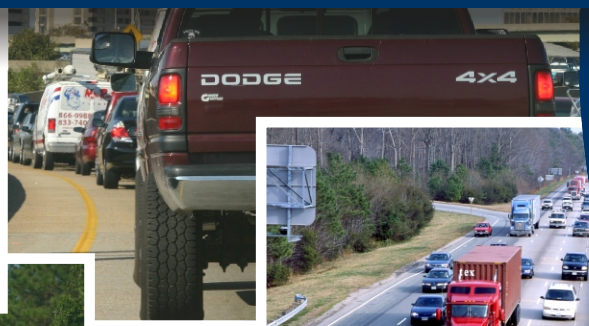
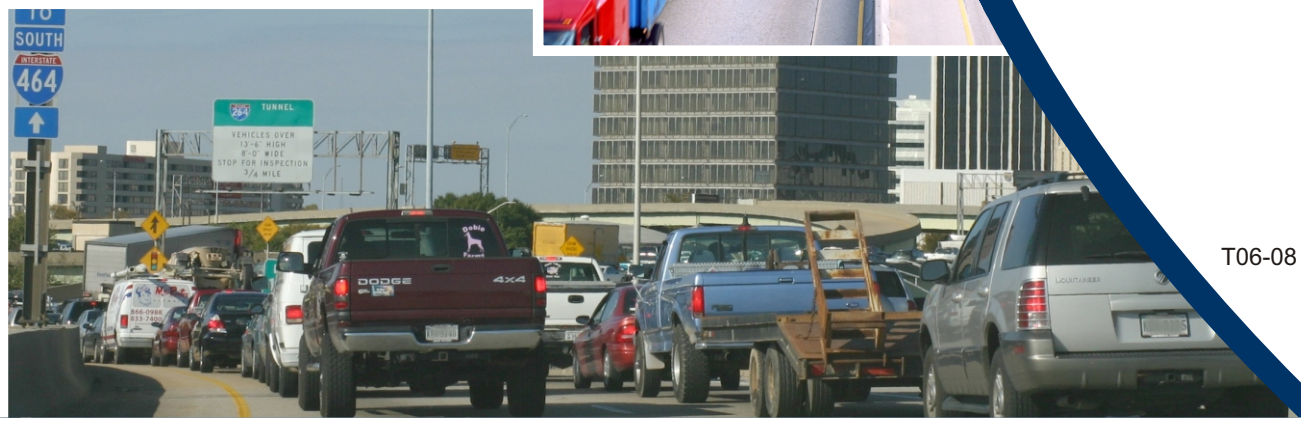
Hampton Roads Congestion Management Process:

The State of Transportation in Hampton Roads





HAMPTON ROADS
PLANNING DISTRICT COMMISSION

JANUARY 2007

T06-08

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HAMPTON ROADS CONGESTION MANAGEMENT PROCESS:

THE STATE OF TRANSPORTATION IN HAMPTON ROADS

This report was included in the Work Program for Fiscal Year 2006-2007, which was approved by the Commission and the Metropolitan Planning Organization at their meetings of March 15, 2006.

PREPARED BY:

HAMPTON ROADS
PLANNING DISTRICT COMMISSION

JANUARY 2007

T06-08

REPORT DOCUMENTATION

TITLE:
Hampton Roads Congestion Management Process:
The State of Transportation in Hampton Roads

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REPORT DATE:
January 2007

GRANT/SPONSORING AGENCY:
FHWA/VDOT/Local Funds

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ABSTRACT

This report updates the state of transportation in Hampton Roads. Data on all facets of the region's transportation system, including rail, water, air, and highways, are included in this report. Many aspects of the highway system are highlighted, including roadway usage, commuting data, HOV usage, safety, truck data, transit usage, bicycle and pedestrian facilities, highway funding, and Intelligent Transportation Systems/Operations.

This report is produced as part of the region's Congestion Management Process (CMP). The Congestion Management Process is an ongoing program that identifies, develops, evaluates, and implements transportation strategies to reduce traffic congestion and enhance mobility regionwide.

ACKNOWLEDGMENTS

This report was prepared by the Hampton Roads Planning District Commission (HRPDC) in cooperation with the U.S. Department of Transportation (USDOT), the Federal Highway Administration (FHWA), and the Virginia Department of Transportation (VDOT). The contents of this report reflect the views of the staff of the Hampton Roads Area Metropolitan Planning Organization (MPO). The MPO staff is responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the FHWA, VDOT, or HRPDC. This report does not constitute a standard, specification, or regulation. FHWA or VDOT acceptance of this report as evidence of fulfillment of the objectives of this planning study does not constitute endorsement/approval of the need for any recommended improvements nor does it constitute approval of their location and design or a commitment to fund any such improvements. Additional project level environmental impact assessments and/or studies of alternatives may be necessary.

Table Of Contents

Route 199 in James City County

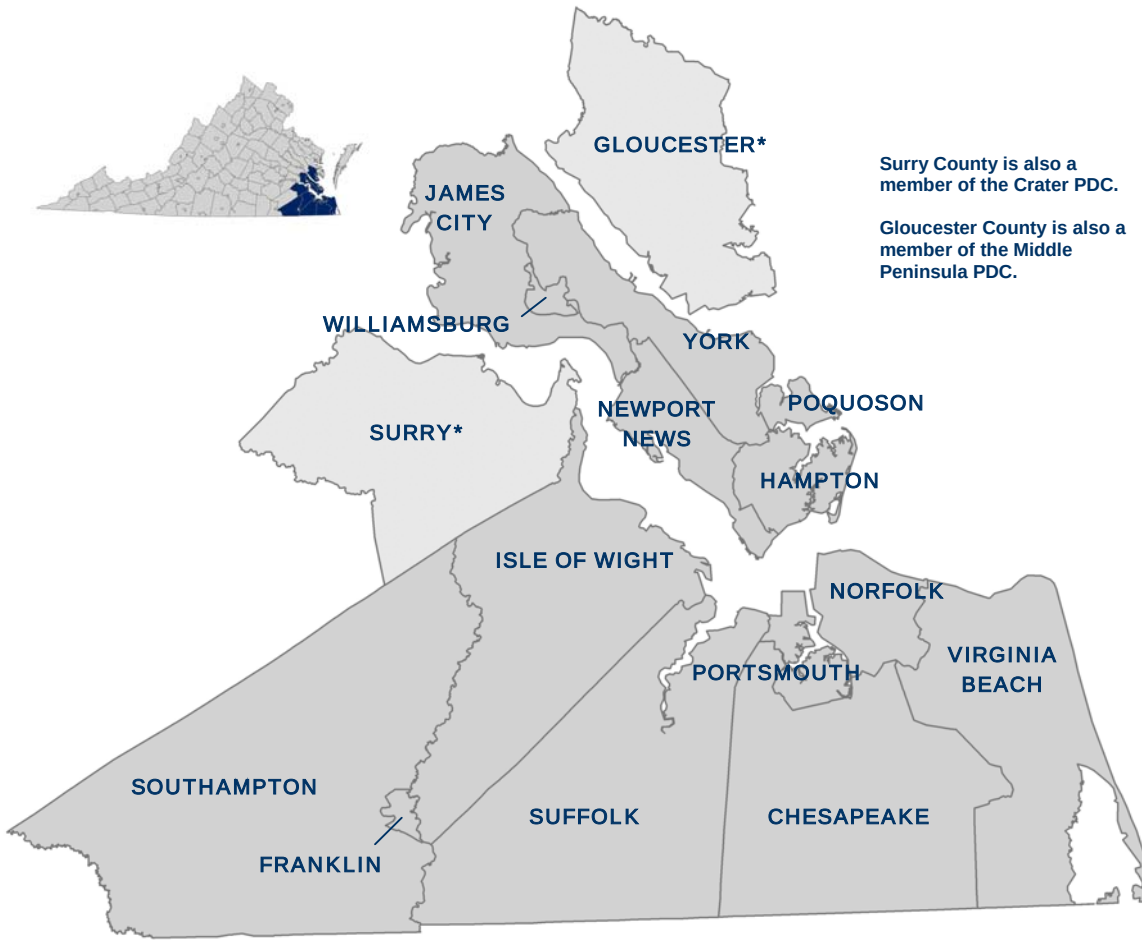
Introduction

As the title indicates, this report details the current state of the transportation system in Hampton Roads. Included in this report is historical data on all facets of the region's transportation system, including rail, water, air, and highways. Many aspects of the highway system are highlighted, including roadway usage, commuting data, HOV usage, safety, truck data, transit usage, bicycle and pedestrian facilities, highway funding, and Intelligent Transportation Systems/ Operations.

This report is produced as part of the region's Congestion Management Process (CMP), which was formerly known as the Congestion Management System (CMS). The Congestion Management Process is an ongoing program that identifies, develops, evaluates, and implements transportation strategies to reduce traffic congestion and enhance mobility regionwide.

The Hampton Roads Planning District Commission (HRPDC) began developing a Congestion Management Process in the early 1990s, and released the region's first CMP report in 1995. Updated CMP reports were released by HRPDC in 1997, 2001, and 2005. The most recent CMP

Hampton Roads Planning District Jurisdictions



report includes an analysis of traffic trends at regional bridges and tunnels, a comprehensive congestion analysis of the region's highway system, congestion management strategies with an analysis of their impacts, and identification of the most congested corridors and areas throughout the region that require further analysis. Copies of all CMP reports are available on the HRPDC website at http://www.hrpdc.org/publications/techreports/transportation.html.

This report is an update to the State of Transportation Report that HRPDC released in December 2004. Future versions of the State of Transportation Report are anticipated to be released by HRPDC on a biannual basis.

Route 58 in Suffolk

Air Travel

While national air travel has only recently reached pre-2001 levels, Hampton Roads air travel has increased substantially over the last few years. Over 2.4 million passengers boarded flights at Hampton Roads two passenger airports, Norfolk International and Newport News-Williamsburg International, in 2005. The number of passengers boarding flights at Hampton Roads airports increased 41% between 2000 and 2005, while during that time national air travel only grew

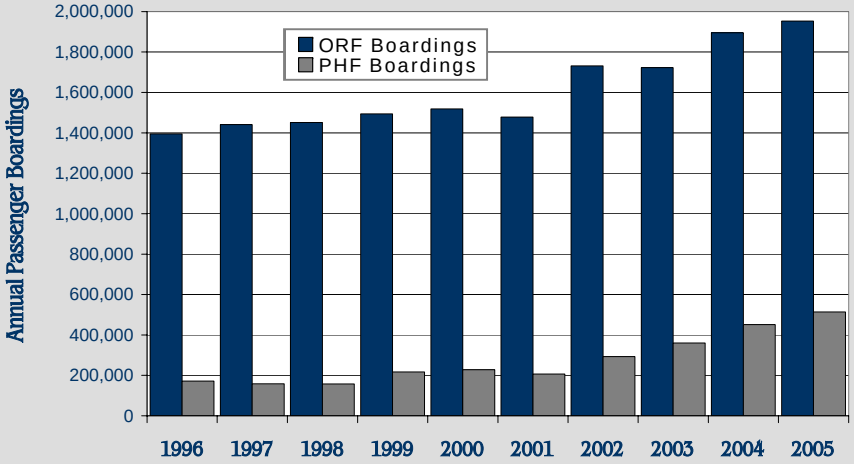
Photo source: Peninsula Airport Commission

4%. This large growth in regional air travel can be attributed to many factors, most notable of which would be increased service from low-cost carriers. Southwest Airlines began service at Norfolk International in October 2001 and now carries nearly 20% of all passengers at the airport. Airtran Airways has also greatly increased its service at Newport News-Williamsburg International, increasing from five outbound flights daily to one destination in late 2001 up to its current thirteen outbound flights to five destinations.

Quick Facts...

- Over 2.4 million passengers boarded flights in Hampton Roads in 2005, a 41% increase from 2000.
- 26 airports are served with nonstop flights from Hampton Roads airports, up from 25 airports in 2002.
- Average airfares for Hampton Roads airports decreased 16% between 2000 and 2005, largely due to increased low-cost carrier service in the region.

Annual Boardings at Norfolk International (ORF) and Newport News-Williamsburg International (PHF) Airports 1996 to 2005



Boardings represent only those passengers that board airplanes at each airport.
Data Source: Federal Aviation Administration.

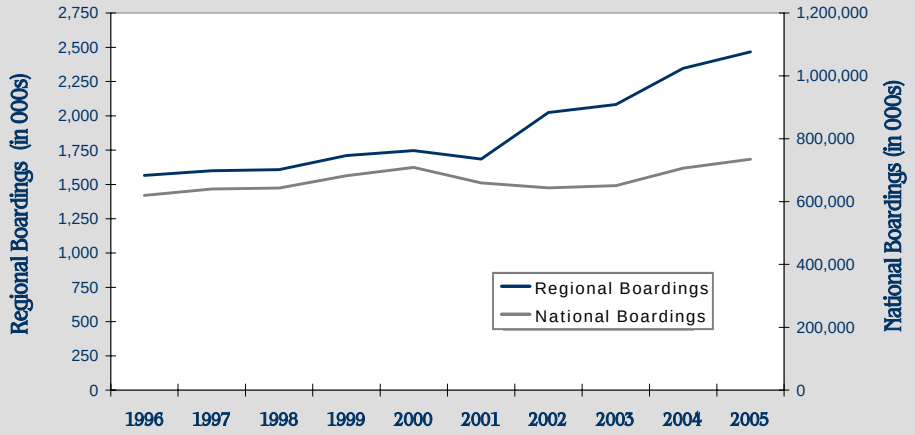
This increase in low-cost carrier service at Hampton Roads airports has also helped to decrease the fares that local air travelers are paying. The average one-way airfare for flights into or out of Hampton Roads airports was $161 in 2005, a 16% drop from the $193 average one-way airfare in 2000. The national average for one-way airfares was $9 less than airfares out of Hampton Roads in 2000. Beginning in 2002 average airfares from Hampton Roads airports dropped lower than the national average, and in 2005 the national average one-way airfare was $3 more than airfares at local airports.

Currently there are a total of 26 airports served nonstop by approximately 130 flights departing daily from Hampton Roads. 25 airports are currently served nonstop by flights from Norfolk International Airport, and 7 airports are served by nonstop flights at Newport News-Williamsburg International Airport. Since 2002, new nonstop service has been added from Hampton Roads airports to Chicago-Midway, Fort Lauderdale, and Miami.

Recent Developments

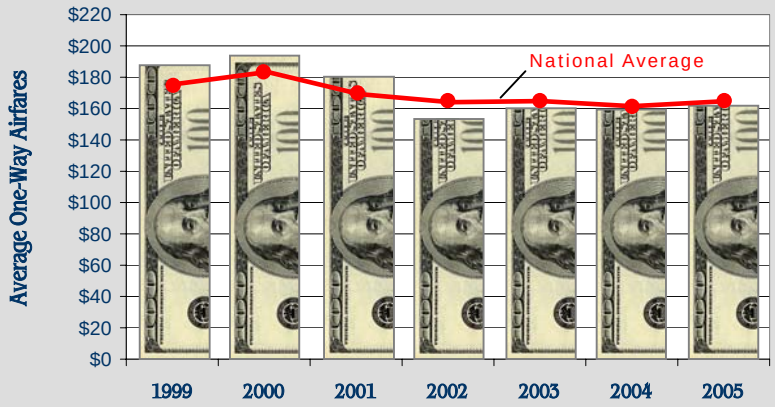
- New nonstop service from Hampton Roads airports has been added to Chicago-Midway, Fort Lauderdale, and Miami over the last three years.
- Construction has begun to increase parking at Newport News-Williamsburg International Airport. When complete in the summer of 2007, 700 additional parking spaces will be available in the new parking garage.

Annual Passenger Boardings at Hampton Roads Airports versus National Boardings, 1996 to 2005



Data Source: Federal Aviation Administration.

Average One-Way Airfares for Hampton Roads and National Airports, 1999 to 2005



Average airfares reflect all routes that average at least 10 passengers per day, and all fare classes. Round trip fares are divided into two one-way fares.
Data Source: Federal Aviation Administration

The most popular destination of Hampton Roads air travelers is Atlanta, with 279,000 passengers traveling between Hampton Roads and Atlanta in 2005. The next most popular markets for passengers traveling to/from Hampton Roads in 2005 were New York City (249,000 passengers to its three major airports), Orlando (241,000 passengers), Chicago (165,000 passengers to its two major airports), and Boston (149,000 passengers). Of the top ten destinations for Hampton Roads air travelers, only San Diego (#7) and Tampa (#9) are not currently served by nonstop service.

Nonstop Destinations from Hampton Roads Airports

Top Destinations to/from Hampton Roads Airports (2005)

DESTINATION	2005 ENPLANEMENTS
1) Atlanta	279,017
2) New York	248,746
3) Orlando	241,386
4) Chicago	165,357
5) Boston	149,365
6) Jacksonville	122,886
7) San Diego	118,796
8) Las Vegas	117,197
9) Tampa	113,927
10) Dallas/Fort Worth	100,236

Data Source: Federal Aviation Administration.

Data Sources: Norfolk International Airport and Newport News-Williamsburg International Airport.

Marine Data

Most facets of the Hampton Roads economy, including the military, ports, and shipbuilding and repair, rely on the Hampton Roads Harbor and its tributaries. According to the Virginia Port Authority over 165,000 jobs and $4.8 billion in yearly payroll are impacted by the Port of Hampton Roads. This includes not only activity at the ports but also various other industries, including the trucking and railroad industries, manufacturing, and warehousing, such as the large Target and Wal-Mart distribution centers located within the region.

Photo Source: Virginia Port Authority.

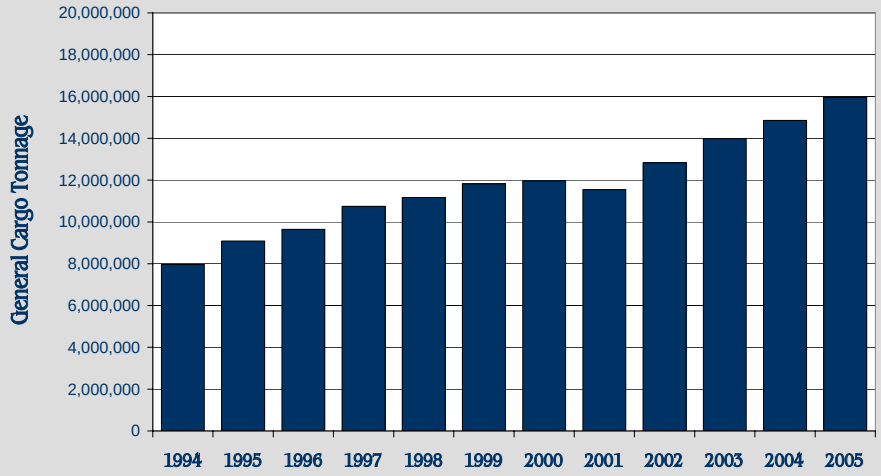
The Port of Virginia handled over 33 million tons of total cargo in 2004. While the port remains the largest exporter of coal in the world, the amount of coal exported through the Port of Virginia has diminished greatly since the mid-1990s. All of the growth that has occurred in recent years at the port is due to increases in general cargo, which includes containerized and breakbulk cargo.

