

# DELAWARE STATE RAIL PLAN

## Executive Summary



DeIDOT

**FINAL DRAFT**

April 2011

# Introduction and Background

Delaware's State Rail Plan (SRP) provides a basis for federal and state rail investment within Delaware. The SRP sets forth Delaware's freight and passenger rail transportation policy, including commuter rail. The SRP is developed to reflect the interests of rail stakeholders and strives to meet the following requirements:

- Broaden the understanding of rail issues for all stakeholders
- Define the role of railroads in a multimodal environment
- Identify infrastructure and other improvements required to improve rail service
- Provide a framework to implement rail improvement initiatives in Delaware
- Support the Delaware Department of Transportation (DelDOT) and other agencies in obtaining federal/other funding



**GRADE CROSSING IN SUSSEX COUNTY**

The SRP describes how rail fits into the overall transportation planning process and presents a series of goals, objectives, and strategies for Delaware's rail system. The SRP serves as a strategic guide for DelDOT, stakeholders, and the public to guide the future freight and passenger rail capital investments.

The SRP has been developed to comply with Chapter 227 of Title 49 of US code Section 22705 as enacted in the Passenger Rail Investment and Improvement Act (PRIIA) of 2008. As such, states are required by PRIIA to submit a state-approved rail plan, which has been revised no less frequently than once every five years, to the US Secretary of Transportation for approval.

The SRP has also been prepared to align with the Federal Rail Administration's (FRA) Preliminary National Rail Plan, to be completed in 2011. The development of Delaware's SRP reflects national consensus on strategic goals in the areas of safety, state of good repair, economic competitiveness, livable communities and environmental sustainability.

# State Rail Plan Vision, Goals and Objectives

The SRP is focused on improving the capacity and efficiency of the State's rail system to meet the ever-growing demand for passenger and freight rail service in Delaware.

Delaware's vision brings together the need for efficient freight rail coupled with the desire for high-speed, intercity, and commuter rail connecting the State's growing communities. Delaware realizes the need for more rail capacity for both passengers and freight, and in order to maintain and grow its economic well-being, it is critical for the State to partner with stakeholders and others to advance the rail improvements necessary to maintain and improve the State's multimodal transportation system. To achieve this long-term future state, vision statements were developed for both passenger and freight rail. Delaware's multimodal freight system should be responsive to increased regional and international economic competition. It can also address limited highway capacity, environmental challenges, rising energy costs, and the need to preserve right-of-way for future rail use. Figure 1 below illustrates the steps taken for SRP highlighting the relationship between the vision, goals, objectives and strategies.



**CLAYMONT STATION**

**Figure 1. Relationship Between Vision, Goals Objectives and Strategies**



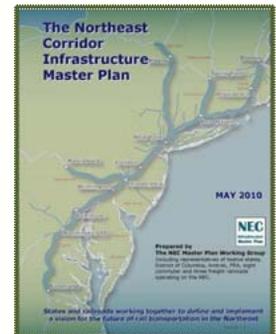
## Delaware's Vision for Passenger Rail



**WILMINGTON STATION**

As congestion increases on the State's highway network, the demand for Delaware's intercity and commuter rail services will continue to grow. Combined with global environmental trends and volatile fuel prices, the desire for more travel options leads to a passenger rail system that provides safe, fast, reliable and frequent service that is competitive with other travel modes. Connections to other modes will also be essential, including local and regional transit services.

The State's vision for passenger rail is aligned with Amtrak's vision for high-speed rail in the Northeast Corridor (NEC) as well as the NEC Infrastructure Master Plan. Both of these recent documents outline near as well as longer-term needs and solutions in collaboration with the commuter railroads that are located along the NEC.



## Delaware's Vision for Freight Rail

Given Delaware's central location in the Mid-Atlantic region, many of the state's industries rely on the freight rail network for efficient delivery of goods. This rail system serves many destinations beyond the State's borders, and its connections with other modes of transport, namely highway and water, provide shippers options in terms of market access, modal economics, and service. With a national emphasis on economic competitiveness and environmental sustainability, an energy efficient choice such as rail is poised to better serve shipper's needs.



**NS TRAIN AT NEWARK STATION**

## State Rail Plan Goals

Using this vision as a foundation, six broad goals for Delaware’s rail transportation system were identified and used to shape the SRP and lead to development of objectives and strategies.

1. Provide mechanisms for continuous safety and security on all rail modes.
2. Preserve the existing network and provide additional capacity to maintain and improve Delaware’s important link in regional and national rail networks.
3. Seamlessly integrate passenger and freight rail with other modes, including transit, ports and aviation.
4. Work with other states and stakeholders to advance improvements in rail transportation through partnerships and innovative funding opportunities.
5. Promote the energy efficiency of rail transportation and educate the public, elected officials, and others on the environmental benefits of rail as well as the economic development opportunities it creates.
6. Contribute to the decision-making process with local governments and land owners to preserve rail corridors and potential station areas for future investment.

For each goal, a list of objectives and strategies was developed that align with the vision established for the future of freight and passenger rail in Delaware.

**TABLE 1. GOALS, OBJECTIVES, AND STRATEGIES**

	Objectives	Strategies
<p><b>GOAL 1.</b></p> <p>Provide mechanisms for continuous safety and security on all rail modes.</p>	<ul style="list-style-type: none"> <li>• Working with the railroads, grade crossings identified of particular concern for closure, enhanced warning devices or separation.</li> <li>• Support for future programs and potential funding sources identified to address heightened rail security concerns.</li> <li>• Increased safety of passengers and freight trains by implementing modern technologies, such as positive train control.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify contingencies for major infrastructure compromise or destruction, partnering with other modes as warranted.</li> <li>• Work with USDOT, state agencies, and adjacent states to come up with collaborative procedures to deal with rail and passenger safety, as well as transport of hazardous materials.</li> <li>• Install video surveillance equipment at key asset locations.</li> <li>• Monitor vehicular and pedestrian access to railroad right-of-way.</li> <li>• Work with FRA on implementing new technologies that help with rail safety.</li> <li>• Investigate the potential to create a centralized office of rail safety and security within the State.</li> <li>• Investigate opportunities for cost savings and additional liability protection through an insurance pool or other protective arrangement.</li> </ul>

**TABLE 1. GOALS, OBJECTIVES, AND STRATEGIES (CONT'D)**

	Objectives	Strategies
<p><b>GOAL 2</b></p> <p>Preserve the existing network and provide additional capacity to maintain and improve Delaware's important link in regional and national rail networks.</p>	<ul style="list-style-type: none"> <li>Expanded rail capacity to promote and meet projected growth in freight and passenger demand.</li> <li>Optimized rail network operations.</li> <li>Removal of bottlenecks and chokepoints to increase system capacity.</li> <li>Preservation of rail corridors for future use.</li> <li>Motivation for business and mixed-use development to locate adjacent to current and future passenger rail stations.</li> <li>Clear understanding of where and when commuter and intercity rail is feasible within Delaware.</li> </ul>	<ul style="list-style-type: none"> <li>Collaborate with railroads to get all rail in the State of Delaware to 286,000-pound rail car load capacity.</li> <li>Identify potential corridors where market demand is projected to warrant 315,000-pound rail car load capacity.</li> <li>Identify the cost and benefits of improvements needed to achieve 286K compliance and consider alternative ways of funding these projects with the shortlines.</li> <li>Identify corridors where rail service may be needed and perform cost/benefit analysis to help prioritize these corridors.</li> <li>Develop Statewide policy for rail-to-trail and rail-with-trail for potential rights-of-way that may be abandoned.</li> <li>Establish policy and standards on commuter rail stations including spacing between stations of no less than four miles.</li> <li>Establish a policy for transit-oriented development at passenger rail stations, encouraging density and development at multimodal stations.</li> <li>Develop a context and policy for where new or expanded passenger rail service can be evaluated.</li> <li>Continue to identify rail improvements needed in order to stay competitive with global economy.</li> <li>Investigate the potential for an enhanced State-funded program to allow for additional grade crossing and other rail infrastructure improvements.</li> </ul>

