



Virginia's Long-Range Multimodal Transportation Plan

Corridors of Statewide Significance: Eastern Shore Corridor

**Prepared for:
Commonwealth Transportation Board**

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March 2010**

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Corridor Overview

1.1 Transportation Facilities

The Eastern Shore Corridor is mostly defined by U.S. Highway 13, which is a highway running north-to-south for over 500 miles in the eastern United States; running from the northeast suburbs of Philadelphia, Pennsylvania to Fayetteville, North Carolina. U.S. 13 also travels through Delaware, Maryland, and Virginia. Figure 1 shows the entire U.S. 13 corridor throughout the Eastern Seaboard.

In Virginia, U.S. 13 serves as a connector between the Hampton Roads area and Virginia's Eastern Shore, part of the Delmarva Peninsula, providing the only direct connection to the Peninsula without leaving the state. U.S. 13 crosses the Chesapeake Bay at its mouth via the Chesapeake Bay Bridge-Tunnel, a 20-mile long combination facility. The corridor provides access in the Hampton Roads area to the Cities of Suffolk, Chesapeake, Virginia Beach, and Norfolk, following a portion of the Military Highway through the Hampton Roads area, where U.S. 13 overlaps with the Military Highway. Figure 2 illustrates the Eastern Shore Corridor in Virginia and shows all modal facilities.

The Eastern Shore Corridor passes through the Hampton Roads and Accomack-Norhampton Planning Districts. It passes through four cities in the Hampton Roads area and through both Accomack and Northampton Counties along the Virginia Peninsula. U.S. Highway 13 acts as the major corridor along the Peninsula, linking many smaller towns and other communities in Accomack and Northampton Counties. U.S. 13 also provides indirect access in the Hampton Roads area to the three major Virginia Ports, located in Newport News, Portsmouth, and Norfolk. In addition, the Chesapeake Bay Bridge-Tunnel was constructed over two major shipping channels that provide access to the Port of Virginia.

U.S. 13 begins in Virginia at the North Carolina border in the City of Suffolk, and travels through four cities in the Hampton Roads Planning District, most of which also operates as the Hampton Roads MPO. Through this area, U.S. 13 serves primarily as a local access corridor, one of many in the Hampton Roads area, connecting Suffolk to Portsmouth and Chesapeake to the east. North of Virginia Beach, it enters the Chesapeake Bay-Bridge Tunnel, connecting to the Eastern Shore.

Eastern Shore Corridor Jurisdictions

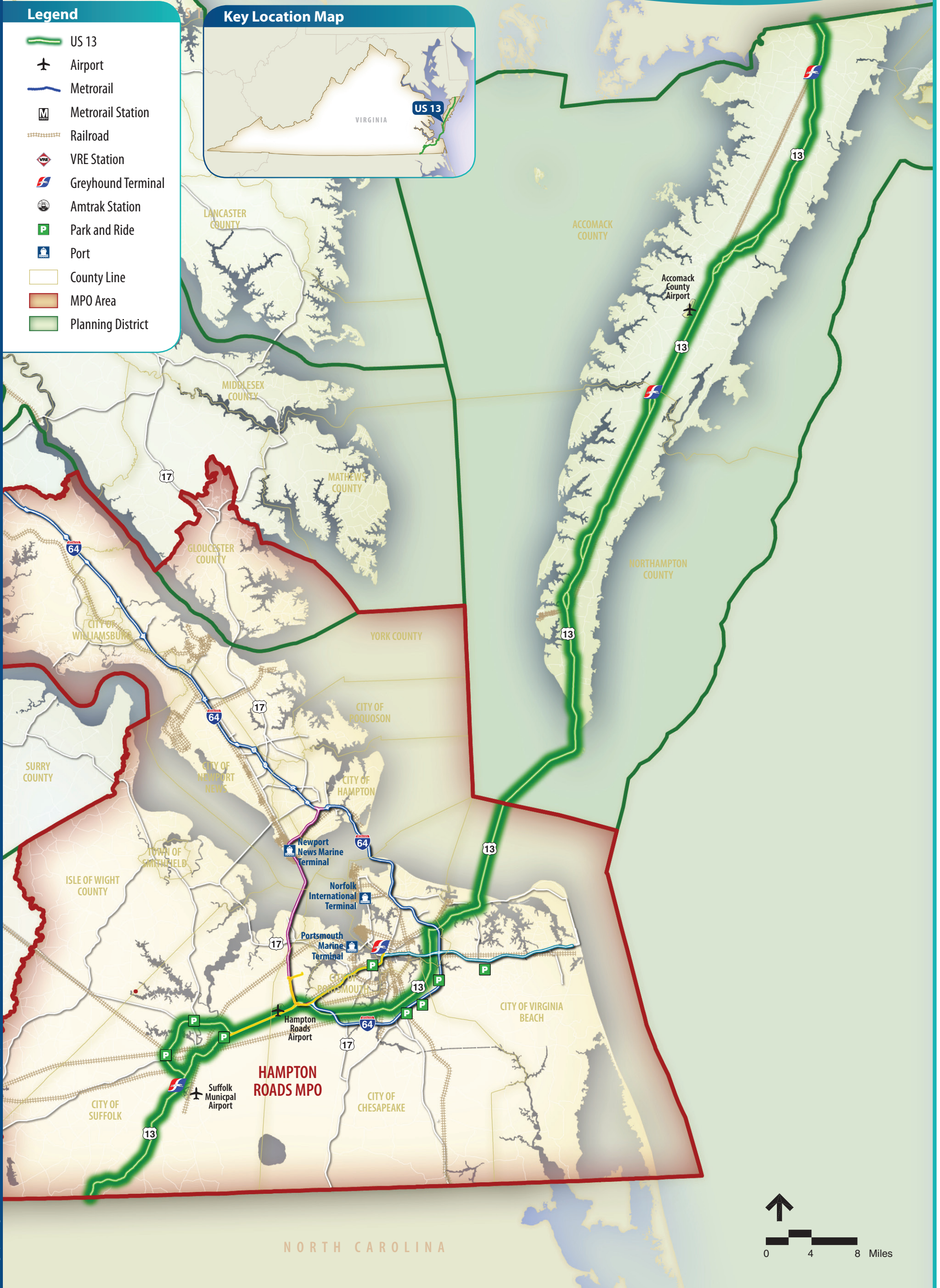
- ▶ City of Suffolk
- ▶ City of Chesapeake
- ▶ City of Virginia Beach
- ▶ City of Norfolk
- ▶ Northampton County
- ▶ Accomack County



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FIGURE 1

Eastern Shore Corridor National Context Map



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FIGURE 2
Eastern Shore Corridor Map

The Chesapeake Bay Bridge-Tunnel is a 20-mile-long facility, with the above-water portions at four lanes, while the tunnel portions are two-lane facilities. This facility is operated by the Chesapeake Bay Bridge Tunnel Commission. There are four man-made islands along the Bridge-Tunnel that act as portals for the facility. The Bridge-Tunnel spans two major widely spaced shipping channels, as freight is moved to the Port of Virginia in the Hampton Roads area.

U.S. 13 runs concurrently with U.S. Highway 58 and U.S. Highway 460, both Corridors of Statewide Significance, between Suffolk and Chesapeake. U.S. 58 and U.S. 460 split off at either end of this link between the two cities. In Suffolk, U.S. 13 runs concurrently for a short stretch with Virginia Route 32 and runs concurrently for a small stretch in Chesapeake with Virginia Route 191. In Norfolk, U.S. 13 overlaps with Virginia Route 165 for half a mile, and in Norfolk and Virginia Beach, it overlaps with Virginia Route 166 for two miles. Along the Virginia Peninsula, U.S. 13 runs concurrently with Virginia Route 180 for a half-mile in the Town of Keller.

