatly between the rural, suburban and urban settings, although there are common conditions and opportunities throughout the County. Two of the most prevalent needs for access and connectivity are way-finding and dedicated bicycle facilities on County roadways. Way-finding provides an excellent way for all users to easily find points of interest and redirect users to the safest roadways for each mode of transportation. Dedicated bicycle lanes (with appropriate signing and striping) provide an expectation of safety for bicyclists while alerting drivers to share the road.

Providing river access, particularly to the Passaic River, falls under the category of a need and an opportunity. Facilities such as riverwalks, fishing piers and boat launches will be looked at as key access points for ecotourism. Maps 4.1 and 4.2 identify some of the potential boat and kayak launch points along the Passaic River and where they connect to Bicycle and Pedestrian Priority

Corridors. River access should also be considered on all County bridges undergoing maintenance, engineering or reconstruction as a continuous riverwalk is developed over time.

The Morris Canal Greenway offers an opportunity for biking, hiking and river access in virtually every setting Passaic County has to offer. The greenway connects to other trail systems, parks and roadways that connect three-quarters of the County. The *Morris Canal Greenway Feasibility Study* outlines all the proposed features as well as next steps in the evolution of this key transportation corridor and adopted as an element of the *Passaic County Master Plan*. The route of the greenway is highlighted in Maps 4.1 and 4.2, along with the connections to the extensive trail system that exists throughout the County. Many of these trails are maintained by the NY/NJ Trails Conference, and offer an ideal route to connect facilities and provide a safe environment for hiking and biking where it may not be possible on County roadways.

Centers of activity, such as the Paterson Great Falls National Historical Park, act as major generators for pedestrian and bicycle activity. Similar destinations include those in the Passaic County Park System, which is currently undergoing a \$3 million renovation. Access to these facilities is paramount and investments should be sensitive to their importance in accommodating all users, especially individuals with physical and developmental disabilities. Improvements such as distinctive signage, large sidewalks and historic bridge elements should reflect the character of these facilities and reinforce their role. A potential boathouse and/or nautical museum could offer a way to leverage river access as well as an opportunity to build from the rich nautical heritage of the County. Existing downtowns and



The on-going investment in the Passaic County Parks System is creating friendlier destinations for bicyclists and pedestrians.



County bridges should provide pedestrian and possibly boat access to the river. Designs should take into account the surrounding context as they are rebuilt and maintained.



Creation of a boathouse and/or nautical center along the Passaic River can provide direct access to the water and organize all activities.



## 4. Bicycle Pedestrian and River Access

Central Business Districts act as activity centers, as pedestrians are the lifeblood of any commercial center. The opportunity to become new hubs for ecotourism is a natural fit for these centers as they are often served by public transportation and can provide the services needed for day trips by visitors and residents. Municipalities in the Highlands Preservation Area provide logical start and end points for tourists, and offer a way to connect to the extensive trail system that characterizes most of the biking and hiking opportunities in the northern portion of the County, including the Appalachian Trail.

The County intends to partner with the Rutgers Center for Advanced Infrastructure and Transportation (CAIT) to complete additional RSAs that focus on providing better connectivity between land use and transportation. The Safe Routes to School (SRTS) and Safe Routes to Transit (SRTT) programs, sponsored by NJDOT, can also highlight the areas to promote new connections or enhance existing facilities. The Passaic County Complete Streets Guidelines provide standards to implement recommendations generated through these processes.

### Recommendations

Table 4.1 outlines recommendations that address the issues raised in this section, including more detailed studies and master planning efforts, implementing specific projects and ongoing policy recommendations. The order of the recommendations is not meant to reflect priority order. The timing column is reflective of the pace at which the recommendations may be implemented. Recommendations such as implementing the Complete Streets Guidelines are a high priority,

as it carries a distinct set of standards that speak to bicycle and pedestrian issues. The Complete Streets Guidelines should be used in conjunction with the County's annual repaving program and capital project development in order to take advantage of every opportunity to address bicycle and pedestrian needs. Projects such as the *Morris Canal Greenway Feasibility Study* are already underway and will be completed in phases over time. Clearly identifying issues that pertain to bicyclists and pedestrians is paramount to any effort, as it allows the County to gauge the effectiveness of any implementation project. The practice of developing problem statements that highlight data and trends is a preferred practice as these statistics can be gathered after completion of a project.



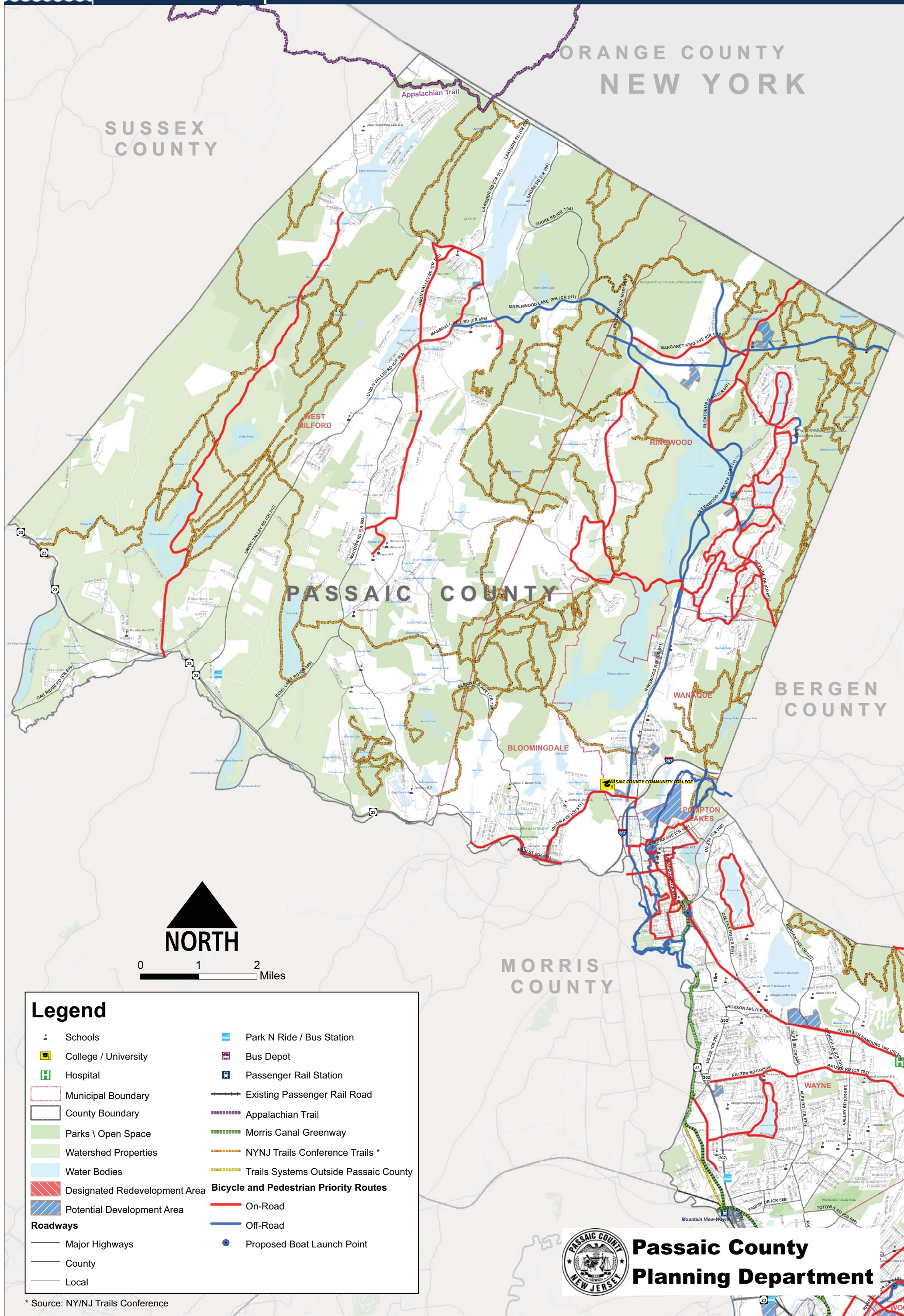
**Table 4.1 - Bicycle, Pedestrian and River Access Recommendations**

	<b>Recommendation</b>	<b>Type</b>	<b>Timing</b>
1	Develop a detailed Bicycle and Pedestrian Element of the Passaic County Master Plan	Master Plan/Study	Short
2	Implement recommendations of the Morris Canal Greenway Feasibility Study	Implementation/Maintenance	Short/Medium
3	Identify and program improvements at intersections and corridors with high incidences of bicycle and pedestrian crashes (this should include Walkable Communities Workshops and Road Safety Audits)	Studies/Safety Grants/Implementation	Short/Medium
4	Develop a river walk plan for the Passaic River and other waterways in conjunction with Passaic County municipalities	Study	Short
5	Implement the Complete Street Guidelines as part of the Development Review and the Capital Planning Process	Policy/Implementation	Ongoing
6	Apply priority treatments (such as mid-block crosswalks, enhanced bicycle lanes and traffic calming) along all bicycle and pedestrian priority corridors	Implementation	Ongoing
7	Develop a way-finding system for all users that will improve safety as well as visibility of Passaic County attractions	Implementation	Short
8	Investigate the concept of a boathouse/nautical museum that can function as the hub for activities along the Passaic River	Study/Policy/Implementation	Medium/Long
9	Prioritize connections with existing bicycle and pedestrian facilities such as the Morris Canal Greenway, Appalachian Trail and NY/NJ Trail Conference Trail System	Implementation	Ongoing
10	Implement recommendations of the NJTPA <b>Bus Stop Safety Toolbox</b>	Implementation	Ongoing
11	Develop problem statements for bicycle and pedestrian issues for any capital improvement projects	Study/Implementation	Ongoing
12	Track public health trends as improvements to bicycle and pedestrian access are made or following any system-wide improvements	Study	Ongoing
13	Develop a Heritage Tourism Element of the Passaic County Master Plan that can identify critical transportation nodes and potential center of activity for tourism opportunities	Study	Short
14	Investigate connections to all County Parks to ensure proper signage, connections to public transportation and ADA access points (if possible)	Policy/Implementation	Short/Medium
15	Coordinate all bicycle and pedestrian plans from municipalities, non-profits or any other entity that can expand bicycle and pedestrian access	Master Plan	Ongoing
16	Coordinate with non-profit and other government entities to introduce boat and kayak launch points throughout the County	Study/Implementation	Ongoing

Short 0 to 2 years  
 Medium 2 to 5 years  
 Long > than 5 years







0 1 2 Miles

### Legend

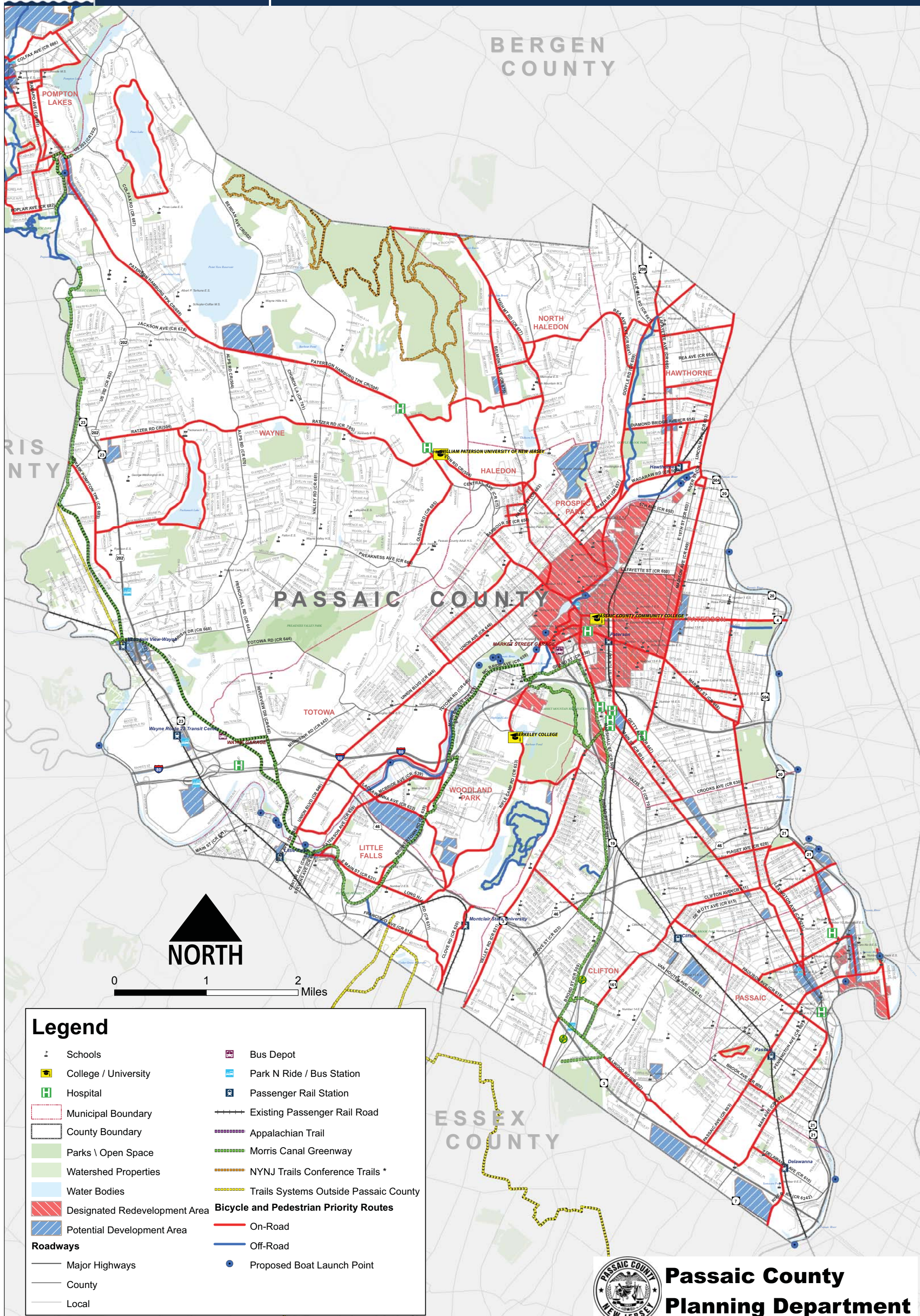
- Schools
- College / University
- Hospital
- Municipal Boundary
- County Boundary
- Parks \ Open Space
- Watershed Properties
- Water Bodies
- Designated Redevelopment Area
- Potential Development Area
- Roadways**
- Major Highways
- County
- Local
- Park N Ride / Bus Station
- Bus Depot
- Passenger Rail Station
- Existing Passenger Rail Road
- Appalachian Trail
- Morris Canal Greenway
- NYNJ Trails Conference Trails \*
- Trails Systems Outside Passaic County
- Bicycle and Pedestrian Priority Routes**
- On-Road
- Off-Road
- Proposed Boat Launch Point

\* Source: NY/NJ Trails Conference



**Passaic County  
Planning Department**



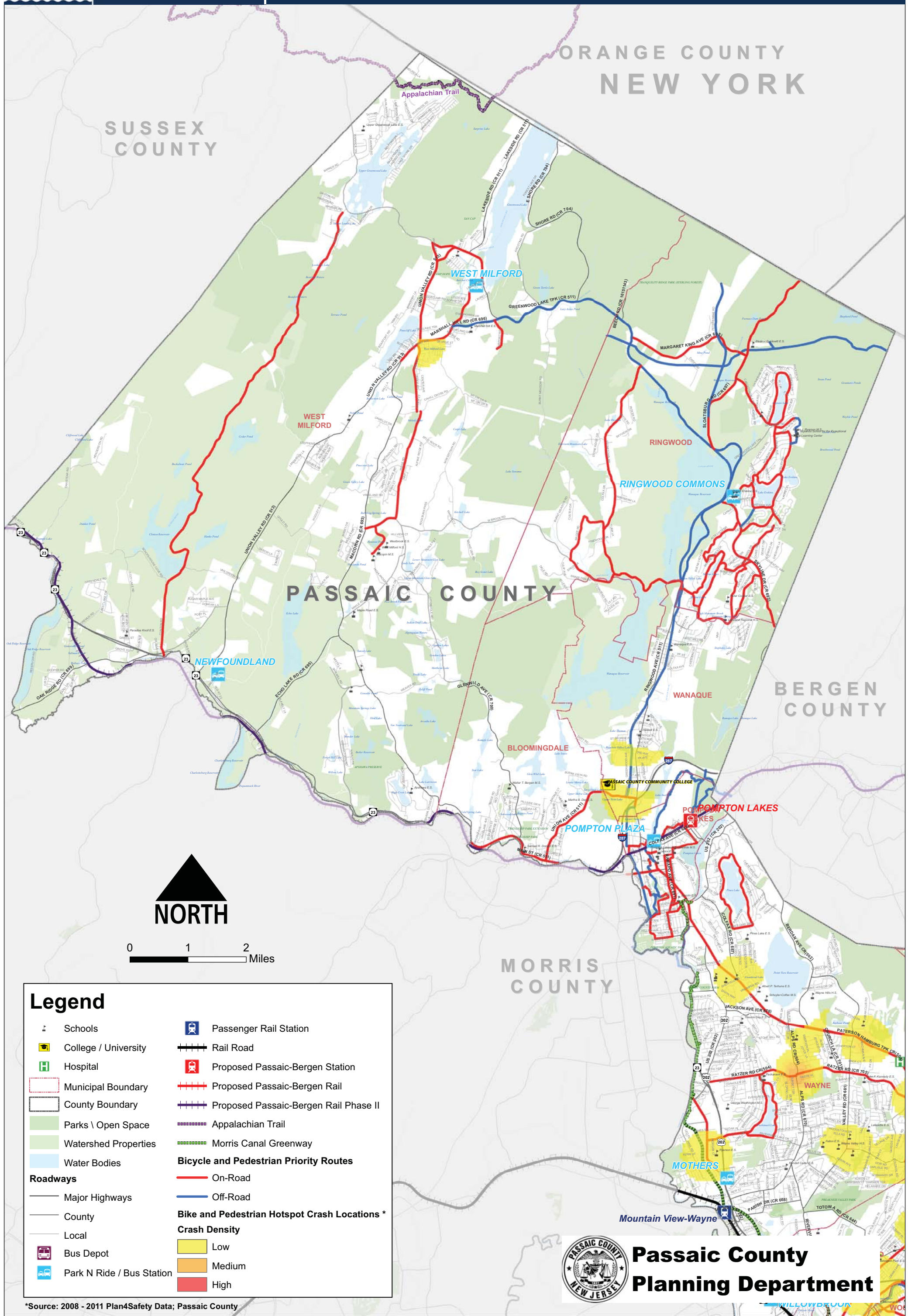


**Legend**

	Schools		Bus Depot
	College / University		Park N Ride / Bus Station
	Hospital		Passenger Rail Station
	Municipal Boundary		Existing Passenger Rail Road
	County Boundary		Appalachian Trail
	Parks \ Open Space		Morris Canal Greenway
	Watershed Properties		NYNJ Trails Conference Trails *
	Water Bodies		Trails Systems Outside Passaic County
	Designated Redevelopment Area	<b>Bicycle and Pedestrian Priority Routes</b>	
	Potential Development Area		On-Road
<b>Roadways</b>			Off-Road
	Major Highways		Proposed Boat Launch Point
	County		
	Local		

\* Source: NY/NJ Trails Conference





SUSSEX  
COUNTY

ORANGE COUNTY  
NEW YORK

PASSAIC COUNTY

BERGEN COUNTY

MORRIS COUNTY



0 1 2  
Miles

**Legend**

Schools	Passenger Rail Station	
College / University	Rail Road	
Hospital	Proposed Passaic-Bergen Station	
Municipal Boundary	Proposed Passaic-Bergen Rail	
County Boundary	Proposed Passaic-Bergen Rail Phase II	
Parks \ Open Space	Appalachian Trail	
Watershed Properties	Morris Canal Greenway	
Water Bodies	<b>Bicycle and Pedestrian Priority Routes</b>	
<b>Roadways</b>		
Major Highways	On-Road	<b>Bike and Pedestrian Hotspot Crash Locations *</b>
County	Off-Road	
Local	<b>Crash Density</b>	
Bus Depot	Low	Medium
Park N Ride / Bus Station	High	



**Passaic County  
Planning Department**

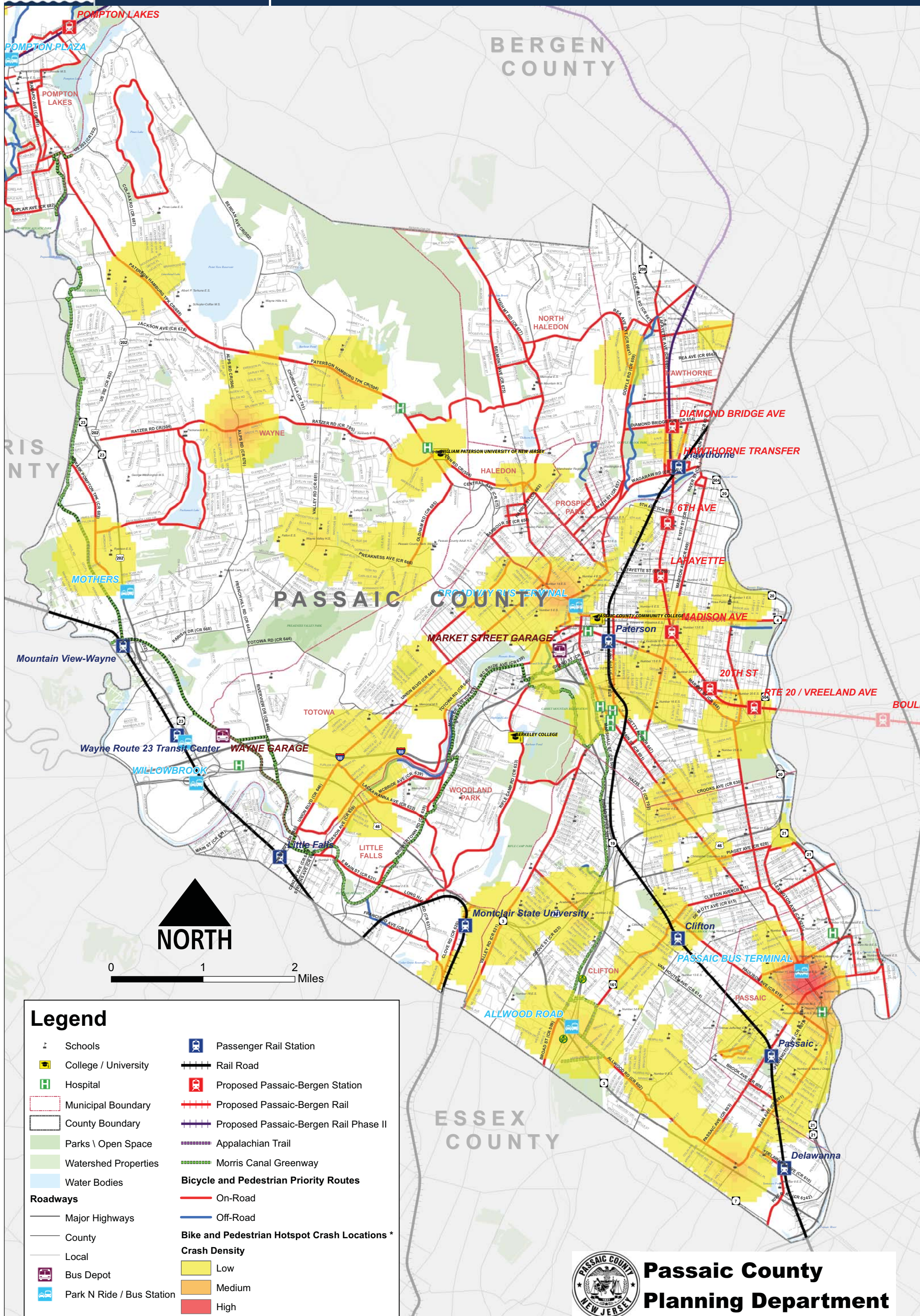
\*Source: 2008 - 2011 Plan4Safety Data; Passaic County





**BICYCLE  
PEDESTRIAN AND  
RIVER ACCESS**

**Map 4.4 Bicycle and Pedestrian Hot Spot Crash Locations  
(2008 – 2011)  
Southern Passaic County**



**Legend**

Schools	Passenger Rail Station
College / University	Rail Road
Hospital	Proposed Passaic-Bergen Station
Municipal Boundary	Proposed Passaic-Bergen Rail
County Boundary	Proposed Passaic-Bergen Rail Phase II
Parks \ Open Space	Appalachian Trail
Watershed Properties	Morris Canal Greenway
Water Bodies	
<b>Roadways</b>	<b>Bicycle and Pedestrian Priority Routes</b>
Major Highways	On-Road
County	Off-Road
Local	
Bus Depot	<b>Bike and Pedestrian Hotspot Crash Locations *</b>
Park N Ride / Bus Station	<b>Crash Density</b>
	Low
	Medium
	High

\*Source: 2008 - 2011 Plan4Safety Data; Passaic County



## Section 5 - Public Transportation

### Introduction

Public Transit is an essential part of the transportation system in Passaic County. The system consists of a coordinated network of buses, commuter rail lines and para-transit services that serve the various demographic groups throughout the County. In Passaic County, the system covers all sixteen municipalities and provides access to places of work, shopping, medical facilities, educational institutions, recreational destinations, and more. The system also supports a large commuter population that either lives or works outside of the County. Many of the buses and rail lines connect to large business centers such as Newark, Jersey City and New York City.

New Jersey Transit (NJT) is the primary transit agency in Passaic County, operating two passenger rail lines as well as providing bus service on over 30 bus lines running in and through the County. Maps 5.1 and 5.2 depict the roadways, rail lines and rail stations covered by NJ Transit bus and rail services in Passaic County. The system is also supported by private and locally operated buses, and several systems that service individuals with special needs, individual businesses and low-income residents.

### Issues

As Passaic County continues to grow over the next 20 years, there are several issues that the transit system needs to address:

#### **Retaining and building upon existing service**

– The existing transit system is vital to the

transportation and economic needs of residents and businesses; the system needs to continue to respond to the growing and changing needs of the County, as well as offer enhancements to the existing facilities and services.

#### **Facilitating efficient economic growth in developed areas**

– The transit system must work in tandem with land use policies to foster economic growth in a responsible manner; Transit Oriented Development (TOD) will play an important role in addressing this issue.

#### **Providing more efficient inter- and intra-county travel**

– The transit system should be designed to deliver efficient service to its prime markets inside the County and to its neighboring counties. This includes further investigating periodic delays due to flooding.

#### **Reducing dependence on autos and reduction of GHG**

– The transportation system should grow in a way that promotes more transit usage and sustainable land uses. Recommendation should be in line with the State and regional greenhouse gas mitigation policies, goals, and plans, including the *New Jersey Energy Master Plan* (2011) and the forthcoming *NJTPA Regional Greenhouse Gas Mitigation Plan*.

