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Traffic to go up and away

Interchange connecting I-95, Beltway to be completed in 2011

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Sun Reporter

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To the northeast of Baltimore, where Interstate 95 meets the Beltway amid a forest of construction cranes, something truly mind-boggling is taking shape.

Here, the Maryland Transportation Authority is building a highway interchange to replace the 1960s-vintage connection between the two busy highways, where congestion has turned peak travel times into a commuter's nightmare.

This is no ordinary interchange. Designed to accommodate new express toll lanes in both directions on I-95, the junction will be an intricate "spaghetti bowl" of lanes, ramps and soaring flyovers.

Motorists can expect delays during construction, but when the interchange opens - in late 2011 if the project stays on schedule - it will be the largest structure of its kind in Maryland and perhaps the state's most significant highway engineering feat since the opening of the Fort McHenry Tunnel in 1985.

The interchange, with an estimated cost of \$450 million to \$500 million, will include 16 ramps carrying high volumes of high-speed travel on four levels to connect I-95's separate express toll and general-purpose lanes with the Baltimore Beltway.

Project manager Dave Greenwood said that in effect, the authority is building two new interchanges atop an existing one, while keeping the current lanes open to traffic.

Tom Warne, a former president of the American Association of State Highway and Transportation Officials, said after viewing a rendering of the project that it rivals the complexity of some of the large interchanges in Southern California, including one in Orange County known as "Orange Crush."

"This is going to put [Maryland] way at the top of complicated interchanges," said Warne, a former Utah transportation chief who runs a consulting firm.

Travelers in the I-95 corridor can see the project beginning to take shape in the form of tall T-shaped piers of steel-reinforced concrete rising to the sky. The piers, which will support 11 flyover ramps, soar as high as 80 feet and catch the eye of rubbernecking motorists.

"Certainly, the construction is impacting the driving habits," Greenwood said. "You can't help but watch what's going on."

But nothing drivers are seeing now can convey a sense of what is to come nearly as well as the renderings being displayed by transportation authority officials at public meetings and a recent media briefing. The drawings show a tangle of loops and whorls connecting the two highways, both of which are to be widened to relieve the corridor's persistent congestion.

Not everyone is thrilled by this marvel of design and engineering.

Joppa resident Carolyn Hicks viewed the renderings at a public meeting recently and called the design the work of "ivory-towered idiots."

"It looks like something out of a cartoon series, like George Jetson maybe," she said. "I'm not impressed. If anything, I'm distressed."

Hicks, who opposes the concept of what she calls "Lexus lanes," doesn't like the eight soaring "sky ramps" that are part of the interchange's design. She pictures a tractor-trailer falling off the side of a high ramp and landing on cars below.

"I just think traffic is safer if it's lower," she said.

Warne said the interchange should be "perfectly safe" because it will be designed to rigorous engineering standards adopted by the highway and transportation officials association, an organization that literally writes the book on highway design in the United States.

Warne, a supporter of toll lanes, said the complexity of the interchange is "the price of doing something really good." He said the long, sweeping, elevated lanes are necessary to keep traffic moving at speeds close to that on the mainline of the highways.

Teri A. Moss, a transportation authority spokeswoman, the new interchange will be "logical and simple to use" because all of its exits will connect one highway to the other using exits on the right.

The current interchange involves several left exits and entrances, which are considered undesirable by highway engineers because they confound drivers' expectations.

"The trend has been to eliminate them where possible," Warne said.

Moss said the interchange will be comparable to the recently rebuilt "Mixing Bowl" at I-95, Interstate 395 and the Capital Beltway in Springfield, Va. But she said the structure in Northern Virginia "doesn't provide the full range of access movements" that the Maryland interchange will allow.

The widening of I-95 has been in the works for many years, but the administration of Gov. Robert L. Ehrlich Jr. decided to finance the project by adding express toll lanes, a choice that required twice the number of ramps at a typical interchange.

Gordon Torbery, construction manager for the project, calls the structure "an extremely difficult interchange to construct." For one thing, the space available for the interchange is relatively small for such a complex structure. And the project has to be carried out while minimizing congestion.

"It takes a lot of scheduling, a lot of planning, a lot of manpower to build something like this," Torbery said during a recent visit to the construction site.

From a vantage point off one of the existing ramps carrying I-95 traffic to the Beltway, a visitor can see

two large stormwater ponds and a half-dozen cranes. Workers could be seen putting together a rebar cage to erect one of the nine piers required for a single ramp.

The piers must be strong enough to support the girders that form the skeleton of the ramp. Each of the girders, weighing several tons, must be lifted into place with a 350-ton crane. According to Torbery, the interchange project will consume seven miles of steel girders before the job is done.

The project involves scraping acres of vegetation down to bare soil, but construction officials said every effort is made to control runoff into nearby streams.

During the press visit, Wagman Construction Co. project coordinator Tracey Leonard stopped by to direct a team that was reseeding the site and spreading hay by the bale.

"We constantly rotate so that no sediment leaves the job sites," she said.

The interchange construction is part of a larger, roughly \$900 million project running from the split of I-95 and Interstate 895 at the Baltimore City line to north of Route 43 in White Marsh.

The project will add two express toll lanes running 10 miles in both directions to the current eight lanes of I-95, with technology to collect tolls without tollbooths.

The tolls will vary depending on demand to prevent congestion in the express lanes. The interchange was designed to accommodate a possible addition of toll lanes on the Beltway.

The project will also add two new free lanes to northbound I-895 (the Harbor Tunnel Thruway) and reconstruct the interchange between I-95 and I-895 so that southbound I-95 traffic no longer has to take an exit to stay on the main road toward the Fort McHenry Tunnel, the busiest of the three harbor crossings. That part of the project is expected to be complete by 2010.

Another part of the project involves replacing the cloverleaf interchange at I-95 and Route 43 with a more modern design that will eliminate the "weaving" of entering and exiting vehicles.

Phase one of the project, which began in late 2005, is expected to cost \$218 million, according to the authority. A second phase, involving the construction of the toll lanes, is expected to go out to bid next year at an anticipated cost of more than \$200 million. The project is to be financed with current and future tolls.

The project will require the Transportation Authority to close lanes at various times during the project, but in most cases construction work will be done after 10 p.m. and before 5 a.m. on weeknights. Greenwood said there will also be occasional weekend lane closings.

By 2025, the interchange is expected to handle about 450,000 vehicles - passing through or making a connection - on an average day. More than 66,000 of them each day are expected to pay tolls to use the express lanes.

Warne said Marylanders can look forward to the opening.

"You've got a great product here, and it's going to be exciting to see it built and in operation," he said.

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