

# 2023 NOTEWORTHY PRACTICES GUIDE

## NATIONAL ROADWAY SAFETY AWARDS WINNERS

Recognizing proven lifesaving achievements by public agencies across the United States



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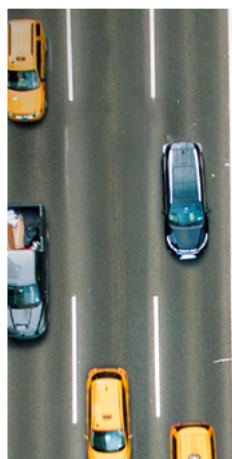


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U.S. Department of Transportation  
**Federal Highway Administration**



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# LETTER FROM THE FEDERAL HIGHWAY ADMINISTRATOR

It is my honor to join the Roadway Safety Foundation (RSF) in announcing the winners of the 2023 National Roadway Safety Awards. During this biennial competition, the Federal Highway Administration (FHWA) and the RSF encourage State, local and Tribal agencies to nominate infrastructure projects or programs that exemplify safety effectiveness, innovation, and efficient use of taxpayer resources. In addition, the competition encouraged safety solutions that address underserved populations.

I encourage you to read through this Noteworthy Practices Guide, which summarizes each winning project from two categories: Infrastructure and Operational Improvements and Program Planning, Development, and Evaluation. This year's recipients have improved safety at intersections, reduced roadway departure crashes, applied speed management techniques, and focused efforts to address safety for all road users. I hope that a review of the noteworthy practices showcased in the guide will inspire others to consider these or generate new ideas.

Regardless of where you live or how you get around, all Americans deserve a safe and efficient transportation system. Consistent with the USDOT's National Roadway Safety Strategy, the responsibility to create a safe system belongs to all of us. I would like to thank all the 2023 award applicants for demonstrating a strong commitment to move the United States towards zero deaths and serious injuries.

**Please join me in congratulating all the winners of the 2023 National Roadway Safety Awards!**

**Shailen P. Bhatt**

*Administrator*

Federal Highway Administration



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# LETTER FROM THE ROADWAY SAFETY FOUNDATION

“Welcome to Washington, DC!”

I am greatly looking forward to uttering those words to our stellar National Roadway Safety Award winners this year, as we return from a virtual format to once again celebrate in person. And what a group it is: 10 winners and two honorable mentions, hailing from 12 states and representing multiple levels of government. Congratulations to all!

The Roadway Safety Foundation (RSF) and Federal Highway Administration (FHWA) have partnered to recognize outstanding safety projects and programs every other year for more than two decades.

What unites all of these efforts is a common thread: excellence in using innovative and cost-effective approaches to demonstrably save lives. And to that point, I must take a moment to offer my sincere thanks to this year’s blue-ribbon panel of subject matter experts who assessed the strong pool of applicants and determined which most exemplified this excellence. We had a wonderful mix on the panel of program veterans and newcomers, and these dedicated volunteers truly make these Awards possible.

This program also wouldn’t be possible without the steadfast support of the FHWA Office of Safety. It is an honor to collaborate with such a dedicated team of safety professionals, and RSF is tremendously grateful for all of you.

Now, without further ado, read on to see the winners and honorable mentions of the 2023 National Roadway Safety Awards! They are presented in two categories – Infrastructure and Operational Improvements and Program Planning, Development, and Evaluation – and ordered alphabetically by agency name. We hope you’ll learn

something new and perhaps be inspired to take some of these ideas back home to your community.

**My sincere thanks and congratulations to all,**

**Bruce Hamilton, MPH**

*Executive Director*

Roadway Safety Foundation

**What unites all of these efforts is a common thread: excellence in using innovative and cost-effective approaches to demonstrably save lives.**



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## Roadway Safety Foundation

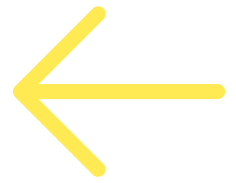
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# WINNER (I&O)

## Acadiana's T-Intersection Crash Reduction Initiative

Following a sharp increase in severe crashes involving drivers running through the back of T-intersections, the Acadiana Planning Commission used GIS to systematically identify locations at high risk of this crash type, enhanced 15 sites, and saw an 86 – 92% reduction in crashes at these locations as a result.

Roadway departure crashes comprise the majority of fatal and serious injury crashes in the Acadiana region. Typical roadway departure treatments focus primarily on lane departure, and include rumble strips, curve delineation, and enhanced striping. However, the treatments for these crash types are highly dependent on roadway geometry, and the Acadiana region needed to address fatal and serious injury crashes that were occurring because of drivers running through the back of T-intersections. These crash types had increased significantly in recent years, and crash reports documented that this rise was largely caused by drivers engaged in phone use.

