



# Atlantic Gateway

Partnering to Unlock the I-95 Corridor



Prepared for  
U.S. Department of Transportation  
Office of the Secretary of Transportation  
Docket No. DOT-OST-2016-0022

Funding Opportunity for the  
Department of Transportation's  
Nationally Significant Freight  
and Highway Projects  
(FASTLANE Grant)  
for Fiscal Year 2016

Submitted by



April 14, 2016

Project Name	 <b>Atlantic Gateway</b> Partnering to Unlock the I-95 Corridor
Previously Incurred Project Cost	<b>\$40,000,000</b>
Future Eligible Project Cost	<b>\$1,400,000,000</b>
Total Project Cost	<b>\$1,440,000,000</b>
NSFHP Request	<b>\$200,000,000</b>
Total Federal Funding (including NSFHP)	<b>\$472,000,000</b>
Are matching funds restricted to a specific project component? If so, which one?	<b>Yes, see section 4</b>
Is the project or a portion of the project currently located on the National Highway Freight Network	<b>Yes</b>
Is the project or a portion of the project located on the National Highway System? » Does the project add capacity to the Interstate System? » Is the project in a national scenic area?	<b>Yes</b> » <b>Yes</b> » <b>No</b>
Do the project components include a railway-highway grade crossing or grade separation project?	<b>Yes</b>
Do the project components include an intermodal or freight rail project, or freight project within the boundaries of a public or private freight rail, water (including ports), or intermodal facility?	<b>Yes</b>
If answered yes to either of the two component questions above, how much of the requested NSFHP funds will be spent on each of these project's components?	<b>\$45,000,000 Rail</b> <b>\$25,000,000 Grade Separations</b>
State(s) in which project is located	<b>Virginia</b>
Small or large project	<b>Large</b>
Also submitting an application to TIGER for this project?	<b>Only for Component 4</b>
Urbanized Area in which project is located, if applicable	<b>Washington, D.C. – VA – MD</b> <b>Fredericksburg, VA</b>
Population of Urbanized Area	<b>4,586,770</b> <b>141,238</b>
Is the project currently programmed in the: » TIP » STIP » MPO Long Range Transportation Plan » State Long Range Transportation Plan » State Freight Plan	<b>See Appendix for Details</b>  » <b>Yes</b> » <b>Yes</b> » <b>Yes</b> » <b>Yes</b> » <b>Yes</b>



## COMMONWEALTH of VIRGINIA

Office of the Governor

Terence R. McAuliffe  
Governor

April 13, 2016

The Honorable Anthony Foxx  
U.S. Secretary of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Dear Secretary Foxx:

My administration is focused on building the new Virginia Economy to help Virginia be competitive and grow. Key components of this work are improving the flow of commerce, and attracting a 21<sup>st</sup> Century workforce through an improved transportation network. Over the last 18 months we have developed an innovative and strategic approach to unlock the economic potential of Virginia and the entire Eastern Seaboard through a multimodal suite of highway, rail, and transit improvements that will address the most heavily traveled corridor in the Southeast.

The attached proposal, the **Atlantic Gateway**, is a \$1.4 billion partnership that focuses on the I-95 corridor between Fredericksburg and Washington, D.C., and leverages federal, state and private investments to:

- Resolve critical freight and passenger bottlenecks;
- Connect people to employment opportunities;
- Improve reliability; and,
- Increase travel choices.

As you are well aware, Virginia and its private partners have made and continue to make major investments in transportation. This project will build on and leverage past and on-going investments including \$650 million to expand the Port of Virginia, the Virginia Avenue Tunnel project, the \$900 million Interstate 95 Express Lanes project and a \$2 billion investment in Interstate 66, as well as other major investments in rail improvements between Hampton Roads and Washington, D.C.

**The Commonwealth is requesting \$200 million through USDOT's Nationally Significant Freight and Highway Projects/FASTLANE grant program to implement a systems-approach to the 95/395 corridor and leverage \$565 million in private investment to deliver this program.** The Atlantic Gateway will specifically:

- Extend 95/395 Express lanes north to the Pentagon and south to Fredericksburg;
- Construct Long Bridge phase I and new third track along the corridor for 14 miles of new rail track to support additional freight, commuter, and passenger rail service;

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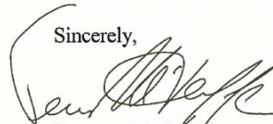
*The Honorable Anthony Foxx*  
*April 13, 2016*  
*Page 2*

- Lay the groundwork for Southeast High-Speed Rail by acquiring the S-line and completing engineering work on the second phase of the Long Bridge project; and,
- Provide dedicated on-going funds to expand bus service in the corridor with consideration to providing Ladders of Opportunity.

This innovative solution will ensure that Virginia, and the nation, remain at the forefront of economic competitiveness and will address critical congestion issues in our region that are negatively impacting the employment prospects, economic growth and quality of life that our citizens deserve. It has a positive return on investment and will continue to provide benefits through on-going investment in new travel choices over the life of the project.

Thank you for your favorable consideration of this request.

Sincerely,



Terence McAuliffe



# Atlantic Gateway

Partnering to Unlock  
the I-95 Corridor

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The Atlantic Gateway leverages innovative federal, state, and private partnerships to unlock the economic potential of the Eastern Seaboard by accelerating key highway and rail projects to provide a long-term, multimodal network for freight and passenger transportation between the Northeast and Southeast. **This unique approach results in a return of \$2.24 for every \$1 invested which, with the support of a \$200,000,000 grant, equates to a total corridor benefit of nearly \$3,000,000,000.**

The Atlantic Gateway will reduce travel times on the most heavily traveled corridor in the southeast. Virginia will build on past investments to expand access to employment opportunities, enhance the ability to move people and freight, and alleviate some of the worst bottlenecks in the United States. This corridor carries over 350 million tons of freight each year and over 400,000 people a day. The corridor is a vital conduit for national commerce and trade that connects northeast consumer markets with southeastern ports and manufacturing centers, accounting for 20% of the U.S. GDP and making it the fourth largest economy in the world. Congestion on I-95 and parallel rail lines challenges the efficiency of the workforce and the freight network.

To address these problems, the Virginia Department of Transportation (VDOT), the Virginia Department of Rail and Public Transportation (DRPT), Transurban, and CSX Transportation are building on a proven track record of success to develop a \$1.4 billion partnership to build the Atlantic Gateway. The Atlantic Gateway includes a combined suite of freight and commuter rail, highway, and technology components. **Components include major investments in Long Bridge, expansion of Express Lanes, critical improvements to general purpose lanes, and corridor-wide investments.**

### The Atlantic Gateway will:

-  **Resolve critical existing freight and passenger bottlenecks, congestion, and safety concerns on the heavily traveled I-95 corridor**
-  **Accommodate projected population and employment growth**
-  **Improve reliability for long distance passenger travelers and freight carriers**
-  **Enhance the quality of life in this vital interregional and national corridor**
-  **Connect people to employment opportunities**
-  **Provide new travel choices throughout the corridor**

The Atlantic Gateway has the singular opportunity to improve the safety, efficiency, and reliability of our transportation network along the whole eastern U.S., generating national and regional economic benefits, enhancing the United States’ global competitiveness, and expanding Ladders of Opportunity in our Nation’s capital. Virginia is seeking a \$200 million FASTLANE Grant award from the U.S. Department of Transportation (USDOT) to accelerate and complete a series of critical multimodal projects that support all seven USDOT National Performance goals. This grant award, in conjunction with substantial private investment from Transurban and CSX, is integral to the delivery of this comprehensive corridor-wide program. This project of national significance is built on a substantial amount of upfront work that allows the components to move forward quickly in a region with a demonstrated track record of project delivery such as over \$2 billion of investments in a new Express Lanes network,

including on I-66 and I-95. Atlantic Gateway will also build on the Virginia Avenue Tunnel and other investments to rail infrastructure along the corridor, and the Commonwealth’s \$650 million investment in the Port of Virginia. This is paralleled by extensive community outreach and support as depicted in the letters of support and material included in the appendices.

The Atlantic Gateway expands access to employment opportunities and directly serves numerous employment centers of national significance, including Marine Corps Base Quantico, Fort Belvoir, the Pentagon, and the Navy Yard—collectively representing over 100,000 direct employment opportunities.

**The Atlantic Gateway includes on-going revenue reinvestments that will enhance transit service along the corridor by providing capital and operating support for affordable service connecting all communities with jobs and activity centers in the region.**

SUMMARY OF BENEFITS			
MERIT CRITERIA	BENEFIT CATEGORIES	7% DISCOUNT RATE	3% DISCOUNT RATE
Economic	Travel Time Savings	\$1,371,617,751	\$2,330,280,102
	Shipping Cost Savings	\$821,781,000	\$1,406,019,970
	Vehicle Operating Cost Reduction	\$341,297,196	\$562,735,638
Mobility	Reduction in Highway Congestion due to Modal Shifts	\$84,521,418	\$144,075,062
	Pavement Cost Savings	\$13,781,912	\$23,552,076
	Residual Value of Infrastructure Built	\$26,023,354	\$64,935,253
	Residual Value of ROW Purchased	\$169,743	\$423,555
Safety	Accident Cost Reduction	\$193,284,946	\$322,298,553
Community and Environmental	Emissions Cost Reduction	\$75,068,847	\$85,611,231
<b>TOTAL BENEFIT ESTIMATES</b>		<b>\$2,927,546,168</b>	<b>\$4,939,931,440</b>



# 1 PROJECT DESCRIPTION

The Atlantic Gateway is a \$1.4 billion partnership among VDOT, DRPT, Transurban, and CSX. VDOT and DRPT are **seeking \$200 million in FASTLANE Grant funding from the USDOT to complement the more than half a billion dollars in private investment** to bring the

vision of the Atlantic Gateway to a reality. This grant award, combined with other federal funds, state funds, and substantial private investment from Transurban and CSX, is critical to the delivery of this integrated highway and rail program. The Atlantic Gateway includes a combined suite of freight rail, commuter rail, highway, Express Lanes, bus service, and technology components that will work together to benefit the region, state, and country. The Atlantic Gateway has the singular opportunity to improve the safety, efficiency, and reliability of our transportation network along the whole eastern U.S., generating national and regional economic benefits and enhancing the United States' global competitiveness.

