

# Delaware's Transportation Agenda in the Northeast Corridor

**October 2009**

**by Geoff Edwards**



**Institute for Public Administration  
College of Education & Public Policy  
University of Delaware**

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## Preface

As the director of the Institute for Public Administration (IPA) at the University of Delaware, I am pleased to provide this report on *Delaware's Transportation Agenda in the Northeast Corridor*. This project represents our institution's commitment to research in corridor transportation issues, especially those related to the Northeast Corridor (NEC).

The culminating workshop for this project—attended by nearly a dozen regional transportation stakeholders—provided stimulating insights into the challenges for our region and highlighted exciting new directions for future research. This report summarizes the key issues facing the corridor, many of which were proffered by the corridor transportation stakeholders themselves. It is our hope that this report, along with the report *Transportation Policy and Governance in the Northeast Corridor: An Overview of Major Public Agencies* (available at [www.ipa.udel.edu/publications](http://www.ipa.udel.edu/publications)) written by David Beauchamp and Dr. Robert Warren, will serve as the foundation for important research in the near future.

I want to acknowledge the work of Geoff Edwards, a Ph.D. candidate in our Urban Affairs and Public Policy program, who served as lead researcher on this project under the guidance of IPA Assistant Policy Scientist Troy Mix and Policy Scientist Ed O'Donnell. IPA Assistant Policy Scientist Mark Deshon provided editorial assistance and designed the cover.

This project was funded by the University Transportation Center (UTC) at the University of Delaware through support it receives from the U.S. Department of Transportation. Dr. Sue McNeil is the director of UTC and provided valuable support and facilitation for the project.

Finally, I want to extend our gratitude to the numerous transportation stakeholders who provided their valuable thoughts and opinions on regional concerns, many of which form the core of this project.

Jerome R. Lewis, Director  
Institute for Public Administration

## Institute for Public Administration

The Institute for Public Administration (IPA) prepared this report for the University of Delaware University Transportation Center. A unit within the College of Education & Public Policy at the University of Delaware, IPA links the research and resources of the University with the management and information needs of local, state, and regional governments in the Delaware Valley. IPA provides assistance to agencies and local governments through direct staff support and research projects as well as training programs and policy forums.

IPA Research Assistant Geoff Edwards researched and authored this report with assistance from Assistant Policy Scientist Troy Mix.

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## Acknowledgments

The project team is grateful to the University of Delaware's University Transportation Center for its support, funding and consideration of this project. While initial efforts focused on gleaned information from reports produced by transportation stakeholders within the region, it became clear in those early stages that the project would benefit from conversations with the stakeholders themselves. IPA appreciates all who participated in any of the several rounds of stakeholder interviews and extends a special thanks to those who offered their valuable insights at the workshop on August 25th, including Dan Blevins and Dave Gula of the Wilmington Area Planning Council (WILMAPCO), Roberta Geier and Greg Oliver of the Delaware Department of Transportation, Joseph Hacker and Meghan Weir of the Delaware Valley Regional Planning Commission, Kennard Potts and David Campbell of the Delaware Transit Corporation, Claire Marazzo Greenwood of Select Greater Philadelphia, Simon Taylor and Ira Silverman of the Maryland Transit Administration, and Anthony Di Giacomo of the Cecil County Office of Planning and Zoning.

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## Executive Summary

The fractionated governance structure of the entire Northeast Corridor (Warren 2009) is also evidenced within the Baltimore-to-Philadelphia portion, which contains the entire extent of Delaware’s claim to the corridor. Though comprising only a small segment of the overall corridor and a miniscule portion of Delaware’s total transportation infrastructure, this 25-mile stretch is fundamental to the state’s relations with transportation and economic networks at several scales, from regional to global. This report employs recent literature and stakeholder input to provide future researchers with an appreciation for the major issues that will hinder or enable Delaware’s regional, national, and international transportation relationships over the next five to ten years.

Nearly all of these issues affect corridor cohesion; they all center on some aspect of building bridges, filling gaps, and forging alliances (quite often in the literal sense of these terms). While each of the transportation stakeholders along the corridor support the clearance of major impediments to corridor movement, funding, and governance, they often hold widely diverging positions as to how this should be performed. The diverse group of stakeholders interviewed for this report generally cites the collective issues in Table 1 as most important to the study region.

