VISION **ZERO**

Ohio Strategic Highway Safety Plan

Department of Transportation

2025

Department of Transportation
transportation.ohio.gov

Mike DeWine, *Governor*
Jim Tressel, *Lt. Governor*
Pamela Boratyn, *Director*

On behalf of Ohio Governor Mike DeWine, I am pleased to present the Ohio Strategic Highway Safety Plan. ODOT's mission is to provide a transportation system that is safe, accessible, well-maintained, and positioned for the future. As the director, I am dedicated to ensuring that we fulfill our mission and ensure the safety and well-being of all road users traveling in and through Ohio.

Building upon the 2020 Ohio Strategic Highway Safety Plan, as well as the 2023 Ohio Vulnerable Road User Safety Assessment, our department undertook a comprehensive, data-driven approach to develop strategies to pursue over the next five years.

Our approach to the Strategic Highway Safety Plan emphasizes collaboration, engagement, and partnerships with a wide range of stakeholders, including local governments, other state agencies, academic institutions, non-profits, and law enforcement. We look forward to continued collaboration and sustained partnerships as we move towards implementing the various strategies outlined in this plan.

I am confident that our agency's dedication to road safety, strong partnerships, and willingness to be leaders in this space has resulted in a robust and actionable Strategic Highway Safety Plan. ODOT and its partners are fully committed to implementing the strategies identified in this plan with the shared vision of zero traffic deaths on Ohio's transportation system.

Respectfully,

Pamela Boratyn
Director
Ohio Department of Transportation

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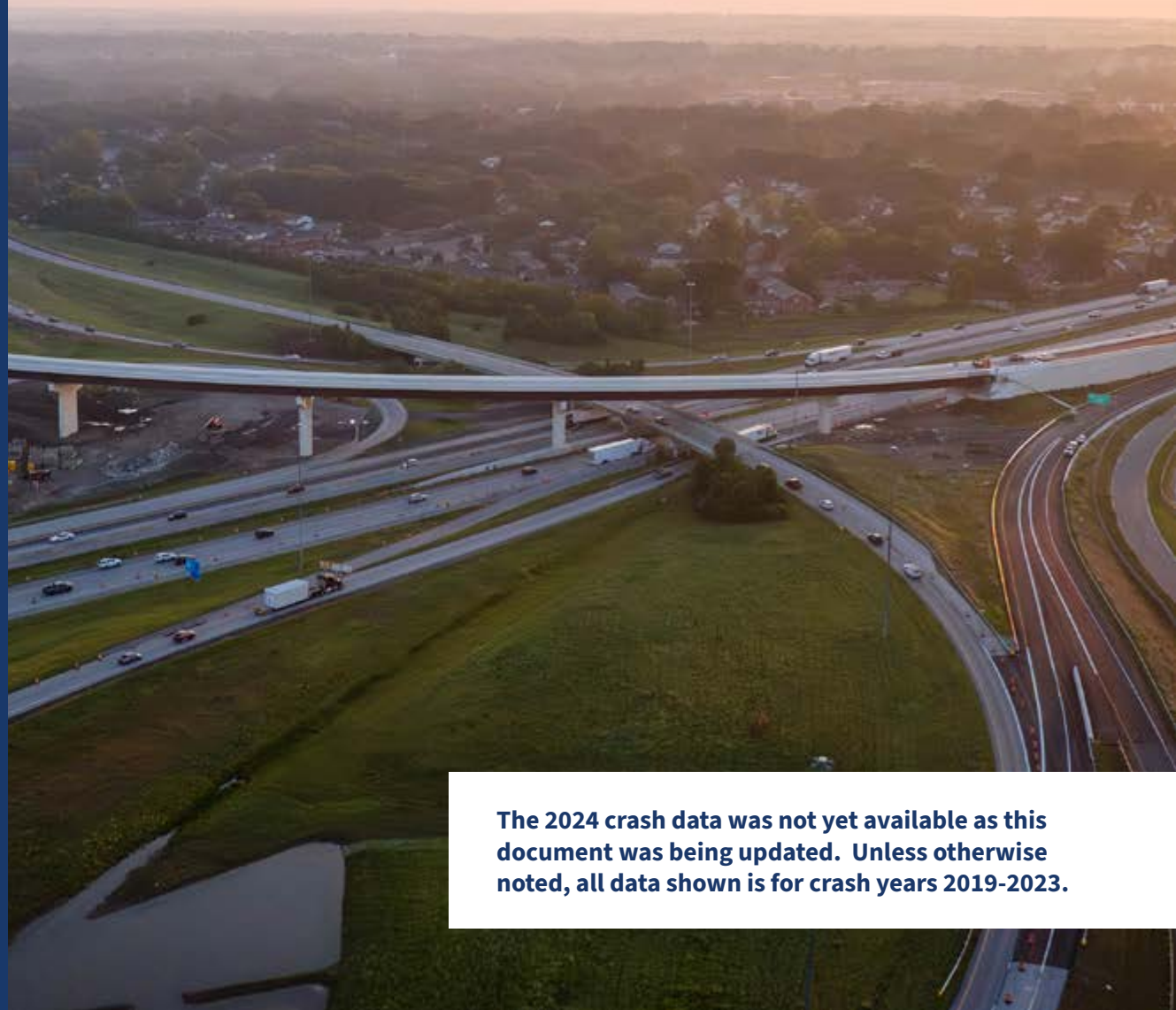
What's Inside?

The strategies and actions in the SHSP are targeted for implementation in 2026-2030.

Focusing on these transportation safety issues provides the greatest opportunities for Ohio to move toward **VISION ZERO.**



The 2024 crash data was not yet available as this document was being updated. Unless otherwise noted, all data shown is for crash years 2019-2023.

Safe System Forward
Ohio Strategic Highway Safety Plan (SHSP)

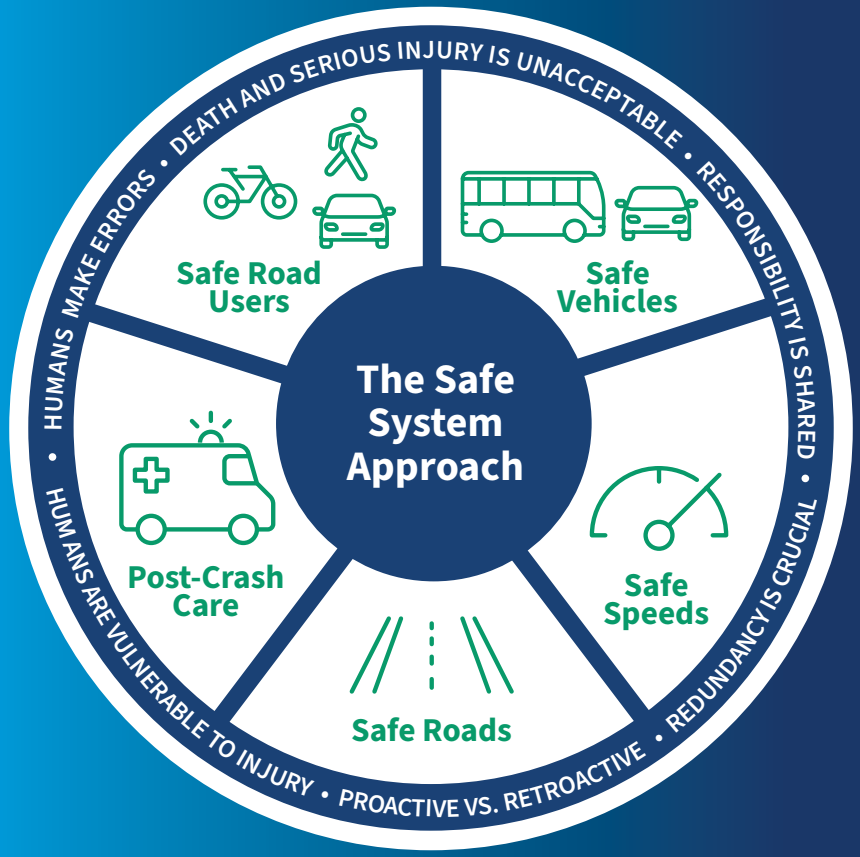
While the SHSP establishes the goal of zero deaths and serious injuries on Ohio's roadways, the Safe System Approach provides a more detailed framework for how we reach that goal.

Compared to traditional beliefs that traffic crashes are inevitable, the Safe System Approach acknowledges that traffic deaths and serious injuries are **preventable.** Although humans will inevitably make mistakes on the roadway, the Safe System Approach recognizes the need to implement solutions that **compensate for human error and lessen the severity** in the event of a crash, keeping impact forces at a tolerable level.

At the core of the Safe System Approach is a strong culture that supports safety for all users regardless of their mode choice. Enhancing safety culture both internally in every agency that works on transportation safety and externally with the public is necessary to ensure there is an expectation that all users of the road system will be protected.

Reducing deaths and serious injuries on Ohio's roadways will also require shared responsibility among all stakeholders across levels of government, industry, non-profit and advocacy groups, and the public. While engineers have a responsibility to reduce crash severity through roadway design and operational changes, the public has a responsibility to make safe decisions and behave appropriately while walking, biking, rolling, taking transit, or driving.

As Ohio continues its commitment to achieve zero deaths and serious injuries, this SHSP outlines the programs and projects needed to move the needle toward Safer Road Users, Safer Roads, Safer Vehicles, Safer Speeds, and Post-Crash Care. **Each action item within the plan is explicitly linked to one or more of these elements, ensuring a holistic and integrated approach to enhance roadway safety across the state.**



New to the Ohio SHSP update is a focus on the Safe System Approach, above. The Safe System Approach is a nationwide paradigm shift to address roadway safety through five elements, shown as the inner pie slices of the circle, and six guiding principles, shown as the outer ring of the circle.

What is the Strategic Highway Safety Plan?

Ohio's roadways are used to move groceries to stores, children to school, and people to work. Our people move on our roads via car, truck, bike, scooter, and feet as they roll and stroll to their destinations. More than 1,000 people have died on Ohio roads each year since 2014. The Strategic Highway Safety Plan (SHSP) is a comprehensive statewide plan that works to address the most prevalent causes of fatalities and serious injuries on our roadways. This data-driven plan establishes shared goals, priorities, and strategies; offers a framework for monitoring the implementation of activities and safety investments across the state; and helps ensure Ohio's resources are used effectively as agencies and organizations collaborate to prevent injuries and save lives on all public roads.

Developing the Plan

The plan was created through collaboration and coordination with local, state, federal, and private sector partners representing a wide range of traffic safety disciplines, including engineering, education, enforcement, and emergency response. It aligns with other key state transportation plans, such as the Highway Safety Improvement Program (HSIP), Highway Safety Plan (HSP), Commercial Vehicle Safety Plan (CVSP), and the State of Ohio Rail Plan. Together, these stakeholders developed a comprehensive and practical SHSP that prioritizes safety for all road users—drivers, truck operators, rail users, motorcyclists, bicyclists, and pedestrians. Additional details on the plan's development are available on page 16. The strategies outlined in this plan will be carried out through the statewide transportation planning process.

