Virginia's Long-Range Multimodal Transportation Plan

Corridors of Statewide Significance: Tidewater Corridor

Prepared for:
Commonwealth Transportation Board

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Contents

List of Tables

List of Figures

1

Corridor Overview

1.1 Transportation Facilities

The Tidewater Corridor is mostly defined by U.S. 17, which is a highway running north-to-south in the eastern United States for close to 1,200 miles. It is known as the "Coastal Highway," as it is near to the Atlantic Coast for much of its length. U.S. 17 runs parallel to U.S. 1 throughout its length, though it is typically closer to the Atlantic Coast than U.S. 1 and further from Interstate 95 than U.S. 1. The northern terminus is in the City of Winchester, Virginia at U.S. 50, while the southern terminus is in Punta Gorda, Florida at U.S. 41. Figure 1 shows the corridor throughout the Eastern Seaboard.

In the Commonwealth of Virginia, U.S. 17 does not, for the most part, parallel the coast the way it does through North Carolina, South Carolina, and Georgia, though it runs close in its southern sections, especially in the Hampton Roads area. U.S. 17's northern end is in the mountainous area of Winchester, Virginia, and it travels through rural and suburban regions, connecting through Fredericksburg and through the Middle Peninsula area before reaching Hampton Roads and traveling to North Carolina. Figure 2 illustrates the entire corridor throughout Virginia along with all modal facilities.

U.S. 17 travels through 11 counties in Virginia in addition to the Cities of Chesapeake, Portsmouth, and Newport News in the Hampton Roads area as well as the City of Fredericksburg and the City of Winchester. It also travels through the Towns of Tappahannock, located within the boundaries of Essex County on the Middle Peninsula and through the Town of Warrenton, located within Fauquier County. U.S. 17 travels through five Planning Districts as well as through three Metropolitan Planning Organizations (MPOs), including Winchester, Fredericksburg, and Hampton Roads.

Tidewater Corridor Jurisdictions

- Frederick County
- City of Winchester
- Clarke County
- Fauquier County
- Stafford County
- City of Fredericksburg
- Spotsylvania County
- Caroline County
- Essex County
- Middlesex County
- Gloucester County
- York County
- City of Newport News
- Isle of Wight County
- City of Suffolk
- City of Chesapeake
- City of Portsmouth

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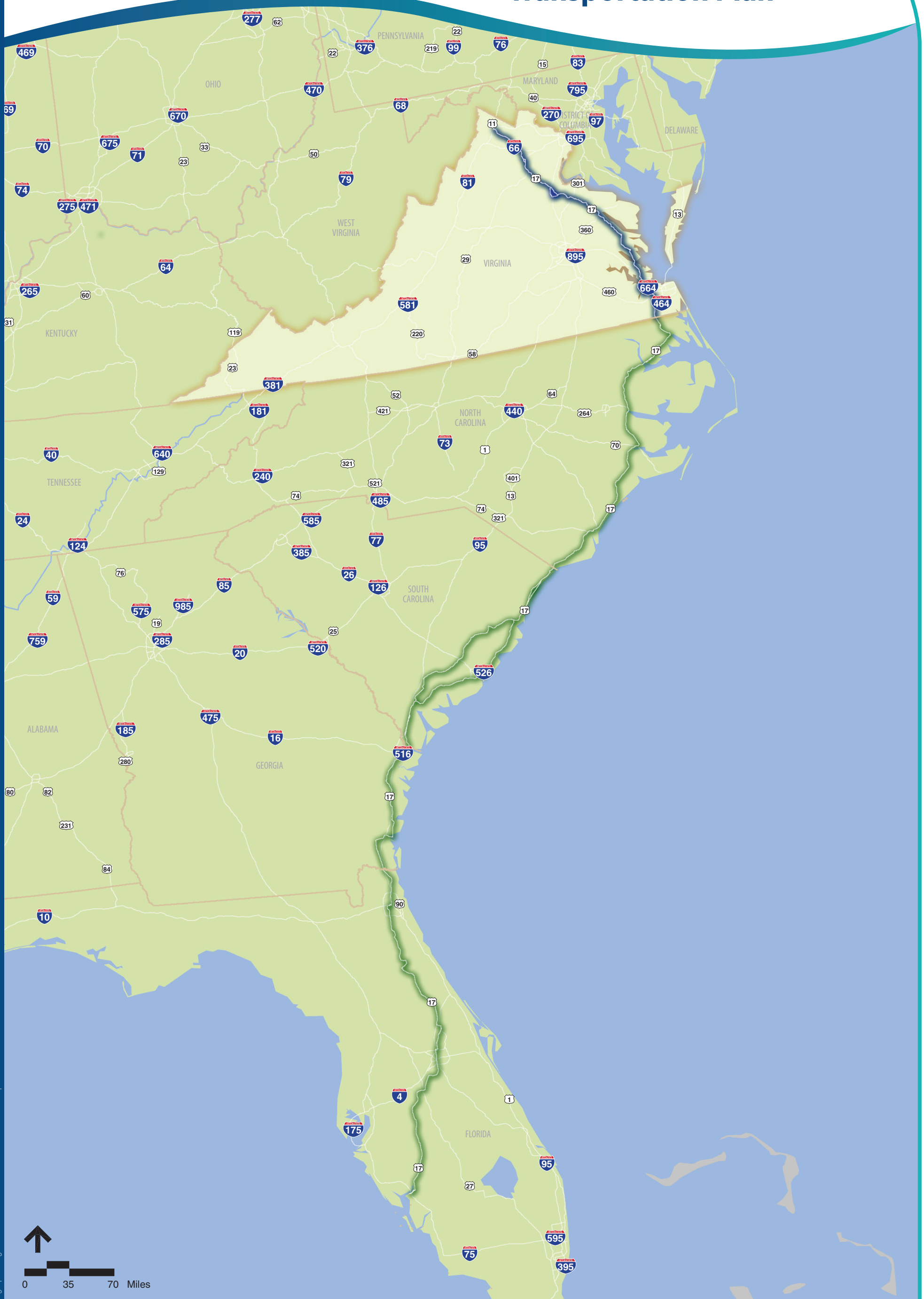

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FIGURE 1
Tidewater Corridor National Context Map

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Legend

- US 17
- Airport
- Railroad
- Greyhound Terminal
- Amtrak Station
- Park and Ride
- Port
- County Line
- MPO Area
- Planning District

WINCHESTER MPO
Winchester Regional
Virginia Inland Port
NORTHERN VIRGINIA PORTION OF THE METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS
WASHINGTON D.C.
MARYLAND
Warrenton Fauquier
Stafford Regional
Shannon
FREDERICKSBURG AREA MPO
CHARLOTTESVILLE-ALBEMARLE MPO
Tappahannock-Essex County
RICHMOND AREA MPO
TRI-CITIES AREA MPO
Newport News/ Williamsburg International
Newport News Marine Terminal
Norfolk International Terminal
Portsmouth Marine Terminal
HAMPTON ROADS MPO
Chesapeake Municipal
NORTH CAROLINA

Key Location Map

0 7.5 15 Miles

FIGURE 2
Tidewater Corridor Map

The northern terminus of U.S. 17 is within the city limits of Winchester, where it runs concurrently with U.S. 522, as well as with U.S. 50. U.S. 50 turns to the west to continue into the western part of the United States at the terminus of U.S. 17. Trucks are not allowed along U.S. 17 between Paris in northern Fauquier County and Winchester. While U.S. 17 ends at U.S. 50 in Winchester, the Tidewater Corridor can be considered to continue to the west along the remainder of U.S. 50 in Virginia into West Virginia.

South of Paris, U.S. 17 splits from U.S. 50, with U.S. 17 traveling to the south, where it connects briefly with Virginia Route 55 before a stretch of concurrency with Interstate 66 for approximately six miles. U.S. 17 runs concurrently with U.S. 15 and U.S. 29 in Fauquier County between Warrenton and Opal, then splits from these routes to travel toward Stafford County and Spotsylvania County, where it accesses the I-95 corridor. Within Spotsylvania County, U.S. 17 runs concurrently with U.S. 1 for over six miles. At the interchange with Interstate 95, U.S. 1 continues along its north-south path, while U.S. 17 joins I-95 for less than a mile traveling south. It then splits off again and travels east toward Caroline County, where it is known as the "Tidewater Trail."