KEY ISSUES	CONSIDERATIONS
<b>Freight Rail</b>	
Infrastructure improvement	Aging infrastructure cannot continue to bear the size and weight of modern freight cars
Chokepoint clearance	Capacity restoration begins in our region but needs to be replicated by neighbors
Declining customer base	Zoning and economic changes increasingly make trucks more viable than rail
<b>Passenger Rail</b>	
Commuter rail from Perryville to Newark	Costs to MARC do not justify service north to Elkton or Newark
Military base realignment	Launched a thousand planning issues; regional rail need not be one of them
Amtrak	Largely unaccountable to the needs of states and regional stakeholders
<b>Intercity Roadways</b>	
Intermodal terminals	An important trend, though not necessarily good at mitigating corridor congestion
Open-road tolling	A good method for toll collection at increased speeds; stalled for lack of agreement
ITMS implementation	Decreased congestion via expanded use of EZPass, VMS, and CVISN
<b>Ports and Airports</b>	
Port of Wilmington	Long-range plan includes dock expansion, truck parking, and ITMS applications
Short sea shipping	How might Atlantic Coast shipping look 10 or 20 years from now?
New Castle County Airport	Long-term plan calls for updated facilities and increased business traveler access
<b>Governance</b>	
Funding	Current federal grant system favors large states with internal transportation corridors
Resilient systems	Safe, secure, and resilient corridors require healthy alternatives to the corridor itself
Focusing on corridors	The current environment requires creative approaches to funding and governance

Though several issues affect multiple modes of transportation, most seem to have a particular influence on only one or two. Many of the chief issues surrounding freight rail are related to the age of the infrastructure and its inability to keep pace either with bulkier rail cars or with the advantages afforded to the trucking industry by interstate highways. Passenger rail issues are

related primarily to cost and access. For the interstate roadway portion of the Northeast Corridor, most stakeholders cite issues centered on the continued use of intelligent transportation management systems (ITMS) in alleviating congestion, rather than those related to increasing roadway capacity through the construction of new lanes or rededication of existing lanes (e.g., lanes for use only by high-occupancy vehicles or commercial trucks). The key issues for Delaware's main port and airport are of the "wait and see" variety; each of these ports abides by long-term plans featuring facility upgrades in preparation for numerous economic- and transportation-related contingencies. Finally, the governance of the corridor and its component transportation modes are chiefly affected by a lack of coherence in the federal grants structure and the inability of regional stakeholders to articulate a comprehensive vision for what intermodal corridors could and should provide.

Relying heavily on stakeholder interviews and recent literature, the following report presents summaries of many of the major transportation issues that define Delaware's position within the Northeast Corridor.

## Methodology

This project consisted of three phases. The first phase comprised general research on corridor issues and unstructured interviews with transportation stakeholders. The second stage was oriented towards synthesizing and reporting phase-one results into a presentation titled “Developing Delaware’s Agenda in Transportation within the Northeast Corridor.” The third stage concluded the project with a series of structured interviews and a stakeholder workshop.

### *First Phase: Information Gathering and Unstructured Interviews*

During the first phase of research, the project lead conducted as comprehensive an inquiry as possible into the transportation literature related to the Northeast Corridor, with a particular emphasis on the Delaware region. The lead supplemented this literature search with unstructured interviews of a wide variety of people working within the region’s transportation industry. These included individuals employed by metropolitan planning organizations (MPOs, including DVRPC and WILMAPCO), state agencies (e.g., DelDOT) or their subsidiaries (e.g., DART First State), and the business community (e.g., Select Greater Philadelphia). Due to the lack of recent literature specifically focusing on the Baltimore-to-Philadelphia segment of the Northeast Corridor, the project team relied more heavily than anticipated on the first round of stakeholder interviews. The information gleaned from these interviews became a major asset during the third phase, when the structured interviews and workshop discussions tended to develop more from a foundation of prior interviews than on one established by the literature.

Despite the lack of substantial recent literature, the project lead was able to develop a working annotated bibliography based primarily on publications issued by several major transportation stakeholders within the region, including the I-95 Corridor Coalition, WILMAPCO, DelDOT, and the University of Delaware’s University Transportation Center. Two of the most valuable reports produced by this group—the *I-95 Corridor Coalition’s Mid-Atlantic Rail Operations Study* (MAROps) and the *DelDOT Freight and Goods Movement Plan*—are due for updates within the next two years. Since many of the issues discussed herein are culled from previous versions of these reports, the updates will provide valuable insights into the current state of corridor operations, particularly regarding freight rail.