VISION ZERO

Zero Deaths, Zero Serious Injuries

As Ohio zeroes in on the causes of crashes that are taking and impacting lives, the state is hyper focused on eliminating traffic deaths and injuries. Ohio recognizes that reaching Vision Zero is ambitious and requires a comprehensive and coordinated approach among all of Ohio's safety partners and the motorists that operate on our roadways. It requires proven strategies and actions as well as new and innovative approaches and technologies like connected vehicle technology. And ultimately, it requires a safe system approach.

Collaboration to Reach Zero

Ohio's broad range of agencies and safety stakeholders are critical to implementing this plan. Ohio agencies and organizations are committed to making investments that:

- Reduce the occurrence and severity of roadway departure, intersection and highway/ railroad crossing crashes
- Address high-risk drivers and behaviors such as young and older drivers, impaired driving, unbelted drivers and passengers, distracted driving, and excessive speed
- Address vulnerable road users such as motorcycle and bicycle riders and pedestrians, which are more likely to be involved in serious crashes
- Increase our understanding of how connected and automated vehicles can improve safety
- Improve the quality, accuracy, timeliness, and availability of crash, driver, roadway, and emergency care data
- Improve access to adequate and timely post-crash care and ensure a safe working environment for first responders

Vision Zero is not a goal designed to achieve a percentage of reduction. It recognizes that every life is valuable and works to achieve zero deaths and zero serious injuries. By focusing on these transportation safety issues, Ohio provides the greatest opportunities to achieve Vision Zero and make significant strides toward that goal over the five-year life of this plan.

Implement proven and innovative approaches while working together to prevent injuries and save lives on all public roads.

Ohio Crash Trends

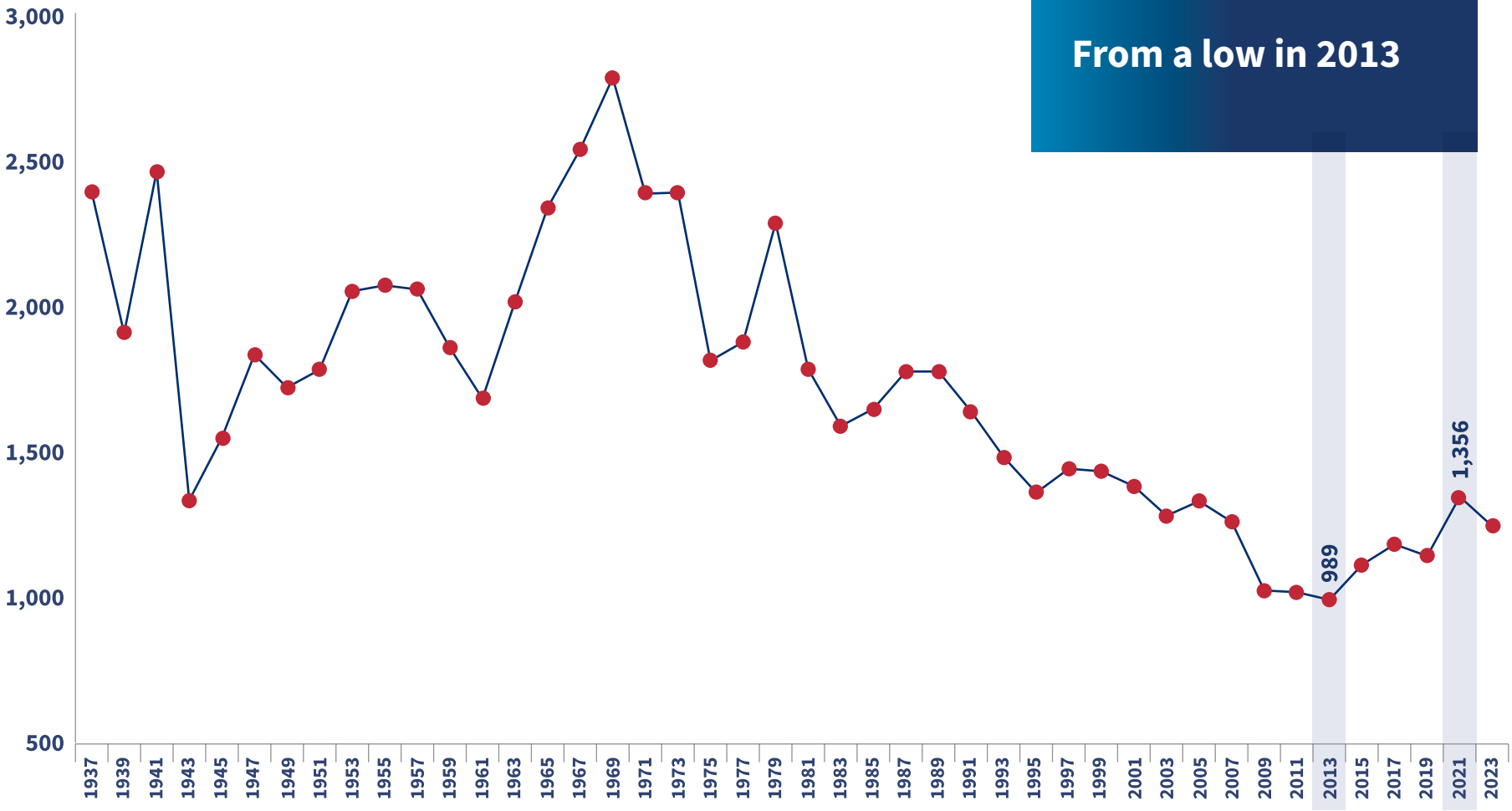
While Ohio had been making progress in reducing fatalities, traffic deaths took a sharp and troubling turn in 2013—spiking in 2021 during the height of the COVID-19 pandemic. With fewer vehicles on the road, drivers often traveled at dangerously high speeds, and enforcement strategies were adjusted to limit in-person contact. These conditions created a perfect storm, reversing the downward trend and underscoring how quickly progress can be undone when risk factors align.

In 2021 Fatalities

↑ 25%

From a low in 2013

Ohio Fatalities by Year



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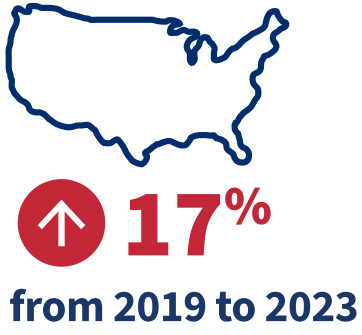
Fatalities Nationally



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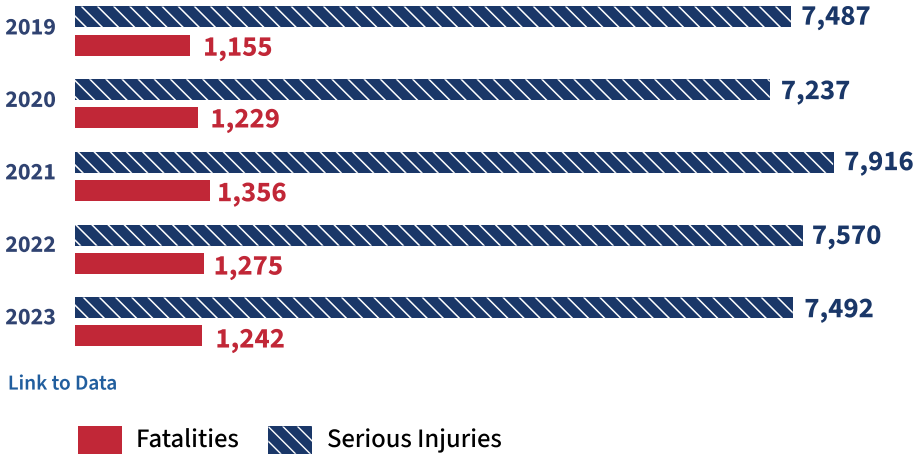
Fatalities and Serious Injuries



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Ohio experienced a peak in both fatalities and serious injuries in 2021, largely driven by a shift in driver behavior influenced by pandemic-related road conditions. Coming out of the pandemic, there was an increase in high-risk driving behaviors - ranging from extreme speeding and distracted driving, to impairment and a troubling disregard for seat belt use. As traffic volumes return to pre-pandemic levels and road conditions stabilize, fatalities and serious injuries have begun to decline, and the link between congestion, travel speeds, and crash severity have become more evident.

Percentage Change From Previous Plan

**Total Serious Injuries and Fatalities from 2015 -2019 compared to 2019-2023*

Wide Streets and High Speeds | Drivers are speeding. A lot.

Pedestrians

Survivability rates for pedestrians when struck at different speeds:

20 MPH **92%** **40 MPH** **54%**

Ohio State Highway Patrol Annual Citations of 20+ mph Over the Speed Limit*

	2020	2021	2022	2023	2024
Annual Citations of 20+ mph	76,146	90,815	79,472	80,511	83,480

*Does not include local law enforcement citations.

Motor Vehicle Occupants

Motor vehicle occupants are also impacted by speeds. Joint research by the AAA Foundation for Traffic Safety and the Insurance Institute for Highway Safety (IIHS) in 2020 indicates that crash tests at speeds greater than 50 mph reflect poor vehicle crash-worthiness and poor occupant protection ratings. The study also indicated the likelihood of serious injury or worse at the following speeds to the right.

45 MPH **15%**

50 MPH **59%**

56 MPH **78%**

A small increase in speed results in much higher risk of injury.

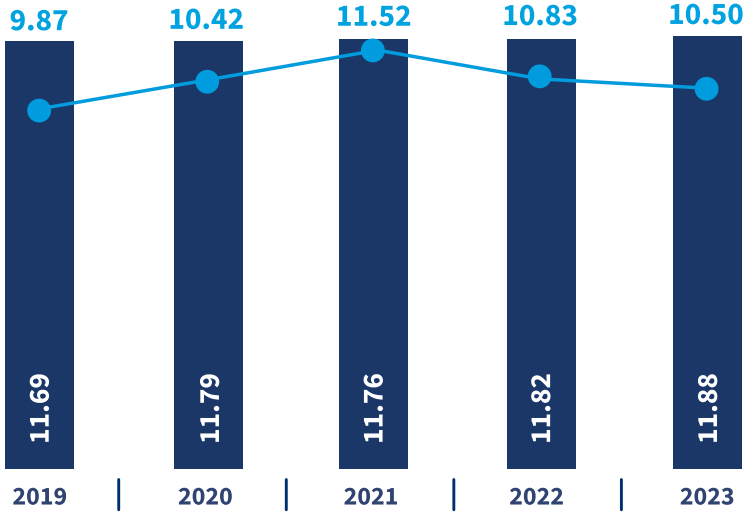
Wide Streets

Drivers can get comfortable driving too fast on wide streets without visual cues to slow down, especially when traffic is light. Combined with other key design factors, or lack thereof, wide streets can become especially deadly.