	Objectives	Strategies
<p><b>GOAL 3</b></p> <p>Seamlessly integrate passenger and freight rail with other modes, including transit, ports and aviation.</p>	<ul style="list-style-type: none"> <li>System redundancy, reliability and viability to support other modes of transportation.</li> <li>Improved coordination among freight, intercity passenger and commuter rail systems with other modes of transportation.</li> <li>The global nature of goods movement is considered when making regional and local freight-related decisions.</li> <li>Replicating intermodal goods movement "success stories" from Delaware and beyond.</li> <li>Increased knowledge on the costs vs. benefits of rail travel.</li> <li>Improved ADA compliance on all passenger rail service.</li> <li>Seamless transferability provided for passengers between services.</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate with county, municipal and state economic development offices, airports, ports, and railroads to identify additional opportunities for multimodal goods movement.</li> <li>Consider development of policy to create protective berms between residential and rail land uses. Policy should identify areas where a trail could be included as part of the berm.</li> <li>Partner with local and regional ports to identify short and longer-term opportunities and ways of enhancing these shipping corridors for mutual benefit.</li> <li>Continue to explore rail-related responsibilities between DelDOT and DTC to identify opportunities to more effectively manage rail activities in the state, including the potential formalization of a rail group.</li> <li>Identify ways that rail can help replicate successes experienced when niche markets are able to grow and prosper.</li> <li>Identify win-win solutions for diverting truck trips to rail.</li> <li>Partner with Amtrak and transit agencies to advance ADA plans and initiatives.</li> <li>Consider connections with other public transportation modes when rail timetables are modified as well as when new passenger rail services or corridors are advanced.</li> </ul>

**TABLE 1. GOALS, OBJECTIVES, AND STRATEGIES (CONT'D)**

	Objectives	Strategies
<p><b>GOAL 4</b></p> <p>Work with other states and stakeholders to advance improvements in rail transportation through partnerships and innovative funding opportunities.</p>	<ul style="list-style-type: none"> <li>• Exploitation of successes experienced via public-private partnerships.</li> <li>• Public policies that reflect regional and national interests and promote the attractiveness of rail.</li> <li>• Delaware’s interests are voiced as federal policy and legislation are developed.</li> <li>• Implementation of policies that provide competitive pricing for passenger and freight rail travel.</li> <li>• A State funding program that facilitates planning and implementing public investment in rail transportation.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a State policy on publicly-funded improvements to private property.</li> <li>• Replicate the success of the Shellpot Agreement (described more in Chapter 8) and use as a model for other similar projects.</li> <li>• Conduct economic impact analyses to quantify costs and benefits.</li> <li>• Partner with railroads and others to market the benefits of rail and freight mobility.</li> <li>• Work with the Office of State Planning and the counties to ensure that the transportation element of the comprehensive plans incorporates freight needs as part of the land use recommendations.</li> <li>• Partner with the freight railroads to prioritize reinvestment projects including increasing track speed and weight limits.</li> <li>• Keep abreast of legislation related to Positive Train Control and other federal initiatives.</li> <li>• Partner with other northeastern states in forums such as the Northeast Corridor Infrastructure Advisory Commission to maintain and expand capacity of the NEC.</li> <li>• Consider creating a Rail Freight Assistance Program or Rail Infrastructure Fund, referring to neighboring states for beneficial models (e.g., Pennsylvania, Virginia, Maryland).</li> <li>• Identify the extent to which Delaware should support out-of-state initiatives that can be shown to provide benefit to Delaware.</li> <li>• Investigate, with Maryland and Virginia, the potential for a regional operator to bring together the shortlines on the Delmarva.</li> </ul>