### *Second Phase: Refinements and Presentation*

The beginning of phase two marked the end of the initial interview process and literature search. During this phase, most of the project resources were devoted to analyzing data gathered during the first phase and distilling the key issues for each transportation mode into information that could be used by policymakers and academics to help construct Delaware’s transportation agenda in the Northeast Corridor. This effort culminated with a presentation by Geoff Edwards to the transportation research community at the University of Delaware. This phase also included the creation of a wiki repository for issue briefs for each of the transportation modes examined. The wiki is accessible at [geoffedwards.org/wiki](http://geoffedwards.org/wiki) and may be edited with permission from Geoff

Edwards (gedwards@udel.edu). During this phase, the project team continued to refine its approach by focusing on the multiple scales of corridor governance and the challenges that entails. This framework proved helpful in guiding the interview portion of phase three.

### *Third Phase: Structured Interviews and Workshop*

Phase three consisted of a series of structured interviews and culminated with a workshop attended by members of transportation agencies throughout the region. Before the interview process, the project team contacted regional transportation stakeholders and members of the business community to provide them with a copy of an initial issue brief. This issue brief contained a summary of research findings to that point. The stakeholders responded to these findings, providing helpful corrections and supplementing the team's understanding of corridor issues with their own or those of their agency. All but one of these respondent stakeholders agreed to participate in the structured-interview portion of the third phase.

The project team conducted structured interviews by telephone, with each interview lasting between 15 and 30 minutes. One of the respondents elected to visit the IPA office, and a face-to-face interview was conducted in this case. Questions focused largely on determining each subject's perception of the major transportation issues affecting the Northeast Corridor. Interviewees were free to discuss new issues the project team may have missed or undervalued, in addition to offering additional information on issues more adequately captured.

The project culminated with a workshop on the morning of August 25, 2009, at Graham Hall on the University of Delaware campus. Nine representatives from five major transportation agencies in the Baltimore to Philadelphia region offered their thoughts on issues affecting this segment of the Northeast Corridor. At the onset of the meeting, the project team asked stakeholder representatives to write down their regional transportation concerns on large tablets stationed throughout the room. Each of these tablets was devoted to capturing stakeholder concerns for a single mode of transportation (i.e., freight rail, passenger rail, intercity roadways, and ports and airports). Mode-by-mode discussions comprised the duration of the workshop. For each mode, the project lead presented research findings and the project team facilitated discussions among the stakeholders. To conclude the discussions, the project team invited each stakeholder to allocate five dots to the issues written down at the station for that particular mode. These dots represented "priority points." If a stakeholder deemed one issue more important than the others pertaining to that mode, for instance, she could allocate all her points to that issue. At the conclusion of the workshop, the project team had not only heard what the stakeholders thought was important in their conversation with one another, but also had physical evidence for what the nine regional stakeholders believed to be the highest priority issues along the section of the Northeast Corridor between Baltimore and Philadelphia. Many of the issues and issue discussions contained within this report come directly either from the stakeholder workshop or the structured interviews that preceded the workshop.

## Freight Rail

The I-95 Corridor Coalition produced a *Mid-Atlantic Rail Operations Study* (MAROps) in 2003, with participation from five states within the region—Delaware, Maryland, Pennsylvania, New Jersey, and Virginia—and the three major railroads operating within it—Amtrak, CSX, and Norfolk Southern. The study focused on the condition of rail infrastructure, system efficiency, and the potential for multi-state rail programs and other unconventional partnerships or funding strategies. It remains the most important summary of the major issues affecting freight rail in the Delaware region. Most notably, the report highlights 71 chokepoints within the region, primarily related to a lack of track capacity and the inability of older rail infrastructure (e.g., bridges and tunnels) to accommodate the larger, heavier freight trains in common use today (de Cerreño, 2008, p. 70). The clearance of each of these chokepoints constitutes a significant project, requiring the funding cooperation of public and private actors. The I-95 Corridor Coalition estimates the projects' combined costs at \$6.2 billion and makes explicit—as do many of the stakeholders interviewed for this report—that “the fullest systemwide benefit would be realized by implementing the entire program” (I-95 Corridor Coalition, 2003, p. 18).