Nearly 16 million tons of general cargo was handled by the Port of Virginia in 2005, which accounted for nearly 50% of the total cargo going through the Port of Virginia. The amount

Quick Facts...

- The Port of Virginia tied with Charleston as the second largest port on the East Coast in terms of volume in 2005.
- The Port of Virginia remains the largest exporter of coal in the world.
- The amount of general cargo handled by the Port of Virginia doubled between 1994 and 2005.

General Cargo Tonnage Handled by the Port of Virginia, 1994-2005



Data does not include Virginia Inland Port tonnage.
Data Source: Virginia Port Authority.

of general cargo handled by the port doubled between 1994 and 2005, with most of this growth occurring over the last four years.

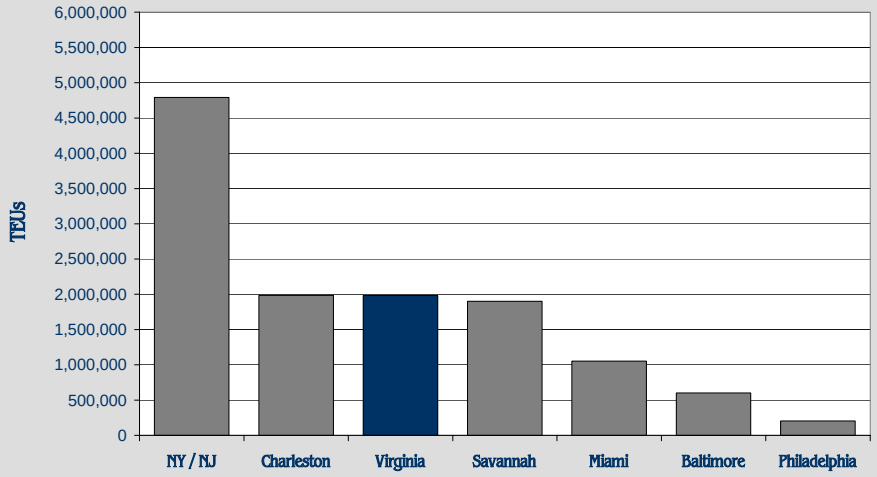
Another means of measuring containerized cargo is 20-foot container equivalent units, or TEUs. The Port of Virginia handled nearly 2 million TEUs in 2005, up from 0.9 million TEUs in 1994. This volume of containerized cargo ranked the Port of Virginia tied for second among East Coast ports behind only the Port of New York/New Jersey, and tied for seventh among all ports in the United States.

The demand for containerized cargo will continue to increase significantly in the future, with a demand of over 10 million TEUs expected for the Port of Virginia by 2040. A significant increase in the capacity of the ports will occur in 2007 with the opening of the 575-acre APM Terminal in Portsmouth. This facility is expected to increase capacity at the regional ports by an additional 500,000 containers yearly.

Recent Developments

- APM Terminals Virginia (a subsidiary of Maersk) began construction on a new marine terminal in Portsmouth. When completed in 2007, the new terminal is expected to handle an additional 500,000 containers per year.
- Improvements continue to be made at the Port of Virginia, including the addition of the largest cranes in the world and improved cargo carriers.
- Construction has begun on a cruise terminal facility at Nauticus in Norfolk. The $36 million facility is expected to open in early 2007.

United States East Coast Ports Market Shares: TEUs, 2005



TEUs are twenty-foot container equivalent units, a common method of measuring freight.
Data Sources: AAPA and various port authorities.

The cruise industry is also important to the regional economy. 105,000 passengers sailed on cruises from Norfolk in 2005, up from 35,000 passengers in 2002. Scheduled service for 2007 so far includes cruises to both Bermuda and the Bahamas. To accommodate cruise passengers the City of Norfolk is in the midst of constructing a new $36 million cruise terminal at Nauticus that is expected to open early in 2007.

Marine public transportation services are also available in Hampton Roads. Hampton Roads Transit provides ferry service between Waterside in Downtown Norfolk and High Street Landing in Portsmouth, and over 320,000 passengers used this service in 2005. VDOT also operates a free passenger and vehicular ferry service between Jamestown and Scotland in Surry County. This service carried 997,000 vehicles across the James River in 2005, up from 895,000 vehicles in 2000.

Rail Travel

With the ports being such a vital part of the Hampton Roads economy, an effective rail system is necessary to keep the local ports competitive. Transporting goods by rail is a primary method of getting goods to and from the region's port facilities. 45% of all inbound freight to Hampton Roads and 7% of all outbound freight from Hampton Roads by tonnage was transported by rail in 2004 according to Global Insight data. Most of this inbound freight is coal.

Passenger rail service is also provided in Hampton Roads with Amtrak stations in Newport News and Williamsburg. Currently two trains arrive and depart the region daily. In 2005, nearly 130,000 passengers boarded Amtrak trains in Hampton Roads, with 92,400 passengers boarding at the Newport News station and 37,500 passengers boarding at the Williamsburg station. This is down from 2002, when 151,000 passengers boarded Amtrak trains at the two regional stations.

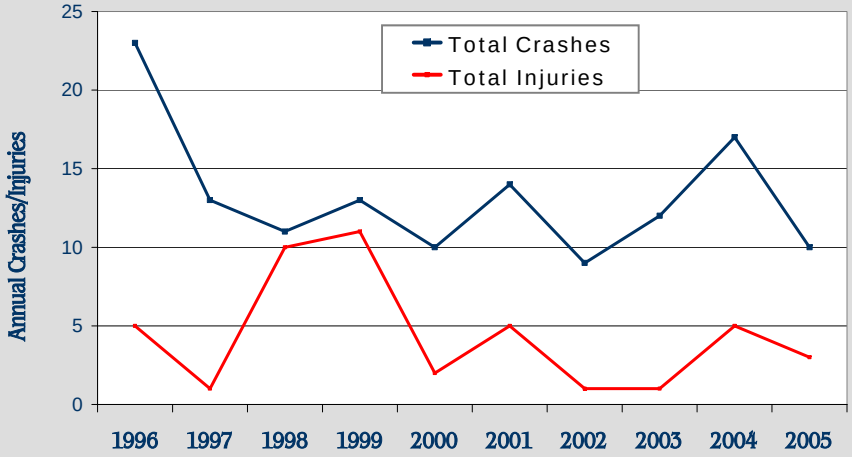
With the number of trains that cross the region, safety at highway-rail crossings is a concern. Between 1996 and 2005, there were 132 crashes at highway-rail crossings throughout Hampton Roads, an average of 13 per year. These crashes resulted in a total of 2 fatalities and 44 injuries. With the amount of freight entering the region expected to increase, the exposure to highway-rail crashes will also increase.

The Virginia Department of Rail and Public Transportation is currently studying ways to improve passenger rail service between Hampton Roads and Richmond, and connect Hampton Roads to the proposed Southeast High Speed Rail Corridor. More information on this project can be found at http://www.rich2hrrail.info.

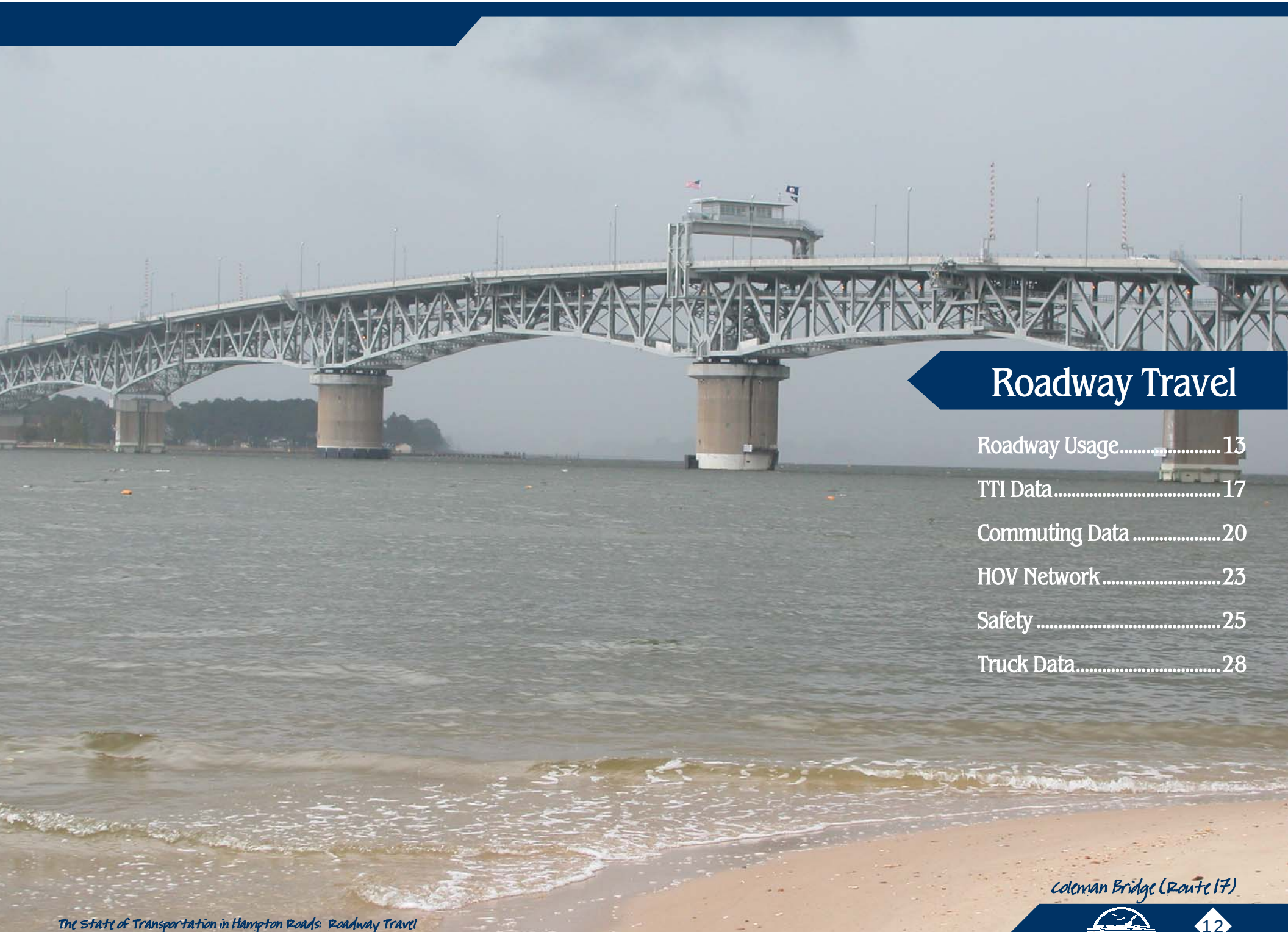
Quick Facts...

- 45% of all inbound freight to Hampton Roads and 7% of all outbound freight from Hampton Roads was transported by rail in 2004.
- Nearly 130,000 passengers boarded Amtrak trains in Hampton Roads in 2005, down from 151,000 in 2002.
- Between 1996 and 2005, there were 132 crashes at highway-rail crossings in Hampton Roads, with 2 fatalities and 44 injuries.

Total Crashes and Injuries at Highway-Rail Crossings in Hampton Roads, 1996-2005



Data Source: Federal Railroad Administration.



Roadway Travel

Coleman Bridge (Route 17)

Roadway Usage

The growth in travel occurring on roadways throughout Hampton Roads is outpacing the growth in both regional population and regional roadway capacity. The amount of roadway travel in Hampton Roads is measured in terms of vehicle-miles of travel (VMT), which is the total number of miles every vehicle throughout the region travels. There were over 40 million vehicle-miles of travel on the average day in the Hampton Roads Planning District in 2005. Over the course of the entire year this added up to nearly 15 billion miles of vehicular travel in the region!

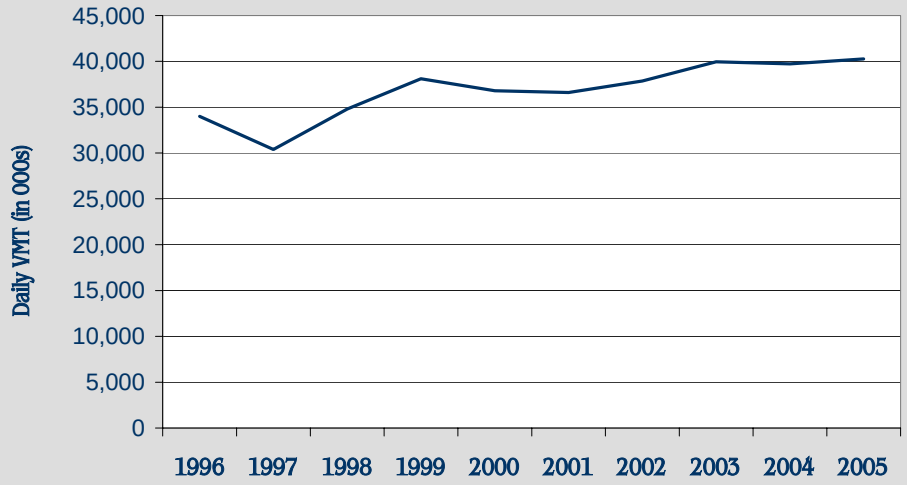
I-64 near the I-264 Interchange in Norfolk

The amount of daily vehicular travel in Hampton Roads increased by 6 million miles between 1996 and 2005. This 18% growth in vehicular travel outpaced the 13% growth in daily travel in the state of Virginia, but was lower than the growth in travel experienced in other large urbanized areas nationwide (25%) and the United States (21%). The amount of vehicular travel has been affected in the last year by rising fuel prices,

Quick Facts...

- There were over 40 million vehicle-miles of travel on the average day in Hampton Roads in 2005, up from 34 million per day in 1996.
- Hampton Roads ranked 17th among 25 large urban areas in terms of vehicular travel per capita in 2005.
- The growth in vehicular travel in Hampton Roads between 1996 and 2005 (18%) far outpaced both regional population growth (6%) and regional roadway capacity growth (9%).

Daily Vehicle-Miles of Travel in the Hampton Roads Planning District, 1996-2005



1996-2001 data is estimated based on Highway Statistics data for the Hampton Roads Urbanized Area.
Data Source: VDOT.

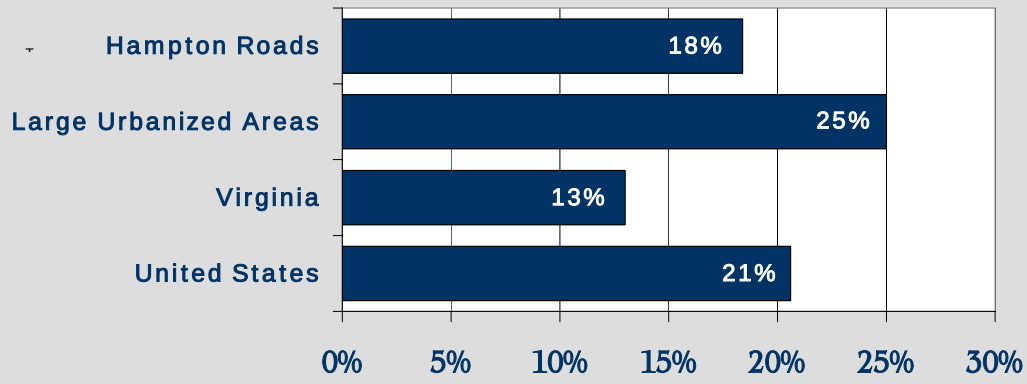
particularly in the immediate aftermath of Hurricane Katrina in late summer of 2005.

While the total amount of vehicular travel in Hampton Roads increased 18% between 1996 and 2005, the amount of travel each person made in Hampton Roads also increased. The amount of vehicle-miles of travel per capita in the Hampton Roads urbanized area was 23.0 miles per person per day in 2005, up from 22.3 miles per person per day in 1996.

Among the 25 large federal-aid urbanized areas in the United States (those urbanized areas with populations of between one and three million people), Hampton Roads ranked 17th in terms of daily vehicle-miles of travel per capita in 2005. The average daily vehicle-miles of travel in large urbanized areas was 24.9 miles per person in 2005, which was 1.9 miles per person more than the average in Hampton Roads.

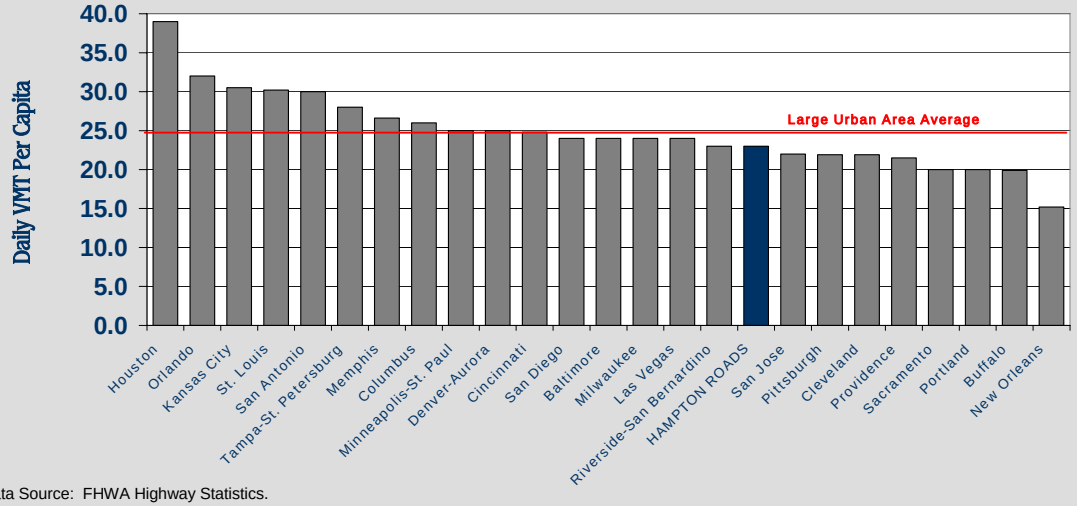
The growth in vehicular travel in Hampton Roads far outpaced population growth. In 2005 Hampton Roads was estimated to have 1,633,000 residents, an increase of 6% from 1996. During this time vehicular travel in Hampton Roads increased 18%, meaning that the growth in regional vehicular travel was three times higher than the growth in the regional population.

Growth in Vehicle-Miles of Travel in Hampton Roads, Large Urbanized Areas, Virginia, and the United States, 1996 to 2005



Data Sources: VDOT, FHWA Highway Statistics.