**NS TRAIN AT NEWARK**

**AMTRAK ACELA TRAIN - WILMINGTON**



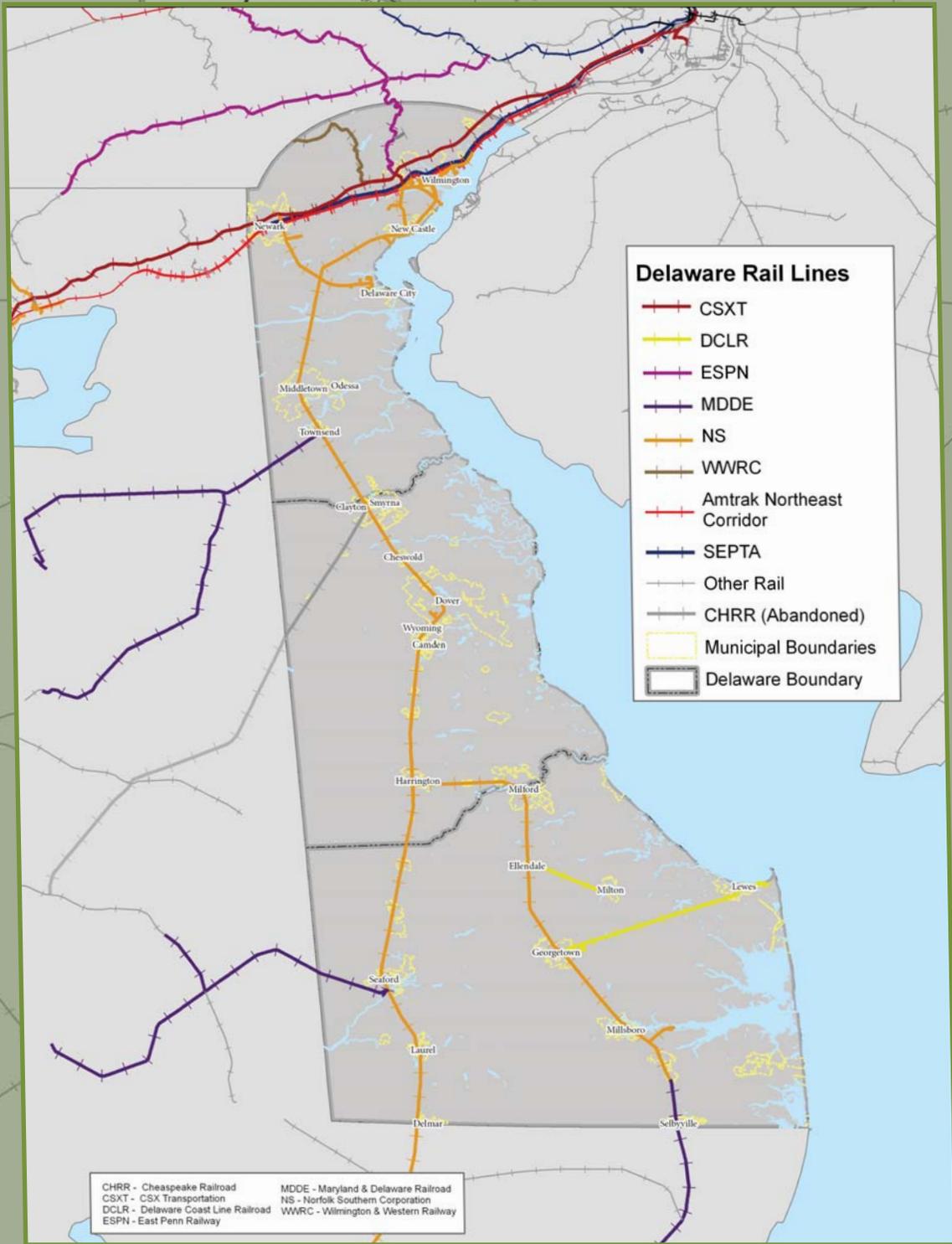
**TABLE 1. GOALS, OBJECTIVES, AND STRATEGIES (CONT'D)**

	Objectives	Strategies
<p><b>GOAL 5</b></p> <p>Promote the energy efficiency of rail transportation and educate the public, elected officials, and others on the environmental benefits of rail transportation as well as the economic development opportunities it creates.</p>	<ul style="list-style-type: none"> <li>• Increased market share of passenger and freight rail services.</li> <li>• Realization that rail corridors are economic drivers for communities throughout Delaware.</li> <li>• Preservation of existing businesses and jobs served by rail transportation; creating new rail-related business opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>• Work with DEDO, the MPOs, and the County Economic Development Directors to identify the markets for rail transportation throughout Delaware as well as other goods that can be transported by rail (e.g., building materials).</li> <li>• Partner with businesses and Economic Development Directors to protect businesses and jobs associated with rail.</li> <li>• Work with DEDO to track number of businesses that locate/relocate to rail lines; quantify the impacts on jobs and goods movement.</li> <li>• Partner with DEDO and others to quantify direct and indirect benefits from rail in Delaware; identify number of jobs that are created and maintained (e.g., Harrington, Wilmington, Newark Yard).</li> <li>• Partner with DEDO and others to quantify the financial loss/gain to preserve rail corridors throughout the State.</li> <li>• Educate municipal officials and the public on the location of rail lines throughout the State, stressing the importance of rail to job creation and preservation.</li> <li>• Work with land use agencies to create policies to preserve existing rail-related business and create new opportunities.</li> <li>• Educate the public on the importance of rail to Delaware's economy, including maintenance facilities and operations centers.</li> <li>• Collaborate with MPOs and others to showcase "freight as a good neighbor" and provide public outreach on rail as a transportation mode.</li> <li>• Partner with county Economic Development Directors to educate shippers on the benefits of rail.</li> </ul>
<p><b>GOAL 6</b></p> <p>Contribute to the decision-making process with local governments and land owners to preserve rail corridors and potential station areas for future investment.</p>	<ul style="list-style-type: none"> <li>• Preserved industrial corridors for future economic development opportunities.</li> <li>• Preserved land around potential stations along current and future passenger rail corridors.</li> <li>• Preserved shortline spurs where warranted.</li> </ul>	<ul style="list-style-type: none"> <li>• Collaborate with the county Economic Development Directors to identify parcels of land adjacent to rail that are ready and available for industrial use.</li> <li>• Partner with Office of State Planning to increase reliance on the Preliminary Land Use Service (PLUS) process to facilitate easier rezoning when warranted.</li> <li>• Partner with DEDO to prepare guidelines for counties to use when rezoning is desired as part of comprehensive plan development.</li> <li>• Work with the MPOs and municipalities to identify areas where future TOD is desired (e.g., Cheswold, Clayton).</li> <li>• Partner with railroads and others to develop policy to preserve shortline spurs.</li> <li>• Work to obtain consensus with municipalities, counties and MPOs to identify and preserve industrial corridors.</li> <li>• Partner with DEDO and others to develop policy that prevents residential and other incompatible land use encroachment on rail lines.</li> <li>• Partner with MPOs, counties and municipalities to preserve land along potential future passenger rail corridors for transit-oriented development and park and rides, identifying any travel benefits that can be realized prior to start of passenger rail service.</li> <li>• Consider most promising and/or logical locations for intermodal transfer centers and partner with local officials to explore opportunities to create them.</li> </ul>

# Delaware's Current Rail Transportation Network

Delaware's combined passenger and freight rail network comprises 263 route miles. Figure 2 below is a map of the railroad network in Delaware.