Other Factors Influencing Ohio Crash Trends

Understanding the external forces and trends that influence the number of traffic deaths and serious injuries across the state is essential. These factors provide critical insight into why crashes happen—and how to more effectively prevent them.

Fatality Rate per Population (in millions)



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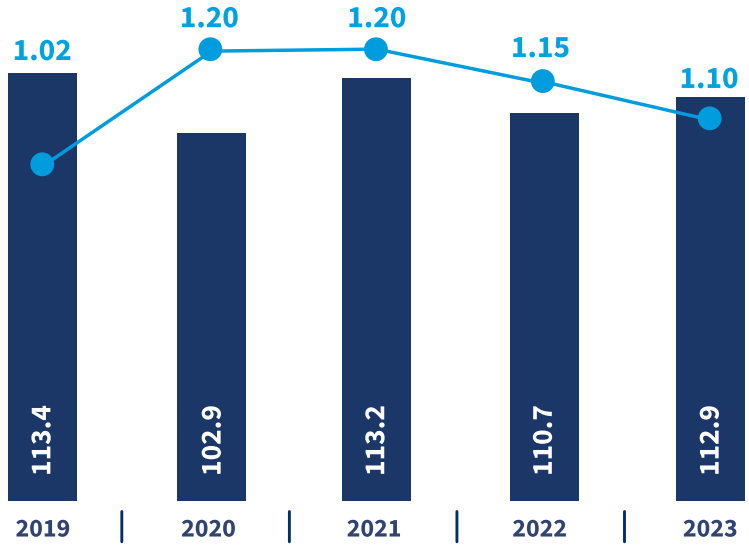
Fatality Rate per Vehicle Miles Traveled (in billions)



Link to Data

2023 National Fatality Rate

1.26 per 100 million Vehicle Miles Traveled

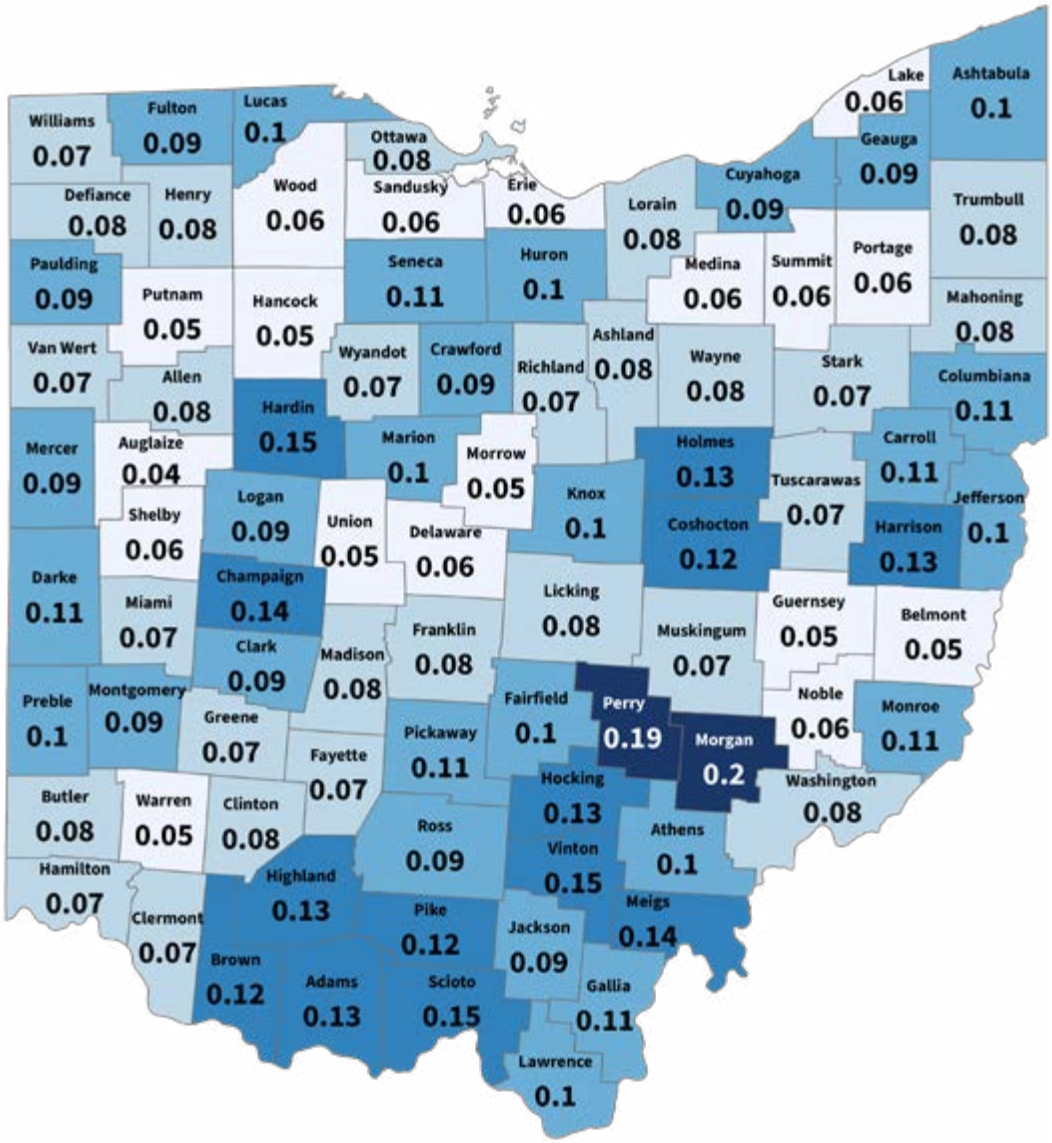
Source: NHTSA

2023 Ohio Fatality Rate

1.10 per 100 million Vehicle Miles Traveled

Source: ODOT

Fatalities and Serious Injuries Rate by County



Fatalities And Serious Injuries Per Million Vehicle Miles Traveled

0.04-0.06 | 0.07-0.08 | 0.09-0.11 | 0.12-0.15 | 0.16-0.2

The darker the county, the higher the rate of fatalities and serious injuries.

**Statistics provided for 2022. U.S. Department of Transportation, Office of Highway Policy Information*

Top 10 State Annual Vehicle Miles Traveled* (in millions)

315,244 California

290,890 Texas

227,757 Florida

128,871 Georgia

119,381 North Carolina

115,382 New York

110,578 Ohio

103,752 Illinois

99,912 Pennsylvania

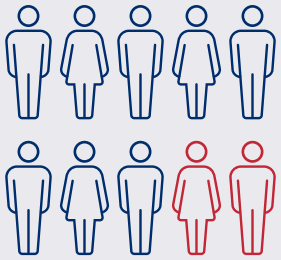
95,901 Michigan

Key Trends Shaping Ohio's Transportation System

Ohio Demographics

8/10

People Live in Urban Areas



Source: US Census

23%

Licensed Drivers 65+

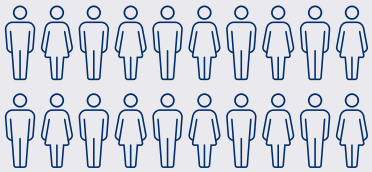
4%

Licensed Teen Drivers

Source: Ohio BMV

Expected Decrease in Population by 2050

Overall Population



11.8M 2020

11.1M 2050

65 and Older Population

4%

Under 25 Population

8%

Source: development.ohio.gov/about-us/research/population/population-projections#OhiosChangingPopulation

Commuting Habits

75%
Drive Alone
(previously 83%)

8%
Carpool

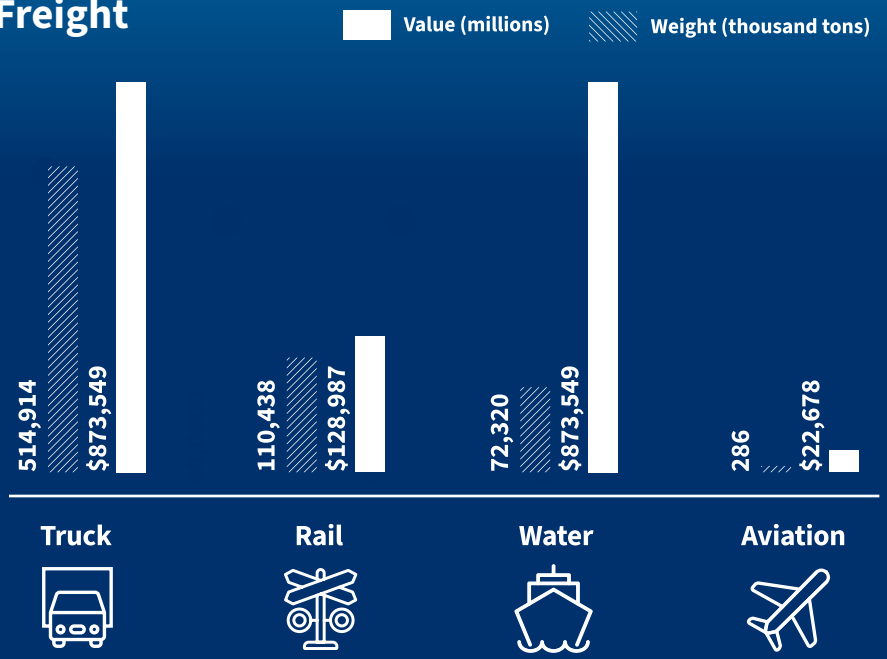
12%
Work from Home
(previously 4%)

2%
Walk

1%
Public Transit

Source:
American Community Survey, 2023

Freight



Growth in Truck Vehicle Miles Traveled (VMT)

Ohio Truck VMT for roads in the statewide model is projected to increase 35% between 2025 and 2045.

35%

Technology & Shared Micromobility

The popularity of shared micromobility has grown exponentially and access through smartphones to mobility options continues to shape how we move, and impact our level of distraction. Micromobility includes lightweight vehicles such as bicycles or scooters, especially electric ones that may be borrowed as part of a self-service rental program in which people rent vehicles for short-term use.

Trips on Shared Micromobility in US and Canada

147M (2019) ↑ **157M** (2023)

Source: NACTO Shared Micromobility Report (2023)

Trips on E-Scooters in US and Canada

58.5M (2022) ↑ **69M** (2023)

Source: NACTO Shared Micromobility Report (2023)

Smartphone Ownership by Percentage of U.S. Population

81% (2019) ↑ **85%** (2021) ↑ **92%** (2023)

Source: ConsumerAffairs. "Cell phone statistics 2025 [2025]" ConsumerAffairs.com. Mar. 20, 2025, www.consumeraffairs.com/cell_phones/cell-phone-statistics.html

Improving Safety on Local Roads

Over the last 15 years, Ohio has placed greater focus on offering technical support and funding to local governments, which are tasked with maintaining and enhancing safety on the majority of the state's roadways.