U.S. 17 runs concurrently with U.S. 360 for over a mile near the Rappahannock River before U.S. 360 crosses into Richmond County and the Northern Neck. U.S. 17 also runs concurrently with Virginia U.S.s 14 and 33 for short stretches through Gloucester and Middlesex Counties. U.S. 17 is the major north-south corridor through the Middle Peninsula and is one of the two major corridors, along with U.S. 360 through this region. It connects many small communities and provides access to this region from Northern Virginia and the Fredericksburg area and provides a direct connection and an alternative to using I-95 and I-64 between Fredericksburg and the Hampton Roads regions.

U.S. 17 Concurrent Roadway Facilities

- U.S. 50 (Northern Shenandoah Valley)
- Virginia Route 55 (Rappahannock)
- I- 66 (Rappahannock)
- U.S. 1 (GWRC)
- Interstate 95 (GWRC)
- U.S. 360 (Middle Peninsula)
- Virginia Route 14 (Middle Peninsula)
- Virginia Route 33 (Middle Peninsula)
- Virginia Route 32 (Middle Peninsula)
- U.S. 58 (Hampton Roads)
- Virginia Route 143 (Hampton Roads)
- I- 64 (Hampton Roads)
- I- 464 (Hampton Roads)

U.S. 17 travels over the York River from Gloucester County and through York County before entering the City of Newport News and Isle of Wight County. Through Newport News and Isle of Wight County, there are areas of overlap with U.S. 258 as well as Virginia Route 32, including as it travels over the James River between the two jurisdictions. In Newport News, U.S. 17 also runs concurrently with Virginia Route 143 east of the James River Bridge. South of the City of Chesapeake, U.S. 17 travels into the State of North Carolina. While U.S. 17 does not access Norfolk or Virginia Beach, it is a major corridor through Newport News and provides access to the Cities of Portsmouth and Chesapeake. It also serves as a major access corridor through the City of Portsmouth and provides access from the City of Chesapeake and the remainder of Hampton Roads to North Carolina. U.S. 17 joins with I-64 for over four miles through the City of Chesapeake and with I-464 for less than a quarter-mile. There are no real parallel facilities to U.S. 17, though it runs concurrently and near other major facilities along its length through Virginia, as mentioned above.

A single line-haul service provides transit to travelers of a portion of the Tidewater Corridor. HRT Route 64, which is part of the Hampton Roads Transit (HRT) System, is a commuter route connecting Smithfield with Newport News. The route provides peak travel time service Monday through Friday and provides connections to park and ride lots. The route also connects to the larger HRT system at the Newport News Transportation Center. This system provides local transit service to the entire Hampton Roads region.

Multiple park and ride lots are available along the Tidewater Corridor between Winchester and Fredericksburg. Access to I-66 and park and ride lots near that corridor in Fauquier County is available, which in turn, can provide access to the Valley Connector, connecting to Washington D.C. Access directly from Winchester to the Valley Connector is also available. Access to park and ride lots around Fredericksburg can provide I-95 commuting options to Washington D.C. The Fredericksburg Virginia Railway Express (VRE) line is also available in Fredericksburg, north to Washington D.C. Park and ride lots are available between Fredericksburg and Hampton Roads, along the Middle Peninsula, and there are multiple accessible lots in the Hampton Roads area near the Tidewater Corridor.

U.S. 17 Transit Facilities

- Hampton Roads Transit (HRT)
- Park-and-ride lots
- Greyhound
- Valley Connector
- Virginia Railway Express

There are four Greyhound Stations in the Hampton Roads area, with one each in Norfolk, Suffolk, Hampton, and Virginia Beach, as well as stations in Williamsburg and Fredericksburg, near the Tidewater Corridor.

U.S. 17 does not directly access the Port of Virginia's three ports, all located within the Hampton Roads area, but it provides indirect access to these ports via southern Virginia through Hampton Roads. In addition, U.S. 17 provides access to the Rappahannock River Navigational Channels, located between the Northern Neck and Middle Peninsula regions. No rail line runs directly along the Tidewater Corridor, though access to numerous Norfolk Southern and CSX lines is available at certain locations. The Tidewater Corridor crosses the I-66 corridor, along which Norfolk Southern lines operate, and U.S. 17 provides access to numerous Norfolk Southern lines near the Port of Virginia, including Heartland Corridor and Coal Corridor lines. Where U.S. 17 crosses the I-95 corridor, access to CSX's National Gateway Corridor is available, and the CSX's Coal Corridor is accessible in the Hampton Roads area.

U.S. 17 Rail and Port Facilities

Ports:
- Norfolk International Terminals
- Newport News Marine Terminal
- Portsmouth Marine Terminal
- Port of Richmond
- Rappahannock River Navigational Channels

Connections to Freight Rail:
- Norfolk Southern Heartland Corridor
- Norfolk Southern Coal Corridor
- CSX National Gateway Corridor
- CSX Coal Corridor

Short Line:
- Chesapeake and Albemarle Railroad

Passenger Rail:
- Amtrak

U.S. 17 runs near the Chesapeake and Albemarle Short-Line Railroad, which operates from Norfolk south to North Carolina, using Norfolk Southern rail lines. In addition, there are Amtrak stations in Fredericksburg, Norfolk, Newport News, and Williamsburg, which provide access to various Amtrak routes throughout the state and throughout the eastern United States.

There are a total of twelve airports along the Tidewater Corridor, including two with commercial service. While it is not directly along U.S. 17, the Newport News Williamsburg Airport can be easily accessed via Interstate 64, and U.S. 17 also provides indirect access to Norfolk International Airport in Norfolk. Two reliever facilities are also accessible in Hampton Roads, including the Chesapeake Regional Airport, located directly along U.S. 17, just north of the North Carolina State line. In addition, U.S. 17 provides access to two other reliever facilities and multiple general aviation facilities. All airport facilities along U.S. 17 along with their location and designation by the Virginia Air Transportation System Plan are listed in Table 1.

Table 1 Tidewater Corridor Airport Facilities

Airport	Type	Location
Norfolk International	Commercial Service	City of Norfolk
Newport News Williamsburg	Commercial Service	City of Newport News
Hampton Roads Executive	Reliever	City of Chesapeake
Chesapeake Regional	Reliever	City of Chesapeake
Warrenton-Fauquier	Reliever	Fauquier County
Stafford Regional	Reliever	Stafford/Fauquier Counties
Middle Peninsula	General Aviation – Regional	King and Queen County
Hummel Field	Local Service	Middlesex County
Tappahannock-Essex County	General Aviation—Community	Essex County
Shannon	General Aviation – Regional	Spotsylvania County
Hartwood	Local Service	Stafford County
Winchester Regional	General Aviation – Regional	Frederick County

2

Corridor Functions

2.1 Corridor Functions in Virginia

The Tidewater Corridor has several major functions. First, it acts as an alternative to I-95, especially between Northern Virginia and Hampton Roads and is a major freight corridor west of I-95, especially as a connection from I-95 to I-66. U.S. 17 provides connections not only to I-66 and I-95 but also to I-64 in the Hampton Roads area and to I-81 through Winchester via U.S. 50. It provides access to the tourist and recreational destinations in the Northern Neck and Middle Peninsula regions.

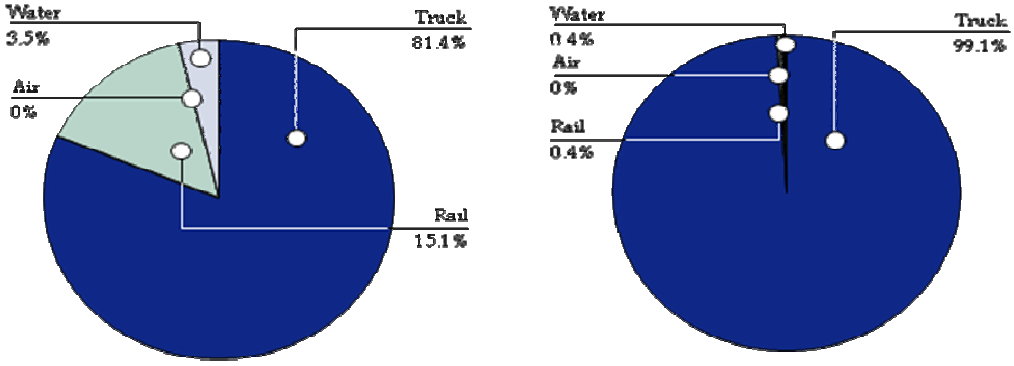
Functions of U.S. 17

- Major I-95 alternative to shore destinations and through traffic
- Freight corridor
- Access to Northern Neck and Middle Peninsula (Tourism)

2.2 Freight Corridor

The Tidewater Corridor is an important freight corridor, with most freight movement accomplished via trucking along the highway, though other options exist, including rail and air. It serves as an important freight alternative to I-64 and I-95 between the Port of Virginia and Washington D.C. and other markets to the north. While there is little rail directly along the corridor, except through Hampton Roads near the Port of Virginia, U.S. 17 also accesses the Virginia Inland Port via I-66 to the north. Figure 3 shows the tonnage by mode along the Tidewater Corridor as well as the freight value by mode.