## ATLANTIC GATEWAY SIGNIFICANCE

### DAILY VOLUMES

CSX CARRIES APPROXIMATELY		<b>83,000</b> TONS OF FREIGHT
VRE CARRIES APPROXIMATELY		<b>18,000</b> PEOPLE
TRUCKS CARRY APPROXIMATELY		<b>271,000</b> TONS OF FREIGHT
CARS AND BUSES CARRY APPROXIMATELY		<b>350,000</b> PEOPLE
METRORAIL CARRIES APPROXIMATELY		<b>90,000</b> PEOPLE
AMTRAK CARRIES APPROXIMATELY		<b>4,500</b> PEOPLE

We have carefully selected a program of multimodal and intermodal project components that were specifically identified to leverage past investments, provide an integrated system, and address the long-term needs of this vital national, multistate, and inter-regional corridor. The main project components are listed in **Table 1-1** and shown in **Figure 1-1**.

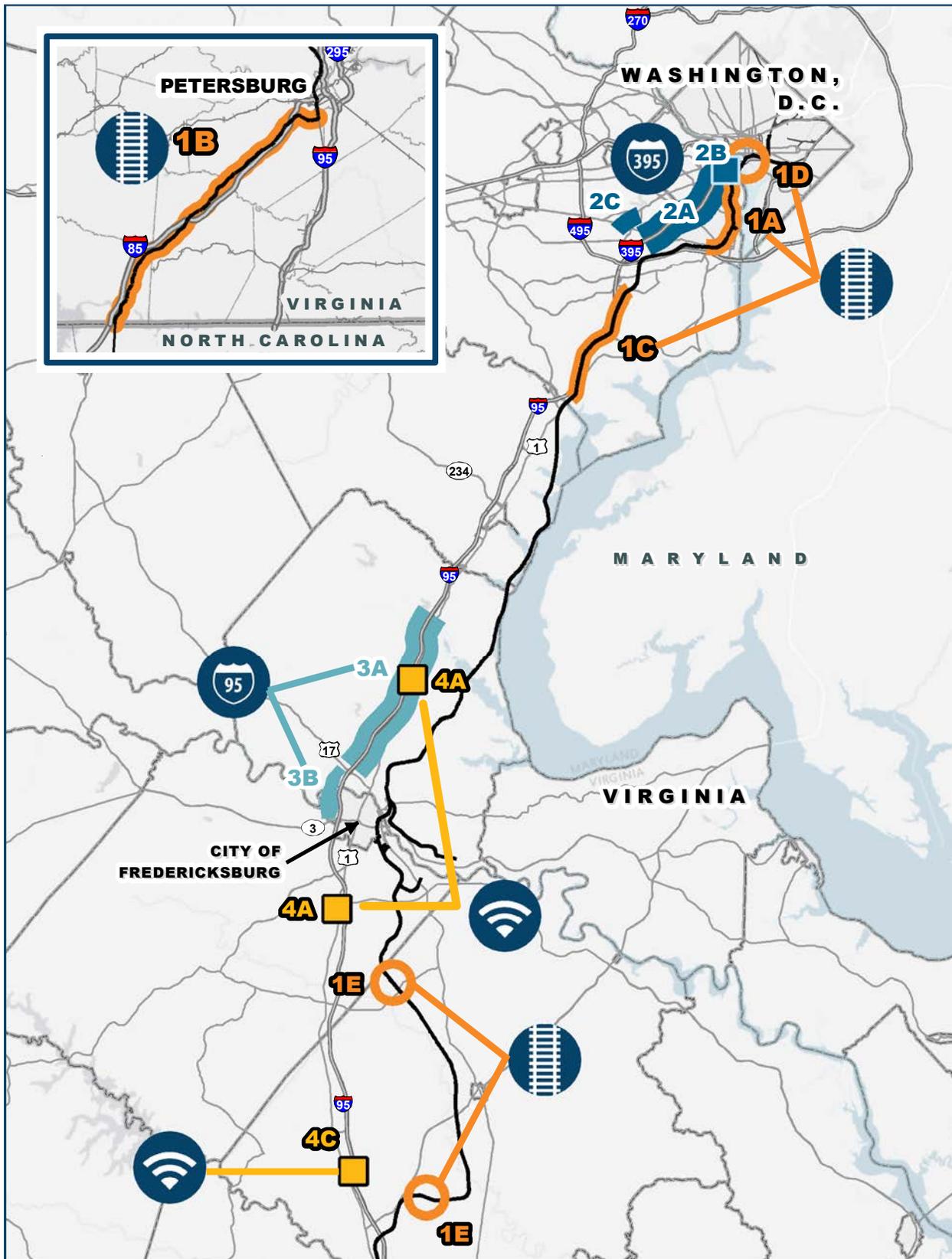
The Commonwealth and our private sector partners recognize that it will take coordinated improvements in highways, pricing, technology, transit and rail in order to handle all the demand, and address the bottleneck in the multimodal corridor.

<b>Safety</b>	Reduces accidents and provides for additional safe truck parking
<b>Infrastructure Condition</b>	Invests in aging facilities
<b>Congestion Reduction</b>	Addresses most congested corridor in southeast
<b>System Reliability</b>	Enhances predictability of movement of people and goods
<b>Freight Movement &amp; Economic Vitality</b>	Provides competitive freight choices and connects people
<b>Environmental Sustainability</b>	Makes transit a viable option and takes trucks off the road
<b>Reduced Project Delivery Delays</b>	Utilizes proven public/private partnerships

**TABLE 1-1. ATLANTIC GATEWAY PROJECT COMPONENTS AND SUB-COMPONENTS**

PROJECT COMPONENT	DESCRIPTION
 <b>Component 1: Rail Infrastructure</b>	<b>1A</b> Long Bridge–Phase 1 <b>1B</b> Dedicating the S-Line <b>1C</b> Constructing a Third Main Line Track (Franconia to Occoquan) <b>1D</b> Engineering for Long Bridge–Phase 2 <b>1E</b> Improving Rail Operations Along the Corridor
 <b>Component 2: I-395 Improvements</b>	<b>2A</b> Extending the Express Lanes to the Pentagon <b>2B</b> Improving Multimodal Access to the Pentagon <b>2C</b> Providing Safety and Capacity Improvements on I-395 (Duke Street to Edsall Road)
 <b>Component 3: I-95 Improvements</b>	<b>3A</b> Extending the Express Lanes to Fredericksburg <b>3B</b> Adding I-95 Southbound Capacity Across the Rappahannock River
 <b>Component 4: Corridor-Wide ITS and TDM Improvements</b>	<b>4A</b> Providing Additional Commuter Parking in Spotsylvania and Stafford County <b>4B</b> Transportation Technology <b>4C</b> Rest Area Reconstruction and Truck Parking

FIGURE 1-1. Atlantic Gateway Project Location and Component Locations





## COMPONENT 1: Rail Infrastructure

**1A: Long Bridge–Phase 1.** Construct approximately six miles of a fourth main line track from the south bank of the Potomac River to Alexandria. This is Virginia’s down payment for the ultimate expansion of Long Bridge–Phase 2, which is the major freight bottleneck in the corridor. The construction of this new main line track will add rail capacity to the most heavily used rail line in the Commonwealth of Virginia. These improvements will allow for additional VRE and Amtrak trains to use the corridor and will be constructed to ultimately accommodate the SEHSR and expanded intermodal and freight rail service.

**1B: Dedicating the S-Line.** CSX is dedicating the abandoned rail line between Petersburg and the North Carolina line to the Commonwealth of Virginia. This corridor, known as the S-Line, is an integral part of SEHSR.



**1C: Constructing a Third Main Line Track (Franconia to Occoquan).** Construct approximately eight miles of new third main line track on CSX’s freight corridor between the Franconia/ Springfield VRE Station to the Occoquan River in Fairfax County. These improvements will allow for additional VRE

trains to use the corridor and ultimately accommodate the Southeast High Speed Rail (SEHSR) and expanded intermodal and freight rail service.

### **1D: Engineering for Long Bridge–Phase 2.**

This component advances the design and engineering to accelerate the permitting and ultimate construction of the full Long Bridge project.

### **1E: Improving Rail Operations Along the Corridor.**

Design and installation of two universal track crossovers south of Fredericksburg in Caroline County. These crossovers will increase the flexibility for Amtrak trains to meet and pass freight traffic and ultimately accommodate the Southeast High Speed Rail (SEHSR) and expanded intermodal and freight rail service.



