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For release: 1:30 p.m., Nov. 29, 2023 NOTE: Award presentation photo to follow by 4 p.m.

FLORIDA DEPARTMENT OF TRANSPORTATION HONORED FOR FRICTION TREATMENT THAT REDUCES STOPPING DISTANCES AT INTERSECTIONS 2023 National Roadway Safety Awards recognize innovations to protect pedestrians, cyclists and

motorists as pandemic spike in U.S. road fatalities continues largely unabated

WASHINGTON, DC – The Florida Department of Transportation (FDOT) was honored today with a 2023 National Roadway Safety Award for demonstrating how increasing pavement friction helps motorists stop more quickly and retain better control at high-speed intersections.

As part of a pilot project started in 2020, FDOT added highly skid-resistant material to the road surface at three Hillsborough Avenue intersections in Tampa to see how much it would enable vehicles to come to a stop within a shorter distance. The goal was to reduce "improper stopping behavior," such as vehicles ending up in crosswalks, which puts pedestrians and cyclists at risk.

Florida and other states had used specially engineered material to increase friction on curves to prevent vehicles from running off the road. However, this is believed to have been the first time a U.S. transportation agency has used intersection high friction treatment to reduce stopping distances and study its effect on driver stopping behaviors at signalized intersections, as is done in some European countries.

FDOT's two-year before and after study found that the increased friction reduced improper stopping behaviors at the three signalized intersections. On average, these reductions ranged from 11 percent to 31 percent compared to the pre-treatment conditions.

"The range in results comes from the comprehensive assessment we performed across multiple 'after' time periods, from six to 21 months, and several scenarios, including daytime and nighttime conditions, as well as dry and rainy weather. The effectiveness of friction treatments can last for a long period of time," said Pei-Sung Lin, the study's principal investigator.

"We want to be proactive," said Lin, who is also program director at the University of South Florida's Center for Urban Transportation Research. "If we can reduce risky driving behavior, that means we can reduce the potential for crashes. Better friction between tires and the pavement makes a big difference." "It works," said Peter Hsu, who initiated the study as the FDOT District Safety Administrator for Tampa Bay. "It helps reduce stopping distance and improper stopping behaviors invading the crosswalks at signalized intersections."

The findings are significant in a state where about 1,000 people die every year in intersection collisions. Between 2013 and 2022, about 27 percent of traffic fatalities and 35 percent of serious injuries statewide occurred at intersections.

The 10 National Roadway Safety Award winners and two honorable mentions are using proactive, data-driven, collaborative and cost-effective approaches to better protect pedestrians, cyclists and motorists across the country. Much of their work began amid a nationwide spike in vehicular crashes during the pandemic, when U.S. <u>roadway fatalities rose 7.3 percent in 2020</u> and a further 10.1 percent in 2021 before holding steady at a high level in 2022 (-0.3 percent).

Early estimates for the first half of 2023 show crash fatalities declined slightly but <u>remain at</u> <u>levels not seen since the mid-2000s</u>. Between January and June, fatalities nationwide declined by an estimated 3.3 percent, compared with the first six months of 2022, according to the <u>National Highway Traffic Safety Administration</u> (NHTSA).

First-half 2023 fatalities in Florida declined about the same: An estimated 1,772 people died on Florida roads, down 3.7 percent from the same time frame last year, according to <u>NHTSA's</u> <u>preliminary data</u>.

The continued high fatality numbers demonstrate the value of safety innovations like Florida's skid-resistant pavement and the 11 other projects from across the nation.

FDOT's pilot study team included the Federal Highway Administration and the Center for Urban Transportation Research at the University of South Florida, as well as consultants Element Engineering Group and WDM USA.

The National Roadway Safety Awards, presented biannually since 1999, are sponsored by the Federal Highway Administration and the nonprofit Roadway Safety Foundation. Projects were evaluated on safety effectiveness, innovation and efficient use of resources.

"The problem-solving creativity and dedication shown by the Florida Department of Transportation will save countless lives -- using a data driven approach and practices that are proven to reduce crashes," said Federal Highway Administrator Shailen Bhatt. "It demonstrates a strong commitment to moving Florida toward zero deaths and serious injuries on the state's roadways, and we are proud to applaud their efforts."

"The stubbornly elevated fatality numbers underscore the urgent need for innovations like the National Roadway Safety Award honorees' projects," said Roadway Safety Foundation Executive Director Bruce Hamilton. "With several initiatives already showing major reductions in fatalities, injuries and crashes, today's honorees are shining a bright light on the path to safer travel."

Other honorees are:

- North Carolina: NCDOT for reducing severe crashes at rural intersections by adding more all-way stops
- Illinois: Illinois Tollway for creating an app that shows livestream video of serious crashes to speed up incident response

- Louisiana: Acadiana Planning Commission for reducing severe crashes at rural "T" intersections using larger signs and rumble strips to alert distracted drivers
- **Texas**: TxDOT for reducing pedestrian fatalities on an Austin highway, particularly among people experiencing homelessness
- **Delaware**: DelDOT for reducing fatal and serious injury crashes by converting more intersections to all-way stops
- **New Jersey**: South Jersey Transportation Planning Organization for developing a plan to prioritize cyclist and pedestrian safety in rural Cumberland County
- New Jersey/New York: The Port Authority of NY & NJ for reducing crashes by using timely data analysis to proactively identify and address safety problems
- **Minnesota**: MnDOT for its widespread use of "J-turn" intersections on high-speed divided highways to reduce the severity of crashes
- **California**: Caltrans for implementing pedestrian protections, signs to prevent wrongway driving and other cost-effective safety measures more quickly
- **Virginia**: VDOT (Honorable Mention) for funding lower-cost safety projects in a more systemic way aimed at preventing traffic fatalities and serious injuries
- **Nevada**: NDOT (Honorable Mention) for its first comprehensive plan to reduce speeding, a leading cause of fatal and severe crashes

Winners were selected by an expert panel of judges:

- Lori Diaz, The American Traffic Safety Services Foundation
- Jennifer Hall, American Association of State Highway and Transportation Officials
- Adam Kirk, Kentucky Transportation Center
- Stephen Read, Virginia Department of Transportation
- Brian Roberts, Transportation Research Board
- Terecia Wilson, Clemson University

For complete details on each of the winners and for more information on the national awards program, visit: **www.roadwaysafety.org/awards**

The Roadway Safety Foundation is a 501(c)(3) charitable and educational organization. Our mission is to reduce the frequency and severity of motor vehicle crashes, injuries and fatalities by improving roadway systems and their environment.