Figure 3 Total Freight Tonnage and Value by Mode



Tonnage Value

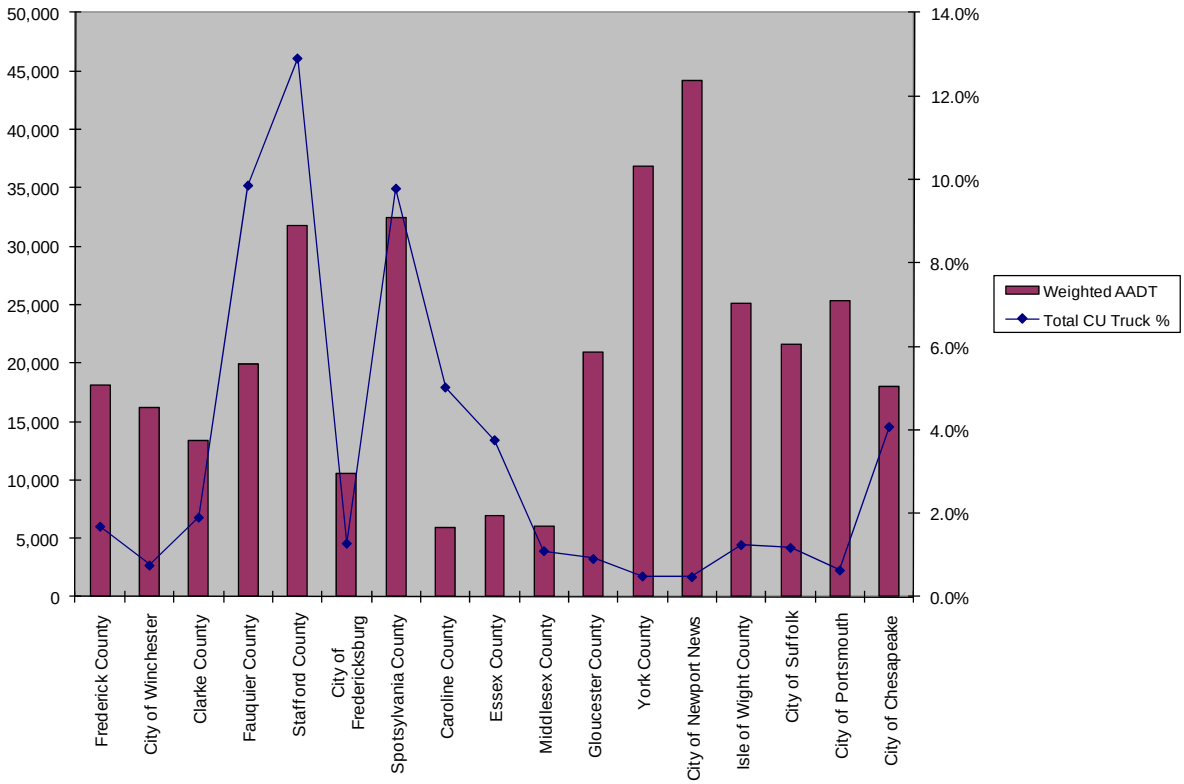
(Source: Statewide Freight Study)

As seen in Figure 3, most freight tonnage along the Tidewater Corridor is handled by truck, though some is handled by rail and even water transport. Truck transport accounts for over 99 percent of the total value of freight moved within the corridor, however.

Figure 4 shows that trucks account for anywhere between 1 and 13 percent of the total traffic along U.S. 17. This demonstrates the importance of U.S. 17 as a freight corridor and illustrates the fact that a large amount of freight is moved by truck using the highway facilities.

Traffic is heaviest in the Hampton Roads region, especially through the City of Newport News, though truck volumes are relatively low. Truck volumes are slightly higher through the City of Chesapeake where U.S. 17 travels south into North Carolina. Total traffic volumes are much lower through the Middle Peninsula. Truck percentages increase between Middlesex County and Spotsylvania County, where they are fairly high at 10 percent. Truck percentages are also very high through Stafford County and Fauquier County. While truck percentages are lower through the City of Fredericksburg, the total traffic volumes are much higher, meaning that the total number of trucks along U.S. 17 in Fredericksburg is approximately the same as in the surrounding counties (Stafford County and Spotsylvania County). This is where U.S. 17 connects to I-95, so it is expected that truck volumes would be high here. North of Fauquier County, trucks are not allowed on the roadway, so the percentages are much lower. Truck traffic typically diverts to I-66 at this point.

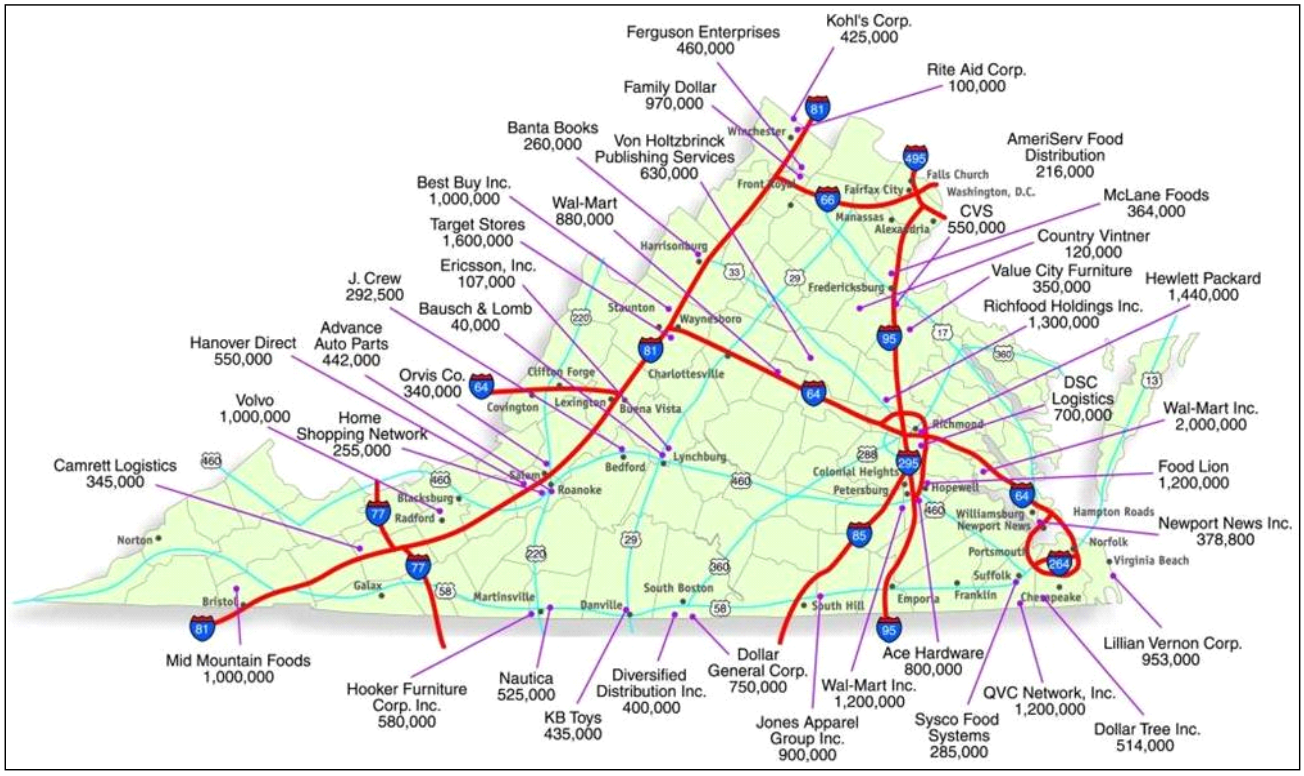
Figure 4 U.S. 17 Average Annual Daily Traffic (AADT) and Commercial Unit (CU) Truck Percentages



(Source: Statewide Freight Study)

Figure 5 shows the major distribution centers in Virginia. As seen in the figure, a number are located directly along the Tidewater Corridor. This allows for easy access from the corridor to the distribution centers.

Figure 5 Major Virginia Distribution Centers



(Source: Statewide Freight Study)

Table 2 lists the distribution centers located along the Tidewater Corridor. As seen in the table, there are a number of these facilities, which provide a destination for freight along U.S. 17. They are located throughout the corridor.