## COMPONENT 2: I-395 Improvements

### **2A: Extending the Express Lanes to the Pentagon.**

Extend the I-95 Express Lanes on I-395 for eight miles north from Edsall Road to the vicinity of Eads Street in Arlington. The two existing HOV lanes will be converted to Express Lanes and a third lane will be added, providing three reversible Express Lanes. Transurban will also make an annual payment to support enhanced bus service in this part of the corridor. This component significantly improves access to the major employment centers in Arlington and a new direct access to the Pentagon will be delivered.

### **2B: Improving Multimodal Access to the Pentagon.**

Improve access into and around the Pentagon South Parking area while also improving transportation support facilities. The proposed improvements, when combined with improvements to the Eads Street interchange, will provide reduced travel times for transit providers, improved circulation of buses, and reduce queues along I-395.

**2C: Providing Safety and Capacity Improvements on I-395 (Duke Street to Edsall Road).** Address significant safety and capacity issues in the I-395 corridor. As presently configured, southbound I-395 has four through lanes north of the Duke Street interchange and south of the Edsall Road interchange. However, between the Duke Street and Edsall Road interchanges there are only three lanes causing heavy congestion on southbound I-395 during weekday afternoon peak periods.



### COMPONENT 3: I-95 Improvements

**3A: Extending the Express Lanes to Fredericksburg.** Construct approximately nine miles of Express Lanes south of the current terminus near Garrisonville Road to Route 17 in Stafford County. This component would complete one of the longest Express Lanes system in the U.S., from D.C. to Fredericksburg and unlock a major point of daily congestion in the region.

**3B: Adding I-95 Southbound Capacity Across the Rappahannock River.** Construct two Collector-Distributor (CD) Lanes on Southbound I-95 from Exit 133 (Route 17) to Exit 130 (Route 3), including a new bridge over the Rappahannock River. The interchanges at Exit 133 and 130 will be reconstructed to address significant bottlenecks.

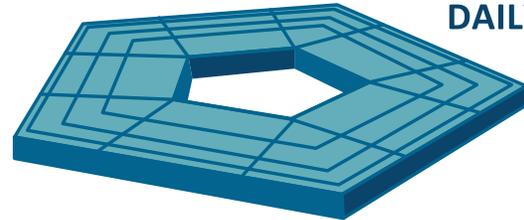


### COMPONENT 4: Corridor-Wide ITS and TDM Improvements

**4A: Providing Additional Commuter Parking in Spotsylvania and Stafford County.** Construct and expand two commuter parking facilities in Spotsylvania and Stafford Counties.

**4B: Transportation Technology.** Support a wide range of intelligent transportation systems and advanced technology improvements in the I-95/I-395 Corridor. These include the I-95/I-395 Integrated Corridor Management (ICM) Program, Multimodal Traveler Information, VDOT 511

**850**  
BUSES SERVE THE  
**PENTAGON**  
DAILY



System Enhancements, Predictive Incident Detection System (PIDS), Roadside Intrusion Detection System (RIDS), and update selected ramp meters to adaptive ramp meters on I-95 and I-395, and I-95 Commercial Truck Parking Location System. The expansion of the Express Lanes will incorporate **Pavement for Autonomous Vehicle Enhancement (PAVE)** technology, creating nearly 50 miles of roadway available for deployment and testing of autonomous vehicles.

**4C: Rest Area Reconstruction and Truck Parking.** The Atlantic Gateway Project will also completely reconstruct and reconfigure both I-95 northbound and southbound rest areas in Caroline County to make these places safer for long-term truck parking. Section 1401 of MAP-21, commonly referred to as Jason's Law, encourages additional parking options for long haul truckers. Based on a 2015 Jason's Law FHWA survey, truckers identified I-95 as the worst corridor for parking shortages in the country. **Reconstructing these rest areas will provide approximately 50 additional truck parking spaces.**

## 1.1 NATIONAL AND REGIONAL SIGNIFICANCE

The Atlantic Gateway represents a critical connection in our nation's transportation system by providing:

- » A key segment of the East Coast transportation network from Maine to Florida,

serving as the main economic conduit for the entire U.S. eastern seaboard

- » A vital part of the longest north-south Interstate in the U.S. passing through 15 states linking multiple metropolitan regions from Miami to Portland
- » A strategic link in the supply chain between major ports including Miami, Jacksonville, Savannah, Charleston, Wilmington, Hampton Roads, Baltimore, and NY/NJ to markets along the East Coast

The Atlantic Gateway supports the nation's rail infrastructure by:

- » Making important improvements to the only freight rail line that serves the entire eastern seaboard
- » Securing a critical segment of the SEHSR corridor from Petersburg to the Virginia/North Carolina state line
- » Providing needed redundancy and resiliency in a critical section of the nation's rail network, and
- » Supporting new, high speed rail service linking Richmond, Virginia, and Raleigh, North Carolina, as part of the Southeast High Speed Rail Corridor, and expanded passenger and commuter rail services in Northern Virginia

## 1.2 PROJECT USERS

The Atlantic Gateway will benefit from a wide range of local, regional, and national travelers, residents, and businesses. The section below briefly describes the users of the corridor and how, by improving corridor-wide mobility, the Atlantic Gateway Project will unlock the full potential of this critical transportation network.

### *Freight/Goods Movement*

Trucking and the movement of goods by road and rail is one of the most important uses of the corridor. **The segment of I-95 between Fredericksburg and Washington, D.C. carried 99 million tons of freight worth \$155 billion in 2012, and is estimated to carry 137 million tons of freight worth \$227 billion in 2025.**

These trucks, which account for between eight



and 17 percent of the traffic volume on I-95, are subject to the same delays and unpredictability as auto users. The Port of Virginia marine terminals in Hampton Roads are major generators of freight traffic on I-95, accounting for around five percent of the total truck freight value.

The parallel CSX's Freight Rail Corridor is the only rail corridor that operates along the entire length of the eastern seaboard south of Washington, D.C., providing intermodal and freight rail service to major cities and seaports in the eastern United States. The 1,400-mile, Freight Rail Corridor links 10 states and the District of Columbia, and moves between 40 million and 60 million gross tons of freight per year in Virginia, primarily food and consumer products, as well as metals, chemicals, agricultural products, and building materials. This corridor also plays a growing role in diverting truck traffic onto rail through CSX's National Gateway initiative, an \$850 million public-private partnership, connecting key routes between mid-Atlantic ports and the Midwest to handle doublestack intermodal trains.



### **Automobiles**

Automobiles are the primary user of the I-95 corridor. Near the I-95/I-395 split, passenger vehicles carry more than 287,500 people daily. In fact, eight of the top ten roadway combined traffic volumes and 19 of the top 25 top volumes in the Commonwealth are on I-95 or I-395 in the Atlantic Gateway corridor. The auto users on the corridor include a mix of daily commuters, shoppers, recreational, and long-distance travelers.

### **Public Transit and Passenger Rail**

In addition to significant freight traffic, the CSX tracks that parallel I-95 also serve as a vital intercity passenger rail and commuter rail corridor **that moves more than 1.6 million Amtrak passengers and 4.5 million Virginia Railway Express (VRE) commuters annually.** Amtrak operates seven different passenger routes in this corridor serving 21 stations in Virginia. The 18,000 daily VRE commuters ride 32 weekday trains. VRE's services contribute to reducing Interstate highway travel delay by 8% to 20% depending on the commuter line, saving travelers 1.8 million to 4.1 million hours per year in delay costs.

In addition to the existing service, the rail corridor is poised to play a key role in the development of new interregional passenger rail by **providing future service for the northern leg of the Southeast High Speed Rail Corridor (SEHSR).** This corridor, currently under development by the Federal Railroad Administration (FRA) in close cooperation with state agency partners and private freight railroads, will provide the Southeast with a network of high-performance passenger rail services linking Washington, D.C.,

Richmond, Raleigh, Charlotte, Atlanta, Savannah, and Jacksonville. CSX's Freight Rail Corridor will provide the critical link between the southeast rail corridors and the northeast rail corridor from Washington, D.C., to New York and Boston, enhancing public mobility and connectivity by providing faster, more frequent, and more reliable passenger rail service along the entire eastern seaboard.

Bus transit also plays a significant role. The creation of additional HOV lanes improves the quality and reliability of transit services in the corridor. Various agencies provide commuter service from Park and Ride Lots along the corridor using the Express Lanes. Recent studies by VDOT have shown that these lots are often filled by 7:00 a.m. with commuters trying to avoid peak hour traffic delays.

## **1.3 TRANSPORTATION CHALLENGES**

Travel of any type in the Atlantic Gateway corridor can be a challenge. The section below briefly describes the key issues and mobility challenges in the corridor.