There are no true parallel facilities to U.S. Highway 13. However, it accesses other major corridors, especially within the Hampton Roads area, where it accesses Interstate 64 and its auxiliary routes, including I-664, the Hampton Roads Beltway, and I-264 in multiple locations. It also accesses U.S. 58, U.S. 460, and U.S. 17, all components of Corridors of Statewide Significance. The corridor does not run concurrently with any interstate in Virginia.

The corridor is also served by multiple transit facilities. The Hampton Roads area is served by Hampton Roads Transit (HRT), which provides bus service as well as Metro Area Express (MAX) service throughout the region, particularly from Suffolk to Norfolk and between the Norfolk Naval Air Station and Greenbrier. None of the bus routes access the Eastern Shore or Chesapeake Bay Bridge-Tunnel. The MAX bus offers service along the U.S. 13 corridor within Hampton Roads from Suffolk to Portsmouth.

- U.S. 13 Transit Facilities**

 - Hampton Roads Transit (HRT)
 - Metro Area Express (MAX)
 - Shore Transit and Rideshare (STAR)
 - Greyhound

Multiple park and ride lots are available in the Hampton Roads area as well, including three in Suffolk and five near where U.S. 13 runs parallel to I-64 through Chesapeake and Virginia Beach. Shore Transit and Rideshare (STAR) offers bus service along four lines on the Eastern Shore, though there is no connection to the Hampton Roads area.

Greyhound offers service in the Hampton Roads region. There are multiple stations in this area, including ones in Suffolk, directly along the Eastern Shore Corridor, in Newport News, Hampton, and Norfolk. Greyhound provides service to both North Carolina and Maryland from these stations as well as to other cities in Virginia. In addition, Greyhound service is available along the Eastern Shore, as there are stations in Exmore and Oak Hall, near the Maryland border, providing a bus connection between Hampton Roads and the northern Eastern Shore.

While U.S. 13 does not directly access the Port of Virginia, the Chesapeake Bay Bridge-Tunnel was constructed to allow for two major shipping channels into these

ports with little to no disruption of shipping or vehicular traffic. The Port of Virginia’s facilities can be accessed indirectly in the Hampton Roads region from the Eastern Shore Corridor.

In addition, Norfolk Southern operates freight rail lines from the Port of Virginia in Chesapeake and Suffolk and out of the Hampton Roads area. CSX operates rail lines that travel along the Eastern Shore Corridor in Chesapeake and Suffolk and to the remainder of Virginia and North Carolina. While Amtrak has stations in the Hampton Roads area, the tracks along the Eastern Shore Corridor are not utilized for passenger rail. In addition, the Chesapeake and Albemarle Short-Line Railroad operates from Norfolk south to North Carolina, using Norfolk Southern rail lines.

Norfolk Southern lines run along the Eastern Shore of Maryland but do not run into Virginia. The Bay Coast Railroad runs along the Eastern Shore from Maryland and crosses the Chesapeake Bay via rail ferry barge across 26 miles of water to access Norfolk. It is the most direct rail route from the Northeast to Norfolk, and can accommodate larger loads than most Virginia railways. It interchanges with Norfolk Southern rail lines in both Norfolk and in Maryland.

In addition to access to the Port of Virginia, the Chesapeake Bay Navigational Channels and Inland Waterway are both located in this region. Barge transport between the Port of Virginia and Baltimore, MD as well as the Port of Richmond and the Port of Alexandria also is available. Also, cruise ships operate between the Northern Neck, the Maryland Eastern Shore, Tangier Island, and the Virginia Eastern Shore, offering access between the various localities.

Commercial air service is available at both Norfolk International Airport and Newport News Williamsburg Airport in the Hampton Roads region. In addition, there are two reliever facilities that offer limited commercial service. On the Eastern Shore, there is no commercial service available, except to the north along Maryland’s Eastern Shore at the Ocean City/Salisbury Airport. However, there is a general aviation facility and air access to Tangier Island. Table 1 lists the airport facilities along the Eastern Shore Corridor, including the location and the Virginia Air Transportation System Plan (VATSP) designation.

U.S. 13 Rail and Port Facilities

Port:

- Newport News Marine Terminal
- Portsmouth Marine Terminal
- Norfolk International Terminals
- Chesapeake Bay Navigational Channels

Freight Rail:

- Bay Coast Railroad
- Norfolk Southern
- CSX
- Chesapeake and Albemarle Railroad

Passenger Rail:

- Amtrak

Table 1 Eastern Shore 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 |
| Suffolk Municipal | General Aviation – Regional | City of Suffolk |
| Accomack County | General Aviation – Regional | Accomack County |
| Tangier Island | General Aviation – Community | Accomack County |

Corridor Functions

2.1 Corridor Functions in Virginia

The Eastern Shore Corridor provides a direct connection between the Hampton Roads region and the Eastern Shore and offers an important connection to Virginia and North Carolina beaches from northern states such as Maryland, Delaware, and New Jersey. It is the shortest path from the Port of Virginia to northeastern markets. In addition, it provides access to other tourist areas such as Chincoteague Island and accesses NASA’s Wallops Island facility, located along the Eastern Shore of Virginia. U.S. 13 is also the main corridor through Accomack and Northampton Counties along Virginia’s Eastern Shore and provides access to Maryland to the north.

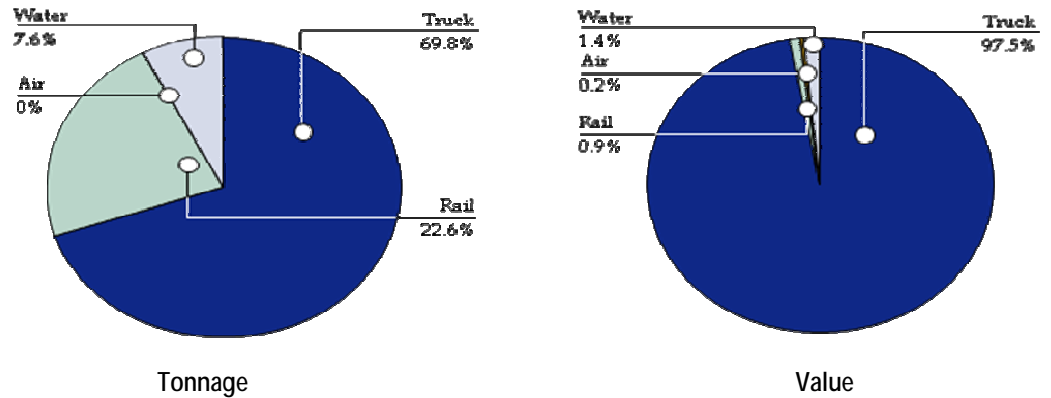
Functions of U.S. 13

- ▶ Link between Hampton Roads and Eastern Shore for passengers and freight
- ▶ Main Street through Eastern Shore
- ▶ Access to tourist areas

2.2 Freight Movement Link between Hampton Roads and Eastern Shore

The Eastern Shore Corridor is an important freight corridor, with most freight movement accomplished via trucking along the highway or along the Bay Coast Railroad and Barge, which connects rail facilities in Hampton Roads with rail facilities along the Virginia Eastern Shore via barge transport. This offers a more direct connection for freight via rail from the Port of Virginia to the northeast and is the shortest path between these two points. The railroad’s route is strategically located between Norfolk Southern northern and western connections and Norfolk Southern lines and CSX lines with their southern and western connections. The railroad bypasses the congested Northeast Corridor and its restricted clearances, with the capability to handle high-roof 60 ft. boxcars, tri-level enclosed auto racks, and over dimension shipments. The Bay Coast Railroad and Barge, like many short-line railroads in Virginia is partially subsidized by the Virginia Department of Rail and Public Transportation. Figure 3 shows the tonnage by mode along the Eastern Shore Corridor as well as the freight value by mode.

