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What's at the intersection of traffic and planning? Roundabouts

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Ten years ago, roundabouts and traffic circles were something you encountered on a European vacation, whether you went on an actual getaway or just watched the National Lampoon's movie. At the time, only a few dozen roundabouts existed in Georgia, and they were typically confined to small neighborhood streets.

In recent years, though, they've been popping up on roads throughout the state. About 145 roundabouts have been built in Georgia since 2005. More than 110 are in various stages of design, and more than 20 are currently under construction.

And it's not just in Georgia. Whereas in the 1990s there were fewer than 100 roundabouts in the nation, there are now more than 2,300, according to an online inventory database maintained by the transportation engineering firm Kittelson & Associates.

State officials say roundabouts work pretty intuitively for drivers. Moreover, roundabouts have proved to be safer than traditional intersections because they force motorists to slow down, and they eliminate cross-traffic turns that can lead to serious wrecks, officials say.

- [Map: More roundabouts for metro Atlanta](#)

Some residents, however, fear drivers don't understand how to use them. And they question whether enough is being done to educate motorists on the issue.

Drivers: They help! They hurt!

To navigate a roundabout, drivers travel counterclockwise by making a right turn into the circle after yielding to oncoming traffic. They continue circling until they reach the road where they want to turn. Then, they make a right-hand turn to exit the traffic circle. Sounds simple enough. But roundabouts can be a love-it-or-loathe-it kind of thing.

Lewis Corley, 58, said the roundabout near his home in Duluth at the three-way intersection of West Lawrenceville Street, McClure Bridge Road and Irvindale Road flows pretty smoothly.

"I'm a little surprised that it's working as well as it does, because I sort of think most of the drivers down here think yield signs and stop signs are just suggestions," Corley said, laughing.

Sabrina Anne Hembree, 43, of Lawrenceville lives down the street from a roundabout at Hutchins Road and Arnold Road, an intersection where there used to be a lot of accidents because of poor visibility and speeding drivers.

"Now it flows smoothly," Hembree said. "I have yet to see an accident down there."

Rick Bradley, 51, has a law office near a roundabout at the intersection of Grady Avenue and Beauregard Boulevard in Fayetteville. He had been a roundabout doubter. But since it opened to

traffic in 2011, “it’s easier to get in and through the intersection than it was before. ... It has definitely helped,” Bradley said.

The experience hasn’t been quite as rosy for Elena Fox, 20, of Loganville.

“During school take-in and let-out, it’s just a nightmare,” Fox said in reference to a roundabout in front of Walnut Grove High School. Several signs inside the circle have had to be replaced after cars plowed into them.

“There should be another option, because drivers here don’t understand,” Fox said.

Education needed, or else

Drivers who aren’t circle-savvy sometimes stop at a roundabout entry point rather than continuing into the circle, causing traffic behind them to stack up. Or, a driver might cut off someone if they turn into the roundabout without first yielding to the circulating traffic.

The Georgia Department of Transportation holds public hearings in communities around the state before every roundabout project is undertaken. At the hearings, GDOT representatives explain why a roundabout makes sense for that particular intersection and how they work. But Decatur attorney Robert Katz, who has litigated cases against GDOT over road defect issues, said that’s not enough. He said educating drivers about how to use roundabouts should continue to be a focus for GDOT and local governments after they are installed.

“If you’re not pairing education with them, you are going to get accidents,” Katz said. Navigating a roundabout is not a mandated part of the road test that must be passed to obtain a Georgia driver’s license. Nor does it appear on the written test, said Georgia Department of Driver Services spokeswoman Susan Sports.

And the Georgia Driver’s Manual isn’t much help. Out of its 60 pages, only a half-page concerns how to navigate a single-lane roundabout, while multi-lane roundabouts aren’t mentioned at all. Information on how to handle multi-lane roundabouts is being drafted for next year’s driver’s manual, said assistant state traffic engineer Scott E. Zehngraft.

That’s important because about a third of the roundabouts that are planned are going to be multi-lane. Only one multi-lane roundabout exists in Georgia at present, on St. Simons Island, Zehngraft said. Another is under construction in the city of Milton.

The skinny on roundabouts

The Federal Highway Administration says roundabouts are the preferred alternative for a wide range of intersections.

In particular, roundabouts can be useful at:

- Intersections with more than four legs or with difficult skew angles.
- On roads with historical problems of excessive speed and a high number of crashes.
- Intersections with a high percentage of turning.
- Intersections with a high number of U-turns.

Another plus? Roundabouts are often less costly to build and maintain than an intersection controlled by a traffic light. There's no technology to update. And the sometimes smaller footprint means the state doesn't need to buy as much land.

For example, a roundabout in Covington at the intersection of Ga. 81 and Ga. 162 was projected to cost between \$511,000 and \$744,000 to build. Installing a stop-and-go traffic signal would have cost \$868,000.

In 2009, GDOT adopted a policy that roundabout designs should be considered whenever a traffic signal is requested at an intersection, or whenever a new intersection is being built or reconstructed.

Herman Hill, a road engineering consultant who worked for GDOT for 15 years, has encountered roundabouts all over Georgia, and said he has yet to hear about any that are considered a failure. "They are in congested areas and noncongested areas, and they work fine," Hill said. "The drivers and the public sometimes feel it's going to be confusing. But in actuality, as it gets going and as people get comfortable with it, they really like it."

Four types of circular intersections:

Modern roundabout — a type of circular intersection in which traffic travels counterclockwise (in the United States) around a central island and in which entering traffic must yield to circulating traffic. Single-lane roundabouts have a single lane of entry at all legs, one circulatory lane, and a typical diameter of 90 to 180 feet. Multi-lane roundabouts have at least one entry with two or more lanes, may be useful for higher-speed roads, and have a typical diameter of 150 to 300 feet.

Rotaries — an old-style circular intersection common to the United States prior to the 1960s, characterized by a large diameter, often greater than 300 feet. Unlike the modern roundabout, drivers may have to change lanes for some movements. In addition, some rotaries operate with traffic inside the circle yielding to traffic that is entering the circle, which can cause backups inside the rotary. Also, circulating speeds can become high because of the large diameter, making maneuvers within the circle more difficult.

Signalized traffic circles — another old-style circular intersection used in some cities in the United States. Traffic signals are used to control one or more entry point.

Neighborhood traffic circles — these are typically built at the intersections of local streets for reasons of traffic calming (slowing down vehicles) or design aesthetics.

Some benefits of roundabouts:

- » 78% reduction in injury crashes over signalized intersections
- » 82% reduction in injury crashes over two-way stop controlled intersections.
- » 75% reduction in conflict points over a traditional four-way intersection.
- » 100% reduction in crossing conflict points over a traditional four-way intersection.
- » Increased safety for pedestrians because of low-speed environment.

- » Can be good alternatives for intersections of more than four roads or intersections with difficult skew angles.
- » Can have an overall reduced footprint.
- » Can have reduced cost.