### **Travel Time Reliability**

- » Congestion and incidents in the corridor make I-95 the 15th most unreliable corridor in the United States according to TTI
- » For a one hour long trip, commuters need to plan for 2.5 hours to ensure an on-time arrival

### **Transit Time Reliability**

- » Transit buses can be stuck in the same congestion as automobiles
- » Congestion on the rail corridor impedes Amtrak on-time performance

**Population Growth**

- » Population growth in I-95 corridor is expected to outpace the rest of the Washington D.C. region further taxing the transportation network

**Highway Congestion**

- » The I-95 corridor south of Washington D.C. is one of the most congested corridors in the nation
- » Peak hour travel time of up to three hours to travel the 50 miles from Washington D.C., to Fredericksburg during the afternoon peak period
- » Eight of the top ten most heavily used highway segments in the state are in the corridor

**Congestion and Reliability for Freight**

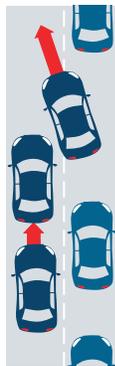
- » Traffic on I-95 causes freight delays between Fredericksburg and Washington, D.C., with a

**ATLANTIC GATEWAY CORRIDOR CONGESTION**  
EXISTING CONDITIONS

<b>HIGHWAY</b>	TOTAL ANNUAL CORRIDOR DELAY	<b>13.2 MILLION PERSON-HOURS</b>
<b>TRANSIT</b>	VRE TRAINS AT OR OVER CAPACITY	<b>70%</b>
<b>FREIGHT</b>	FREIGHT DELAY	<b>357 MILLION TON-HOURS</b>

**70%**

of crashes are rear end & sideswipe, which are INDICATORS OF CONGESTION



total of 357 million ton-hours of delay and an average delay of 893,000 ton-hours per mile

- » Lack of rail capacity results in idle freight trains and loss of system efficiency and productivity

**Safety**

- » General purpose lanes have a higher crash rate than Express Lanes
- » Nine percent of all crashes in the I-95 corridor involve tractor trailers

**1.4 HOW THE PROJECT ADDRESSES THE TRANSPORTATION CHALLENGES**

**Economic Improvements**

The components of the Atlantic Gateway Project will have a significant and measurable impact on both inter-regional and national transportation system efficiency and reliability, making the east coast transportation system more attractive, resilient, and competitive. The combined impacts of rail and highway improvements will

improve efficiency for the movement of freight and people. Increasing capacity and reducing travel times on both systems will provide more choices for freight shippers and commuters. Providing shippers with more and better options for moving goods is anticipated to increase competition between modes and yield lower long-term costs and more efficient private operations for both trucking and rail.

By unlocking the I-95 corridor, the Atlantic Gateway will increase the global economic competitiveness of the U.S. by improving connectivity between freight transportation modes, improving roadways vital to national security, facilitating freight movements and addressing the impact of population growth on the movement of people and freight.

The I-95 corridor through Northern Virginia is one of the most congested and unreliable sections of highway in the nation. The current I-95 Express Lanes have provided a highly reliable system within part of the corridor. By completing the Express Lanes system from Fredericksburg to Washington D.C., people and small commercial vehicles will have access to more reliable transportation network and will also improve the

reliability of the general purpose lanes due the overall increase in capacity.

**Mobility Improvements**

**The Atlantic Gateway will reduce the vehicle hours of travel in the greater Washington D.C. region by over 8.7 million hours by 2040.**

The rail improvements are forecasted to eliminate another million hours of travel time on area highways by shifting more freight to the high capacity, environmentally sustainable rail system.

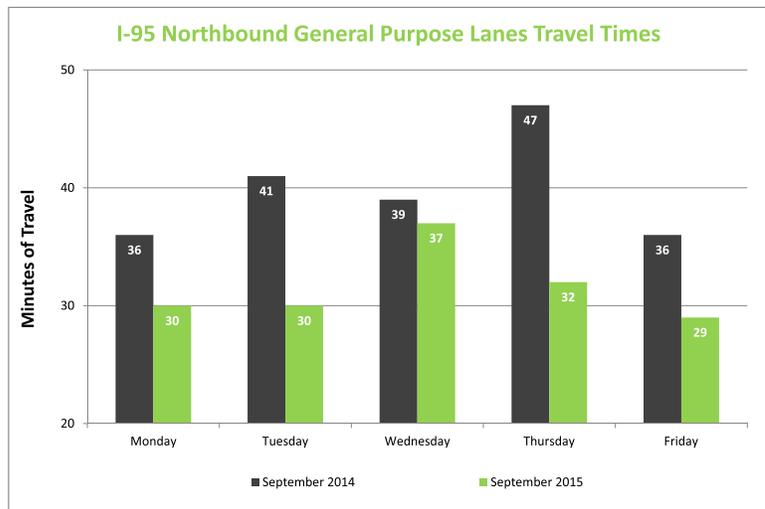
The project would reduce the total vehicle miles traveled in the corridor by 70 million, with an even larger national reduction due to the truck to rail shift. The substantial VHT and VMT reductions demonstrate that the project would result in a much more efficient transportation system in the Atlantic Gateway and beyond.

Public opinion polls conducted by the sponsor agencies clearly show that both Express Lanes users and non-users support expanding the Express Lanes system. The VRE system is very cost-effective and currently has one of the highest fare recovery rates in the nation. Thus, enhancements to this commuter rail system will expand an already efficient transit system by adding two new round trip trains. These

additional trips will carry as many people as a lane of Interstate during a peak hour.

The Atlantic Gateway improvements will significantly reduce congestion in the Fredericksburg to Washington D.C. corridor, increasing average speeds, decreasing travel times, and eliminating over 8.7 million hours of delay in horizon year of 2040. Extending the

**AVERAGE INTERSTATE TRAVEL SPEED**  
Southbound Peak Period



Source: The Regional Integrated Transportation Information System (RITIS)

**FIGURE 1-3. General Purpose Travel Time Before and After Express Lanes**

Express Lanes to Fredericksburg and adding I-95 southbound capacity across the Rappahannock River are projected to provide just under half of this travel time decrease. The Express Lanes extension to the Pentagon and southbound general purpose lane improvements in the north are forecasted to account for a similar amount of reduction in congestion. The rail improvements will add additional capacity and flexibility for goods movement (reducing I-95 truck traffic) and the new VRE trains (reducing I-95 auto traffic) will account for the remaining decrease.

Additional important mobility consideration for this nationally critical corridor is system resiliency and emergency evacuation capacity. The improvements proposed for the corridor, both rail and highway, will increase the transportation system capacity during an emergency, such as an evacuation scenario. The multi-modal improvements will also provide additional system resiliency. For example, if a national emergency required that the interstate be closed, then the additional rail infrastructure could be very useful for moving both goods and people into or out of the Washington D.C. metro area.

The current system has several important maintenance and operations issues that would be addressed by the proposed project including

repairs to deficient structures on I-395. Operation and maintenance of the Express Lanes would be managed by a private entity. Implementation of this project will improve the movement of people and goods by maintaining highways, bridges, and freight infrastructure in a state of good repair, enhancing the resiliency of critical surface transportation infrastructure, and significantly reducing highway congestion and bottlenecks.

### Safety Improvements

The proposed project will improve transportation safety in significant ways:

- » Shifting auto traffic from general purpose lanes to lower crash rate Express Lanes
- » Reducing truck movements from the corridor as more freight uses the parallel rail facilities
- » Decreasing the number of autos from the corridor as more people use commuter bus and VRE
- » ITS enhancements to improve overall corridor safety, and
- » Reducing total vehicle miles traveled in the corridor and thereby reducing crash exposure

### Community and Environmental Improvements

The Atlantic Gateway Project will unlock the full potential of the I-95 corridor. The components of the project will enhance personal mobility and remove barriers to employment centers. The Atlantic Gateway includes a corridor-wide bus program to ensure affordable transit access from the commuter rail and Express Lanes to the major employment centers in the corridor—for example, by providing the diverse communities of eastern Prince William County with direct bus access to Fort Belvoir or by funding shuttle bus service between L’Enfant Plaza commuter rail and the major employers in and around the Navy Yard.

Increased access to transit and additional freight rail capacity will improve air quality by diverting the movement of goods and people to rail.

### Partnership and Innovation

The Atlantic Gateway Project represents the combined partnership of the Commonwealth of Virginia, Transurban, CSX, VRE, local governments, the District of Columbia, and the Federal government. This is a partnership that has worked successfully on transportation issues through existing statutory and contractual frameworks. Innovation is at the very core of this partnership, from the completion of the longest privately managed Express Lanes network in the country, to the integrated commuter and passenger rail system. Atlantic Gateway will continue the innovation by creating the first autonomous vehicle ready travel lanes in the country.

### Cost Share

The Atlantic Gateway Project is an **unprecedented public private partnership, where over a half billion dollars of private investment** is leveraged with highly stable and predictable state funds to provide exceptional benefits to the entire eastern seaboard as described in **Section 4**.

TABLE 1-2. TRANSIT PROVIDERS IN THE PROJECT CORRIDOR	
	
	
	
	
	
	

# 2 PROJECT LOCATION

The Atlantic Gateway includes multi-modal transportation networks that generally run north-south along the I-95 corridor from Fredericksburg Virginia to Washington D.C. This project encompasses some of the worst congestion in the East Coast and the nation. **Figure 2-1** shows the locations of each project component.



FIGURE 2-1. Project Location

# 3 PROJECT PARTIES

The Atlantic Gateway’s success relies on a variety of active parties. **Tables 3-1** and **3-2** below identify those providing substantial financial and/or operational oversight for the project. There are many other localities, planning organizations, regulatory agencies, as listed in **Table 3-3**, that are equally critical to the Atlantic Gateway’s success.

TABLE 3-1. GRANT RECIPIENTS		
	<b>Virginia Department of Transportation</b>	As co-applicant, VDOT will serve as the grant recipient and will be responsible for the overall implementation of the program with primary responsibility for the implementation of the highway aspects.
	<b>Virginia Department of Rail and Public Transportation</b>	As co-applicant, DRPT will provide oversight over the program. DRPT’s primary focus will be on the rail aspects of the program.