Figure 3 Total Freight Tonnage and Value by Mode

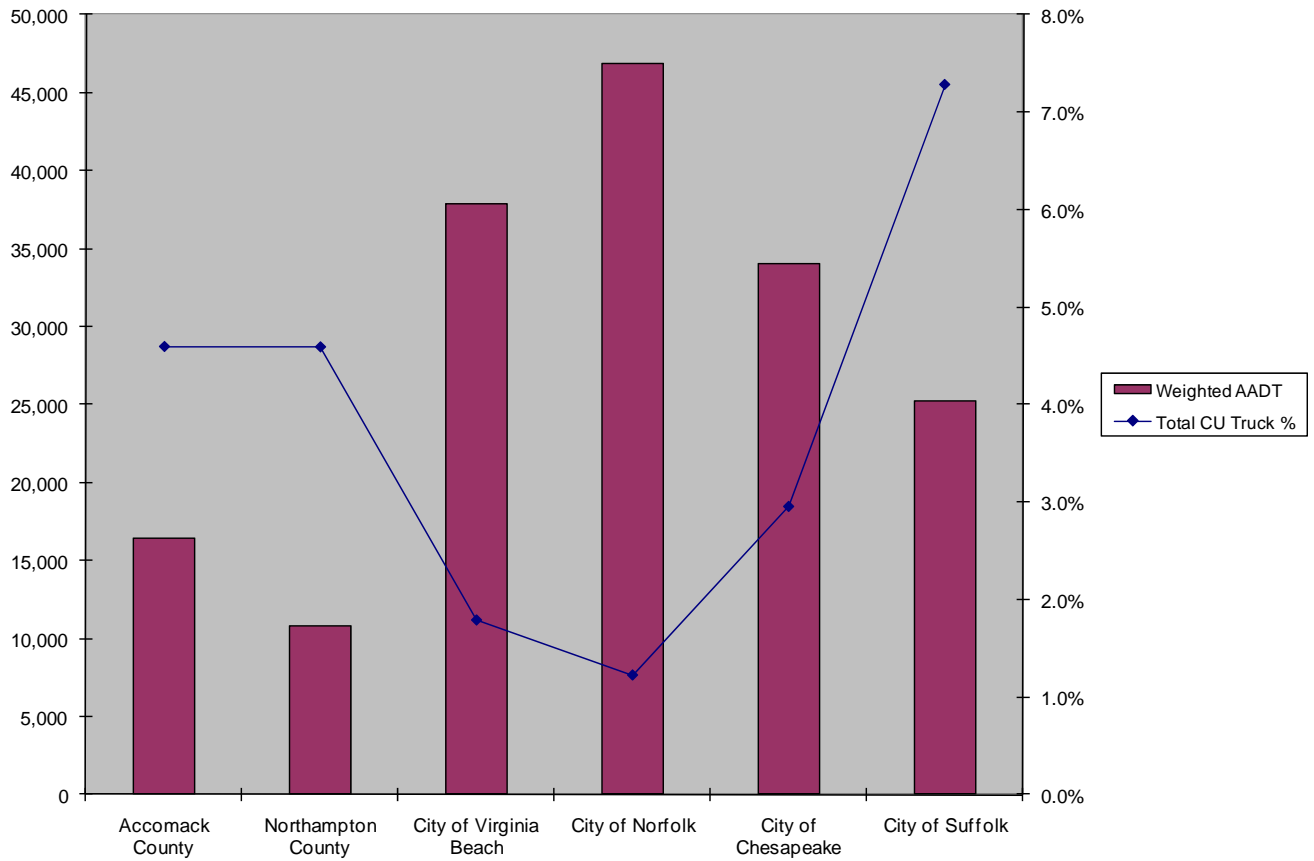


(Source: Statewide Freight Study)

As seen in Figure 3, most freight is transported by truck despite the presence of the rail lines and the Bay Coast Railroad and Barge. Water transport of freight represents over 7 percent of the total freight movement by volume through the Eastern Shore Corridor, and rail transport accounts for over 22 percent. Truck transport along the highway facilities accounts for virtually all of the total freight value (over 97 percent).

Figure 4 shows that trucks account for anywhere between 1 and 7 percent of the total traffic along U.S. 13. While it is not as heavy a freight corridor as some other corridors in Virginia, there is substantial truck traffic through the Eastern Shore and especially through the City of Suffolk as U.S. 13 travels south into North Carolina. As expected, traffic flow is heavier in Hampton Roads than it is on the Eastern Shore.

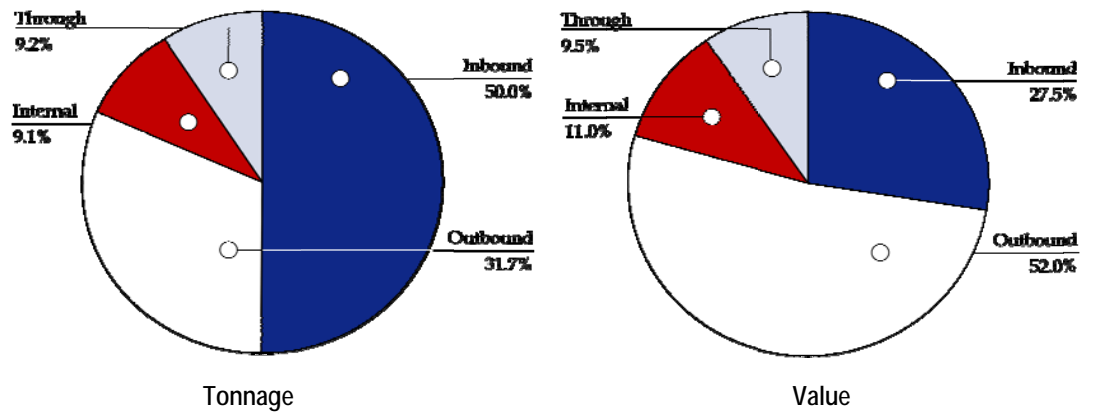
Figure 4 U.S. 13 Average Annual Daily Traffic (AADT) and Commercial Unit (CU) Truck Percentages



(Source: Statewide Freight Study)

Figure 5 shows the freight tonnage and value by direction. As seen in this figure, approximately half of the total volume is inbound freight, though half of the total value is outbound freight, likely from the Port of Virginia to markets to the north of Virginia. There is some through freight along the corridor and some internal freight, though inbound and outbound freight together represent over three-quarters of the total freight movement along the Eastern Shore Corridor in Virginia.

Figure 5 Freight Tonnage and Value by Direction



(Source: Statewide Freight Study)

According to Statewide Freight Study, freight volumes along the Eastern Shore Corridor will continue to grow and will be influenced by a number of factors leading to increased transportation demand. Population growth along the corridor 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 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. Yet, with the total amount of freight through the Port expected to increase substantially, truck and barge transport will still be very prevalent, especially with regard to its role as an important east-coast freight corridor. With increases in freight demand, it is important that capacity to carry the expected volumes of freight will exist into the future, not only along the highway facilities but along the rail facilities as well.