The MAROps report also emphasizes the public benefit that would result from chokepoint clearance. This point is exemplified by the Shellpot Bridge restoration project, completed in 2004 (only two years after being identified in the MAROps report). Not only does the bridge directly benefit Norfolk Southern and the state of Delaware, but also Amtrak and SEPTA, both of which suffered service delays whenever freight trains accessed tracks near Wilmington prior to the construction of the Shellpot Bridge (I-95 Corridor Coalition, 2003).

With the federal role in freight rail neither significant nor well-defined, the funding of the Shellpot Bridge project represents one of the innovative strategies required of the region's freight rail stakeholders to pay for maintenance and improvements. The federal role is much clearer in passenger rail, where Amtrak is accountable to and subsidized by the federal government. There is no such federal analog in the freight world; almost all government money spent on freight rail infrastructural improvements and maintenance comes from the state (I. Silverman, workshop communication, August 25, 2009).

### *Infrastructure Improvement and Chokepoint Clearance*

The most dire need for freight rail within the region is the preservation and improvement of existing rail infrastructure. Continued freight rail service along Delmarva requires improvements to aging infrastructure in order to prevent freight providers from abandoning service to the peninsula, either in part or altogether. The consequences of a diversion from Delmarva freight rail to alternate shipping methods (i.e., truck or rail freight service along the Northeast Corridor) would not only increase congestion along tracks and roadways within the region but also have negative economic consequences for residents in Delmarva who rely upon regular freight service.

Freight rail infrastructure projects aimed at facilitating trains that carry double-stacked containers would likely benefit the regional economy, but only insofar as similar projects are replicated elsewhere along the corridor and in neighboring regions. Since long-haul freight moves receive larger efficiency gains than short-haul trips from double-stack container moves, higher-capacity tunnels and other improvements associated with double-stack container movement should be made at least from New York and to the south (DeIDOT, electronic communication, July 23, 2009). For Delaware's part, there is little incentive to accommodate double-stack containers as most of the freight passing through the state—the bulk of which includes “chemicals, grain, coal, and automobiles”—typically does not require double-stack operations (DeIDOT, electronic communication, July 23, 2009). Moreover, the proposed alternatives to replacing the Baltimore rail tunnels—identified in the MAROps report, and elsewhere, as examples of capacity constraining, outdated infrastructure—will likely not be conducive to freight movement. Other proposed alternative modes for freight movement in the area include “car floats” up the Delmarva Peninsula—a method for using unpowered barges to ferry rail cars across bodies of water—and truck service along the I-95 roadway.

### *Declining Customer Base*

Along with infrastructure shortcomings, many freight rail lines are threatened by a shrinking customer base. Due to many industries within the region either streamlining their shipping process or closing facilities altogether, freight rail providers have failed to keep longtime customers and struggled to attract new ones. Industrial and commercial zones along rail corridors are often replaced by residential zones (R. Geier, workshop communication, August 25, 2009). This further shrinks the pool of potential freight rail customers and increases the likelihood that future industrial and commercial zones will be placed along roadways, making trucks a more viable option than freight rail.

The rail industry in the Delaware region is driven largely by coal and international containers (I. Silverman, workshop communication, August 25, 2009). The Delmarva rail line owes its current operation chiefly to the coal it hauls to power plants on the peninsula. For most other shipping needs, long-hauls by freight rail are not competitive with similar trips made by truck. Norfolk Southern has threatened to abandon certain freight lines within Delaware unless the state provides funds for infrastructure improvements and maintenance (K. Potts, workshop communication, August 25, 2009). Not only have maintenance costs risen for freight rail providers, but competition with the trucking industry has required a move to heavier cars, the weights of which cannot be supported by many of the region's bridges.

## Passenger Rail

The issues that have slowed passenger rail development in the Northeast Corridor are in large part attributable to the failure of rail stakeholders at all scales to effectively articulate a more comprehensive vision of what passenger rail could and should provide. While recent federal budget legislation has gradually shifted funding towards transit (and away from highways), albeit by mere percentage points, increased funding at the federal level must be received within more cohesive institutional strategies for putting it to use at regional, state, and local scales. Delaware must continue to work with Maryland and Pennsylvania to develop a regional perspective on passenger rail based on shared conceptions of social, political, and environmental goals (I-95 Corridor Coalition, 2008, 4-2 to 4-4). Delaware and Maryland, in particular, must continue to define the public benefits of passenger rail capacity improvements, especially regarding the influx of new residents associated with military Base Realignment and Closure (BRAC). Finally, public and private transportation stakeholders within the region must continue to pressure the federal government to make fundamental changes to Amtrak operations along the Northeast Corridor, particularly regarding ticket price.

