# SMART
## GRANTS PROGRAM

## New Jersey SMART RIGHT NOW
### New Jersey Department of Transportation

## PROJECT PARTNERS

Delaware Vally Regional Planning Commission (DVRPC)
North Jersey Transportation Planning Authority (NJTPA)
South Jersey Transportation Planning Organization (SJTPO)
New Jersey State Police
Rowan University
AtkinsRéalis

## PROJECT CHALLENGE

While wrong-way driving crashes represent a smaller percentage of the overall statewide incidents, these crashes often result in serious injuries or fatalities. Using SMART Grant funds, New Jersey DOT intends mitigate these dangerous crashes through a statewide, programmatic approach that includes the evaluation and deployment of multiple roadside sensor-based systems, development of standard evaluation criteria and standardization of design and installation methods, and creation of systemwide responses using central and edge intelligence.

## IMPACT

To supplement the initial pilot deployment project located in Trenton, New Jersey, prototype technologies will be installed at two locations with noted histories of wrong-way incidents along I-295 in Camden County and US 1/9 in Essex County, respectively. These locations were chosen because they will have an equitable impact on the safety of road users in Historically Disadvantaged Community zones. The aim is to enhance safety and reliability in a manner that benefits both New Jersey residents and motorists fairly.

## CURRENT STATE OF THE ISSUE

**Over a recent twelve year period (2010-2021), a total of 1,281 wrong-way crashes occurred on limited-access interstate and state highways, as well as toll roads operated by independent authorities in the state of New Jersey, resulting in an average of 107 crashes per year and a total of 1,146 injuries and 64 fatalities.**

## STAGE 1 OUTCOMES

1. Identification of multiple off-the-shelf wrong-way vehicle detection systems capable of high-degrees of accuracy in various environmental and geometric conditions of New Jersey. 2. Development and integration of an automated systemwide response plan leveraging multiple existing systems and edge-computing technology.

## STAGE 2 VISION

New Jersey DOT aims to scale the successful roadside wrong-way vehicle detection systems across the state, focusing on the highest risk locations in Phase II. Following the development and successful pilot of an automated systemwide response plan, the Department will implement a large-scale architecture for the statewide implementation to include cameras, sensors, dynamic message signs, Connected Vehicle technology, and more to appropriate warning motorists of wrong-way drivers and track the events to conclusion. The Department will work with partner agencies to establish peer-to-peer knowledge transfer and funding opportunities for an integrated, boundaryless statewide deployment.