### Commuter Patterns and Needs

Passaic County's work patterns indicate that most residents live and work in New Jersey (94%). Figure 5.1, on the next page, shows that the largest portion of Passaic County's workforce lives and works in Passaic County (46%) or works in neighboring counties such as Bergen (26%), Essex (8%) and Morris (7%). Work trips to New York City account for less than 5% of all trips by Passaic County residents. This trends points to a need for more enhanced

## 5. Public Transportation

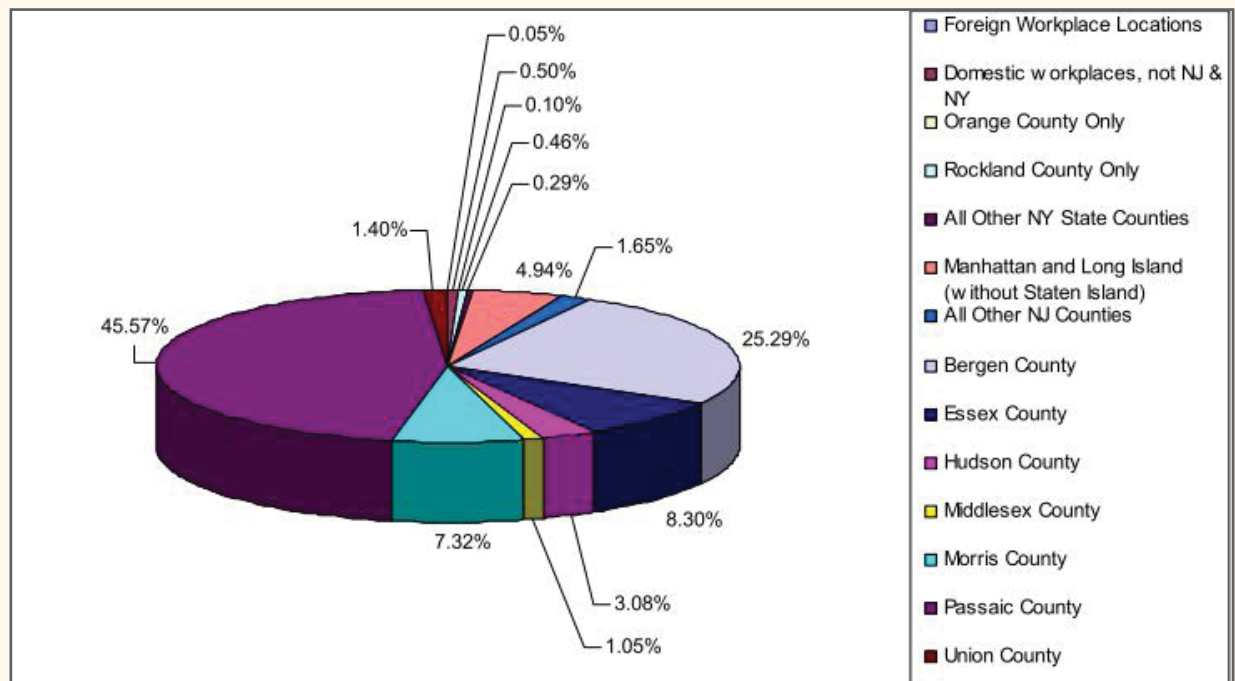
inter-county services and destinations that can offer residents and employers more options in accessing employment opportunities without needing an automobile.

The average commute time for Passaic County residents is approximately 27 minutes with almost one-third of these work trips completed in less than 15 minutes. Providing better access and frequency between local hubs could reduce the commuting costs for a county whose median income trails state levels. Residents also voiced a need to enhance these facilities with shelters, lighting and ADA accessible amenities. Other evidence also shows that public transportation needs to be better suited to the particular industries in Passaic County. Many respondents commented on the lack of frequency in early morning and late evening off-peak hours that would typically serve second- and third-shift

workers. The industry makeup of Passaic County is in manufacturing, warehousing and health care. Many of these job types and considerations should be studied to ensure these major employers are served at the appropriate times. Feedback from the local universities also identified more frequent service in these off-peak hours as a major issue in accessing jobs and entertainment for students without cars.

The last main issue in terms of services revolves around providing additional reverse-commuter access within the County and from points east. Many of the potential reinvestment areas are located on public transportation routes that do not currently provide reverse-commute service in the peak-hours. Providing these services helps make Passaic County more economically competitive for major employers and qualified employees that

**Figure 5.1 - Work Place Location for Passaic County Residents**



Source: 2007 - 2009 American Community Survey



do not have public transportation options into the County. Retaining and introducing new reverse-commute services on weekends would also bolster efforts to promote more tourism, with an emphasis on the Paterson Great Falls National Historical Park.

## **Commuter Rail Service**

### **NJ Transit Main Line**

The NJ Transit Main Line, as shown in Map 5.4 at the end of this section, is a commuter rail line that runs from Suffern, New York through Bergen and Passaic counties and terminates at the Hoboken Station in Hoboken, New Jersey. The Main and Bergen Lines run coincidental between Hoboken and Secaucus Junction where the Bergen Line splits off from the Main Line and travels into Bergen County while the Main Line travels into Passaic County. The two lines then rejoin at the Ridgewood station and run coincidental service up to Suffern. Some service continues north to the terminal in Port Jervis, New York. Commuters can transfer at Secaucus Junction or Hoboken for connecting service into New York City.

The Main Line serves as access to the southern and eastern area of Passaic County with good commuter service in the peak (towards Secaucus) and reverse-commute directions. Maintaining robust service is important to making Transit Oriented Development (TOD) a catalyst for economic development in Passaic County.

Several potential reinvestment areas occur near the existing stations in the City of Clifton, downtown Paterson, and in the Hawthorne Central Business District. These areas are depicted as Designated Redevelopment Areas and Potential Development Areas, shown on the maps at the end of this section, and were identified during the municipal

interview process and review of local master plans. The restoration of the South Paterson Train Station would provide additional momentum to the multi-million dollar renovation and expansion of the Saint Joseph’s Medical Center, which is adjacent to the site. The possibility of relocating the Delawanna train station in Clifton will require further analysis on how to access and serve potential development sites and park-and-ride facilities in the vicinity of the intersection of the Main Line with N.J. 3. A new facility could hold the potential to provide a multi-modal facility that would serve as a gateway along one of the most highly utilized bus corridors in New Jersey. Coordinating local bus service and implementing Complete Streets will allow for these train stations to become larger activity centers that accommodate job growth in the future.

### **NJ Transit Montclair-Boonton Line**

The NJ Transit Montclair-Boonton (MB) Line, as shown in Map 5.2 at the end of this section, is a commuter rail line that runs from Hackettstown, New Jersey, east to Hoboken and New York City. There is a station at Secaucus Junction where transfers can be made to most other NJ Transit rail lines. There are four (4) station stops along the MB line in Passaic County: Montclair State University, Little Falls, Wayne/N.J. 23 Transit Center, and the Mountain View station.

The MB Line has semi-frequent weekday peak period service inbound (toward Hoboken). The Montclair State station offers midtown direct service and is served by a large parking garage. Outbound peak-service is also semi-frequent but is limited in Passaic County, terminating at the Montclair State University Station, due to limitations of a single track configuration and no electrification west of this station. This configuration limits the multi-

## 5. Public Transportation

modal service and the potential growth that can occur in Wayne, where the local master plan calls for development of a multi-story office building and parking garage at the N.J. 23 Transit Center. The area surrounding the Little Falls Station is being studied as a potential NJDOT Transit Village that would support Transit Oriented Development (TOD). Any new development would greatly benefit from enhanced service along this rail line and draw from a larger employment and customer base. More frequent service, including westbound reverse-commuting, would provide improved connectivity to the multi-modal N.J. 23 Transit Center. Further analysis is also needed to determine what measures are needed to minimize and provide alternative service during temporary service interruptions caused by flooding at Willowbrook Mall and the N.J. 23 facility. A vulnerability assessment of all critical infrastructure in the Passaic River basin would

provide the information needed for future capital planning and providing transportation services during emergency conditions.

### Potential Rail Service

Potential future rail service includes Phase I and II of the Passaic-Bergen Passenger Rail Service Restoration Project, as shown in each of the maps at the end of this section. Phase I proposes to restore passenger rail service between Hawthorne in Passaic County and Hackensack in Bergen County along the current NYS&W freight rail line. This phase has gone through final design and is presently awaiting funding for construction. The *Madison Avenue Commuter Rail Study* (2009) developed a TOD concept plan for the area surrounding the proposed Madison Avenue near the intersection of Madison Avenue and Broadway in Paterson. In 2010 this study received a Smart Growth Award from the New Jersey

Figure 5.2 - Passaic-Bergen Passenger Rail Service Restoration Project, Phase I Alignment



Chapter of the American Planning Association. The study was also adopted under the Transportation Element of the City of Paterson Master Plan.

The County has also worked with the Borough of Hawthorne to test concepts for development that may take better advantage of the existing NJ Transit rail service, proposed transfer station adjacent to the Hawthorne Train Station and possibly expanding service to the historic train station in the Central Business District.

Phase II would extend the Passaic-Bergen Rail Restoration Project from Hawthorne to the north and west through Bergen County, northern portions of Passaic County towards Morris County. Extending the passenger service would expand the service area of the TOD planned along Phase I of the rail line. A new rail connection for northern Passaic County could reduce congestion on eastbound N.J. 208 and N.J. 4 as well. The Passaic County Board of Chosen

Freeholders passed a resolution in support of the “Weisbecker/O’Connell Initiative”, which calls upon NJ Transit to formally investigate the feasibility of reintroducing passenger service along the NYS&W freight line in the northern portion of Passaic County along the N.J. 23 corridor. This project has been identified through the NJTPA Strategy Refinement process, which looks to move new initiatives into project development. The Lackawanna Cut-Off is a proposed two-phase rail extension that would connect to the Montclair-Boonton and Morristown Lines in Lake Hopatcong and extend west eventually into the Poconos of eastern Pennsylvania. Completion of this rail route would expand the western market of commuters, shoppers and recreational trips bound for Passaic County.

## Bus Service



The *Madison Avenue Commuter Rail Corridor Study* presents a vision for potential development at the Madison Avenue Train Station along the proposed Passaic Bergen Passenger Rail Service Restoration Project.

## 5. Public Transportation

The bus system is a key element of the Passaic County transportation system, serving workers, shoppers, medical patients, elderly, disabled, and low-income residents. NJ Transit provides most of the fixed-route service that runs along the majority of the County roadway system. This service is augmented by Lakeland, Coach and DeCamp bus companies, as well as private jitney operators in the most densely populated areas of the County. The mass transit system also consists of a series of carpool, vanpool and shuttles servicing private employers, colleges and universities by the two Transportation Management Associations (TMA) operating in Passaic County, Meadowlink and TransOptions. Senior citizens, individuals with disabilities and low-income residents throughout the County are serviced by NJ Transit Access Link, the TMAs and Passaic County Para-Transit. Local systems include the free Paterson Trolley System and a shuttle system operated by the Township of West Milford that offers options to deviate from a fixed route at the request of passengers.

Supporting the bus system are ten park-and-ride lots, two bus depots and two bus garages (see

Table 5.1). The park-and-ride lot at the N.J. 23 Transit Center in Wayne is multi-modal, serving both bus and train passengers. Together they provide vital transportation services in and through the County, into Bergen and Essex counties and as far as Hudson County and New York City.

### Potential Bus Service Enhancements

The feedback received during the public outreach process is supported by two major studies conducted by NJ Transit, which provide analysis and recommendations for the Passaic County transit system. The *Northwest New Jersey Bus Study* completed in 2010, along with the ongoing *Northeast New Jersey Metro Mobility Study* (NENJMMS) examine existing transit network service, identify areas of improvement and recommend options for meeting current and future transit needs.

### Bus Service Enhancements

The recommendations from the analysis include expanded service routes and frequency along select corridors, new or enhanced park-and-ride facilities, new services, and further planning and coordination.

**Table 5.1 - NJ Transit Bus Park and Ride Facilities in Passaic County**

Park and Ride Name	Municipality	Location
Allwood Road Lot 1	Clifton	GSP Exit 153 and Allwood Avenue
Clifton Commons	Clifton	Kingsland Ave and N.J. 3
Passaic Bus Terminal	Passaic	Lexington Avenue & Main Street
Broadway Bus Terminal	Paterson	22 Broadway
Ringwood	Ringwood	Skyline Drive & Cannici Drive
Mothers Park & Ride Lot	Wayne	N.J. 23 NB & Newark-Pompton Tpke
Wayne N.J. 23 Transit Center (multi-modal)	Wayne	N.J. 23 SB & West Belt Parkway
Willowbrook Mall	Wayne	U.S. 46 EB & Willowbrook Blvd
Newfoundland - W. Milford Lot 1	West Milford	Old Rte 23 & Kanouse Rd
West Milford Park & Ride	West Milford	Greenwood Lake Tpke & Lincoln Ave



The feedback received also indicated that reductions in bus services have created hardship for some riders. Increased frequency would better serve densely populated area that depend on the transit system as a primary transportation option. Further analysis is also needed to determine if increased frequency of service is needed in the off-peak and later hours to accommodate night shift workers. Maps 5.3, 5.4 and 5.5, at the end of this section, highlight the corridors and facilities for these recommendations and how they connect to points within and outside Passaic County. The *Hudson County Jitney Study* conducted by NJ Transit in conjunction with the NJTPA, provides information on the organizational and operational structure of some of the private jitney services operating in New Jersey. The results of the study could help coordinate other existing services in the urban areas of the County.

## Bus Rapid Transit

Among the recommendations of this plan are a series of potential Bus Rapid Transit (BRT) routes, which offer enhanced service through improvements to existing infrastructure, schedules or equipment. What makes BRT more efficient are service enhancements such as queue bypasses, signal priority, limited stops and/or exclusive right-of-way for buses. The proposed BRT routes would provide more efficient service to major destinations, such as Broadway Bus Terminal in Paterson, NJ Transit passenger rail stations, and various existing and proposed park and rides. The proposed BRT routes are shown on Maps 5.5, 5.6 and 5.7, at the end of this section.

The Paterson to Montclair State University (MSU) route, shown in brown, connects Passaic County Community College to MSU along Valley Road, creating partnership opportunities between

educational institutions and new access for students. The route would also offer a precursor to reactivating the South Paterson Train Station by connecting the existing NJ Transit station on Market Street to Saint Joseph's Regional Medical Center. The proposed Paterson-Hamburg Turnpike BRT, shown in light blue, could potentially link to the Paterson to MSU BRT, providing access to William Paterson University and the Wayne campus of the Saint Joseph's Regional Medical Center. Both of these routes are important to bolstering these major industries in Passaic County. The Paterson-Hamburg BRT also presents the opportunity to build a new park-and-ride facility in the Wayne Hills area, as an alternative to facilities already at capacity, such as the NJ23 multi-modal station. The proposed Up-County Circulator Bus Route defines the northerly end of the route, providing new access to residents in the northern portion of the County. The Market and Essex Street, and the Broadway/N.J. 4 BRT routes, shown in orange and green, could act as the precursor to Phase I of the proposed Passaic-Bergen passenger rail line. The Market Street BRT services the same areas as the Passaic-Bergen Rail Line between Bergen and Passaic counties, while providing direct access to downtown Paterson and the Great Falls Historic District. The Broadway/N.J. 4 BRT could build on the vision outlined in the Madison Avenue Commuter Rail Corridor Study and utilize the TOD at the proposed Madison Avenue Station as an anchor destination. Modifying bus stops and schedules, new equipment, expedited payment methods, and marketing may add efficiency to the bus lines currently servicing the Cities of Paterson, Passaic, and Clifton along the Main Avenue/Street BRT route, shown in yellow. A new bus hub and downtown enhancements along Main Avenue in the City of Passaic, will be pursued as one of the focal points

## 5. Public Transportation

along the BRT route. An opportunity for a new multi-modal facility along N.J. 3 could serve as an anchor to the Main Avenue/Street BRT route. Additional study will be needed as to how this facility can be coordinated with the relocation of the Delawanna train station and redevelopment of properties along this critical bus corridor. An abandoned freight rail ROW may provide an avenue to introduce a dedicated service route between Nutley and Paterson. This concept, shown in dark blue, will need further study into feasibility and routing with local and statewide partners.

### Frequency

Frequency of service was another issue expressed in the northern portion of the county during the public outreach process. Further analysis of the existing bus service indicates gaps in connections between bus lines with most of the service concentrated on destinations further east through the Willowbrook Mall park-and-ride. Frequency is also affected by delays in regular bus service along the NJ N.J. 23 corridor. Routine congestion delays may be avoided with a series of queue jumps identified in the Northwest New Jersey Bus Study. This technique allows buses to use shoulders on the road to jump past traffic queues where they are available. A specific location for this treatment is shown on Maps 5.5 and 5.6 at the intersection of NJ N.J. 23 and Packanack Lake Road. Additional analysis be needed to properly design any potential queue jumps along this corridor. There is also a lack of reverse-commute service and midday service on various bus lines in the area. A proposed local circulator shuttle can provide connections between communities, enhance the frequency of existing services, and add a reverse commute component to the up-county area. This service would work in partnership with one of the

local TMAs as well as the communities and major employers along the proposed route shown in green on Map 5.5. The proposed service should not conflict with any existing NJ Transit service or the local shuttle operated by the Township of West Milford.

### Facilities

Many of the service recommendations require potential investments in bus facilities, such as new or expanded park-and-ride lots, signal equipment, bus shelters/stations, and bus depots. Park-and-ride locations provide opportunities to create better connections between various bus and rail services. They can be located along proposed BRT routes to provide better access to these lines and help strengthen potential ridership. The Broadway Bus Terminal in Paterson will become a focal point for introducing new BRT service and may require additional investments. There is also potential along priority routes for a number of new park-and-ride facilities or enhanced access to existing facilities such as the N.J. 23 Transit Center. The need for a new park-and-ride facility with access to interstate 287 in the vicinity of Wanaque or Pompton Lakes was a need communicated at both the municipal level and from NJ Transit. A coordinated effort is needed to study the feasibility, parameters, and impacts of vacating the current NJ Transit bus garage along Market Street in Paterson. The facility is near the intersection with Spruce Street and in the heart of the Great Falls Historic District. Vacating the facility will provide an economic development opportunity that can leverage the investments in the newly created Paterson Great Falls National Historic Park. Moving bus operations to a more appropriate site can help alleviate the traffic issues in around this key neighborhood and provide a more sustainable long term solution to providing operations in the greater Paterson area.

## Scenario Planning

Scenario planning enabled the project team to evaluate a range of potential outcomes by testing a mix of infrastructure, demographic, land use, and policy changes. The mix of changes was the outcome of the existing transit system, future transit enhancements, input from studies, visions plans and redevelopment plans to develop a likely mix of land use, demographics and infrastructure improvements. These scenarios were tested using the North Jersey Regional Transportation Model-Enhanced (NJRTM-E), the travel demand model for northern New Jersey.

Two scenarios were tested. The first scenario (Future Baseline) looks at future Passaic County growth concentrated in the potential development areas previously discussed. The purpose of this scenario is to answer the question of whether the TOD policies attract more transit trips and define the anticipated needs of the transit and roadway system as Passaic County grows.

The second scenario (TOD Plus) builds upon the Future Baseline. The transit system is enhanced to support several TOD policies in the vicinity of development areas including improved peak, off-peak and reverse commute services on both the bus and rail system; better access to park-and-ride facilities; better walk-to-transit options and Transportation Systems Management improvements including Intelligent Transportation Systems (ITS) enhancements in the form of coordinated signal systems.

The major findings are encouraging when the TOD Plus scenario is compared to the Future Baseline Scenario:

- Transit ridership in Passaic County increases by 5%;
- Total Vehicle Hours of Travel (VHT) are reduced by over 3%; and
- The percent of vehicle travel (VHT) under severely congested conditions is reduced by 7.8%.

More detailed information on the parameters used to develop the scenarios, and the model results can be found in Appendix C.

## Recommendations and Implementation

Table 5.2 outlines recommendations addressing the issues raised in this section, including transit-supportive policies, transit service needs and future planning efforts. The order of the recommendations is not meant to reflect priority order. The timing column is reflective of the pace at which recommendations may be implemented. Bus Rapid Transit services are short-term projects that provide a relatively flexible service to support future rail transit efforts and TOD initiatives. Providing new or enhanced connections between major colleges and universities, medical facilities, and business districts will also support the largest industries in Passaic County. Coordination is paramount to successfully implementing any Public Transportation project. Local needs must be properly communicated to ensure any service can be sustained through local demand. Properly assessing vulnerability in the public transportation system is important to providing reliable service and should be addressed in flood-prone areas as part of any planning or design effort. Public-private partnerships will need to be part of implementation strategies in response to funding constraints.

## 5. Public Transportation

**Table 5.2 - Public Transportation Recommendations**

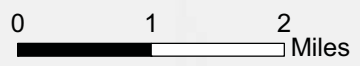
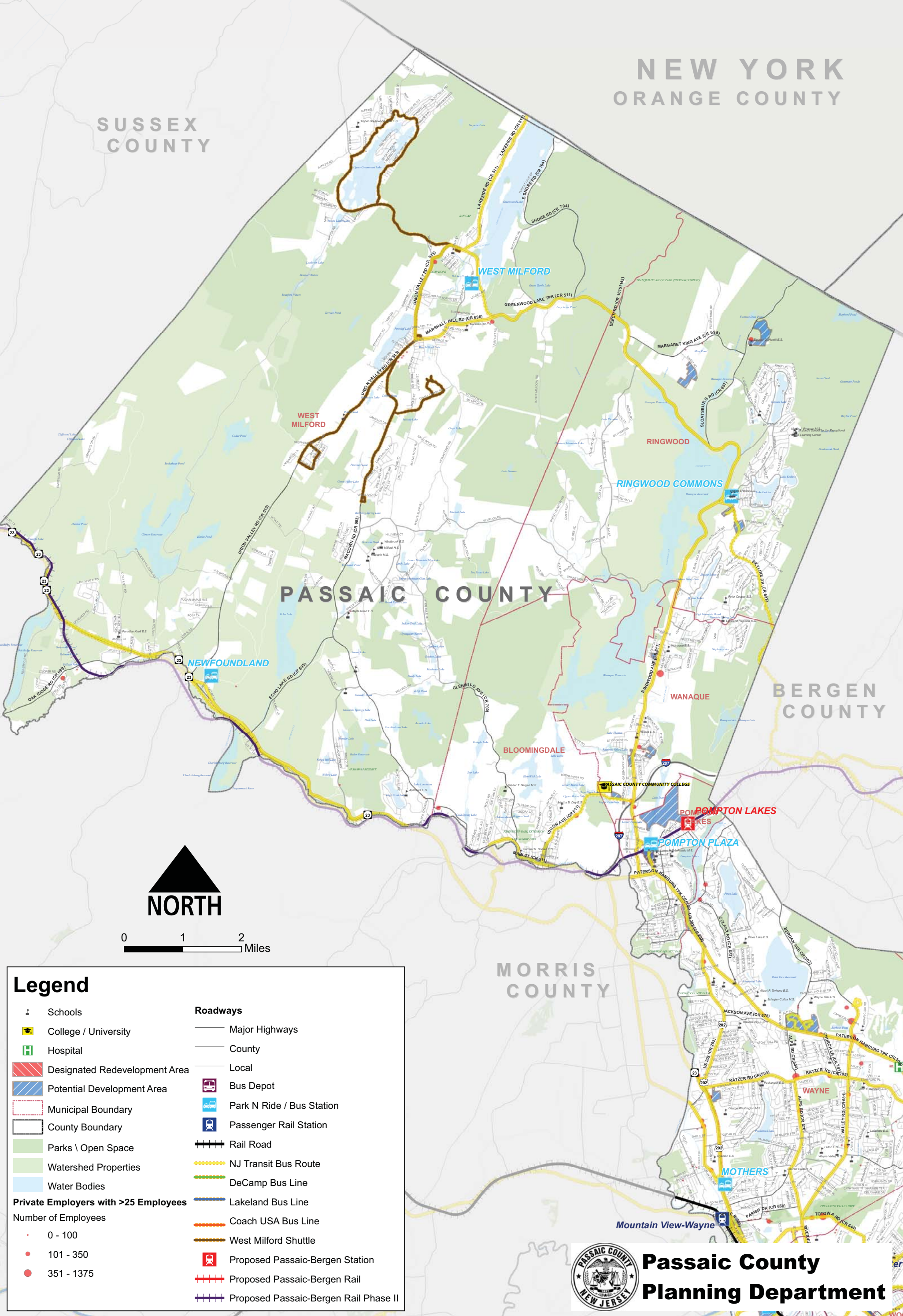
Name	Phase/Suggested Study/Policy	Type	Timing
Passaic-Bergen Rail Line Phase I	Design complete, awaiting construction funding	Rail	Short
Passaic-Bergen Rail Line Phase II	Preliminary Planning Phase/Concept Development	Rail	Long
Madison Avenue TOD Concepts	Coordinate with Paterson on standards and strategies that will support the vision for this Transit Oriented Development	Rail	Short
Study possibly relocating NJ Transit Delawanna Train Station in Clifton	Study alternatives locations for a multi-modal train facility that will coordinate with existing and planned bus park-and-ride facilities along Route 3 as well as potential redevelopment sites	Rail/Bus	Short
Reactivation of the South Paterson Train Station	Freeholder resolution supporting study; Coordination needed with NJT	Rail	Medium
Bus Rapid Transit – Paterson-Hamburg Turnpike	Suggested for study	Bus	Short
Bus Rapid Transit - Main Street (Paterson, Clifton, Passaic)	Suggested for study	Bus	Short
Bus Rapid Transit – Market and Essex Street	Suggested for study – Reuse of abandoned rail freight ROW	Bus	Medium
Bus Rapid Transit – Nutley to Paterson	Suggested for study	Bus	Medium
Bus Rapid Transit – Broadway and Route 4	Suggested for study	Bus	
Bus Bypass lanes at the intersection of NJ 23 northbound at Packanack Lake Road in Wayne	Design and implementation	Bus	Short
Park-and-Ride @ Route 3/21	New park-and-ride to meet demand along Route 3 Corridor	Park-and-Ride	Medium
Park-and-Ride @ Wayne Hills area	New park-and-ride to support demand in the Wayne Area	Park-and-Ride	Medium
Park-and-Ride along northern section of Route 23	Wanaque to support local and regional trips and bolster Passaic County Community College Campus	Park-and-Ride	Medium
Coordinated Corridor Signal Systems	Downtown Paterson and other potential congested areas	ITS	Short
Development/redevelopment policies	Encourage development practices to support transit access; buildings toward the road and parking in the back of sites	Policy	All
Need for more on-demand services in Passaic County	Study additional need for para-transit services	Policy	Short
Need to address out-of-county trips between Morris and Passaic County	Study inter-county travel in coordination with Morris County	Policy	Short
More evening/weekend service	Solicit additional outreach from employers on need for evening service; coordinate with Heritage Tourism Study to highlight need for weekend service	Policy	Medium
Need to regulate Jitney service	Solicit NJTPA for additional guidance on how to incorporate jitneys into traditional mass transit service	Safety/Congestion	Short
Bus Queue jumps along Route 23	Reuse shoulders at various points along Route 23 to create bypasses for buses to jump traffic queues	Bus/Roadway	Medium
Study Relocating Market Street Bus Garage	Consider for Feasibility Study to be conducted in coordination with local, state and regional entities	Bus	Medium
Up-County Circulator Bus Service	Proposal to close gaps in NJT service in the Up-county area; It will need to be vetted with municipalities and local agencies in coordination with TMAs	Bus	Short
Vulnerability Assessment of all mass transit services/facilities and roadways in the Passaic River Basin	Submit proposal to NJTPA to assess the vulnerability of major transportation assets in the Passaic River Basin; Coordination is needed with all counties in the watershed and should address possible future impacts of climate change	All	Short
Montclair-Boonton Passenger Rail Service Expansion	Coordinate with NJT on how to add reverse-commute service providing access to Passaic County in the morning peak hour period	Rail	Medium