### *Commuter Rail Service from Perryville to Newark*

The extension of Maryland Area Regional Commuter (MARC) Penn Line rail service from Perryville to Elkton or Newark remains the top issue facing passenger rail in this region. In 2007, the Cecil County Office of Economic Development issued their Growth Report, in which they support closing the rail gap in order to “tie Cecil County more closely to the dense economies of the broader Philadelphia region while also supporting the County’s ongoing efforts to direct growth to its towns and development district” (p. 6). New Castle County would likely realize similar benefits from expanded connections to Cecil County and the Baltimore region.

MARC has committed to addressing the rail gap by 2020. In the meantime, “deadheading” MARC trains into stations north of Perryville has been proposed as a way to provide service within the so-called “hole in the donut” while using existing resources. The most limiting factor—besides problems with ADA compliance at the Elkton train station—is one of funding. Additional crews would need to be added for the extended legs and for staffing the Newark and Elkton train stations. Even excluding the costs of station renovations, the hiring of additional crews and station staff would cost MARC well over half a million dollars per year (S. Taylor & I. Silverman, structured interview, July 31, 2009). The demand for service to the Elkton train station is currently projected at 50 to 60 people per day, which does not constitute enough demand to encourage additional expenditures for closing the gap in commuter rail service.

### *Military Base Realignment*

Base realignment (referred to as BRAC) should not be characterized as a regional rail issue. While some planners in the region have concerns that the transfer of employees from Fort

Monmouth, New Jersey, to Aberdeen Proving Ground (APG), Maryland, will increase demands for commuter rail service within the region, transportation planners with DelDOT and MARC assert that this is an overstatement. Not only is there no rail connection from the Northeast Corridor to APG, but demand for rail transit has yet to be identified. Currently, there is no demand on MARC service for commutes to APG; there is neither direct access to the installation itself nor are there transit-friendly facilities within it. The vast size of APG and on-base security concerns make shuttle service expensive and likely to be operated by the Department of Defense or a private contractor.

Moreover, APG employees are, on average, more affluent than other commuters within the region and will tend to make most trips in their personal automobiles. This does not mean, however, that employee growth at APG has not created a potential pool of passenger rail users. The spouse market offers possibilities for rail trips towards Baltimore and stops in between, but not necessarily for trips to Aberdeen (Simon Taylor and Ira Silverman phone interview). While improved and expanded commuter rail connections within the region is a goal worth pursuing—as stated earlier, for many stakeholders it is the goal worth pursuing—we should probably downplay the influence of BRAC on planning considerations.

### *Amtrak*

Within the Northeast Corridor, Amtrak has been focused primarily on increasing speeds. This often comes at the expense of capacity, mostly due to the tradeoffs associated with train size. If one of the goals of Amtrak is to reduce corridor congestion, then Amtrak needs to reevaluate how it might shift away from an emphasis on speed and travel time and towards an emphasis on capacity and affordability. The corporation could, for instance, spend a higher proportion of its funds on lengthening platforms or purchasing more train cars. Instead, it spends disproportionate amounts on shaving minutes off travel time within the Northeast Corridor to meet the demands of its stockholders (the federal government) and those able to afford a ticket.

Amtrak has been subject to the whims of the federal government since its inception in 1971. Much of the infrastructure on which it runs—both in the Northeast Corridor and elsewhere across the country—predates the corporation by several decades. The long-term plan for the corporation includes \$3 billion for the replacement or improvement of eight bridges, two tunnels, and the renovation of several stations to comply with ADA standards (Decker, 2007). Some of these projects—the Gunpowder River Bridge replacement, for example—are already underway.