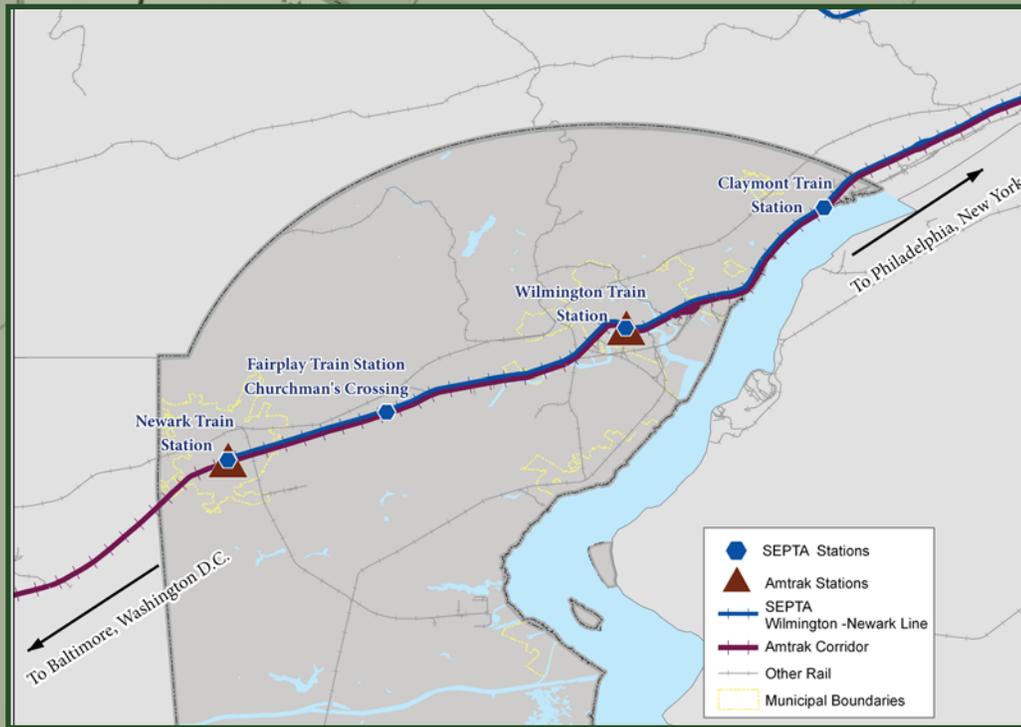
**Figure 2. Delaware's Rail Network**



# Delaware's Passenger Rail Network

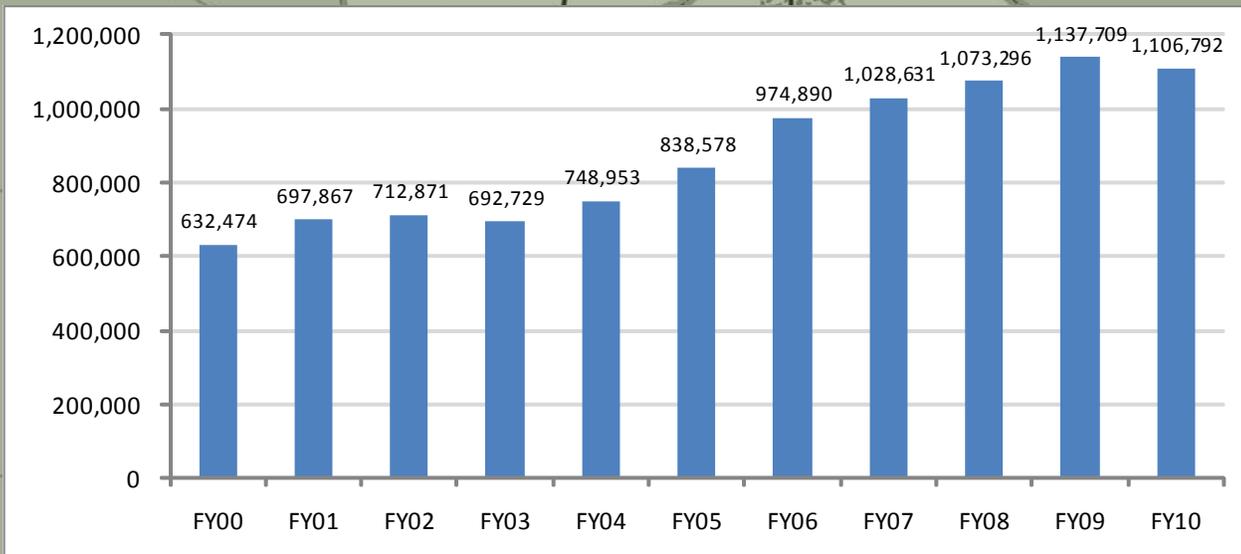
Passenger rail service is provided by two carriers. Amtrak's NEC passes directly through Delaware providing intercity passenger rail service from the Newark and Wilmington Stations. Complementing the intercity service is a network of Philadelphia-oriented commuter trains operated by the Southeastern Pennsylvania Transit Authority (SEPTA) with four commuter stations in the State.

**Figure 3. Delaware's Passenger Rail Network**



Ridership on the Wilmington-Newark commuter line has grown considerably since 2000. Combined total ridership between the Claymont, Wilmington, Churchman's Crossing, and Newark stations has grown from 632,474 to 1,106,792 between 2000 and 2010, representing an average growth of 7% per year.

**Figure 4. SEPTA Ridership by Year in Delaware**



# Delaware's Freight Rail Network and Facilities

The State is served by two Class I railroads as well as by four smaller, shortline railroads that provide feeder service for the larger carriers. In addition to providing connections to principal economic centers in the East and Midwest, the Class I railroads offer Delaware's industries and consumers access to markets west of the Mississippi River as well as in Canada and Mexico through connections with other railroads.

**TABLE 2. DELAWARE'S FREIGHT RAIL SYSTEM**

Railroad Name	Railroad Abbreviation	Miles Operated in Delaware
Norfolk Southern*	NS	158
CSX Transportation*	CSX	23
Maryland & Delaware Railroad	MDDE	16
Wilmington & Western Railroad	WWRC	10
East Penn Railroad	ESPN	10
Delaware Coastline Railroad	DCLR	23
<b>Total Miles</b>		<b>240</b>

\* NS also operates 23 miles on the NEC; CSX has trackage rights on the NEC though it does not currently use them.

## Norfolk Southern

Norfolk Southern (NS) is the largest rail freight carrier in Delaware. It serves the State through access rights over the Northeast Corridor granted by the federal government. It also serves the Delmarva peninsula with a line extending south to Pocomoke, Maryland. Several NS yards are located throughout the State and include:

- Edgemoor Yard, Wilmington
- Newark Yard, Newark
- Harrington Yard, Harrington
- Jello Yard, Dover



**FREIGHT CARS AT HARRINGTON YARD**

## Port of Wilmington

The Port of Wilmington is an important freight facility in the region. The Port of Wilmington is directly served by NS with rail car loading docks located next to terminal warehouses. The State of Delaware updated recently upgrade the internal rail circulation and intermodal facilities of the Port.

<http://dedo.delaware.gov/business/siteselection/transportation.shtml>



**PORT OF WILMINGTON**

## CSX Transportation

CSX Transportation (CSX) is the second-largest freight railroad in Delaware. CSX's service in Delaware, however, is limited to its line paralleling the NEC across the northern part of New Castle County (Philadelphia subdivision). Most CSX freight traffic passes through Delaware on this Philadelphia-Baltimore line segment through Wilmington and Newark. CSX has two facilities located in Delaware

- Wilsmere Yard, Wilmington
- TransFlo Facility, Wilmington

## CSX TransFlo Facility

The TransFlo Terminal in Wilmington is important for companies that do not have direct access to rail transportation. This bulk intermodal facility provides the capability to transfer products between rail cars and trucks. The Wilmington location is one of 58 connected to the CSX network.

## Delaware's Shortline Railroads

In addition to NS and CSX there are four shortline carriers that serve Delaware providing feeder service for customers not served directly by NS or CSX. These include:

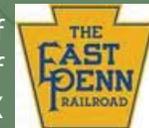
### Wilmington & Western Railroad

The Wilmington & Western Railroad (WWRC) is a freight and heritage railroad in northern Delaware, operating over a CSX predecessor railroad, Baltimore and Ohio Railroad (B&O), branch between Wilmington and Hockessin. The WWRC serves northern New Castle County from the CSX mainline.



### East Penn Railroad

The East Penn Railroad (ESPN) is a short-line railroad that operates a number of lines in Pennsylvania and Delaware. The ESPN owns and operates 10 miles of track in northern New Castle County. The ESPN railroad intersects with the CSX mainline at Elsmere Junction in Delaware.



### Maryland & Delaware Railroad



The Maryland & Delaware Railroad (MDDE) is a shortline railroad operating on the Delmarva Peninsula with connections to the NS network. Headquartered in Federalsburg, Maryland, the MDDE operates over 120 miles of track in Delaware and Maryland with 16 of these miles in Delaware. The MDDE lines connect with the NS Network at Townsend, Seaford and Frankford.



DCLR AT GRAVEL HILL

### Delaware Coastline Railroad

The Delaware Coastline Railroad (DCLR) is another short line railroad operating on the Delmarva Peninsula with 23 miles of track in Sussex County. The DCLR intersect with NS in Georgetown and Ellendale, Delaware. The track is owned by the State of Delaware and managed by the Delaware Transit Corporation (DTC).