Daily Vehicle-Miles of Travel Per Capita in Large Urbanized Areas, 2005



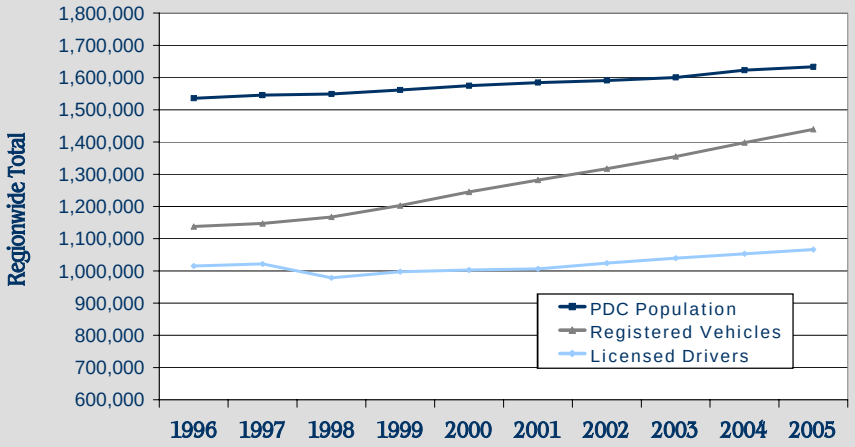
Data Source: FHWA Highway Statistics.

Although the growth in vehicular travel outpaced population growth in Hampton Roads, the growth in registered vehicles outpaced both. There were 1,440,000 registered vehicles in Hampton Roads in 2005, one for every 1.13 residents. This number increased 27% between 1996 and 2005, outpacing the 6% growth in population and the 18% growth in vehicle-miles of travel that occurred during the same period.

In spite of the rapid growth in registered vehicles, the number of licensed drivers in Hampton Roads only slightly increased between 1996 and 2005. There were 1,070,000 licensed drivers in Hampton Roads in 2005, up from 1,020,000 back in 1996. For every licensed driver in Hampton Roads in 2005, there were 1.35 registered vehicles. This ratio was 1.12 registered vehicles for every licensed driver back in 1996.

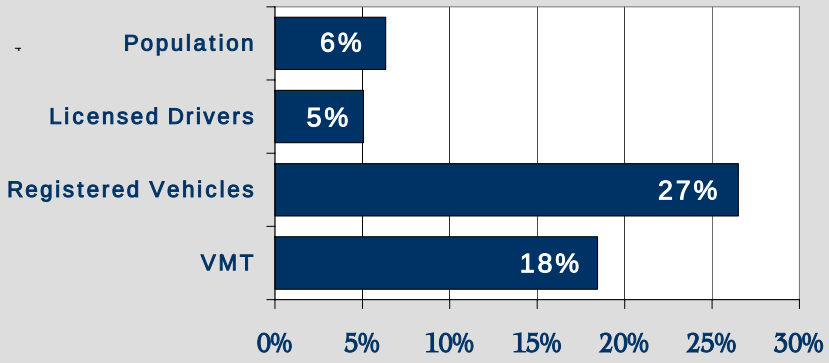
Most of the growth in regional travel in recent years occurred on the Interstate system. The amount of travel on the Interstate system in Hampton Roads increased 45% between

Population, Registered Vehicles, and Licensed Drivers in Hampton Roads, 1996-2005



Data Sources: Hampton Roads Databook, Virginia DMV.

Growth in Population, Licensed Drivers, Registered Vehicles, and VMT in Hampton Roads, 1996 to 2005

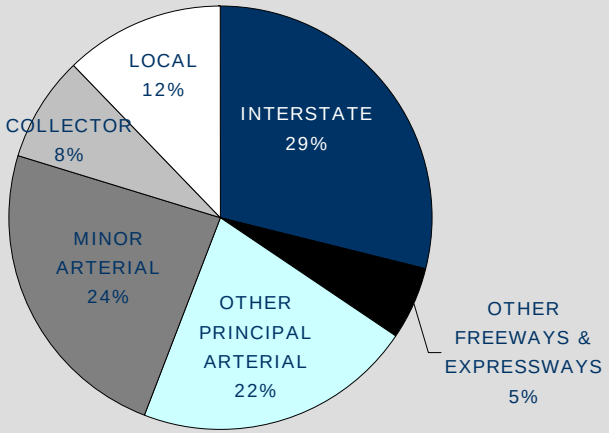


Data Sources: Hampton Roads Databook, Virginia DMV, VDOT, FHWA Highway Statistics Series.

1996 and 2005. Although the Interstate system only constituted about 4% of the total roadway lane mileage (which is defined as the centerline mileage of each roadway multiplied by the number of lanes) in Hampton Roads in 2005, it carried 29% of the daily traffic in the region. Conversely, local roadways (i.e. neighborhood streets) comprised 56% of the total roadway lane mileage in Hampton Roads in 2005 but carried only 12% of the total traffic volumes.

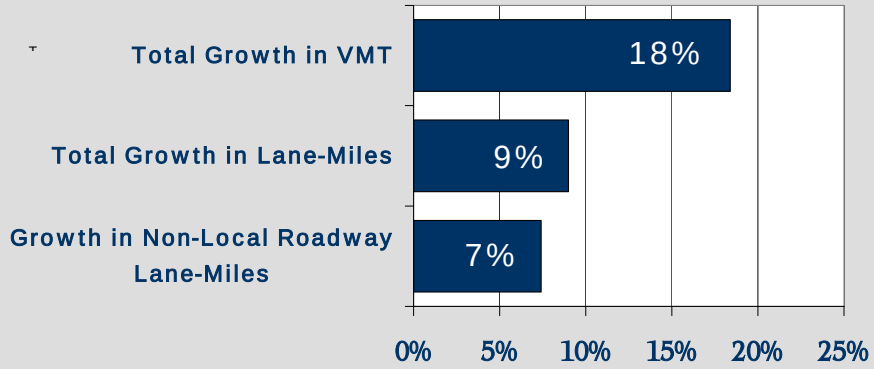
Roadway capacity improvements have not kept pace with the growth in vehicular travel in Hampton Roads. The amount of regional roadway capacity in Hampton Roads (in terms of roadway lane mileage) increased 9% between 1996 and 2005. Excluding local roadways, the total growth in roadway capacity in Hampton Roads was only 7%. This means that the amount of vehicular travel in Hampton Roads increased at more than twice the rate of the increase in non-local roadway capacity between 1996 and 2005. This trend will likely continue in the future as funding for new highway construction is expected to decrease in the future. (More information on roadway funding and future trends is included in the Transportation Financing portion of this report.)

VMT in Hampton Roads by Roadway Functional Class, 2005



Data Source: VDOT.

Growth in VMT, Total Lane-Miles, and Non-Local Roadway Lane-Miles in Hampton Roads, 1996 to 2005



Data Sources: VDOT, FHWA Highway Statistics Series.

TTI Data

Congestion on Hampton Roads highways cost local drivers 22 million hours of delay and $367 million in costs in 2003. This congestion has a multitude of effects, including making the region less competitive economically and lowering the regional quality of life.

The Texas Transportation Institute (TTI) at Texas A&M University publishes the Urban Mobility Report, which is the only widely distributed analysis of the performance of urban highway systems. The most recent release of this report was in 2005, comprising 2003 traffic data. In this study, TTI estimates the amount of time travelers in 85 urbanized areas nationwide spend in congestion, and the costs that are related to this congestion. This estimate includes both recurring congestion, which is delay that occurs regularly due to traffic volumes that are higher than the capacity of the roadway, and nonrecurring congestion, which is due to factors such as crashes, disabled vehicles, and weather.

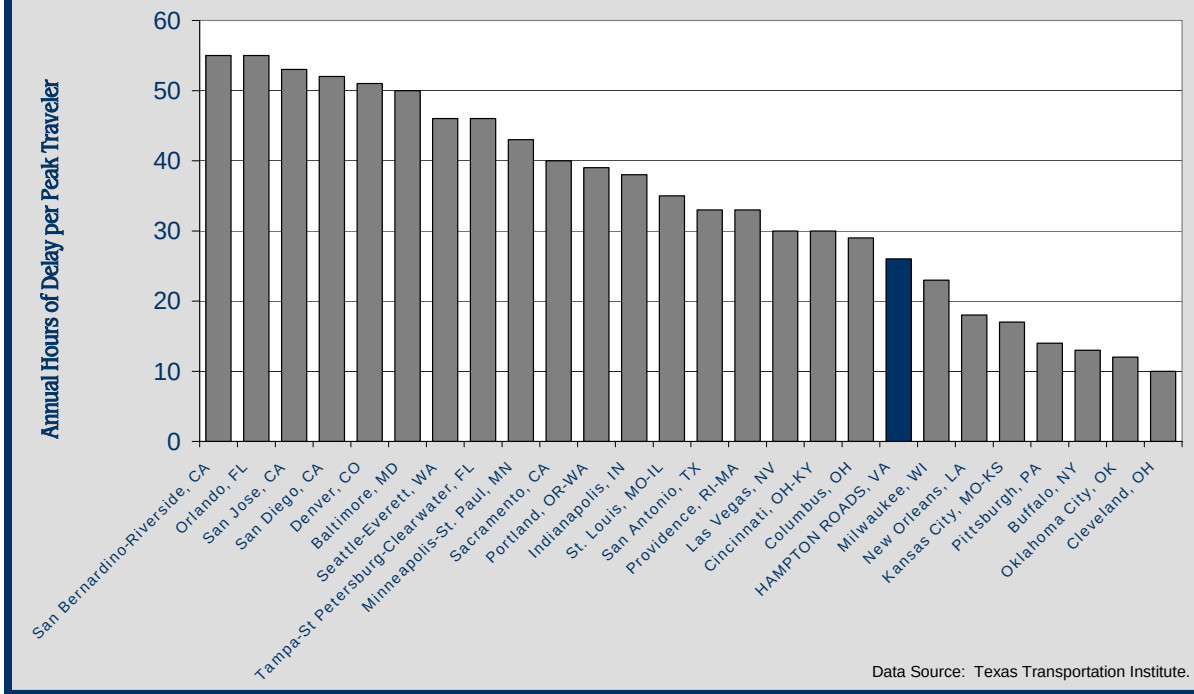
TTI divides urbanized areas into four population groups for comparison purposes: Very large, large, medium and small. Hampton Roads was grouped with 25 other areas defined by TTI as large urbanized areas, those with populations between one and three million people.

Peak period travelers in Hampton Roads spent an average of 26 hours stuck in traffic in 2003 according to TTI. This placed

Quick Facts...

- Each peak period traveler in Hampton Roads experienced an average of 26 hours of delay due to congestion in 2003.
- This delay cost each peak period traveler an average of $438 in congestion costs in 2003.
- The average peak period trip took 21% longer than the same trip during nonpeak periods in Hampton Roads in 2003.

Annual Hours of Delay Per Peak Period Traveler Large Urban Areas, 2003



Data Source: Texas Transportation Institute.

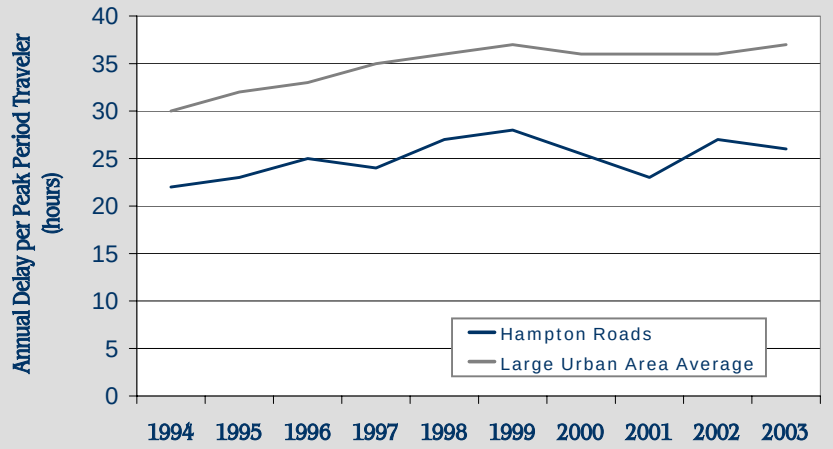
Hampton Roads 19th among the 26 large urbanized areas. Although this number increased 4 hours from 1994 when regional peak period travelers spent an average of 22 hours in congested traffic, it still remains below the average delay experienced in comparable large urbanized areas. These Hampton Roads delay estimates are believed to be low, since TTI's delay estimation techniques do not account for facilities that have lower capacities than other facilities with a similar number of lanes, such as the tunnels and drawbridges that are prevalent throughout our region.

Recent Developments

- The Urban Mobility Report was not released in 2006, so that TTI can refine research methods to produce a more extensive and reliable study. An updated version of the Urban Mobility Report will be released in mid-2007.

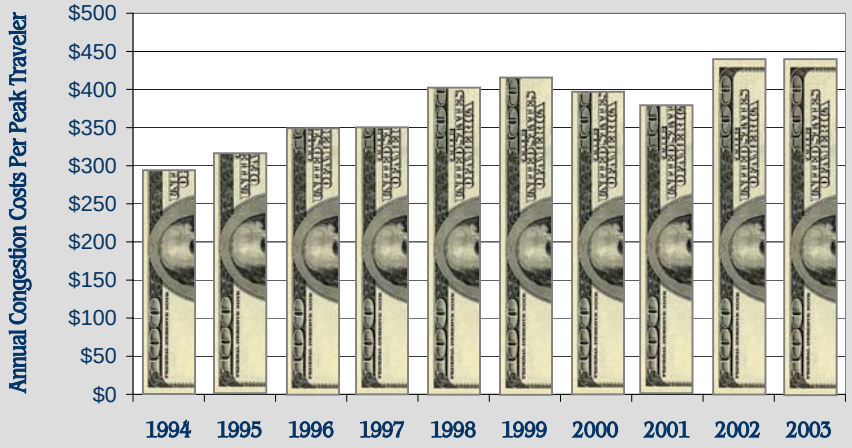
Drivers stuck in congestion incur both direct and indirect costs. TTI estimates these costs of being stuck in congestion by including the value of a person's time, wasted fuel, and commercial vehicle operation costs. TTI estimates that being stuck in congestion cost each Hampton Roads peak period traveler $438 in 2003, which amounts to $367 million for the entire region. This is the result of 22 million person-hours and 14 million gallons of fuel being lost due to congestion regionwide. This is up from $292 per Hampton Roads peak period traveler in 1994, although congestion costs from 2005 and 2006 are expected to be much higher due to the significant increase in fuel costs.

Annual Hours of Delay Per Peak Period Traveler Hampton Roads and Large Urban Areas, 1994-2003

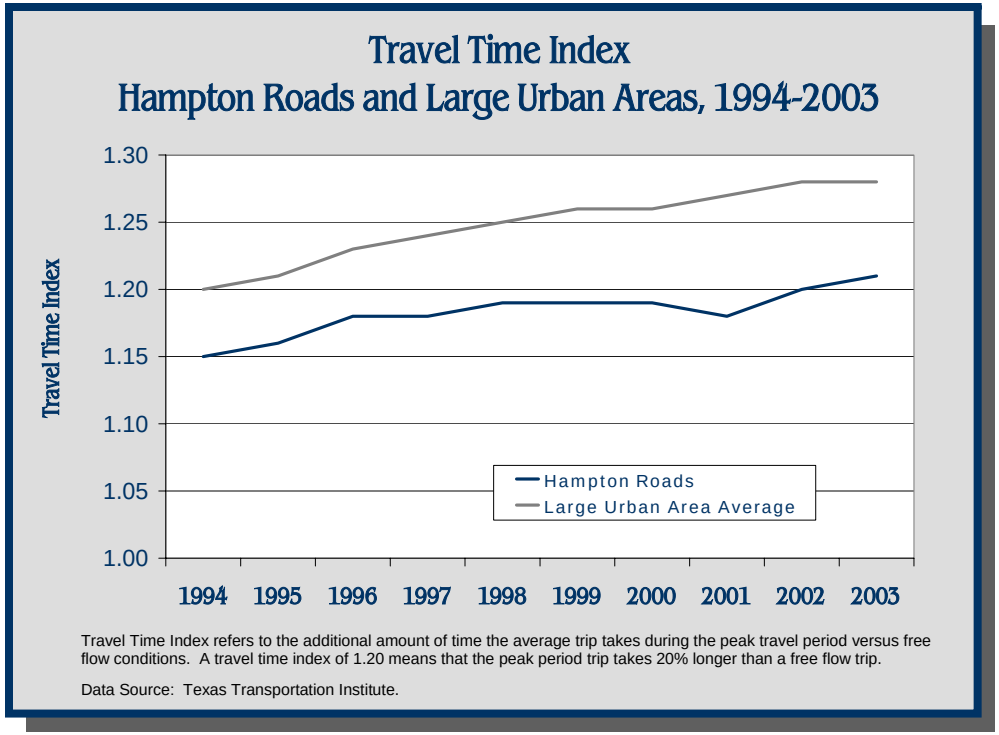


Data Source: Texas Transportation Institute.

Annual Congestion Costs Per Peak Period Traveler In Hampton Roads, 1994-2003



Data Source: Texas Transportation Institute.



Travel Time Index refers to the additional amount of time the average trip takes during the peak travel period versus free flow conditions. A travel time index of 1.20 means that the peak period trip takes 20% longer than a free flow trip.

Data Source: Texas Transportation Institute.

TTI also calculates a delay factor called the Travel Time Index, which measures the additional time that is required to make a trip during the peak travel period as compared to the same trip during free flow periods. In 2003 the Travel Time Index was 1.21 in Hampton Roads, meaning that the average peak period trip in Hampton Roads took 21% longer than the same trip took during free flow periods of the day. A trip that took 30 minutes during free flow travel periods took over 36 minutes during peak travel periods in Hampton Roads in 2003. In 1994 this trip would have taken 34.5 minutes when the Travel Time Index in Hampton Roads was 1.15.

In large urbanized areas, the average Travel Time Index was 1.28 in 2003. A trip that would take 30 minutes during free flow travel periods would take on average 38 minutes in other large urbanized areas.

Dominion Boulevard in Chesapeake

Commuting Data

Commuters in Hampton Roads are increasingly driving to work alone, even as fuel costs rise and congestion increases. Beginning in 2005 the United States Census Bureau collects and distributes socioeconomic data via the annual American Community Survey (ACS) rather than through the decennial Census. Included in the 2005 American Community Survey is data related to commuting characteristics, such as travel time to work, whether commuters cross jurisdictional boundaries, and commuting methods.