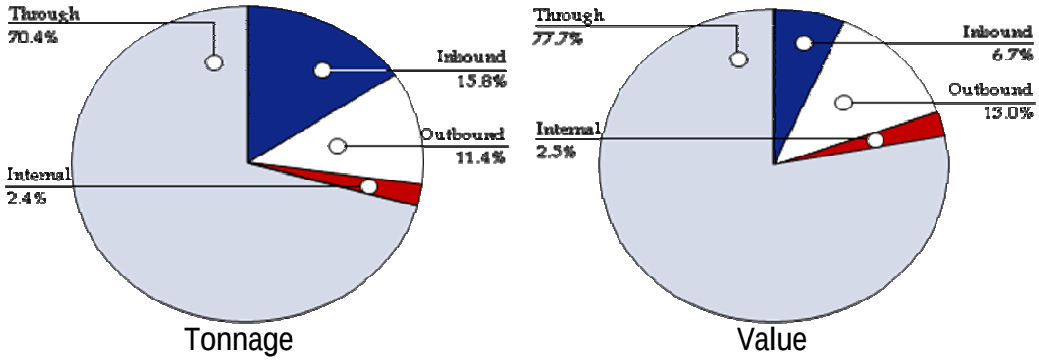
Table 2 U.S. 17 Warehouse and Distribution Facilities

Store	Location	Area (Square Feet)
Ferguson Enterprises	Winchester	460,000
Family Dollar	Front Royal	970,000
McLane Foods	Manassas	364,000
Value City Furniture	Ruther Glen	350,000
Newport News Inc.	Newport News	376,800
QVC Network	Suffolk	1,200,000
Dollar Tree Inc.	Chesapeake	514,000

(Source: Statewide Freight Study)

Figure 6 shows the freight tonnage and value by direction. As seen in this figure, a large majority of the freight moved along the Tidewater Corridor is through freight. This emphasizes that the Tidewater Corridor is a multi-state connection that offers a freight alternative to I-95 and I-64.

Figure 6 Freight Tonnage and Value by Direction



(Source: Statewide Freight Study)

According to the Statewide Freight Study, freight volumes along the Tidewater Corridor will continue to grow and will be influenced by a number of factors leading to increased transportation demand. Population growth along the corridor, while less than the overall population growth in Virginia, will play a major role. In addition, changes in national and global logistics patterns and the corridor's evolving industry structure will lead to increased demand for freight along this already heavy freight corridor.

There are projects that will expand capacity at the Port of Virginia, including the Norfolk International Terminals Central Rail Yard Expansion, the Craney Island expansion and rail connection, and the Norfolk/Portsmouth Beltline Railroad which will increase capacity into and out of the Port. These projects will likely lead to more freight being transferred to rail from truck. However, as the total amount of freight through the Port is expected to increase substantially, truck transport along U.S. 17 will remain a popular mode.

2.3 I-95 Alternative and Access to Tourist Areas and Shore Destinations

The Tidewater Corridor serves as an alternate route to I-95 for both passengers and freight, especially for those traveling between Northern Virginia and the Hampton Roads region. U.S. 17 connects Fredericksburg and I-95 to Newport News and I-64, providing another, shorter route to traveling through or around Richmond (via I-64 and I-95 and/or I-295).

Between Newport News and Fredericksburg, U.S. 17 is mostly a four-lane divided highway facility, though there is a two-lane section just east of Fredericksburg. Most of this section runs along the Middle Peninsula of Virginia, which is a fairly sparsely populated area of the Commonwealth. While U.S. 17 is not a limited access freeway through the Middle Peninsula and there are multiple at-grade unsignalized and signalized crossovers, it is mostly a free-flow route with slower speeds only through the developed areas of Newport News and Tappahannock.

2.3.1 Population Projections

The Virginia Transportation Research Council (VTRC) completed a report as part of VTrans2035, detailing population and employment trends and projections to 2035 for these socioeconomic factors. Increases in population will impact the amount of traffic on the roadway, impacting local traffic, through traffic, and tourist traffic. It will also impact both passenger and freight traffic along the highway.

Table 3 details the population projections for 2010 and 2035 based on two different sources, one a private vendor (NPA Data Associates) and one a public source (Virginia Employment Commission - VEC). Projections by both these sources only extended to 2030, so linear regression was used by VTRC to project to 2035. The data was organized by Planning District. The Northern Neck Planning District was also included along with the five PDCs that U.S. 17 directly passes through, as U.S. 17 provides the main access to this area via U.S. 360 over the Rappahannock River. Figure 7 illustrates the population density projections for the year 2010 at the Planning District level along the Tidewater Corridor, and Figure 8 illustrates the density projections for the year 2035 and the increase in population density from 2010 to 2035.

Table 3 Population Projections to 2035

	2010 Value		Midpoint 2035 Forecast		Percentage Increase		Annual Effective Growth Rate	
PDC	VEC	NPA	VEC	NPA	VEC	NPA	VEC	NPA
Hampton Roads	1,662,480	1,652,080	1,977,027	2,060,607	18.9%	24.7%	0.7%	0.9%
Middle Peninsula	94,630	96,350	122,282	130,942	29.2%	35.9%	1.0%	1.2%
Northern Neck	51,721	51,910	58,378	63,265	12.9%	21.9%	0.5%	0.8%
George Washington	345,022	355,520	595,668	638,298	72.6%	79.5%	2.2%	2.4%
Rappahannock	176,584	175,960	279,603	253,073	58.3%	43.8%	1.9%	1.5%
Northern Shenandoah Valley	225,501	224,660	324,804	308,542	44.0%	37.3%	1.5%	1.3%
Statewide Totals	8,010,340	8,057,350	10,278,943	10,926,181	28.3%	35.6%	1.0%	1.2%

Source: Virginia Transportation Research Council

As seen in this table and in the graphics, the increases in population between 2010 and 2035 along the Tidewater Corridor will be fairly substantial. In four of the six Planning Districts, the growth will be greater than the state averages.

In Hampton Roads, the percentage growth will be under the statewide average; however, given the size of the population, the total growth in population will be substantial. The more rural Middle Peninsula, Rappahannock, and Northern Shenandoah regions are expected to grow at a fairly high rate as well, though since the total population is far less than other areas, the total population growth will not be as great as in Hampton Roads or George Washington. George Washington, Northern Shenandoah Valley, and Rappahannock are all expected to grow partially as outer suburbs of the Washington D.C. region. This, however, has little effect on the Tidewater Corridor, which is not used substantially as a commuter corridor.

According to the VTRC Trends Report, between 76 and 81 percent of the total population increase in Virginia will take place in four Planning Districts (Northern Virginia, Richmond Regional, Hampton Roads, and George Washington). The Tidewater Corridor passes through both Hampton Roads and George Washington and near Northern Virginia, meaning that the growth along the corridor will be substantial over the next twenty-five years. The transportation infrastructure will need to keep up with the population growth to sustain the viability of the corridor.