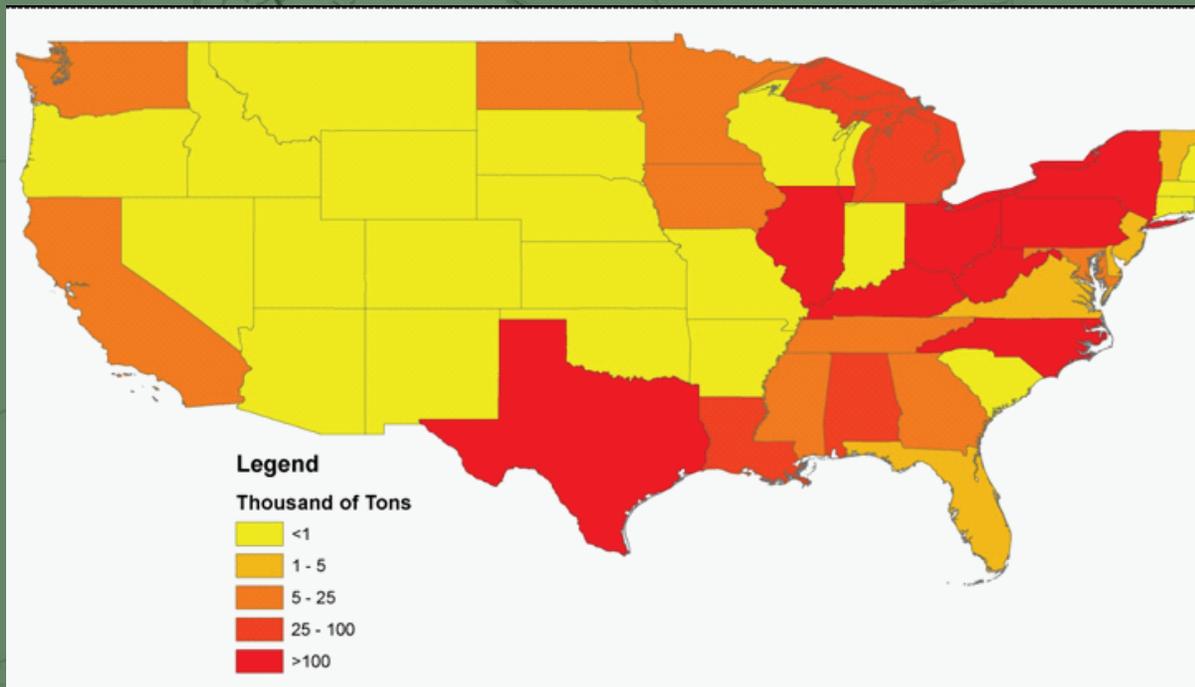


## Freight Activity in Delaware

Measured by either value or tonnage, trucks continue to be the dominant means of freight transport for shipments originating or terminating in Delaware. Rail, however, represents a small but growing share of the freight market. The largest dollar value rail transported commodities terminating in Delaware include basic chemicals, motorized vehicles, and coal.

The rate of growth for rail freight inbound to Delaware is projected to experience slight average annual growth of approximately 2.5%, but this reflects growth in only selected commodities, while most others are expected to decline. Commodities that are expected to grow include chemical and other agricultural products, milled grain products, animal feed and coal. Waste/scrap, metallic ores, textiles/leather, and wood products are expected to slightly decline through 2035.<sup>1</sup>

**Figure 5. Origins of Rail Freight with Destination in Delaware (2007)**



Rail and truck/rail intermodal shipments from Delaware are expected to decline (-0.4% and -0.7% average annual growth respectively), with other intermodal shipments as well as air/truck and truck expected to grow slightly through 2035 (7.1% and 4.2% average annual growth respectively). The relatively larger increases in average annual percentage growth for air/truck and other intermodal modes of transport suggests that manufacturing goods of high value and/or time sensitivity will continue to grow in Delaware's industrial sector.

Similar to the projections for commodities and types of growth for rail freight coming to Delaware, this mode as a whole is expected to experience slight growth through 2035. By weight, goods shipped to Delaware by air/truck and other intermodal modes are expected to experience the largest growth (15.4% and 7.0% average annual growth), while truck/rail and rail alone are expected to experience more modest tonnage growth (3.6% and 2.5% average annual growth).

<sup>1</sup> Source: Freight Analysis Framework (FAF). FAF is a public database developed by the Federal Highway Administration that integrates data from a variety of sources to create a comprehensive picture of freight traffic flows by commodity and mode. FAF version 3 (FAF3) is the most current version describing freight movements by tonnage and value for 2007.

# Rail Safety and Security

Rail safety and security is an important issue facing the rail industry as well as all levels of government - federal, state, and local. Various programs are in place at each of these levels to ensure safety and security. Coordination among the involved agencies is a crucial component of rail safety and security for passenger and freight rail providers.

## Safety

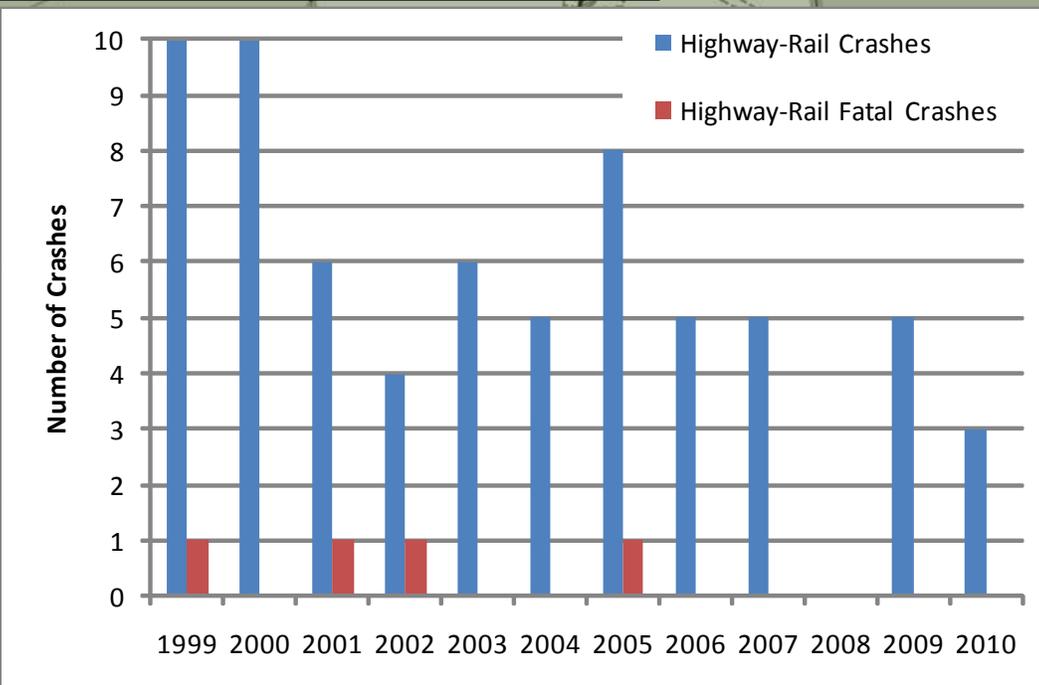
There are multiple DeIDOT entities responsible for safety including DTC, Traffic Engineering, Quality, Planning, Subdivisions, Signing and Striping, Pavement Management, and Project Development. With 379 highway rail crossings in Delaware, DeIDOT places a high priority on safety at railroad crossings and follows federal guidance for allocating appropriate percentages of funding to address safety and rideability issues. Over the past ten years, Delaware has had an average of 5.6 grade crossing collisions per year. Figure 6 below shows the trend of highway-rail grade crossing accidents. Notably, there were no accidents in 2008.