Ohio has 123,000 miles of roadway, making it one of the largest transportation networks in the country. Of that total, 84% are local roads maintained by more than 900 cities and villages, 1,308 townships, and all 88 counties. The remaining 16% are classified as state roads and fall under the maintenance of the Ohio Department of Transportation (ODOT).

More than half of the state's serious injuries and traffic fatalities occur on local roads. Between 2019 and 2023, 65% of serious injury and fatal crashes happened on roadways managed by local governments. Of that, 43% are taking place on roads maintained by cities and villages. This wide-ranging network of responsibility creates challenges in delivering consistent training, technical support, and funding across all jurisdictions.

Despite these complexities, Ohio's safety partners remain dedicated to addressing safety on local roads. The state has notably increased its investments in local pedestrian and bicycle safety efforts. Additionally, Ohio continues to partner with local law enforcement to support high-visibility enforcement campaigns focused on speeding, distracted driving, impaired driving, and seat belt use.

In nearly every SHSP Emphasis Area, the majority of severe injuries and fatalities take place on roads maintained by local jurisdictions.

Ohio is focusing more resources and funding on arterial roads with more lanes and higher speeds. This focus is essential to reducing fatal and serious injury crashes.

Fatalities and Serious Injuries by Road Type and Emphasis Area

Percentage ODOT vs. Local Roads

	Local vs. State Roads		Type of Local Road			
Emphasis Area	**State**	**Local**	**City/Village**	**County**	**Township**	**Total FSI***
Roadway Departure	40%	60%	33%	20%	7%	44%
Intersection	25%	75%	58%	13%	4%	38%
Young Driver (15-25)	35%	65%	43%	16%	6%	32%
Seat Belts	40%	60%	37%	17%	6%	29%
Speed	34%	65%	44%	15%	6%	26%
Older Driver (65+)	41%	59%	40%	15%	4%	19%
Alcohol Impaired	33%	67%	41%	19%	7%	17%
Motorcycle	33%	67%	42%	18%	7%	16%
Drug Impaired	41%	59%	36%	18%	5%	12%
Commercial Motor Vehicle (CMV)	67%	33%	23%	8%	2%	8%
Pedestrian	17%	83%	70%	8%	3%	8%
Distracted Drivers	44%	56%	33%	18%	5%	5%
Bicycle	10%	90%	72%	12%	6%	2%

Percentage Urban vs. Rural Roads

	Urban vs. Rural Roads		
Emphasis Area	**Urban**	**Rural**	**Total FSI***
Roadway Departure	56%	44%	44%
Intersection	75%	24%	38%
Young Driver (15-25)	66%	34%	32%
Seat Belts	61%	39%	29%
Speed	65%	34%	26%
Older Driver (65+)	63%	37%	19%
Alcohol Impaired	64%	36%	17%
Motorcycle	63%	37%	16%
Drug Impaired	61%	39%	12%
Pedestrian	88%	12%	8%
Young Driver (15-25)	66%	34%	32%
Distracted Drivers	58%	42%	5%
Bicycle	85%	15%	2%

**FSI: Fatalities and Serious Injuries combined*

Fatalities and Serious Injuries by Roadway Type

13%

Freeways

42%

Arterial Roads

26%

Collector Roads

18%

Local Roads

**1% unknown*

Performance Measure Targets

The federal government requires states to establish five performance measures and set targets to demonstrate fatal and serious injury reductions on all public roads. It established five safety performance measures and requires states to set targets for those measures to demonstrate progress toward reducing specific crashes. The performance measures were continued in the Infrastructure Investment and Jobs Act (IIJA).

Ohio has adopted a 2% reduction goal across all five measures - illustrated by the following five charts.

Required Performance Measures

- Number of fatalities
- Number of serious injuries
- Fatality rate (per 100 million VMT)
- Serious injury rate (per 100 million VMT)
- Number of non-motorized fatalities and serious injuries

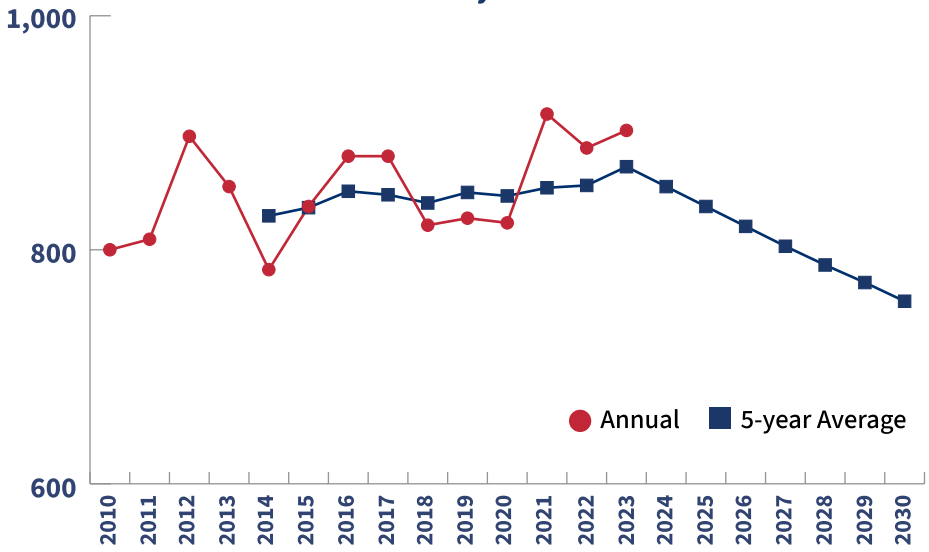
These performance measures are designed to promote transparency and accountability, enabling agencies to gauge safety progress regionally, statewide, and nationwide. To chart long-term trends and set realistic targets, the federal government relies on five-year rolling averages, which smooth out short-term fluctuations and provide a clearer view of historical crash patterns.

Ohio has committed to a 2% annual reduction across all five safety metrics—the goal illustrated in the accompanying graphics. Ohio believes these reductions are achievable because of record-level safety investments, Ohio's new handsfree law, a statewide focus on proven safety countermeasures, and new initiatives that strengthen young driver training programs across the state.

Non-Motorized

Reduce Non-Motorized Fatalities and Serious Injuries

871 from 2023 → **746** by 2030



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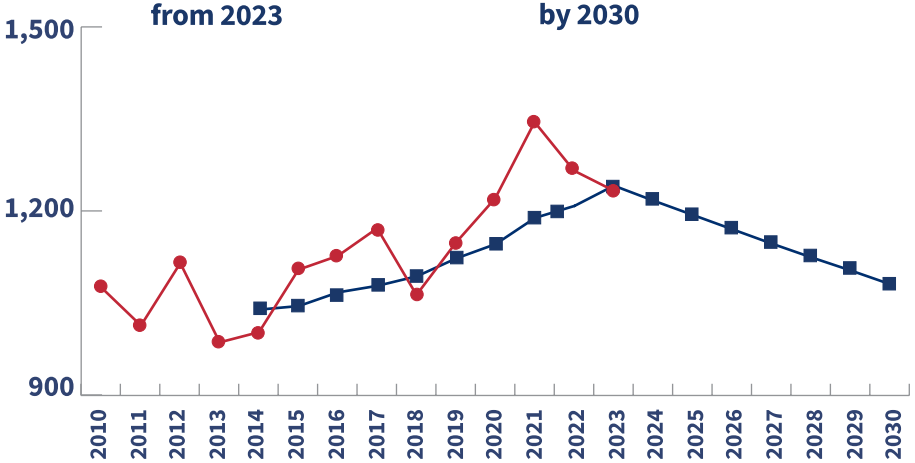
Annual 5-year Average

Number of Fatalities

Reduce Fatalties

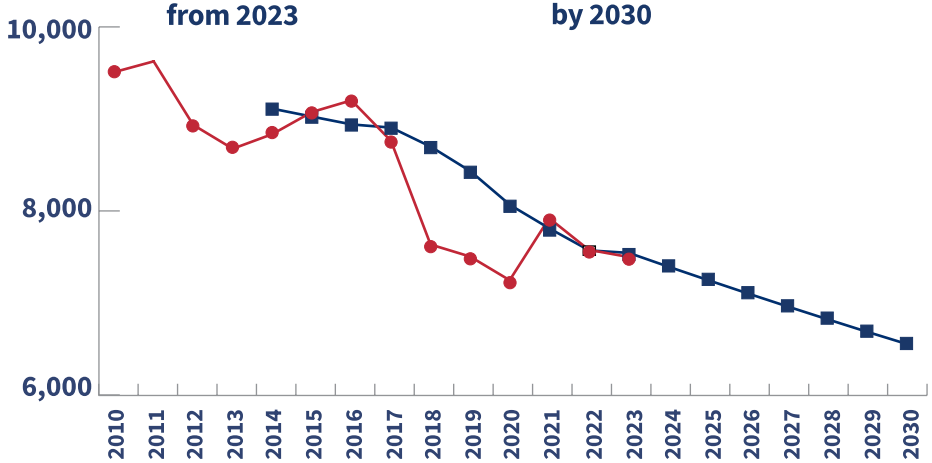
1,251 from 2023 → **1,086** by 2030



Number of Serious Injuries

Reduce Serious Injuries

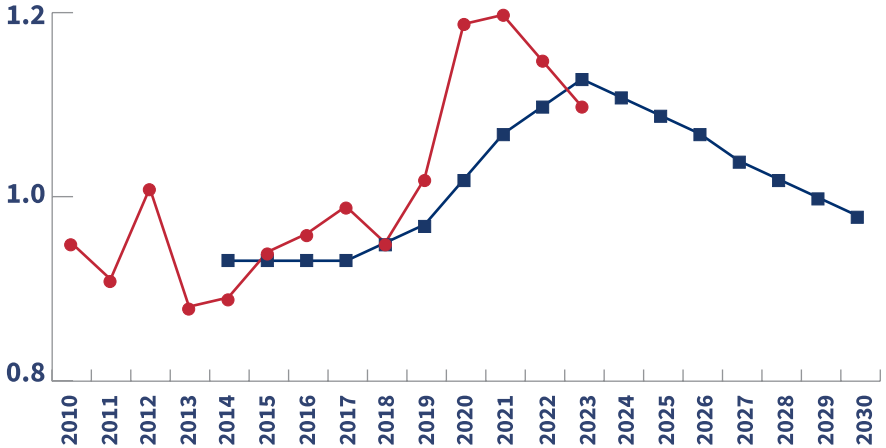
7,541 from 2023 → **6,548** by 2030



Fatality Rate

Reduce Fatality Rate

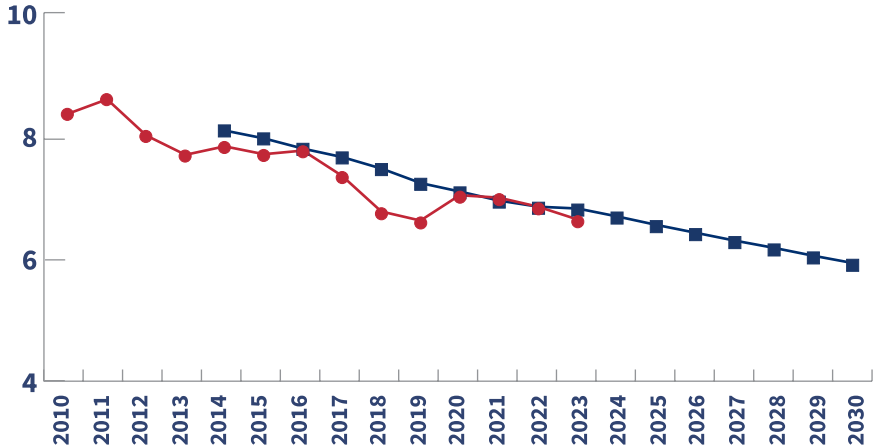
1.13 from 2023 → **0.98** by 2030



Serious Injury Rate

Reduce Serious Injury Rate

6.82 from 2023 → **5.92** by 2030



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What are the SHSP Emphasis Areas?

