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RELIEF FOR OUR CLOGGED ARTERIES?

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RICHMOND

--It is time for a reality check for the Interstate 95 traffic congestion issue in the Northern Virginia-Washington area. The stretch of I-95 from Fredericksburg (U.S. 17) to north of I-495 (the Capital Beltway) in Maryland has some of the most congested freeway segments in the nation.

According to the American Highway Users Alliance report "Unclogging America's Arteries, 1999-2004," of the 24 worst highway bottlenecks across the country, two were in this area: (1) I-495 at the I-270 interchange (ranking No. 7: 243,425 vehicles per day with 19.429 million annual hours of delay); and (2) the Springfield interchange (rank No. 15: 185,125 vehicles per day with 15.035 million annual hours of delay). In addition to these two hot spots, Potomac River crossings on the Woodrow Wilson Bridge have been tough over the years.

Beyond the impact on quality of life, traffic congestion is having a measurable negative effect on an otherwise strong regional economy. Researchers at George Mason University estimate that congestion costs the local economy nearly \$5.5 billion a year.

The severe traffic congestion on I-95 can be traced to a myriad of factors, among which is fast population growth. From 1990 to 2010, the cities and counties traversed by this stretch of I-95 experienced the following population growths: The city of Fredericksburg, from 19,027 to 22,239 (16.9 percent); Stafford County, from 61,236 to 135,806 (121.8 percent); Prince William County, from 215,686 to 401,323 (86.1 percent); Fairfax County, from 818,584 to 1,038,918 (26.9 percent).

While Washington slightly lost population (from 607,000 to 601,723, or a 0.9 percent drop), suburban counties experienced significant gains. According to the Fredericksburg Area Metropolitan Planning Organization, this growth pattern will remain the same in the next two decades.

Because of Northern Virginia's high housing costs, tens of thousands of Washington-employed workers choose more affordable housing in the outer Virginia exurban counties, contributing to this population growth. Due to dispersed low-density regional land-use patterns, job-housing imbalance, near-universal auto ownership, a lack of paralleling north-south transportation arteries, and undeveloped public-transit systems between suburban counties and Washington, most commuters have no choice but to drive on I-95, even though they are stuck in traffic for hours each day.

According to the Greater Washington Metropolitan Region 2007-2008 Household Transportation Survey, there existed a great variation of average weekday trips per household between central city and suburban counties: Washington, 7 trips per household, 51.4 percent auto modal share; Prince William County, 9.9 trips per household, 88.6 percent auto modal share; and Fairfax County, 9.1 trips per household, 86.1 percent auto modal share. Compared with Washington, which has public transit (especially its Metro subway system), these outlying suburban counties in Virginia had much higher trip rates and higher auto modal shares.



Riders wait for their Yellow Line train to depart the Pentagon City Metro station. Construction is under way to extend the system to Dulles International Airport.

GOVERNMENT TO BLAME?

Some people may understandably point fingers at government agencies and complain about their ineffectiveness in curbing traffic congestion. But, in fact, the Virginia Department of Transportation and other government agencies have made numerous multimodal improvements over the years, including high-occupancy vehicle and high-occupancy toll-lane projects, despite seemingly limited traffic-relief effects.

Two major regional bottlenecks, the Springfield interchange and the Woodrow Wilson Bridge, were massively reconstructed. The reconstruction of the Springfield interchange helped ease traffic at the intersection of I-95, I-495, I-395, and surrounding interchanges. With respect to the Wilson Bridge replacement project, 10 lanes opened in December 2008 and greatly reduced traffic delays on the Capital Beltway. At present, the following mega projects are under way in Virginia:

I-495 HOT lanes: Fourteen miles of new HOT lanes (two in each direction) are being built on I-495 between the Springfield interchange and just north of the Dulles Toll Road in McLean. Buses, carpools, van pools with three or more people, and motorcycles can ride free in the new lanes. Vehicles carrying two or fewer people must pay a toll. This project is scheduled for completion by late 2012.

I-95/395 HOT lanes: This 56-mile project would add a third lane to the existing 28 miles of HOV lanes between Arlington and Dumfries, and would build two new HOV lanes for an additional 28 miles south from Dumfries to Spotsylvania. The new lanes would be free to carpools, buses, and motorcycles. Vehicles carrying two people would have a choice to ride in the HOT lanes for a toll or travel in the regular lanes for free. No completion date has been set for this project.

Dulles Corridor Metrorail Project: A new 23-mile rail line will extend service from the existing Orange Line at East Falls Church in Fairfax County to Route 722 in Loudoun County. Phase 1 (East Falls Church station to Wiehle Avenue station) is scheduled to be completed by 2013. Phase 2 will extend the Metrorail to Dulles International Airport and eastern Loudoun County. A construction start date has not been set for Phase 2.

IN THE WORKS

I-95 Telegraph Road interchange: Rebuilding this interchange at I-95/495 is the final component of the Woodrow Wilson Bridge project. When completed, motorists will have smoother traffic flow on Telegraph Road and related side streets, improved ramp access to and from the Beltway, and a wider Beltway up to the new Woodrow Wilson Bridge. This interchange will be completed by 2013.

I-95 widening: This project will add a fourth lane in each direction of I-95 from Woodbridge to Newington. A fourth northbound lane opened at Exit 161 near the Occoquan River bridge in 2009. A fourth southbound I-95 lane opened at Exit 166 in October 2010. By late summer 2011, the project will be complete with six miles of four lanes in each direction from Exit 166, Fairfax County Parkway, to Exit 160, Woodbridge/Occoquan.

BRAC: Fairfax County Parkway, I-95 Defense access ramps, Mark Center: Multiple improvements are under way as part of the Department of Defense Base Realignment and Closure plan. The entire project will be completed by 2012.

Other projects are either planned or under way. A potential high-speed rail project between Washington and Richmond is also attracting attention.

PUBLIC-PRIVATE

Due to insufficient governmental funding, the completion of the above mega- projects heavily rely on a successful public-private partnership program. On the public side, VDOT, the Virginia Department of Rail and Public Transportation, the Metropolitan Washington Airports Authority, and local cities and counties are key government agencies. Private firms also contribute to these projects: The I-95/395 HOV/Bus/HOT lanes project is being developed by VDOT in partnership with Fluor-Transurban.

So, will traffic congestion on I-95 get better or worse in the future? It really depends on how transportation demand can be reduced and transportation supply can be increased. Compared with more costly supply-side capacity-enhancement projects, managing demand may be more cost-effective. Land use-transportation coordination (transit-oriented development, mixed land uses, job-housing balance, building polycentric urban regions) and improvements in multimodal transportation development (highway, transit, bicycling, pedestrian) are especially important for the I-95 corridor.

Let us work together for a better I-95 in the years to come.

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