The corporation has owned a majority of corridor rail lines since 1976 and, over time, this ownership has narrowed the possibilities for the infrastructure to include only those that correspond to Amtrak's intercity transportation mission (Alan M. Voorhees Transportation Center 2008). This narrowed horizon of use for corridor rail infrastructure ignores regional commuter rail and other passenger rail services along the Northeast Corridor and prevents corridor rail operations and infrastructure from being held accountable to public investors in passenger rail at the state and federal levels. A report issued by the Alan M. Voorhees

Transportation Center at Rutgers University urges a shift in governance of corridor rail lines from the current model structured around Amtrak's mission to a model "structured around and accountable to a Federal-State Partnership" (Alan M. Voorhees Transportation Center, 2008, p. 15). This shift in values would likely lead to a more diverse set of uses for the corridor rail lines, or at least allow for increased responsiveness of passenger rail operations to the real needs of passengers (and potential passengers) residing in states along the corridor.

## Intercity Roadways

At the Northeast Corridor Issues Workshop, concerns of the attendees regarding intercity roadways generally focused on smaller-scale issues and the bluntly practical solutions that have been proposed. Many of the transportation stakeholders recognized that lanes devoted to certain types of vehicles should be included on a regional transportation agenda. Some argue that these single-use lanes, while effective in other contexts, would likely be of little use in Delaware due to the limited right-of-way within the Delaware section of the I-95 corridor (DeIDOT, electronic communication, July 23, 2009). Though smaller-scale issues and proposals comprise the bulk of intercity roadway concerns, many of the issues that plague the other modes also resonate here. These issues are dealt with in greater detail in the Governance section of this report. The following section, on the other hand, focuses exclusively on those issues more clearly associated with asphalt, automobiles, tires, and tolling.

### *Intermodal Terminals*

Much of the congestion along intercity roadways can be avoided by diverting long-haul truck trips to alternative modes. This solution is contravened by the economic advantages to shippers provided by intermodal terminals built outside of congested areas, allowing the transfer of freight to trucks from rail for movement along interstate corridors. Norfolk Southern operates one such terminal along Interstate 81 outside Harrisburg, Pennsylvania (and plans to build another one nearby within the next few years). While Pennsylvania's Governor Ed Rendell and others tout the ability of intermodal terminals to reduce highway congestion (Watson, 2009), transportation planners within the region are concerned that the facilities merely displace truck traffic—trucks that once moved along Interstate 95 will now be required to do the same along Interstate 81 (I. Silverman, workshop communication, August 25, 2009). If the region's transportation plan has as a goal the gradual elimination of trucks from intercity roadways, the construction of intermodal terminals outside presently congested areas is not necessarily going to help the region achieve that goal.

### *Open-Road Tolling*

Open-road tolling (ORT) is a potential measure for decreasing congestion around toll plazas but its expanded use is currently stalled due to the lack of agreement among states (and private toll-collection companies) regarding the collection of out-of-state tolls. The I-95 Corridor Coalition has made significant progress on this front and expects to reach some level of agreement with relevant stakeholders over the next few years (G. Schoener, personal communication, June 25, 2009). Without a standard for open-road tolling in place across the entire corridor (or at least a significant portion of it) states have made improvements aimed at expediting collections at existing toll lanes. Delaware, for instance, has added highway-speed EZPass lanes to toll plazas along State Route 1 and a project is underway to do the same along I-95 (DeIDOT, electronic communication, July 23, 2009).

### *ITMS Implementation*

Due to present levels and expected increases in truck traffic, as well as the increasing importance of just-in-time deliveries to freight operations, Delaware should expand its Intelligent Traffic Management System (ITMS). In the Delaware region, EZPass lanes represent the most visible manifestation of interstate coordination on an ITS initiative. Other efforts underway include the coordination of variable-message signs (VMS) along I-95 throughout Maryland, Pennsylvania, and Delaware. Constraints on I-95 lane expansion and other infrastructural improvements mean that coordinated ITS enhancements have become a preferred method for reducing congestion along I-95. For example, while truck-only lanes along I-95 through Delaware are probably not feasible given the limited right-of-way within the state's portion of the interstate (DelDOT, electronic communication, July 23, 2009), the continued use and development of the Commercial Vehicle Information Systems and Network (CVISN) remains a viable method for facilitating truck flows throughout the state. Indeed, high proportions of through and outbound truck traffic require the increased coordination of ITMS efforts between Delaware and the departments of transportation in neighboring states.