Short Term = 0 to 3 years

Medium Term = 3 to 5 years

Long Term = >5 years





### Legend

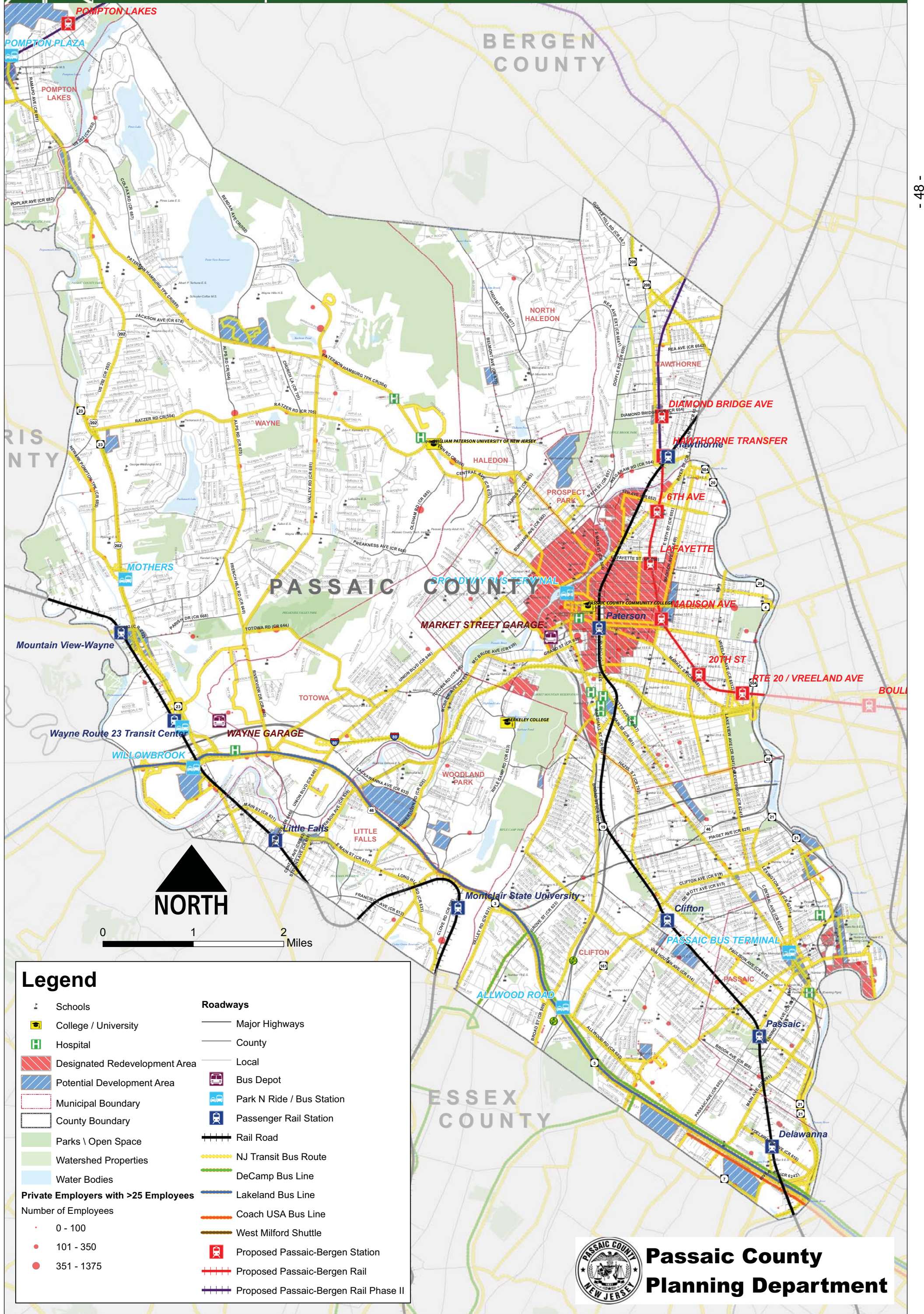
Schools	<b>Roadways</b>
College / University	Major Highways
Hospital	County
Designated Redevelopment Area	Local
Potential Development Area	Bus Depot
Municipal Boundary	Park N Ride / Bus Station
County Boundary	Passenger Rail Station
Parks \ Open Space	Rail Road
Watershed Properties	NJ Transit Bus Route
Water Bodies	DeCamp Bus Line
<b>Private Employers with &gt;25 Employees</b>	Lakeland Bus Line
<b>Number of Employees</b>	Coach USA Bus Line
0 - 100	West Milford Shuttle
101 - 350	Proposed Passaic-Bergen Station
351 - 1375	Proposed Passaic-Bergen Rail
	Proposed Passaic-Bergen Rail Phase II





# PUBLIC TRANSPORTATION

# Map 5.2 Bus and Rail Service Areas Southern Passaic County



0 1 2 Miles

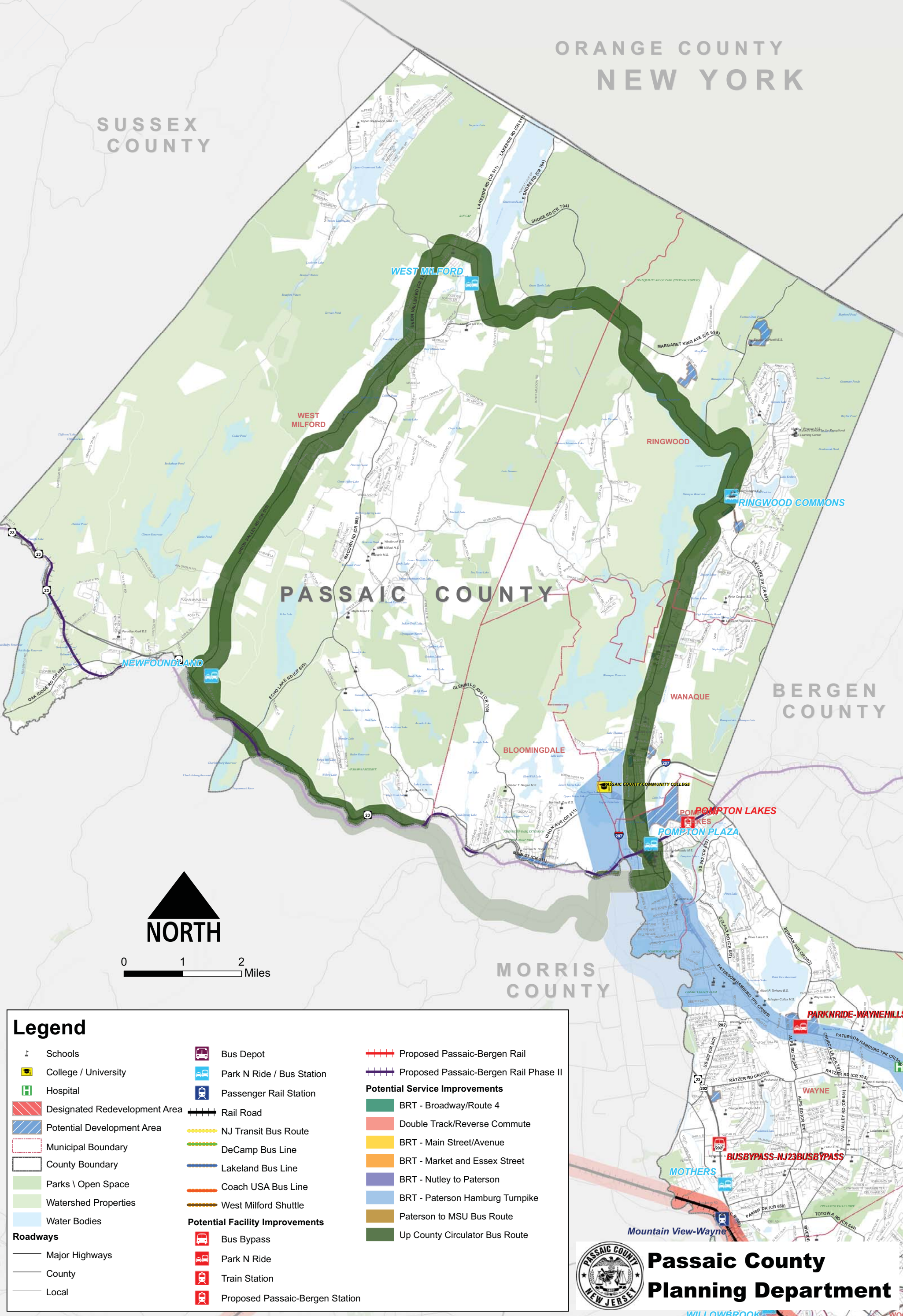
### Legend

	Schools		Major Highways
	College / University		County
	Hospital		Local
	Designated Redevelopment Area		Bus Depot
	Potential Development Area		Park N Ride / Bus Station
	Municipal Boundary		Passenger Rail Station
	County Boundary		Rail Road
	Parks \ Open Space		NJ Transit Bus Route
	Watershed Properties		DeCamp Bus Line
	Water Bodies		Lakeland Bus Line
<b>Private Employers with &gt;25 Employees</b>			Coach USA Bus Line
Number of Employees			West Milford Shuttle
• 0 - 100			Proposed Passaic-Bergen Station
• 101 - 350			Proposed Passaic-Bergen Rail
• 351 - 1375			Proposed Passaic-Bergen Rail Phase II





# Map 5.3 Public Transportation Proposed Improvements Northern Passaic County



### Legend

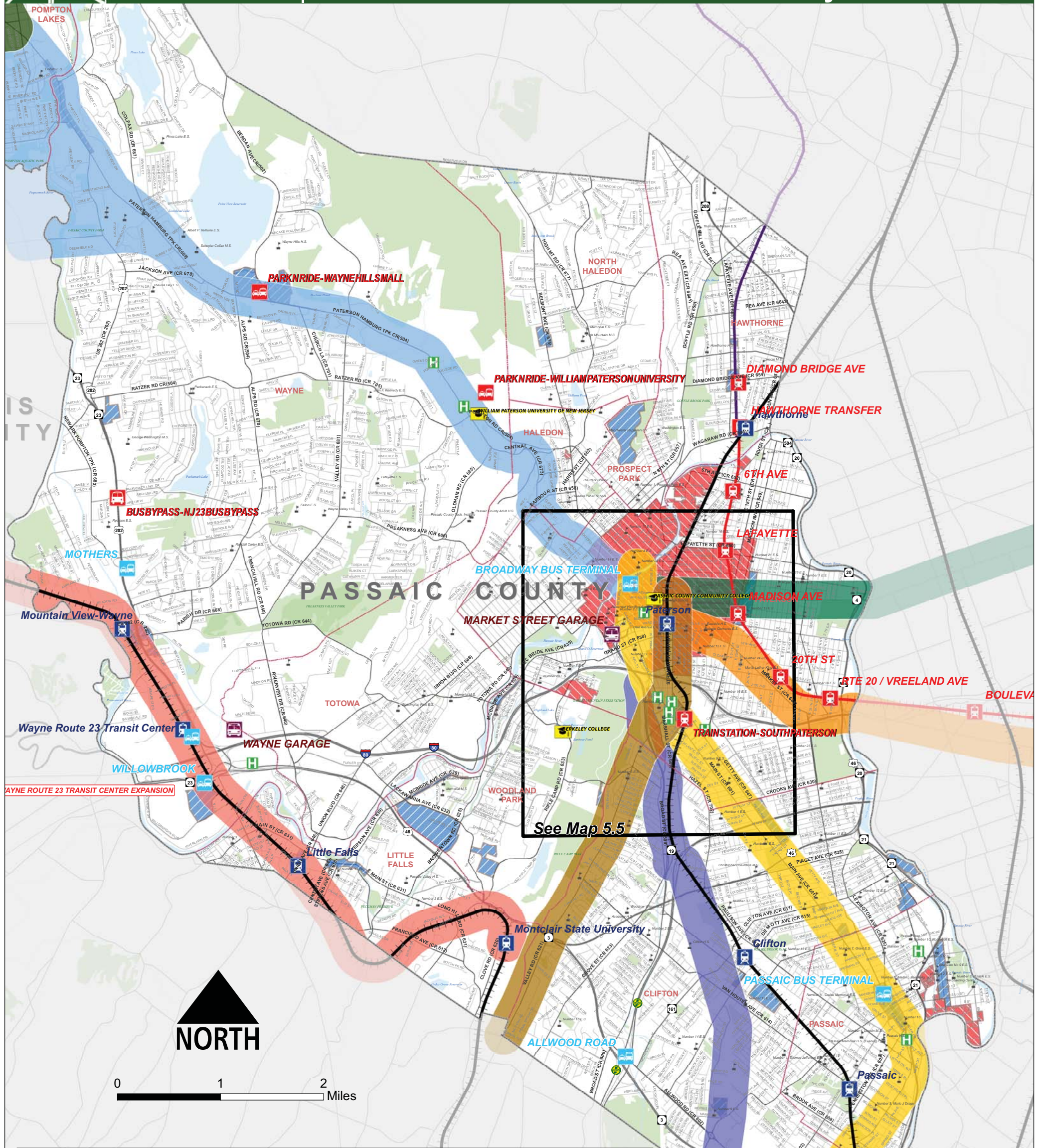
Schools	Bus Depot	Proposed Passaic-Bergen Rail
College / University	Park N Ride / Bus Station	Proposed Passaic-Bergen Rail Phase II
Hospital	Passenger Rail Station	<b>Potential Service Improvements</b>
Designated Redevelopment Area	Rail Road	BRT - Broadway/Route 4
Potential Development Area	NJ Transit Bus Route	Double Track/Reverse Commute
Municipal Boundary	DeCamp Bus Line	BRT - Main Street/Avenue
County Boundary	Lakeland Bus Line	BRT - Market and Essex Street
Parks \ Open Space	Coach USA Bus Line	BRT - Nutley to Paterson
Watershed Properties	West Milford Shuttle	BRT - Paterson Hamburg Turnpike
Water Bodies	<b>Potential Facility Improvements</b>	Paterson to MSU Bus Route
<b>Roadways</b>	Bus Bypass	Up County Circulator Bus Route
Major Highways	Park N Ride	
County	Train Station	
Local	Proposed Passaic-Bergen Station	





# PUBLIC TRANSPORTATION

# Map 5.4 Public Transportation Proposed Improvements Southern Passaic County



## Legend

- |                               |  |                                       |
|-------------------------------|--|---------------------------------------|
| Schools                       | Bus Depot                              | Proposed Passaic-Bergen Rail          |
| College / University          | Park N Ride / Bus Station              | Proposed Passaic-Bergen Rail Phase II |
| Hospital                      | Passenger Rail Station                 | <b>Potential Service Improvements</b> |
| Designated Redevelopment Area | Rail Road                              | BRT - Broadway/Route 4                |
| Potential Development Area    | NJ Transit Bus Route                   | Double Track/Reverse Commute          |
| Municipal Boundary            | DeCamp Bus Line                        | BRT - Main Street/Avenue              |
| County Boundary               | Lakeland Bus Line                      | BRT - Market and Essex Street         |
| Parks \ Open Space            | Coach USA Bus Line                     | BRT - Nutley to Paterson              |
| Watershed Properties          | West Milford Shuttle                   | BRT - Paterson Hamburg Turnpike       |
| Water Bodies                  | <b>Potential Facility Improvements</b> | Paterson to MSU Bus Route             |
| <b>Roadways</b>               | Bus Bypass                             | Up County Circulator Bus Route        |
| Major Highways                | Park N Ride                            |                                       |
| County                        | Train Station                          |                                       |
| Local                         | Proposed Passaic-Bergen Station        |                                       |

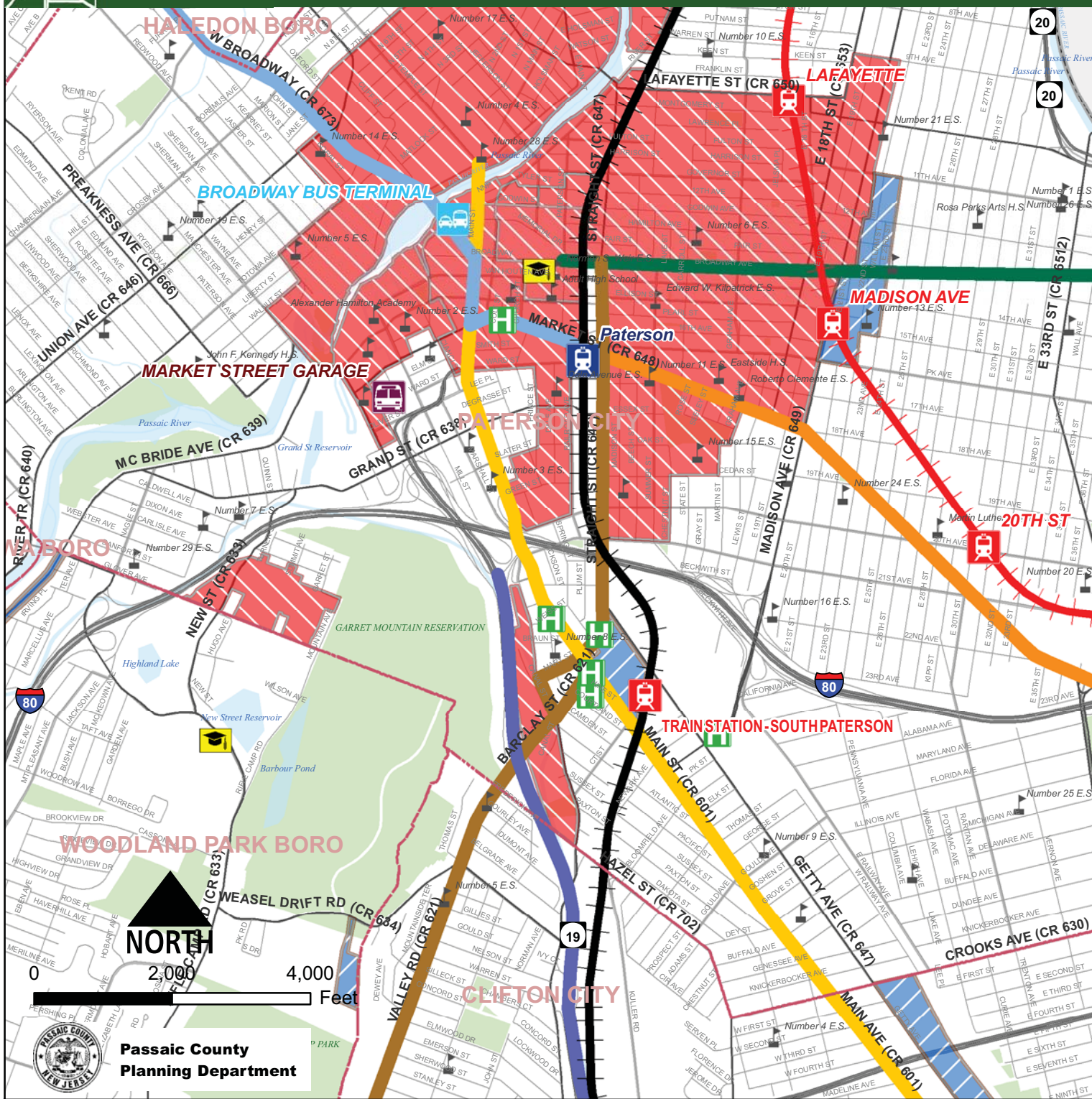


## Passaic County Planning Department





# Map 5.5 Public Transportation Proposed Improvements Southern Passaic County - Detail Map



### Legend

- Schools
- College / University
- Hospital
- Designated Redevelopment Area
- Potential Development Area
- Municipal Boundary
- County Boundary
- Parks \ Open Space
- Watershed Properties
- Water Bodies
- Roadways**
- Major Highways
- County
- Local

- Bus Depot
- Park N Ride / Bus Station
- Passenger Rail Station
- Rail Road
- NJ Transit Bus Route

### Potential Improvements

- Bus Bypass
- Park N Ride
- Train Station
- Proposed Passaic-Bergen Rail
- Proposed Passaic-Bergen Rail Phase II
- Proposed\_BRT\_Routes**
- Broadway / Route 4
- Main Street/Avenue
- Market and Essex Streets
- Nutley to Paterson
- Paterson-Hamburg Turnpike
- Paterson to MSU



## Section 6 - Motor Vehicle Circulation

### Introduction

The Passaic County roadway system is the primary means for delivering people to jobs, schools and universities, shopping, medical facilities, and recreational trips. Although some of these trips are conducted by mass transit, more than 90% of the trips are made using motor vehicles. The roadway system also accounts for 97% of the goods moved in and through the County.

The existing roadway system is extensive in Passaic County, consisting of approximately 520 total lane-miles of roadways at the County-level and above. One hundred and seventy-one (171) lane-miles are on County routes; 91 lane-miles are interstates; and 259 lane-miles are U.S. and New Jersey highways.

One-third of the higher level system is on County roadways, providing most of the connectivity from state and U.S. roads to local destinations. This makes the county roadway system key in delivering both people and goods.

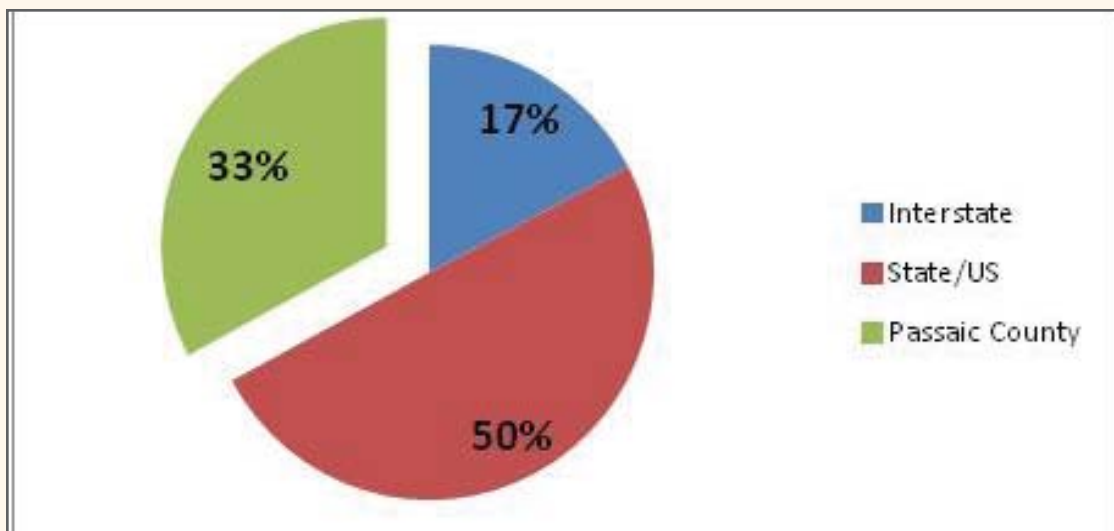
### Issues

The roadway system in Passaic County must address several needs of County residents, workers and businesses. Below is a list of the major issues that need to be considered when assessing and planning the future of the Passaic County roadway system.

**Congestion** – Improvements must address recurring delays associated with peak-period traffic and future delays based on scenario planning.

**Transportation and Land Use** – Transportation projects need to recognize land use changes/growth/needs and have the flexibility to respond to those needs as Passaic County continues to grow.

Figure 6.1 - Lane-miles of roadways by jurisdiction in Passaic County



## 6. Motor Vehicle Circulation

**Complete Streets** – Complete Streets guidelines design all roads to optimize conditions for all users.

**Safety** – Improvements must provide safe streets for all users with an emphasis on corridors and intersections with high crash rates.

**Efficiency** – Future projects need to deploy technology such as Intelligent Transportation Systems (ITS) to help the existing system operate more efficiently without building new capacity. Updating Right-of-Way (ROW) standards will enhance efficiency by minimizing the amount of land needed to implement future priorities.

**Drainage** – A detailed assessment is needed on the impacts of flooding on County roadways and the potential effects of climate change on these conditions.

**Bridges** – The need to maintain the aging infrastructure including bridges and integrate Complete Streets concepts such as providing bicycle and pedestrian facilities and river access.

### Travel Corridors

Passaic County has a number of roadway corridors that account for the majority of inter- and intra-county travel. These corridors run north-south or east-west, providing access to other parts of the county or to neighboring counties and other parts of the metropolitan region. The importance of these corridors is that the roadways usually work in tandem to deliver traffic to and from specific geographic areas. They also act as redundant roadways to each other. If a corridor roadway is highly congested, drivers will tend to use the other roadways in that corridor to avoid congestion and continue their trip. It is important to consider the impacts on all roadways within a particular corridor when designing improvements for individual

roadways. The corridors discussed below are shown on Maps 6.1 and 6.2 at the end of this section.

In the northern portion of the County, Union Valley Road (CR 513), to the west, and Ringwood Avenue/Greenwood Lake Turnpike (CR 511), to the east are the primary north-south corridors. Paterson-Hamburg Turnpike (CR 504) is a major corridor roadway providing access between the northwest portion of the county into Paterson and Haledon Borough via the combination of Pompton Road (CR 504) and Central Avenue (CR 658). N.J. 23 is the major corridor roadway connecting the northern and southern portions of the County and beyond the County boundary to neighboring counties. Interstate 287 provides a short but important regional corridor travelling through the communities in the northern portion of the County.

In the southern region of the County, there are several regional roadways and corridors. Interstate 80, U.S. 46 and N.J. 3 are the primary east-west roadway corridors. In the southwestern part of the County, N.J. 23 and U.S. 202 provide the north-south regional connections. In the central and eastern parts of the County, N.J. 19 and the combination of N.J. 20 and N.J. 21 are high-level facilities providing regional access in and through Passaic County. County roadways that are the primary north-south facilities include Paterson-Hamburg Turnpike (as previously discussed); Main Street and Main Avenue (CR 601) combined with Getty Avenue form a north-south corridor into Paterson; Valley Road (CR 681) and Alps Road (CR 670) form a north-south corridor through Wayne; Goffle Road, Lincoln and Lafayette Avenues form a corridor through Hawthorne and Paterson; Paterson-Hamburg Turnpike (CR 504), CR 640 (Riverview Drive and French Hill Road), Union Boulevard (CR 646), CR 639 (McBride Avenue and Paterson Avenue) connect Wayne, Little Falls,



Woodland Park and Totowa; Valley Road (CR 621), Grove Street and Broad Street (CR 509) form a corridor between Clifton and Paterson.

Most of the corridors in the southern portion of the County pass through portions of Paterson, Passaic and Clifton, making them key hubs for managing traffic issues in the County. More detailed information on the parameters used to develop the scenarios, and the model results can be found in Appendix C.

## Congestion

There are several roadways that are already congested today and will continue to be highly congested as Passaic County grows. The term “highly congested” means that the roadway level of service (LOS) is expected to be at a failing grade (F) during the peak travel periods. Travel speeds along these roadways are well below the posted speed limit and usually result in “stop-and-go” conditions. On signalized streets, motorists may wait in long queues through several cycles before passing through a signalized intersection.

