

## Ramp meters could help freeway traffic flow

April 16, 2013

By Bruce Sicheloff

Triangle rush hour traffic got lots better after the state Department of Transportation widened Interstate 40 on the west side of Raleigh, and it got a little better after DOT narrowed part of I-40 near the Clayton Bypass.

We might learn soon whether DOT can help traffic go faster on the interstate by making cars stop briefly on the on-ramp.

Ramp meters have been used for more than 40 years as a low-cost tool for cutting rush-hour delays in cities from New York to Atlanta to San Diego. When travel lanes are clogged, the meters trigger a traffic signal on the on-ramp - changing it from green to red for a second or two at a time - to spread out the flow of cars entering the freeway.

Now a new consultant's report recommends ramp meters for busy Triangle freeways. Atkins, an international engineering firm, says DOT should install the meters at 14 on-ramps for 12 interchanges on Interstates 40, 440 and 540, at an estimated cost of \$3.2 million.

The idea is to put more space between those cars coming down the ramp, so they'll merge more smoothly with traffic on the interstate. Drivers pause on the ramp, but the measured pace is supposed to reduce overall delays.

"You keep the big pipe flowing so the little pipes can add more to the system," said Kevin Lacy, chief state traffic engineer for DOT. "The more orderly we get traffic to operate, the higher number of vehicles we can operate on the system. It's getting more capacity out of the existing system."

State and federal funds would have to be set aside, and traffic laws would have to be modified. Running a regular red light is a serious violation, but Lacy said authorities wouldn't favor the same punishment for somebody who fails to pause for a ramp meter.

Ramp meters would be a new kind of traffic signal for North Carolina drivers - alternating between red and green lights, without a yellow. And they probably would go dark when traffic was light.

In some cities they're called merge lights or flow signals.

They're controversial even where studies credit them with reducing delays. Authorities shut down ramp meters around Minneapolis a few years ago, but traffic problems worsened, and drivers clamored for their return.

When Minneapolis on-ramps are crowded, it sometimes is hard for merging drivers to match the speed of interstate traffic, says David Vitek of Raleigh. He visits relatives in Minneapolis for a few weeks each year.

"With the lights you get freedom and space to adjust your speed, faster or slower, and merge properly," Vitek, 18, a senior at Enloe High School, said Monday.

"As someone who takes the (I-440 Beltline) to school every morning, it's frustrating to try to merge onto the freeway when someone in front of you is going 45 and the traffic is going 65," Vitek said by email.

Planners want to test ramp meters in a few locations in the Triangle, but it's not clear how soon they'll move.

Triangle commuters are in for three years of disruption and delay, starting this summer, while DOT rebuilds I-40 and I-440 across South Raleigh. Traffic engineers say that might not be a good time to introduce a new-fangled way of getting on and off the interstate.

Greg Fuller, who oversees traffic system technology for DOT, says the meters won't work if drivers don't like them.

"I've been working for DOT for a long time," Fuller said. "You don't just take something new and throw it out there and expect it to work. You've got to be able to sell it and show the benefits of it."

Make contact: 919-829-4527 or [bruce.siceloff@newsobserver.com](mailto:bruce.siceloff@newsobserver.com). On the Web at [twitter.com/Road\\_Worrier/](https://twitter.com/Road_Worrier/) and [blogs.newsobserver.com/crosstown/](https://blogs.newsobserver.com/crosstown/). Please include address and daytime phone.

Two ways to quicken I-40

Triangle planners have been looking for low-cost options to ease congestion while postponing the cost of adding freeway lanes.

A new DOT study says the morning flow is smoother in northwest Johnston County now that a third lane of westbound I-40 has been closed at the U.S. 70 Clayton Bypass interchange.

Drivers took advantage of a short stretch where I-40 was widened there, but they caused trouble when the extra lane ended and they had to squeeze back into two lanes. DOT used paint stripes and other markers to eliminate that third lane.

Now I-40 drivers save as much as 90 seconds at the busiest time of the morning, around 7:30 a.m., when they pass the U.S. 70 interchange. Drivers earlier or later in the morning save less time.

In Raleigh, drivers saw more sustained improvement after DOT added a third lane in each direction to I-40 between Wade Avenue and U.S. 1/64. Average weekday travel speeds picked up by about 5 miles per hour.

Caption: Road Worrier

By Bruce Siceloff

A consultant recommends ramp meters for 12 Triangle interstate interchanges. NCDOT engineers say they could reduce rush-hour congestion by smoothing out the flow of traffic entering the freeway.

Takaaki Iwabu - [tiwabu@newsobserver.com](mailto:tiwabu@newsobserver.com)

Ramp meters with stop-go lights might be installed on interstate on-ramps to moderate traffic flow. On-ramps suggested for ramp meters include this one at Miami Boulevard (exit 281) on I-40.