## Ports and Airports

The Port of Wilmington and the New Castle County Airport are the two major nodes connecting Delaware directly to the maritime shipping and air transportation networks. While the New Castle County Airport currently offers neither commercial airline service nor major air freight operations, the Port of Wilmington remains one of the most important ports along the Northeast Corridor. In 2008 the Port of Wilmington handled more TEUs (a measure based on the most common dimensions for intermodal cargo containers) than all but 24 ports in North America, putting it just ahead of the Port of Philadelphia (American Association of Port Authorities, 2008). Much of the literature reviewed and many of the stakeholders interviewed for this report suggest that the expansion of the Panama Canal—along with other expected shifts in shipping patterns—will not only lead to more port traffic along the Atlantic Coast of the United States but will also necessitate new methods for decreasing port congestion and turnaround times for cargo ships originating in Asian ports. One of these potential methods, short sea shipping, has received considerable support and attention from the I-95 Corridor Coalition and other corridor-planning stakeholder organizations.

### *Port of Wilmington*

The Port of Wilmington long-range plan includes the development of 170 acres along the Delaware River, allowing room for four new docking sites. Though the Port of Wilmington benefits from its proximity to the I-95 corridor, truck access to the port has long been suboptimal. Many roadways and ramps in the vicinity of the port inhibit truck operations. The port lacks adequate facilities for trucks and the ability to manage truck access along Terminal Avenue. Drivers park in an informal staging area along the roadside, increasing the risk of driver injury or vehicle damage as vehicles pull on and off the road to park (DeIDOT, 2004). In cooperation with DeIDOT and WILMAPCO, the Port has also investigated the need for measures to improve truck and rail access to the area, including expanded truck parking, Terminal Avenue improvements, and closer dock access for rail. The Port has also identified CVISN needs in the short term, including the installation of a weigh-in-motion (WIM) system to expedite truck service and reduce congestion along Terminal Avenue.

### *Short Sea Shipping*

Short Sea Shipping (SSS) has emerged as a potential alternative for freight movement along the Atlantic Coast of the United States. SSS refers to the transport of freight along a continuous coastline, as opposed to overseas shipping. Most freight movements within the United States (and North America, in general) are made via roadway; transport via short sea shipping is almost nonexistent. In Europe—a continent with marine networks very similar to North America—short sea shipping has the second highest share of the European Union's shipping market (41 percent, compared with the 44 percent share of roadway shipping) (Brooks, 2008).

While there has only been preliminary planning and development of an SSS network along the East Coast of the United States, this mode is attractive for its promise to reduce roadway congestion, provide environmental benefits, and decrease shipping costs via gains in efficiency versus truck or rail service. With the expansion of the Panama Canal (due to open in 2014), large container vessels—most of which originate in Asian ports—will be able to pass through to the Atlantic. This will enable many shippers to forego the transpacific-intermodal route in favor of more direct access to Atlantic Coast ports. One proposal has these large freighters unloading cargo in Kingston, Jamaica—the closest deepwater port to Panama—so that short sea shippers can move more distributed loads to smaller ports throughout the Gulf and Atlantic Coasts.

The perceived necessity for SSS from Kingston, Jamaica, or other Atlantic ports highlights worries—by John Vickerman of TranSystems, and others—that U.S. ports will grow congested and fail to accommodate the massive influx of container-borne cargo heralded by Panama Canal expansion and changes in global demand. It is unclear to what extent (if any) SSS will play along the Atlantic Coast in the wake of canal expansion. Similarly, it is unclear what effect canal expansion will have on operations at the Port of Wilmington.

### *New Castle County Airport*

New Castle County Airport is a reliever airport operated by the Delaware River and Bay Authority (DRBA). Though DRBA Airports Division estimates show that the facility can accommodate 600,000 passengers, current demand cannot support passenger service at the airport. Plans to increase this demand and attract commercial carriers include the construction of a new terminal—for which the airport has reserved land—and discussions with WILMAPCO regarding increased transportation access to the airport, including rail and ground transit access and parking at the airport facilities.

## Governance

Most of the stakeholders stated that despite the importance of issues particular to individual modes, the handful of larger-scale issues plaguing the Northeast Transportation Corridor in its entirety should not be neglected. These issues typically arise in two situations. The first occurs when states or regions address transportation problems that have spillover effects on other states or regions. The second occurs when stakeholders engage in corridor-wide solutions to many of the issues outlined in the preceding sections. Either case requires that actions and funding be coordinated by agreement among the participating actors or imposed from above by the federal government or some other stakeholder representing a larger region or set of interests. The following section captures a few of these “umbrella” issues related to corridor governance and funding.