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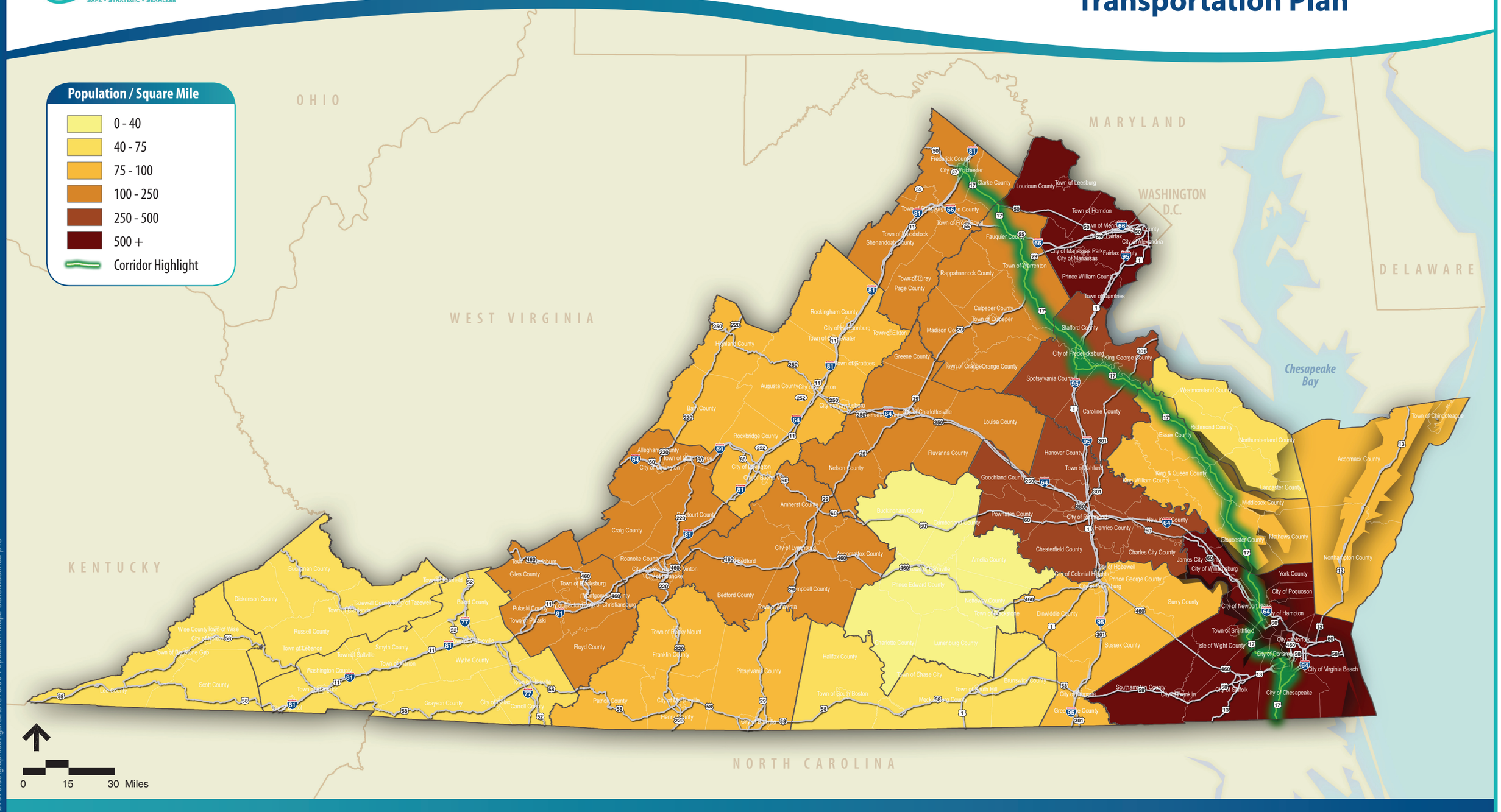

FIGURE 7
Population Density 2010 Projections - Tidewater Corridor

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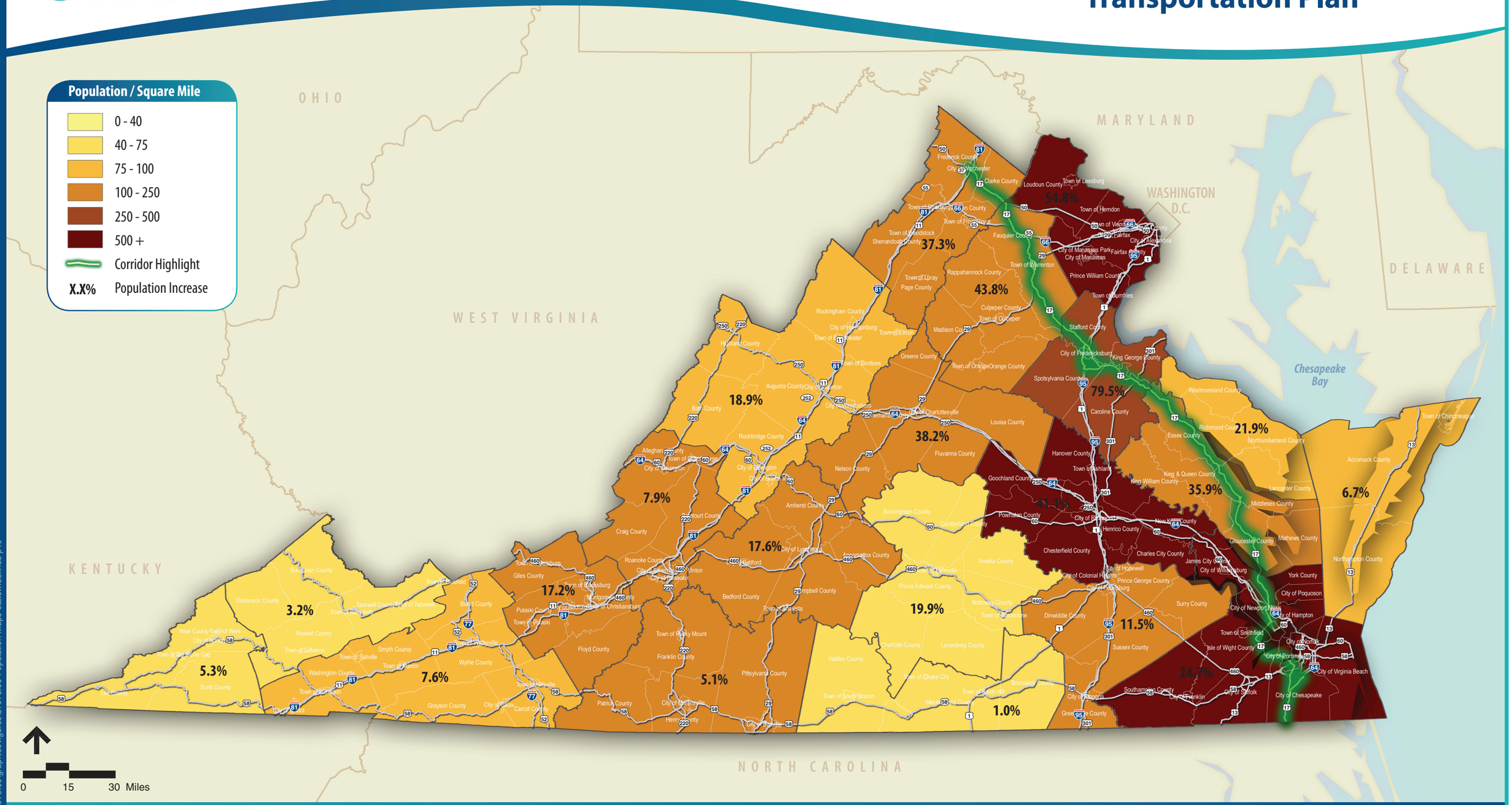


FIGURE 8
Population Density 2035 Projections -Tidewater Corridor

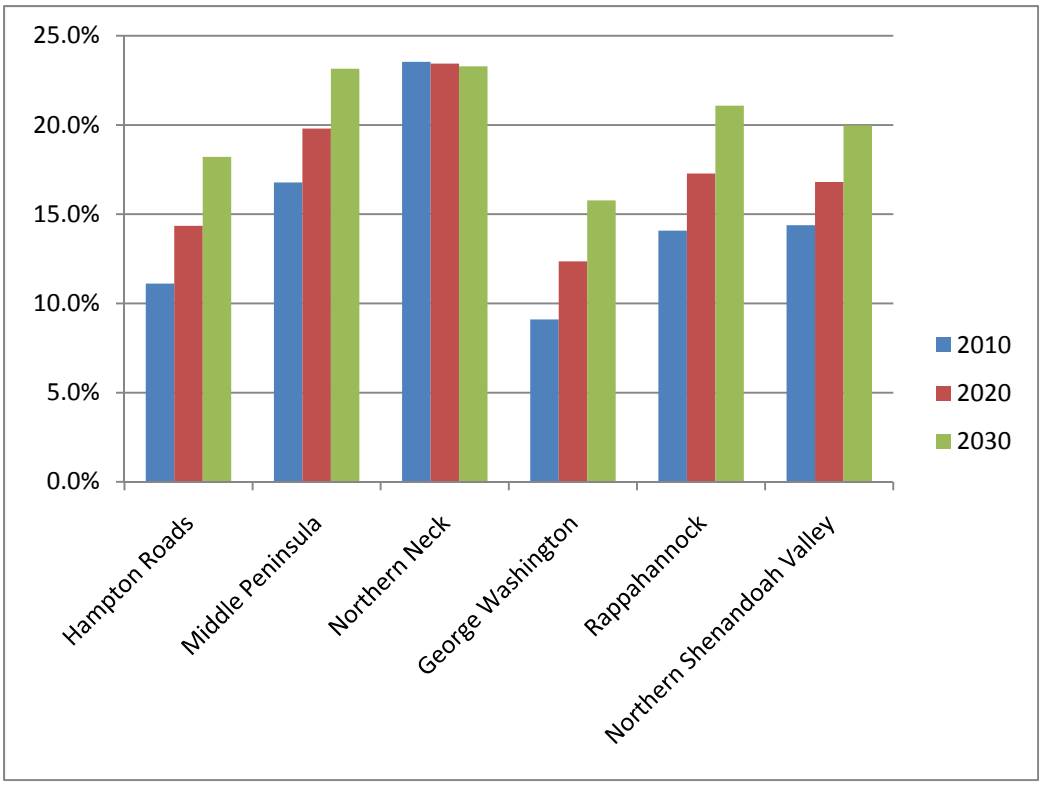
2.3.2 Population Over Age 65

In addition to general population projections, VTRC projected the ages of the population, broken down into five-year increments for a total of 18 categories. The percentage of population that is over age 65 was calculated based on these projections, and this information is available in Figure 9 for the years 2010, 2020, and 2030. The percentages were calculated for each Planning District along the Tidewater Corridor.