Emphasis Areas are a mandatory and essential part of every SHSP, guiding the allocation of resources and helping the state concentrate its transportation safety efforts on the areas with the most critical needs.

After analyzing the data, all of the Emphasis Areas from the previous plan were retained. The state added Post-Crash Care as an Evolving Emphasis Area where first responders are working to enhance the survivability of crashes through expedient access to emergency medical care, while creating a safe working environment for first responders. The Emphasis Areas are intentionally broad to foster collaboration among key stakeholders and address a wide range of crash trends affecting Ohioans.

Stakeholders from state, local, federal, and private sectors—representing various traffic safety disciplines—joined Emphasis Area teams based on their expertise and interests. These teams met regularly throughout the plan development process to review relevant data, identify high-risk behaviors and locations, and develop targeted strategies and actions aimed at improving road user safety. They also established performance measures and implementation timelines to monitor progress. All strategies and action items were shared with the SHSP Steering Committee for feedback. The final Action Plan is included in Appendix A.

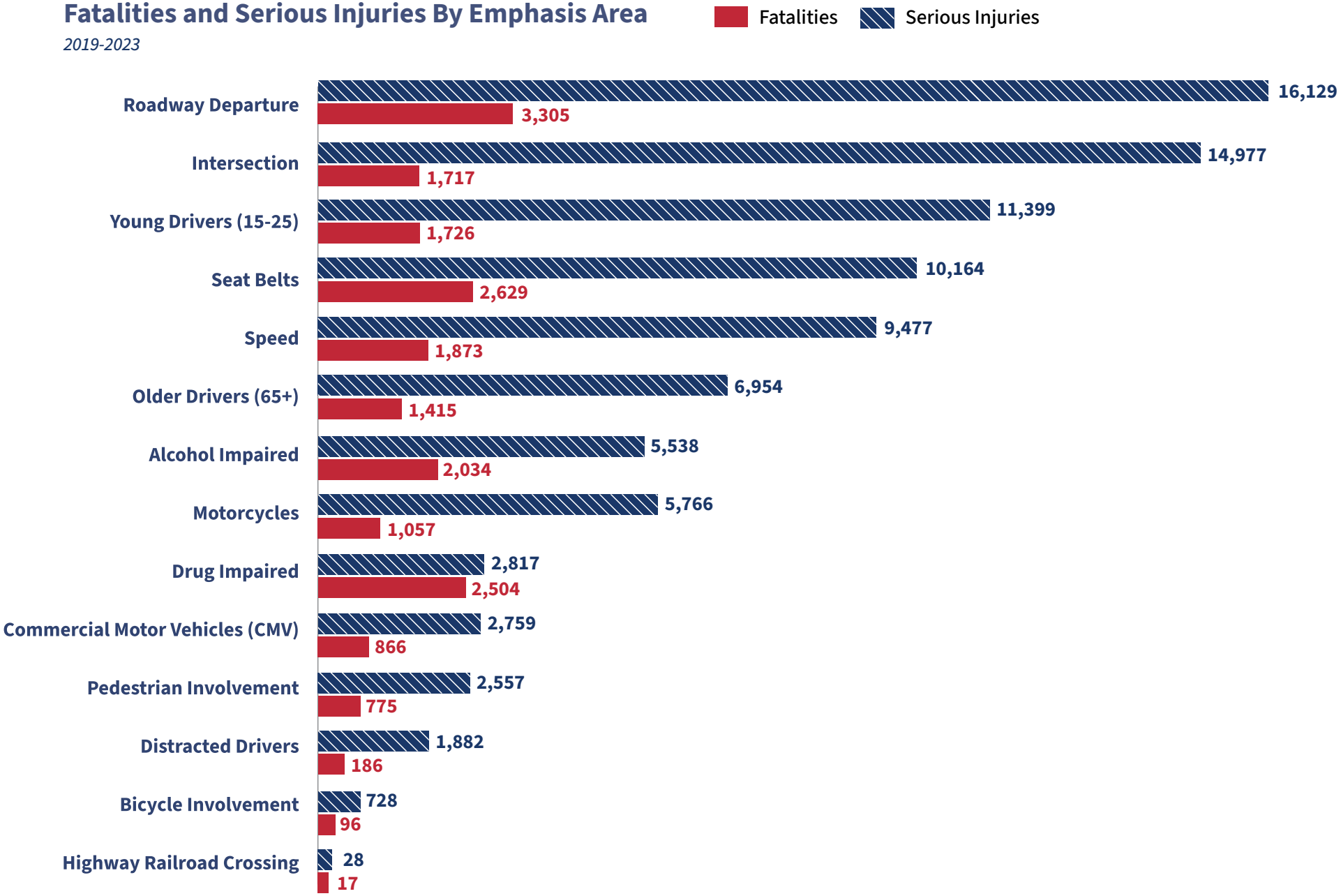
An area that is emerging as an Emphasis Area is Post-Crash Care. This Emphasis Area focuses on improving crash survivability by ensuring rapid access to emergency medical care, while also promoting a safe working environment for first responders and reducing the risk of secondary crashes through strong traffic incident management practices.

Emphasis Areas

- Roadway Departure
- Motorcycles
- Intersections
- Commercial Motor Vehicles
- Young Drivers
- Distracted Driving
- Speed
- Pedestrians & Bicycles
- Impaired
- Highway Railroad Crossing
- Older Drivers
- Connected and Automated Vehicles
- Seat Belts
- Data

Fatalities and Serious Injuries By Emphasis Area

2019-2023



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Roadway Departure

A persistent trend in Ohio is over half of all traffic fatalities and nearly half of all serious injuries include a motor vehicle veering from its intended lane.

These fatalities and serious injuries often occur when drivers strike a fixed object. The most common objects struck were trees, utility poles, and ditches.

However, running off the road is typically the result of other factors influencing this outcome. Fifty-six percent of severe roadway departure crashes occurred in urban areas with wide streets where there is an increase in speeding and other risky behaviors contributing to traffic deaths and serious injuries, particularly in late night hours.

Alcohol and drug impairment as well as speeding and lack of seat belt use are the most prevalent contributing factors for fatal and serious injury outcomes in a roadway departure crash. Speeding, alcohol- or drug-impaired drivers often struggle to remain on the roadway. In these types of crashes, unbelted occupants are frequently ejected when the vehicle collides with another object or vehicle. Additionally, young and inexperienced drivers often have difficulty maintaining their lane on narrow roads and may overcorrect when they veer out of the travel lane. Although underreported, distraction plays a role in these crashes as well.

While roadway departure strategies aim to help keep motor vehicles in their lane, this outcome must be addressed holistically with the other Emphasis Areas.

Overlapping Emphasis Areas:

41% Alcohol & Drugs

39% Unbelted Person

33% Speed

29% Young Driver

Top Ohio Strategies

Reduce roadway departure crashes on higher risk roads through systemic treatments.

Provide assistance and resources to local agencies to mitigate severe roadway departure crashes.

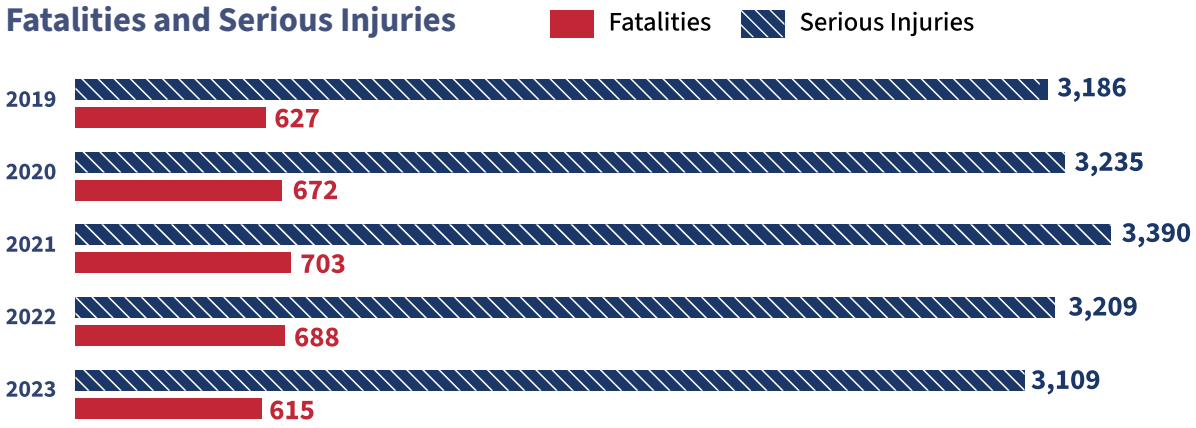
Promote and enhance existing LTAP and Local Programming resources for roadway departure safety.

Review ODOT policy and standards for roadway departure crashes.

Explore nuances of different context environments to better inform future priorities and strategies.