The Acadiana Regional Transportation Safety Coalition (ARTSC) brought together the Acadiana Planning Commission staff and the Louisiana Department of Transportation and Development's (DOTD) District 03 traffic engineers to identify intersection locations with a high likelihood of run-through roadway departure crashes. After filtering crashes by roadway departures within a certain distance of an intersection, crash locations were joined with the intersection shapefile in the geographic information system (GIS). The results were analyzed to identify locations with a high number of the target crash types. A separate intersection query was then performed to review the crashes at the identified intersection to document the intersection run-through crashes.

The locations identified as meeting the threshold for run-through intersection crashes were evaluated based on a site visit that documented the existing infrastructure at the location. In total, the team reviewed 124 locations and developed a plan for escalating interventions at 15 intersections. They also identified six intersections to monitor based on

<sup>1</sup> Three of these remaining six are at a location that is scheduled for conversion to a roundabout.



*Oversized Stop Sign with Double Arrow Sign and four Object Markers to delineate a T-Intersection. Photo courtesy of Ashley Moran, Acadiana Planning Commission.*

prior improvements. Plans ranged from installing T-intersection signage, redundant and oversized stop signs, flashing beacons, and/or transverse rumble strips at the terminal roadway's approach.

The project utilized minimal funding from the LA DOTD district and local budgets. At the locations where the improvements were implemented, there was at least a 50 percent reduction in run-through intersection crashes, with the majority of locations seeing a complete elimination of this crash type. Overall, run-through crashes fell from 75 to six at intersections on the state system<sup>1</sup>, and from 14 to two on the local system locations. The project is ongoing, and additional locations have been selected for improvements in the future.

The project can also easily be scaled to a statewide improvement program to address these crash types.

### **Acadiana Planning Commission**

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### **Project Representative**

Ashley Moran, Senior Planner

# WINNER (I&O)

## Florida's Intersection High Friction Surface Treatment Program

With intersection-related crashes posing a major hurdle for Florida to achieve its Vision Zero goals, FDOT's District 7 gathered a safety team to test high friction surface treatments at urban signalized intersection approaches – and reduced stopping distance and improper motorist behaviors at select study sites by 11 – 31%.

From 2012 to 2022, approximately 26 percent of fatal and 35 percent of injury crashes in Florida were related to intersections. In the Florida Department of Transportation's (FDOT) District 7 (D7), the respective values were even higher (32% for fatal and 39% for injury), with major implications for vulnerable road users.

Recognizing that innovative pavement treatments could be a critical infrastructure strategy to reduce stopping distances and improve safety for all road users at urban intersections, FDOT D7 worked with a safety team that included the Federal Highway Administration (FHWA), the Center for Urban Transportation Research (CUTR) at the University of South Florida (USF), Element Engineering, and WDM USA to gather continuous pavement friction measurements (CPFM)<sup>2</sup> on all D7 arterials, evaluate candidate locations, install High Friction Surface Treatment (HFST) at 10 locations, and conduct detailed before-after studies at three signalized intersections to improve signalized intersection safety.

Stopping behaviors before and after the implementation of HFST were used to evaluate HFST at the signalized intersections. If a vehicle cannot fully stop before the stop bar when the signal changes to red, the vehicle may enter the intersection, block crosswalks, or cause collisions. The performance in Tampa indicated that HFST significantly reduced the rate of improper stopping behaviors at the study sites for different scenarios (morning, afternoon, night) and time periods (6, 9, 14, 19, and/or 21 months), with overall reduction rates of 11 – 31 percent at the 95% confidence level. The results also demonstrated that the safety improvement from implementing HFST can last for a long period of time.

<sup>2</sup> Continuous friction measurement is an improvement over traditional spot-based methods of measuring friction and a best practice for targeting more efficient and effective installations of friction-enhancing treatments.



*High Friction Surface Treatment is applied by a night work crew. Photo courtesy of FDOT.*

The safety effectiveness of HFST has been proven on curves. With this project, D7 extended the application of HFST to intersections and adopted a proactive and innovative study approach based on behavioral surrogate safety measures. Although HFST's initial cost is higher than conventional pavement treatments, its long-lasting service life (10 years) qualifies it as a low-cost and durable treatment to provide higher pavement friction compared to the removal and replacement of the existing pavement. Through the use of CPFM data and implementing pilot projects of HFST at intersections, FDOT has created a proactive strategy for addressing intersection crash risk – a major challenge in Florida's Vision Zero goals. The pilot study results will be used to support further implementation of HFST at intersections and update the Florida High Friction Surface Treatment Guidelines.