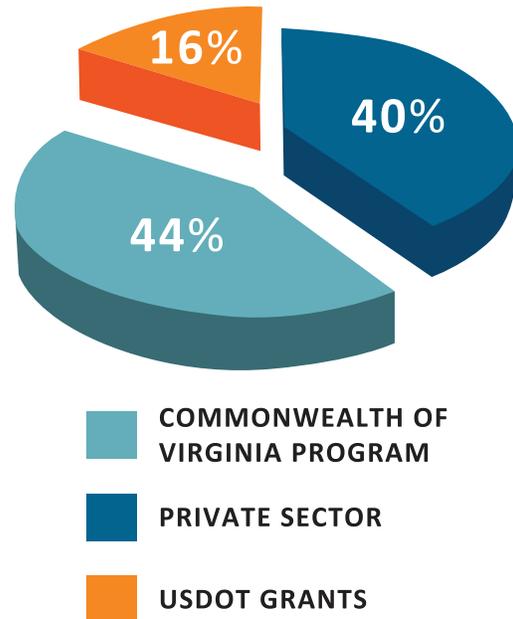
TABLE 3-2. PRIVATE PARTIES		
	<b>CSX</b>	CSX owns and dispatches the railroad, they are also the freight rail operator. CSX will leverage the expanded infrastructure to provide a competitive shipping option for customers along the East Coast. CSX also currently owns an abandoned right-of-way between Petersburg and North Carolina, called the S-Line. As part of this project, CSX will engage with the Commonwealth in a commitment to enable the Commonwealth to obtain the S Line.
	<b>Transurban</b>	Transurban is the private investor and long-term operator for the existing 495 and 95 Express Lanes network in Virginia. Transurban will design, build, operate, and maintain the expanded Express Lane system on I-95 and I-395. They will also be responsible for the privately secured funding for these projects.

TABLE 3-3. PUBLIC AGENCIES		
	<b>Virginia Railway Express (VRE)</b>	VRE will utilize the increased rail capacity to implement expanded commuter rail service in the corridor
	<b>North Carolina Department of Transportation (NCDOT)</b>	North Carolina and Virginia, together with the Federal Railroad Administration are partnering on the Southeast High Speed Rail Corridor (SEHSR). The FASTLANE project components are critical elements of the SEHSR and will provide the required connectivity of North Carolina’s service to Amtrak’s Northeast Corridor.
	<b>D.C. Department of Transportation (DDOT)</b>	DDOT, in cooperation with DRPT and FRA, is conducting the feasibility and EIS evaluating expanding the capacity of CSX’s Long Bridge crossing of the Potomac River. The Atlantic Gateway improvements will optimize the freight, passenger, and commuter rail benefits of increased Long Bridge capacity.

# 4 GRANT FUNDS, SOURCES, & USES OF PROJECT FUNDS

The Atlantic Gateway Project is a true public-private partnership. **Privately secured contributions are expected to reach up to \$565 million, which equates to 40 percent of the overall program of interrelated projects.** Our private sector partners, Transurban and CSX, have long-standing relationships with the Commonwealth and have demonstrated their financial and program delivery success on recent initiatives along this corridor. **A FASTLANE grant of \$200 million, when combined with private sector investment and Virginia’s robust state and federal program, provides a 15 to one return on the grant investment.** In addition to this application, Virginia is actively developing a parallel application for USDOT’s TIGER program requesting \$25 million, to ensure that corridor-wide technology and transportation demand management solutions are delivered.

FIGURE 4-1. Atlantic Gateway Funding Sources



The delivery of this program relies on a variety of innovative interdependent financing and project delivery instruments. **Figures 4-1 and Table 4-1** show the commitment of public and private funds, and the amount of FASTLANE funding

necessary to complete the project. **Table 4-2** summarizes the uses of project funds, broken down by the project’s major components.

TABLE 4-1. COMMITTED FUNDING SOURCES

		Funding Partner	Description	Funding Amount	Funding %		
Private Sector		 Transurban	Private Sector Partner – Toll Facility Manager/ Operator	\$520M	37%	40%	Private Sector
		 CSX	Private Sector Partner – Class 1 Railroad Owner/ Operator	\$45M	3%		
Virginia		Commonwealth of Virginia Program	Federal Assistance	\$247M	18%	44%	Virginia
			State Assistance	\$363M	26%		
USDOT Grants		NSFHP	USDOT Grant Program	\$200M	14%	16%	USDOT Grants
		TIGER	USDOT Grant Program	\$25M	2%		
<b>TOTALS:</b>				<b>\$1.4B</b>	<b>100%</b>		

# 4 GRANT FUNDS, SOURCES, AND USES OF PROJECT FUNDS

**TABLE 4-2. USES OF PROJECT FUNDS**

Project Component	Description	Eligible Project Cost	NSFHP Funds	TIGER Funds (Pending)	Other Federal Sources	Non-Federal Sources*
 <b>Component 1: Rail Infrastructure</b>						
1A	Long Bridge–Phase 1	\$185M	\$55M		\$82M	\$48M
1B	Dedicating the S-Line	\$30M				\$30M
1C	Constructing a Third Main Line Track (Franconia to Occoquan)	\$220M				\$220M
1D	Engineering for Long Bridge–Phase 2	\$30M	\$15M			\$15M
1E	Improving Rail Operations Along the Corridor	\$30M				\$30M
 <b>Component 2: I-395 Improvements</b>						
2A	Extending the Express Lanes to the Pentagon	\$250M	\$30M			\$220M
2B	Improving Multimodal Access to the Pentagon	\$10M	\$10M			
2C	Providing Safety and Capacity Improvements on I-395 (Duke Street to Edsall Road)	\$40M	\$40M			
 <b>Component 3: I-95 Improvements</b>						
3A	Extending the Express Lanes to Fredericksburg	\$420M	\$50M		\$50M	\$320M
3B	Adding I-95 Southbound Capacity Across the Rappahannock River	\$115M			\$115M	
 <b>Component 4: Corridor-Wide ITS and TDM Improvements</b>						
4A	Providing Additional Commuter Parking in Spotsylvania and Stafford County	\$30M		\$15M		\$15M
4B	Transportation Technology	\$20M		\$10M		\$10M
4C	Rest Area Reconstruction and Truck Parking	\$20M				\$20M

\*Includes state and private funds, and a number of financing options are being considered.

**TOTALS: \$1.4B \$200M \$25M \$247M \$928M**

# 5 COST EFFECTIVENESS

The cost effectiveness of the improvements described in this application was measured through a complete Benefit-Cost Analysis (BCA) to monetize, as thoroughly as possible, benefits generated under each one of the merit criteria defined in the FASTLANE program and compare them against the project's costs. The analysis shows that the project is a net benefit to the nation's economy.

## 5.1 ECONOMIC OUTCOMES

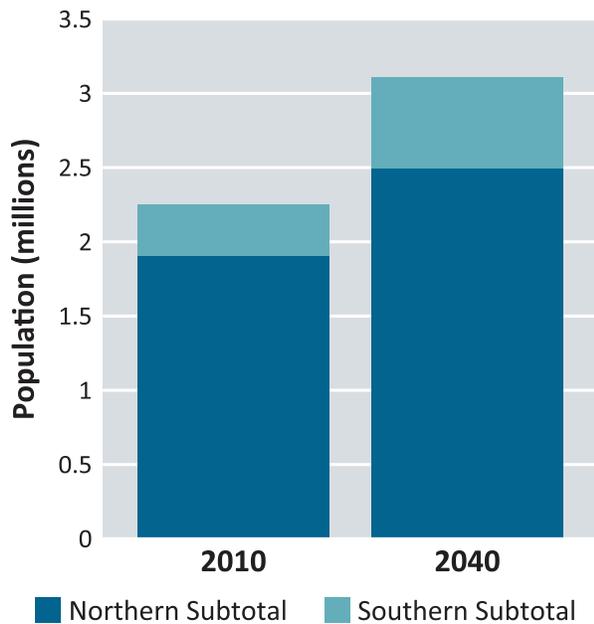
**The Atlantic Gateway Project components improve the connectivity between homes and work places and between production and consumption sites. At the same time, they increase the competitiveness of the United States by increasing efficiency in the movement of goods. The area in which the proposed improvements are located is home to about half of the Commonwealth's projected growth in population and employment.**

In particular, the population of areas surrounding the I-95 corridor between Fredericksburg and the D.C. line is expected to increase by 1.08 million between now and 2040, accounting for almost half of Virginia's projected population growth for that period. This same region is also expected to see an increase of approximately 1.5 million jobs between now and 2040, more than half of Virginia's projected job growth over the same period. These population and employment trends portend a significant increase in traffic along the corridor both from people moving between homes, jobs and places of recreation as well as from an increased demand for goods to be shipped into the region. Without the proposed improvements, the region is certain to see significant increases in congestion in the corridor and longer travel times for interstate users.