Roadway Departure

Fatalities and Serious Injuries



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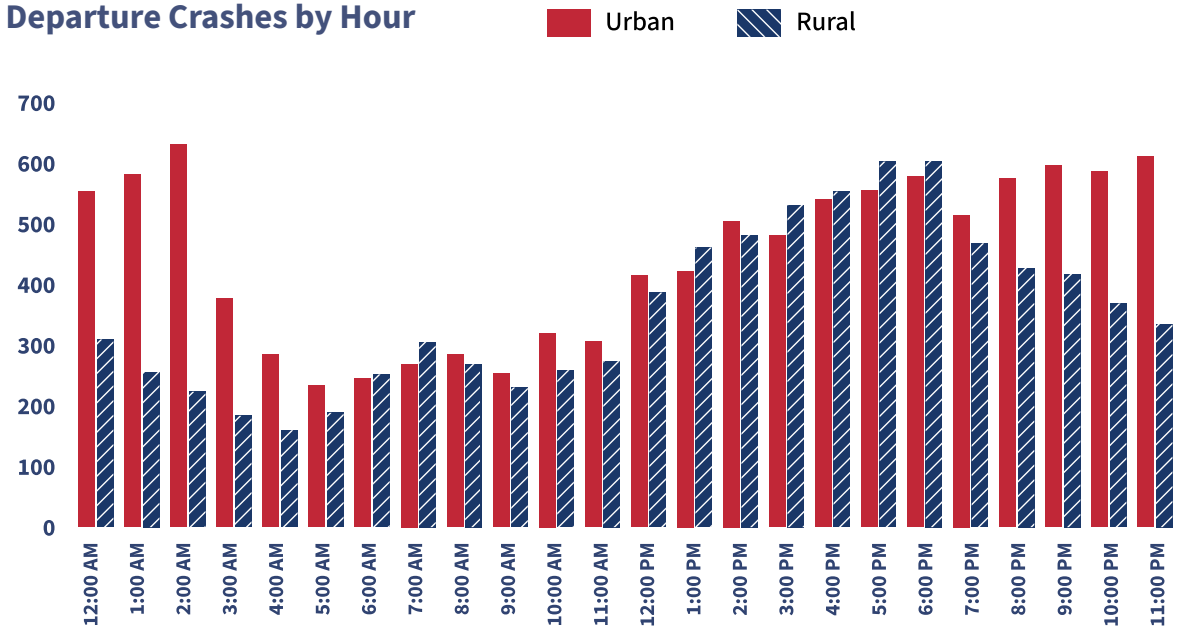
Urban vs. Rural Roadway Departure Crashes by Hour



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Fatalities and Serious Injuries by Location and Road Type

56% Urban

49% Two-Lane

20% Interstate/Freeways

29% Multilane

2% Unknown

44% Rural

89% Two-Lane

6% Interstate/Freeways

3% Multilane

2% Unknown

Intersections

Throughout 2019 to 2023, almost 27% of all traffic deaths and 40% of all serious injuries occurred at an intersection. About 55% of fatalities and serious injuries occurred on high-capacity arterials, of which nearly 70% are located in cities, towns, or villages.

Intersections are points where two or more roads converge, bringing together traffic from multiple directions. They vary widely in design, layout, and size.

The most common types of intersection crashes in Ohio are:

- **Angle and left turn** – Driver fails to yield to a driver from another direction.
- **Fixed object –** Driver collides with a stationary object, such as utility pole.
- **Rear end –** Driver hits the vehicle in front of it.
- **Motorcycle, bicycle, and pedestrian –** A driver collides with one of these road users while passing through or turning at an intersection.

Driver behavior and age also play a role in these crashes. A driver who is speeding, distracted or under the influence of alcohol or drugs is likely to have difficulty navigating intersections. Drivers under the age of 30 are more likely to be involved in an intersection crash than any other age group, and males are twice more likely to be involved in these crashes than females.

Fatalities and Serious Injuries Occurred at

42% Signal

32% Stop Sign

25% Other

1% Roundabout

Top Ohio Strategies

Advance the use of new technology that make intersections safer.

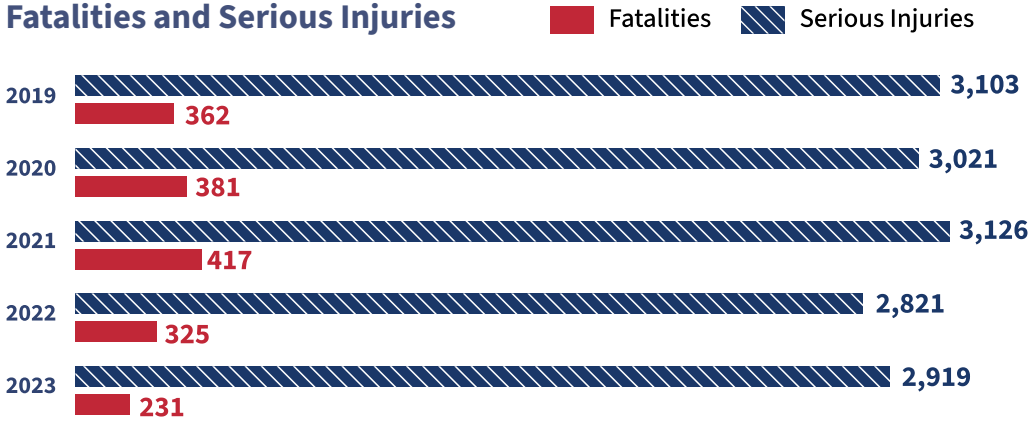
Implement proven and low-cost systematic safety improvements to reduce intersection crashes.

Develop and implement a comprehensive plan to address angle and left turn crashes at intersections.

Develop and implement additional guidance to address pedestrian and bicycle safety at intersections.

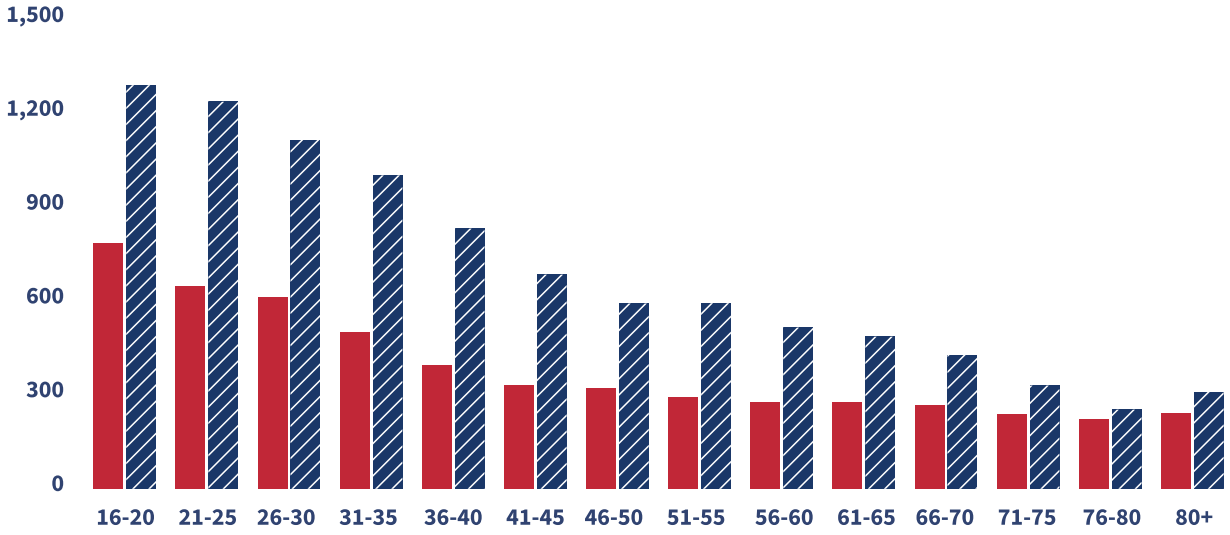
Intersections

Fatalities and Serious Injuries



Link to Data

Fatalities and Serious Injuries by At-Fault Driver Age and Gender



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Fatalities and Serious Injuries by Location

63%
4-way Intersection

29%
T-Intersection

6%
5 or More Point Intersection

1%
Roundabout

1%
Driveway/Alley Access

Urban vs. Rural

74%
Urban

24%
Rural

Young Drivers Ages 15-25

Motor vehicle crashes continue to be the leading cause of unintentional death for young drivers[1]. Every day, an estimated eight teens lose their lives on roadways in the United States due to their lack of driving experience and tendency to take greater risks[2]. Between 2019 and 2023, a total of 1,726 fatalities and 12,399 serious injuries resulted from crashes involving young drivers.

According to National Highway Traffic Safety Administration (NHTSA), 2,608 people were killed in crashes involving a teen driver in 2021 alone. Despite only accounting for approximately 5% of total drivers in 2021, young drivers (ages 15 to 20) represented 8.5% of all drivers involved in fatal crashes nationwide. Similar to national trends, young drivers (ages 15 to 25) in Ohio are also overrepresented in traffic crashes. Between 2019 to 2023, young drivers were involved in crashes that resulted in nearly 28% of deaths and 33% of serious injuries statewide. In approximately 69% of those cases, the young driver was found at-fault.

While young driver serious injury crashes in Ohio declined by 18% between 2019 to 2023, young driver fatalities increased by nearly 4%.

Inexperience and risk-taking behaviors such as speeding, driving while distracted, driving while impaired, and driving without a seat belt significantly contribute to crash likelihood and severity. These behaviors are compounded by complex driving environments, where split-second decisions have life-altering consequences. Young drivers learn acceptable driving behaviors from parents and other mentors, making it a shared responsibility among older adults to keep young drivers safe. As parents, it's essential to prepare teens to be safe and confident drivers who understand the rules of the roadway.

[1]nhtsa.gov/book/countermeasures-that-work/young-drivers
[2]cdc.gov/teen-drivers/risk-factors/index.html

Top Ohio Strategies

Use peer-to-peer programs to educate teens about key traffic safety topics.

Conduct media campaigns and outreach activities to educate young drivers and their families about safe driving practices.

Remove barriers to and enhance the driver training experience for Ohio families.