### **Florida Department of Transportation District 7**

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#### **Project Contact**

Emmeth Duran, PE, District Traffic Safety Program Engineer

# WINNER (I&O)

## TIMS2GO Mobile Incident Response Tool

Recognizing the need for a more streamlined process for managing operations on its 294-mile network, the Illinois Tollway developed a mobile app that allows traffic and incident managers access to 2,300 ITS assets on demand, thereby cutting average incident confirmation time by 12%.

Illinois Tollway traffic and incident managers are highly-trained professionals that primarily monitor conditions from the Traffic Operations Center (TOC) at the agency's headquarters. The TOC operates 24/7/365 and is the central location for monitoring the Tollway's 2,300 ITS assets deployed across the 294-mile system. These include 1,400 CCTV cameras, vehicle detection systems, dynamic message boards, roadway weather information systems, and more. The TOC also relies on the Traffic and Information Management System (TIMS) software, which gathers, processes, and disseminates information to the public, media, and emergency responders via computer-aided dispatch, roadway message signs, and popular apps.

Traffic and incident managers, TOC technicians, and dispatchers each have their own unique roles and responsibilities that are vital to a rapid, effective response. All roles require critical thinking and split-second decision-making. There are an average of over 650 incidents per day on the network. In March 2020, the challenges became greater due to the COVID-19 pandemic.

TIMS2GO was already in the works when COVID hit, but integrating all the ITS resources of the Illinois Tollway into a mobile app was no small task. The team brought in experts on transportation industry technology solutions from TranSmart Technologies and Parsons to help develop the app. As the launch date approached, the pandemic hit, often resulting in only one person working in the TOC per shift. The team accelerated its efforts to meet this urgent need. TIMS2GO was live and fully operational by the end of 2020.

TIMS2GO is helping Illinois Tollway traffic and incident managers make better-informed decisions by providing instant access to livestreaming video, incident details, and response status updates. Traffic managers also can instantly see which maintenance vehicles or Highway Emergency Lane Patrol (H.E.L.P.) trucks are on site or on the way using automatic vehicle



*TIMS2GO provides real-time access to all the ITS technologies available to the Illinois Tollway. Photo courtesy of Illinois Tollway.*

location tracking technologies. It also allows traffic managers to efficiently share information with Illinois State Police, as well as other emergency responders and roadway maintenance personnel.

Since it launched in November 2020, TIMS2GO has been used on average 115 times per month to manage incidents on the Illinois Tollway system. That has helped reduce the Tollway's average confirmation time for incidents by nearly 12 percent, which can make a major difference when there's a crash, fire, wrong-way driver, police activity or medical emergency. This also can reduce secondary crashes.

By making traffic and incident management possible anytime from anywhere, TIMS2GO furthers the Illinois Tollway's mission to provide and promote a safe and efficient system of highways while ensuring the highest possible level of service to its customers.

### **Illinois Tollway**

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Steven Mednis, *Deputy Chief of Traffic and Incident Management*



# WINNER (I&O)

## All-Way Stops in North Carolina: Vision Zero for Rural Intersections

To address the 300 fatalities and 1,100 serious injuries that occur each year at rural intersections in North Carolina, the state Department of Transportation undertook a program of systemic, widespread application of All-Way Stop treatments at select locations, and saw a 92% reduction in fatal and serious-injury crashes at the converted sites.

With over 80,000 miles of roadway under its jurisdiction, the North Carolina Department of Transportation (NCDOT) is responsible for one of the nation's largest highway systems, and proactively seeks low-cost, high-return safety solutions to protect road users. Each year, 300 fatalities and 1,100 serious injuries occur at rural North Carolina intersections. Frontal impact crashes are a predominant crash type at these intersections and include crash types associated with higher severities such as head-on, angle, left-turn, and right-turn crashes.

To combat this problem, NCDOT has shined a light on an often overlooked and underutilized safety strategy, All-Way Stop (AWS) control. The agency created a program to implement the treatment in rural, high-speed locations with treatable patterns of injury crashes. AWS is not a new or particularly flashy form of intersection control, but what is innovative is North Carolina's systemic, widespread application of AWS as a safety strategy for high-risk rural intersections. Beginning in 2020, NCDOT magnified usage of the countermeasure to better influence safety trends. As of early 2023, roughly 450 AWS conversions have been funded as safety projects in North Carolina. Many of these projects have already been implemented and more are underway across the state.