As seen in this figure, the percentage of the population over the age of 65 is expected to increase in all Planning Districts except the Northern Neck, with the percentage of the population over age 65 expected to be at least 20 percent in four of the six PDCs. The regions with the highest elderly population will be in the Northern Neck and in the Middle Peninsula. The over-65 population is expected to decrease slightly along the Northern Neck; however, this is expected to remain a popular region for retirees.

As the older population increases, it is likely that the population without access to a vehicle will increase as well, leading to a need for other modes of transportation, especially transit. While transit is available in Hampton Roads, Fredericksburg, and Winchester, there are few, if any, transit options in the rural areas with a high percentage of the population over 65, such as the Northern Neck and Middle Peninsula. As the population ages, increased demand response transit for the elderly and disabled should be investigated and likely implemented.

Figure 9 Percentage of Population over 65 (Projections)



2.3.3 Levels of Service

Figures 10 shows the existing levels of service (LOS) along the Tidewater Corridor, with red areas indicating undesirable levels of service (i.e., LOS 'E' or LOS 'F'). All areas not marked in red are where acceptable levels of service (i.e., LOS 'A' through LOS 'D') currently exist. As seen in Figure 10, the only areas of deficiency under existing conditions are short sections in the City of Winchester, Fredericksburg, and in the Hampton Roads region. The area just north of the York River also currently experiences undesirable levels of service, likely due to an increase in development and a proliferation of signalized intersections. In addition, the bridge over the York River is only two lanes, while the remainder of the corridor through this area is a four-lane divided highway section.

Figure 11 shows the future levels of service along the Tidewater Corridor, with the same color coding. As seen in the figures, levels of service are expected to degrade somewhat in various locations. In the northern section, the areas where U.S. 17 overlaps with I-66 and with U.S. 29 in Fauquier County are projected to have undesirable levels of service. The areas of deficiency near Fredericksburg and Hampton Roads, especially in the Newport News area, are projected to expand.

The future levels of service take into account projects along the roadway that are planned by the Virginia Department of Transportation. Even with planned expansions of the roadway and other programmed improvements, the highway facilities of the corridor are expected to degrade somewhat in the urban areas and in the areas where the corridor runs concurrently with other corridors. To combat this, localities, PDCs, and MPOs should identify the worst areas and plan for improvements to these areas.

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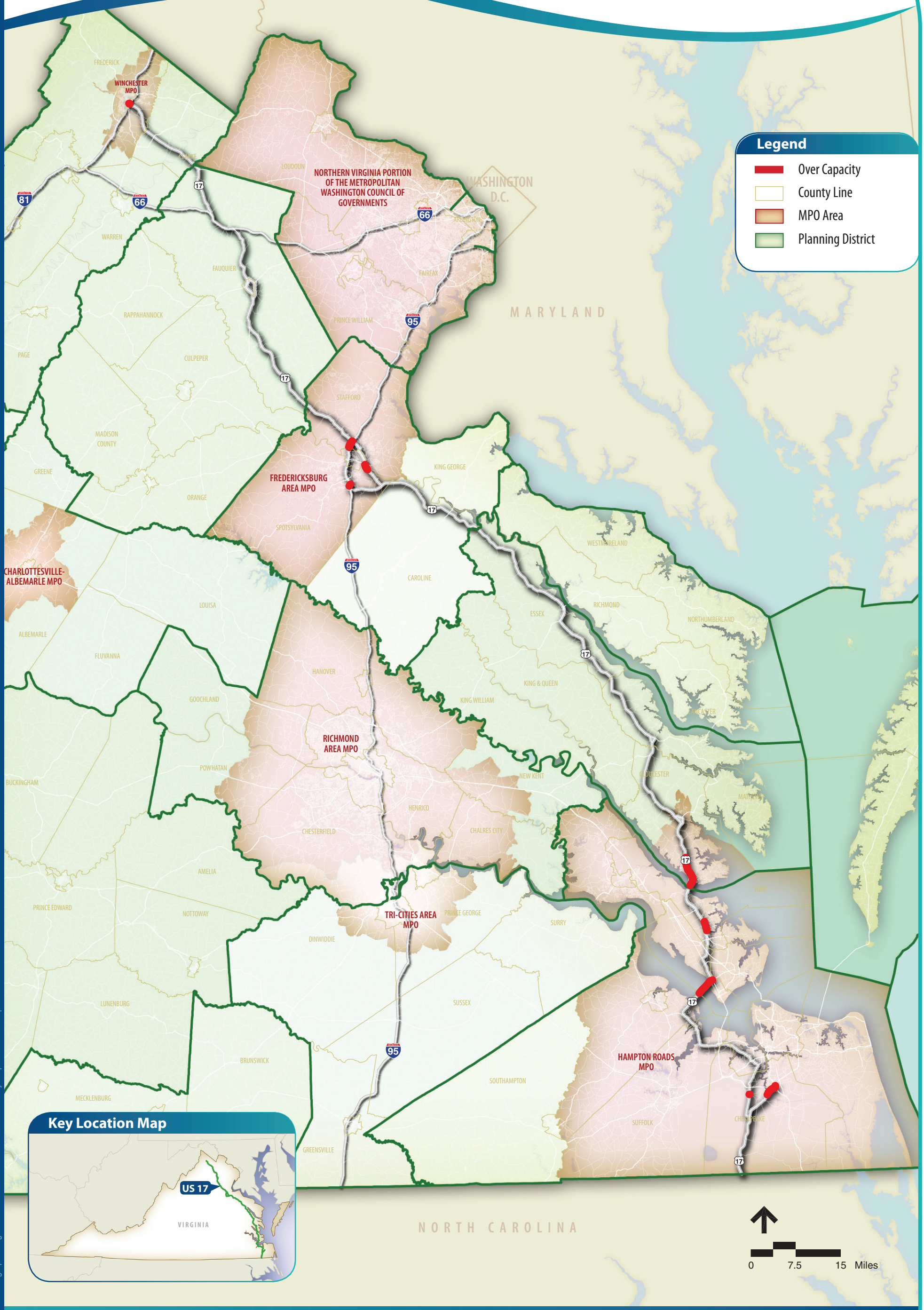

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FIGURE 10
Tidewater Corridor Existing Conditions

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- Over Capacity
- County Line
- MPO Area
- Planning District

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PRINCE GEORGE
SURRY
DINWIDDIE
LUNENBURG
SUSSEX
BRUNSWICK
SOUTHAMPTON
MECKLENBURG
SUFFOLK
CHESAPEAKE
GREENSVILLE
NORTH CAROLINA

Key Location Map

0 7.5 15 Miles

FIGURE 11
Tidewater Corridor Future Conditions

2.3.4 High-Crash Rate Areas

Figure 12 illustrates areas along U.S. 17 that have been identified as high-crash rate areas, according to the Virginia Department of Transportation. As seen in the figures, the high-crash rate areas are mostly concentrated in certain regions of the corridor, such as near the junction with I-66 in Fauquier County, around the Fredericksburg area, around Tappahannock, and through the northern part of the Hampton Roads region, especially near Newport News. These are areas of higher capacity, which could be the cause of the higher crash rates, such as in the Newport News area. Some areas are where the corridor overlaps with other corridors, where traffic streams from multiple sources overlap for short stretches, such as in Fauquier County where U.S. 17 overlaps with both U.S. 29 and U.S. 15. Safety should be considered with any expansion in capacity, especially in the areas highlighted in Figure 12.