Fatalities and Serious Injuries

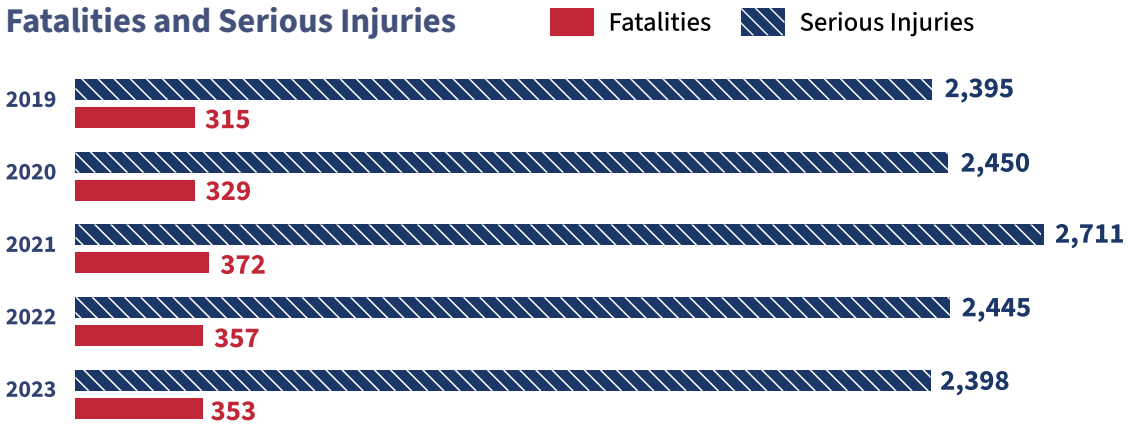
43%
Intersections

45%
Between 3-9PM

Young Drivers Ages 15-25

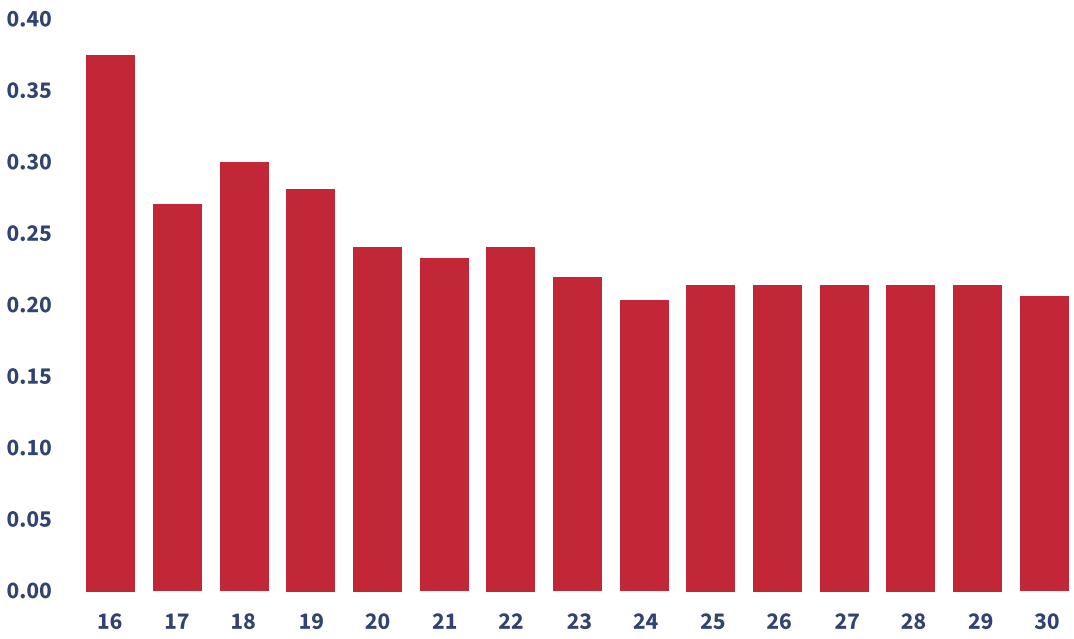
Data on this page indicates Young Driver Involved (not necessarily at-fault or killed).

Fatalities and Serious Injuries



Link to Data

Average Fatalities and Serious Injuries per 100 Registered Drivers by Age



Link to Data

Overlapping Emphasis Areas

43% Intersection

40% Roadway Departure

32% Seat Belt

16% Alcohol Impaired

12% Drug Related Involvement

12% Motorcycle Driver/Passenger

Speed

Speeding is about more than just breaking the law. It endangers everyone on the road and leads to more severe injuries. Achieving Safe Speeds on Ohio roads is pivotal in eliminating the worst crashes.

Speed not only influences the likelihood of a crash occurring, it also exponentially increases the severity of a crash when it does occur. In order to reduce the impacts of speed, changes are needed in how streets are designed, as well as how safe speed limits are determined and set. Strategic speed enforcement and a change in societal acceptance for speeding will also be key.

Speed-related fatal and serious injury crashes are more common during the summer months, on weekends, and in the evening hours. These incidents are also increasingly occurring on urban/suburban roads with multiple lanes, which can feel more open and inviting to speed—especially during off-peak, uncongested times.

Driving too fast can lead to serious consequences, including a higher risk of losing control of the vehicle, longer stopping distances near intersections or hazards, reduced seat belt effectiveness, and a much greater likelihood of injury or death—especially for pedestrians and bicyclists.

Even driving at the posted speed limit may be dangerous under certain conditions. Many drivers go too fast for the situation, particularly in poor weather, construction zones, or at night.

People involved in speed-related crashes were most often killed or seriously injured when running off of the road (57%). Additionally, young drivers were involved 38% of the time. Other risky behaviors often contribute to speed-related crashes. Throughout 2019 to 2023, approximately 24% of the time alcohol was involved in crashes resulting in deaths and serious injuries.

Top Ohio Strategies

Continue prioritizing speed management initiatives and develop a network analysis for speed management.

Continue to update the speed setting process for Ohio.

Market communication and educational messages that focus on high-risk drivers.

Review and implement national research and best practices related to speed.

Fatalities and Serious Injuries

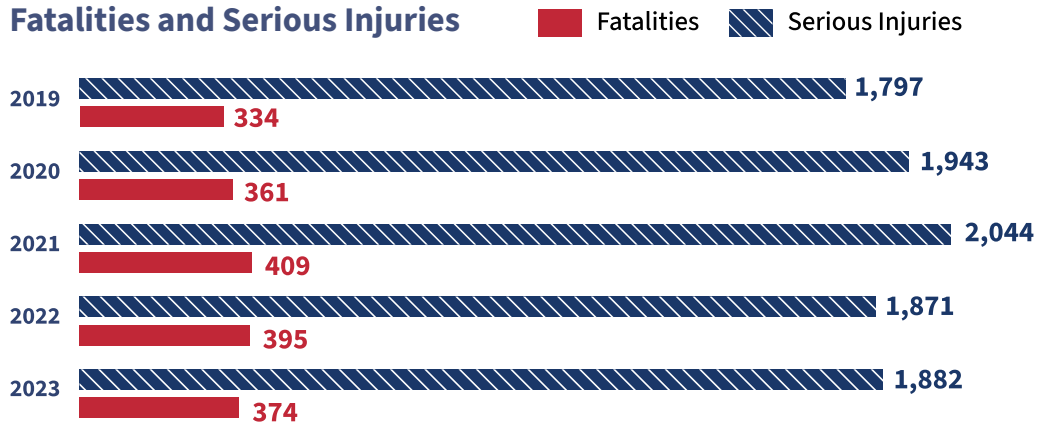
33%
ODOT-Maintained Roads

44%
City-Maintained Roads

14%
County-Maintained Roads

Speed

Fatalities and Serious Injuries



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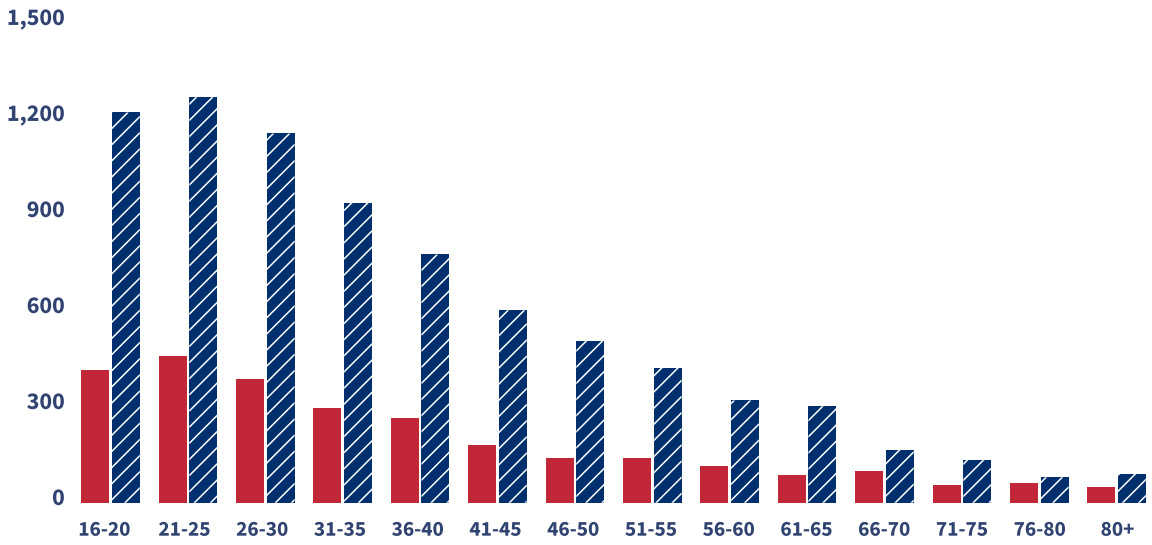
Fatalities and Serious Injuries by At-Fault Driver Age and Gender



Link to Data

Fatalities and Serious Injuries by Location and Road Type

65% Urban

27% Two-Lane

18% Interstate/Freeways

36% Multilane

19% Local Roads

35% Rural

62% Two-Lane

8% Interstate/Freeways

5% Multilane

25% Local Roads

Impaired

Impaired driving is a challenge to impact as it involves influencing human behavior. We often think of impaired driving as driving under the influence of alcohol; however, it also includes driving under the influence of illegal or prescription drugs. Alcohol and drugs are substances that alter the function of the brain and body leading to impaired thinking, reasoning, and muscle coordination – which may inhibit a driver's ability to operate a vehicle safely.

Once impairment sets in, it is often hard for the impaired person to gauge. As such, they often believe they can drive when they should not. Driving while impaired can result in life altering consequences. As seen in some high-profile fatal crashes involving Ohio residents, the consequences can be deadly, not just for the driver but for passengers, pedestrians, bicyclists, and others sharing our roads. Headlines like, "Man sentenced after killing bicyclist in DUI crash" are too frequent.

With the legalization of marijuana, drugged driving appears on the rise. Drugs are involved in 40% of Ohio fatalities, a jump of 20% in the last five years.

Combining drugs with alcohol while driving persists as a problem in Ohio. From 2019 to 2023, 45% of drug-impaired driving fatalities and serious injuries involved alcohol as well. Of the impaired crashes that occurred, roadway departure crashes, 63%, were by far the most likely crash type to kill occupants of the vehicle in both alcohol and drug impaired crashes.

For motorcycle riders, alcohol or drugs were involved in 14% and 12% of motorcycle crashes, respectively. Impairment can lead to a rider feeling invincible despite diminished balance, coordination, and awareness. When it comes to educating drivers, perhaps there is a message to be extracted and emphasized – plan for a sober ride home BEFORE drinking or using impairing drugs, such as marijuana, and before judgement is impaired.

Top Ohio Strategies

Sustain a data-driven and high visibility impaired driving enforcement program.

Implement an impaired driving mass media campaign and outreach efforts using delivery methods that reach specific segments of the targeted population.