Evaluation data has been compiled for all intersections converted from minor road stop control to AWS through Fall 2022. The results have shown a 92 percent reduction in fatal and serious-injury crashes. Before AWS, there were 81 fatal crashes at the intersections studied. After AWS, there have been no fatal crashes at the study intersections to date. AWS conversions have yielded a benefit cost ratio of 83:1, despite rising construction costs in recent years. The average AWS currently costs roughly \$30,000 for the installation of new signing and markings. The average traffic signal project costs six times an AWS project. AWS conversions can thus be implemented at many more locations – and can often be completed in just one day.



Series of Advance Signage approaching an All-Way Stop in NC. Photo courtesy of NCDOT.

Based on the strong safety outcomes already realized, NCDOT plans to continue installing AWS, providing a low-cost high safety benefit for North Carolina's rural communities and all who travel through them.

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### Project Contact

Shawn Troy, *State Traffic Safety Engineer*

# WINNER (I&O)

## Mobility35 Pedestrian Safety Program

With a portion of Interstate 35 in Austin experiencing a disproportionate number of pedestrian fatalities, TxDOT and a broad coalition undertook a multipronged approach to address the problem, including education, outreach, and infrastructure treatments which together have reduced pedestrian fatalities in the corridor by 64%.

In 2017, FHWA conducted a Road Safety Audit (RSA) at the request of the Texas Department of Transportation (TxDOT) and City of Austin to address pedestrian safety. Through the RSA, one segment of I-35 from 51st Street to Rundberg Blvd. was identified as experiencing disproportionate numbers of pedestrian crashes and fatalities. Three target demographics were identified as high-risk pedestrians: children under the age of 17, mature adults between the ages of 50-65, and people experiencing homelessness. Data also revealed that over 90 percent of pedestrian fatalities occurred after dark.

Due to this high incidence of pedestrian fatalities and forthcoming construction activities, the TxDOT Austin District with the help of the TxDOT Traffic Safety Division innovated an infrastructure improvement as a pedestrian safety countermeasure and developed an educational pedestrian safety initiative called “Be Safe Be Seen.” Activities included providing reflective bags to at-risk populations to enhance nighttime visibility. Additionally, the Mobility35 Initiative to Address Homelessness created a coalition of local and state officials and non-profit and faith-based organizations that engaged in outreach and communicated information regarding upcoming construction projects, safe pedestrian routes in the area, and other resources. The goal of the coalition was also to humanely relocate individuals to safe, dignified housing or shelter.

Along with educational and outreach efforts, TxDOT engineered a pedestrian crossing deterrent as an infrastructure solution for the interstate. In December 2020, TxDOT added two-foot panels to the top of the center median concrete barrier along a 3.5-mile stretch of I-35 between 51st Street and Rundberg Blvd.

As of June 2023, the pedestrian safety efforts have resulted in an overall reduction of 64 percent in pedestrian fatalities and an 89 percent reduction in



*Pedestrians sporting ‘Be Safe Be Seen’ campaign bags.  
Photo courtesy of TxDOT Austin District.*

pedestrian fatalities involving people experiencing homelessness. Given this success, TxDOT had completed installation of 21 additional miles of barrier by April 2023, with similarly positive results.

### **Texas Department of Transportation**

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### **Project Contact**

Mike Arellano, PE, Deputy District Engineer,  
Austin District

# WINNER (PPDE)

## Highway Maintenance 4 Safety Pilot Program

With approximately 55 fatalities and serious injuries occurring on California's roadways every day, Caltrans developed an innovative program and funding mechanism for quickly delivering needed safety projects in a fraction of the time that traditional planning methods take – and were able to enhance more than 4,500 locations in just two fiscal years.

In 2019, traffic collisions in California caused over 3,900 fatalities and 16,000 severe injuries, resulting in both human tragedy and an economic burden of over \$53.5 billion annually. California Department of Transportation (Caltrans) has committed to eliminating fatal and serious injury collisions by 2050.

Caltrans Division of Safety Programs has implemented several initiatives that address high-priority safety challenge areas. One of these strategies is the introduction of the HM-4 Safety Pilot Program utilizing the Highway Maintenance (HM) programs' delivery process, which has a unique ability to install, implement, and maintain safety enhancements more quickly than other traffic safety improvement programs. On average, traditional project delivery methods take three years to develop and two years to construct.