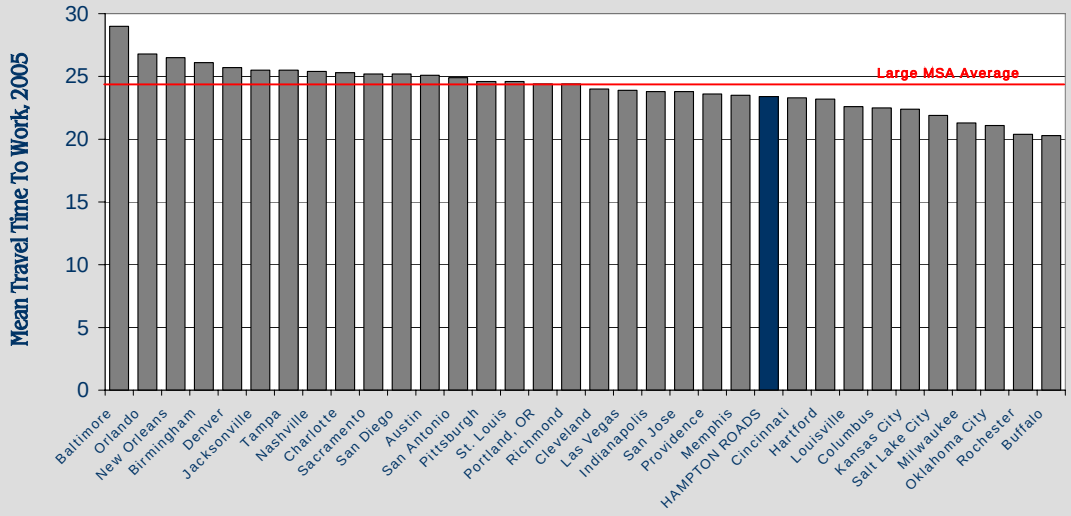
According to the American Community Survey, the mean travel time to work was 23.4 minutes in Hampton Roads in 2005. This is down from 24.1 minutes in 2000, although any decrease is more likely due to surveying differences between the ACS and the Census than actual decreases in travel time to work. Among all 34 metropolitan statistical areas (MSAs) with populations between one and three million people, Hampton Roads ranked 24th in mean travel time to work. The mean travel time to work in these 34 MSAs was an average of 24.4 minutes in 2005, 1.0 minutes longer than the mean travel time to work in Hampton Roads.

Although the mean travel time to work in Hampton Roads is about 23 minutes, many people have much longer commutes. 32% of all commuters in Hampton Roads had a commute of 30 minutes or greater in 2005, up from 28% in 1990. 5% of all Hampton Roads

Quick Facts...

- The mean travel time to work was 23.4 minutes in Hampton Roads in 2005.
- Nearly 83% of all commuters drove to work alone in Hampton Roads in 2005, up from 73% in 1990 and 79% in 2000.
- In 2005, over half of all workers in Hampton Roads worked in a different community than they resided in.

Mean Travel Time to Work
MSAs with Populations Between One and Three Million, 2005



Data Source: US Census Bureau.

workers had commutes of greater than 60 minutes in 2005, up from 3% in 1990.

Primarily due to military work schedules, people in Hampton Roads leave earlier for work than in other metropolitan areas. In 2005, 32% of all workers in Hampton Roads left for work between 5 am and 7 am. By comparison, in MSAs with populations between one and three million people, an average of 28% of all workers left for work between 5 am and 7 am. Spreading out the times that people commute to and from work can help to spread out the peak volume of traffic and keep congestion levels lower than they might otherwise be.

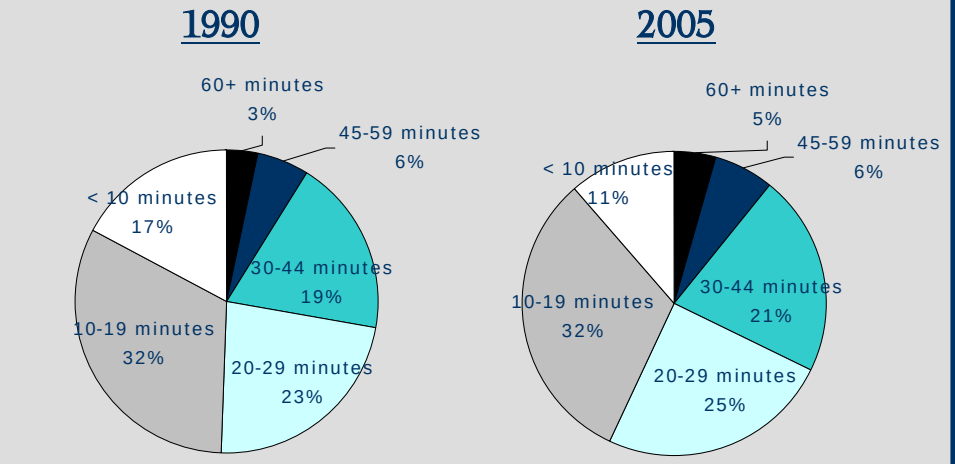
Recent Developments

- Beginning in 2005, the Bureau of the Census collects and distributes socioeconomic data via the American Community Survey. The American Community Survey will be released annually rather than every ten years as was previously done with Census data, making the data timelier.

The percentage of Hampton Roads residents that work in a jurisdiction that is different from the one they reside in has increased. In 1990, 45% of all workers in Hampton Roads worked in a jurisdiction that was different from the one they lived in. In 2000 this percentage increased to 49%, and in 2005 more than half of all residents of Hampton Roads worked in a different jurisdiction than the one they resided in.

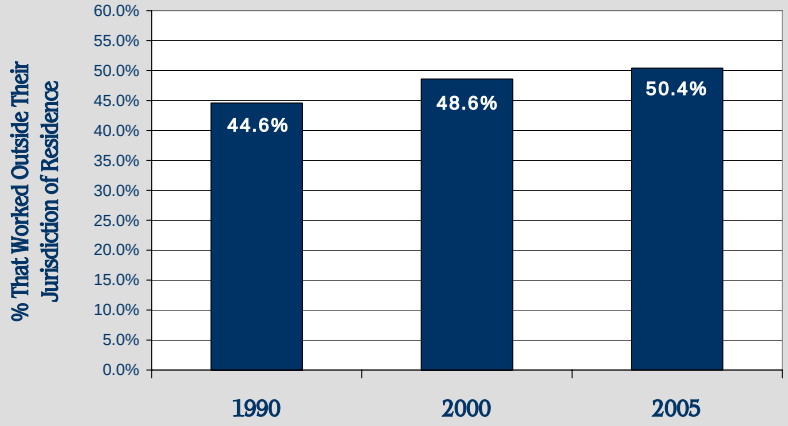
The proportion of commuters that drive to work alone has also increased substantially. In 1990, 73% of all commuters in Hampton Roads drove to work alone. By 2000 this rate had increased to nearly 79%. In 2005, 83% of all commuters in

Length of Trip to Work in Hampton Roads, 1990 and 2005



Data Source: US Census Bureau.

Percentage of Hampton Roads Workers that Worked Outside Their Jurisdiction of Residence, 1990, 2000, and 2005



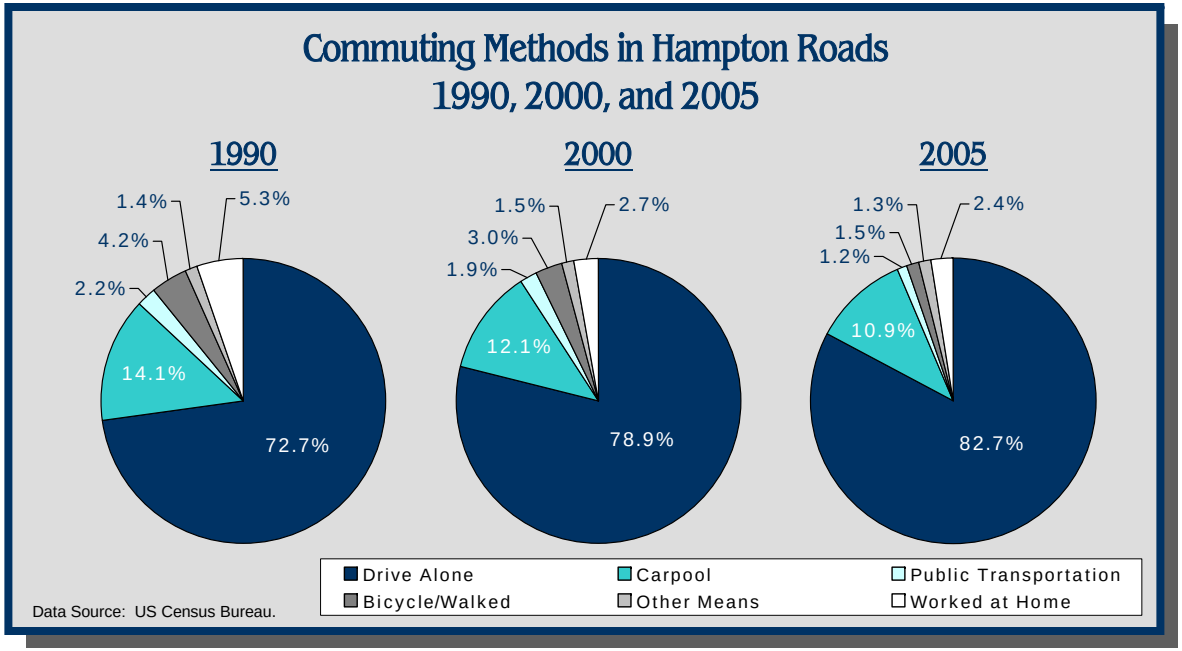
Data Source: US Census Bureau.

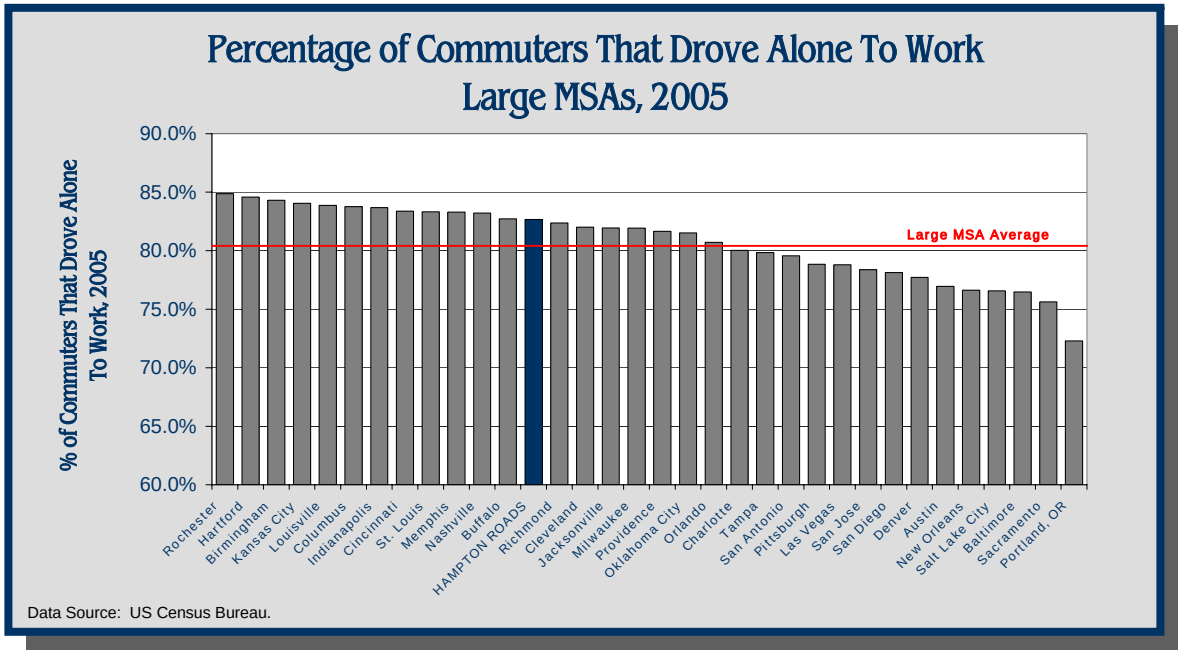
Hampton Roads drove to work alone, 10% higher than 15 years before. This amounts to 104,000 more commuters driving alone to work in Hampton Roads in 2005 than in 1990. All other commuting methods (carpooling, public transportation, working at home, and bicycling/walking) had lower percentages in 2005 than in 1990 and 2000.

A recent survey conducted by the Southeastern Institute of Research found an even higher percentage of Hampton Roads commuters drive alone to work. According to their survey, 92% of all respondents drove alone to work in 2006.

Among all 34 metropolitan statistical areas with populations between one and three million people, Hampton Roads had the 13th highest percentage of commuters that drove alone to work in 2005. The average percentage of commuters that drove alone to work in these MSAs was 80.4% in 2005, 2.3% lower than the percentage of commuters that drove alone to work in Hampton Roads.

There are regional programs in place that attempt to reduce the number of commuters that drive alone to work. Traffix promotes various commuting alternatives, including ridesharing, telecommuting, van leasing, and guaranteed ride programs. The Department of Rail and Public Transportation administers Telework VA, which provides financial support to companies that start or expand formal telecommuting programs.





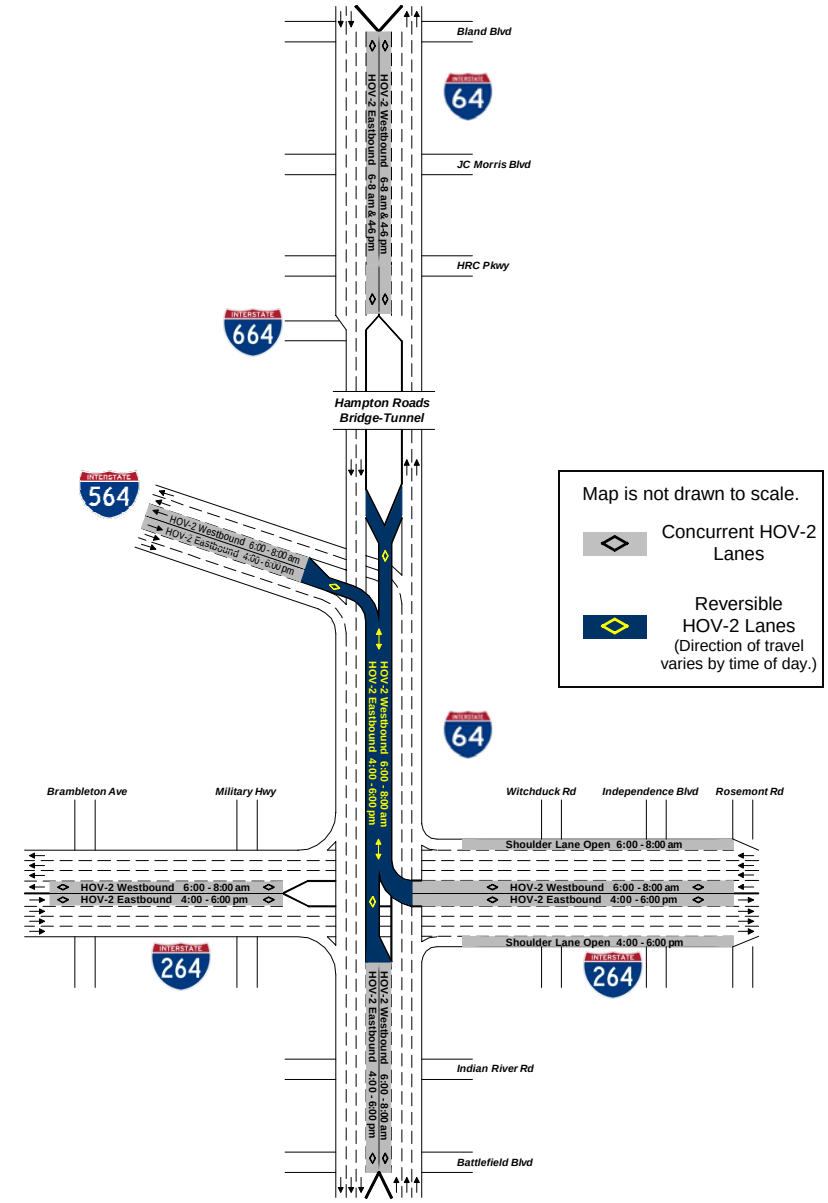
HOV Network

Although congestion is increasing throughout Hampton Roads, usage of HOV facilities remains largely unchanged. As part of an effort to increase vehicle occupancy rates and provide a thoroughfare for express bus service, HOV lanes were first constructed on regional freeways back in 1986. With the recent addition of HOV lanes on I-64 on the Peninsula, there are currently 37 centerline-miles of HOV facilities in Hampton Roads. Most of the HOV facilities in Hampton Roads are concurrent facilities, meaning that the lanes are adjacent to the regular travel lanes and traffic can enter and exit the HOV lanes at any point. The HOV facility on I-64 between I-564 and I-264 is a reversible, barrier-separated facility with traffic flow going towards I-564 and the Naval Base during the morning and towards I-264 and Virginia Beach during the afternoon.

Reversible HOV Lanes on I-64 in Norfolk

HOV facilities in Hampton Roads require at least two persons per vehicle, with exceptions for motorcycles and licensed low emission vehicles, between 6:00 – 8:00 am and 4:00 – 6:00 pm, depending on the direction of peak travel flow.

Hampton Roads HOV Network



Outside of these hours, single-occupant vehicles are allowed to use the HOV facilities.

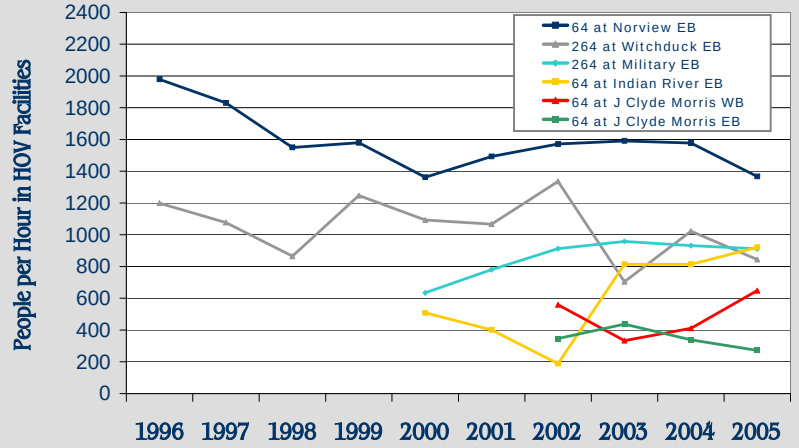
HOV data is collected by VDOT multiple times yearly at six locations throughout the region. Based on this data, the total number of people using HOV facilities has decreased on some facilities and increased on others in recent years. Although the reversible HOV lanes on I-64 in Norfolk still carry more people during the afternoon peak period than other HOV facilities in the region, the number of people using these lanes has dropped from about 2,000 people per hour in 1996 down to 1,400 people per hour in 2005.

