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LOCAL

How often do you get a green light? Raleigh rates high in national traffic signal study

BY RICHARD STRADLING

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Traffic passes through the intersection of Peace and West streets in downtown Raleigh in this file photo from April 2016.
NEWS & OBSERVER FILE PHOTO *hlynch@newsobserver.com*

RALEIGH

If it sometimes feels like every traffic light you hit is red, a new national study out of Texas suggests it could be a lot worse.

It turns out the Raleigh metro area has among the most efficient traffic signals in the entire country, and drivers here are more than twice as likely to get a green light as red, according to researchers at the Texas A&M Transportation Institute.

Using crowd-sourced data gathered in the fall of 2020 by the analytics company INRIX, the researchers determined the chances that a signal would be green at a sampling of intersections in each metro area. They used that number to create a "traffic signal efficiency index" — essentially the number of times more likely it is that a driver will get a green light than a red one.

"American drivers share a common experience — and sometimes a common frustration — with traffic signals every day," Luke Albert, a research engineer at the institute, said in a written statement. "We've developed a way to compare those experiences from one city to another."

Out of 97 metro areas across the country, Raleigh had the second highest index score, trailing only Boulder, Colorado. Drivers at the signals studied here found them green 69% of the time, for a score of 2.29. The national average was 1.7.

The researchers also calculated the average time all vehicles passing through an intersection were delayed, whether they got a green light or not. In Raleigh, the average delay was 13.4 seconds.

In Fresno, California, the metro area with the poorest efficiency rating, drivers got green lights 53% of the time, for an index score of 1.14, and were delayed 20.6 seconds on average.

The study looked at Raleigh and parts of Wake County with at least 1,000 residents per square mile, according to Albert. The organization focused on about 100 urban areas it has studied intensively in the past, Albert said, and that did not include Durham or Chapel Hill.

Greensboro rated nearly as well as Raleigh, with an index score of 2.25, while Winston-Salem and Charlotte were about average, at 1.79 and 1.72 respectively.

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The Texas A&M researchers say this is the first study of its kind and that one of the goals was to show that it was even possible. Before crowd-sourcing data, collected from INRIX apps and GPS devices on cars for the institute's annual Urban Mobility Report, traffic engineers had to visit individual intersections or set up cameras or other equipment.

The data was collected at about 210,000 traffic lights nationwide during one week in October 2020, at a time when traffic patterns were still very much affected by the COVID-19 pandemic. Researchers say college towns such as Boulder and perhaps Raleigh were bound to do better than they might otherwise because many students were still taking classes remotely.

The researchers also found that traffic signals appeared to perform better when there were a lot of them, compared to urban areas with "less traffic signal density." They also noted that some communities have different goals when it comes to traffic,

placing more emphasis on pedestrians, cyclists and transit than timing their traffic lights to keep cars moving.

The target audience for the study is not so much the public as it is local transportation agencies that might see who is doing better and seek to learn from them, Albert said.

“Crowd-sourced data, like this information from INRIX on how traffic signals are working, gives people making travel decisions much more detailed information and more quickly than in the past when engineers had to go stand on the side of the road to watch traffic or install expensive equipment,” he wrote.

To read the full study, go to https://bit.ly/3TaImsU.

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