2.3 Passenger Link between Hampton Roads and Eastern Shore/Main Street through Eastern Shore

The Eastern Shore Corridor connects the Delmarva Peninsula to Hampton Roads for passenger traffic as well as through freight via the Chesapeake Bay Bridge-Tunnel, which spans 20 miles and includes over-water sections of four-lane bridges as well as underwater sections of two-lane tunnels. This is the quickest connection from southern Virginia and points south to the Eastern Shore, which continues into Maryland and Delaware and provides further access to New Jersey, New York, and the northeast.

After crossing the Chesapeake Bay via the Bridge-Tunnel, U.S. 13 also acts as the main access through the Eastern Shore of Virginia, providing access to numerous small towns and communities in Northampton and Accomack Counties where it is mostly a four-lane facility. It is the only major north-south corridor through this region, so it carries virtually all of the through traffic and much of the local traffic traveling between communities.

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 both local traffic and through traffic through the Eastern Shore and in Hampton Roads, and it will impact both passenger and freight traffic along the highway.

Table 2 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. There are two very disparate Planning Districts along the Eastern Shore Corridor. The Hampton Roads PDC is a very densely populated, mostly urban region, while the Accomack-Northampton PDC is a mostly rural region. Figure 6 illustrates the population density projections for the year 2010 at the Planning District level along the U.S. 13 corridor. Figure 7 illustrates the density projections for the year 2035 and the increase in population density from 2010 to 2035.

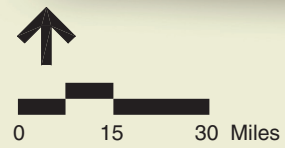
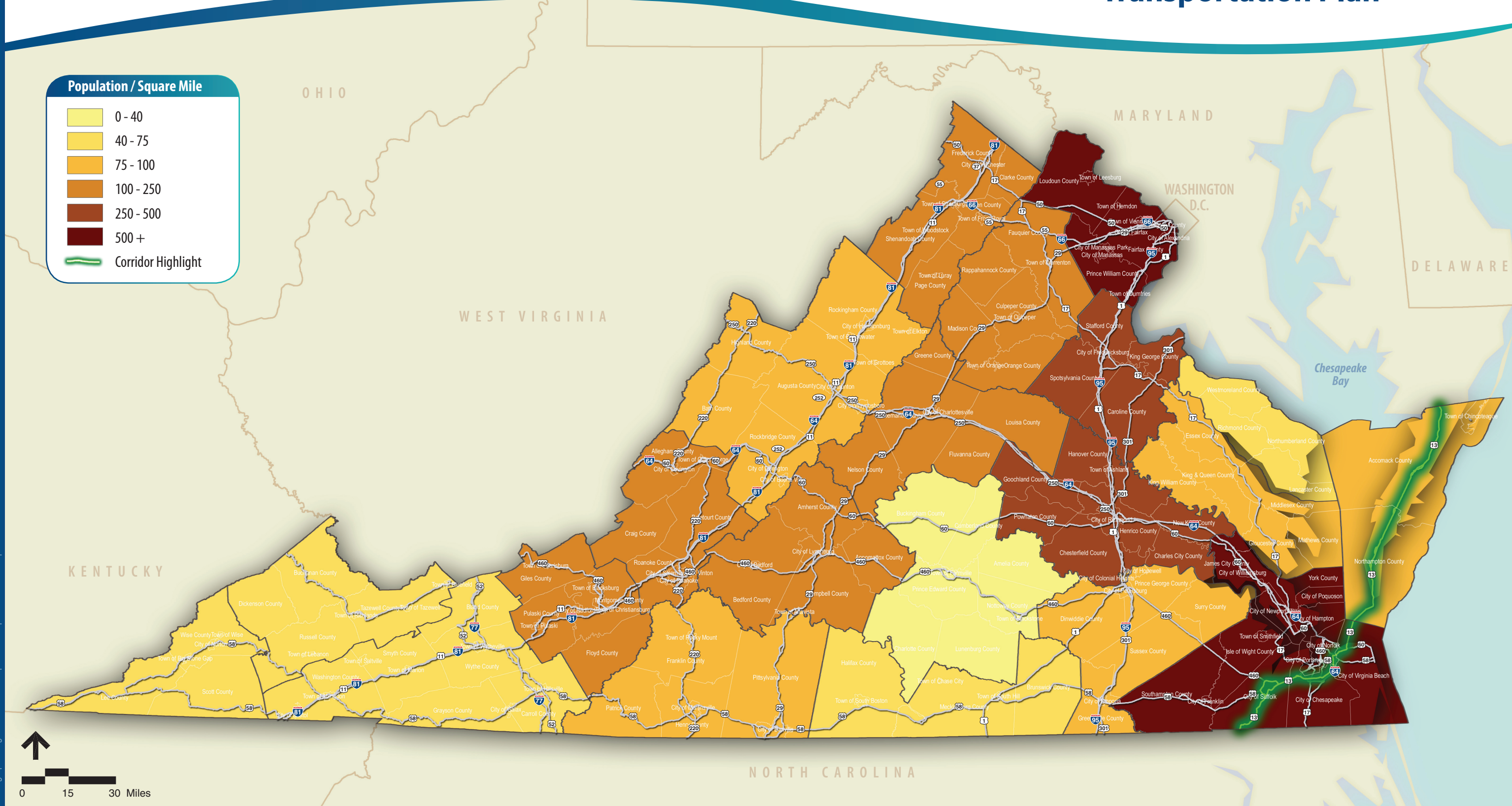
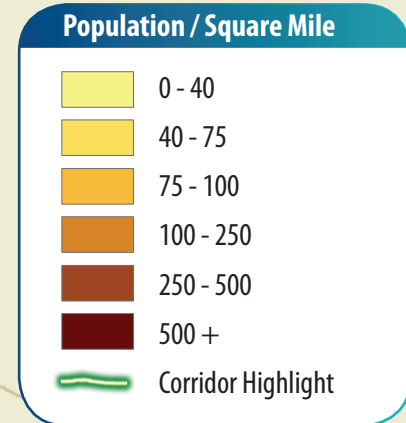
Table 2 **Population Projections to 2035**

| PDC (Number) | 2010 Value | | Midpoint 2035 Forecast | | Percentage Increase | | Annual Effective Growth Rate | |
|-------------------------|------------------|------------------|------------------------|-------------------|---------------------|--------------|------------------------------|-------------|
| | 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% |
| Accomack-Northampton | 54,235 | 52,550 | 61,636 | 56,093 | 13.6% | 6.7% | 0.5% | 0.3% |
| 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 the table and in the graphics, the increases in population between 2010 and 2035 in the Hampton Roads region are expected to be fairly large, while the growth along the Eastern Shore is expected to be smaller, though not unsubstantial. However, the total population increase along the Eastern Shore is only expected to be a few thousand residents over the twenty-five year time span, so considering it is currently a sparsely populated, mostly rural area, it will continue to be so into the future with no substantial development expected.

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 the George Washington Regional Commission). Most of the increase in population, and therefore traffic, will happen in the Hampton Roads region, where U.S. 13 acts as one of many local arterials. The transportation infrastructure along U.S. 13 in Hampton Roads will need to keep up with the expected increase in traffic.