### *Funding*

While organizations like the I-95 Corridor Coalition and the coordinated efforts of public and private actors at various scales often succeed in identifying and addressing capacity constraints for all modes within the region, only the federal government has the resources to fund large-scale transportation initiatives within the region. This is largely due to the structure of federal grants. Most grants are suited to large states that can implement a large-scale project without the need for interstate coordination. States such as California and Texas benefit from the current system, while smaller states such as Delaware and Maryland compete with one another for funding (DeIDOT, structured interview, August 4, 2009). While the creation of bi-state or multi-state authorities might improve the region's chances for winning federal money aimed at larger-scale projects, these authorities are very difficult to create and maintain (DeIDOT, structured interview, August 4, 2009).

More likely, sources of funding for large projects in this region will come from public-private partnerships, as they did for the restoration of the Shellpot Bridge. After the Shellpot Bridge was taken out of service by Conrail in 1995, the DeIDOT Freight Rail Plan identified it as one of the top three freight rail issues within the state. The state and the bridge's new owners, Norfolk Southern, worked out a plan to grant Norfolk Southern \$5 million and provide another \$9 million as a cash advance for the restoration of the bridge in exchange for minimum payments each year over the 20-year agreement. DeIDOT also receives debt repayments from Norfolk Southern based on a per car toll of trains crossing the Shellpot Bridge (DeIDOT, 2004).

Federal funds are often not provided to assist states in maintaining or replacing a federal transportation asset, such as bridges or tunnels. Most of this federal infrastructure, though located in a single state, plays a role in regional or national flows. Nevertheless, maintenance or replacement costs often belong solely to the state in which it is located. When it comes to addressing most regional transportation issues—especially those related to freight movement—an individual state is too narrow a conduit through which broad solutions can flow. The I-95 Corridor Coalition, in partnership with several states, recently secured federal money for I-95

when it was designated one of six “Corridors of the Future” (U.S. Department of Transportation, 2007) by the United States Department of Transportation. This provides \$21.8 million in funds earmarked for intelligent transportation systems (ITS) enhancements along the corridor and capacity improvements from Washington, D.C., to the south. The designation also suggests that the federal government will expand the scope of transportation-project funding to encompass more multi-state corridors in the future.

### *Resilient Systems*

The uncertainties about the future of trade, travel, and security highlight the need to develop alternatives to the Northeast Corridor. These alternatives exist; it is just a matter of recognizing them and making them into important regional issues. The Octoraro rail line—running from Chadds Ford, Pennsylvania, to Sylmar, Maryland—is one such alternative. Though the Octoraro rail line has been largely abandoned since the mid-1990s, planners concerned with creating a more resilient Northeast Corridor might see the benefit of maintaining the rail line and similarly redundant transportation infrastructure throughout the region. Related to this need to develop redundant systems within and alternatives to the Northeast Corridor is a parallel need to develop more robust incident-management services and to reduce accidents due to unsafe engineering and enforcement (J. Hacker, electronic communication, July 17, 2009).

### *A Corridor Focus*

Policymakers at the regional level need to commit to building comprehensive corridors along which two or more of the transportation modes discussed in this report would flow. This means abandoning traditional funding methods—in which tolling and gas taxes pay for highway construction—and embracing new funding methods in which funding streams for different modes are merged (J. Hacker, workshop communication, August 25, 2009). This has been proposed for Pennsylvania’s Route 422 (Nunnally 2009). Under the proposal, SEPTA’s Norristown line would be extended into Reading to help alleviate congestion along Route 422. Absent substantial federal funding for the project, this extension would be paid for with tolls to Route 422 itself. This represents not only an innovative approach to funding problems but also a reinvigorated emphasis by the region’s transportation planners on intermodal corridors.

This increased emphasis on intermodal corridors—literally, the aggregation of disparate transportation modes into a unified whole—is one part of a larger movement towards other forms of funding aggregations that facilitates larger-scale projects in the Northeast Corridor. These corridor-wide projects require a regionalized approach to transportation planning—by MPOs or other, less formalized partnerships that are able to address funding issues and, eventually, create more formal and lasting funding partnerships for future projects.

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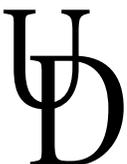


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