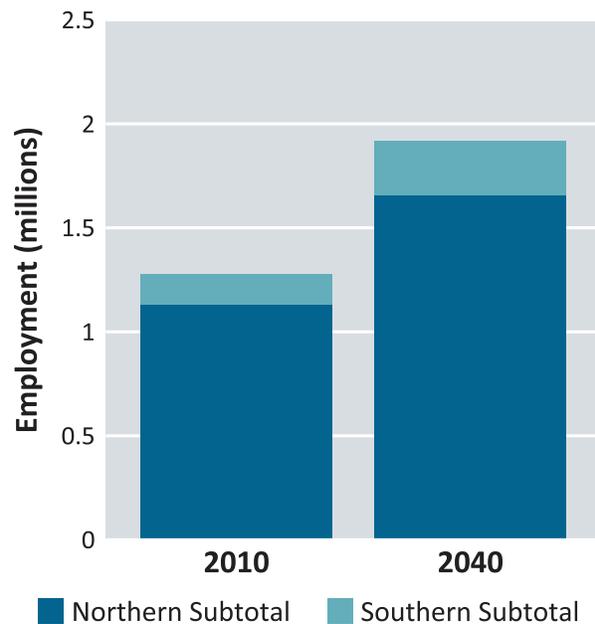
Extending the Express Lanes south on I-95 and north on I-395 is anticipated to generate significant travel time savings for private and commercial drivers along the I-95 corridor. Travel times on general purpose lanes adjacent to the 95 Express lanes have improved 20 percent; see discussion in **Figure 1-3**. The majority of these travel time savings will be realized by passenger vehicles, light commercial vehicles, and buses, which will be able to take advantage of higher average speeds compared to those experienced in the general purpose lanes. Truck drivers will also benefit since the passenger vehicles that shift to the Express Lanes will reduce traffic on the general purpose lanes, resulting in increased average speeds. The travel time saving benefits were monetized in the BCA along with reduced vehicle operating costs resulting from faster speeds on both the Express and the general purpose lanes. At the same time, because the higher speeds along the I-95 and I-395, linked to both the extension of the Express Lanes and the construction of Collector Distribution lanes, trucks can reach their destinations faster, which reduces inventory costs, improves connectivity between production and consumption sites, and increases the fluidity of the movement of goods along the East Coast and the rest of the United States. Despite the importance of inventory cost savings as a result of the proposed improvements, they were not monetized as part of the BCA due to a lack of a standardized approach to monetize them.

The Atlantic Gateway Project improvements also include enhancing multimodal access to the Pentagon. In particular, access into and around the Pentagon south parking area will be improved from the Eads Street Exit off of I-395 with additional enhancements to transportation

**FIGURE 5-1. I-95 Corridor Population Projections**



**FIGURE 5-2. I-95 Corridor Employment Projections**



support facilities. The changes are anticipated to remove a significant bottleneck for commuters by formalizing drop-off and pick-up areas for “slugging” in the parking area, providing additional covered waiting areas for transit riders, and improving circulation in the parking lot. These benefits are difficult to quantify and monetize, and therefore were not formally included in the BCA.

In addition, the railroad corridor, which runs parallel to the highway, is currently congested due to the demands from freight, passenger, and commuter rail operations. The lack of capacity means both that opportunities to add additional freight and passenger services are limited, and current service quality is not satisfactory to public users. The rail components of the Atlantic Gateway Projects will expand the capacity of CSX’s rail line to enable additional intermodal freight trains movement, mainly servicing the National Gateway Corridor, and also enable the operation of additional VRE commuter trains. With the proposed rail improvements described in this application, this cargo is anticipated to divert from trucks, generating significant

public benefits and highway cost savings. If the improvements do not occur, the cargo would have to move by truck, canceling out any potential benefits. Shipping cost savings due to this diversion were monetized in the BCA and were netted out from the additional operating costs associated with the additional rail services.

Finally, **a portion of the tolls collected from the extension of the I-395 Express Lanes will be used as a transit payment to the Commonwealth over the life of the concession.** This transit payment is anticipated to be used by the Commonwealth to cover the corridor’s transit needs through developing and operating a bus service. In particular, these funds are expected to purchase new buses to service the corridor well after the period of analysis considered in this application. However, since the transit service will be selected by the region, using Ladders of Opportunity criteria to meet evolving needs in the corridor, it is difficult to monetize; therefore, this benefit has not been included in the BCA.

## 5.2 MOBILITY OUTCOMES

The project improvements will contribute to maintaining a state of good repair of the highway infrastructure and improving the movement of people along the corridor by promoting the use of transit. The increase in the capacity of the rail corridor and the resulting modal diversion from truck to rail reduces the number of trucks traveling along this highway corridor compared to the scenario in which the proposed rail improvements do not occur. Similarly, by enabling two additional VRE round-trips per day on weekdays, the proposed improvements are anticipated to reduce the number of passenger vehicles that use the interstate to commute between home and workplace. The reduction of both trucks and passenger vehicles transiting along the corridor reduces pavement maintenance costs. These savings are monetized as part of the BCA.

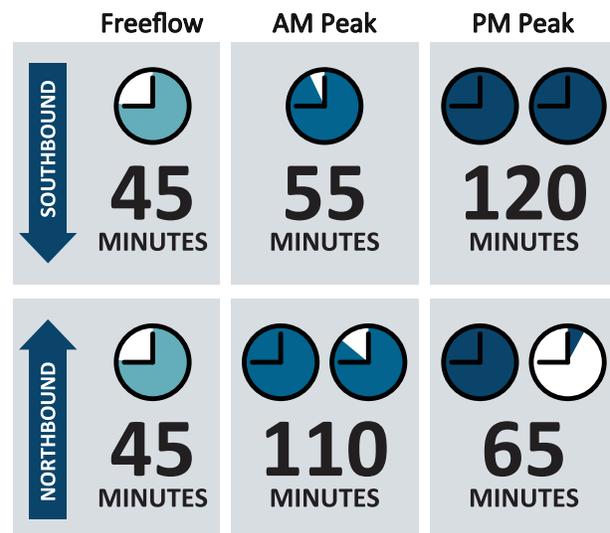
Another benefit monetized is the residual value of the rail and highway infrastructure that will be built as part of the proposed improvements, as well as the right of way (ROW) that needs to be purchased for those improvements to become a reality. The rail infrastructure proposed as part of this application has a design service life beyond the 20-year analysis period and therefore is the main component monetized as part of this benefit. A mobility benefit that was identified but not monetized as part of the BCA is travel time reliability. Reliability along I-95 and I-395 during peak-traffic hours is low, featuring planning time indices that range between 2.5 and 3.0 in 2015. Due to the anticipated increase in traffic volumes along the corridor, these indices are expected to increase if the proposed improvements are not built. After construction, the proposed highway improvements will significantly reduce bottlenecks along the interstate.

## 5.3 SAFETY OUTCOMES

The proposed improvements will achieve reductions in traffic fatalities and serious injuries by reducing stop and go traffic conditions, removing large trucks from the highway onto rail and increasing highway capacity and traffic flow.

## ESTIMATED I-95 TRAVEL TIMES DURING CONGESTED PERIODS

Fredericksburg to the Potomac River



Source: 2015 Google Traffic Data

The expansion of the Express Lanes both on I-395 and I-95, which feature a safer design and operation compared to the general purpose lanes on this corridor, means that more users will travel on a safer roadway. In addition, by increasing capacity on a major thoroughfare in the region, commuters who currently drive on local roads to avoid interstate congestion will not only benefit from more direct trips using the less congested I-95 and I-395 interstates, but will also benefit from driving on roads with lower accident rates. These benefits are monetized in the BCA. The expansion of the freight rail capacity and addition of VRE service due to the proposed rail improvements mean that fewer trucks and passenger vehicles will use I-95 to reach their destination. By switching the movement of goods and people to a safer mode, the improvements generate accident cost reduction benefits, which are also monetized in the BCA.

Finally, the improvements on I-395 from Duke Street to Edsall Road will increase safety on this segment of the interstate. Currently southbound I-395 has four through lanes north of the Duke Street interchange and south of the Edsall Road

interchange. However, between the Duke Street and Edsall Road interchanges there are only three lanes, causing heavy congestion on southbound I-395 during weekday afternoon peak periods. The proposed improvements will allow leveraging maintenance of traffic (MOT) services that will be underway as a result of the expansion of the I-395 Express Lanes. This improved safety, however, is difficult to quantify and monetize and thus was not included as part of the BCA.

#### 5.4 COMMUNITY AND ENVIRONMENTAL OUTCOMES

Diverting goods and people to rail will reduce emissions, such as carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NOx), fine particulate matter (PM<sub>2.5</sub>), Sulfur Dioxide (SO<sub>x</sub>) and Carbon Dioxide (CO<sub>2</sub>). The emission cost reductions for most of these pollutants are monetized in the BCA.

In addition to these environmental benefits, the proposed improvements will present opportunities to increase mobility and better connect aging populations with destinations throughout the corridor. Almost a quarter of the population increase along the I-95 corridor between Fredericksburg and the D.C. line is expected to be among persons of 65+ years of age, with the number of persons age 75+ increasing 150 percent by 2040. With the proposed improvements, this population will benefit from additional transit options, less congestion, and improved signage and markings on the interstate along the corridor.

Also, the I-395 Express Lanes transit payment will be focused on:

- » Providing ongoing capital and operating support for corridor-wide transit
- » Connecting all communities to jobs and regional activity centers like Fort Belvoir, and
- » Delivering projects selected by the region

**Ladders of Opportunity will be a major consideration in the project selection process.** While important, these benefits are

difficult to quantify and therefore were not monetized in the BCA.

Finally, there has been a significant effort by the Commonwealth to conduct extensive public engagement for the improvements described in this application. In particular, during the development of the Environmental Assessment for the I-395 improvements, the Commonwealth held a series of public meetings to inform the community about the proposed improvements and allow for feedback. Similarly, for the I-95/I-395 Travel Demand Management (TDM) study, the results were made public through the DRPT's webpage.

#### 5.5 RESULTS OF THE BENEFIT-COST ANALYSIS

**Table 5-1** below summarizes the monetization of the main benefits for the proposed improvements, categorized under the main criteria established in the FASTLANE program.