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FIGURE 6
Population Density 2010 Projections - Eastern Shore Corridor

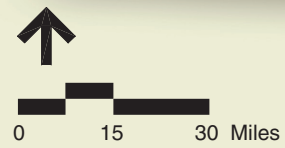
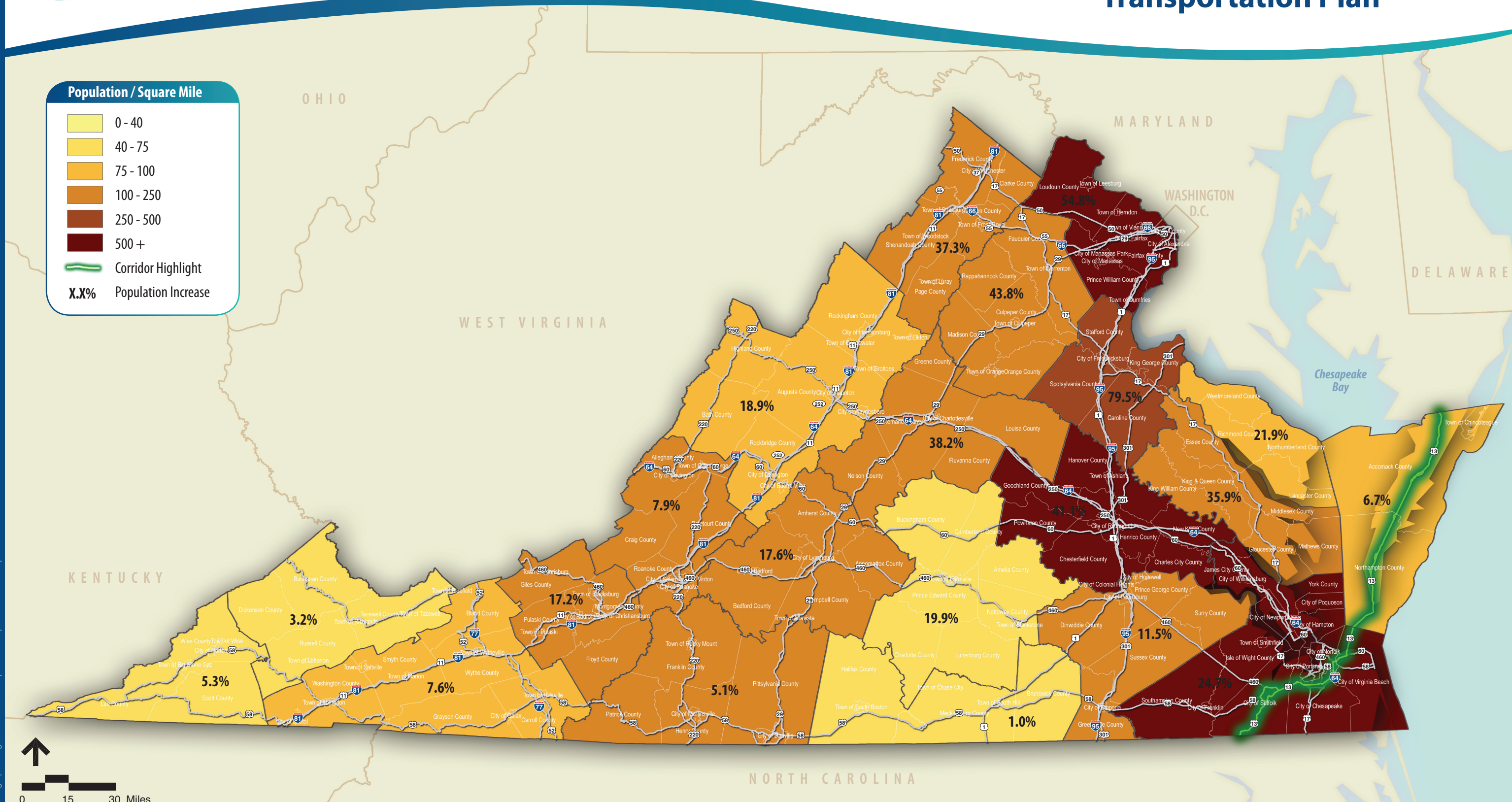
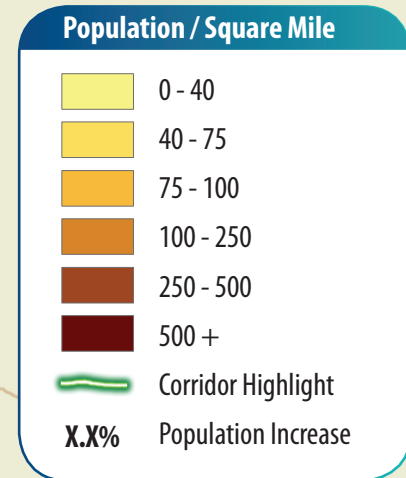


FIGURE 7
Population Density 2035 Projections -Eastern Shore Corridor

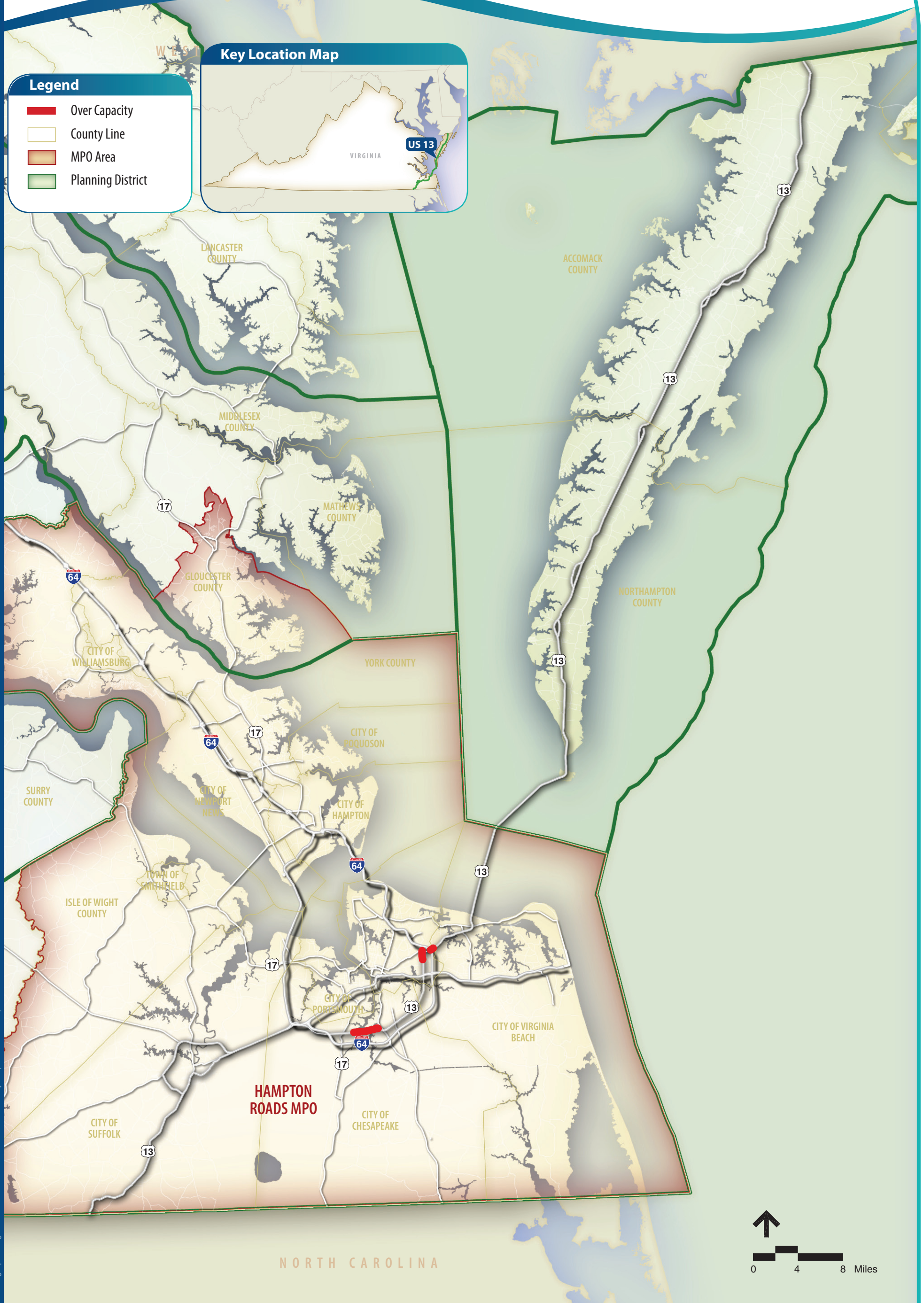
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2.3.2 Levels of Service