The average number of people per vehicle using the HOV lanes has also decreased in recent years. All of the HOV facilities in Hampton Roads had average vehicle occupancy rates during the afternoon peak travel period of between 1.4 and 1.6 persons per vehicle in 2005. This indicates that around half of all vehicles on regional HOV facilities have only one occupant, meaning HOV violations are a significant problem. Without additional police enforcement and increased penalties, it is unlikely that the average vehicle occupancy rates on regional HOV facilities will increase.

Recent Developments

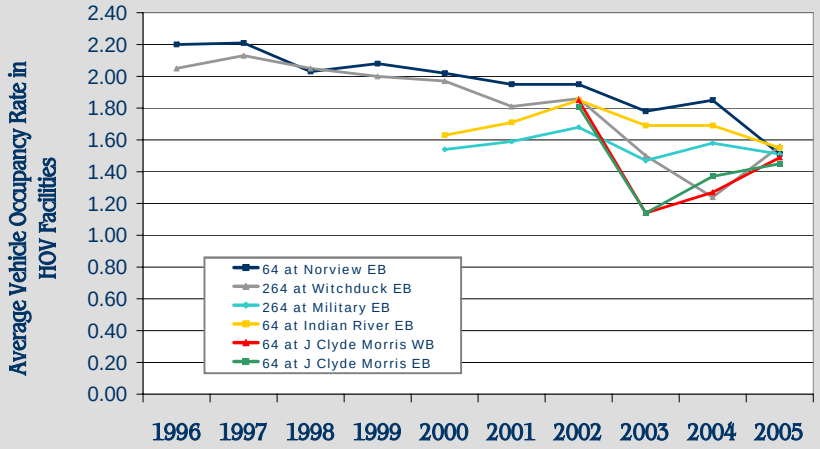
- HOV lanes were completed earlier this year on I-64 between I-664 and Hampton Roads Center Parkway. With these three miles being added to the system, there are now 37 centerline-miles of HOV facilities in Hampton Roads.
- Construction has begun on I-64 at Battlefield Boulevard in Chesapeake. When complete, HOV lanes will be extended from east of Battlefield Boulevard to I-464.

People Per Hour in HOV Facilities in Hampton Roads PM Peak Period, 1996-2005



Data Source: VDOT.

Average Vehicle Occupancy Rates in HOV Facilities in Hampton Roads, PM Peak Period, 1996-2005



Data Source: VDOT.

Safety

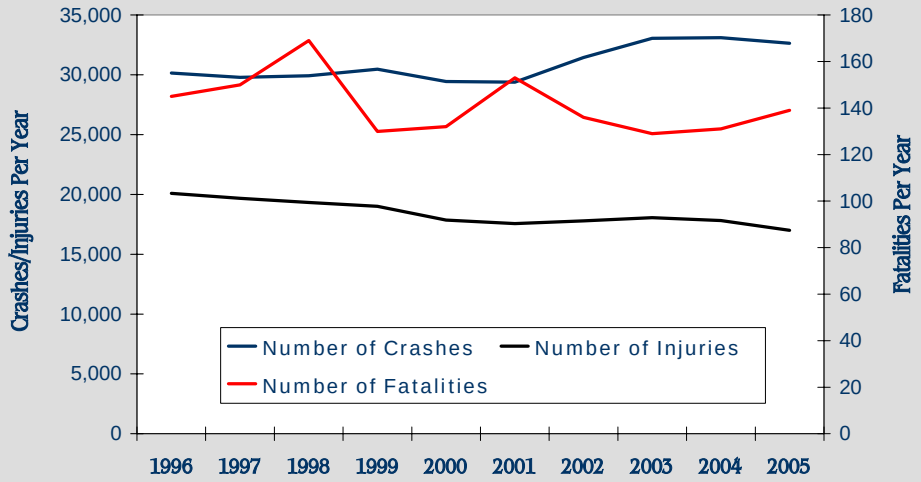
There were 32,600 crashes on Hampton Roads roadways in 2005, resulting in 17,000 injuries and 139 fatalities. The number of crashes in Hampton Roads has increased over the last decade: 2,500 more crashes occurred in Hampton Roads in 2005 than in 1996, an 8% increase. Although the number of crashes increased, the number of injuries and fatalities in these crashes decreased during this time. There were 3,100 fewer injuries and 6 fewer fatalities in 2005 than in 1996 in Hampton Roads, decreases of 15% and 4% respectively.

Trends in crashes, injuries, and fatalities in Hampton Roads were all better than the statewide trends. The number of crashes statewide increased 17% between 1996 and 2005, which is twice the rate of increase that Hampton Roads experienced during this time. Statewide injuries decreased 8% between 1996 and 2005, which was only half the rate of decrease in Hampton Roads, and fatalities increased 9% statewide, while fatalities in Hampton Roads decreased.

Quick Facts...

- There was a crash throughout Hampton Roads on average every 16 minutes in 2005.
- There were 139 fatalities as a result of traffic crashes in Hampton Roads in 2005. 42% of the fatalities occurred in crashes that involved alcohol.
- The crash rate in Hampton Roads decreased 11% between 1996 and 2005, and the fatality rate decreased 21% during this time period.

Crashes, Injuries, and Fatalities in Hampton Roads 1996-2005



Data Source: Virginia DMV.

While the number of crashes occurring throughout the region has increased in recent years, so has the amount of travel and therefore the amount of exposure to crashes. The crash rate, which accounts for this increased travel, decreased in Hampton Roads from 2.49 crashes per million vehicle-miles of travel (VMT) in 1996 to 2.22 crashes per million VMT in 2005, an 11% decrease. Although the statewide crash rate increased during this time period, it is still lower than the crash rate in Hampton Roads.

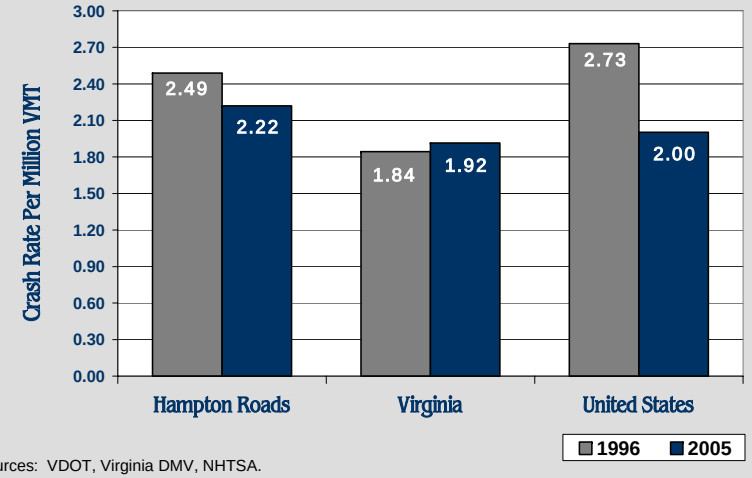
The fatality rate in Hampton Roads decreased as well, from 1.20 fatalities per 100 million VMT in 1996 down to 0.95 fatalities per 100 million VMT in 2005. The fatality rate in Hampton Roads was significantly lower than the statewide and national fatality rates in 2005.

While crashes are the most substantial type of incident, other types of incidents also compromise the safety and capacity of the roadway system. Examples of these incidents include disabled vehicles, flat tires, and debris. To respond to these incidents as quickly and as safely as possible, the VDOT Smart Traffic Center of Hampton Roads maintains a Safety Service Patrol 24 hours a day, 7 days a week on 105 miles of freeway. In addition, the major bridges and tunnels throughout the region also maintain safety patrols at their facilities.

The Safety Service Patrol responded to over 37,000 incidents in 2005, or an average of over 100 incidents every day. This number is significantly higher than the number of incidents responded to in 2003 and 2004, when funding cutbacks resulted in fewer hours of the day and miles of roadway covered by the Safety Service Patrol.

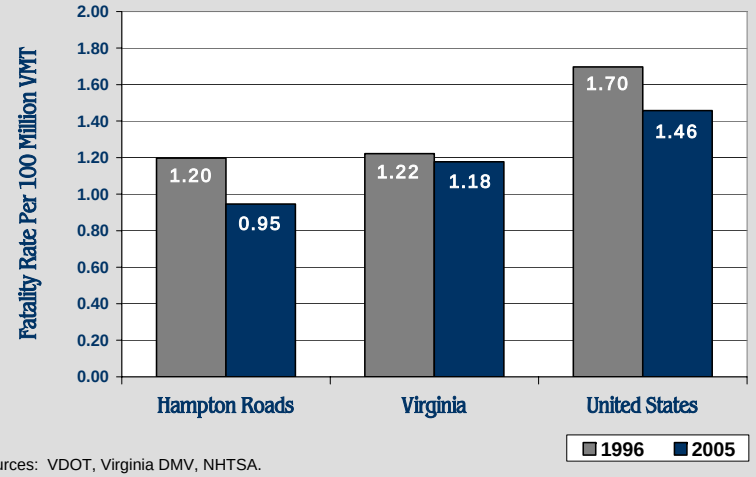
The average duration of incidents responded to by the Safety Service Patrol was 14.7 minutes per incident in 2005. This is the amount of time between when the Smart Traffic

Traffic Crash Rates in Hampton Roads, Virginia, and the United States, 1996 and 2005



Data Sources: VDOT, Virginia DMV, NHTSA.

Traffic Crash Fatality Rates in Hampton Roads, Virginia, and the United States, 1996 and 2005



Data Sources: VDOT, Virginia DMV, NHTSA.

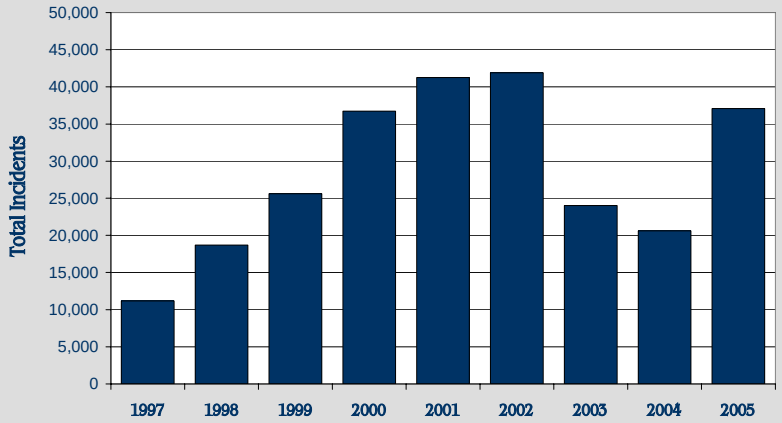
Center was notified of the incident and when the incident was cleared from the scene. For accidents responded to by the Safety Service Patrol, the average duration was 39.9 minutes in 2005. Although the number of incidents responded to by the patrol has varied through the years due to changes in coverage, the average incident and accident duration times has remained mostly unchanged since 2000.

As part of the Congestion Management Process, HRPDC analyzes roadway safety on a regional basis. The Hampton Roads Regional Safety Study, which was released in 2004, examined general crash data and trends as well as crash countermeasures for high crash locations throughout the region. Further reports, including an analysis of roadway safety in the region's rural areas as well as an update to the general crash data and trends, have been released recently. All of these publications can be found at http://www.hrpdc.org/publications/techreports/transportation.html.

Recent Developments

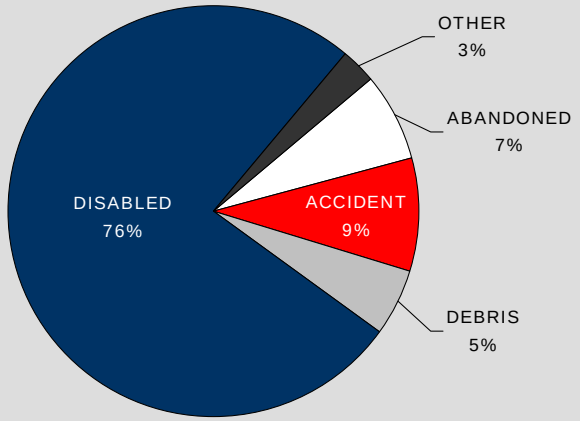
- After cutting back hours-of-service and coverage due to budget constraints, VDOT has resumed operating the Safety Service Patrol 24 hours a day, 7 days a week and has expanded roadway coverage.
- Virginia is in the process of creating a Statewide Highway Safety Plan. This effort, which involves many levels of state and local government, is being done to reduce the number of injuries and fatalities occurring on Virginia's roadways.

Total Incidents Responded to by the VDOT Safety Service Patrol, 1997-2005



Data Source: VDOT Hampton Roads Smart Traffic Center.

Types of Incidents Responded to by the VDOT Safety Service Patrol, 2005



Data Source: VDOT Hampton Roads Smart Traffic Center.

Truck Data

With the amount of port and warehouse activity in the region, truck traffic is always prevalent throughout Hampton Roads. According to Global Insight data, 48% of all domestic freight entering Hampton Roads and 73% of all domestic freight leaving Hampton Roads was transported by truck in 2004. This amounts to nearly 20,000 trucks entering and leaving Hampton Roads each weekday. If these trucks were laid end-to-end, they would stretch all the way from Virginia Beach to Washington D.C., over 200 miles!

Trucks on Hampton Boulevard

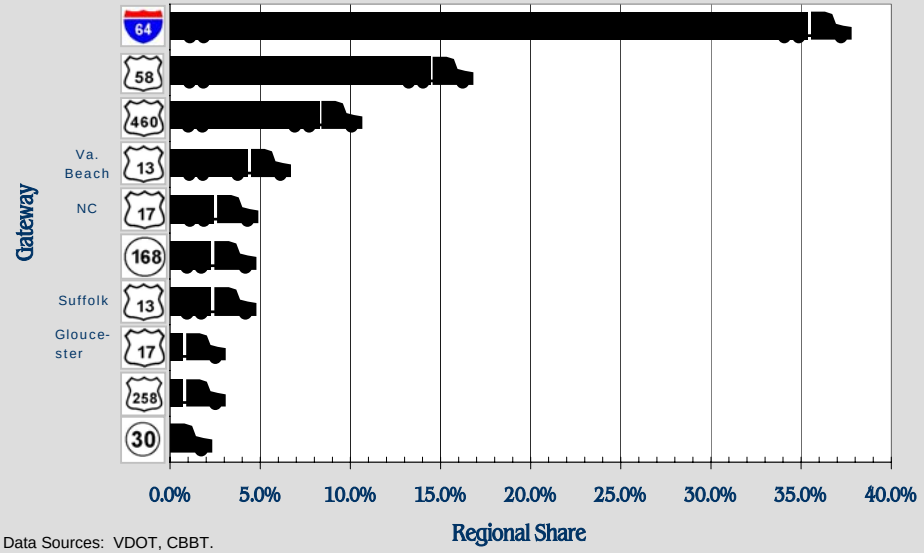
Not surprisingly, I-64 is the primary gateway for trucks entering or leaving Hampton Roads. 38% of all freight entering or exiting the region by truck uses I-64. Route 58 is the second most used gateway with 17% of all freight entering or exiting the region, and Route 460 is third with an 11% share.

Despite the large number of trucks operating in Hampton Roads, trucks are primarily on regional roadways during non-peak travel periods. 66% of all truck traffic in Hampton Roads occurs outside of the morning (6 am – 9 am)

Quick Facts...

- Nearly 20,000 trucks enter and exit Hampton Roads each weekday.
- I-64 is the primary corridor trucks use to enter and exit Hampton Roads, with Route 58 and Route 460 ranking second and third respectively.
- Nearly 20,000 overheight trucks were turned around at Hampton Roads tunnels in 2005, including 13,800 at the westbound Hampton Roads Bridge-Tunnel.

Share of Total Regional Freight Movement by Truck at the Top Ten Regional Gateways, 2005



Data Sources: VDOT, CBBT.

and afternoon (3 pm – 6 pm) peak travel periods, when vehicle volumes are the highest.

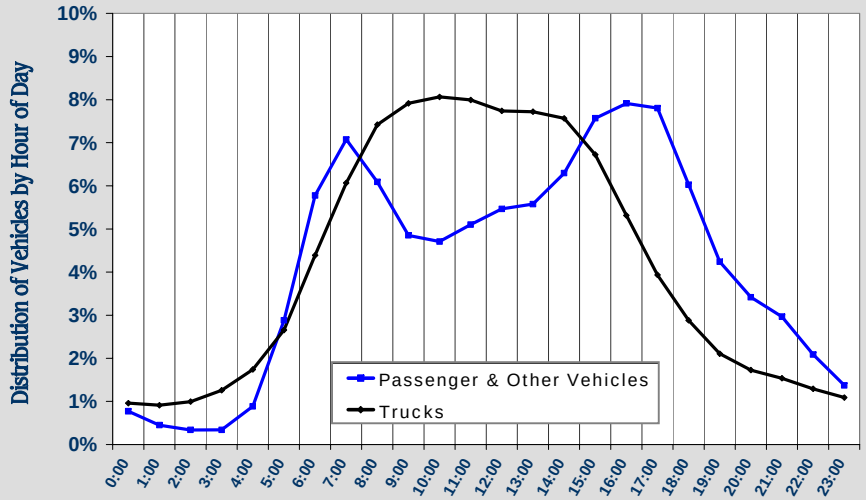
Overheight trucks are a concern at the region's tunnel facilities. Trucks that are overheight can lead to congestion-inducing traffic stoppages in both directions if they need to be turned around at the entrance of the tunnel. This is particularly a problem for the westbound lanes at the Hampton Roads Bridge-Tunnel, which are older and have a lower vertical clearance than the eastbound lanes. There were almost 20,000 overheight vehicles stopped, measured, and turned around at the regional tunnels in 2005, an average of nearly 55 vehicles per day. The westbound Hampton Roads Bridge-Tunnel had the most overheight vehicles, with 13,775 such trucks being turned around in 2005, almost 69% of the regional total. Of these, 1,332 were turned around at the tunnel entrance on the South Island, leading to traffic stoppages in both directions.

HRPDC is currently updating the Intermodal Management System study. This report includes a summary of regional freight movement, including where trucks enter and leave the region, high truck locations, and freight bottlenecks.

Recent Developments

- To reduce the number of overheight trucks that are turned around at the Hampton Roads Bridge-Tunnel, tougher penalties including $500 fines and three license demerit points took effect in July 2005. After a brief decrease, the number of overheight trucks has nearly returned to previous levels. This led the General Assembly to increase the fine to $1,000 as of January 1, 2007.

Hourly Regional Distribution of Trucks and Passenger and Other Vehicles, 2005



Includes data at VDOT permanent count stations in Hampton Roads.
Data Source: VDOT.

