

SPANNING THE

# Chesapeake Bay

*For 40 years, the world's largest bridge-tunnel has connected the Virginia mainland to the Delmarva Peninsula*

BY CHARLES GERENA

Before the first cars crossed the Chesapeake Bay Bridge-Tunnel on April 15, 1964, the governor of Virginia and other leaders touted the significance of connecting Virginia Beach, Norfolk, and other cities in the Hampton Roads region to the two rural

counties of Virginia's Eastern Shore. They heralded the 17.6-mile system of concrete trestles, steel bridges, and mile-long tunnels as a faster, more reliable transportation link for the growing number of motorists and truckers wanting to cross the bay.

The bridge-tunnel's anniversary this past April was observed with less hoopla than its momentous debut as one of the seven engineering wonders of the world. A restaurant on one of the bridge-tunnel's man-made islands served free cake, toll takers passed out

commemorative bookmarks, and one lucky set of travelers received a gift basket. After 40 years, the bridge-tunnel has become part of the backdrop of Hampton Roads and the Eastern Shore, playing a different economic role in each region.

### The Missing Link

Before Interstate 95 was substantially completed through Virginia in 1964, drivers traveling between New York and Florida often hugged the coastline. But to cross the southern section of the Chesapeake Bay, they had to hitch a ride on one of the steamer ships or private ferries that ran between Hampton Roads and the southern tip of the Eastern Shore.

When the Pennsylvania Railroad stopped running steamers, ferries couldn't keep up with the growing demand from interstate travelers and locals. James Brookshire Jr., executive director of the Chesapeake Bay Bridge and Tunnel District, says it took 90 minutes to make the trip by boat, plus time to load and unload passengers and vehicles. The ferry crossing was "the one bottleneck" along the East Coast that needed help.

Virginia legislators created a private commission in 1954 to take over the ferry service and deal with the bottleneck, then decided two years later that a fixed crossing was the long-term solution. After a study found such a crossing to be financially feasible, the commission sold \$200 million in revenue bonds in 1960 to finance the construction of the Chesapeake Bay Bridge-Tunnel (CBBT).

Today, the CBBT continues to facilitate interstate traffic, supporting three important industries in the Hampton Roads area. "We need to get trucks to our ports, we need to get our tourists in and out during the summer months, and we need to get inputs and outputs to and from our factories," describes John Whaley, deputy executive director of economics at the Hampton Roads Planning District Commission.

Though the CBBT handles fewer vehicles compared to Hampton Roads' other entry points (see table), its traffic volume continues to grow along with

the volume on US-13. This four-lane road passes through Philadelphia and Wilmington, Del., and snakes down the center of the Delmarva Peninsula for over 200 miles until it reaches the CBBT. More people are choosing this route into and out of Hampton Roads over the busy interstates.

The region's trucking companies often serve customers in the Northeast, so they have plenty of big rigs traveling west on I-64 and north on I-95, and vice versa. But the interstates can be frustrating, notes Whaley. "Lots of trucks don't want to have to go through Washington, D.C., if they are coming from the north. I-95 is hectic and I-64 is hectic. Then, you have to go through the Hampton Roads Bridge-Tunnel, which in the summertime becomes pretty jammed up. I'm told that many truckers will get on US-13 north of D.C. and have pretty clear sailing all the way to Hampton Roads."

By using US-13 and the CBBT, truckers shave 95 miles off their trip between Wilmington and Hampton Roads. This reduces fuel consumption, which is especially important given today's high gasoline costs.

The alternative route also saves fuel because it provides stretches of smooth driving with relatively few starts and stops. Drivers pass through only two towns of any size – Dover, Del., and Salisbury, Md. – enabling trucks to travel 55 miles per hour for most of their journey. Pat Patterson, a personnel manager at Givens Transportation in Chesapeake, Va., says this is the optimal speed for fuel efficiency, but drivers have a hard time maintaining it on I-64 and I-95. "If you're not running 70 miles an hour you have to get out of somebody's way," he complains.

Tourists also turn to US-13 and the CBBT to save time, and to take a break from the lack of interstate scenery. Hampton Roads residents travel the route to head north, while Canadians and travelers from Northeast cities use it to head south.

In addition to facilitating interstate travel, the CBBT connects Virginia's Eastern Shore to the mainland. "It's our lifeline to Hampton Roads if you live from Exmore south," says Julie Badger,

chief financial officer at Farmers & Merchants Bank-Eastern Shore in Onley, Va. (Exmore is near the midpoint of the Eastern Shore, with Accomack County above and Northampton County below.) "A lot of people head south for entertainment, health care, and shopping."