Figure 8 shows the existing levels of service (LOS) along the Eastern Shore 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. Under existing conditions, the levels of service are acceptable along all areas of the corridor in Virginia except along three separate small stretches in the Hampton Roads region. The levels of service along the Eastern Shore of Virginia are all at acceptable levels.

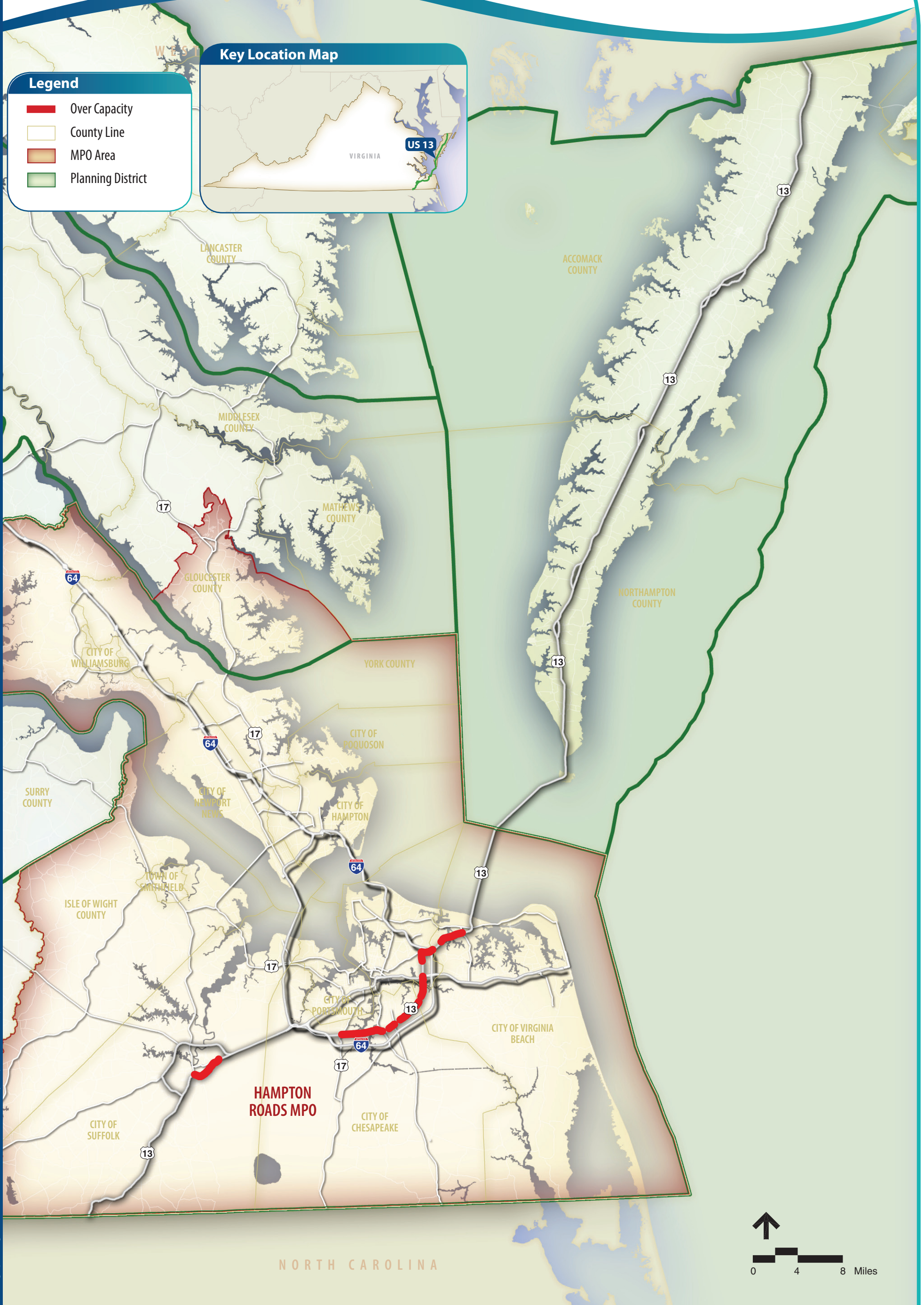
Figure 9 shows the future levels of service along the Eastern Shore Corridor, with the same color coding. As seen in these figures, levels of service in the Hampton Roads region will degrade somewhat as larger portions of the roadway are expected to operate at undesirable levels of service, including large sections through the City of Virginia Beach and the City of Portsmouth and a small stretch in the City of Suffolk. However, all sections of roadway along the Eastern Shore are expected to operate at acceptable and desirable levels of service in the future.

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 significantly degrade by 2035. To combat this, localities, PDCs, and MPOs should identify the worst areas and plan for improvements to these areas.



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FIGURE 8
Eastern Shore Corridor Existing Conditions



