270

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The 10.9-mile route is but one segment of an "outer belt freeway" around St. Louis.

The piece of Interstate 270 from Illinois Route 3 to Interstate 55 in Troy was completed in 1965, and the 270 bridge over the Mississippi River was finished in 1966. Together, they replaced the bulk of traffic that had been served by U.S. 66 and the old Chain of Rocks Bridge. A new Chain of Rocks Canal Bridge was constructed in 2015.

The Interstate 270 river bridge will be rebuilt at a cost of $225 million as part of the overall plan, with funding by both states. Acquisition and contractor planning are underway.

In Illinois, the interstate carries an average of 51,000 vehicles per day on its western end and an average of 54,100 on its eastern end, with approximately 17 percent of that being truck volume.

In Missouri, that state of Missouri has been actively rebuilding pieces of Interstate 270 and interchanges from Bellefontaine Road to McDonnell Boulevard.

In Illinois, Phase 1 preliminary engineering is wrapping up. When done, Brown said, it is anticipated that the project will receive design approval from the Federal Highway Administration. Then, Phase 2 engineering, including final design and construction bid documents will begin and require 24 to 36 months to complete for each individual contract, Brown said. Phase 3 is the actual construction, involving several contracts.

Jim Michael, project manager with Crawford, Murphy & Tilly, said roadway improvements will include a minimum of three lanes on both eastbound and westbound 270, with 12-foot paved shoulders. An existing grass medium will be converted to a paved median with concrete barrier walls installed.

Auxiliary lanes will be added along the route for merging purposes.

The vertical profile of the interstate will be raised to increase clearances over Illinois Route 3, the Union Pacific railroad, which has proposed future high speed passenger rail, and over Illinois Route 111, Michael said.

Much time was spent during the fall forum describing the biggest change, interchange wise, which will be a conversion of the juncture of Illinois 111 and 270 into a diverging diamond interchange, or DDI, for which IDOT has received a grant as part of the Illinois Competitive Freight Program to help with financing the interchange.

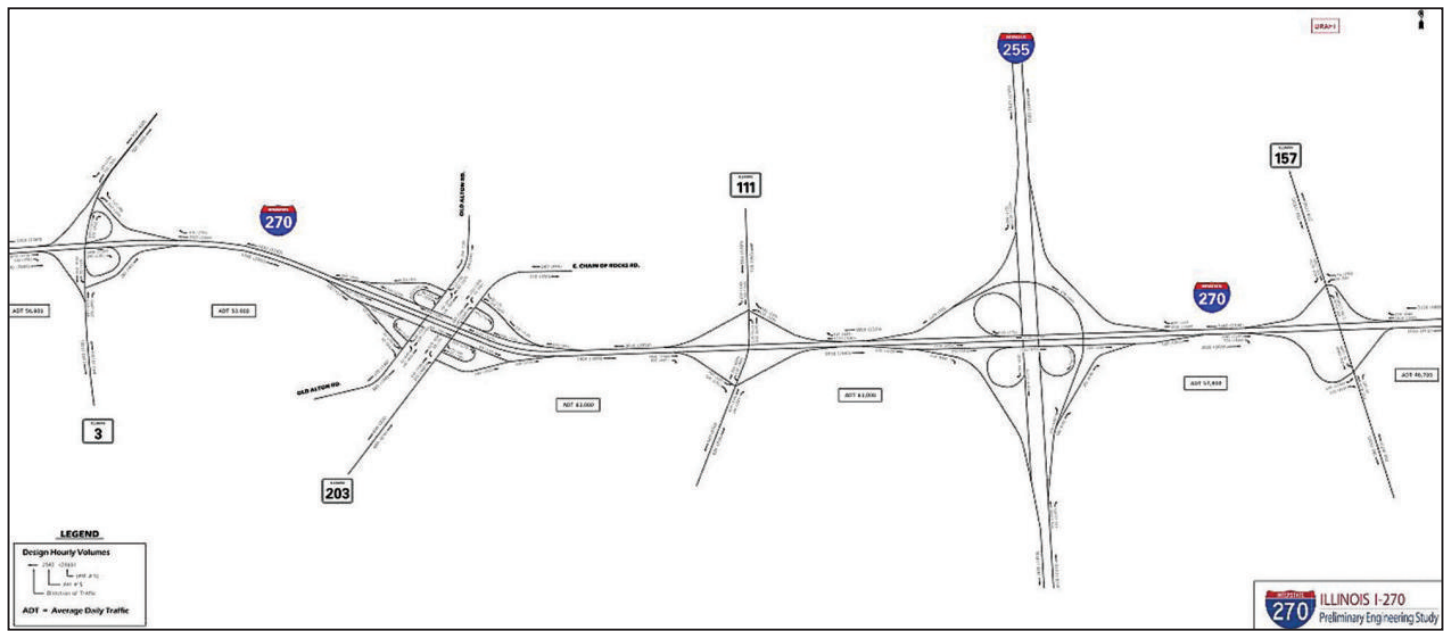
The DDI differs from a tradition interchange because of the design of the directional crossovers on either side of the interchange. The design eliminates the need for left-turning vehicles to cross the paths of approaching through vehicles. By shifting the cross-through traffic to the left side of the road, between the signalized crossover intersections, vehicles on the crossroads do not conflict with vehicles approaching from other directions.

Operationally, it's safer and more efficient for traffic flow, Michael said.

(A similar interchange can be found locally at Interstate 270 and Dorsett Road in Maryland Heights.)

Improvements at the Illinois 111 means changes will also be needed to existing Chain of Rocks Road, which is a short distance north of the interstate, in the Mitchell area.