Overheight Vehicles Stopped, Measured, and Turned Around at Regional Tunnel Facilities, 2005

Facility	Eastbound	Westbound
Hampton Roads Bridge-Tunnel	458 (including 22 at North Island)	13,775 (including 1,332 at South Island)
Downtown Tunnel	1,107	3,923
Midtown Tunnel	263	461
Monitor-Merrimac Memorial Bridge-Tunnel	0	0

Data Source: VDOT.

Public Transportation

Public transportation use has increased in Hampton Roads in recent years, even outpacing the nationwide growth in transit usage. Hampton Roads has a variety of public transportation services available throughout the region:

- Conventional bus service is provided in most of Hampton Roads by Hampton Roads Transit (HRT), with service in James City County, York County, and Williamsburg provided by Williamsburg Area Transport.
- Passenger ferry service is provided by HRT between Downtown Norfolk and Downtown Portsmouth, and vehicular ferry service is provided by VDOT across the James River between Surry County and Jamestown.

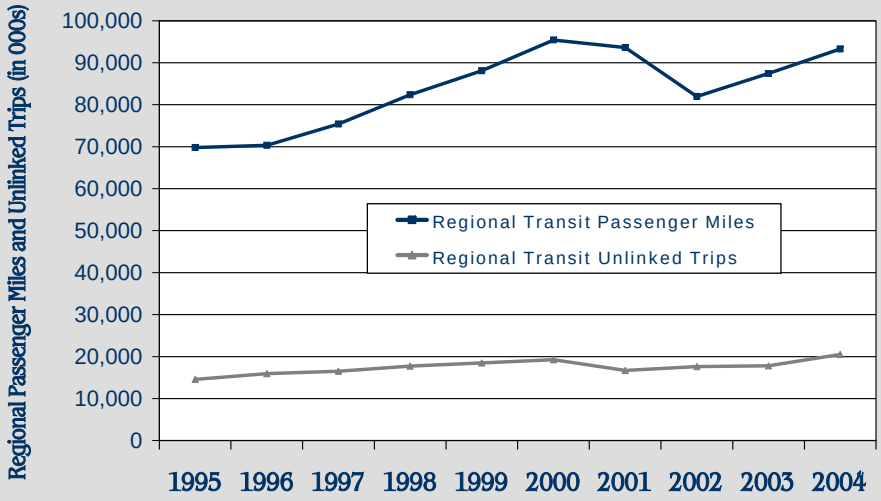
Photo Source: Williamsburg Area Transport.

- Tourist-oriented transit services are provided, including VB WAVE trolleys at the Oceanfront, Boomerang bus service between Virginia Beach and Williamsburg, and Norfolk Electric Transit. Williamsburg Area Transport provides tourist-oriented service to Busch Gardens, Water Country USA, Jamestown, and Yorktown.
- Commuting alternatives are promoted by Traffix, including ridesharing, van leasing, telecommuting, and guaranteed ride programs.

Quick Facts...

- The number of passenger miles taken on public transportation in Hampton Roads increased 34% between 1995 and 2004.
- At 58 passenger miles per capita taken on public transportation in Hampton Roads, the region ranked 19th among 35 metropolitan areas with populations between one and three million people in terms of transit use per capita.

Transit Passenger Miles and Unlinked Trips in Hampton Roads, 1995-2004



Data Source: National Transit Database. An unlinked trip is a trip made on one transit vehicle. If a passenger boards two buses to get from origin to destination, that is two unlinked trips.

There were over 93 million passenger miles taken on public transportation in Hampton Roads in 2004. Although there was a decrease in public transportation usage early in the decade, the number of passenger miles taken on public transportation increased 34% in Hampton Roads between 1995 and 2004, outpacing the 23% growth nationally.

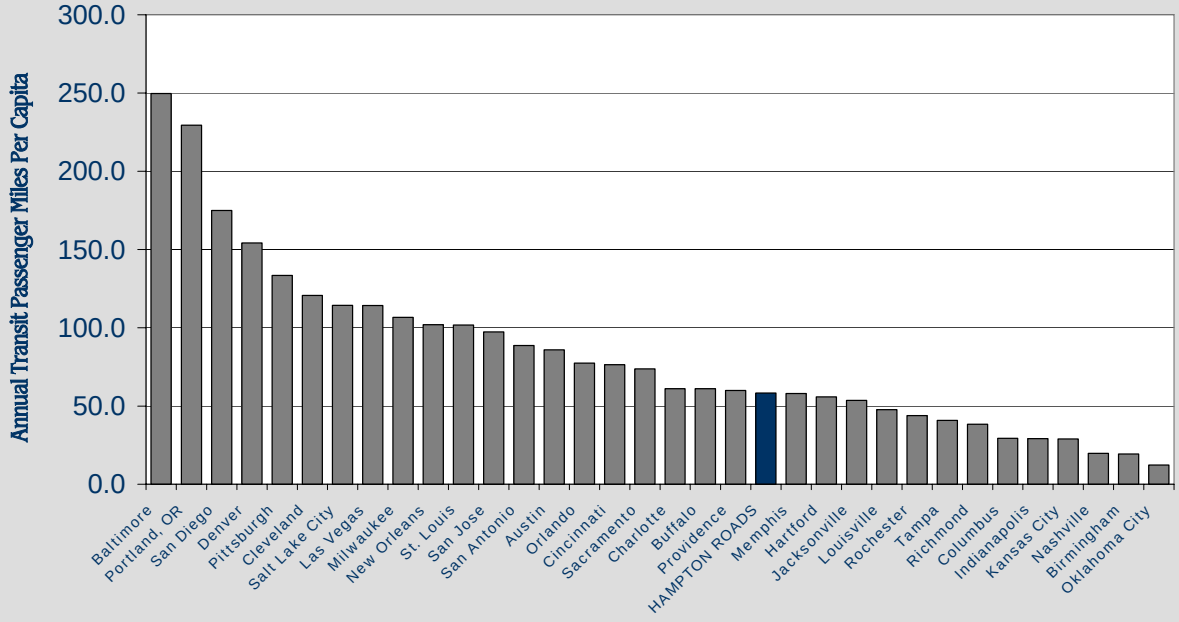
The 93 million passenger miles in Hampton Roads in 2004 were taken on over 20 million unlinked trips. (An unlinked trip is a trip made on one transit vehicle, regardless of the fare paid. If a passenger board two buses to get from origin to destination, that counts as two unlinked trips.) The number of unlinked trips on public transportation in the region increased 41% between 1995 and 2004, which is also higher than the growth that occurred nationwide.

Despite the growth in public transportation usage, the amount of public transportation usage per capita in Hampton Roads still lags behind other comparable metropolitan areas. With 58 public transportation passenger miles per capita in 2004, Hampton Roads ranked 21st among the 34 large metropolitan areas with populations between one and three million people. The Portland, OR/WA metropolitan area, which has many land use controls in place, had nearly four times as many public transportation passenger miles per capita as Hampton Roads did in 2004. Of the 20 large metropolitan areas with higher public transportation use per capita than Hampton Roads, 15 had a transit rail system in place.

Recent Developments

- The Federal Transit Administration recently approved the Norfolk Light Rail Project for final design. When completed, the initial line will stretch 7.4 miles from Newtown Road through Downtown Norfolk to the Sentara Norfolk General hospital complex. The line is currently scheduled to be operational in late 2009 or early 2010.

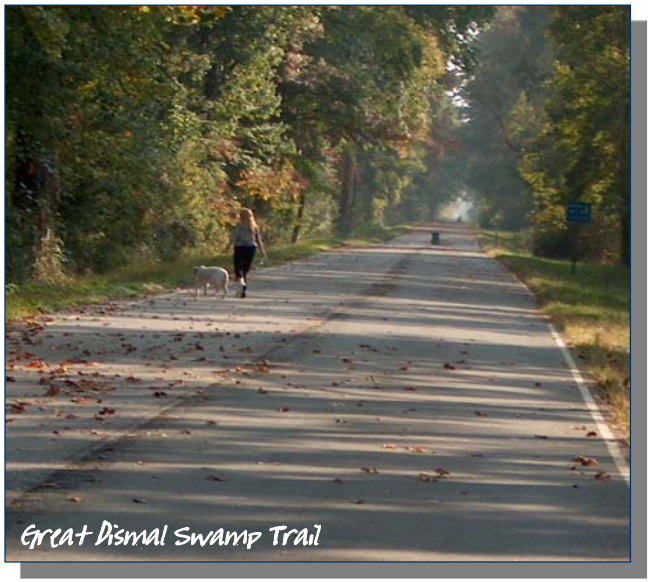
Transit Passenger Miles Per Capita in MSAs with Populations Between One and Three Million People, 2004



Data Sources: National Transit Database, Bureau of the Census.

Bicycle/Pedestrian Facilities

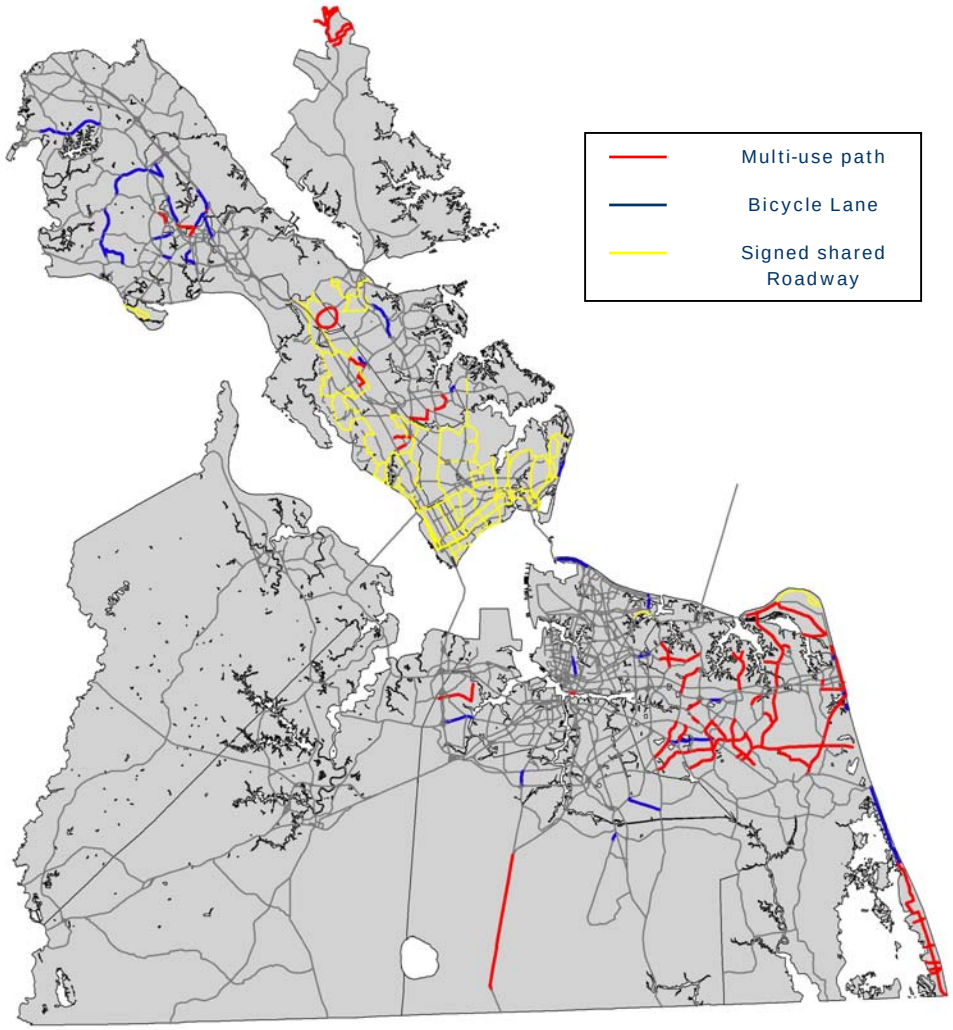
In recent years planning for and constructing bicycle and pedestrian facilities has become more prevalent in Hampton Roads. Not only have additional bicycle and pedestrian facilities been built recently but most roadway projects in the region are now designed to accomodate bicyclists and pedestrians. Localities are also including more bicycle and pedestrian facilities in their comprehensive planning documents. Bicycle and pedestrian facilities not only provide for an alternate means of transportation but also provide additional recreation opportunities for both residents and visitors to the region.



Great Dismal Swamp Trail

There are currently 376 miles of bicycle and pedestrian facilities throughout Hampton Roads. The facilities range from secluded refuge paths to bicycle lanes along major throughfares to the resort area boardwalk. The primary types of bicycle and pedestrian

Existing Bicycle Facilities in Hampton Roads



Data Sources: HRPDC, VDOT.

Existing Centerline Miles of Bikeway by Type in Hampton Roads

Multi-Use Path	Bicycle Lane	Signed Shared Roadway
142 miles	45 miles	189 miles

Data Source: VDOT.

Recent Developments

- The Great Dismal Swamp Trail opened to users in April 2006. The 8.5-mile trail uses the former Route 17 roadway just east of the Great Dismal Swamp Canal. This corridor is available for walking, running, bicycling, horseback riding, and boating.

- Work has begun on the Virginia Capital Trail. When completed, the 10-foot wide multi-use path will stretch 54 miles between Williamsburg and Downtown Richmond along the Route 5 corridor.

facilities in the region are multi-use paths (189 miles) and signed shared roadways (142 miles).

Although many of the regional bicycle and pedestrian facilities are constructed by localities or as part of other roadway projects, regional funds have also been devoted to bicycle and pedestrian facilities. For the Fiscal Years 1993-2010, over $20,000,000 of federal Congestion Management and Air Quality funding (CMAQ) has been allocated for 34 bicycle and pedestrian facility projects in Hampton Roads. This number accounts for 14% of the total CMAQ funds allocated during this time.

There are plans for over 1,400 additional miles of bicycle facilities in VDOT's Hampton Roads District Bicycle Plan. With current policies and funding levels it is expected that only 230 miles of additional bicycle and pedestrian facilities will be constructed throughout Hampton Roads over the next 20 years.

Transportation Financing

Although transportation funding has increased in recent years, roadway construction has had trouble keeping up with increased travel due to increased maintenance requirements and construction costs. The final transportation budget for the State of Virginia in Fiscal Year 2007 is $4.3 billion. This amount includes construction and maintenance of Virginia's highway system, operations and administration, debt payments, and

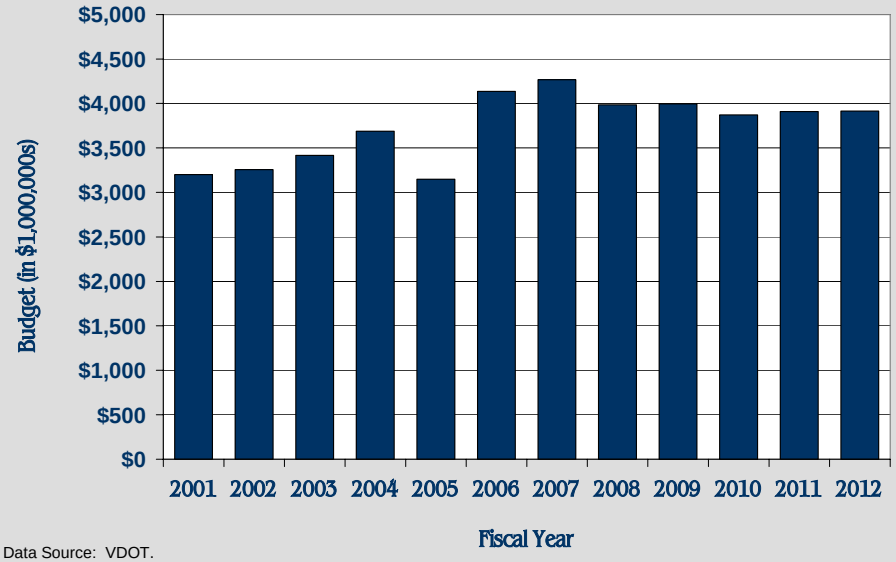
I-64 Work Zone near Battlefield Boulevard

support to ports, aviation, and public transportation. This is up 33% from the $3.2 billion spent on transportation funding in Virginia in 2001. In the future, however, Virginia's transportation budget is expected to decrease. An average of only $3.9 billion is projected to be budgeted annually to transportation in Virginia between 2008 and 2012, which is an 8% decrease from 2007 funding levels.

Quick Facts...

- The transportation budget in Virginia is expected to decrease from $4.3 billion in 2007 to $3.9 billion in 2012.
- The state of Virginia ranked 44th among the 50 states and District of Columbia in total per capita capital outlays for highways in 2003.
- Virginia ranks 41st among the 50 states and District of Columbia in total taxes and fees collected on each gallon of unleaded gasoline.

Historical and Projected Transportation Budget for the State of Virginia, Fiscal Years 2001-2012



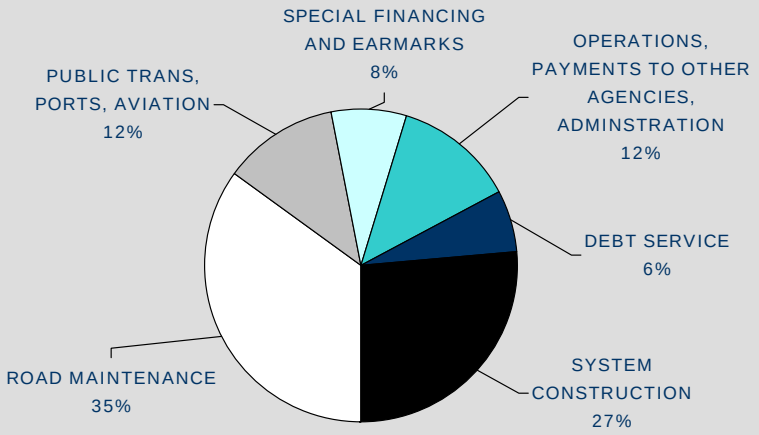
Data Source: VDOT.

The largest component of the transportation budget in Virginia is devoted to roadway maintenance. 35% of Virginia's transportation budget in Fiscal Year 2007 is allocated to maintaining existing roadway infrastructure. The second largest component of the transportation budget is system construction, comprising 27% of the total transportation budget. As recently as 2001, roadway construction comprised a larger portion of the state transportation budget than roadway maintenance.