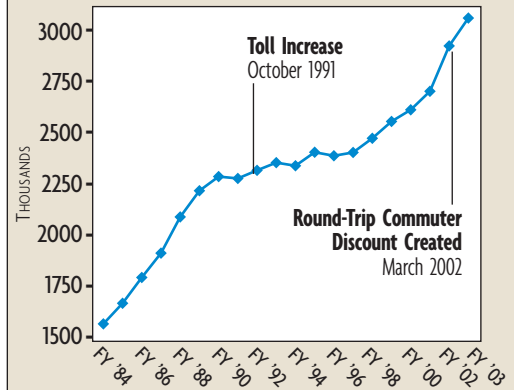
The 51,400 people living in Accomack and Northampton aren't sufficient to interest mass retailers like Kmart, which closed its store in Exmore last year. Only smaller retailers and supermarkets operate in these counties, and mostly along US-13 to take advantage of the traffic flow.

The CBBT also enables Hampton

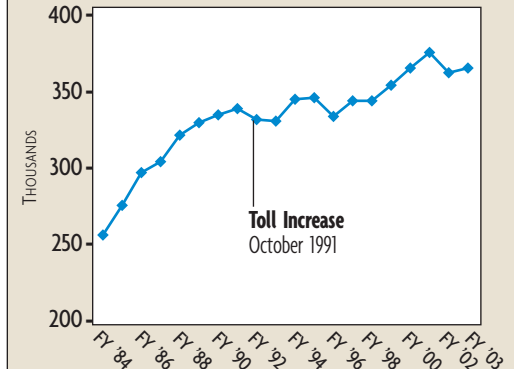
### Busy Across the Bay

The Chesapeake Bay Bridge-Tunnel has seen steady growth in automobile and truck traffic in the last 20 years. Changes in the toll seemed to have little effect on demand.

**Traffic by Fiscal Year, Passenger Cars and Light Trucks, 1984-2003**



**Traffic by Fiscal Year, Heavy Trucks and Recreational Vehicles, 1984-2003**



SOURCE: Chesapeake Bay Bridge-Tunnel Commission

Roads businesses to provide goods and services needed in both counties. For example, residents have seen construction crews making the round-trip across the bridge-tunnel daily to work on residential projects throughout the Eastern Shore. “Anybody who wants to get a house built has to go outside of the area because [the locals] are saying it will be two years before they can get to you,” notes John Ordeman, a retired teacher who belongs to a community group called Citizens for a Better Eastern Shore (CBES).

### The Road to Economic Growth?

Although the Chesapeake Bay Bridge-Tunnel facilitates the flow of people and goods, it hasn’t provided the amount of economic stimulus that major roadways usually bring to rural areas. “When the bridge-tunnel opened, it was expected to have a great economic impact on the Eastern Shore. That didn’t happen for quite a long time,” says Denard Spady, executive director of CBES.

Spady blames the early completion of I-95 in 1964 and delays in upgrading US-13 for dampening traffic flow across the CBBT in its early years. Even when the number of people and goods started growing, eventually requiring the construction of a parallel set of trestles and bridges in 1999, it didn’t always translate into new homes and businesses on the Eastern Shore.

While the region has a good transportation infrastructure and is rich in natural resources, it lacks other factors necessary to support economic activity. These include a sufficient amount of skilled labor, developable land, and water and sewer lines.

One industry on the Eastern Shore that has been able to leverage the CBBT is tourism. More than 900,000 vehicles passed through the bridge-tunnel’s tollgates during the peak summer months of July and August last year, a 36 percent increase from the same period in 1990.

The Travel Industry Association of America has said that more Americans are taking driving vacations, staying close to home, and visiting rural destinations. All three trends have con-

tributed to a growing number of tourists visiting Virginia Beach and other parts of the Hampton Roads area, and the bridge-tunnel has enabled them to discover the joys of the Eastern Shore simultaneously. In addition, Hampton Roads residents cross the bridge-tunnel to escape city life.

To stimulate non-tourism economic growth in Virginia’s Eastern Shore, efforts began several years ago to reduce the \$10 toll for motorists crossing the CBBT. Advocates argued that the toll was a barrier to economic development. A 2001 study commissioned by the Accomack-Northampton Planning District Commission pre-

dicted some acceleration in household growth and a subsequent increase in traffic in areas closest to the bridge-tunnel if the round-trip toll was lowered from \$20 to \$14.

“A reduction in the cost of travel through a toll discount gives the southernmost portions of Northampton County a comparable commute cost profile to other outlying areas of the [Hampton Roads] metropolitan region,” noted the study’s authors. “This, combined with other features of the area, may make it more attractive to residential development aimed at the commuter market.”

But some residents opposed a toll

### Scenic Shortcut

Tourists and truckers traveling between Hampton Roads and Wilmington, Del., save 95 miles by taking the Chesapeake Bay Bridge-Tunnel and US-13 instead of the busy interstates.



\*The Hampton Roads region includes the cities of Chesapeake, Franklin, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg; and the counties of Gloucester, Isle of Wight, James City, Southampton, Surry, and York.