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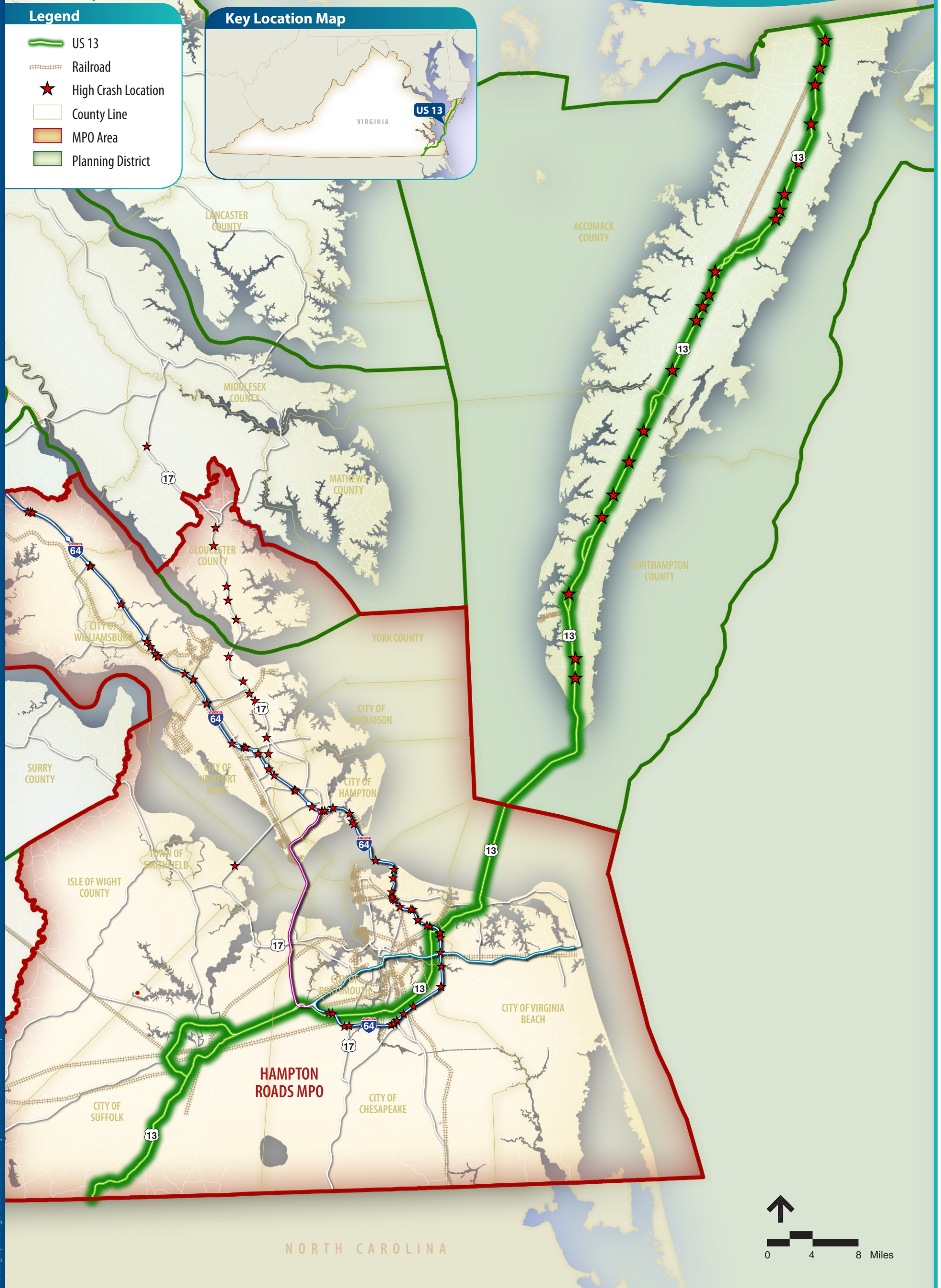
FIGURE 9
Eastern Shore Corridor Future Conditions

2.3.3 High-Crash Rate Areas

Figure 10 illustrates areas along U.S. 13 that have been identified as high-crash rate areas, according to the Virginia Department of Transportation. As seen in the figure, there are multiple high-crash rate areas along the Eastern Shore, through both Northampton County and Accomack County. This area has been identified as a safety concern by these jurisdictions as well. These areas should be further identified and studied to determine how to alleviate these problems. Access management issues, multiple driveways, multiple crossovers, and lack of turn-lanes have been offered by the two counties as possible reasons for high-crash rates along the Eastern Shore. In the Hampton Roads region, the only high-crash rate areas along the Eastern Shore Corridor occur at the junction point with Interstate 64.

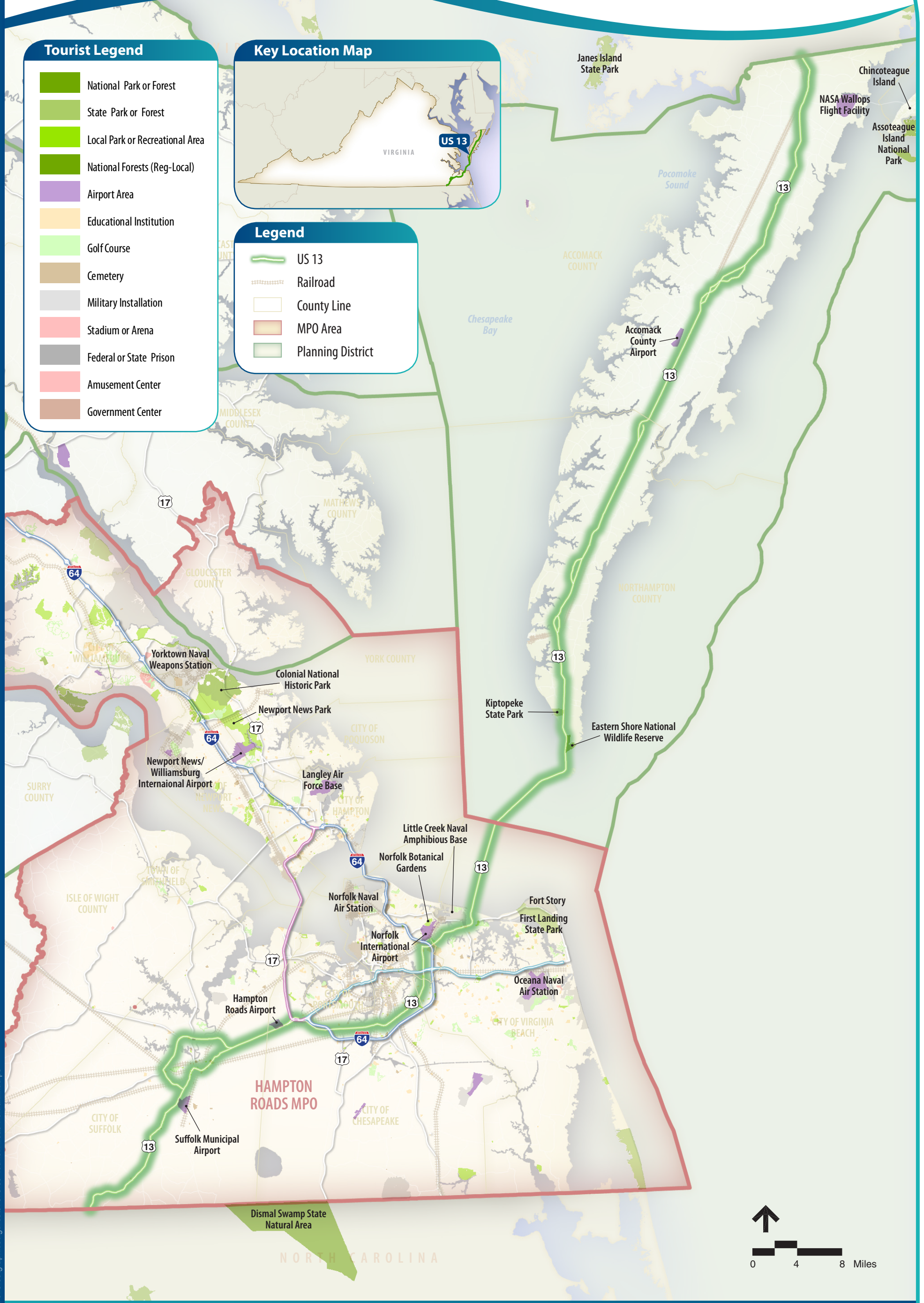
2.4 Access to Assateague, Chincoteague, Tourist Areas, and NASA Wallops Island

U.S. Highway 13 provides access to the beaches along the Eastern Shore as well as to resort areas such Chincoteague, and Assateague. It also provides access to the Maryland and Delaware shore to the north where numerous beach resorts are located. In addition, NASA's Wallops Island facility, which is used primarily as a rocket launch site to support science and exploration missions for NASA and other federal agencies, is also located on the Eastern Shore, just south of Chincoteague. Also located in this vicinity is the Virginia Space Port. Figure 11 illustrates the locations of these facilities, as well as U.S. 13, to show their proximity to U.S. 13 and to show that U.S. 13 is the only major highway that provides access to these areas. Figure 11 also illustrates other tourist facilities with access to the Eastern Shore Corridor in the Hampton Roads region.