New Route 17 in Chesapeake

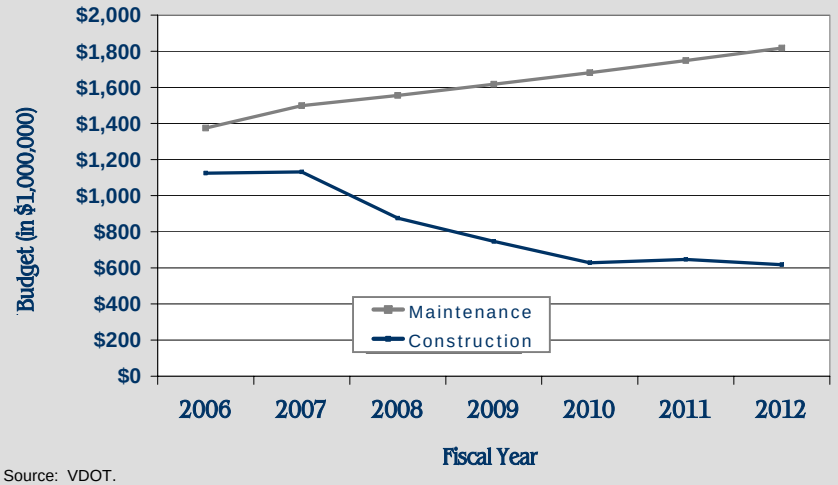
In future years, the amount of the statewide transportation budget that must be devoted to maintaining existing roadway infrastructure will increase. This is due both to the aging of Virginia's roadway system as well as increasing costs in construction materials and labor. The amount of money spent on roadway maintenance in Virginia is expected to increase from just under $1.4 billion in Fiscal Year 2006 to over $1.8 billion in 2012, a 32% increase over the six-year period. This increase in funding for roadway maintenance occurs as the total statewide transportation budget is expected to decrease,

State of Virginia Transportation Allocations Fiscal Year 2007



Data Source: VDOT.

Projected Statewide Highway Funding by Fiscal Year Maintenance vs. Construction, Fiscal Years 2006 – 2012



Data Source: VDOT.

meaning the amount of funding available for roadway construction will decrease significantly. The annual funding for roadway construction in Virginia is expected to decrease from $1.1 billion in 2006 down to just over $600 million in 2012. With escalating costs in construction materials, land acquisition, and labor likely to continue, this decrease in construction funding will be even more significant than the numbers indicate.

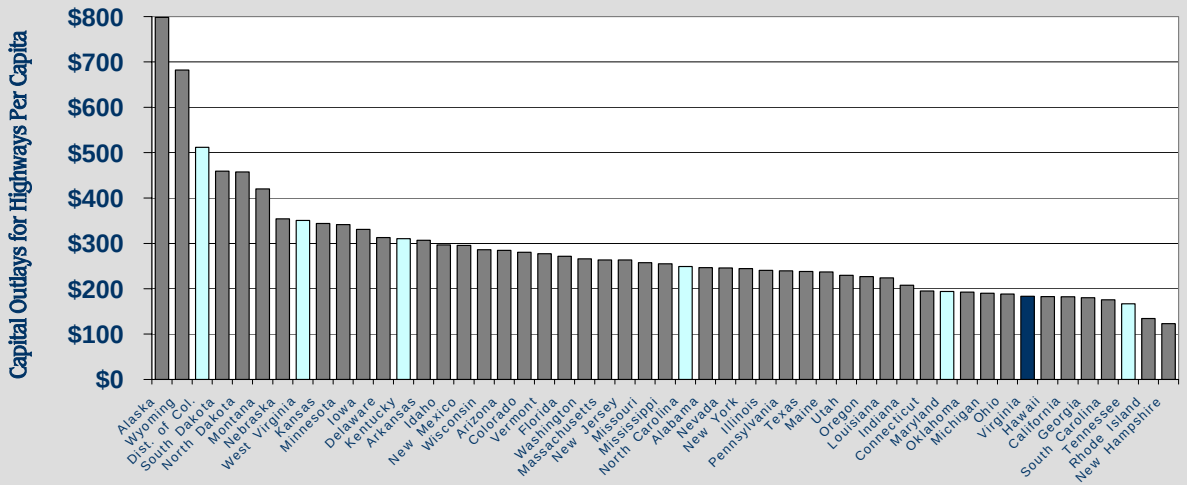
Even before the projected decrease in roadway construction funding occurs, the amount of funding for roadway construction in Virginia lags behind construction funding in other states. Among the 50 states and the District of Columbia, Virginia ranked 44th in total capital outlays for highways per capita in 2003, the most current year available. Among neighboring states, only Tennessee spent less per capita on capital outlays for highways than Virginia. $167 more was spent per person in West Virginia on capital outlays for highways than in Virginia in 2003.

Transit, rail, and highway projects that have funding allocated for studies, design, and construction are included in the statewide Six-Year Improvement Program. The Six-Year Improvement Program for Fiscal Years 2007-2012 includes $1.2 billion for projects in the Hampton Roads construction district, which includes rural areas to the west of Hampton Roads as well as the Eastern Shore. This

Major Roadway Construction Projects Completed in Hampton Roads, 2004 to 2006

Battlefield Boulevard	Replacement and widening of bridge over the Intracoastal Waterway.
Commander Shepard Boulevard	Widening between Magruder Blvd and NASA Main Gate.
Dam Neck Road	New facility between Salem Rd and the Virginia Beach Amphitheater.
Great Neck/London Bridge Rd	Widening and realignment between Shipps Corner Rd and Virginia Beach Blvd.
I-64	Widening (with HOV lanes) between Hampton Roads Center Pkwy and I-664.
Moses Grandy Trail	New facility between Deep Creek and Dominion Blvd.
Pinners Point Connector	New facility connecting the Western Freeway with the Midtown Tunnel and MLK Freeway.
Route 17	New facility replacing the old Route 17 between North Carolina State Line and Dominion Blvd.
Route 199	Widening between Jamestown Rd and Route 60.

Total Capital Outlays For Highways Per Capita, 2003



Capital outlays include all costs associated with highway improvements. Data includes all highway capital outlays regardless of who administers the roadway. Data Source: FHWA Highway Statistics Series, 2004.

accounts for 22% of the total amount allocated to construction districts across the state. Only the Northern Virginia district, which has been allocated 31% of the total statewide Six-Year Improvement Program funds, will receive more money than the Hampton Roads district.

There are many revenue streams that fund Virginia's transportation budget. Increasingly in Virginia, federal funds are used to pay for transportation projects. In Fiscal Year 2007, federal revenues were the largest source of Virginia's transportation revenues at 31% of all statewide transportation revenues.

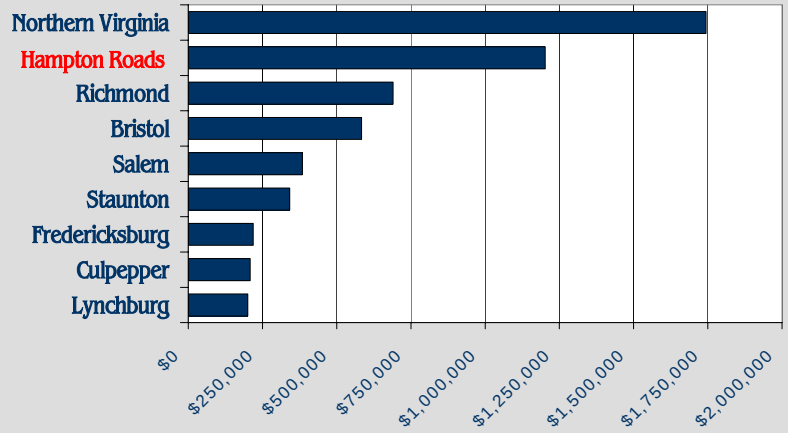
Recent Developments

- The state of Virginia budgeted an extra $625 million for transportation from budget surpluses in 2006. In spite of this increase, no significant future pools of money were budgeted by the General Assembly for transportation beyond 2006.

Although the motor fuels tax comprises the second largest portion of statewide transportation revenue, it has remained largely unchanged in recent years. The statewide excise tax on a gallon of unleaded gasoline in Virginia is 17.5 cents. This amount has remained unchanged since 1986, and since then inflation has reduced the buying power of the fuel excise tax by over 40%.

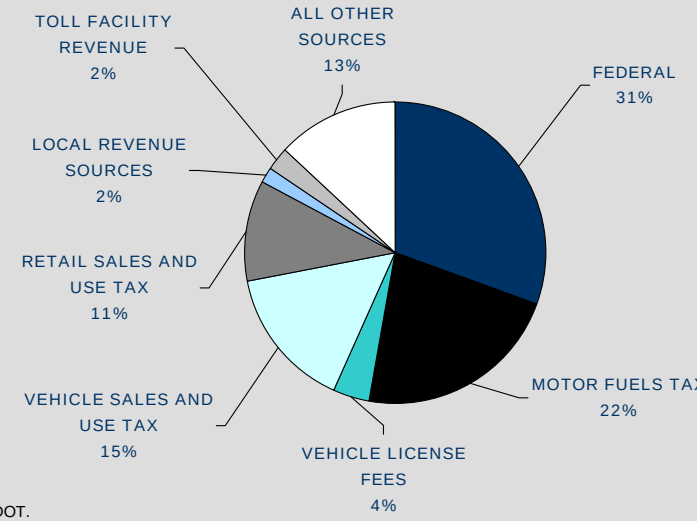
In addition, 0.6 cents per gallon are collected statewide and designated to the petroleum underground storage tank fee. This fee was initiated in 1998. In Northern Virginia, an additional 2% sales tax is collected on motor fuels for public

Six-Year Improvement Program Allocations By VDOT District, Fiscal Years 2007-2012



Data Source: VDOT.

Statewide Transportation Revenues by Source, FY 2007



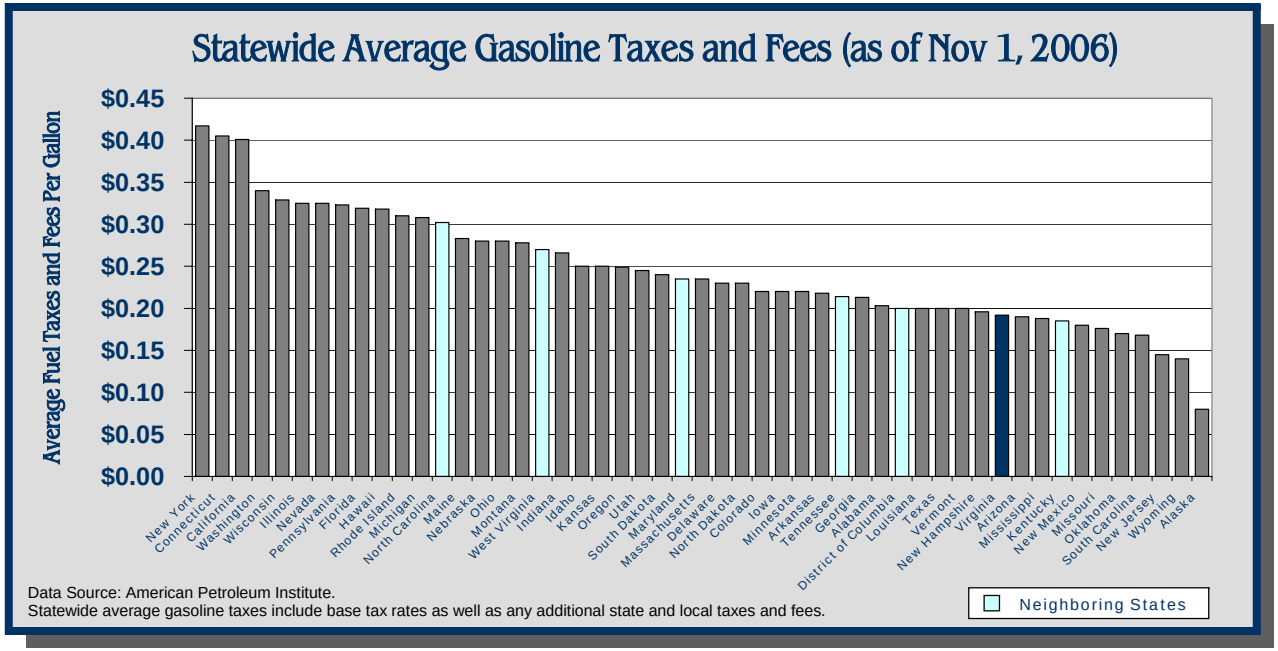
Data Source: VDOT.

transit improvements in localities that are part of the Northern Virginia Transportation District. This tax is not collected in Hampton Roads jurisdictions.

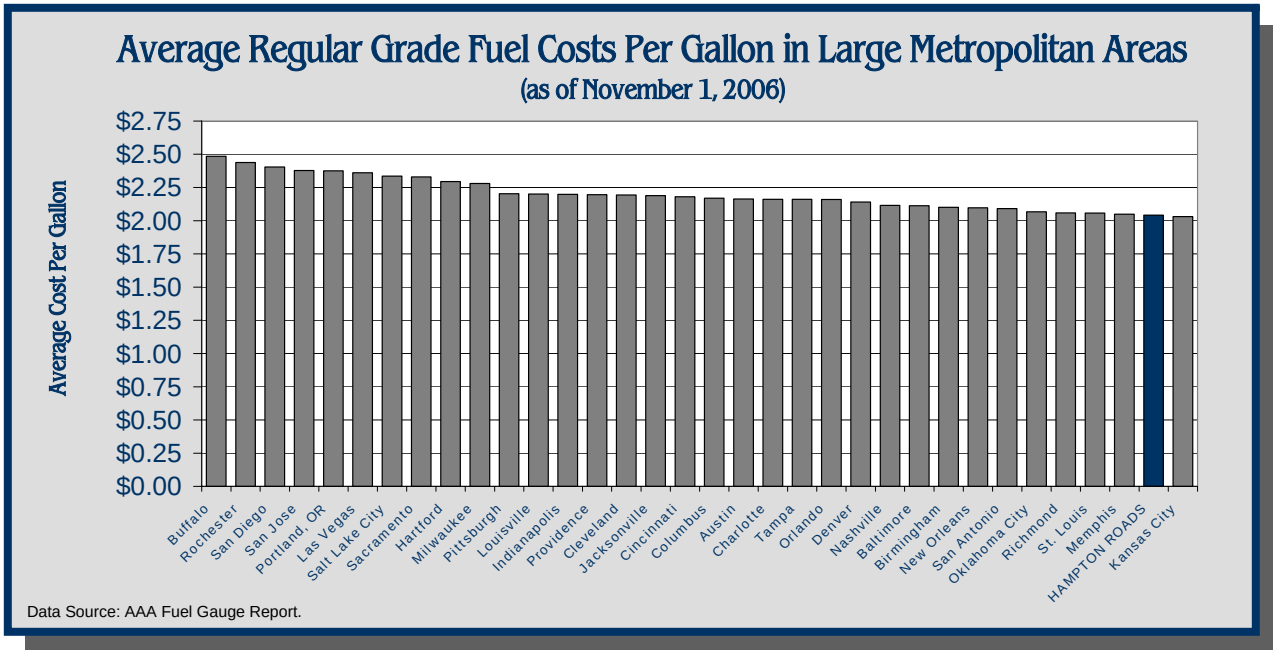
Virginia ranks 41st among the 50 states and District of Columbia in statewide average taxes and fees collected on each gallon of unleaded gasoline. Among neighboring states, only Kentucky has lower average gasoline taxes and fees than Virginia. In North Carolina, gasoline taxes and fees are 11 cents per gallon higher than the statewide average in Virginia.

Largely due to having lower levels of fuel taxes, Virginia and Hampton Roads also have lower fuel costs than other areas. The average cost per gallon of regular unleaded fuel in the state of Virginia was $2.076 as of November 1, 2006 according to the AAA Fuel Gauge Report. This cost ranks Virginia 48th among the 50 states and the District of Columbia, with only South Carolina, Missouri, and New Jersey having lower average statewide fuel costs. North Carolina had average fuel costs that were 9.3 cents per gallon higher than Virginia.

Hampton Roads had an average cost of $2.042 per gallon of regular unleaded gasoline as of November 1, 2006. This cost was more than three



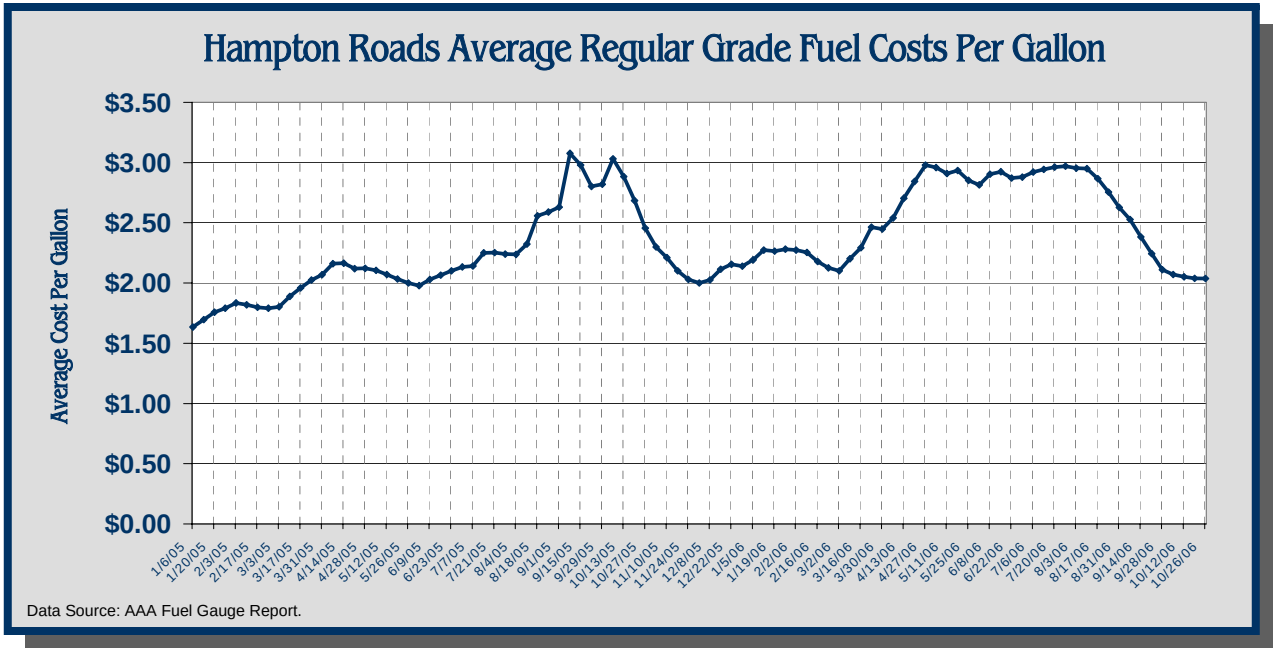
Data Source: American Petroleum Institute.
Statewide average gasoline taxes include base tax rates as well as any additional state and local taxes and fees.



Data Source: AAA Fuel Gauge Report.

cents per gallon lower than the average statewide rate. Of the 34 metropolitan areas nationwide with populations of between one and three million people, Hampton Roads had the second lowest average fuel costs. Only Kansas City had lower average fuel costs than Hampton Roads.