A 25-year analysis period was used in the estimation of the project's benefits and costs, which includes five years of project development (design and construction) and 20 years of operation. Annual costs and benefits are estimated through 2040. Construction is expected to be completed in late 2020 and thus benefits start accruing in 2021 for the full operation of the project (20 years).

Considering all monetized benefits and costs (capital as well as operating and maintenance costs), the estimated internal rate of return of the project is estimated at 16.6 percent. With a seven percent discount rate, the project would result in a net present value of more than \$1.6 billion and a benefit-cost ratio of 2.24. With a three percent real discount rate, the net present value of the project would increase to more than \$3.4 billion, for a benefit-cost ratio of 3.29.

TABLE 5-1. ATLANTIC GATEWAY BENEFITS			
MERIT CRITERIA	BENEFIT CATEGORIES	7% DISCOUNT RATE	3% DISCOUNT RATE
Economic	Travel Time Savings	\$1,371,617,751	\$2,330,280,102
	Shipping Cost Savings	\$821,781,000	\$1,406,019,970
	Vehicle Operating Cost Reduction	\$341,297,196	\$562,735,638
Mobility	Reduction in Highway Congestion due to Modal Shifts	\$84,521,418	\$144,075,062
	Pavement Cost Savings	\$13,781,912	\$23,552,076
	Residual Value of Infrastructure Built	\$26,023,354	\$64,935,253
	Residual Value of ROW Purchased	\$169,743	\$423,555
Safety	Accident Cost Reduction	\$193,284,946	\$322,298,553
Community and Environmental	Emissions Cost Reduction	\$75,068,847	\$85,611,231
<b>TOTAL BENEFIT ESTIMATES</b>		<b>\$2,927,546,168</b>	<b>\$4,939,931,440</b>

TABLE 5-2. ATLANTIC GATEWAY BENEFIT/COST		
PROJECT EVALUATION METRIC	7% DISCOUNT RATE	3% DISCOUNT RATE
Total Discounted Benefits	\$2,947,546,168	\$4,939,931,440
Total Discounted Costs	\$1,305,564,920	\$1,503,330,887
Net Present Value	\$1,621,981,248	\$3,436,600,553
Benefit/Cost Ratio	2.24	3.29
Internal Rate of Return (%)	16.62%	
Payback Period (years)	10	



# 6 PROJECT READINESS

## 6.1 TECHNICAL FEASIBILITY

The Commonwealth of Virginia has extensive experience carrying out many types of large transportation capital projects through two agencies under the Secretary of Transportation, the VDOT, and the DRPT. VDOT is responsible for building, maintaining, and operating the Commonwealth's roads, tunnels, and bridges, including the third largest state-maintained highway network in the United States.

Under an innovative public-private partnership arrangement, VDOT partnered with Transurban on the \$925 million "95 Express Lanes" highway capacity expansion project, which added 29 miles of Express Lanes on I-95 in Northern Virginia. As part of the agreement, VDOT maintained ownership of the new infrastructure and oversaw the successful completion of the project. Through a similar arrangement, VDOT and Transurban successfully completed the delivery of the existing 495 Express Lanes in Northern Virginia.

DRPT is responsible for managing rail, public transportation, and mobility management programs in the Commonwealth and delivering projects to move more people and goods throughout the Commonwealth. DRPT also oversees programs that support freight, passenger, and commuter rail services in Virginia

through innovative mechanisms such as the Intercity Passenger Rail Operating and Capital Fund. In the Atlantic Gateway Corridor alone, DRPT has funded and developed more than \$200 million in large rail capital projects, in partnership with CSX, VRE, Amtrak, and FRA .

**The Commonwealth and CSX have several successful agreements on this corridor that are primed to be leveraged as part of the Atlantic Gateway.**

Many of those projects were funded and administered by DRPT and used existing management systems to control the projects. DRPT was nationally recognized for its involvement in two of the nation's top four transportation infrastructure projects named by Governing Magazine in April 2012, the Dulles Metro Rail Extension Project, and the Norfolk Southern Crescent Corridor Project.

As part of the Atlantic Gateway Project, **Virginia will build on its successful partnership with private toll-road manager Transurban** for the I-95 Express Lanes extension south to Fredericksburg and the I-395 Express Lanes extension north to the Pentagon. Under the partnership agreement, VDOT would own and oversee the lanes and Transurban would build, operate, and maintain.

The rail components of the Atlantic Gateway Project will follow the design and engineering standards established in the “D.C. to Richmond Southeast High Speed Rail Basis of Design,” developed by DRPT. The Basis of Design was

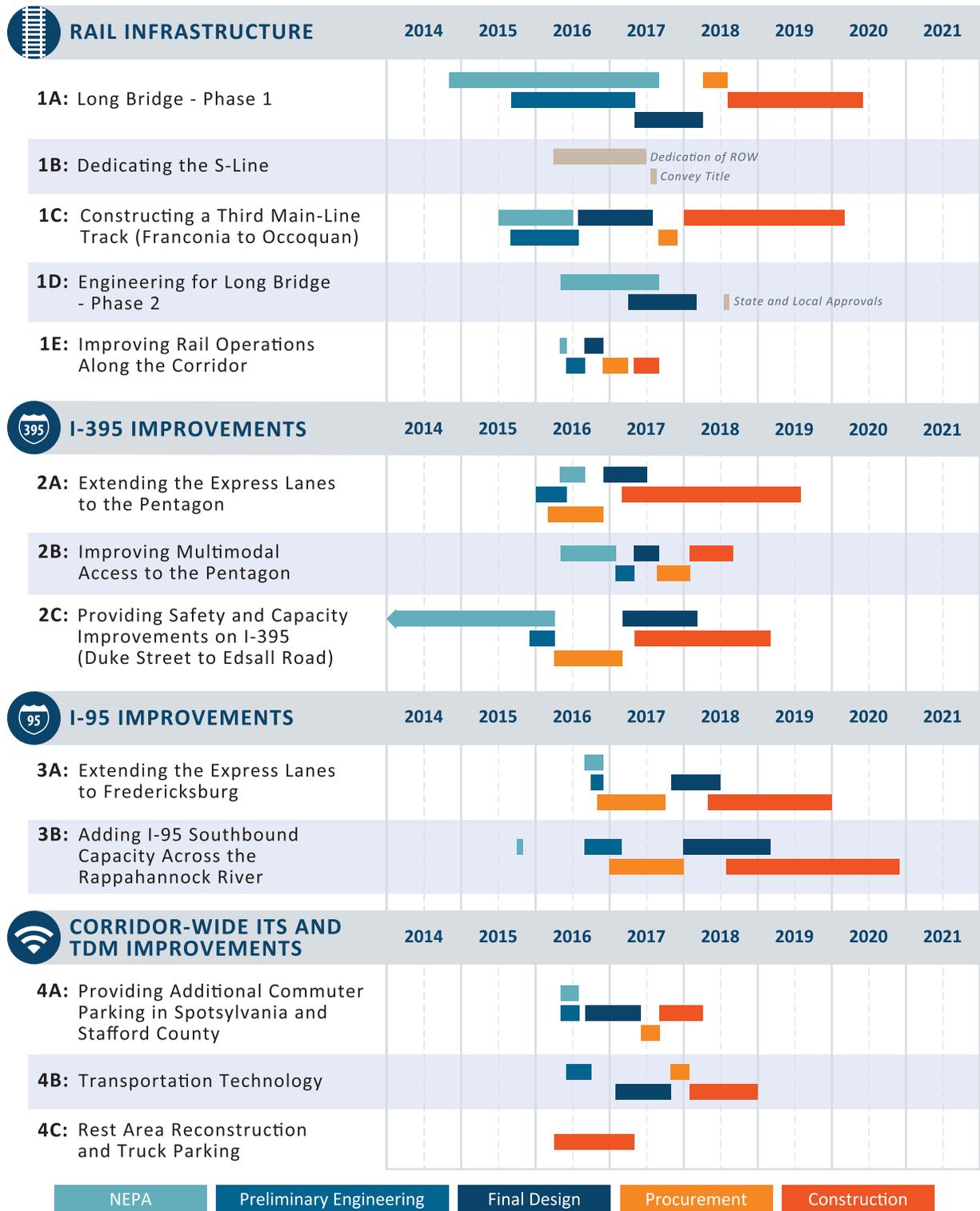
developed in coordination with FRA, DRPT, VDOT, CSX, Amtrak, and VRE.

The readiness status of each Atlantic Gateway Component is summarized in **Table 6-1**.