This section concentrates on future needs and therefore highlights roadways that experienced congestion in the Scenario Planning tools described in the Introduction. The Future Baseline scenario concentrated development in the Designated Redevelopment and Potential Redevelopment Areas identified by municipalities during the public outreach process. These sites were made more transit-dependent, but still attracted more traffic on the surrounding roadways. The TOD Alternative scenario promoted Transit Oriented Development (TOD) alternative for new population and employment centers. The transit system was enhanced to reflect several transit-supportive policies and the recommendations outlined in

Public Transportation section of the plan. The major findings are encouraging when the TOD Alternative is compared to the Future Baseline Scenario:

- Transit ridership in Passaic County increases by 5%;
- Total Vehicle Hours of Travel (VHT) are reduced by over 3%;
- Total Vehicle Miles of Travel (VMT) are reduced by almost 1%;
- The percent of Vehicle Hours of Travel (VHT) under severely congested conditions is reduced by 7.8%;
- The percent of Vehicle Miles of Travel (VMT) under severely congested conditions is reduced by 8.9%;

The roads that experience congested conditions (situations which exceeded the capacity of the roadway) are shown in red on Maps 6.3 through 6.6 at the end of this section. State and regional highly congested roadways will include portions of N.J. 23, I-80, N.J. 46, N.J. 3, N.J. 20 and N.J. 21. The major highly congested County roadways include Paterson-Hamburg Turnpike (CR 504), Haledon Avenue, Union Boulevard and Totowa Road, McBride Avenue, Market Street, Grand Street, Broadway, Main Street/Main Avenue, Getty Avenue, Straight Street, and Allwood Road. It should be noted that interchange issues between State and County facilities may contribute to congestion on county and local roadways. State and Interstate interchanges need to be reviewed and analyzed in greater detail to identify issues at these important interface points.

There may also be congestion along corridors in the Highlands Preservation Area (HPA), particularly along Route 23 in West Milford. Solutions to mitigate congestion in these areas must conform to HPA

## 6. Motor Vehicle Circulation

development guidelines.

This analysis does not directly measure the localized effects of signalized systems. That should be done through operational studies, such as the Paterson Citywide Transportation Assessment Study that examined congestion on the city's streets and recommended a series of coordinated signal corridors. A similar analysis would be most beneficial in the Travel Corridors highlighted in the southern portion of the County. More detailed information on the parameters used to develop the scenarios, and the model results can be found in Appendix C.

### Bridges

Bridges play a critical role in providing access to the most urbanized portions of the County. These gateways often act as the first experience for visitors and a direct link to the waterways that define the heritage of Passaic County. The historic character of bridge structures and the surrounding area should be considered when designing or maintaining any

bridge. Sensitivity to the surrounding land uses includes providing access to riverwalks or creating new access that will allow facilities to be connected over time. Implementation of the Complete Streets Guidelines applies to bridges as well as roads, and can ensure that these structures do not become choke points for bicycle and pedestrian access as they are maintained and/or reconstructed. **"Complete Bridges"** should accommodate all users as gateways to and from as well as within the County.

The County's transportation network includes 321 bridges that are covered within the National Bridge Inspection Standards (NBIS), representing critical nodes that allow traffic to efficiently navigate the region's diverse topography as well as its major highways and arterials. The bulk of these bridges are maintained by either the State (48%) or Passaic County (37%). The remaining bridges are maintained by the Turnpike Authority or other local, state, or private entities. The average year of construction

**Table 6.1: NJDOT Priority Drainage Locations in Passaic County**

Ranking in 2011	Route	Town	LIMITS	
			From	To
4	I-80	Paterson City	56.43	58.22
17	N.J. 3	Clifton City	4.89	4.90
24	I-80	Totowa Boro	55.20	55.40
56	I-80	Totowa Boro	56.00	56.01
81	N.J. 21	Passaic City	11.00	11.27
109	N.J. 208	Hawthorne Boro	4.20	4.60
145	N.J. 23	West Milford Twp.	20.40	20.42

for all bridges in the County is 1959, meaning the average bridge is over 50 years old and nearing the end of its typical design service life. This is in line with the statewide average construction year of 1960.

A review of the Federal Highway Administration's (FHWA) 2010 National Bridge Inventory (NBI) data indicated that a number of structures within Passaic County are either structurally deficient or functionally obsolete. These ratings indicate that the structure, capacity, design, or condition of the bridge will need to be addressed in the near future. Twenty-seven bridges (8%) are structurally deficient while another 92 (29%) are functionally obsolete as displayed on Maps 6.7 and 6.8. This is generally consistent with what is seen in the statewide bridge population, which is 10% structurally deficient and 25% functionally obsolete. The distribution of structurally deficient bridges is nearly equal between State and County maintained structures, while a significantly larger number of State maintained structures are functionally obsolete. As these bridges are maintained and redesigned, it is vital for County, state, and regional officials to consider access for all users over the water and to the water.

## **Drainage and Flooding**

Passaic County's rivers and waterways are an important natural recreational feature, but they are also the source of repetitive flooding. Flooding causes major disruption to the transportation system, as well as businesses and households.

New Jersey tracks major drainage problems along the state and interstate systems, and ranks them according to the severity of flooding. Table 6.1 shows that three of the top 25 worst drainage locations in New Jersey are in Passaic County with seven locations making the list (of the 182 locations on the full list). These frequently flooded locations are shown on

Maps 6.7 and 6.8. Ongoing coordination with NJDOT is needed to ensure these projects advance through the project development process. As stated, these and other locations on the County and municipal roadway system are a recurring source of disruption to the transportation system. Both regional and local facilities are sometimes out of service for days at a time, rendering major portions of the Passaic County transportation system unreliable for long periods after these storms have passed. Implementing "Green Streets" on County roadways can help alleviate minor flood conditions by reducing the amount of water that enters the stormwater systems during storm events.

A formal assessment is needed to determine the vulnerability of mass transit facilities and roadway facilities in the Passaic River Basin. The assessment should also include any potential impacts climate change may have on flooding and involve all local, county, and state entities impacted within the watersheds. Recommendations should include ways of mitigating flooding as well as providing alternative mobility options during flood events.

## **Safety**

Safety is always paramount in designing and maintaining roadways for all users, including motor vehicles. The Complete Streets Guidelines provide standards that help balance the needs of all users as facilities are redesigned or maintained. Vehicle crash data provided by the Rutgers Transportation Safety Resource Center provides the ability to track crash trends that may require further analysis or redesign of a roadway to address an unsafe condition. Maps 6.9 and 6.10, at the end of this section, depict the highest crash rates along County roadways and at various intersections. These statistics can be used to conduct Road Safety Audits (RSA) in conjunction

## 6. Motor Vehicle Circulation

with our partners at the Rutgers Center for Advanced Infrastructure and Transportation (CAIT). An RSA brings together planners, engineers and local officials to determine the unsafe conditions that persist and their possible causes. When completed, the RSA offers a comprehensive report on long-term solutions and “quick fix” projects. These projects can be fed into the NJTPA Local Safety Program, which provides construction funding for short-term solutions in high-crash areas and high-risk rural roads. Passaic County has already participated in an RSA along Main Street in the City of Passaic. Future analysis will be done along corridors and intersections that have high-crash rates or pose other safety risks.

### Efficiency

Increasing efficiency on County roadways will accommodate more traffic while minimizing the need to increase the capacity of the roadway system. Introducing technology such as Intelligent Transportation Systems (ITS) can help coordinate operations along roadways and make adjustments as demands change. Traffic signal systems should be coordinated between the County and the municipalities that maintain this equipment. This coordination can help in pursuing funding for technical studies and implementation.

Updating the Right-of-Way (ROW) standards on all County roadways is another way to ensure that future capital improvements meet the needs outlined in the Transportation Element. The County ROW standards were last updated and adopted in 1995, and do not take into account the impact of the Highlands Regional Master Plan, NJDOT Complete Streets Policy and the emphasis towards a more multi-modal transportation system. Analyzing the needs along each County roadway will provide the proper guidance for future capital expenditures and

take advantage of the opportunities to acquire ROW as it is needed or becomes available.

### Recommendations and Implementation

There are many challenges for the Passaic County roadway system. In order to meet existing traffic demand, and forecasted traffic growth in the County and the greater region, the County with its local and regional planning and engineering partners will need to move forward on several fronts in a coordinated fashion. Table 6.2 provides a listing of recommendations that are a road map to implementing the vision of a roadway system that provides for efficient movement of motor vehicle traffic while ensuring that the system is well maintained and safe for all users. The order of the recommendations is not meant to reflect priority order. The timing column is reflective of the pace at which the recommendations can be realistically implemented. Recommendations such as adopting Complete Streets policies is certainly high priority because it sets the vision and tone for growth of the transportation system in Passaic County for the next several years. Development and implementation of ITS systems are important because they squeeze efficiency out of the existing roadways, making it easier to travel in and around Passaic County. Way-finding systems direct people to their destinations, making the roadways operate more efficiently by reducing driver confusion.





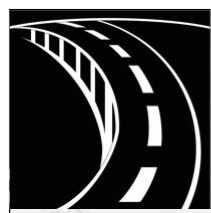
**Table 6.2 - Motor Vehicle Circulation Recommendations**

	<b>Recommendation</b>	<b>Type</b>	<b>Timing</b>
1	Adopt Complete Streets Policies as the vision for the Passaic County Roadway system and a move towards more sustainable transportation infrastructure	Policy	Short
2	Implement Intelligent Transportation Systems (ITS) recommendations such as the City of Paterson coordinated signal systems	ITS/Studies/Implementation	Short
3	Explore ITS options along Paterson-Hamburg Turnpike, a key corridor in the County	ITS	Medium
4	Explore ITS options county-wide; use key travel corridors to guide location of coordinated systems	ITS/Studies	Short/Medium
5	Conduct a bridge analysis for county-owned bridges, assessing river access for recreational purposes as part of Complete Streets	Bridge/Recreation	Short
6	Prioritize bridge repairs as part of capital programs to maintain a state of good repair and retain historical elements	Bridge/Maintenance	On-Going
7	Conduct Road Safety Audits to determine the causes and solutions by increasing safety and reducing accidents at high accident locations	Safety	Medium
8	Implement Other Study Recommendations - like the Madison Avenue Corridor that promote Transit Oriented Development (TOD) and Context Sensitive principles as well as ITS solutions	Implementation	Medium
9	Implement other study recommendations from ongoing transit studies that will increase transit usage and reduce motor Vehicle Miles Travelled (VMT)	Transit	Short/Medium
10	Continue to seek solutions to the County's many recurring drainage issues	Drainage	On-Going
11	Stress adherence to design guidelines in the Highlands Preservation Area	Policy	On-Going
12	Use travel corridors as guidelines for coordinated roadway upgrades	Policy	On-Going
13	Update County Right-of-Way Standards that comply with the goals in each section of the Transportation Element	Policy	Short
14	Vulnerability assessment of all mass transit facilities and roadways in the Passaic River Basin	Study/Implementation	Short

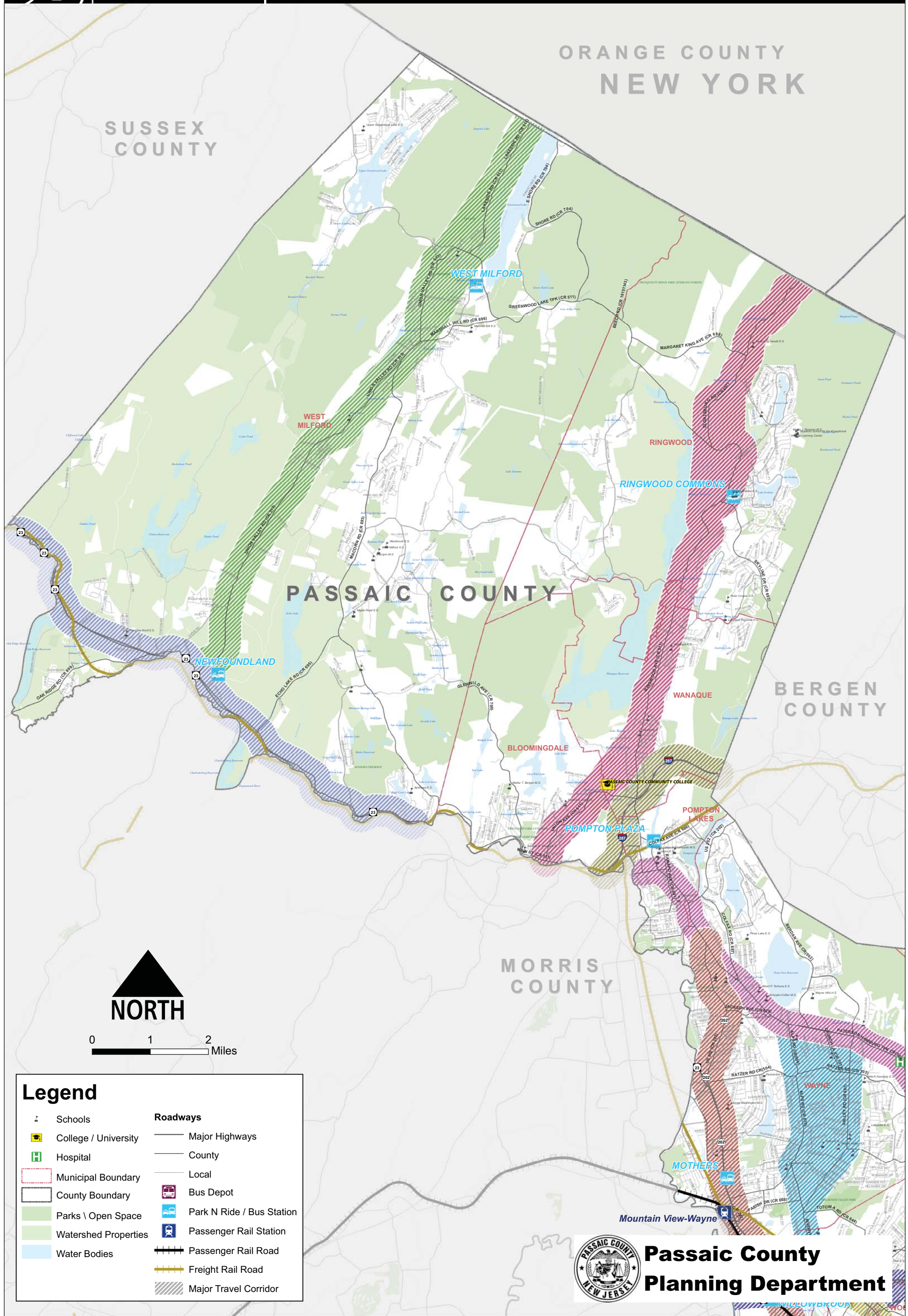
Short 0 to 2 years  
 Medium 2 to 5 years  
 Long > than 5 years







# Map 6.1 Major Travel Corridors Northern Passaic County



SUSSEX COUNTY

ORANGE COUNTY  
NEW YORK

PASSAIC COUNTY

BERGEN COUNTY

MORRIS COUNTY



0 1 2 Miles

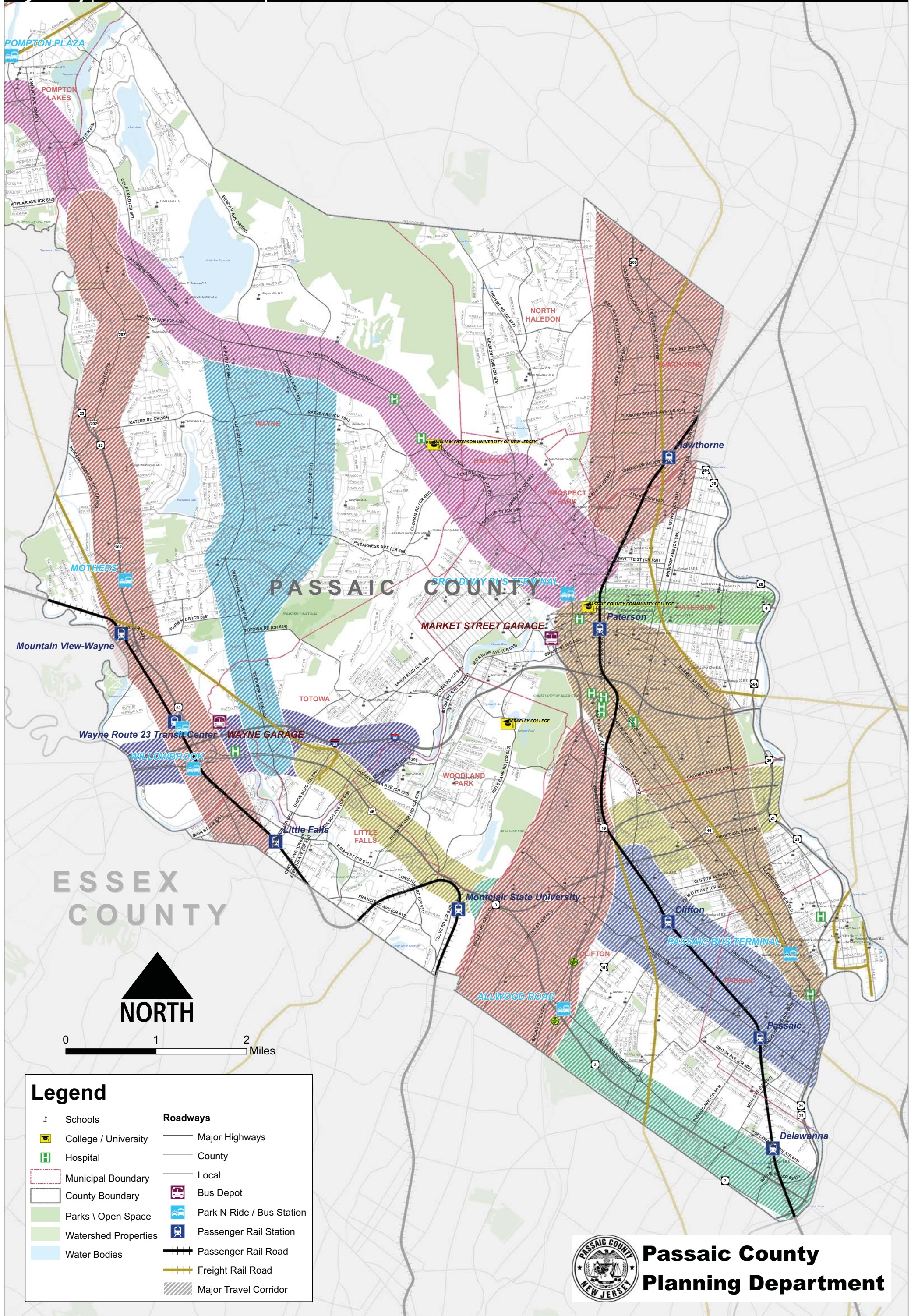
## Legend

- |  |                      |  |                           |
|--|----------------------|--|---------------------------|
|  | Schools              |  | Major Highways            |
|  | College / University |  | County                    |
|  | Hospital             |  | Local                     |
|  | Municipal Boundary   |  | Bus Depot                 |
|  | County Boundary      |  | Park N Ride / Bus Station |
|  | Parks \ Open Space   |  | Passenger Rail Station    |
|  | Watershed Properties |  | Passenger Rail Road       |
|  | Water Bodies         |  | Freight Rail Road         |
|  |                      |  | Major Travel Corridor     |



**Passaic County  
Planning Department**

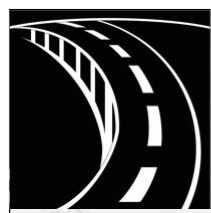




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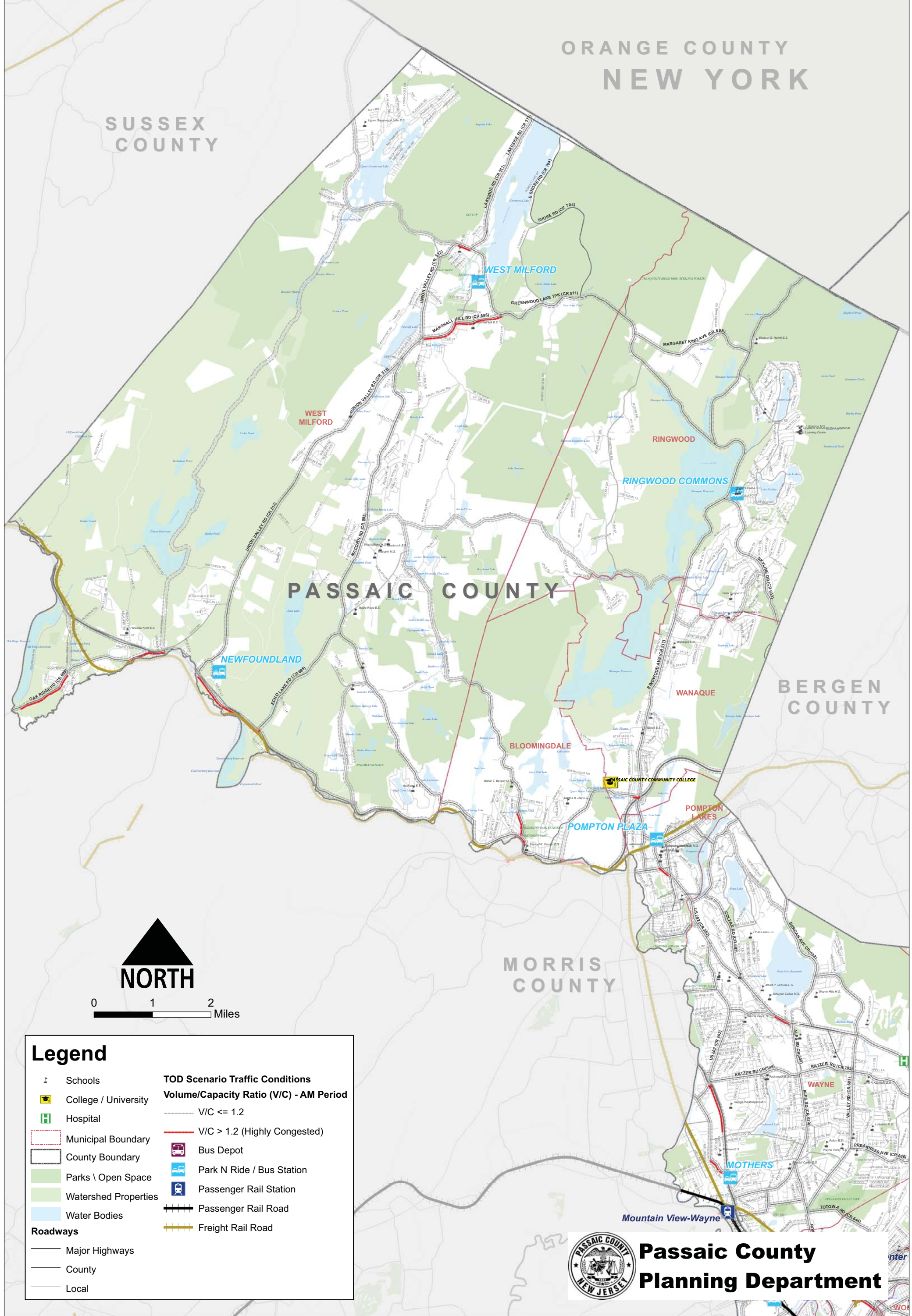
	Schools		Major Highways
	College / University		County
	Hospital		Local
	Municipal Boundary		Bus Depot
	County Boundary		Park N Ride / Bus Station
	Parks \ Open Space		Passenger Rail Station
	Watershed Properties		Passenger Rail Road
	Water Bodies		Freight Rail Road
			Major Travel Corridor





**MOTOR  
VEHICLE  
CIRCULATION**

**Map 6.3 Future TOD Scenario Traffic Conditions  
(AM Peak Period)  
Northern Passaic County**



SUSSEX  
COUNTY

ORANGE COUNTY  
NEW YORK

PASSAIC COUNTY

BERGEN COUNTY

MORRIS COUNTY

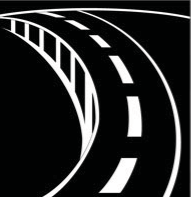


0 1 2 Miles

**Legend**

	Schools		TOD Scenario Traffic Conditions
	College / University		Volume/Capacity Ratio (V/C) - AM Period
	Hospital		V/C <= 1.2
	Municipal Boundary		V/C > 1.2 (Highly Congested)
	County Boundary		Bus Depot
	Parks \ Open Space		Park N Ride / Bus Station
	Watershed Properties		Passenger Rail Station
	Water Bodies		Passenger Rail Road
<b>Roadways</b>			Freight Rail Road
	Major Highways		
	County		
	Local		





# MOTOR VEHICLE CIRCULATION

# Map 6.4 Future TOD Scenario Traffic Conditions (AM Peak Period) Southern Passaic County

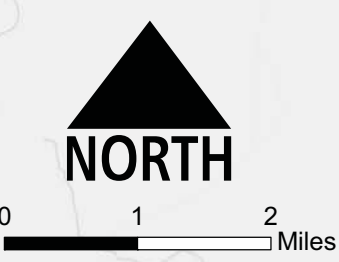
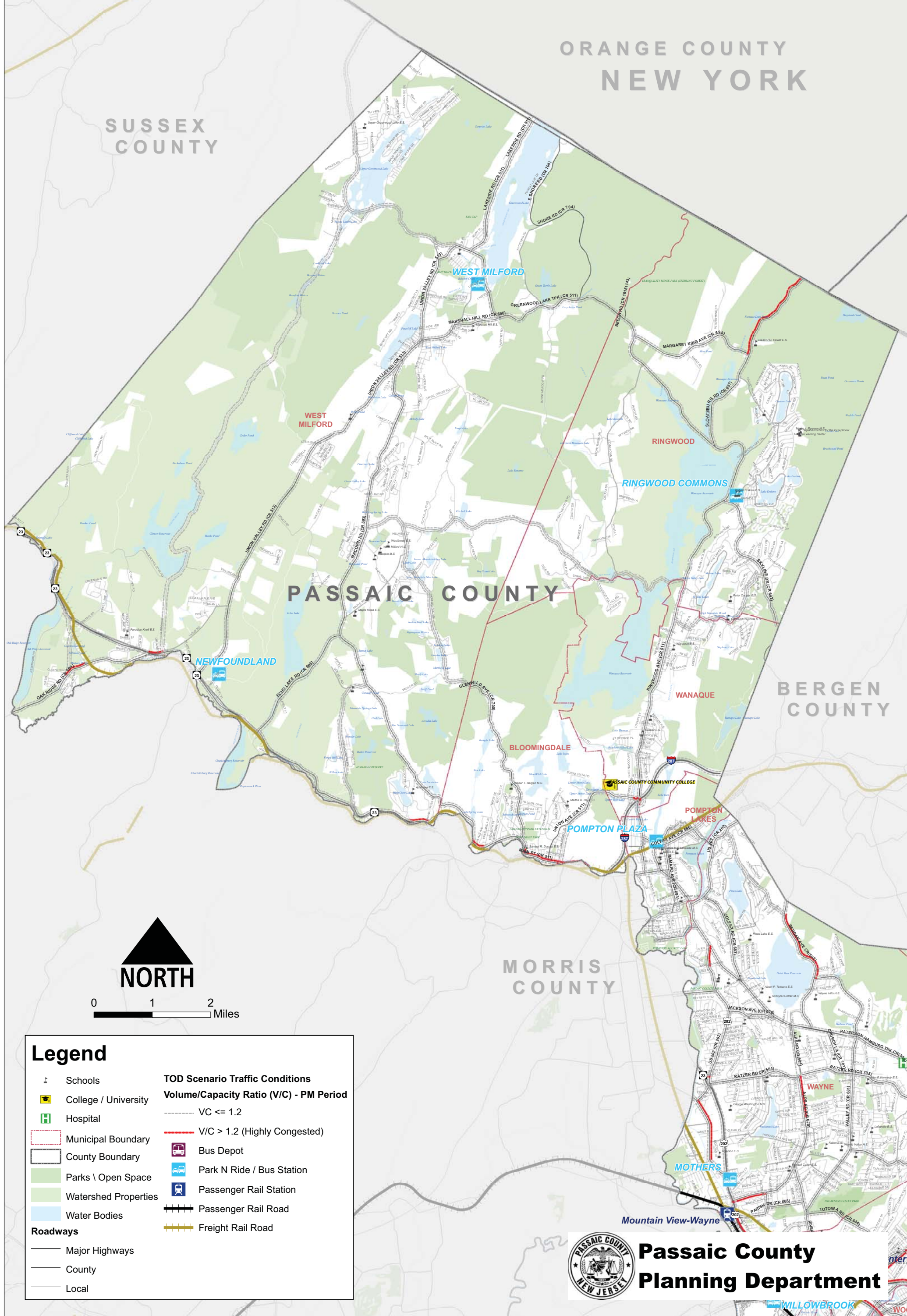
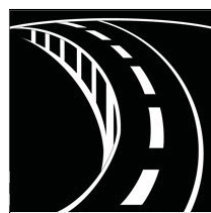