Fuel costs in Hampton Roads, as well as the rest of the United States, have fluctuated significantly over the last year. When Hurricane Katrina struck the Gulf Coast late in August 2005, fuel costs immediately increased to over $3.00 a gallon for a brief period of time in Hampton Roads. Prices were also in the $3.00 per gallon range in Hampton Roads through the late spring and summer of 2006 before decreasing to the $2.00 per gallon range in October 2006.



Data Source: AAA Fuel Gauge Report.

ITS/Operations

With major roadway projects becoming more costly and more difficult to construct, using Intelligent Transportation System (ITS) technologies and improving systems operations are cost-effective methods of maximizing the capacity of the existing roadway network. The purpose of system operations is to maximize the safety, security, and mobility of roadway users by actively managing the regional transportation system. This is done using many different methods including incident management, signal coordination and optimization, signal preemption for emergency vehicles, automated toll collection, providing real-time traveler information via multiple forms of media, etc. Two vital components needed to optimize system operations are trained and coordinated manpower resources and Intelligent Transportation Systems technologies.

Photo source: VDOT.

In Hampton Roads, regional system operations are spearheaded by the VDOT Hampton Roads Smart Traffic Center. The Hampton Roads Smart Traffic Center installs and maintains ITS infrastructure on the Interstate system, monitors Interstate traffic conditions, manages the Safety Service Patrol incident management team, and disseminates traveler information via changeable message signs and highway advisory radio.

Quick Facts...

- Currently 50 miles of freeway in Hampton Roads are instrumented with ITS technologies. With the completion of Phase III in 2007, 113 miles of freeway will be instrumented.
- As of October 31, 2006, the 511 Virginia traveler information service had received over 2.7 million calls.

ITS Technologies Used in Hampton Roads

Changeable Message Signs

Provides up-to-date traveler information.

Automated Toll Collection

Allows travelers to pass quickly through special lanes, avoiding delays due to paying tolls.

Highway Advisory Radio

Provides up-to-date traveler information through radio broadcasts.

Advanced Signal Systems

Improves timing and coordination of traffic signals, thereby reducing delays.

Roadway Sensors

Records traffic volumes and speeds, notifying traffic management centers of congestion and incidents.

Closed-Circuit Cameras

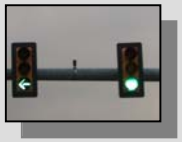
Provides roadway images to traffic management centers and the public. Improves assistance times.

511 Virginia

Provides up-to-date traveler information via telephone.

Transit Automatic Vehicle Location

Provides the location of transit vehicles, helping to keep them on schedule.



Emergency Vehicle Signal Preemption

Improves safety and response time of emergency vehicles.

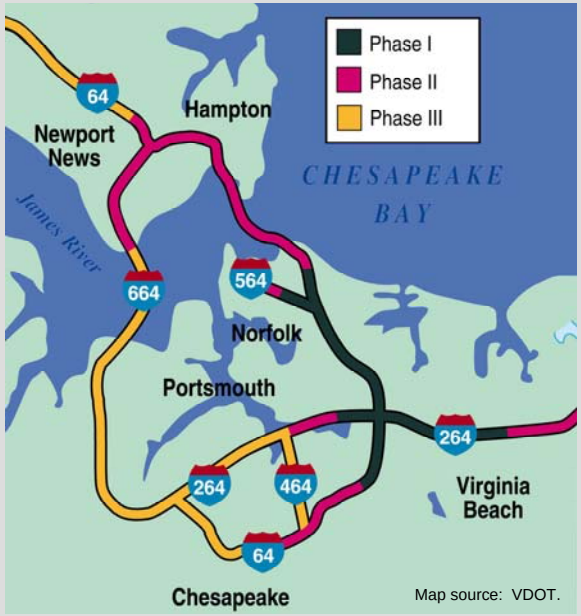
Currently 50 miles of the Interstate system in Hampton Roads are instrumented with vehicle detectors and cameras. With the completion of Phase III in 2007, 113 miles of freeway, nearly the entire Hampton Roads Interstate system, will be instrumented. The complete system will include 288 closed-circuit cameras, over 2,300 vehicle detectors and sensors, and 240 changeable message signs.

Local jurisdictions in Hampton Roads also operate their own Smart Traffic Centers. Norfolk opened their Smart Traffic Center in 2000 and since then Chesapeake, Hampton, and Virginia Beach have begun operating Smart Traffic Centers. All of these local Smart Traffic Centers either are or will be connected to the Hampton Roads Smart Traffic Center, which allows for video sharing and instant communication.

The state has also made improving operations a top priority. System operations has become a core function at VDOT, placing it on the same level as construction and maintenance. The state also operates the 511 Virginia traveler information service. The service, which began operation in February 2002 and was launched statewide in February 2005, has received over 2.7 million calls as of the end of October 2006.

Regional operations and ITS planning and coordination are conducted through the Hampton Roads Management, Operations, and ITS Committee. This group, which is comprised of traffic engineers, operations staff, police, and first responders, produces the Hampton Roads ITS Strategic Plan. This plan serves as a road map for the effective use of ITS technologies throughout the region. The current Hampton Roads ITS Strategic Plan can be found at http://www.hrpdc.org/publications/techreports/transportation.html.

Hampton Roads Smart Traffic Center Coverage Area



Map source: VDOT.

Recent Developments

- Hampton Roads is developing a Regional Concept of Transportation Operations (RCTO), which is a blueprint for improving system operations throughout the region. Currently the primary scope of the RCTO is to improve regional incident management.
- VDOT has made systems operations a core function, placing it on the same level as roadway construction and maintenance.
- In recent years, Chesapeake, Hampton, Norfolk, and Virginia Beach have opened Smart Traffic Centers.

Air Quality

With fewer ground-level ozone violations over the last few years, Hampton Roads currently meets the federal ozone air quality standard. The Environmental Protection Agency (EPA) regulates the amount of pollutants allowed in each region. These pollutants come from two sources: stationary sources such as factories and power plants, and mobile sources such as automobiles, trucks, locomotives, and ships. According to the EPA, over half of all hazardous air pollutants come from mobile sources.

Since mobile sources are a contributor to regional air quality issues, federal regulations require that the metropolitan transportation planning process meet the mandates set forth by the Clean Air Act. This means that both the regional Transportation Improvement Program as well as the regional Long Range Transportation Plan must be analyzed to make sure they meet all air quality conformity standards. In Hampton Roads, VDOT performs these air quality conformity analyses for regional plans and programs.

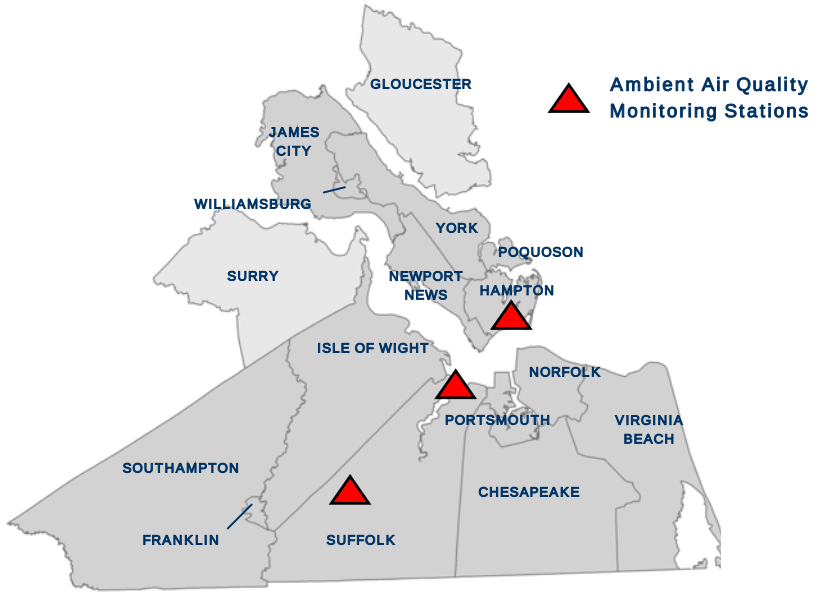
In Hampton Roads, ground-level ozone as well as other pollutants are measured by three ambient air quality stations. These stations are located in the Holland section of southwestern Suffolk, the TCC campus in northern Suffolk, and downtown Hampton. The readings at these stations determine when regional violations occur and how the region is classified in terms of air quality.

Based on the amount of ground-level ozone at these monitoring stations, EPA designates each metropolitan area as being in attainment or nonattainment of federal ozone air quality standards. In 1991 EPA first classified Hampton Roads as a marginal ozone nonattainment area based on violations of a one-hour ambient air quality standard. The region was

Quick Facts...

- Due to fewer ground-level ozone exceedences in recent years, Hampton Roads now meets federal ozone standards. Hampton Roads is currently putting together a maintenance plan so that the region can be redesignated as an ozone attainment area by EPA.
- According to the EPA, over half of all hazardous air pollutants come from mobile sources, such as automobiles, trucks, locomotives, and ships.

Hampton Roads Air Quality Monitoring Stations



Source: Virginia Department of Environmental Quality.

redesignated to attainment status in 1997, based on approval of the Hampton Roads Area Maintenance State Implementation Plan.

In 1997 EPA proposed a new eight-hour ambient air quality standard. This standard replaced the previous one-hour standard in 2004. To determine whether there is a violation, EPA uses the fourth highest daily maximum eight-hour average ozone concentration over the course of the year, averaged over a three-year period. A region is considered to be in nonattainment if this value is 85 parts per billion or higher at any of the regional monitoring stations. With violations at multiple regional monitoring stations in both 2001 and 2002, Hampton Roads was classified as a marginal ozone nonattainment area under the eight-hour standard.

However, with the three-year average for the years 2003 to 2005 dropping to 78 parts per billion at the two highest monitoring stations in the region, Hampton Roads now meets the federal ozone air quality standard. The region is in the process of putting together an air quality maintenance plan so that the region can be redesignated as an ozone attainment area by the EPA.

Eight-Hour Ozone Exceedences at Regional Air Quality Monitoring Stations, 2001-2005

Monitor Location	2001	2002	2003	2004	2005
Hampton	4	14	2	1	0
Suffolk - Holland	0	11	3	0	0
Suffolk - TCC	4	13	3	1	1

Data Source: Virginia Department of Environmental Quality.

Fourth Highest Daily Maximum Ozone Readings (ppb) Eight-Hour Averages, 2001-2005

Monitor Location	2001	2002	2003	2004	2005	3-yr avg
Hampton	85	102	83	74	78	78
Suffolk - Holland	75	92	79	75	77	77
Suffolk - TCC	85	98	83	74	77	78

Data Source: Virginia Department of Environmental Quality.

Additional Information

The information provided within this report was compiled from a wide variety of sources, many of which are publicly available. Data from the following sources were included in this report and can be accessed for additional information:

Air Travel – The Federal Aviation Administration (FAA) updates air passenger data for both the nation and individual airports at http://www.faa.gov. Passenger data is also provided by each of the region's airports at http://www.norfolkairport.com and http://nnwairport.com.

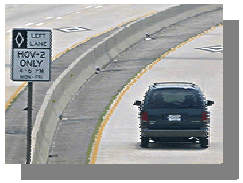
Marine Data – The Virginia Port Authority maintains up-to-date statistics regarding the Port of Virginia on their website http://www.vaports.com/Port_Information/PORT-stats-generalstats.asp. The Hampton Roads Maritime Association also releases the Port of Hampton Roads Annual Report, which contains extensive information regarding all aspects of the port. Their website is http://www.portofhamptonroads.com.

Rail Travel – The Federal Railroad Administration (FRA) Office of Safety Analysis maintains a rail safety database. This data is located at their website http://safetydata.fra.dot.gov/officeofsafety. Amtrak maintains passenger data at it's website http://www.amtrak.com.

Roadway Usage – The Highway Statistics Series contains data on motor fuel, motor vehicles, driver licensing, highway finance, highway mileage, and Federal aid for highways. The reports are released annually by the Federal Highway Administration and are located at http://www.fhwa.dot.gov/policy/ohpi.

TTI Data – The Texas Transportation Institute (TTI) at Texas A&M University releases the Urban Mobility Report, a nationally known study of mobility and traffic congestion on freeways and major streets in 85 urbanized areas. The report is located at http://mobility.tamu.edu.

Commuting Data – Beginning in 2005, the Bureau of the Census collects and distributes socioeconomic data via the American Community Survey (ACS). The ACS will be released annually rather than every ten years as was done with the Census, making the data timelier. Included in the 2005 ACS is data related to commuting characteristics. Data from the American Community Survey is available at http://www.census.gov/acs.



HOV Network – VDOT maintains 37 centerline miles of Interstate that contain HOV facilities. Details of the regional HOV network are included at http://virginiadot.org/comtravel/hov-default.asp.

Safety – The Virginia Department of Motor Vehicles annually releases the Virginia Traffic Crash Facts document, which is a comprehensive statistical overview of traffic crashes occurring throughout Virginia. The document is located at http://www.dmv.state.va.us/webdoc/citizen/drivers/crash_facts.asp.

Transit – The Federal Transit Administration collects and disseminates data on the state of public transportation via the National Transit Database (NTD) program. The National Transit Database is located at http://www.ntdprogram.com/ntdprogram/pubs.htm.

Bicycle and Pedestrian Facilities – Information regarding VDOT's bicycle and pedestrian facility policies is available at http://www.virginiadot.org/infoservice/bk-default.asp.

Transportation Financing – Information concerning transportation financing in Virginia is available at http://www.virginiadot.org. The American Petroleum Institute maintains a list of fuel taxes and fees by state. The data is available at http://api-ec.api.org. National, statewide, and regional fuel prices are available via AAA's Fuel Gauge Report, the most comprehensive retail gasoline survey available. This data is located at http://www.fuelgaugereport.com.

ITS/Operations – VDOT maintains ITS infrastructure and manages traffic on the regional freeway system. More information is available at http://www.virginiadot.org/infoservice/smart-default.asp. The Hampton Roads ITS Strategic Plan details the state of ITS in the region as well as goals to be attained. This plan is located at http://www.hrpdc.org/publications/techreports/transportation.html.

Air Quality – Virginia's Department of Environmental Quality maintains information regarding national air quality standards and regional air quality data. Their website is http://www.deq.virginia.gov/air.

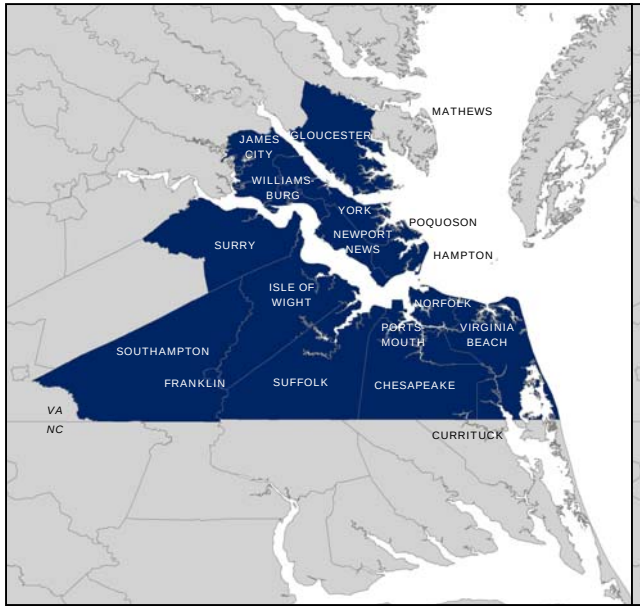
For additional information regarding this report, previous Congestion Management studies, or other transportation questions or concerns, please contact HRPDC:

Hampton Roads Planning District Commission
723 Woodlake Drive
Chesapeake, Virginia 23320
757.420.8300
http://www.hrpdc.org

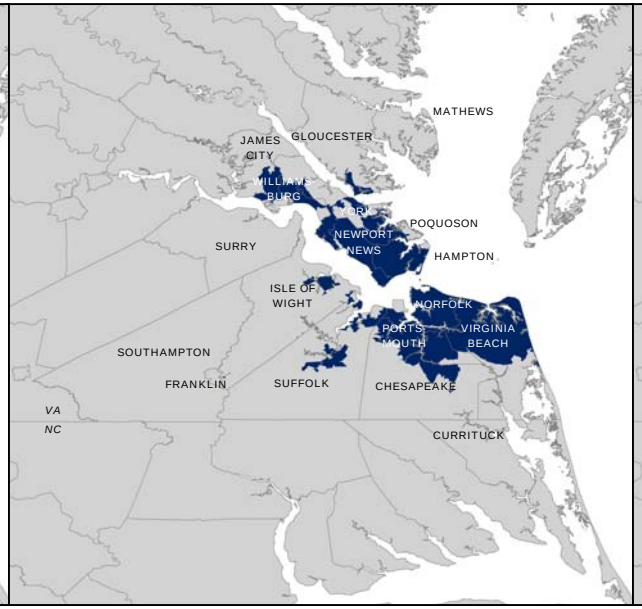
Appendix

Since various data sources are used in this report, there are various definitions of each metropolitan area, including Hampton Roads. The primary metropolitan area definitions used in this report are the Planning District Commission boundary, the Federal-Aid Urbanized Area, and the Metropolitan Statistical Area (MSA). If not explicitly stated, the default definition of Hampton Roads in this report is the Planning District Commission boundary. The various boundaries for Hampton Roads are shown below:

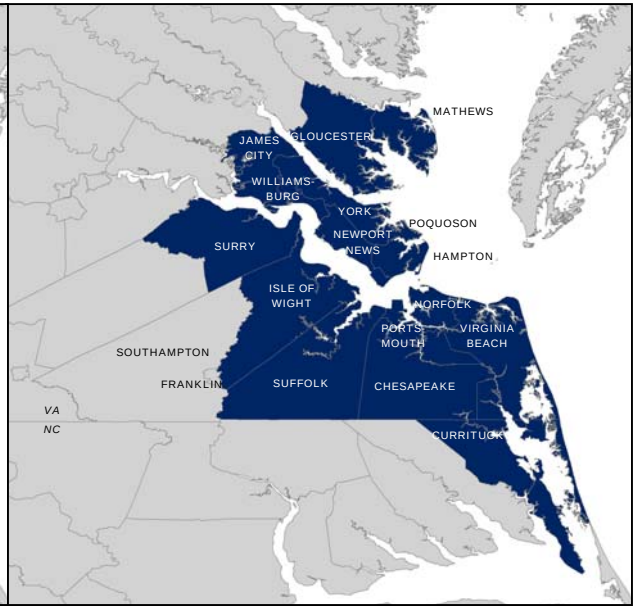
Hampton Roads Planning District Commission



Hampton Roads (aka Virginia Beach) Federal-Aid Urbanized Area



Hampton Roads (aka Virginia Beach–Norfolk–Newport News) Metropolitan Statistical Area



Map Source: Bureau of Transportation Statistics National Transportation Atlas Database.