### Safety Outreach Activities



Delaware's Operation Lifesaver (OL), established in 1986, is an educational outreach program of DTC. As part of the national Operation Lifesaver, Inc., Delaware's chapter is focused on reducing the number of highway-rail grade crossing crashes.

**Figure 6. Delaware's Highway-Rail Crashes**



## Security

Security is important from both from both a passenger and a freight movement perspective. On the passenger security side, security becomes particularly difficult given the mass movement of people; on the freight side, millions of tons of hazardous materials are moved along the nation’s transportation network. Better communication, accountability, and coordination between agencies are important factors in rail security with a continual focus of rail security plans.



**SEPTA AT WILMINGTON STATION**

DTC contracts with Amtrak for on-call and on-site police presence at the Wilmington Station and along the Northeast Corridor. There are separate contracts with private security firms for guard services at the three other passenger stations in Delaware.

Delaware’s Class I railroads have freight security plans as well as continuity of operations plans in place that are reflective of the American Association of Railroad’s 2001 Terrorism Risk Analysis and Security Management Plan. Communication among security officials, law enforcement and the railroads is critical to ensuring secure operations on Delaware’s

The key agencies responsible for security on the nation’s rail transportation system are the US Department of Homeland Security on the federal side and DeIDOT/DTC, Delaware Emergency Management Agency (DEMA), and Delaware Department of Safety and Homeland Security (DSHS) on the state side. These agencies have addressed transportation security largely through identifying critical assets, developing protection strategies for these assets, and developing emergency preparedness plans.

## Institutional Arrangements

The current organizational structure of the State’s rail involvement has rail responsibilities divided between several DeIDOT divisions and the Delaware Transit Corporation (DTC). With establishment of DTC in 1995, most rail functions followed staff expertise. Each agency may have several lead roles but also has a supportive role on the others’ efforts. The table below lists rail responsibilities by agency. The SRP recommends re-examining assignment of activities between DeIDOT and DTC to find out whether the current arrangement can be altered in some way to make it more efficient and effective.

**Figure 7. Rail Responsibilities and Arrangements**

DeIDOT	DTC
<ul style="list-style-type: none"> <li>• Implementation and monitoring of grade-crossing-control devices (Traffic)</li> <li>• Develop and implement the State Rail Plan (Planning)</li> <li>• Evaluate strategic and long-range rail planning (Planning)</li> <li>• Ensure federal safety guidelines on rail freight operations are followed (Traffic)</li> <li>• Support Delaware’s economic goals through strategic enhancement of the rail freight system (Planning)</li> <li>• Administer grade crossing protection program (Traffic)</li> </ul>	<ul style="list-style-type: none"> <li>• Monitor regional rail freight service and safety issues</li> <li>• Passenger rail studies and projects</li> <li>• Management of commuter rail operations</li> <li>• Administer State-owned shortline</li> <li>• Coordinate and monitor regional rail freight service issues</li> <li>• Promote rail safety</li> <li>• Inspect State-owned rail lines</li> <li>• Manage federal grants rail infrastructure and service planning projects</li> </ul>

# Rail Funding Options

With limited funding available for rail capital investments, the challenge continues in Delaware, as well as the rest of the country, to find adequate and predictable funding for these projects. State rail funding is typically accomplished through funding specific projects on a limited, strategic basis as well as partnerships with the private sector, such as the Shellpot Agreement with NS. However, a financially constrained environment at the federal and state levels has led to a backlog of projects waiting to be advanced. In recent years they were several federal programs that DelDOT utilized to advance a few of these projects.

## Federal Support for Rail Investments in Delaware

### PRIIA

The Passenger Reinvestment and Improvement Act of 2008 (PRIIA) tasks states with establishing or designating a state rail transportation authority that will develop statewide rail plans to set policy involving freight and passenger rail transportation within their boundaries, establish priorities and implementation strategies to enhance rail service in the public interest, and serve as the basis for federal and state rail investments within the state [§303]. PRIIA attempts to put rail on an equal footing with planning for other transportation modes by requiring state rail plans as a prerequisite to receiving grant funding.

Several sections of PRIIA funding exist:

- Intercity Passenger Rail Service Corridor Capital Assistance Program (section 301)
- High-Speed Rail Corridor Development (section 501)
- Congestion Relief (section 302)

### ARRA

The American Recovery and Reinvestment Act of 2009 (ARRA) signed into law on February 17, 2009 calls for an additional \$8 billion for PRIIA projects. As part of this legislation, FRA would develop a strategic plan for administering newly appropriated funds, followed by a detailed grant program, and a competitive grant application cycle. The Wilmington Train Station Rehabilitation was completed in early 2011 with a portion of the total project cost of \$32 million coming from ARRA funding.



**ARRA BANNER AT WILMINGTON STATION**

## HSIPR Funding

In June 2009, the FRA launched the High-Speed Intercity Passenger Rail (HSIPR) Program. In the long-term, the HSIPR Program aims to build an efficient, high-speed passenger rail network connecting major population centers 100 to 600 miles apart. In the near-term, the program will aid in economic recovery efforts and lay the foundation for this high-speed passenger rail network through targeted investments in existing intercity passenger rail infrastructure, equipment and intermodal connections. Two projects in Delaware received HSIPR funding:

- **Downstate Intercity Rail Study**- Investigate demand and start-up needs for 1-2 daily trains to Southern Delaware and Ocean City, Maryland.
- **Wilmington Third Track** - Install 1.5 miles of track, turnouts, freight approach and reconfiguring interlockings to add commuter frequencies south of Wilmington.

## TIGER II Planning Grant

In 2010, US Departments of Transportation (DOT) and Housing and Urban Development (HUD) joined together to award grants via the TIGER II Planning Grants and HUD's Community Challenge Planning Grants programs as part of the departments' "Partnership for Sustainable Communities" with the Environmental Protection Agency (EPA). Funding was made available for localized planning activities that ultimately lead to projects that integrate transportation, housing and economic development.

In October 2010, the Wilmington Area Planning Council (WILMAPCO) was awarded a TIGER II Planning Grant to fund the Newark Regional Transportation Center, which would advance the planning efforts for the project including preliminary engineering efforts and National Environmental Policy Act (NEPA) environmental studies. The funds would be used to 1) determine the optimal solution for train operations in the vicinity of Newark; 2) design a reconfiguration of the Newark Train Station for passenger and intermodal use; and 3) develop the Newark Train Station in context with the 272-acre former Chrysler site, in concert with the University of Delaware capital plans, and leverage the transit-oriented development (TOD) opportunities afforded by the site. In addition to resolving the freight and passenger train operating conflicts, the intent of the effort is for the Newark Regional Transportation Center to serve as a catalyst for enhancing sustainable development in the City of Newark.



**LOCATION OF POTENTIAL  
NEW TRACK AT NEWARK**

# Rail Projects

Future capital investment in Delaware's rail system depends on the investments provided by the private sector, as well as state and federal government. As shown in the proposed table of projects starting on page 20, the majority of projects require funding from a variety of sources.