In contrast, the HM-4 Safety Pilot Program has created a funding source to implement Proven Safety Countermeasures through the HM Program's quick delivery process. The program funds capital costs for stand-alone safety projects in three areas: Wrong-Way Driver Prevention Countermeasures, Horizontal Alignment Curve Warning Sign Packages, and Pedestrian Safety Enhancements. The last area is critical as approximately 20 percent of fatal crashes on the State Highway System involve pedestrians. In response to the rise in fatalities and serious injuries among non-motorized users over the last decade, Caltrans has identified locations for safety enhancement. The criteria for location selection include disadvantaged communities, communities with proximity to school campuses, and vulnerable populations consisting of seniors and youth.

The Divisions of Maintenance and Safety Programs collaboratively manage the HM-4 Safety Pilot Program, which is funded at \$21.6 million per year. In the two fiscal years (FY) of the HM-4 Safety Pilot Program (FY 21/22 and F Y 22/23), Caltrans has been able to deliver



*Horizontal Curve Warning Sign Packages. Advance Curve Warning with advisory speed limit sign, chevron, and arrow signs. Photos courtesy of Caltrans.*

safety enhancements at 4,540 locations, exceeding the Pilot Program's goal by almost 1,290 locations.

The innovative HM-4 Safety Pilot Program is delivering quick and efficient safety projects and has been proven effective. Because of the success of the Pilot Program, Caltrans has expanded the HM-4 Safety Pilot Program to include other high-priority challenge areas. The program now also includes Bicyclist Safety Enhancement, Run-Off-Road Collision Prevention, and Cross-Over Collision Prevention Countermeasures. The HM-4 Pilot Program is also an example of Caltrans' commitment to the Safe Systems Approach, which is based on six key principles that define how we respond to safety challenges, implement interventions, and evaluate progress. By accounting and planning for human error, and by taking proactive and expedient steps to protect all roadway users, the HM-4 Safety Pilot Program showcases Caltrans' innovative effort to implement the Safe Systems Approach.

**California Department of Transportation (Caltrans)**  
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### **Project Contact**

Rachel Carpenter, PE, Chief Safety Officer

# WINNER (PPDE)

## Exploring the Safety Benefits of All-Way Stop Control at Low-Volume Unsignalized Intersections

With nearly 40% of fatalities and serious injuries on Delaware's roads occurring at intersections, DelDOT studied the safety benefits of installing All-Way Stop Control at low-volume junctions – and saw a 75% reduction in fatal crashes at the 20 locations that were initially converted.



*Stop Sign with ALL WAY plaque and flashing beacons. Photo courtesy of Rummel, Klepper & Kahl, LLP (RK&K).*

One of DelDOT's emphasis areas in the 2021-2025 Delaware Strategic Highway Safety Plan (SHSP): Towards Zero Deaths, is Intersections. From 2015 through 2019, nearly 40 percent of fatalities and serious injuries in Delaware occurred at an intersection. Of the fatalities and serious injuries that occurred at an intersection, 51 percent occurred at unsignalized intersections.

In support of the SHSP objective to reduce intersection fatalities and serious injuries by 15 percent over the next five years, DelDOT studied the potential safety benefits of installing All-Way Stop Control (AWSC) at low-volume intersections to determine if the use of AWSC conversion could improve safety. DelDOT frequently evaluates the potential to convert intersections to AWSC based on guidance contained in the Manual on Uniform Traffic Control Devices (MUTCD). In 2017, FHWA issued Interim Approval for Optional Use of an Alternative Signal Warrant 7 – Crash Experience (IA-19). While developed for signal warrant analyses, DelDOT used these reduced thresholds to identify low-volume intersections in Delaware that could potentially benefit from AWSC.

DelDOT implemented AWSC at 20 low-volume intersections. The group of 20 intersections included roadways with varying speed limits, functional classifications, and average daily traffic. DelDOT then

performed a before/after study to evaluate and identify the benefits of AWSC as a potentially cost-effective safety treatment. The data showed significant reductions in crashes, including a 75 percent reduction in fatal crashes and a 90 percent reduction in injury crashes.

The implementation and evaluation of AWSC at unsignalized intersections is consistent with DelDOT's SHSP strategy to reduce the frequency and severity of intersection crashes through operational, geometric, and traffic control device improvements. Traffic control devices needed to implement AWSC (signs and, in some cases, pavement markings and solar powered beacons) are low cost, minimally invasive, and can be installed quickly. DelDOT's research efforts have shown that implementing AWSC as a countermeasure at low-volume intersections has a high potential for significantly reducing fatal and serious-injury crashes while using planning and engineering resources efficiently.

### **Delaware Department of Transportation**

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Peter Haag, *Chief of Traffic Engineering*

# WINNER (PPDE)

## J-Turn Statewide Planning, Engagement, Implementation and Evaluation

Facing a decades-old safety problem involving two-way stop-controlled intersections on high-speed multilane expressways, the Minnesota Department of Transportation constructed more than 80 J-Turn Intersections to prevent severe broadside crashes – and saw a 69% reduction in fatal and serious-injury crashes at the upgraded sites.