**TABLE 6-1. ATLANTIC GATEWAY READINESS REQUIREMENTS**

COMPONENT TYPE	PROJECT COMPONENT	PE COMPLETION	NEPA STATUS	PERMITTING AGENCIES CONTACTED
 <b>Component 1: Rail Infrastructure</b>	<b>1A</b> Long Bridge–Phase 1	10% Completed	NEPA completion in Fall 2017	USACE, VADEQ
	<b>1B</b> Dedicating the S-Line	Not applicable	Tier II Final EIS Raleigh to Richmond September 2, 2015	Not applicable
	<b>1C</b> Constructing a Third Main Line Track (Franconia to Occoquan)	10% Completed	Documented Categorical Exclusion Summer 2016	USACE, VADEQ
	<b>1D</b> Engineering for Long Bridge–Phase 2	Not Applicable	NEPA completion in Fall 2017	Not applicable
	<b>1E</b> Improving Rail Operations Along the Corridor	10% Completed	Categorical Excluded	None anticipated
 <b>Component 2: I-395 Improvements</b>	<b>2A</b> Extending the Express Lanes to the Pentagon	60% Completed	NEPA completion in Fall 2016	USACE, VADEQ
	<b>2B</b> Improving Multimodal Access to the Pentagon	Spring 2017	NEPA completion in Fall 2016	USACE, VADEQ
	<b>2C</b> Providing Safety and Capacity Improvements on I-395 (Duke Street to Edsall Road)	Completed	NEPA completion in Spring 2016	USACE, VADEQ
 <b>Component 3: I-95 Improvements</b>	<b>3A</b> Extending the Express Lanes to Fredericksburg	PE to begin in 2016	EA completed 09/2011; reevaluation 2016	USACE, VADEQ
	<b>3B</b> Adding I-95 Southbound Capacity Across the Rappahannock River	20% Completed	FONSI issued 11/2015	USACE, VADEQ, VMRC
 <b>Component 4: Corridor-Wide ITS and TDM Improvements</b>	<b>4A</b> Providing Additional Commuter Parking in Spotsylvania and Stafford County	PE to begin in 2016	Stafford County lot: reevaluation underway; Spotsylvania County lot: NEPA completion in 2018	USACE, VADEQ
	<b>4B</b> Transportation Technology	PE to begin in 2016	Programmatic Categorical Exclusions	Not applicable
	<b>4C</b> Rest Area Reconstruction and Truck Parking	Completed	Programmatic Categorical Exclusions	None anticipated

FIGURE 6-1. Project Schedule



**6.2 PROJECT SCHEDULE**  
**All project components will be under construction by September 2019.**

Planning-Engineering, National Environmental Policy Act (NEPA) and public outreach are under-way for the I-95 and I-395 Express Lanes extensions. The Express Lanes will be constructed

under a design-build agreement with Transurban that currently anticipates all NEPA decisions, preliminary design, and contractual arrangements to be completed by the first quarter of 2017. Construction is anticipated to begin soon after, in the first half of 2017, and last approximately two years, for an estimated projected completion date of mid-2019.

Planning, NEPA work, and public outreach are also underway for the major rail construction components of the Project. Long Bridge–Phase 1, the fourth main line track between Arlington and Alexandria, and the third main line track between Franconia and Occoquan. These components are all within the limits of the Washington, D.C. to Richmond Southeast High Speed Rail project (the DC2RVA project), which is underway and preparing a Tier II Environmental Impact Statement and Preliminary Engineering (30 percent design). DRPT is advancing the DC2RVA project through the Tier II NEPA process on an aggressive three-year schedule.

**Figure 6-1** summarizes when each project component is anticipated to meet major project milestones. The summarized schedule on the previous page demonstrates that the FASTLANE funds will be spent steadily and expeditiously once construction starts and that construction will start within 18 months of the obligation of funds.

## 6.3 REQUIRED APPROVALS

### *NEPA Status of Project*

VDOT and DRPT either have or will soon complete the NEPA evaluations for their respective highway and rail project components, as summarized in **Table 6-1**.

Project components associated with the construction of third and fourth main line track in Northern Virginia (Franconia to Occoquan third track, Long Bridge–Phase 1) will continue to be covered by the Washington to Richmond Southeast High-Speed Rail project. The third main line track between Franconia and Occoquan qualifies for a Categorical Exclusion. DDOT is

preparing an EIS evaluating the options to add rail capacity to Long Bridge. DDOT anticipates that the Notice of Intent will be published in spring 2016 and the Record of Decision issued in 2018.

### *Reviews by Other Agencies*

Each NEPA analysis will require interagency coordination and acceptance by those agencies with review and/or permit responsibilities. For their respective project components, VDOT and DRPT have been in contact with agencies to ensure that all environmental permitting and the appropriate resource clearance requirements will be met. Key federal will be the U.S. Army Corps of Engineers (USACE), U.S. Coast Guard (USCG), U.S. Fish and Wildlife Service (USFWS), and the U.S. Environmental Protection (USEPA). In addition, multiple state agencies will participate in the project's environmental review, including the Virginia Department of Environmental Quality (VADEQ) and Virginia Marine Resources Commission (VMRC). **Table 6-1** summarizes the permitting agencies contacted to date about the project.

### *Discussions with DOT Modal Agencies*

Preliminary discussions about the Atlantic Gateway Project have occurred with representatives from the USDOT, Federal Highway Administration and Federal Railroad Administration on April 8, 2016 to discuss the project, a FASTLANE application for it, and which DOT modal administration might be the relevant administration for the project. From those discussions, it was agreed that FHWA would be the relevant modal administration, moving the project forward with strong cooperation and support from FRA.

### *Legislative Approvals*

The VDOT carries out the funding and administrative policies established by the Commonwealth Transportation Board, whose 17 members are appointed by the Governor.

The DRPT's legislative authority was established by Code of Virginia §33.1-391.4, which sets out the general powers of DRPT. Code of Virginia

§33.1-391.5 describes the responsibilities of DRPT. DRPT will work with CSX to accept ownership of the abandoned S-Line right-of-way south of Petersburg for the future development of the SEHSR Corridor.

Under the Public-Private Transportation Act of 1995, and associated policy directives found in Code of Virginia §56-55, VDOT, DRPT, and other transportation agencies of the Commonwealth have the legislative authority to enter into agreements with private organizations for the development or operation of certain transportation facilities within the Commonwealth.

### **State and Local Planning**

Both the highway and rail components of the Atlantic Gateway have been identified in numerous planning studies as vital projects to ensuring that the Commonwealth's highway and rail networks have the capability to meet forecasted projections for traffic growth.

In its Virginia Multimodal Freight Plan 2014, the Commonwealth identified Interstate 95 and the parallel CSX Freight Rail Corridor as "National Corridors," meaning they have a high importance to nationwide freight mobility and they connect to key international gateways for goods movement within the Commonwealth. The plan also identified the portion of each mode's route in the I-95 Corridor between Fredericksburg and Washington, D.C. as among the major truck bottlenecks and freight rail chokepoints in the entire Commonwealth. The plan concluded that the capacity expansions delivered as part of the expansion of HOV/HOT lanes on Interstate 95 from Fredericksburg north—key components of the Atlantic Gateway Project—are among the most impactful options to support the improvement of the Commonwealth's freight-transportation infrastructure.

The highway project components are, or will be by the end of 2016, part of the Metropolitan Washington Council of Governments'

Constrained Long Range Transportation Plan for the National Capital Region, with the exception of the I-395 Pentagon Access Improvement project component, which is in the Pentagon Master Plan.

The rail components of the project will not only provide additional capacity on a congested rail line, but have been identified as projects that are critical to the successful future development of the Southeast High Speed Rail Corridor. The third track project component is in the most recent Commonwealth's FY2016 Rail and Public Transportation Improvement Program, a six-year capital investment funding plan developed by the Commonwealth Transportation Board. The additional sections of third and fourth main line track were also improvements recommended by the Mid-Atlantic Rail Operations Study.

## **6.4 ASSESSMENT OF PROJECT RISKS AND MITIGATION STRATEGIES**

**Table 6-2** assesses the risks that may pose a threat to the ability of the project to meet its objectives and schedule, along with proposed mitigation actions.

**TABLE 6-2. RISK ASSESSMENT**

RISK #	RISK CATEGORY	RISK NAME	DESCRIPTION	PROBABILITY OF OCCURRENCE	SEVERITY OF IMPACT	MITIGATION STRATEGIES
1	Management	Program Management	Implementing this large multi-modal program will compete with other state transportation programs and projects for executive oversight and project management resources	3	3	The Commonwealth of Virginia will draw upon the combined experience in both VDOT and DRPT which has been developed through the successful delivery of many large highway and rail projects
2	Financial	Loss of Public Funding	Loss of public funding source due to unforeseen circumstances	2	3	Multiple public funding sources leveraged with private investments reduce the impact from the loss of any one funding source. FASTLANE grant is critical to the success of this project.
3	Partnerships	Agreements	Each component will require the negotiation and execution of several complex and challenging agreements among public and private entities	3	3	The Commonwealth of Virginia will leverage the extensive experience it has in negotiating successful agreements with both the federal partners and the private stakeholders
4	Contracting & Procurement	Administrative Burden	Managing multiple large procurements with complex contracting requirements could stress available state procurement resources	2	2	The implementation responsibility will be shared by both VDOT and DRPT which will allow for sharing the administrative burden
5	Construction	Business Disruption	Business located near the project sites could be impacted by construction activities and congestion	2	2	A project phasing plan and a plan to maintain access during construction will be developed during final design
6	Construction	Construction Access	Construction access could be challenging because of the high fills, large excavations and urban nature of adjacent property	3	1	Access will be identified and addressed during final design
7	Environmental		Completion of the NEPA requirements and acquiring permits could result in delays	1	1	Each component either already has NEPA compliance, or has a defined and agreed to schedule and process for NEPA compliance. Work has been initiated with permitting agencies to reduce delays
8	ROW	Property Ownership	Substantial property acquisition could be required	3	1	Right of way issues will be identified and addressed during final design
9	Maintenance of Traffic		Existing highway and railroad traffic must be maintained during construction which will complicate the delivery process	3	3	Recent experience by the Commonwealth on the delivery of the existing I-95 Express Lanes and the delivery of large scale rail projects will be leveraged to reduce the risk of a schedule impact
10	Operations & Maintenance	Storm water	Management of stormwater post construction will be substantial	3	1	Measures will be incorporated into the design to address storm water management issues

1 = Low     
 2 = Minor     
 3 = Moderate     
 4 = Significant