The projects contained in this list were compiled from a variety of sources, including DelDOT's Capital Transportation Program (CTP) and rail stakeholders. They represent both passenger and freight needs, and sometimes both within a single project. The passenger rail projects are intended to address service and operational deficits in the region and the freight projects similarly address the need to address capacity issues as well as state-of-good repair. In addition, a series of planning studies have been identified to continue to address the need for additional or expanded rail service as the State's population continues to grow, particularly in the southern two counties. Delaware realizes that needed improvements do not stop at state borders and that there are multi-state benefits on many of the proposed projects. While the project table only contains projects that are directly sponsored by Delaware, the State is also involved in projects sponsored by other states. For example, Maryland's Third Track Project, a.k.a. the "Chesapeake Connector" and the replacement of the Baltimore and Potomac tunnel in Maryland are two projects that directly impact Delaware's rail transportation system.

The projects are organized based on whether they would be completed in the short term (through 2015), mid-term (2020), or longer term (2030). They were evaluated based on the goals and objectives for the SRP, which included considering the project's impacts on the State's (and region's) rail transportation system, as well as their influence and impacts on other modes such as transit, trucks, aviation, and ports.

## Shellpot Agreement as a Public/Private Partnership Model

In 2002, the State of Delaware and NS entered into a Railroad Facilities Improvement and Revenue Participation Agreement, which covered various aspects of the rehabilitation of NS's Shellpot Bridge in New Castle County. Known as the "Shellpot Agreement," the State's total investment was \$13.9 million.

NS pays a per-car charge or toll to the State for each crossing of the bridge. The State is also entitled to guaranteed minimum annual payments in the event that rail traffic levels are lower than anticipated. Over the 20-year life of the agreement, the minimum payment from NS for use of the bridge will total \$4.5 million, which is approximately 32 percent of the original investment (without considering inflation). To the State's benefit, there is no limit on the amount of fees that the state can earn, i.e., if rail traffic levels are consistently high, the State could earn car movement fees greater than the original investment.



**REHABILITATION OF THE SHELLPOT  
BRIDGE IN  
NEW CASTLE COUNTY**

In addition to the projects included in the potential project list, there are a number of efforts either underway or recently completed that warrant additional mention in the SRP. These projects include:

### **Chesapeake Connector Freight and Passenger Rail Benefits Study**

WILMAPCO is currently leading the development of a freight and passenger rail benefits study in Cecil County Maryland to investigate the cost and benefits of a series of physical improvements on this 6.3 mile two-track segment of the NEC. A priority rail project that is anticipated to provide public and private benefits for Delaware, the study results are intended to provide a path forward through a series of actions to advance this project in accordance with federal and private funding options. This is a unique situation for the State in that if it is determined that the project should advance, Delaware may need to participate in funding this out-of-state project. The study is expected to be completed by the end of 2011 and includes collaboration with DelDOT/DTC, CSX, MDOT/MTA, NS, Amtrak and other stakeholders.

### **SEPTA Commuter Rail Cars**

Four cars of SEPTA's new commuter rail purchase will be primarily dedicated to the Wilmington-Newark line providing service to Philadelphia. With a total capital cost of \$7.9M, these cars are anticipated to be in service in 2011.



**SILVERLINER V CARS NEAR NEWARK**



**RENOVATED WILMINGTON STATION**

### **Wilmington Station Rehabilitation Project**

Performing the necessary improvements to this station restored the building's exterior as well as improved passenger amenities including the main entrance, restrooms, and better access for persons with disabilities. This project was completed in early 2011 and funded partially through the American Recovery and Reinvestment Act (ARRA), DelDOT and FTA for a total project cost of \$32 million.

### **BR 1-651 on Newport Road Railroad Crossing at Marshalton Road**

A CSX project, this includes the replacement and raising of the new bridge to conform to CSX railroad requirements. As part of this project the road approaches are also being raised and tied in to the existing roadway to afford the railroad additional clearance under bridge 1-651. This is a \$7 million project that includes federal and local funding and is expected to be completed in 2015.

### **BR 1-503 on St Anne's Church Road Railroad Crossing over NS**

This project includes replacement of existing bridge which was on DelDOT's list of structurally deficient bridges with steel beams and composite concrete deck with Mechanically Stabilized Earth (MSE) walls. The total cost of the project is approximately \$9.3 million and expected to be completed in FY 2011.

# Project List

**Table 3. Proposed Freight Projects**

Timing	Project Title	Location	Description	Total Capital Cost (in Millions)	Rationale	Estimated Completion Date
Short-term	New Castle Secondary Siding	New Castle County	Storage capacity transferred from NEC to the New Castle Secondary. Reconstruct or rebuild the Tasker siding on New Castle Secondary. Project will also increase capacity on the Newport Industrial Track.	\$0.7	This project will accommodate additional NS stone trains heading Downstate by allowing more traffic flow without impacting local operations.	2015
Short-term	Rail Program Autoport	New Castle County	The project will address capacity improvements for handling railroad cars at Port of Wilmington. Sidings will be constructed on Autoport, Inc. and NS Railway right-of-way to increase capacity from 60 to 90 railcars. New connections to the NS main track will be provided to eliminate the conflict with highway traffic at Terminal Avenue. It is part of a public-private project with NS putting up 70% of the cost and FHWA 30%.	\$3.015	This project represents earmark money going to NS to improve access to the Port of Wilmington. Improving access to the Port of Wilmington will enable easier transportation of goods into and out of the Port, which will contribute positively to Delaware's economy. The project is a partnership between the Port and NS. NS has received an FHWA earmark of \$984,900 and is funding the remainder themselves.	2015
Short-term	Raise Edgemoor Yard	New Castle County	Flooding frequently occurs in the yard causing disruption in service. To fix this problem the yard could be raised anywhere from 2 to 6 feet.	\$7.0	This is a short term solution that may not be the most effective because of the steep grade the yard will need to be raised to avoid the flooding. A longer term solution would be to relocate the yard.	2015

**Table 4. Proposed Passenger Rail Projects**

Timing	Project Title	Location	Priority	Description	Total Capital Cost (In Millions)	Local Share	Federal Share	Rationale	Estimated completion date
Short-term	Orange Street Bridge Rehabilitation	New Castle County	Low	Reconstruct bridge near Wilmington Station. Reconstruction of the Orange Street railroad overpass on the Amtrak Northeast Corridor in Wilmington to allow three through tracks making it more efficient to have more commuter trains south of Wilmington.	\$7.4	\$2.4	\$5.0 (Amtrak)	Remove girder permitting Amtrak to use Track 2 northbound saving operating time. Amtrak recently indicated through Value Engineering of a potential \$2.2M savings.	
Short-term	CRIP – Third Track Wilmington-Newark. Third Track - Ragan to Brandy	New Castle County	High	Install 1.5 miles of track, turnouts, freight approach and reconfiguring interlockings. Also includes communications and signals work.	\$37.6	\$10.1	\$27.5	Improvements are essential to add commuter frequencies south of Wilmington and improve reliability of all services	Mar. 2014
Long-term	Ruthby Interlocking	New Castle County	Low	Expand rail capacity near S.R. 273	\$2.0	\$0.4	\$1.6	Crossovers between tracks 1, 2 and 3 to support expanded SEPTA train frequencies.	Long-term
Long-term	High level platforms - Churchmans Crossing	New Castle County	Low	Gauntlet track for freight; high level platforms both sides and parking garage	\$20.0	\$4.0	\$16.0	Expanded capacity at Churchmans Crossing to support expanded SEPTA frequencies. Contract with partner requires structured parking.	Long-term