The Minnesota Department of Transportation (MnDOT) has over 1,000 two-way stop-controlled intersections on high-speed, multi-lane expressways across the state. These intersections have been found to have a higher incidence of fatal and serious injury crashes. Most of these crashes were right-angle related, typically associated with drivers attempting to cross all four lanes of the highway. Over the course of 10 years, these 1,000+ at-grade expressway intersections had 79 fatal crashes and 175 serious injury crashes.

Most of these intersections are characterized by high volumes on the state-owned trunk highway and low volumes on the typically locally-owned minor street that is stop controlled. Solutions such as traffic signals typically did not meet warrants, or often made the crash problem worse. Other solutions such as median closure are politically infeasible, and grade separated interchanges are often too expensive.

Minnesota researched and implemented the first J-turn intersection in the state in 2010 in Wilmar, MN. The intersection design works by preventing traffic on the minor street from crossing the highway directly. Instead, vehicles trying to cross or turn left first make a right turn, then travel a short distance to a designated U-turn location to complete the intended maneuver.

The Wilmar location saw a complete elimination of fatal and serious injury crashes from the time of its construction to the present. Following this success, MnDOT has begun an aggressive campaign to install more of the intersections across the state. The state now has over 80 of these intersections (or variations) installed on the Trunk Highway Network, with over 30 more planned and programmed over the next five years. MnDOT has evaluated these intersections for traffic safety performance numerous times, most recently in 2021. This found a 69 percent reduction in fatal and serious injury crashes.

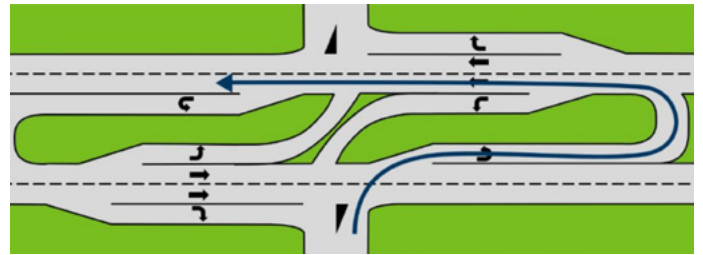


Diagram showing turning path to take a left from side road onto main highway. Image courtesy of MnDOT.

Even with the traffic safety, engineering, and design successes of the J-turn, MnDOT has faced challenges with getting public acceptance. Communities often balk when first presented the J-turn concept. Based on this, MnDOT has worked with numerous agencies to develop public engagement tools to better work with local agencies and concerned residents to ensure that the community is more comfortable with the J-turn. These include a Public Engagement Social Media Toolkit, the “J-turn communications and community engagement playbook,” and various presentations and other reports demonstrating the safety benefits of the change.

In sum, MnDOT has identified a proven traffic safety solution that saves lives, and has taken key steps to ensure widespread deployment by researching the effectiveness of the treatment, planning where these intersections can be installed, providing funding opportunities to build more, engaging the public, and working with local and statewide media to raise awareness of the safety benefits of J-turn intersections.

### Minnesota Department of Transportation

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### Project Contact

Derek Leuer, *State Traffic Safety Engineer*

# WINNER (PPDE)

## PANYNJ Traffic Safety Improvement Program

In need of a strategic safety program to target high-risk locations and maximize data-driven decision-making capabilities, the Port Authority of New York and New Jersey created The Traffic Safety Improvement Program (TSIP) and has seen a 46% reduction in annual crashes in the 20+ years since its inception.

In 2000, the Port Authority of New York and New Jersey (PANYNJ) recognized the importance of establishing a strategic safety program based on industry standard practice to identify, prioritize, implement, and evaluate treatments for high hazard/high crash locations, and the need to access and maintain crash data to maximize data-driven decision-making.

The Traffic Safety Improvement Program (TSIP) was created with the objective to minimize the frequency, severity, and risk of motor vehicle crashes on the Agency's roadway system by strategically focusing attention and resources on those areas where the data indicates the problem is the greatest. The program is administered with four key elements: Crash Records Management, Safety Data Analytics, Crash Mitigation (implementation), and Safety Performance Evaluations.

As part of the TSIP, the Port Authority created and maintains an innovative motor vehicle crash database, called the Crash Reporting & Analysis for Streets and Highways (CRASH) system. CRASH is a web-based system that utilizes GIS technology to expedite crash record data entry and retrieval, minimize data entry errors, and improve crash analysis capabilities. Additionally, the TSIP proactively identifies targeted, actionable, and achievable crash countermeasures that could be implemented on a system-wide approach. The systemic approach focuses on risk factors, including sight distances at unsignalized intersections, vehicle speeds at horizontal curves, speeding, and driver behavior.

