

MIAMI-DADE COUNTY

## Stuck in traffic while drawbridge is up? This forecast may be answer for 3 Miami bridges

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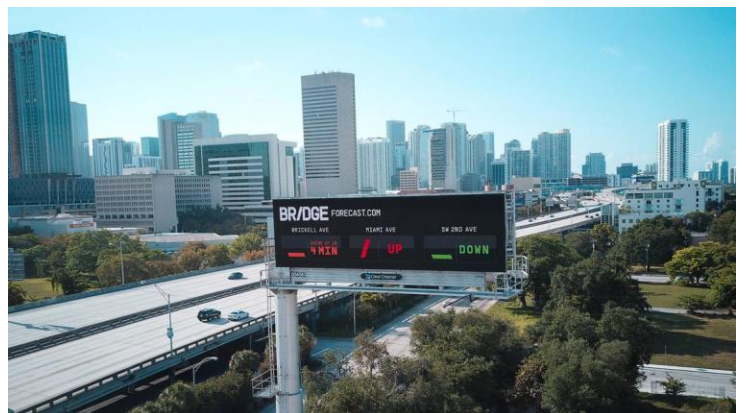
When Raphael Franzini moved to a Brickell apartment two years ago, he quickly realized that his commute over the Miami River was the most agonizing segment of his day. When the drawbridges went up, so did his blood pressure.

So Franzini and his tech wizard colleague Chris Neff set out to create a warning system for motorists who are constantly bedeviled by the unpredictable bridge openings that cause gridlock downtown.

“People at our office go through this every day and they couldn’t believe there’s no solution,” said Franzini, who along with Neff works at the ad agency The Community. “The real game changer is predicting when they will go up.”

Their invention, called Bridge Forecast, is a website ([www.bridgeforecast.com](http://www.bridgeforecast.com)) that tells users when three major bridges in Miami will rise, enabling them to seek alternate routes and avoid the city’s notorious downtown congestion. When the [Brickell bridge rises](#), the average waiting time is seven minutes, and it can take 20 minutes or more to travel less than a mile when traffic peaks.

They launched the mobile site Monday and are promoting it with a digital billboard located off Interstate 95 at the Southwest Eighth Street exit, showing real-time, up-to-the-minute reports on bridge status. The billboard will come down Sunday.



“It can happen fast. It can happen often, and then you’re stuck,” Neff said, referring to bridge openings. “We decided to do something about it.”

Franzini and Neff began designing the technology a year ago when they placed around-the-clock cameras overlooking the Miami Avenue, Southwest Second Avenue and — most hated of all — Brickell Avenue drawbridges to record boat traffic and bridge openings. Utilizing Computer Vision, a form of artificial intelligence that studies images, they amassed months of data that taught the system how to predict when the bridges would go up.

“It starts like an infant, its brain grows, and it becomes a bridge expert,” Neff said. “It has built a library of understanding.”

The Brickell bridge causes backups each time it opens during peak periods. Tension between those in cars on land and those in boats on the water has grown as the downtown population has swelled by 40 percent since 2010. Business owners, commuters and residents want extended bridge closure times during morning and evening rush hours.

But the U.S. Coast Guard, which regulates traffic on the Miami River, and the marine industry have been opposed to more disruption of commerce and navigation on the working river, home to two dozen boatyards, marinas, shipping terminals and agents.

The conflict over the bridges’ schedule has become a festering problem with no satisfying resolution for any of the stakeholders. The business community claims downtown comes to a halt each time the Brickell bridge goes up, causing a loss of \$12 million in productivity and revenue per year. Mayor Francis Suarez has denounced “unnecessary and burdensome delays.”

But the marine industry claims longer lockdown periods hurt their business and cause navigational hazards as vessels — many of which must travel during high tides — queue for passage.

Commuters have complained over the years that the bridge is opened at random and improper times by tenders who allow pleasure boats to pass through during curfew, causing bottlenecks all the way to I-95.



After years of squabbling among the Coast Guard, Downtown Development Authority, city of Miami, Florida Department of Transportation and Miami River Commission, it took two smart and frustrated co-workers at The Community advertising agency to implement a program that may offer relief.

“I love to experiment and play with new technology and if I can do that for good, it’s a no-brainer,” Neff said. “And there is the benefit of solving a local

source of tension here in Miami.”

Neff and Franzini hope the easily accessible, hands-free site, which they funded through the agency, will eventually be integrated into such apps as Waze, Google Maps, Apple Maps, Uber and Lyft. The technology could be expanded to address other transportation choke points around South Florida and beyond.

“The more users, the better traffic will flow,” Franzini said.

Current lockdown times for the Brickell bridge are 7:35 to 8:59 a.m., 12:05 to 12:59 p.m., and 4:35 to 5:59 p.m. weekdays, except for vessels in distress or vessels under tow (usually freighters).

During other periods, the bridge opens on the hour and the half hour, and then only in response to a vessel request.

“Everyone I shared our idea with said they know there’s a schedule, but they are confused because of all the exceptions,” Franzini said. “Even when it’s the height of rush hour, the bridge goes up.”

The city, Coast Guard, FDOT, DDA and Miami River Commission are working together to implement a pilot program that would shift lockdown times to 8 to 9 a.m. and 5 to 7 p.m. weekdays. Shortening the morning hours represents a compromise to extend the evening lockdown times, when bridge volume reaches 12,200 vehicles per hour.

The Coast Guard has been skeptical about changing curfew times, arguing in a 2017 study that the net effect could be even more car traffic as the bridge would have to remain open longer to allow a longer line of boats to pass through.

“Our request to the U.S. Coast Guard is straightforward: The only way to accommodate the rapid growth taking place in our urban core is aligning the Brickell bridge lockdown periods with our changing traffic patterns,” said Miami City Commissioner and DDA Chair Ken Russell. “We look forward to implementing a mutually agreeable testing period to prove that easing car traffic with better bridge hours will in no way negatively affect the marine industry.”

Neff and Franzini see their Bridge Forecast website as a start toward easing congestion — and tempers — on downtown streets. Franzini, who did test runs on his cellphone, has already experienced shorter commute times by adjusting his route.

“It’s been on our brains for so long and now we can share it,” Franzini said.

Russell said the website should be a useful aid and he’s hopeful the new Brickell bridge schedule will be implemented soon. The population in greater downtown Miami is expected to grow another 19 percent by 2021 to 109,617, according to the DDA.

“Any innovation that improves mobility in downtown Miami is a welcomed step, but the long term solution for easing gridlock is eliminating the disruption caused by the Brickell bridge opening during peak traffic hours,” Russell said. “Working with our partners at FDOT, the City of Miami and the Miami River Commission, the DDA continues to advocate on behalf of the residents, businesses, motorists and pedestrians who are disrupted by the bridge opening and closing at inconvenient times.”