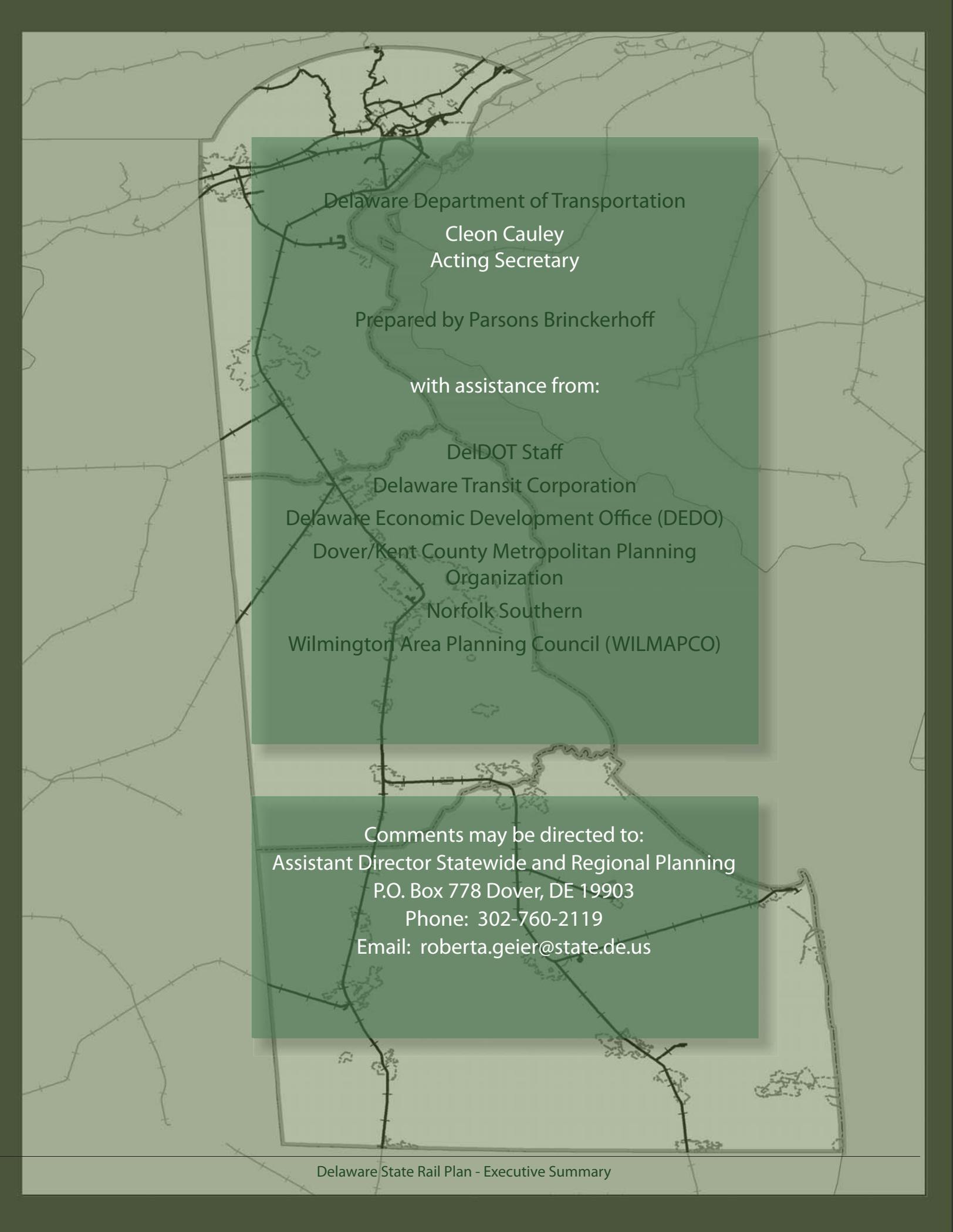
**Table 5. Proposed Passenger Rail Projects (Cont'd)**

Timing	Project Title	Location	Priority	Description	Total Capital Cost (In Millions)	Local Share	Federal Share	Rationale	Estimated completion date
Long-term	Claymont Station Improvements	New Castle County	Medium	From Claymont Station Study – construct new high-level platforms at north part of station platform on straight section of track. The Preferred Alternative would add station amenities, improved pedestrian connections, a new station building located close to Myrtle Avenue and a new station entrance with a bus turnaround, passenger drop-off, public plaza, and 12 carpool and carshare parking spaces. Expand Claymont's commuter station in collaboration with TOD. Passenger bridge and structured parking.	\$30.0	\$6.0	\$24.0	In partnership with developer to expand and improve passenger facility.	Long-term
Long-term	Reconfigure Holly Interlocking	New Castle County	Low	Realign passenger tracks near Claymont.	\$10.0	\$2.0	\$8.0	Increase speed of intercity and commuters; separation of freight operations.	Dec. 2020
Long-term	Holly - Landlith Interlockings - Track Upgrade, Reconfiguration, New Fourth Track	New Castle County	Low		TBD	TBD	TBD	Reconfiguration of interlocking will provide flexibility through Wilmington. New track will improve track capacity and operations.	Long-term
Long-term	Churchmans Crossing Parking Structure	New Castle County	Medium	Construct new parking garage at commuter rail station in conjunction with private development at the site.	\$7.0			Contract with development partner requires structured parking.	Long-term

**Table 6. Proposed Studies**

Timing	Project Title	Priority	Description	Total Study Cost (In Millions)	Estimated completion date
Short-term	Downstate Rail-Delmarva Intercity Rail Study	High	Investigate demand and start-up needs for 1-2 daily trains to Southern Delaware and Ocean City, Maryland. Study proposed intercity passenger rail corridor in southern Delaware.	\$0.9	2012
Short-term	Newark Station Design & Environmental Analysis	High	Enlarge station capacity to accommodate new large development at University of Delaware.	\$3.0	2012
Short-term	Chesapeake Connector: Freight and Passenger Rail Benefits Study	Medium	Cost benefit analysis for physical improvements to 6.3 mile NEC segment in Cecil County, Maryland	\$0.15	2011
Short-term	Delaware-Maryland Commuter Rail	Medium	Analyze demand costs for commuter rail connecting Newark, Northern Maryland, Baltimore & Washington DC.	\$1.5	2013
Short-term	Newport Station Area Planning TOD	Medium	Transit and land use planning, traffic analysis and modeling, site development design.	\$0.1	2011
Mid-term	Chesapeake Connector	Medium	Design, environmental analysis and preliminary engineering, 3rd track Bacon to Prince (Maryland).	\$2.0	2015
Long-term	Edgemoor Station Area Planning TOD	Medium	Transit and land use planning, traffic analysis and modeling, site development design.	\$0.1	Mid-term
Long-term	Kent County to New Castle County Commuter Rail	High	Address commuter rail New Castle County to Kent County regardless of the outcome of the Delmarva Intercity study	\$0.9	Long-term

 Current Studies

A map of Delaware is shown in the background, with a large green rectangular overlay in the center. The overlay contains text identifying the author and contributors of the document. The text is arranged in a top-down hierarchy, starting with the Delaware Department of Transportation and its Acting Secretary, followed by the preparer, Parsons Brinckerhoff, and then a list of assisting organizations.

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