A key factor in the effectiveness of the TSIP is having timely access to safety data, which could include police crash reports, construction activity data, recorded videos from CCTVs, traffic management center incident logs, and traffic volume data. The TSIP receives police reports daily and the CRASH database can be updated with a crash that occurred



*Safety Message at New York Entrance to Holland Tunnel.  
Photo courtesy of PANYNJ.*

just the day before. The timeliness of available crash data means immediate access to real-time incident data and preliminary crash investigation reports to ensure rapid response to any system conditions that may have contributed to fatalities or serious injuries. Analysts perform weekly, monthly, and quarterly analyses to proactively identify short-term trends, crash patterns, and crash clusters along with volume data to identify and address safety issues.

All told, TSIP is a results-oriented and performance-based approach to safety. Since the inception of the program, annual crashes have been reduced by 46 percent Agency-wide, including a decrease of 48 percent at the tunnels and bridges, 43 percent at the airports, and 28 percent at the port facilities.

**Port Authority of New York and New Jersey**  
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### **Project Contact**

Kevin Walkes, *Principal Engineer*

# WINNER (PPDE)

## Cumberland County Bicycle and Pedestrian Safety Action Plan

After a study in Cumberland County, NJ found that bicyclists and pedestrians were greatly over-represented in fatal and serious-injury crashes, the South Jersey Transportation Planning Organization led a coalition to develop the Cumberland County Bike/Ped Safety Action Plan, a resource that helps identify and prioritize locations with the greatest safety needs for vulnerable road users.

The South Jersey Transportation Planning Organization (SJTPO) has a vision of a transportation system in its jurisdiction (Atlantic, Cape May, Cumberland, and Salem Counties) based on regional collaboration that moves people and goods in a safe and efficient manner, inclusive of all modes and users. However, a study in Cumberland County found that in a five-year period, cyclists and pedestrians were involved in 2.9 percent of crashes, but 21.6 percent of all fatal and serious injury crashes in the county.

The Cumberland County Bicycle and Pedestrian Safety Action Plan aimed to confront this troubling statistic. This plan is aligned with the vision of eliminating traffic-related deaths and serious injuries and is supported by SJTPO, the New Jersey Department of Transportation (NJDOT), and the Federal Highway Administration (FHWA). Funding for the project was obtained through the FHWA Highway Safety Improvement Program (HSIP) administered by NJDOT.

The plan follows a strategic and data-driven approach to prioritize locations with the greatest safety needs for cyclists and pedestrians. GIS analysis was used to identify intersections and corridors in the county with the worst crash performance. An initial screening process ranked these locations according to the number and severity of bicycle and pedestrian crashes.

Top candidate locations were selected for further review by county and municipal officials, local stakeholders, and the public. Feedback from elected officials and the community played a crucial role in determining the final corridor locations. The public's input was gathered through a dedicated website, public events, and meetings with local groups. Several innovative, non-virtual public outreach options were provided to address the communities with the project locations within Low Internet Accessibility areas.

A detailed analysis was conducted for the selected locations, which involved reviewing crash reports,



*Chestnut Avenue recommendations concept. Graphic courtesy of SJTPO.*

conducting pedestrian road safety audits, and analyzing roadway characteristics. Countermeasure options were identified, and public support for these measures was assessed through extensive outreach efforts, including bilingual mailers, social media campaigns, videos, virtual meetings, door-to-door canvassing, and surveys.

The plan received resolutions of support from the cities and county, indicating their commitment to advancing safety projects in these locations. Application materials were assembled for HSIP projects and a Safe Streets and Roads for All (SS4A) application. Within eight months of plan completion, funding has been awarded for all projects included within the plan. Chestnut Avenue in the City of Vineland was awarded an SS4A Implementation Grant. This comprehensive approach aims to make significant progress in improving bicycle and pedestrian safety in the county.

**South Jersey Transportation Planning Organization**  
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### **Project Contact**

Jennifer Marandino, PE, Executive Director

# HONORABLE MENTION

## Nevada Speed Management Action Plan

Speeding is widespread throughout Nevada. From 2015 to 2019, there were 454 speeding-related fatal crashes, representing 31 percent of all fatal crashes within the state. During this same timeframe, there was also an average of 175,000 speeding-related citations issued per year.