SOURCES: Hampton Roads Chamber of Commerce and Hampton Roads Planning District Commission

reduction because it would undercut the financing of future projects, such as the construction of additional tunnels to connect to the CBBT's second set of bridges and trestles. Others feared that development would accelerate and change the rural nature of the Eastern Shore.

### Tinkering with the Price of Passage

In March 2002, the commissioners who oversee the CBBT sided with growth advocates. They voted to reduce the round-trip toll from \$20 to \$14 for travelers completing the journey within 24 hours.

In two years, the toll change didn't seem to have a big impact. Residents say they have seen an acceleration of real estate speculation and residential construction as developers play up the cheaper cost of crossing the CBBT, but some of this activity was probably taking place before the toll change.

Studies commissioned by the Virginia Department of Transportation (VDOT) and the CBBT Commission in 2000 concluded that the bridge-tunnel's traffic flow would not change significantly in the short term by cutting the toll a few dollars. In other words, the demand for the bridge-tunnel appeared to be relatively "price inelastic" for several reasons (see the Jargon Alert column on p. 6 for a discussion of this term).

First of all, most residents need to cross the bridge-tunnel only occasionally. They tend to do most of their business locally and a growing number of them are retirees, either the 65-and-older crowd who no longer have a daily commute or younger people who run a business locally or from home.

Many people, in fact, live on Virginia's Eastern Shore because of its relative isolation. "When people move to the Eastern Shore, it's a lifestyle decision," says Julie Badger at Farmers & Merchants Bank. "If you ... want a Starbucks, a multiplex, chain restaurants, and a mall, none of that is here. That kind of person won't move here."

Second, more residents earn high incomes, and the cost of the bridge-tunnel toll isn't significant to them. In

1990, only 3.4 percent of the Eastern Shore's households made \$75,000 and more. Ten years later, that percentage tripled to 10.2 percent of households.

Would a change in the price of passage across the CBBT affect the flow of commercial vehicles? The tolls for trucks are more than double the motorist toll, but their bottom-line impact is small. "If you are a trucker bringing in \$50,000 worth of cargo, the cost of the toll is not really significant," says economist John Whaley of the Hampton Roads Planning District Commission.

The toll isn't a big factor for many Eastern Shore businesses either because they don't have to use the CBBT. For example, Ed Tankard has seven to eight trucks carrying plants from his family-owned nursery in Exmore to customers every day. None of them head south. Instead, they head north to markets like Philadelphia, New York, and Boston. While businesses on the Eastern Shore serve some customers to the south, Tankard says that most of their demand has historically been from the north.

A poultry processing facility operated by Perdue Farms, the Eastern Shore's largest employer, reportedly uses the CBBT to access the port in Hampton Roads. However, other poultry firms in the region don't produce a majority of their chicken for export. "Most of our finished product goes north through Delaware or west ... to Annapolis," says Bill Satterfield, executive director of the Delmarva Poultry Industry Inc., a regional trade group.

Data from a VDOT study of the US-13 corridor supports this anecdotal evidence. Average daily volume on US-13 is higher at points north of the midpoint of the Eastern Shore compared to points south of the midpoint, including the bridge-tunnel.

In the final analysis, it would probably take a drastic reduction of the CBBT toll or its elimination to dramatically affect traffic patterns or residential development in southeastern Virginia. The likelihood of that happening is slim, however. The bridge-tunnel depends mostly on toll revenue to cover its annual maintenance and

## Major Arteries

Among the thoroughfares carrying traffic in and out of Hampton Roads, Va., the Chesapeake Bay Bridge-Tunnel accounts for a relatively small share of the region's traffic volume.

| Facility (No. of Lanes)                   | Est. Vehicles Per Day (min.-max.) |
|---|-----------------------------------|
| Chesapeake Bay Bridge-Tunnel (4)          | 10,000–20,000                     |
| Chesapeake Expressway (4)                 | 10,000–30,000                     |
| Hampton Roads Bridge-Tunnel (4)           | 80,000–100,000                    |
| US-460 (4-6)                              | 40,000–85,000                     |
| Max. capacity for typical 2-lane facility | 20,000–25,000                     |
| Max. capacity for typical 4-lane facility | 75,000–80,000                     |

SOURCE: Hampton Roads Planning District Commission

operating costs and to pay off construction bonds.

In fact, the commission decided to boost the price of passage in June 2004 to help finance the new tunnels. The one-way toll for motorists rose two dollars to \$12, while the round-trip toll increased three dollars to \$17. Also, five-axle tractor trailers and commercial buses have to pay \$5 more.

Officials say the new capacity will be necessary to handle traffic growth projected for the next 40 years. Since the toll increases probably won't slow this growth, the Chesapeake Bay Bridge-Tunnel will likely continue to support economic activity in the Eastern Shore, Hampton Roads, and beyond. **RF**

### READINGS

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