0 1 2 Miles

## Legend

- Schools
- College / University
- Hospital
- Municipal Boundary
- County Boundary
- Parks \ Open Space
- Watershed Properties
- Water Bodies
- Roadways**
- Major Highways
- County
- Local
- TOD Scenario Traffic Conditions**
- Volume/Capacity Ratio (V/C) - AM Period**
- V/C <= 1.2
- V/C > 1.2 (Highly Congested)
- Bus Depot
- Park N Ride / Bus Station
- Passenger Rail Station
- Passenger Rail Road
- Freight Rail Road



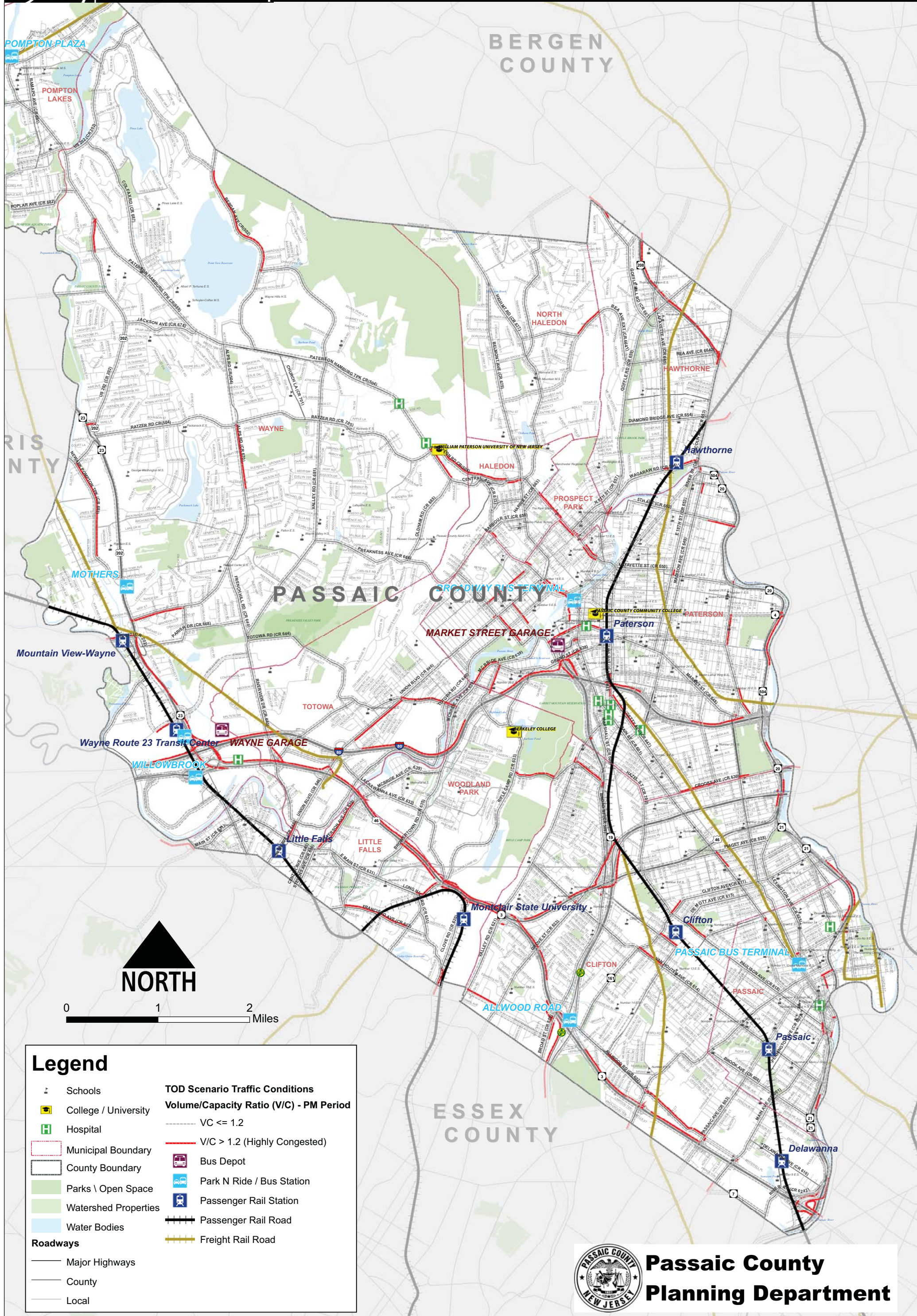


Legend	
	Schools
	College / University
	Hospital
	Municipal Boundary
	County Boundary
	Parks \ Open Space
	Watershed Properties
	Water Bodies
Roadways	
	Major Highways
	County
	Local
TOD Scenario Traffic Conditions	
Volume/Capacity Ratio (V/C) - PM Period	
	VC <= 1.2
	V/C > 1.2 (Highly Congested)
	Bus Depot
	Park N Ride / Bus Station
	Passenger Rail Station
	Passenger Rail Road
	Freight Rail Road



# MOTOR VEHICLE CIRCULATION

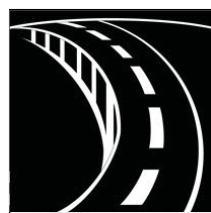
# Map 6.6 Future TOD Scenario Traffic Conditions (PM Peak Period) Southern Passaic County



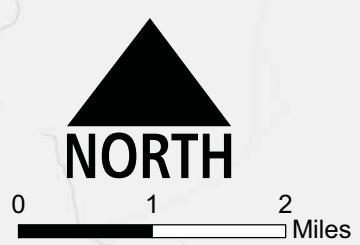
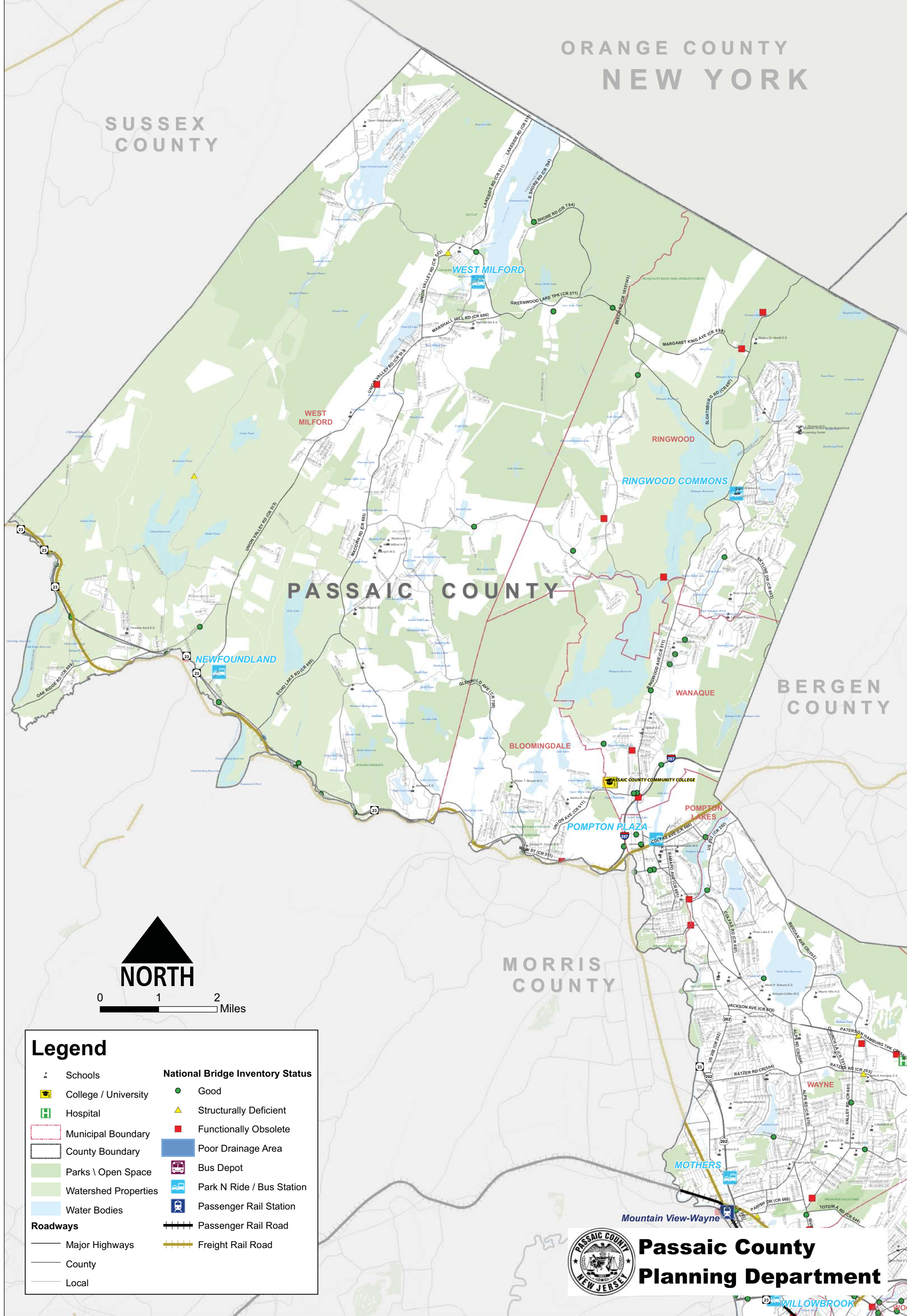
### Legend

	Schools	<b>TOD Scenario Traffic Conditions</b>
	College / University	<b>Volume/Capacity Ratio (V/C) - PM Period</b>
	Hospital	VC <= 1.2
	Municipal Boundary	V/C > 1.2 (Highly Congested)
	County Boundary	
	Parks \ Open Space	
	Watershed Properties	
	Water Bodies	
<b>Roadways</b>		
	Major Highways	
	County	
	Local	



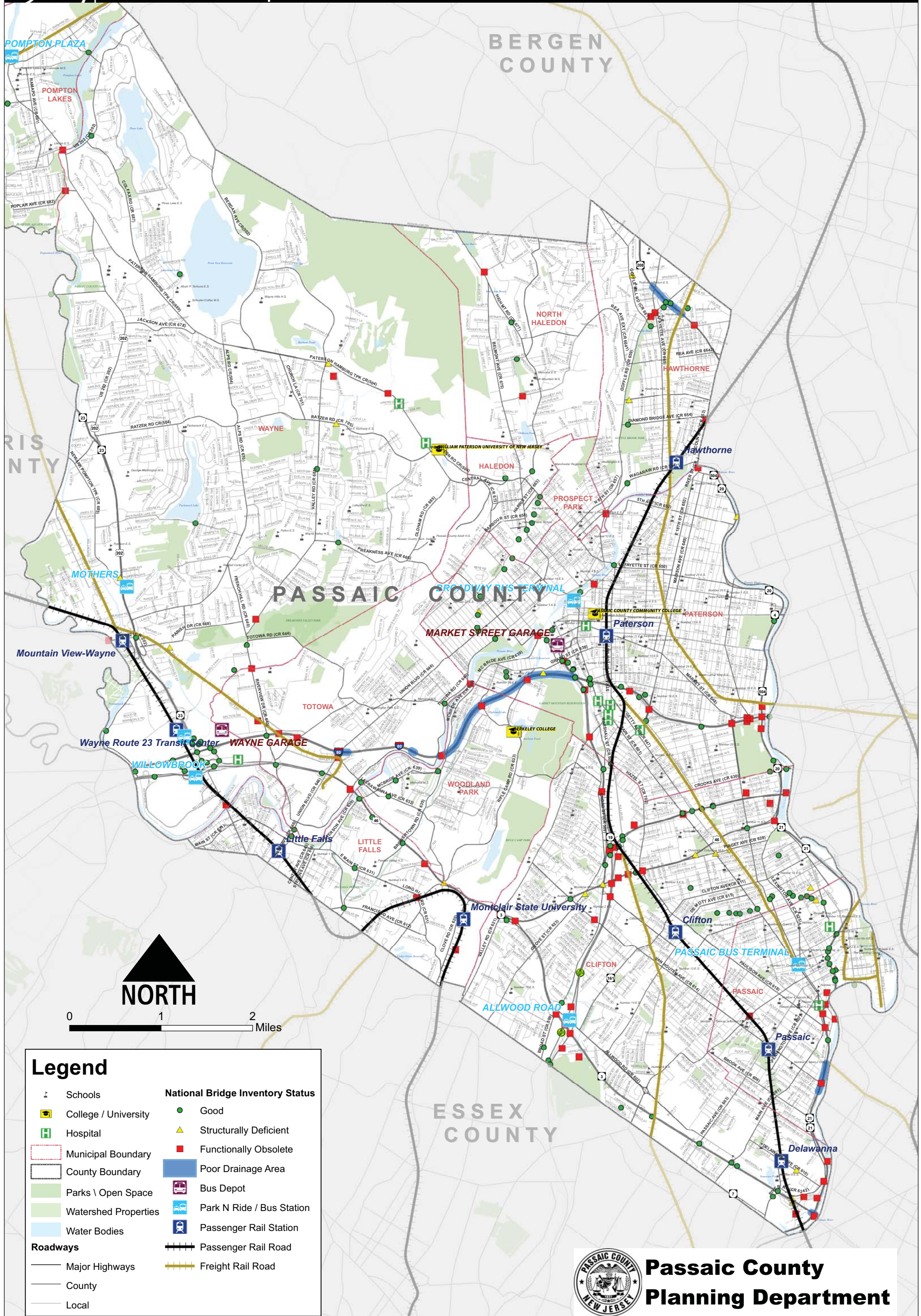


# Map 6.7 Bridge and Drainage Project Status Northern Passaic County



Legend	
	Schools
	College / University
	Hospital
	Municipal Boundary
	County Boundary
	Parks \ Open Space
	Watershed Properties
	Water Bodies
	Major Highways
	County
	Local
	Good
	Structurally Deficient
	Functionally Obsolete
	Poor Drainage Area
	Bus Depot
	Park N Ride / Bus Station
	Passenger Rail Station
	Passenger Rail Road
	Freight Rail Road





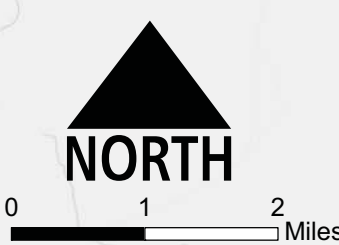
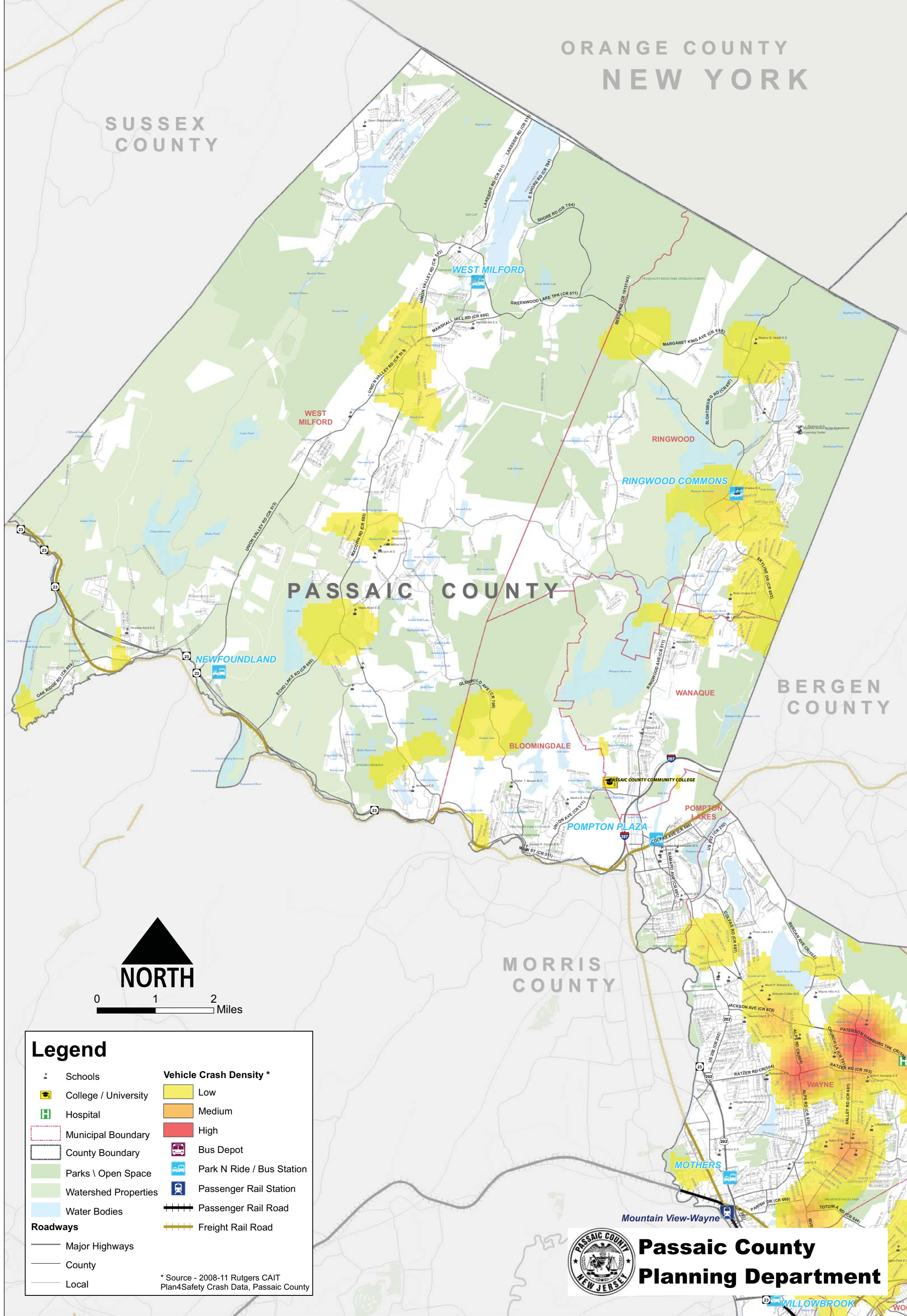
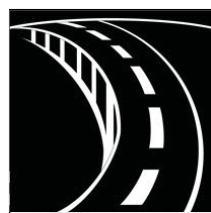
0 1 2 Miles

**Legend**

- |                      |   |
|----------------------|---|
| Schools              | <b>National Bridge Inventory Status</b> |
| College / University | Good                                    |
| Hospital             | Structurally Deficient                  |
| Municipal Boundary   | Functionally Obsolete                   |
| County Boundary      | Poor Drainage Area                      |
| Parks \ Open Space   | Bus Depot                               |
| Watershed Properties | Park N Ride / Bus Station               |
| Water Bodies         | Passenger Rail Station                  |
| <b>Roadways</b>      | Passenger Rail Road                     |
| Major Highways       | Freight Rail Road                       |
| County               |   |
| Local                |   |





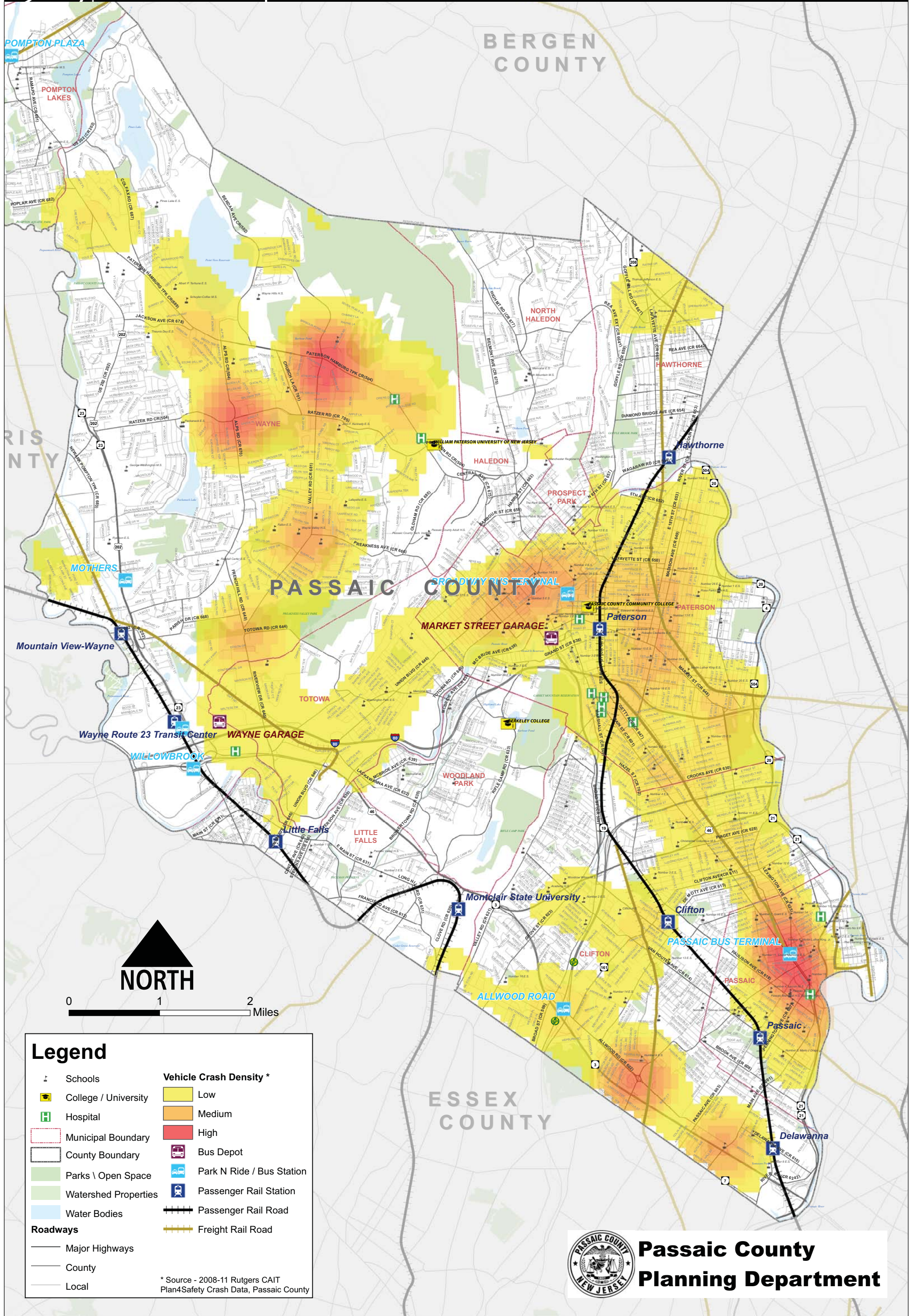


**Legend**

	Schools		Low
	College / University		Medium
	Hospital		High
	Municipal Boundary		Bus Depot
	County Boundary		Park N Ride / Bus Station
	Parks \ Open Space		Passenger Rail Station
	Watershed Properties		Passenger Rail Road
	Water Bodies		Freight Rail Road
<b>Roadways</b>			
	Major Highways		
	County		
	Local		

\* Source - 2008-11 Rutgers CAIT Plan4Safety Crash Data, Passaic County





0 1 2 Miles

**Legend**

- |                      |                                |
|----------------------|--------------------------------|
| Schools              | <b>Vehicle Crash Density *</b> |
| College / University | Low                            |
| Hospital             | Medium                         |
| Municipal Boundary   | High                           |
| County Boundary      | Bus Depot                      |
| Parks \ Open Space   | Park N Ride / Bus Station      |
| Watershed Properties | Passenger Rail Station         |
| Water Bodies         | Passenger Rail Road            |
| <b>Roadways</b>      | Freight Rail Road              |
| Major Highways       |                                |
| County               |                                |
| Local                |                                |

\* Source - 2008-11 Rutgers CAIT Plan4Safety Crash Data, Passaic County





## Section 7 - Moving Goods and People

### Introduction

Goods movement is an essential asset of Passaic County. With over \$57 billion<sup>1</sup> in freight flowing into, out of and within the county annually, Passaic County's freight system is vital to its economy and will play a key role as the County grows. The goal of this section of the plan is to direct the creation of a freight system that promotes economic activity and ease of freight movement in a safe and efficient manner. This can be done by maintaining and creating "freight-friendly" routes throughout Passaic County that receive freight traffic travelling into the County from major highways such as Interstate Routes 80 and 287. It also includes supporting rail projects that will increase the opportunities to carry a larger percentage of freight by rail.

The following discusses the freight system in Passaic County, including a profile of freight activity; an inventory of the existing freight system; and recommendations for opportunities to connect freight users with the county and regional freight system.

### Issues

As the goods movement industry in Passaic County continues to grow, there are several issues that need to be addressed:

**Traffic** – Truck traffic travels over the same roadways that automobiles travel. By 2040 over 23% of vehicular travel will be under highly congested conditions.

**Safety** – As Passaic County grows it must continue to deliver goods in a manner that is safe to all users of the system and does not conflict with sensitive land uses, such as residential areas.

**Economic Development** – Passaic County must use its transportation system to create a better business climate and a more accessible freight system by linking its freight activity centers within the County and outside the County.

**County Roadways for Freight Movement** – Use of the County roadway system to support effective goods movement in and through the county and onto the regional freight system.

**Rail Freight** – In order for Passaic County to be able to most effectively utilize the rail freight system. Restrictions of larger freight cars (up to 286,000 pounds) on parts of the freight system must be addressed and upgraded.

