



## Walk. Ride. Drive. Smarter.



Drivers and pedestrians who participated in the previous phases of the Tampa Hillsborough Expressway Authority Connected Vehicle Pilot (THEA CV Pilot) experienced a safer and smoother trip in the city's central business district as we proved that our CV applications work and can save lives. We would like to keep advancing connected vehicle technology because it has the potential to transform the experience of the drivers and pedestrians who traverse the city every day. Our THEA CV Pilot prevents collisions, enhances traffic flow, improves transit trip times & efficiencies, and even shrinks the Tampa Bay area's carbon footprint by reducing emissions of greenhouse gases.

Tampa is one of the first cities in the nation to deploy CV technology on real city streets. In fact, Tampa was one of just three sites in the nation to be selected for the U.S. Department of Transportation (USDOT) CV Pilot Deployment Pilot, which seeks to spur innovation among early adopters of CV applications. The other two sites are New York City and the Interstate 80 corridor in Wyoming.

The four-year effort began in September 2015, when the USDOT awarded THEA a \$17 million contract to implement its winning proposal. In 2016, the project entered its second phase, which included design, testing and deployment. The third and final phase of the pilot, began in mid-2018, and involved the full-scale operation of CV technology throughout downtown Tampa.

The THEA CV Pilot was so successful that the USDOT has asked THEA to continue on to the next phase in the CV space and begin working with the auto industry manufacturers. In 2021, THEA is collaborating with Honda Development & Manufacturing of America, LLC (HDMA), Hyundai America Technical Center, Inc and Toyota Motor North America to deploy vehicles with CV technology to provide the next evolution of delivering safer transportation.

This collaboration is among the first of its kind where several auto manufacturers are coming together in the existing CV deployment. The newly equipped vehicles will not only interact with one another but also the existing CV Pilot participants transmitting crucial safety information to all participants of the THEA CV Pilot.



# WHAT WE'RE DOING

The THEA CV Pilot will employ innovative vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communication technology to improve safety and traffic conditions in downtown Tampa.

## MORNING BACKUPS



Roadways: Lee Roy Selmon Expressway

Commuters approaching downtown on the Lee Roy Selmon Expressway's Reversible Express Lanes enter a curve ending at a traffic light at the intersection of East Twiggs Street and Meridian Avenue. Morning traffic backs up here, increasing the risk of rear-end crashes. Drivers on the express lanes who participate in the THEA CV Pilot will receive warnings when cars on the road ahead have suddenly slowed or come to a stop. Their vehicles will also alert them when they are approaching the curve at an unsafe speed.

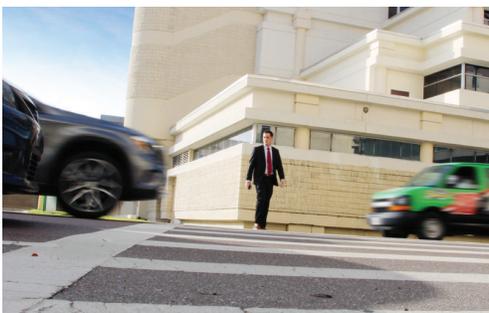
## WRONG-WAY ENTRY



Roadways: Lee Roy Selmon Expressway, East Twiggs Street, North Meridian Avenue

The downtown end of the Lee Roy Selmon Expressway's Reversible Express Lanes is a potential entry point for wrong-way drivers. The THEA CV Pilot aims to reduce the risk of collisions by detecting and warning wrong-way drivers before they get on the expressway. Other connected vehicles on the express lanes will also receive warnings when a wrong-way driver is approaching.

## PEDESTRIAN SAFETY



Roadways: East Twiggs Street

The THEA CV Pilot will install CV technology at the midblock crosswalk on East Twiggs Street at the Hillsborough County Courthouse to improve pedestrian safety. When sensors detect a pedestrian in the crosswalk, roadside equipment will broadcast that information to connected vehicles in the vicinity, and their drivers will receive an alert.

## RED LIGHT VIOLATION



Roadways: Lee Roy Selmon Expressway

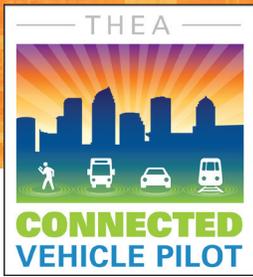
Commuters traveling to Downtown Tampa on their way to work might rush through the City's busy intersections. The THEA CV Pilot aims to reduce the potential for crashes by warning participants the Pilot as they approach an intersection whose light is about to turn red.

## TRAFFIC PROGRESSION



Roadways: Meridian Avenue, North Nebraska Avenue, Florida Avenue

Connected vehicles will communicate with some traffic signals on Meridian, North Nebraska and Florida avenues to improve traffic flow in real time. Drivers of connected vehicles will also receive a warning when it is not safe to enter an intersection. For example, a car may alert its driver to oncoming traffic on a cross street that may be out of view. The City of Tampa's Transportation Management Center will also capture traffic data to improve system-wide performance.



## EQUIPMENT

The THEA CV Pilot aims to improve safety, mobility, and the environment by enabling vehicles and elements of the downtown roadway infrastructure to “talk” to each other. To make this vision a reality, THEA has assembled a team that includes HNTB, Siemens, DENSO, Brandmotion, the University of South Florida Center for Urban Transportation Research and Playbook Public Relations. Siemens is developing roadside units that will communicate with connected vehicles and with the city’s Transportation Management Center via dedicated short-range communications, or DSRC. The project’s vehicle systems integration partner, Brandmotion, will lead the installation process of all onboard units in the participants’ vehicles. The onboard units, which display safety messages on an enhanced rearview mirror, will be the primary interface between drivers and the CV environment.



## OUR PARTNERS