Speed management is a complex endeavor that requires commitment of all stakeholders. Accordingly, the Nevada Department of Transportation's (NDOT) Speed Management Action Plan (SMAP) characterizes Nevada's speeding-related safety problems and speed management issues; identifies appropriate engineering, enforcement, and educational countermeasures and strategies; and outlines actions that NDOT and partner agencies can take to implement these strategies to reduce speeding and speed-related fatal and serious injury crashes. The SMAP facilitates coordination and cooperation among various agency stakeholders including planners,

designers and managers, enforcement officials, public health practitioners, and policymakers to implement a sustainable speed management program, and to target countermeasures where they will have the greatest safety benefits.

The SMAP will be a working document, with additional implementation actions, schedules, and other updates incorporated as needed during the five-year plan period. Near the end of five years, following the plan evaluation, revisions to the SMAP will incorporate lessons learned from the evaluation and implementation experiences, as well as from an updated problem assessment.

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**Project Contact**

Lacey Tisler, *Chief Traffic Safety Engineer*

# HONORABLE MENTION

## VDOT HSIP Systemic Initiatives



Like many other states, Virginia has experienced a rise in traffic fatalities and serious injuries. In response, the Virginia Department of Transportation (VDOT) has transformed its Highway Safety Improvement Program (HSIP). With support from senior leadership and informed with the proven results of systemic safety treatments combined with sophisticated predictive data analysis, VDOT has adapted its program to largely focus on the identification and deployment of low-cost, effective systemic safety measures.

Shifting the HSIP program in this way has been a significant undertaking that highlights VDOT's commitment to enhancing traffic safety across its network. Since VDOT made this change in 2019, there has been continued growth and evolution in both the treatments and how the program is tracked and delivered.

VDOT has implemented two phases of the program and is currently working on a Phase III.

Ultimately, this programmatic change has allowed VDOT to efficiently allocate resources to those locations with the greatest crash risk and those improvements that provide the greatest return on investment. This has provided a scalable program that is nimble in the face of a global pandemic and rapidly changing inflation. By taking a proactive stance and implementing systemic safety improvements, VDOT aims to prevent crashes before they happen.

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**Project Contact**

Tracy Turpin, *VDOT HSIP Project Delivery Manager*



# THE 2023 BLUE-RIBBON PANEL

Winners of the National Roadway Safety Awards program are selected by a volunteer panel of dedicated transportation safety professionals. Judges independently evaluate each entry on the basis of safety effectiveness, innovation/transformation, and cost-effectiveness/economic strength, and convene for a panel discussion to agree on final selections of Winners and Honorable Mentions.<sup>3</sup> Our sincere thanks to the six individuals who served on this year's blue-ribbon panel:

**Lori Diaz, CFRE**

*Director*

The American Traffic Safety Services Foundation

**Jennifer Hall**

*Deputy Director – Chief of Staff*

American Association of State Highway and Transportation Officials

**Adam Kirk, PhD**

*Research Engineer*

Kentucky Transportation Center (KY LTAP)

**Stephen Read, PE**

*State Highway Safety Engineer, Traffic Operations Division*

Virginia Department of Transportation

**Brian Roberts, MSCE, PE**

*Senior Program Officer, Technical Activities Division*

Transportation Research Board

**Terecia W. Wilson, RSP**

*Professor of Practice and Assistant Director*

Institute for Global Road Safety & Security

Clemson University

<sup>3</sup> To prevent conflicts of interest, judges do not evaluate, comment on, or participate in discussions or voting pertaining to applications submitted by any agency that they may represent.



Photo Credit: Munbaik Cycling Clothing on Unsplash



## ABOUT THE SPONSORS

### The Federal Highway Administration (FHWA)

FHWA is committed to helping our nation achieve zero roadway deaths and serious injuries by creating a “Safe System” for all road users. A Safe System encompasses working closely with multidisciplinary organizations and groups to achieve safe roads, safe speeds, safe road users, safe vehicles, and effective post-crash care. FHWA’s Office of Safety provides leadership with our partners and various stakeholders to achieve a national safe system.



U.S. Department of Transportation  
**Federal Highway Administration**

#### US Department of Transportation Federal Highway Administration

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[highways.dot.gov/safety](https://highways.dot.gov/safety)

### The Roadway Safety Foundation

The Roadway Safety Foundation is a 501(c)(3) nonprofit charitable and educational organization solely dedicated to reducing the frequency and severity of motor vehicle crashes by improving the safety of America’s roadways. To this end, the RSF focuses on improving the physical characteristics of roadways, such as design and engineering, operating conditions, removal of roadside hazards, and effective use of safety features.



#### Roadway Safety Foundation

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