### County Goods Movement Profile

Over 17 million tons of freight were transported into, out of and within Passaic County in 2010. Sixty percent of freight tonnage flows from and/or to Passaic County are in the Atlantic region. About five percent of the freight flows internationally. Less than ten percent of the freight flows into the Central, Pacific and Mountain regions of the USA. The flows indicate that Passaic County is a local trading partner in terms of distance.

The largest percentage of freight flow tonnage comes from trips made to and/or from warehouses and distribution centers. The second largest movements are the shipment of nonmetallic minerals typically produced through quarrying activities. The types of commodities moved and the nature of our local trade partners account for trucks moving 97% of the freight when classified

<sup>1</sup> 2007 TranSearch forecasted to 2010

## 7. Moving Goods and People

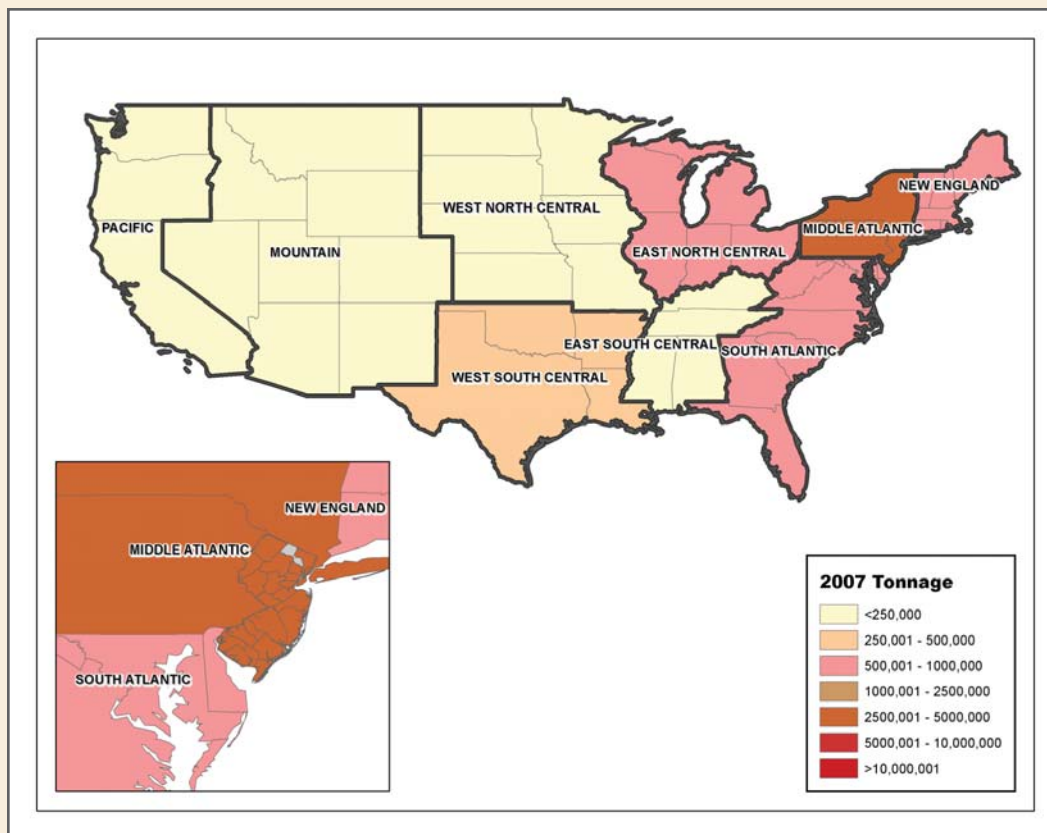
by weight and 99% when classified by value. In order to maintain and grow these commodity markets, the Passaic County freight system must move to safely accommodate these types of movements in and through Passaic County.

### Freight Generators

Truck and rail traffic are the way businesses move their goods and generate economic activity. While smaller retail shops may only generate one truck delivery per day, larger industrial, warehousing and retail facilities receive several daily truck deliveries. These uses can generate up to 30 truck trips per day, which puts a different level of burden on the roadways based on the size and density of businesses where these facilities are located.

In order to better understand this relationship, the existing freight system and clusters of freight-generating businesses were examined and mapped. "Freight Activity Center Buffers" were created around business clusters based on the type of business, number of employees and density of businesses. The result is a set of maps that depict areas of the county that are currently served by the existing system, opportunities to close system gaps and freight facilities that may need to be expanded. These maps serve as the basis for freight facility recommendations and coordination of land uses that can take advantage of this infrastructure.

Figure 7.1 - Trading Regions by Truck and Rail Tonnage



Source: Transearch 2007



## **Roadway Freight System**

The existing roadway freight system in Passaic County consists of approximately 520 total lane-miles of shared roads. Maps 7.1 and 7.2, at the end of this section, depict the freight roadways along with corresponding freight activity centers, major employers and other freight hubs. Half of the Passaic County roadway freight system is on U.S. and State routes which carry the bulk of freight to/from and through Passaic County. County roadways fully account for one-third of the system playing a critical role in connecting local businesses to the regional freight roadways and to each other.

## **Roadway Classification**

Businesses that generate goods movement are spread throughout Passaic County. The county has a diverse county-based roadway system, ranging from two-lane rural roads to neighborhood streets to downtown Central Business District (CBD) areas. The challenge for the transportation system is linking the freight generators with the appropriate roadway system to effectively move goods into and out of Passaic County.

This section details the different types of roadways on which freight flows; the types of businesses and areas that are likely to generate freight; and the opportunities to enhance the existing system to better accommodate freight movement using County roadways. A way-finding and signage system can assist in directing traffic along the appropriate truck routes in order to reduce conflicts with sensitive land uses such as residential areas.

Each of the Passaic County roadways has been placed into one of five categories representing its role in delivery and flow of goods:

- Through (Yellow)
- Connectors (Magenta/Purple)
- Restricted (Cyan/Blue)
- Opportunities (Orange)
- Local (Gray)

The roadways and their categories are illustrated in Maps 7.1 and 7.2 at the end of this section.

## **Through Roadways**

Through Roadways are identified as roadways that help deliver freight through the County, or to and/or from regional destinations. They are part of the regional and national transportation system that serves New Jersey and points beyond as well as Passaic County roadways of considerable length. Through Roadways are primarily high-level State and Interstate facilities, although many of the Through Roadways in the northern portion of the county are under county jurisdiction. A fair portion of Through Roadways run through the Highlands Preservation Area so special consideration needs to be made because of the added emphasis on sustainability, safety and limitations on capacity expansion. Recommendations for Through Roadways include:

- Updating interchanges to modern standards specific to missing movements, turning radii and acceleration/deceleration lanes;
- Access control – limiting or consolidating access points and driveways where possible;
- Addressing drainage issues;

## 7. Moving Goods and People

- Intelligent Transportation Systems (ITS) – use of Variable Message Signs (VMS) also called Dynamic Message Signs (DMS) and other methods to inform drivers of prevailing conditions and options; and
- Way-finding signage at intersections with Connector Roadways in order to reinforce proper access points to local communities.

### Connector Roadways

Connector Roadways play a primary role in goods movement in Passaic County. They serve to facilitate the movement of goods between the freight generators, the local system and the Through Roadways. They are a collection of County roadways that run long distances of the County and serve a diverse range of access conditions, roadway and lane widths, land uses and intersection treatments. One of the primary goals of Connector Roadways is to create an efficient system of freight routes that will keep large trucks off roads that run through sensitive areas such as residential neighborhoods or CBD areas if possible. In addition to adhering to Complete Streets design standards there are several recommendations that promote “freight-friendly” Connector Roadways, including the following:

- “Last mile” connections to rail facilities, warehouse and distribution centers;
- Access to regional “through” roadways – designing the system to connect freight generators with the regional roadways to facilitate a more efficient delivery process;
- Intersection improvements to accommodate larger truck turning radii, including wider turn lanes and curb treatments;

- Wayfinding signage for truck routes;
- Local redundancy where feasible – designating and designing parallel roadways as freight roadways;
- Maintenance on bridges to maintain load ratings;
- ITS technologies such as video surveillance or incident management;
- Real-time congestion information to inform en-route guidance;
- Wider lanes and shoulders to safely accommodate trucks and other transportation modes such as automobiles, bicyclists and pedestrians; and
- Coordination with municipalities on capital improvements and land uses along connector roadways.

### Restricted Roadways

Restricted roadways are those roads that have restrictions on heavy vehicles (trucks) and/or commercial vehicles. This includes the Garden State Parkway (GSP) and Skyline Drive (CR 692). Enforcement on restricted roadways is the key to maintaining safety on County-controlled roads.

### Local Roadways

Local roadways (not highlighted on maps) make up the bulk of the roadways in Passaic County. They include roadways not listed in the previous categories. They are County and municipal roads that are designed to carry smaller, local delivery trucks (i.e., FedEx, UPS panel trucks) but are not designed to accommodate 3-axle or larger trucks. The primary improvements along Local Roadways would be to accommodate local on-street and off-street deliveries while maintaining safety and



access for all other modes of transportation. All Complete Streets design standards should be taken into consideration

**Potential “Opportunity” Roadways**

After having classified most of the roadways into the first four categories, additional analysis was performed to identify missing links or potential freight roadways that are considered “opportunities” to either fill in under-served areas, complete existing corridors, become connectors between corridors, or create access for freight generators. These roadway recommendations were shared with municipalities for their feedback. In general these would take on the characteristics of Connector Roadways along with the design considerations and way-finding that would allow for a more organized freight roadway system. The Complete Streets Guidelines should account for freight access along these roadways based on land use needs and emerging industries. If new freight activity centers develop over time, these roadways should be reclassified as Connector Roadways.

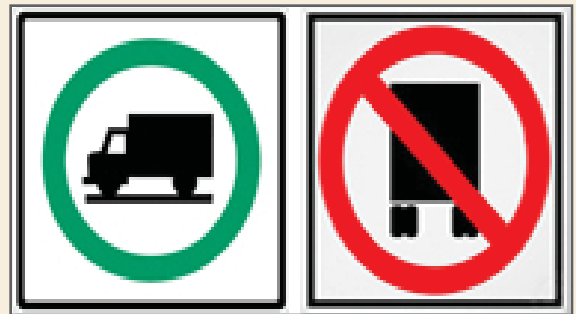
**Rail Freight System**

The majority of the Passaic County freight rail system is owned and/or operated by four companies: The New York Susquehanna and Western Railway (NYS&W), Norfolk Southern, CSX, and New Jersey Transit (NJT), which operates passenger service but has agreements with freight companies to operate freight trains over their right of way (ROW).

The Passaic County freight rail system is greatly underutilized, carrying only three percent of the total freight into and out of the county. One of the reasons that rail freight may be low is that more than half of the freight shipped into or out of



*Variable Message Signs (VMS) and Dynamic Message Signs (DMS) can help inform drivers of prevailing conditions and plan alternative routes.*



*Proper signage at intersections along Through Roadways direct freight traffic to the appropriate freight routes as goods enter the County.*



*Detailed way-finding signage can help route drivers along Connector and Local Roadways. This leads to more organized freight flow and reduced conflict with residential areas.*

## 7. Moving Goods and People

Passaic County either originated or was destined within New Jersey, or to New York or Pennsylvania. These relatively shorter trips are better suited for trucks rather than rail. This data points to a need to develop more trading partners throughout the country and identify any infrastructure restrictions that may impede these relationships.

### Rail Restrictions and Opportunities

The chief barrier to rail freight growth in Passaic County is the lack of rail paths that are “286k compliant.” The rail freight industry standard states that rail infrastructure, including bridges, must be rated to carry rail cars of up to 286,000 pounds. There are three rail lines that pass through Passaic County. Two of them, the Main Line and the Montclair-Boonton Line, are owned and operated by NJ Transit and primarily run passenger service and are not 286k compliant. The third line is owned by the New York, Susquehanna and Western Railway (NYS&W). The NYS&W is a freight rail company operated by Norfolk Souther and CSX, and at present is the only railroad ROW that is fully 286k compliant. Figure 7.2 depicts rail lines in northern and central New Jersey along with the weight restrictions on each line as compiled by NJDOT. It also depicts rail lines that are in the process of upgrading to the 286k standard.

Figure 7.3 depicts two other freight routes that could be formed if portions of the rail lines were upgraded to be 286k compliant. These routes run along the NJ Transit Montclair-Boonton Line, the Morristown Line and the Lehigh Valley line leading out to the west. The Main Line section would eventually connect a path to the Lehigh Valley Line out to the west and the Trenton Line to the south. These alternate freight rail paths are key

to maintaining and growing rail freight traffic in Passaic County.

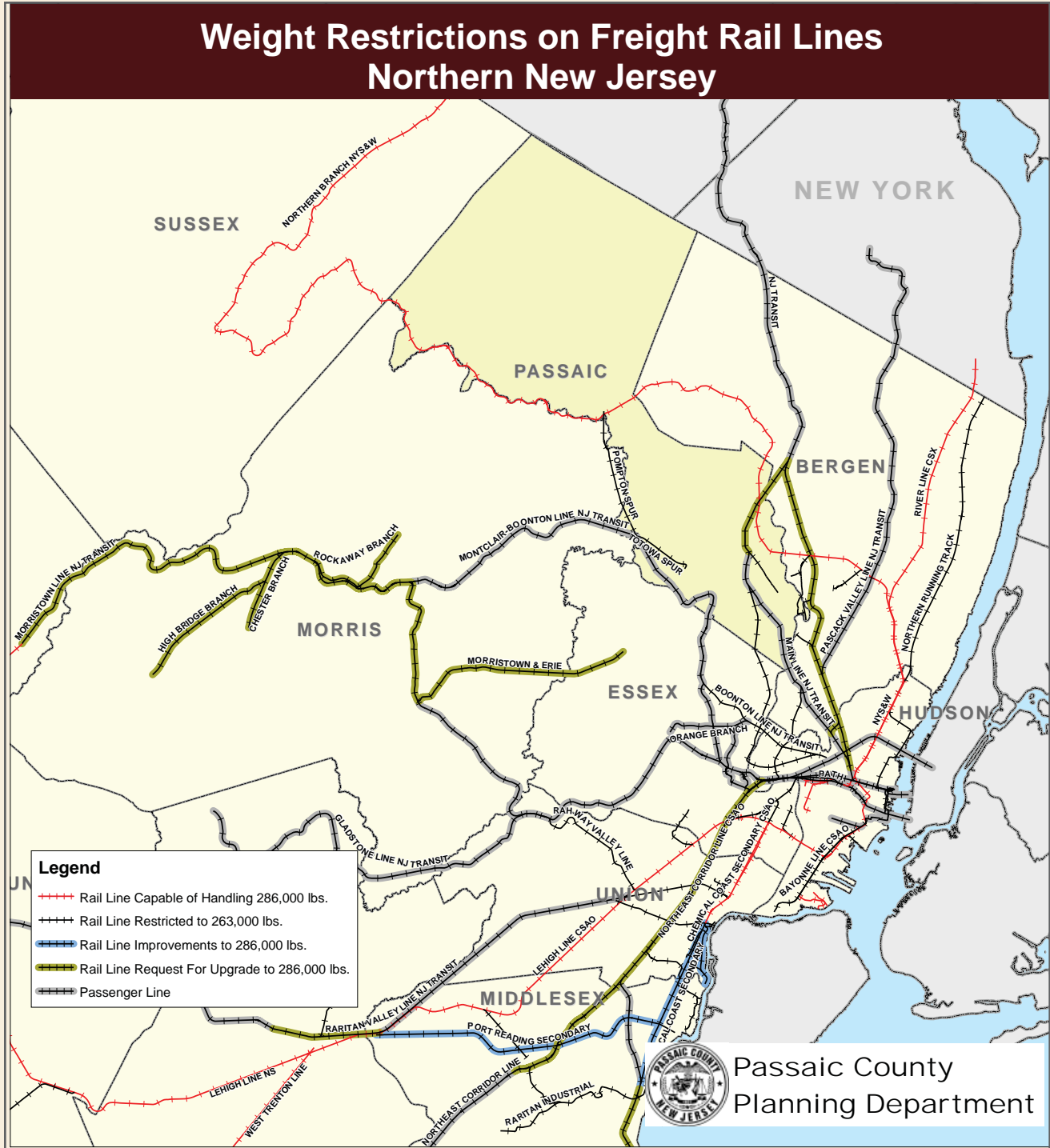
At time of publication, the freight railroads are negotiating with NJT to upgrade sections of the NJT ROWs to become 286k compliant so that freight shippers could move freight along these lines, filling connectivity gaps. One of the first steps in this process is to evaluate bridges along these routes to determine if they can be rated capable of carrying 286k cars. Figure 7.3 shows three bridges that will be evaluated. Two of these bridges are along the NJ Transit Main Line, at mileposts 15.95 and 15.14. The third bridge is located along the NJ Transit Bergen County Line at milepost 5.48.

Additional study is needed to investigate additional freight rail connectivity by utilizing abandoned freight rail segments in the region. The study should also include assessing the feasibility of passenger service and/or bicycle and pedestrian access on these rail lines. A candidate for this study would be the Paterson and Hudson Rail Line that runs adjacent to Main Avenue through the Cities of Paterson, Passaic and Clifton. Passaic County supports the preservation of these rail line ROWs and the investigation of the re-use of these lines as last-mile rail connections near new development.





Figure 7.2 - Weight Restrictions on Freight Rail Lines in the Northern New Jersey Area



Source: NJDOT

# 7. Moving Goods and People

Figure 7.3 - Potential Alternative 286K Compatible Freight Rail Lines in the Northern New Jersey Area



Source: NJDOT



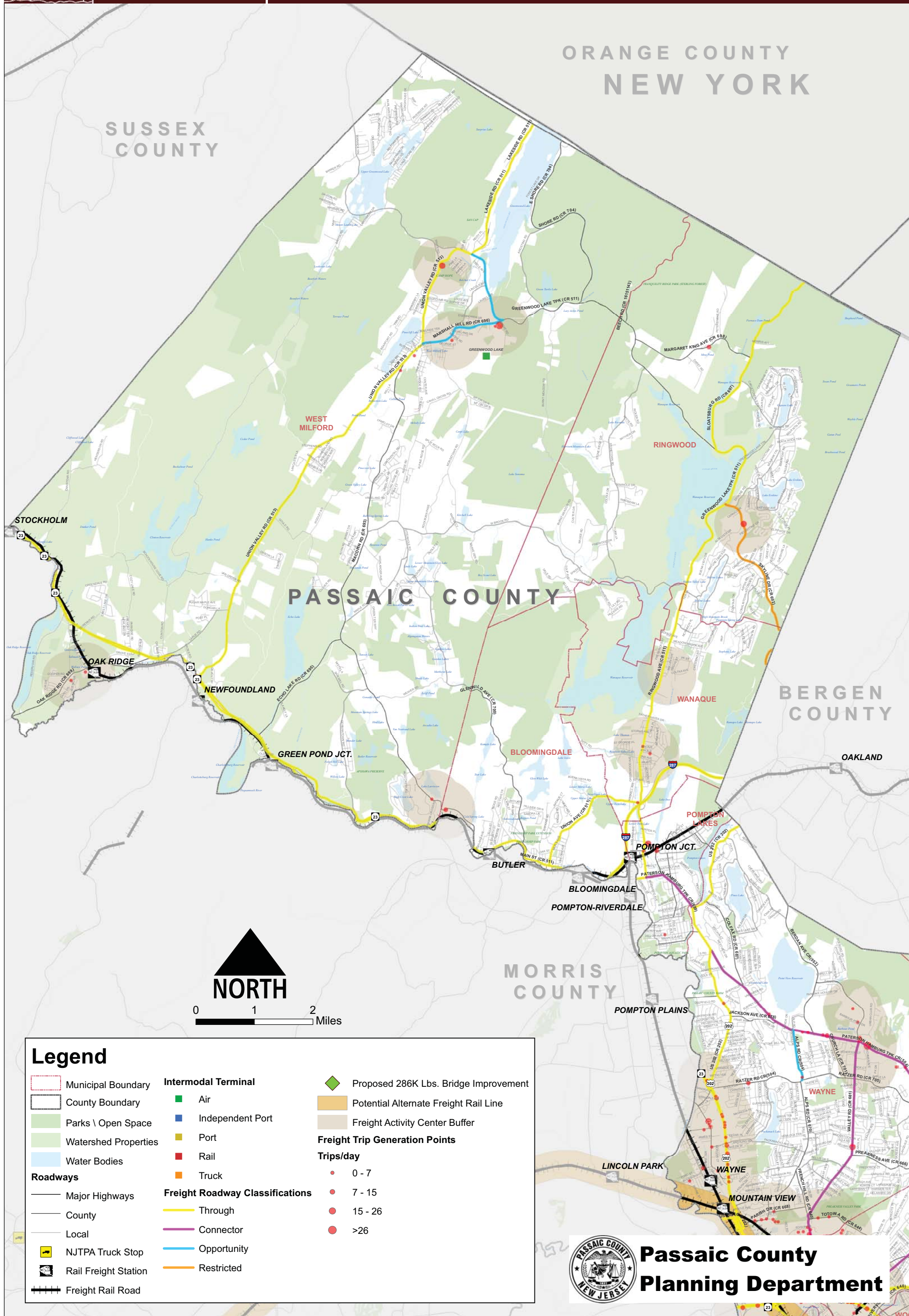
**Table 7.1 - Goods Movement Recommendations**

	<b>Recommendation</b>	<b>Type</b>	<b>Timing</b>
1	Develop way-finding signage to help promote Freight Priority Corridors for truck traffic throughout the County	Policy/Implementation	Short
2	Take Freight Priority Corridors into consideration when implementing Complete Streets Policies on capital improvements or during site plan development review	Studies/Implementation	On-Going
3	Develop more freight rail access through the expansion of 286K freight rail routes by coordinating with NJDOT and NJ Transit on rail bridge upgrades	Engineering/Implementation	Medium/Long
4	Coordinate local plans and policies that leverage Freight Priority Corridors with major Freight Generators in the County	Studies/Coordination	On-Going
5	Monitor freight truck movements to determine where conflicts with sensitive land uses may exist (such as residential areas) and work with municipalities to update and enforce Freight Priority Routes	Studies/Plan Updates	On-Going
6	Investigate the possibility of developing Freight Support Zones in Passaic County	Studies	Short
7	Investigate the possibility of utilizing abandoned freight rail lines to increase freight rail connectivity. The assessment should also include possibilities for passenger service and bicycle and pedestrian access	Studies	Medium

Short 0 to 2 years  
 Medium 2 to 5 years  
 Long > than 5 years







0 1 2 Miles

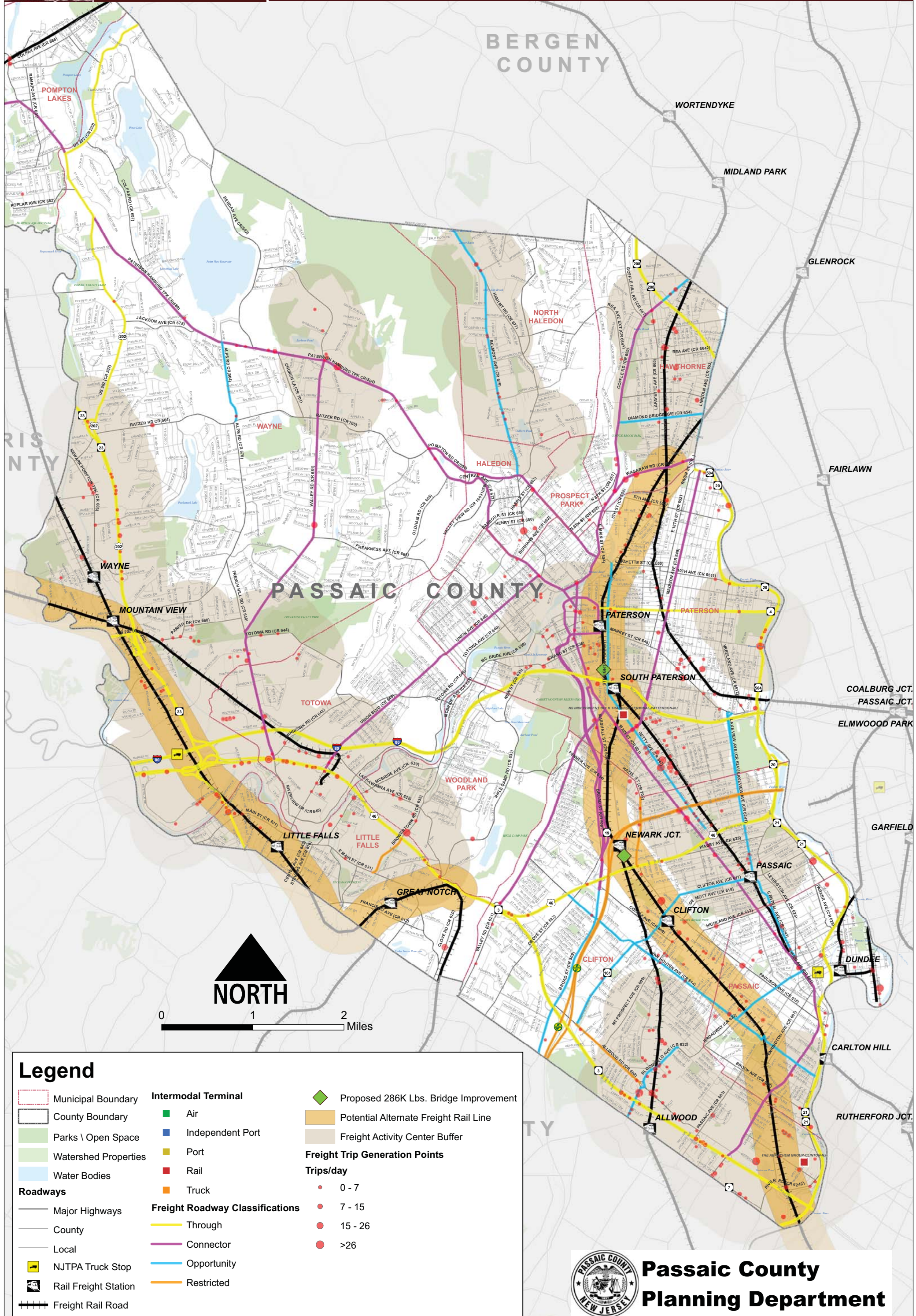
**Legend**

- Municipal Boundary
- County Boundary
- Parks \ Open Space
- Watershed Properties
- Water Bodies
- Roadways**
- Major Highways
- County
- Local
- NJTPA Truck Stop
- Rail Freight Station
- Freight Rail Road
- Intermodal Terminal**
- Air
- Independent Port
- Port
- Rail
- Truck
- Freight Roadway Classifications**
- Through
- Connector
- Opportunity
- Restricted
- Proposed 286K Lbs. Bridge Improvement
- Potential Alternate Freight Rail Line
- Freight Activity Center Buffer
- Freight Trip Generation Points**
- Trips/day**
- 0 - 7
- 7 - 15
- 15 - 26
- >26



**Passaic County  
Planning Department**





**Legend**

- Municipal Boundary
- County Boundary
- Parks \ Open Space
- Watershed Properties
- Water Bodies
- Roadways**
- Major Highways
- County
- Local
- NJTPA Truck Stop
- Rail Freight Station
- Freight Rail Road
- Intermodal Terminal**
- Air
- Independent Port
- Port
- Rail
- Truck
- Freight Roadway Classifications**
- Through
- Connector
- Opportunity
- Restricted
- Proposed 286K Lbs. Bridge Improvement
- Potential Alternate Freight Rail Line
- Freight Activity Center Buffer
- Freight Trip Generation Points**
- Trips/day**
- 0 - 7
- 7 - 15
- 15 - 26
- >26



## Section 8 - Scenic and Historic Byways

### Introduction

The designation of “Scenic and Historic Byways” provides an avenue for protecting, promoting and enhancing transportation corridors that define the heritage and natural beauty of Passaic County. This chapter provides an inventory that highlights the outstanding scenic, natural, historic and/or cultural assets of the Scenic and Historic Byways. The goals, objectives and method for selecting routes set the foundation for a future Heritage and Tourism Element of the Passaic County Master Plan. New measures under the County Development Review process provide an avenue for ongoing identification and protection of scenic and historic assets, while the Scenic Byways Programs at the state and federal levels add additional ways of promoting and enhancing these byways.