2.3.5 Tourism

Figure 13 illustrates the tourist areas, such as state parks and national forests, that the Tidewater Corridor passes through. It also shows the regional airports near the corridor, illustrating another modal option to access these areas. In addition to these tourist areas, the corridor provides access to the Middle Peninsula and the Northern Neck, which includes multiple beaches and resorts along the Chesapeake Bay, the Potomac River, the Rappahannock River, and the York River. The Northern Neck Middle Peninsula areas are popular vacation areas for Mid-Atlantic residents, and U.S. 17 provides the main access from the interstates, like I-95, to these areas. As seen in the figure, there are many tourist attractions along the corridor or near the corridor.

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Virginia Statewide Multimodal Transportation Plan

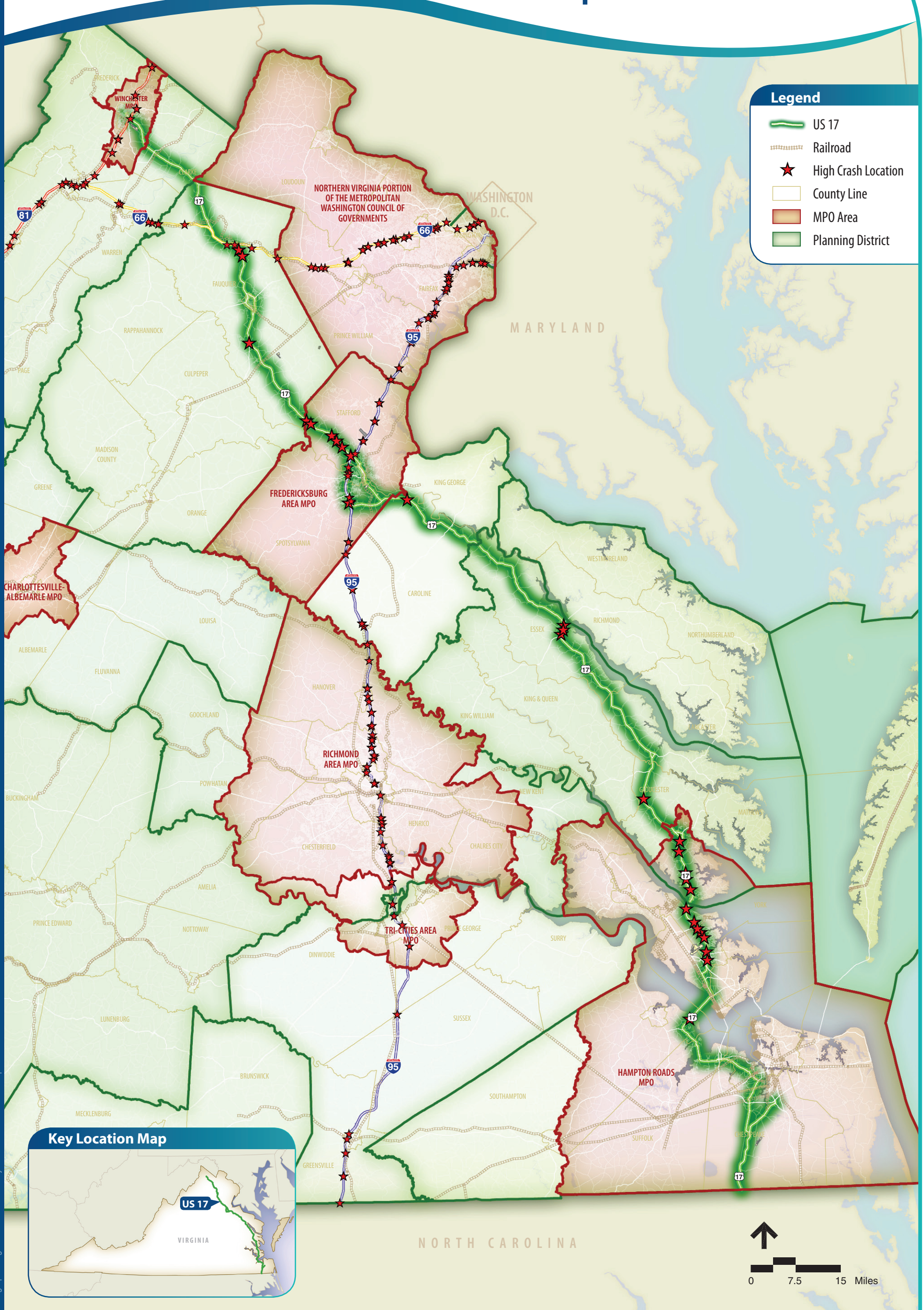

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FIGURE 12

Tidewater Corridor High-Crash Rate Locations Map

Virginia Statewide Multimodal Transportation Plan

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Legend

- US 17
- Railroad
- County Line
- MPO Area
- Planning District

Tourist Legend

- National Park or Forest
- State Park or Forest
- Local Park or Recreational Area
- National Forests (Reg-Local)
- Airport Area
- Educational Institution
- Golf Course
- Cemetery
- Military Installation
- Stadium or Arena
- Federal or State Prison
- Amusement Center
- Government Center

WINCHESTER MPO
NORTHERN VIRGINIA PORTION OF THE METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS
FREDERICKSBURG AREA MPO
CHARLOTTESVILLE-ALBEMARLE MPO
RICHMOND AREA MPO
TRI-CITIES AREA MPO
HAMPTON ROADS MPO

Sky Meadows State Park
George Washington National Forest
Great Meadow Park
Washington Dulles International Airport
Manassas National Battle Park
Prince William National Forest Park
Quantico Marine Corps Base
Shenandoah National Park
Curtis Memorial Park
Spotsylvania County Battle NMP
Fort AP Hill Military Reservation
Joseph Bryan Park
Middle Peninsula Regional Airport
Richmond International Airport
Pocahontas State Park
Yorktown Naval Weapons Station
Colonial National Historic Park
Langley Air Force Base
Newport News/ Williamsburg Internaional Airport
Norfolk Naval Air Station
Hampton Roads Airport
Chesapeake Municipal Airport
Fort Pickett

MARYLAND
NORTH CAROLINA

Key Location Map

US 17
VIRGINIA

0 7.5 15 Miles

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FIGURE 13
Tidewater Corridor Tourist Areas Map

3

Corridor Strategies

This section discusses the general corridor strategies for the Tidewater Corridor, which have been formulated to improve safety, mobility, and capacity along the corridor. The functions of the Tidewater Corridor are listed below, and Figure 14 presents a matrix that shows how the strategies relate to each function.

Functions of Tidewater Corridor

- *Major I-95 alternative to shore destinations and through traffic*
- *Freight corridor for trucks between Hampton Roads and I-95*
- *Access to Northern Neck and Middle Peninsula (tourism)*

Strategies were formulated based on trends, system performance, issues/challenges, elements of the VDOT Six-Year Program, the Constrained Long-Range Plans for each Metropolitan Planning Organization (MPO), visions and plans for the various Planning Districts, and any available Comprehensive Plan visions and strategies for each county and jurisdiction within each corridor. A Regional Planning Forum was held in the spring of 2009 with transportation representatives from across Virginia, including VDOT, Planning Districts and MPOs, transit agencies, the Virginia Airport Authority, the Port of Virginia, and other stakeholders in the Virginia transportation system. Public meetings were held in four locations in June and July of 2009 (Northern Virginia, Richmond, Hampton Roads, and Roanoke). Corridor deficiencies and what could be done to alleviate these deficiencies were discussed, with this information playing a major role in the formulation of these strategies. These strategies are part of a continuing planning process and are designed to be used as a guide for future transportation plans along the corridor within Virginia. They are not the explicit policy of the Commonwealth Transportation Board (CTB), though they are designed to assist the CTB, state and local transportation agencies, and local planning organizations in their planning efforts along the corridor. Specific corridor strategies and improvement recommendations will ultimately be developed as part of subsequent planning analyses at the State and local level.

Figure 14 - Tidewater Corridor Strategies vs. Functions Matrix

	Functions		
Strategies	**Major I-95 Alternative**	**Freight**	**Tourism**
Improve capacity along the Tidewater Corridor by widening, intersection improvements, and/or construction of interchanges at strategic locations.	●	●	●
Increase freight rail capacity from Port of Virginia and ensure multimodal freight movement coordination with the proposed Craney Island expansion.	○	●	○
Support expanded freight capacity by expanding intermodal facilities.	○	●	○
Improve transit in rural areas along the Tidewater Corridor by expanding existing fixed-route services and offering increased demand response services and services for the elderly and disabled.	○		⊙
Improve capacity through high-density areas of the Tidewater Corridor through traffic management, access management, and possible use of ITS technologies.	●	●	●
Improve ground access to airport facilities along Tidewater Corridor where relevant.	○	⊙	⊙

● Strong Correlation ○ Medium Correlation ⊙ Some Correlation

3.1 Strategies for Tidewater Corridor

Strategy: Improve capacity along the Tidewater Corridor by widening, intersection improvements, and/or construction of interchanges at strategic locations.