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FIGURE 10
Eastern Shore Corridor High-Crash Rate Locations Map



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

Key Location Map



Legend

- US 13
- Railroad
- County Line
- MPO Area
- Planning District

FIGURE 11

Eastern Shore Corridor Tourist Areas Map

3

Corridor Strategies

This section discusses the corridor strategies for the Eastern Shore Corridor. They have been formulated to improve safety, mobility, and capacity along the Eastern Shore Corridor. The functions of the corridor are listed below, and Figure 12 presents a matrix that shows how the strategies relate to each corridor function.

Functions of the Eastern Shore Corridor

- *Link between Hampton Roads and Eastern Shore for both passengers and freight*
- *Main street through Eastern Shore*
- *Access to beaches, Chincoteague, Assateague, NASA Wallops Island*

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, 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 12 - Eastern Shore Corridor Strategies vs. Functions Matrix

| Strategies | Functions | | |
|--|--|-----------------------------------|---|
| | Link between Hampton Roads and Eastern Shore | Main Street through Eastern Shore | Access to Beaches/Tourist Areas/NASA Wallops Island |
| Improve safety and mobility along U.S. 13 throughout the Eastern Shore. | ○ | ● | ● |
| Improve safety and mobility along the Eastern Shore Corridor through land use planning by discouraging development directly along the corridor, especially strip development. | ○ | ● | ○ |
| Ensure continued freight movement across the Chesapeake Bay along the corridor through investment in the Bay Coast Railroad and Barge and encouraging other barge transport of freight along the corridor. | ● | ○ | ○ |

Strong Correlation
 Medium Correlation
 Some Correlation

3.1 Strategies for Eastern Shore Corridor

Strategy: Improve safety and mobility along U.S. 13 throughout the Eastern Shore through better access management.

Accomack County and Northampton County, both located along the Eastern Shore of Virginia and along the northern portion of U.S. 13 through the Commonwealth, have identified poor existing access management conditions as a major issue. U.S. 13 is the main corridor through these counties and the Eastern Shore, and as more development takes place, the corridor loses through capacity. The Regional Planning Forum has identified this as a major deficiency and called for better access management through the Eastern Shore.

The counties call for consolidation of driveways, reduction in the number of median breaks, making spot improvements at high-crash areas and other deficient areas, and the possibility of local access roads in denser communities. This would improve not only capacity but safety along the Eastern Shore Corridor and allow for better access to the tourist areas.

Strategy: Improve safety and mobility along U.S. 13 through land use planning by discouraging development directly along the corridor, especially strip development.

As the Eastern Shore Corridor on the Eastern Shore becomes more developed, there is a call by both counties to discourage strip development or even discourage development altogether directly along the corridor. Discouraging strip development and encouraging more clustered commercial and industrial development is important to avoid future access management issues, such as multiple driveways and median crossovers along the roadway. As this is the only major north-south corridor through this region of Virginia, this roadway needs to remain viable for through traffic and for tourist traffic. Safety should not be compromised along U.S. 13, and capacity should be compromised as little as possible to keep traffic moving.

Strategy: Ensure continued freight movement across the Chesapeake Bay through investment in the Bay Coast Railroad and Barge and encouraging other barge transport of freight.

Currently, the Bay Coast Railroad and Barge moves freight to and from the Port of Virginia via barge across the Chesapeake Bay and transferring to rail on either end. This practice should continue, and increased use of barge transport should be considered. This corridor is the shortest route from the Port of Virginia to New York and other northern destination points. Considering U.S. 13 operates as a local access road as well as a through corridor along the Eastern Shore and considering that the Chesapeake Bay Bridge-Tunnel, the highway connection between Hampton Roads and the Eastern Shore is only currently constructed as a two-lane facility, a minimum number of trucks should be using the highway facilities. The Regional Planning Forum identified the need for more barge transport of freight along this corridor, and while it currently takes place, it needs to continue into the future and increase if market forces allow. In addition, continued barge transport from the Port of Virginia to Baltimore, MD and other points, such as the Port of Richmond and the Port of Alexandria should continue into the future.

3.2 Strategies vs. VTrans2035 Goals

The above strategies relate to the seven goals of VTrans2035, and Figure 13 illustrates this relationship. A discussion of each of the goals is below.

- **Goal 1: Safety and Security – Provide a safe and secure transportation system.** One strategy relates directly to improving safety throughout the Eastern Shore through better access management. In addition, another relates to future development and access management along the Eastern Shore, which takes safety into account. All of the strategies lead to an increase in capacity, including transporting more freight by barge, as this will remove some trucks from the roadway and the Chesapeake Bay Bridge-Tunnel.
- **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. It is important that the Chesapeake Bay Bridge-Tunnel, a historic engineering marvel in Virginia be maintained and preserved. In addition, barge transport via the Bay Coast Railroad and Barge should be maintained and even expanded. A shift of freight from truck to barge could also reduce road maintenance costs by reducing truck travel.
- **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. All strategies increase the capacity and therefore, the mobility, connectivity, and accessibility along the roadway in some way, whether through better access management or by expansion of rail and barge transport.
- **Goal 4: Environmental Stewardship – Protect the environment and improve the quality of life for Virginians.** An increase in safety and mobility will help to achieve environmental stewardship, as vehicles travel times should decrease, which should lead to decreased emissions. In addition, movement of freight by barge helps to minimize the number of trucks and reduce emissions.
- **Goal 5: Economic Vitality – Provide a transportation system that supports economic prosperity.** Increasing barge transport of freight should lead to more economic prosperity on the Eastern Shore. Encouraging smarter development along the Eastern Shore by reducing strip development in favor of clustered development is economically sound.
- **Goal 6: Coordination of Transportation and Land Use – Facilitate the effective coordination of transportation and land use to promote livable communities.** Improving safety and mobility along the Eastern Shore goes hand-in-hand with better land use decisions, including discouragement of strip development along the roadway. In addition, local planning efforts should protect airspace and ensure that airports are not compromised by encroachment of incompatible land uses.

Figure 13 - Eastern Shore Corridor Strategies vs. Goals Matrix

| Strategies | Goals | | | | | |
|--|---------------------|-------------------------------------|---|---------------------------|-------------------|---|
| | Safety and Security | System Maintenance and Preservation | Mobility, Connectivity, and Accessibility | Environmental Stewardship | Economic Vitality | Coordination of Transportation and Land Use |
| Improve safety and mobility along U.S. 13 throughout the Eastern Shore. | ● | ● | ○ | ⊙ | | ⊙ |
| Improve safety and mobility along the Eastern Shore Corridor through land use planning by discouraging development directly along the corridor, especially strip development. | ● | ● | ○ | | ● | ● |
| Ensure continued freight movement across the Chesapeake Bay along the corridor through investment in the Bay Coast Railroad and Barge and encouraging other barge transport of freight along the corridor. | ⊙ | ● | ● | ● | ● | |

● Strong Correlation
 ○ Medium Correlation
 ⊙ Some Correlation