At the Route 111 interchange, a widened 270 coming from the west will link up with an existing six-lane 270 that exists east of Route 111. Engineers Road, which parallels 270 and runs south of it, will be reconstructed and shifted farther south.



Map of Interstate 270, from the Riverview Drive interchange in Missouri to Illinois Route 157 in Glen Carbon

"The current 111 interchange cannot accommodate the anticipated traffic demands," Michael said. "The existing cloverleaf design is expected to result in significant traffic congestion and both Route 111 and I-270 due to deficient geometric features."

Route 111 will have three travel lanes, both in northbound and southbound directions. The outer lanes will be dedicated to turning movements at the interchange ramps.

The interstate entrance ramps from 111 will be signalized.

The work is being done in part to accommodate anticipated future expansion of the warehouses in that area, he said.

The interchange improvements are set for two phases. The first is called the Illinois Route 111 Interim. This encompasses 111 south of Chain of Rocks Road, which will include the DDI and the ramps. The remainder will be done as part of the ultimate 111 project that will include improvements north of Chain of Rocks Road and to Chain of Rocks Road itself. The bridge that carries 270 over 111 will be rehabilitated and widened.

The improvements to Chain of Rocks Road will include reconstruction of the Route 111 intersection and the construction of round-abouts at the Bel-Air Drive intersection and at the entrance to the Flying J truck plaza, respectively west and east of 111.

An overview of the work

In all, there are 11 intersections to be improved or reconstructed, Michael said. Major work is planned at Route 3, Old Alton Road, 203, 111, and Chain of Rocks Road.

Here is an overview of each portion of work:

The Riverview Drive interchange, the new bridge and the roadway between the new bridges and canal will be part of the overall bridge project. The new river bridge will be wide enough to accommodate three lanes in each direction. With 10-foot shoulders, left and right.

The new canal bridge already has three lanes but only four-foot shoulders. Improvements will be limited to simple pavement marking and guardrail updates, Michael said.

From the Route 3 interchange to St. Thomas Road area, there will be significant improvements. The intersection will be reconstructed to provide a partial cloverleaf while also modifying the I-270 alignment. An S curve alignment on the interstate provides a "sight-distance issue" that has been a factor in some of the accidents involving merging and exiting traffic.

"The removal of this reverse curve will improve the operation of the interstate and safety at this interchange," Michael said.

A new bridge would be built over Route 3.

Auxiliary lanes would be added to the entrance and exit ramps, needed to give trucks maneuvering room and to provide length for trucks to accelerate as they move to the interstate.

The structures that carry I-270 over St. Thomas Road and the Norfolk and Southern Railroad will be raised and widened with new concrete deck and beams to maintain clearance.

The interstate's exit/entrance ramps intersecting Route 3 will be signalized. The state route will also be reconstructed at those points.

Illinois 3 will consist of two, 12-foot lanes in either direction of travel; the existing grass median will be maintained in its proposed condition; and dual left turn lanes will be provided at both ramp intersections for southbound traffic movements. One 12-foot, right-turn lane will also be provided at each of the intersections for northbound Illinois 3.

From Old Alton Road to Illinois Route 203, there will be maintenance of the same interchange as currently exists. Improvements to the bridge carrying the interstate over Old Alton Road and Route 203 and several railroads will consist of widening the existing piers and replacing the deck and beams. Old Alton Road will not be modified, but the existing intersection ramp will be improved.

Illinois 203's profile will be raised to accommodate the grades of the exit and entrance ramps to the interstate. Northbound, the existing two lanes of traffic on 203 will be maintained. However, southbound , a single lane will be extended north of the interstate and will have a shoulder to also accommodate bike traffic. At the northern ramp intersection, a single, 12-foot left turn lane will be provided for the southbound directions of travel. New signal will provide at the main intersections.

The study area ends at 157 to the east. The roadways and interchanges from that point were evaluated and determined to be adequate for the projected 20-year traffic volumes, Michael said.

Heather Lacey, environmental services group manager with Crawford, Murphy & Tilly, said there are several areas of the corridor where noise impact is expected to be an issue. Noise walls are only considered when feasible and reasonable, she said.

People who might be affected, and who will have a vote in the matter, will receive a mailed invitation to participate in an online/mailed poll.

There are number of residences along 270 between Illinois Route 111 and Old Alton Road, but the specifics on what is needed is still being determined.

"As soon as we get that tallied up, those land owners will be contacted by our land acquisition department and we will start those conversations about exactly what is needed for the project and what compensation is available," said Tiffany Brase, studies and plans engineer with IDOT. Most of the needed land is vacant acreage.

Another environmental aspect being dealt with is the historical integrity of nearby Route 66, which is part of Chain of Rocks Road. Efforts to minimize harm are being incorporated into the plan, she said. Right now, the only work involving Route 66 is at the 111 intersection and the roundabouts mentioned above. The exact plans are still to be designed.

Sequences of construction

They are:

In Fiscal Year 2021, IDOT will construct the diamond interchange at 111.

IDOT has funding in the multiyear program for funding the 2022-2026 for the new river bridge; to add lanes from there to the new canal bridge; the reconstruction of the Route 3 interchange; to add lanes from Illinois 3 to just west of Route 203/Old Alton Road; and the intersection reconstruction at Illinois Route 111 and Chain of Rocks Road.

The section of I-270 from just west of Route 203/Old Alton Road interchange to the 270/255 interchange, including the ultimate improvement to the 111 interchange, are the only improvements currently unfunded.

IDOT said it is working to ensure that closures affecting traffic are kept to a minimum.

"Obviously, we have learned a lot recently with I-255 interstate closure," Brase said. "We can get some projects done a lot faster and a lot more efficiently money wise."

Eventual speed limits will be analyzed after work is done to see if there is a need for adjustment. Most of it is 55 mph through the study area.