### Definition

Scenic and Historic Byways are defined as any roads, rivers, trails, railways or historic routes that hold an intrinsic historic or scenic value that identifies (or was vital) in the development of Passaic County. The intrinsic value of the byway can be characterized by the presence of such features as traditional homesteads, viewsheds, architecturally significant buildings, bridges, stone walls and other features throughout Passaic County. Historical districts, river courses and transportation routes that hold intrinsic historic, scenic or cultural value can also qualify as byways. These byways provide a window into the history of the region, pathways of the Revolutionary War, supply routes that formed the industrial birth of the country, historic settlement and development

areas throughout the County, and evolution of transportation from rivers to canals to rails and roads.

### Methodology

Developing policies that promote, enhance and protect a sense of community requires identifying special historical and natural features. The Transportation Element provides an ideal way of selecting and organizing byways. Identifying transportation hubs, commercial downtowns, recreational facilities, scenic pull-offs, and historic districts provide logical start-and-end points. Transportation also provides a theme to organize and promote byways long since disappeared, whether it is historical trails or roads that have been critical to the development of the County or access to certain natural areas. Highlighting the link between transportation and land use provides a mechanism for protection, preservation, promotion, and restoration through processes regularly used to manage transportation facilities. Lastly, the evolution of transportation itself presents avenues for interpreting history and providing new ways of accessing byways that will be critical in shaping the future of Passaic County.

The first step in designating byways is to map an inventory of all scenic and historic resources through data collection, field work, and interviews with local officials, as well as public feedback.

All historic sites and districts were mapped by their parcel boundaries using federal, state and local historic registers. Locally significant sites were gathered from local master plans, zoning ordinances, historic preservation elements, and other historic or scenic planning documents.

## 8. Scenic and Historic Byways

During the municipal interview process, local officials were asked for feedback on scenic and historic resources addressing the potential impact on economic development efforts in the future. Public input was also solicited through a series of open house meetings about existing resources as well as any limitations to access or information. Passaic County staff also consulted with local historians and the Passaic County History and Tourism Board to nominate any potential byways or sites of major significance.

Byways were selected and organized by prevalence of resources along the route and identifying opportunities to connect with major scenic or historic destinations. Treatments along these byways may focus on preservation, restoration and promotion. Other byways were selected due to their significant impact on the physical development of Passaic County. These include roads, rivers, railways, and trails that no longer exist or have changed from their original use or intent. These would be subject to interpretive treatments, such as historic markers and signage promoting the overall history of the County. Logical starting and ending points are based on the ability to access byways through facilities such as transportation hubs, parking areas, activity centers, historic districts, and/or major recreational facilities.

### Goals and Objectives

Identifying Scenic and Historic Byways provides the foundation needed for more detailed planning and implementation. The following goals and objectives define the potential scope of work for future initiatives:

1. Prepare a History and Tourism Element of the Passaic County Master Plan:
  - Coordinate transportation services to provide better access to and between major sites and byways;
  - Develop way-finding and promotional materials around major transportation hubs and activity centers; and
  - Coordinate information sharing on all levels.
2. Adopt a process for identifying, preserving, and enhancing scenic and historic resources as part of the County Development Review and Capital Planning Processes:
  - Direct Passaic County staff to follow the procedures and guidelines outlined later in this section;
  - Coordinate with all local planning boards, historic and environmental commissions and historians in municipalities where byways exist;
  - Promote resources along byways that are not currently on local, state, and federal historic registers;
  - Formally adopt guidelines that will raise awareness of these byways for potential development review applicants and local agencies; and
  - All capital engineering and construction projects should be referred to the Planning Board for a review of all scenic and historic resources.
3. Provide the basis for an application to state and federal scenic byways programs:
  - Prioritize byways and ensure the application process meets eligibility requirements to make implementation manageable;
  - Identify scenic vistas and facilities that provide enhanced accessibility to



- viewsheds of the Wanaque Reservoir, Monksville Reservoirs and innumerable natural landmarks in the Passaic County Highlands Area; and
  - Coordinate the application process with local stakeholders, boards and commissions.
4. Promote and market byways that can aid in economic development and tourism:
    - Coordinate with all governmental and other resources that promote tourism, such as the New Jersey Division of Travel and Tourism and regional and/or local Chambers of Commerce;
    - Share information and mapping with outlets that assist in tourism and trip planning for residents and visitors such as AAA and NJ Division of Travel and Tourism;
    - Produce marketing materials for distribution throughout the state and tri-state area;
    - Coordinate with the Passaic County History and Tourism Board on new initiatives;
    - Partner with the New Jersey Highlands Council and municipalities to promote byways and ecotourism for local services and visitors; and
    - Utilize the Passaic County website to promote these byways.
  5. Provide and update maps or other data to be shared with local, regional, state, and federal agencies:
    - Regularly update all data with information from local, state and federal historic registers;
    - Coordinate with local tourism boards, recreational boards, environmental and historic commissions, historians, and other entities that identify local scenic or historically significant sites; and
    - Provide regular updates of mapping and data through the Passaic County website.
  6. Improve access and use of historic, scenic and recreational destinations through improved connections to transportation facilities and activity centers:
    - Review all capital planning and construction projects for impacts on byways, especially in cases where river or off-road access can be enhanced (as is the case with some bridge and road projects); and
    - Provide all transportation planning and implementation agencies with information about byways and the scenic and historic resources along them.

**County Development Review**

All regulations and/or proposed improvements should help improve the quality of the built and natural environment that characterizes Scenic and Historic Byways. Improvements and/or regulations should not infringe on the historic or natural characteristics that define a byway.

To that end, it is recommended that a process be developed to continue to identify scenic and historic resources along a byway, or any property that falls within a federal, state or local historic district. The process should be developed in coordination with municipalities and could include local implementation measures such as an overlay district. The purpose would be to coordinate protection and

## 8. Scenic and Historic Byways

enhancement activities along sections of byways where the county has no jurisdiction.

Any regulations or requirements should include documentation of federal, state, or locally registered historic resources, as well as any architecturally or historically significant resources. These resources can include any local inventories or information discovered through the development review process. Documentation of historical resources or issues discovered as part of a "Section 106 Review" under the National Environmental Policy Act (NEPA), should also be furnished. Consideration of the natural resources on scenic byways can include but not be limited to topography, old growth trees, streams, and scenic vistas. An issue would be any action in a development application which in the opinion of the Passaic County Planning Board (PCPB) would compromise or degrade the scenic characteristics or historic fabric of a site along a byway. Requirements can include submission of a written justification for such action, why the action is necessary, what alternatives have been considered, and what mitigation measures will be taken. The process should look to have an applicant respond to any specific alternatives or mitigation measures included as part of a historic and scenic resources report.

Strengthening the connection between transportation and land use can be achieved through greater access to and identification of byways. All development review activities should include considerations for future accommodations, such as pull-off areas for scenic vistas, easements for signage or historic markers, or funding to restore historic elements or natural elements such as trees or rock walls.

Any new procedures should include provisions for proper coordination with partner agencies at the local, state, and federal levels. This includes sending any reports, findings, and outcomes to the appropriate entities such as local planning boards and historic commissions, if applicable.

All findings and outcomes should be available and reviewed on a regular basis for inclusion in capital projects, grant applications, and any other coordinated implementation efforts. A yearly summary can document any progress and provide guidance on updates to elements of the Passaic County Master Plan. This reporting can also assist in updates to the Corridor Enhancement Program, whose purpose is to stimulate business and tourism activity by providing a safer and more attractive environment. Funding is provided through the collection and use of developer fees along designated commercial and recreational corridors of the County, and can include projects such as historic markers, distinctive signage or way-finding elements for visitors.

### **New Jersey Scenic Byways Program Designation**

In keeping with the Goals and Objectives for Scenic and Historic Byways, a logical next step is to plan and apply for formal byway designation for one or more of the identified corridors under New Jersey's Scenic Byways Program. Byway designation offers the advantages of recognition, publicity, participation in NJDOT's byway logo and signage program, and eligibility for competitive federal grant funding, as well as technical support. According to NJDOT, "Designated scenic byways evoke a sense of place and both the road and surrounding landscape are recognized as a community asset."



Established in 1993, New Jersey’s Scenic Byways Program’s mission is to “create unique travel experiences and enhance the local quality of life through efforts to preserve, protect, interpret and promote the intrinsic qualities of New Jersey’s treasured places.” To date, the program has seven state designated byways, two of which have also received federal designation. The byways are located throughout New Jersey and include the Pine Barrens, Millstone Valley, Warren Heritage, Upper Freehold, Delaware River, Bayshore Heritage, and the Palisades. A Passaic County byway would complement this group.

To be eligible for designation, a road must provide “visual or physical access to extraordinary scenic, historic, cultural, recreational, natural or archeological features.” It is not necessary to have all of these features. Unique resources in one category can be enough to qualify. More details on specific eligibility requirements are provided in the New Jersey Scenic Byways Program Manual.

A two-stage process is involved for designation. The first step is preparation of an application for review by the NJDOT Scenic Byways Coordinator and the State Scenic Byways Advisory Committee. This application should be vetted by the appropriate boards and committees at the County level before being submitted for consideration. If the Advisory Committee accepts the nomination, the byway receives provisional designation from the NJDOT Commissioner and the byway sponsor (potentially Passaic County) has five years to complete a Corridor Management Plan. The Plan would specify strategies and actions to be undertaken to maintain and enhance the byway’s qualities, as well as to interpret and promote the byway to visitors. Once a Corridor Management Plan is prepared and accepted by the Advisory

Committee, consideration can also be given to application for federal scenic byway designation.

### **Scenic and Historic Byway Reference Guide**

Table 8.1 provides a reference guide of Scenic and Historic Byways throughout Passaic County. The first two columns provide the byway number and name used in Maps 8.1, 8.2 and 8.3, at the end of this section, as well as descriptions on the subsequent pages. The municipality listing in the third column may be used to identify the extents of each byway. The last column lists the corresponding page of descriptions and photos, which highlight the relevance and landmark sites along each byway.



*Historic markers can help elevate awareness of scenic and historic assets throughout the County. This prototype illustrates an example of a marker to be developed as part of a Heritage Tourism Element of the Passaic County Master Plan.*

## 8. Scenic and Historic Byways

Table 8.1 - Scenic and Historic Byway Reference Guide

Corridor Number/Name	Municipality	Page #
1. Passaic River	Clifton, Little Falls, Hawthorne, Passaic, Paterson, Prospect Park, Totowa, Wayne, Woodland Park	-7-
2. Morris Canal Greenway	Clifton, Little Falls, Paterson, Pompton Lakes, Totowa, Wayne, Woodland Park	-8-
3. Acquackanonk Byway	Clifton, Passaic	-9-
4. Allwood Byway	Clifton	-9-
5. Market Street (Passaic)	Passaic	-10-
6. New York Susquehanna & Western Railway	Bloomingtondale, Hawthorne, Pompton Lakes, Paterson, West Milford	-10-
7. New Jersey Transit-Bergen Main Line	Clifton, Hawthorne, Passaic, Paterson	-11-
8. Montclair Rail Line	Little Falls, Wayne	-12-
9. Market Street (Paterson)	Paterson	-12-
10. Broadway	Paterson	-13-
11. Main Street	Paterson	-13-
12. Lakeview Avenue	Clifton, Paterson	-14-
13. River Street	Paterson	-14-
14. Silk Road Trail	Haledon, Paterson	-15-
15. Totowa Road Revolutionary War Trail	Paterson, Totowa, Wayne	-15-
16. McBride Avenue	Little Falls, Paterson, Woodland Park	-16-
17. Garret Mountain and Rifle Camp Park	Clifton, Paterson, Woodland Park	-16-
18. Goffle Road	Hawthorne	-17-
19. Paterson-Hamburg Turnpike	Bloomingtondale, Haledon, Pompton Lakes, Wayne, West Milford	-17-
20. Farms View	Wayne	-18-
21. Wanaque Avenue	Pompton Lakes	-18-
22. Greenwood Lake Railroad/Ringwood Avenue	Pompton Lakes, Wanaque, Ringwood	-19-
23. Greenwood Lake/Long Pond Ironworks	Ringwood, West Milford	-19-
24. Lake Land Byways	Bloomingtondale, Ringwood, Wanaque, West Milford	-20-
25. Newark-Pompton Turnpike	Wayne	-20-
26. High Mountain Byway	Haledon, North Haledon, Wayne	-20-



**1. Passaic River:** This is the scenic and historic centerpiece of the southern half of the County, also its namesake. It was a source of food for the Lenape Native Americans, now identified as the Acquackanonk and Hackensack Indians. The byway is anchored by the Paterson Great Falls National Historical Park, which is the second largest waterfall in the eastern United States.

During the American Revolution, General Washington used the River to his advantage on a number of occasions during his encampment in the Preakness Valley. Acquackanonk Landing in Passaic is the site where his troops were ordered to cross in 1776 during their retreat through N.J. Here Washington was able to refortify the ranks of his troops with other revolutionary brigades as well as his spirits through the support of the Acquackanonk farmers.

In 1778, Alexander Hamilton saw the Great Falls as a way to power the Industrial Revolution. This vision transformed Paterson into the first planned industrial city in the country during the late 18th century. The Falls powered the mills that churned out dyes, sail cloth, locomotives, guns, and silk, which gave Paterson the nickname “Silk City”. As industrialization grew, so did the communities along the Passaic.

Remnants of the County’s industrial past connected to the Passaic River still mark existing communities such as the Mills in Little Falls, the Morris Canal, rail lines used to move goods from mills, the Great Falls, and the ever changing communities that were born on the banks of this vital waterway. The emergence of new parks, greenways and riverwalks aimed at recapturing the beauty of the Passaic River continue to evolve the landscape of the County.



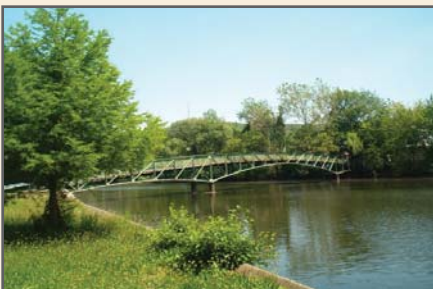
*The Passaic River provides numerous recreational opportunities.*



*The Great Falls in Paterson and the hydroelectric plant, which was designed by Thomas Edison’s Electric Company.*



*Westside Park in Paterson, as seen from the Passaic River.*



*One of many bridges that span the Passaic River.*



*The Dundee Dam, constructed in 1845, is 20 feet tall and 450 feet wide.*



*The Passaic River in Little Falls passes the former site of Beattie’s Mill.*

## 8. Scenic and Historic Byways

**2. Morris Canal:** Before the advent of the railroad and motor vehicle, the Morris Canal was a vital transportation link from the anthracite coalfields of Pennsylvania to northern New Jersey's iron industry and major industrial cities like Paterson. Spanning 102 miles from the Delaware River at Phillipsburg to New York Harbor at Jersey City, the Canal passed through 36 municipalities in six counties, including what are today the Passaic County communities of Clifton, Little Falls, Paterson, Wayne, Pompton Lakes, and Woodland Park. Climbing through the New Jersey Highlands, this 40-foot wide, five-foot deep navigable waterway overcame an elevation change of 1,674 feet through an engineering marvel of 23 lift locks and 23 inclined planes. The canal operated from 1831 to 1924, and at the peak of its success was capable of transporting 90-foot long boats and 70 tons of cargo per trip. The rise of improved rail

systems led to the demise of the Canal, which was decommissioned in 1924. Five years later, the Passaic County Parks Commission proposed in their Annual Report that the County purchase the Canal property to form a trail that would connect the system of County Parks. Today, the County has revived that goal, outlining a plan for a safe recreational trail along the former Morris Canal right-of-way in the Morris Canal Greenway Feasibility Study, available at <http://passaiccountynj.org/morris-canal-greenway-study>.



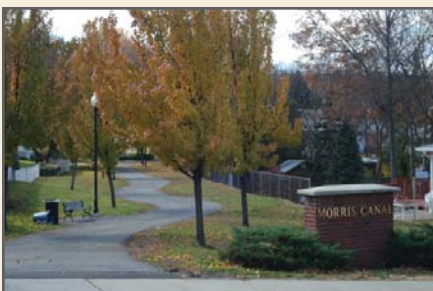
*Morris Canal Park and Jack Kuepfer Nature Preserve, Clifton.*



*Former Ramapo River towpath, Wayne.*



*Cable-lift bascule bridge with curved-track rolling counterweight, formerly at Mountain View, Wayne.*



*Morris Canal Park, Little Falls.*



*Historical photo of Broad Street at Belgrade Avenue, Paterson.*



*A view of the Morris Canal Bikeway, Little Falls.*



**3. Acquackanonk Byway:** The Acquackanonk byway traverses the region that includes parts of present-day Clifton, Passaic and Paterson. Today, this name is most associated with General George Washington and his troops as they escaped British pursuit by crossing the Passaic River and removing the planks of the bridge at Acquackanonk Landing. In the early 19th century, the area close to the landing gave rise to industry, as well as the rapid development of communities along Main

Avenue and Passaic Avenue in the cities of Clifton and Passaic. Transportation evolved from horse-drawn railroads to the first successfully operated electric trolley in New Jersey, as did the landscape of factories, churches, theatres, banks, and civic buildings. What once was a day of amusement at Olympic Park in Clifton is now an opportunity to browse the finest produce in the region at Corrado’s Market. The Peoples Bank building still defines the skyline of downtown Passaic.



*Main Avenue, here in Passaic, once had street cars that carried people to and from Paterson.*



*Acquackanonk Landing sat at the foot of Main Avenue in Passaic.*



*Main Avenue at Clifton Avenue in Clifton.*

**4. Allwood Byway:** Once dairy farms looking onto the historic Morris Canal, the western end of Allwood Road developed into a beautiful tree-lined boulevard at the epicenter of a post World War II housing boom. This neighborhood still thrives today, although the introductions of N.J. 3 and the Garden State Parkway have exponentially raised the level of activity. The intersection with Bloomfield Avenue

marks a major transition in the landscape as the Allwood Circle ushered in a change from residential to industrial land uses. Many of the factories, warehouses and manufacturing operations along Allwood Road provided employment for residents of the cities of Clifton and Passaic. These uses are now shifting to commercial centers, providing added commerce.



*The tree-lined byway of Allwood Road.*



*The old Morris Canal passed through the Allwood Road area near Jubilee Park.*



*Another view of tree-lined Allwood Road.*

## 8. Scenic and Historic Byways

**5. Market Street (Passaic):** Access to the Passaic River has always made the Market Street area a key hub, evidenced by Revolutionary War trails, the Dundee Canal, and the Passaic and Dundee branches of the NYS&W railroad. Settlements in the area developed with the manufacturing core in the cities of Passaic and Clifton in the late 19th and early 20th centuries. The Dundee Canal Industrial Historic District remains an intact legacy of the manufacturing complex that grew around

the historic Dundee Canal in the northern end of this byway. The stretch of Market Street south of the historic district has provided shopping and local services for immigrant groups through the years. Some of the earliest neighborhoods from the post-industrial development can be found in the School Street–Monroe Street neighborhood, while other areas near Passaic Street are undergoing a renaissance for current and future generations.



*The early 20th century St. Peter and Paul's Russian Orthodox Church.*



*A classic mixed-use building on the corner of Market and Passaic Streets.*



*A common characteristic of buildings on Market Street is period detail.*

**6. New York Susquehanna & Western Railway:** The NYS&W Railroad was formed in 1881 by the merger of six smaller lines, one of which was the Paterson Extension Railway. Soon, the NYS&W was transporting both commuters and coal, the fuel of the Industrial Revolution, from Stroudsburg, Pennsylvania to the banks of the Hudson. The main line ran through Pompton Lakes, Hawthorne and Paterson on its way to NYS&W's port in what is now Edgewater, New Jersey. The Depression and

other factors led to a tremendous decrease in demand and resulted in a bankruptcy filing in 1937. After a post-war resurgence, demand again began to dwindle and passenger service ceased altogether in the mid-1960s. Currently, the NYS&W maintains a freight line between Sparta and its eastern terminus in North Bergen. There are plans to restore passenger service between Hawthorne and Hackensack with possible extensions into Morris, Passaic, Sussex, and Warren counties.



*Pompon Lakes' historic train station along with an old 'Susie Q' (NYS&W) rail car.*



*Looking north in Paterson, the NYS&W crosses the Passaic River just beyond the trees.*



*Hawthorne's historic downtown train station, may one day again serve New York City-bound passengers.*



**7. New Jersey Transit–Bergen Main Line:** The Bergen/Main line lies along most of the core of the old Erie Railroad Main Line, which began as the Paterson-Hudson Railroad in 1833. The original line ran between Paterson and the ferries of Jersey City via downtown Passaic, and its cars were horse-drawn. In the 1850s, the Paterson-Hudson line was combined with the Paterson-Ramapo line. This later became part of the Erie New York Railroad, which offered service from the Hudson River all the way to Chicago. The section between downtown Paterson

and Rutherford was abandoned in the 1960s, and the line rerouted to its current path along the old Lackawanna track to Hoboken. Remnants of the abandoned section of line are still in use in Clifton, and shaped the configuration of Main Avenue through downtown Passaic. The gentle curve of Schevchenko Park’s eastern border is a subtle reminder that the rail used to bend here to cross the Passaic River and was the site of the original Passaic Park Station.



*The rail lines were a key mode of transportation during the Industrial Age.*



*Hawthorne has had rail service for well over 100 years.*



*The Main Line’s historic bridge over the Passaic River.*

**8. Montclair-Boonton Rail Line:** Built in the mid-1860s, the Montclair Rail Line ran from present-day Upper Montclair to Jersey City via a connection with the Erie Line. Born out of a dispute with Bloomfield, the line was extended up to Ringwood to provide a faster way of transporting iron south from the mines, and it later fell into the hands of Abram Hewitt, who enhanced its infrastructure and further merged it with the Erie

Railroad’s facilities. After being sold to the Erie, the line became the Greenwood Lake Branch. Declining use eventually led to the 2003 merging of this line with NJ Transit’s Montclair Branch at the Bay Street Station in Montclair. The rail line now serves Little Falls and Wayne townships as well as a new station at Montclair State University.



*The Mountain View Train Station in Wayne.*



*The Passaic River crossing in Little Falls.*



*The Little Falls Train Station at the end of Union Avenue.*

## 8. Scenic and Historic Byways

**9. Market Street (Paterson):** The Market Street byway in Paterson has always held the distinction of an important transportation thoroughfare traversing from the Great Falls Historic District through downtown Paterson to the residential areas to the east. As modes of transport changed from horse-drawn carts to street cars and eventually automobiles and buses, so did the cultural heritage in neighborhoods like People's Park.

First mainly populated by Italian immigrants, this area now has a significant Colombian population that helps define this diverse city. The opening of the Great Falls National Historical Park continues this evolution, along with plans to reintroduce passenger rail service along the NYS&W freight rail line, furthering the reach of these neighborhoods through public transportation.



*Paterson's rich history is clearly evident in the architecture of the buildings around City Hall.*



*Bustling Market Street in downtown Paterson, with The Great Falls National Historical Park viewable in the distance.*



*These buildings serve as a prime example of the architecture in downtown Paterson.*

**10. Broadway:** Broadway is one of the critical links between the downtown business district and the residential areas surrounding Eastside Park. The section of Broadway from the downtown to Madison Avenue has historically been one of the most important commercial thoroughfares in the County, while retaining many of

the original buildings and architectural quality that first defined the byway. The section east of Madison Avenue hosts many historically and architecturally significant commercial and residential buildings that define the Broadway and Eastside Park Historical Districts.



*The Danforth Memorial Library, is on the National Register of Historic Places.*



*Broadway passing through the Eastside Historic District, near Eastside Park.*



*A heavy European influence can be seen in the earlier architecture of these buildings.*



**11. Main Street:** Main Street has played a critical role in the economic and demographic development of the City of Paterson. The types of industry that supported the birth of Paterson through the creation of the Society for Establishing Useful Manufactures (S.U.M.) around the Great Falls in the early 19th century have given way to more service-based commerce anchored by the ongoing

expansion of the current St. Joseph’s Medical Center. Throughout this transformation, the historic downtown has been a constant in the everyday life of Paterson residents in what can be considered one of the best preserved groups of architecturally significant buildings anywhere in the state of New Jersey.



*A view of the historic Main Street commercial corridor.*



*Paterson's colorful Main Street has long been its commercial core.*



*Main Street is also home to a number of historic churches.*

**12. Lakeview Avenue:** The Lakeview Avenue Byway draws its name from the lake that was originally constructed but has long since been drained. Its prominent feature is the Cedar Lawn Cemetery, which dates from 1867 and is the final resting spot for a number of prominent New Jerseyans, including Garret Hobart, former Vice President of the United States, and John Ryle, the man considered to be the father of the silk industry in America. The northern end of the byway

is defined by a broad, tree-lined boulevard which was a rail link to downtown Paterson. This has become a crucial transportation connection to Route 80. The neighborhoods in this area are marked by the work of famous Italian sculptor Gaetano Federici. The southern end of the byway is home to a number of traditional commercial and residential areas in the City of Clifton with connections to the Garden State Parkway and N.J. 46.



*The tree-lined boulevard of upper Lakeview Avenue.*



*The Victorian-era Cedar Lawn Cemetery.*



*Lower Lakeview Avenue in Clifton, where the trolley line formerly ran. In the distance, Route 46 passes overhead.*

## 8. Scenic and Historic Byways

**13. River Street:** A number of the mills that helped the City of Paterson to flourish during the 19th century were found along the waterfront on River Street. Many of these mill buildings still survive along with the Straight Street Bridge, which was constructed in 1907 to provide better access to the mills and was rehabilitated in 2003. The northern end of the byway is defined by what once was the River Street Station of the Erie Railroad, now owned

and operated by the NYS&W. The station was used to transport goods and passengers into this vital corridor and is still an active freight rail, servicing the Bunker Hill section of the city. There are plans to reintroduce passenger service on the rail line and an assessment is currently underway on how to adaptively reuse the mill buildings.