While much of U.S. 17 does not have any major capacity issues, there are spot locations where capacity improvements should be made. The Regional Planning Forum identified the two-lane section of U.S. 17 between U.S. 1 near Fredericksburg and U.S. 301 as being deficient and in need of expansion to a four-lane section. As this provides the connection between I-95 and the remainder of the corridor to the south, both for freight traffic from the Port of Virginia and for tourist traffic to the Northern Neck and the Middle Peninsula, this should be a priority. In addition, there are initiatives underway to expand four-lane sections to six-lanes, such as in York County and Hampton Roads. In addition, capacity can be improved through intersection improvements, such as additional turn lanes and signalization. Interchanges, such as the planned interchange and realignment of U.S. 17 at the intersection with U.S. 15 and U.S. 29 near Opal, can also be constructed to alleviate capacity issues. In addition, the bridge over the York River along U.S. 17 could be expanded to add more capacity. These improvements would assist both freight and passenger traffic to move more efficiently.

Strategy: Increase freight rail capacity from the Port of Virginia and ensure multimodal freight movement coordination with the proposed Craney Island expansion.

According to the Virginia Statewide Rail Plan, the Central Rail Yard Expansion project at Norfolk International Terminals will allow more freight coming into the Port of Virginia to travel by rail instead of by truck. In addition, with the expansion of Craney Island, it is expected that 50 percent of the total freight from this major new facility is expected to be moved by rail from the Port of Virginia. With expansion of the Port of Virginia through the Craney Island project, more rail capacity and more freight movement via rail is essential for capacity and safety along the Tidewater Corridor's highway facilities. U.S. 17 is an important freight alternate route to Northern Virginia and to I-95, especially along highway facilities. It would be a benefit to the corridor for safety and capacity to move freight to rail to follow the Heartland Corridor to the I-95 rail corridor instead of using trucks for transport along U.S. 17.

Strategy: Support increased freight movement capacity by expanding intermodal facilities.

With the expansion of freight capacity along the Tidewater Corridor, especially at the Port of Virginia, intermodal facilities will need to be expanded. These are facilities that transfer freight, usually containers, from one mode to another, such as from rail to truck. The Virginia Inland Port is the largest intermodal facility in Virginia, and there are plans to construct another intermodal facility near Roanoke as part of the rail initiatives along Norfolk Southern's Heartland Corridor. In addition, there are over 50 private intermodal facilities in Virginia, and most of these are near the Port of Virginia with access to the Tidewater Corridor. These facilities will need to be able to handle the amount of freight coming into and out of Virginia and traveling

throughout the state on expanded rail and port facilities, including at the new Craney Island facility and the expanded rail yards at Norfolk International Terminals.

Strategy: Improve transit in rural areas along the Tidewater Corridor by expanding existing fixed-route services and offering increased demand response services and services for the elderly and disabled.

There are urban areas, such as Hampton Roads, Winchester, and Fredericksburg that are served by local transit systems with extensive fixed-route schedules. However, in some more rural areas along the Tidewater Corridor, especially between Hampton Roads and Fredericksburg, access to transit is limited if not non-existent. Many County, City, and Town Comprehensive Plans call for more modal options and less use of single-occupant vehicles, and they discuss the need for demand response service to more rural areas for those without vehicles. As the elderly population in Virginia is expected to increase in the future, the need for these services will increase. The elderly and disabled will require services to shuttle them to medical facilities along the Tidewater Corridor as well as to urban centers. While fixed route services are likely not feasible in most of these areas, increased demand response services should be able to fill this need.

Strategy: Improve capacity through high-density areas of the Tidewater Corridor through traffic management, access management, and possible use of Intelligent Transportation Systems (ITS) technologies.

While much of U.S. 17 does not experience capacity issues, there are some areas where the corridor provides the primary local access. These areas, such as through Hampton Roads, Tappahannock, Warrenton, Fredericksburg, and Winchester, experience some capacity issues as development along the corridor increases. Capacity issues can be somewhat alleviated through signal re-timings, signal coordination, increased access management through these developed areas, including consolidation of entrances and reduction in the number of median breaks, and through possible use of ITS technologies to ensure maximum traffic flow. The public meetings identified that these areas of U.S. 17 are deficient, especially through Newport News and Tappahannock.

Strategy: Improve ground access to airport facilities along Tidewater Corridor where relevant.

There are twelve airport facilities along the Tidewater Corridor, including Newport News-Williamsburg International Airport, multiple reliever facilities, and multiple general aviation facilities. Ground access to these airport facilities should be improved to ensure maximum usage of these airports. Ground access to airports has been identified as a weakness across Virginia. In addition, the long distance from certain areas of Virginia to airports with commercial service has been identified as a major issue. Increases in capacity to the highway facilities and offering other modal options along each corridor could potentially assist in alleviating this problem.

3.2 Strategies vs. VTrans2035 Goals

These strategies relate to the goals of VTrans2035, and Figure 15 illustrates a matrix showing this relationship. A discussion of each of the goals is below.

- **Goal 1: Safety and Security—Provide a safe and secure transportation system.** Most of the strategies relate to the safety and security of the roadway. In addition, more demand response transit service for the elderly and disabled improves their safety and security as well.
- **Goal 2: System Maintenance and Preservation—Preserve and maintain the condition of the existing transportation system.** All of the strategies help to achieve this goal, as the existing transportation system is maintained and preserved, and in many cases, improved. While capacity may be increased along the highway facilities or at the Port of Virginia, the existing transportation facilities are maintained and preserved along the Tidewater Corridor.
- **Goal 3: Mobility, Connectivity, and Accessibility—Facilitate the easy movement of people and goods, improve interconnectivity of regions and activity centers, and provide access to different modes of transportation.** All of the strategies promote increased mobility, connectivity, and accessibility. Any increase in capacity along the roadway, whether along the highway facilities or at the Port of Virginia, assists in achieving this goal. Multimodal coordination at Craney Island and at the Port of Virginia also helps to achieve this goal for freight movement from the Port of Virginia to all markets it serves.
- **Goal 4: Environmental Stewardship—Protect the environment and improve the quality of life for Virginians.** Increases in rail capacity, including at Craney Island, which will remove large trucks from roadways helps to achieve the goal of environmental stewardship. In addition, any increase in roadway capacity that minimizes the amount of time vehicles are on the roadway, leading to fewer emissions, also assists in achieving this goal.
- **Goal 5: Economic Vitality—Provide a transportation system that supports economic prosperity.** The Port of Virginia is one of the major economic engines in Virginia, and the expansion of the Port through the Craney Island project will increase the amount of freight that is shipped through the Commonwealth. Additional freight rail shipment and development could also potentially lead to an increase in freight movement and an increase in distribution centers and warehouses. In addition, there is the potential for further economic development along the Tidewater Corridor. Improved rural transit, as well as increases in capacity, could potentially spur development in the rural areas of the corridor.

- **Goal 6: Coordination of Transportation and Land Use—Facilitate the effective coordination of transportation and land use to promote livable communities.** Increases in highway capacity should be accomplished in coordination with land use decisions in the areas they are constructed. In addition, any increase in transit, including demand response services, should also be coordinated with land use. Local planning efforts should protect airspace and ensure that airports are not compromised by encroachment of incompatible land uses.

Figure 15 - Tidewater Corridor Strategies vs. Goals Matrix

	Goals					
Strategies	**Safety and Security**	**System Maintenance and Preservation**	**Mobility, Connectivity, and Accessibility**	**Environmental Stewardship**	**Economic Vitality**	**Coordination of Transportation and Land Use**
Improve capacity along the Tidewater Corridor by widening, intersection improvements, and/or construction of interchanges at strategic locations.	○	●	●	○		○
Increase freight rail capacity from the Port of Virginia and ensure multimodal freight movement coordination with the proposed Craney Island expansion.	●	●	●	●	●	
Support expanded freight capacity by expanding intermodal facilities.	○	●	●	●	○	⊙
Improve transit in rural areas along the Tidewater Corridor by expanding existing fixed-route services and offering increased demand response services and services for the elderly and disabled.	○	○	●	●	⊙	⊙
Improve capacity through high-density areas of the Tidewater Corridor through traffic management, access management, and possible use of ITS technologies.	○	●	●	○		○
Improve ground access to airport facilities along the Tidewater Corridor where relevant.	⊙	○	●	⊙	⊙	

● Strong Correlation ○ Medium Correlation ⊙ Some Correlation