*River Street's historic past is evident from its older industrial buildings.*



*Viewable in the distance is the Main Line, which has long carried goods and passengers through this region.*



*More examples of older industrial buildings can be found along this corridor.*

**14. Silk Road Trail:** Paterson was, at one time, the silk production capital of the world, hence its Industrial-era nickname "Silk City". This corridor links the industrial center of the city with the Botto House (American Labor Museum) via the historic

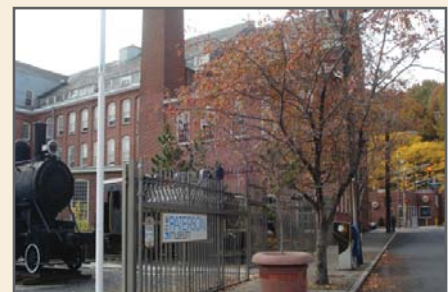
neighborhood of North Paterson. It also connects the historic manufacturing district with the quarries of Little Falls, where brownstone was sourced for building materials.



*The Botto House, also known as the American Labor Museum, Haledon*



*The Great Falls of Paterson, the second largest falls in the eastern United States.*



*The Paterson Museum (Thomas Rogers Building, 2 Market Street).*



**15. Totowa Road Revolutionary War Trail:** This route begins at the Dey Mansion, where General George Washington headquartered for a time during the Revolutionary War. His troops occupied the fields in the immediate area and the corridor

leads up to Totowa Heights, where the General had an excellent view of the Passaic River lowlands to the base of what is now Garret Mountain Reservation.



*The old Fritzsche House, is an example of early Dutch-style architecture.*



*The Dey Mansion, temporary home for General George Washington during Revolutionary War.*



*Totowa Heights, home to multiple memorials and site of American troop encampment during Revolutionary War.*

**16. McBride Avenue:** Originally known as the Little Falls Turnpike, McBride Avenue connected the brownstone quarries of Little Falls to the developing industrial hub of Paterson. Brownstone was the primary material used to construct the mills, which were powered by water that was diverted from the Passaic River. Glimpses of the river can be seen

while traveling along this road, which had its own trolley car line into the 1920s. The byway connects downtown Woodland Park (formerly West Paterson) and downtown Little Falls via Paterson Avenue, and is connected to the Morris Canal Greenway on either end.



*The Hillary Street Bridge over the Passaic River in Totowa.*



*Hayden Heights Park Veterans Memorial Plaza opened in 1939 with the dedication of the World War I obelisk.*



*Dowling Park at the corner of McBride Avenue and Dowling Parkway in Woodland Park.*

## 8. Scenic and Historic Byways

**17. Garret Mountain and Rifle Camp Park:** Garret Mountain Reservation is a 568-acre recreational area operated by the Passaic County Parks Department that provides sweeping views of northern New Jersey, the Great Falls National Historical Park and the New York City skyline. The area along the top of Garret Mountain initially served as a lookout for General Washington and later became known as the location of the castle residence and observation tower of Catholina Lambert, a wealthy Paterson silk merchant during the late 19th century.

It is now the home of the Passaic County Historical Society. At the Garret Mountain Equestrian Center, visitors can take horseback riding lessons or traverse the park's bridle paths. Rifle Camp Park, located adjacent to Garret Mountain Reservation, is a major recreational component of the Passaic County park system, featuring an amphitheater and the John J. Crowley Memorial Nature Center, home to the Astronomical Observatory. The park system was designed by the Olmsted Brothers Firm in 1927.



*Lambert Castle sits high on Garret Mountain.*



*Wild deer and turkey can be found in the parks.*



*One of several gazebos at Garret Mt. Reservation this one near Barbour Pond.*

**18. Goffle Road:** Goffle Road provides picturesque views of sweeping meadows in Goffle Brook Park. This part of the Passaic County Parks System was designed by the Olmsted Brothers, the famous Brookline, Massachusetts landscape architecture firm. The park has provided a unique role in preserving the history and natural resources of the County since the early 1930s and is

included on the National Register of Historic Places. The natural landscape serves to preserve the predominant feature of the park, the Goffle Brook. Remnants of an old grist mill pond are still used for fishing at Arnold's Pond, and in 2007 the Magee Road Bridge was restored and relocated from Ringwood to the southern end of the park.



*Former site of the Marquis de Lafayette's temporary residence during the Revolutionary War.*



*Built in 1810, the Rea House was the final home of John Rea, a famous entertainer and well-respected justice of the peace.*



*An Olmsted Brothers design, Goffle Brook Park was once the site of Lenape Indian camps.*



**19. Paterson-Hamburg Turnpike:** The Paterson-Hamburg Turnpike was built in the early 19th century to better facilitate the transport of goods between Acquackanonk Landing, on the Passaic River in the city of Passaic, and the upper reaches of Passaic and Sussex Counties. Originally a toll road, it was partially financed by contributions from many of the most well-known families in the County: Van Houten, Colfax and Pompton, to name just a few. The road was eventually extended east across the Hackensack River to what is now North

Bergen and west all the way to the Delaware River. Key locations that the road served in Passaic County included the City of Paterson, the Pompton Furnace and the Borough of Bloomingdale. This road still functions as a critical connection between the northern and southern portions of the County, and a number of the original homesteads remain, such as the Schuyler Colfax House, Van Riper-Hopper House and the Hobart Manor on the William Paterson University campus.



*The Schuler-Colfax House, Wayne's oldest residence, was built around 1696.*



*The Van Ness House, built in 1790.*



*Hobart Manor, the summer estate of former Vice President Garret Hobart.*

**20. Farms View:** The centerpiece of this corridor is the 15-acre Passaic County Farm, and adjoining 27 acres of privately owned farmland located at the junction of Black Oak Ridge Road and Pompton Plains Crossroad. Passaic County acquired this working farm in 2007 from the Estate of Paul & Clara Kuehm as part of the County's Farmland Preservation Program, a designated allocation of the Open Space Trust Fund. This was the

first farm preserved in Passaic County, and is maintained for active agricultural use and annually leased. It also provides access to the former Ramapo River Towpath and Pompton Feeder Canal, both historically significant elements of the Morris Canal system that was purchased by the Passaic County Parks Commission in the 1920s. In addition to historic sites, this corridor connects various scenic and recreational resources.



*Looking west towards the Pompton River valley.*



*A view of the farm during growing season.*



*The Pompton Feeder crosses the corridor on its way to the Morris Canal.*

## 8. Scenic and Historic Byways

**21. Wanaque Avenue:** An example of a classic small-town American “Main Street,” Wanaque Avenue in Pompton Lakes features such local landmarks as the Post Office, an old NYS&W train station and the Einstein Memorial Library. Previously anchoring the southern end of the avenue, where it meets the Paterson-Hamburg Turnpike, was the ‘Yellow Tavern,’ used by General George Washington on more than one occasion during the

Revolutionary War. The tavern was torn down early in the 20th century and a number of monuments have been placed at its former location, which is now called Federal Square. During the 19th century, Wanaque Avenue was an important link between down-county industry and up-county resources, and recent initiatives look to reestablish this role in the 21st century as a gateway to the New Jersey Highlands Region.



*An assortment of monuments decorate Federal Square, an historic crossroads.*



*Wanaque Avenue's shopping district.*



*Emanuel Einstein Memorial Library in Pompton Lakes.*

**22. Greenwood Lake Railroad/Ringwood Avenue:** The old Greenwood Lake branch rail line originally ran between Jersey City/Hoboken and Greenwood Lake in West Milford via the Wanaque Valley. From the 1870s to the 1930s, it was used to transport ice to the region's urban core and also to deliver tourists to the resort hotels that once lined Greenwood Lake. A spur connected this

line to the Peter's Mine area in Ringwood, which allowed iron to be efficiently delivered to industry to the south. Later, stops in Wanaque and Wayne provided local residents with a means to easily travel to Hoboken for business and pleasure. Remnants of this line can still be found in Wanaque, Wayne and West Milford.



*An older stone home sits alongside Ringwood Avenue.*



*The Wanaque Reservoir (behind this dam) provides drinking water for millions of people in northern New Jersey.*



*Ringwood Avenue, the main street of Wanaque and the primary connection to attractions further north.*



**23. Greenwood Lake/Long Pond Ironworks:** This corridor is dominated by the three largest bodies of water in the county, Greenwood Lake and the Wanaque and Monksville Reservoirs, both of which have remnants of old communities on their lakebeds. In addition to being a source of drinking water for communities throughout the state (over 4 million served), they provide recreational opportunities and wonderful vistas when viewed against the backdrop of ridges that circle the area. Much of the

ridge-top area is public parkland, which provides more recreational opportunities, including access to the Appalachian Trail and Ringwood Manor/Skylands Manor/NJ Botanical Gardens. Long Pond Ironworks, the site of an 18th-century company town, is also located along this corridor and had mined iron for the Continental Army, for the American forces in the War of 1812, and for the Union Army during the Civil War.



*The Skylands Manor, found just off of Sloatsburg Road in the Long Pond Ironworks area.*



*Greenwood Lake is a haven for boating enthusiasts.*



*One of a number of restored historic structures to be found on the grounds of the Long Pond Ironworks.*

**24. Lake Land Byways:** Almost alpine in nature, the Lakeland byways are characterized primarily by the mountainous landscape of the New Jersey Highlands and the multitude of lakes that dot the region. Many of these lakes, such as Glen Wild and Lindy's, host tranquil residential communities, which grew from

loose collections of seasonal cottages. This corridor also includes West Milford's Macopin Road Historic District and leads to the Main Street of Bloomingdale, which was settled as a farming village around 1712, and subsequently flourished with the rise of the local iron industry.



*An historic residence is obscured by a snow-capped stone wall.*



*An updated version of an older farmhouse-style house.*



*Another example of a typical older residence in the hilly Highlands.*

## 8. Scenic and Historic Byways

**25. Newark-Pompton Turnpike:** The Newark-Pompton Turnpike was originally laid out in the late 18th century, connecting Newark to the northern and western parts of New Jersey west of the Pompton River. The road was used by colonial armies with such notable travelers as George Washington and Anthony Wayne. Israel Crane converted the road to a tolled turnpike in the beginning of the 19th century when it was originally named the Newark and

Bloomfield Turnpike. The road was later sold to the Essex County Road Board and converted to a public highway. In 1917 the road was designated as New Jersey State Highway 8. The Turnpike was renamed as N.J. 23 when all New Jersey state roads were enumerated. The remaining portion of the Turnpike was removed from the state highway when it was realigned to its present condition.



*The historic Morris Canal bisects the Newark-Pompton Turnpike near the Passaic County line.*



*The inscription on the bridge abutment at the Passaic River crossing serves as a remnant of the New Jersey Highway 8 designation from 1917.*



*A historic bridge and county road marker just south of the intersection of Laytham Drive and the Newark-Pompton Turnpike.*

**26. High Mountain Byway:** The southern end of this byway starts at the Haledon Borough municipal complex housed in a historic mill building at the intersection with the Silk Road Trail Byway. Travelling north on High Mountain Road provides a number of scenic vistas of High Mountain Park and other natural attractions. A portion of the byway runs along Overlook Avenue which turns into College Road as you enter William Paterson University. An

entrance to High Mountain Park is located on College Road along with access to trails maintained by the NY/ NJ Trail Conference. The northern end of the byway on High Mountain Road provides picturesque views of the Haledon Reservoir at the border with Bergen County. Travelling west on Reservoir Road provides additional access to the trails through High Mountain Park.



*The Haledon Borough municipal building near the intersection of Church Street and Belmont Avenue.*



*High Mountain Park located along College Road on the campus of William Paterson University.*



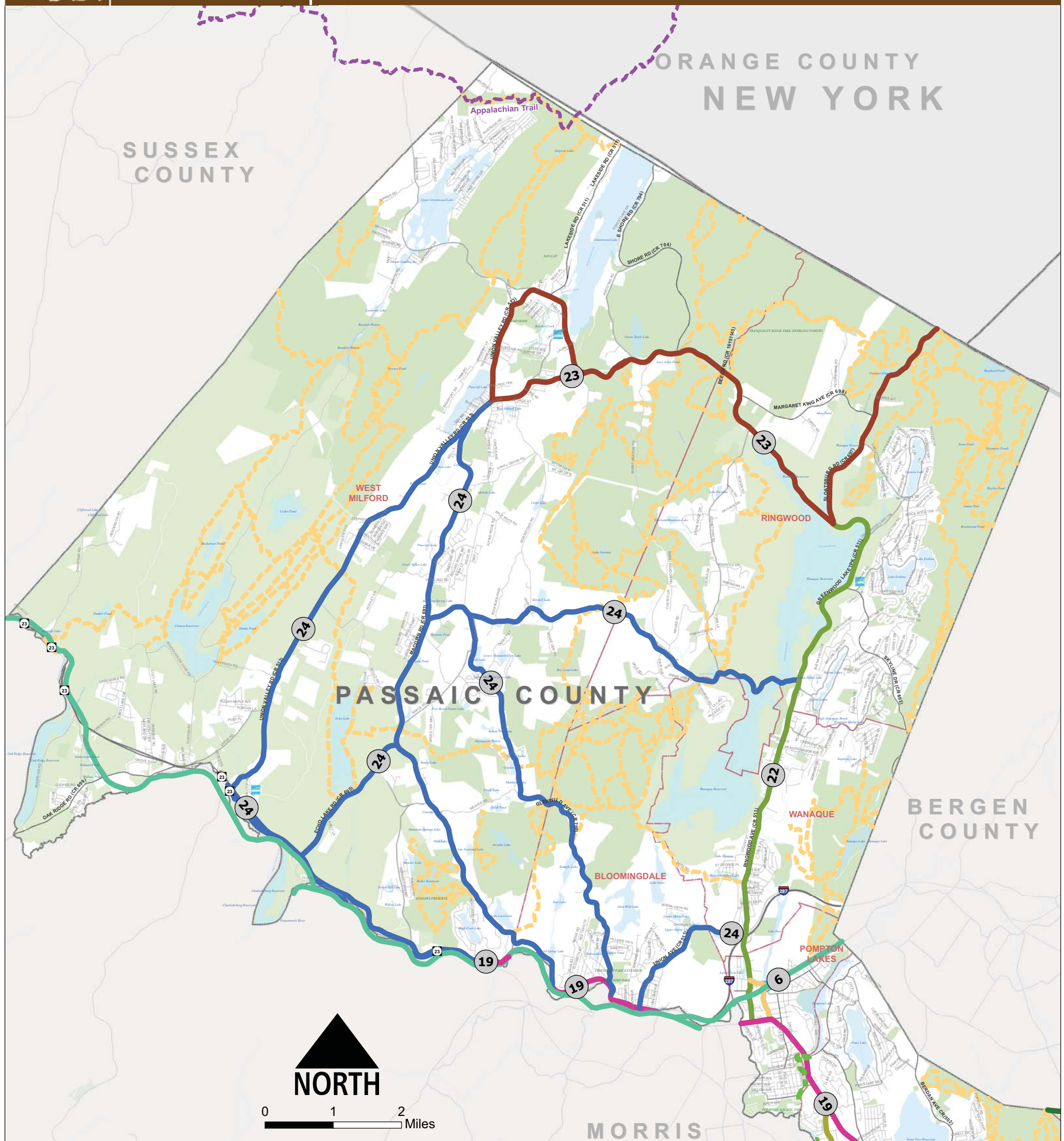
*The Haledon Reservoir runs along High Mountain Road near the Bergen County border.*





# SCENIC AND HISTORIC BYWAYS

## Map 8.1 Scenic and Historic Byways Northern Passaic County



### Legend

Municipal Boundary	<b>Scenic and Historic Byways</b>	14. Silk Road Trail
County Boundary	1. Passaic River	15. Totowa Road Revolutionary War Trail
Parks \ Open Space	2. Morris Canal Greenway	16. McBride Avenue
Watershed Properties	3. Acquackanonk Byway	17. Garret Mountain / Rifle Camp Park
Water Bodies	4. Allwood Byway	18. Goffle Road
<b>Roadways</b>	5. Market St (Passaic)	19. Paterson-Hamburg Turnpike
Major Highways	6. NYS&W	20. Farms View
County	7. Bergen/Main Rail Line	21. Wanaque Avenue
Local	8. Montclair Rail Line	22. Greenwood Lake Railroad / Ringwood Avenue
Park N Ride / Bus Station	9. Market Street (Paterson)	23. Greenwood Lake / Long Pond Ironworks
Bus Depot	10. Broadway	24. Lakeland Byways
Passenger Rail Station	11. Main Street	25. Newark-Pompton Turnpike
Existing Passenger Rail Road	12. Lakeview Avenue	26. High Mountain Byway
Appalachian Trail	13. River Street	
NYNJ Trails Conference Trails *		



**Passaic County Planning Department**

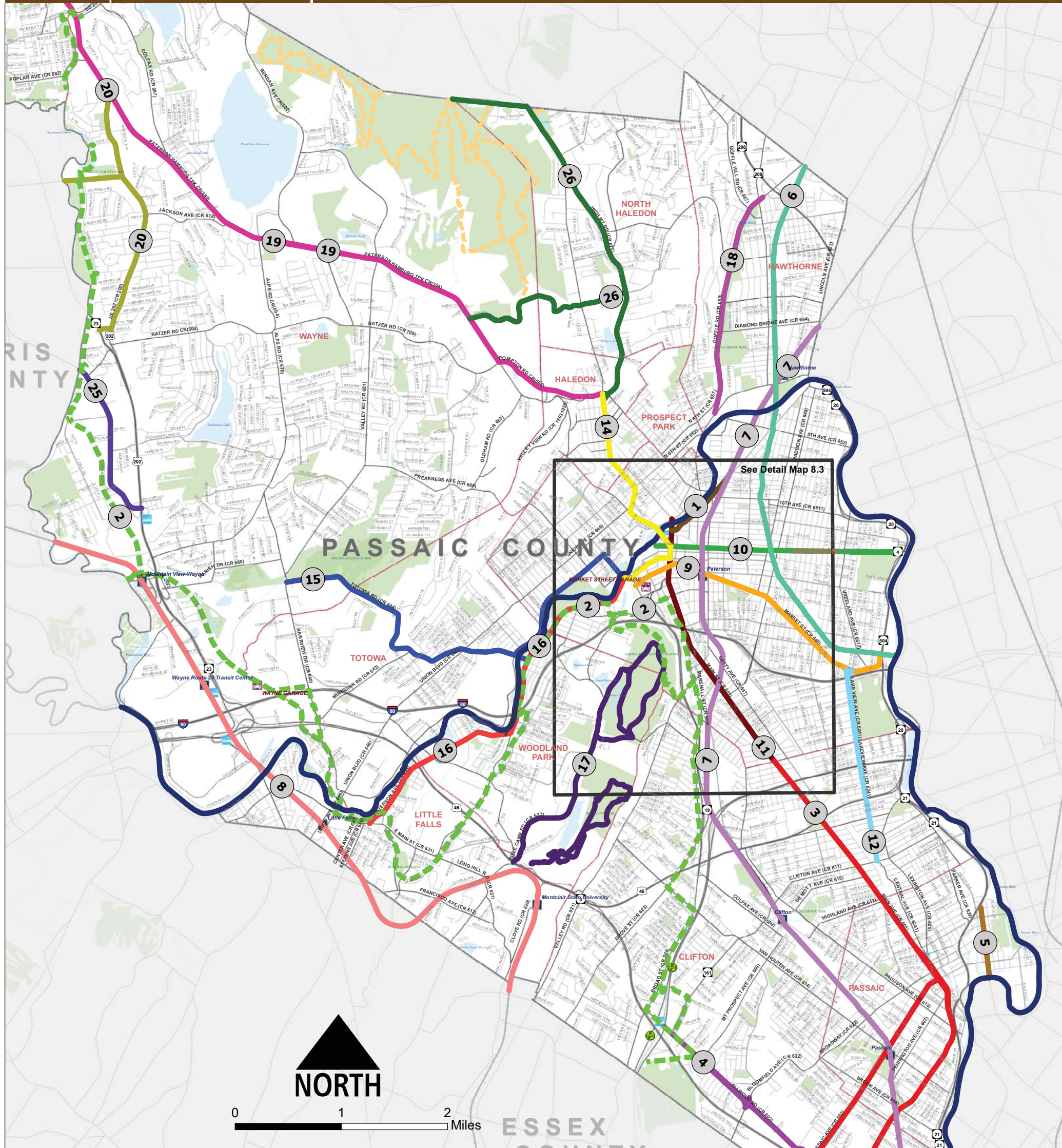
\* Source: NY/NJ Trails Conference





# SCENIC AND HISTORIC BYWAYS

# Map 8.2 Scenic and Historic Byways Southern Passaic County



## Legend

- |                 |                                 |  |                             |  |   |
|-----------------|---------------------------------|--|-----------------------------|--|---|
|                 | Municipal Boundary              |  | Scenic and Historic Byways  |  | 14. Silk Road Trail                           |
|                 | County Boundary                 |  | 1. Passaic River            |  | 15. Totowa Road Revolutionary War Trail       |
|                 | Parks / Open Space              |  | 2. Morris Canal Greenway    |  | 16. McBride Avenue                            |
|                 | Watershed Properties            |  | 3. Acquackanonk Byway       |  | 17. Garret Mountain / Rifle Camp Park         |
|                 | Water Bodies                    |  | 4. Allwood Byway            |  | 18. Goffle Road                               |
| <b>Roadways</b> |                                 |  | 5. Market St (Passaic)      |  | 19. Paterson-Hamburg Turnpike                 |
|                 | Major Highways                  |  | 6. NYS&W                    |  | 20. Farms View                                |
|                 | County                          |  | 7. Bergen/Main Rail Line    |  | 21. Wanaque Avenue                            |
|                 | Local                           |  | 8. Montclair Rail Line      |  | 22. Greenwood Lake Railroad / Ringwood Avenue |
|                 | Park N Ride / Bus Station       |  | 9. Market Street (Paterson) |  | 23. Greenwood Lake / Long Pond Ironworks      |
|                 | Bus Depot                       |  | 10. Broadway                |  | 24. Lakeland Byways                           |
|                 | Passenger Rail Station          |  | 11. Main Street             |  | 25. Newark-Pompton Turnpike                   |
|                 | Existing Passenger Rail Road    |  | 12. Lakeview Avenue         |  | 26. High Mountain Byway                       |
|                 | Appalachian Trail               |  | 13. River Street            |  |   |
|                 | NYNJ Trails Conference Trails * |  |                             |  |   |



**Passaic County  
Planning Department**

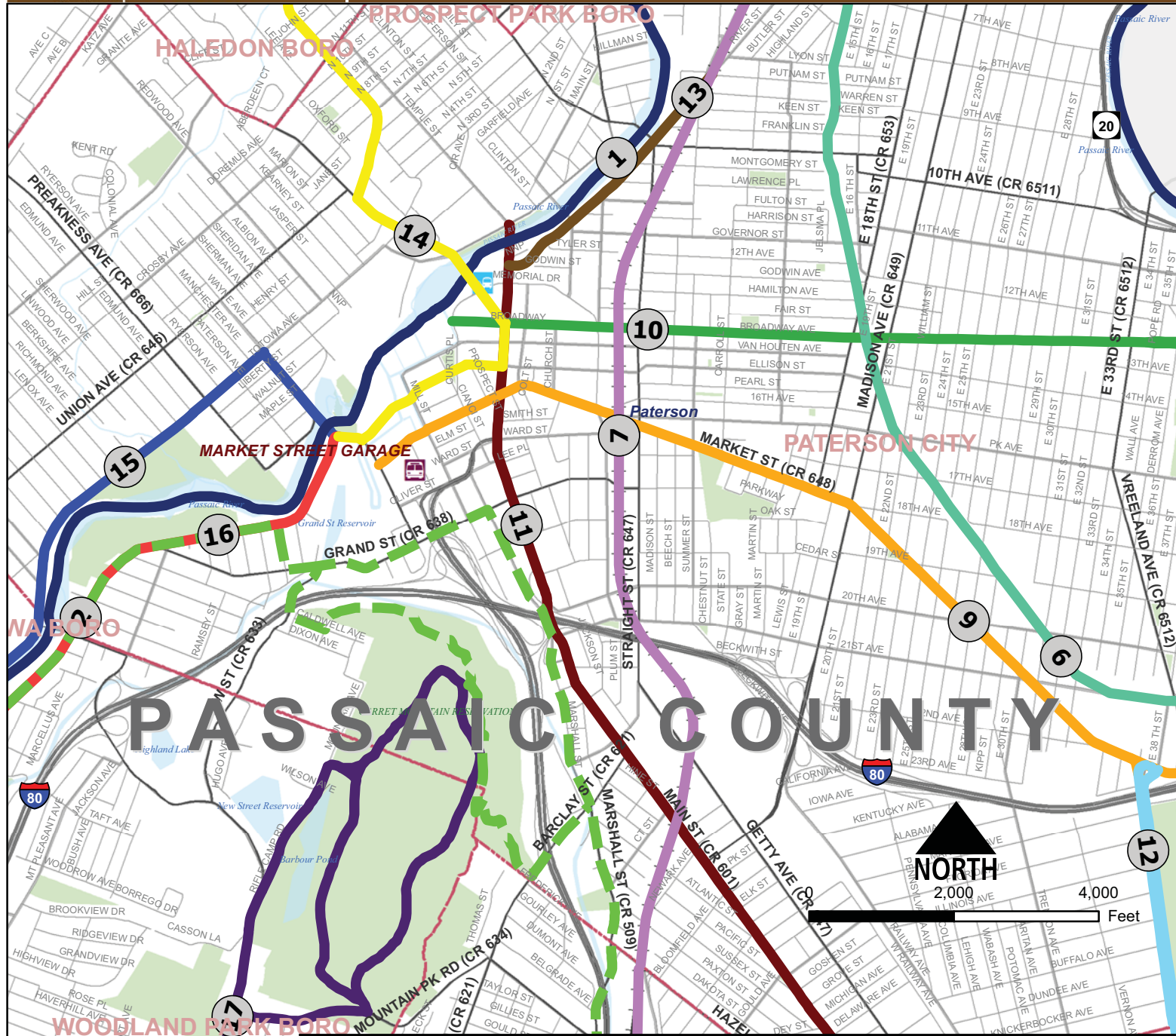
\* Source: NY/NJ Trails Conference





# SCENIC AND HISTORIC BYWAYS

## Map 8.3 Scenic and Historic Byways Detail Map



### Legend

Municipal Boundary	15. Totowa Road Revolutionary War Trail	26. High Mountain Byway
County Boundary	1. Passaic River	16. McBride Avenue
Parks \ Open Space	2. Morris Canal Greenway	17. Garret Mountain / Rifle Camp Park
Watershed Properties	3. Acquackanonk Byway	18. Goffle Road
Water Bodies	4. Allwood Byway	19. Paterson-Hamburg Turnpike
<b>Roadways</b>	5. Market St (Passaic)	20. Farms View
Major Highways	6. NYS&W	21. Wanaque Avenue
County	7. Bergen/Main Rail Line	22. Greenwood Lake Railroad / Ringwood Avenue
Local	8. Montclair Rail Line	23. Greenwood Lake / Long Pond Ironworks
Park N Ride / Bus Station	9. Market Street (Paterson)	24. Lakeland Byways
Bus Depot	10. Broadway	25. Newark-Pompton Turnpike
Passenger Rail Station	11. Main Street	26. High Mountain Byway
Existing Passenger Rail Road	12. Lakeview Avenue	
Appalachian Trail	13. River Street	
NYNJ Trails Conference Trails *	14. Silk Road Trail	



**Passaic County Planning Department**

\* Source: NY/NJ Trails Conference