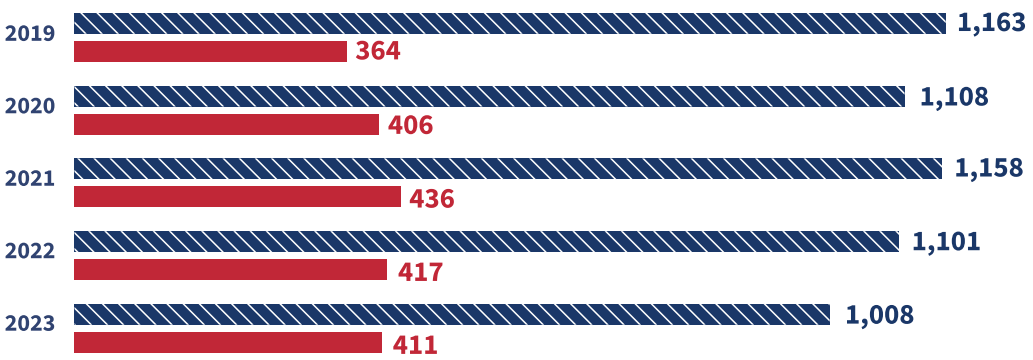
Impaired

Over the Past Five Years

33% Fatalities | **15%** Serious Injuries

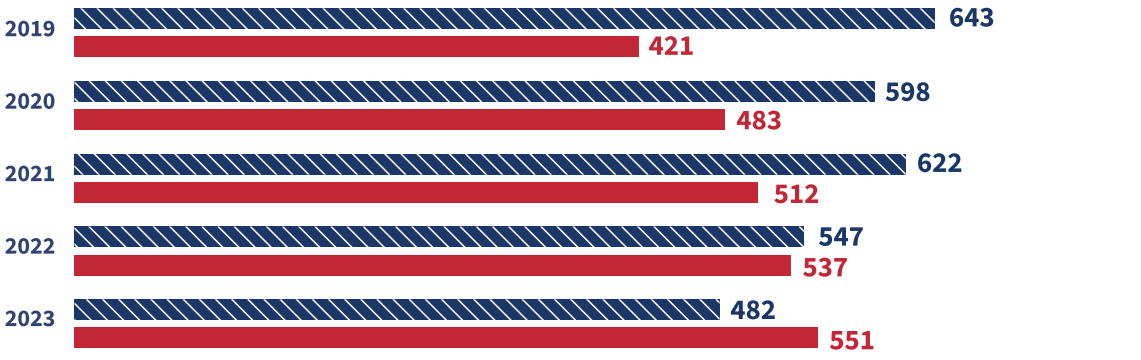
40% Fatalities | **8%** Serious Injuries

Alcohol-Impaired Fatalities and Serious Injuries



Link to Data

Drug-Impaired Fatalities and Serious Injuries



Link to Data

Overlapping Emphasis Areas

Alcohol Impaired

- **63%** Roadway Departure
- **43%** Unbelted
- **36%** Speed
- **32%** Drug Impaired

Drug Impaired

- **60%** Intersection
- **51%** Roadway Departure
- **45%** Speed
- **33%** Alcohol Impaired

Older Drivers

Like the rest of the nation, Ohio is getting older. By 2030, the state will have more than 2.3 million residents who are 65 or older — that's more than 20% of Ohio's population. Ohioans age 65 or older represent the fastest-growing segment of drivers. In 2023, there were 427,351 drivers over the age of 65, 16.6% of the total number of drivers who were registered or renewed their licenses in 2023. Older driver fatalities and serious injuries continued to increase from 2020 to 2023 and are the sixth most common fatal and serious injury crash type in Ohio.

In Ohio, driving is often needed to access medical care, employment, and groceries, for those of all ages. Additionally, driving can be essential for older adults who wish to remain connected and independent, especially in rural communities with longer distances to travel and limited access to sidewalks, bike lanes, and transit services. Although older adults are among the safest drivers on Ohio roads, their risk of being injured or killed in a crash increases with age. Contributing factors like gradual declines in vision, physical and cognitive abilities, along with the increased likelihood of medical conditions and medication use, can greatly impact their driving capability.

Serious injuries and fatalities involving older drivers most often occur at intersections and in roadway departures, with 82% of all crashes falling within these two crash types. These crash types likely occur most frequently for older drivers as declining vision and decreased physical and cognitive ability may affect their ability to respond to moving vehicles, pedestrians, or to a curve that is tighter than expected.

To help prevent these crashes, Ohio continues to support state and local programs that assist older drivers in adopting safe driving strategies and accessing alternatives when driving is no longer a safe option. Communities also play a vital role in improving access to transit and developing age-friendly infrastructure that supports safe walking, biking, and transit use for older adults.

Top Ohio Strategies

Centralize and distribute information on alternative transportation options in Ohio.

Expand or replicate mobility options for older road users to support safe routes to age in place.

Increase awareness and availability of information, resources, and tools to improve older road users' safety and mobility.

Evaluate the use and installation of roadway improvements that compensate for the impacts of aging on safe driving.

Support the assessment process to evaluate a driver's ability to drive safely through public outreach and partnerships with law enforcement.

Older Driver Involved, 15 Years Ago

18% Fatalities | **15%** Serious Injuries

2023

23% Fatalities | **18%** Serious Injuries

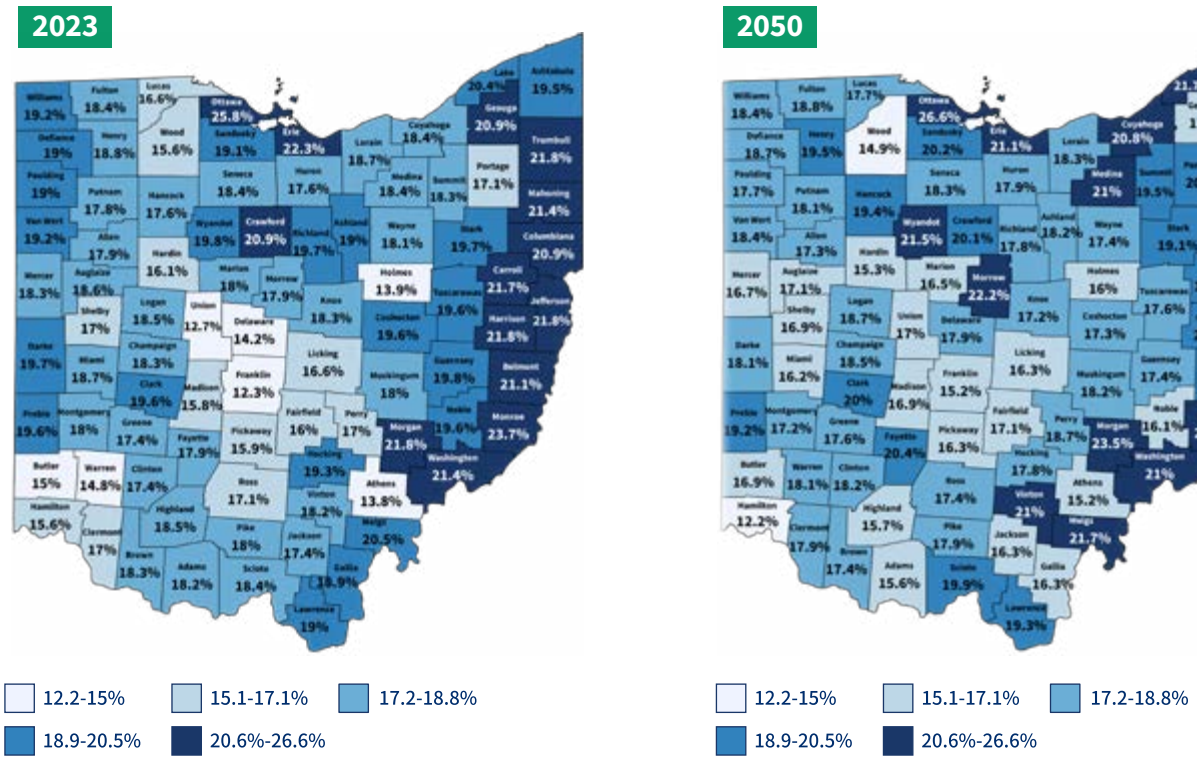
Older Drivers

Data on this page indicates Older Driver Involved (not necessarily at-fault or killed).

Older Driver Involved Crashes Fatalities and Serious Injuries

Link to Data

Population by County 65+



Overlapping Emphasis Areas

50% Intersection

32% Roadway Departure

23% Seat Belt

20% Young Driver

18% Speed

Seat Belts

From 2019 to 2023, 46% of fatalities and 24% of serious injuries on Ohio's roadways involved drivers and passengers who were not wearing a seat belt. Buckling up is a simple and effective decision to prevent death and serious injury during a crash – protecting the human body from harmful crash impact forces.

In 2023, Fix Our Roads (FOR Ohio) conducted the Ohio Licensed Drivers Statewide Survey to gather the public opinion of 1,000 licensed drivers. The survey revealed Ohio drivers agree that wearing a seat belt is important. However, Ohio's seat belt use rate decreased from 86% in 2019 to 85% in 2023, falling well below the national average.

Ohio's law is secondary, which means an officer can only warn or cite a driver for not wearing a seat belt if they observe another traffic offense first. Without a primary enforcement law, seat belt usage rates will generally remain stagnant.

Between 2019 to 2023, Ohio's unbelted fatalities and serious injuries were overrepresented in young drivers (ages 15 to 25) and crashes caused by engaging in high-risk behaviors such as speeding and driving under the influence of drugs or alcohol. Additionally, an estimated 60% of unbelted fatalities and serious injuries occurred when a driver left Ohio's travel lanes, resulting in 1,062 deaths and 3,990 serious injuries due to fixed object crashes. Roadway departure crashes often involve high levels of crash kinetic energy that cause drivers and passengers to be ejected from the vehicle – buckling up keeps them inside of the vehicle, limiting harmful impact forces.

No one is immune to death or serious injury in a traffic crash. Seat belts should be worn at all times, regardless of the seat occupied or the type of vehicle.

Top Ohio Strategies

Sustain high visibility seat belt-related enforcement in jurisdictions and at times with a disproportionate number of unrestrained occupant-related fatalities and serious injuries.

Implement media campaigns and outreach efforts using delivery methods that reach young drivers with messages about unsafe driving practices.

Conduct research on seat belt usage and motivating factors.

Seat Belt Usage Rate (2023)

85% Ohio

91% Nationally

Seat Belt Usage in Ohio

84% Male

92% Female

Seat Belts

Fatalities and Serious Injuries

Link to Data

Seat Belt Compliance Percentage by Age Group for Driver/Passenger*

	Driver	Passenger
15-25	79.7%	84.9%
26-64	88.1%	89.9%
64+	90.9%	96.6%

*2024 Statewide Observational Seat belt Survey

Link to Data

Overlapping Emphasis Areas

- **59%** Roadway Departure
- **36%** Young Driver
- **35%** Speed
- **32%** Intersection
- **26%** Alcohol Impaired
- **22%** Drug Impaired

Motorcycles

When the weather gets nice, May through September, there are more motorcycle crashes on Ohio's roadways. Motorcycles represent 3% of Ohio's registered vehicles but accounted for about 17% of traffic deaths and 15% of serious injuries, a rise of 2% and 4%, respectively from 2015 to 2019.

When people picture the image of a motorcyclist, the vision is of a person riding on a bike with the wind whipping through their hair. People see the freedom of riding a motorcycle but not necessarily the dangers. Safe riding takes balance, coordination, good judgment, and the ability to react swiftly to the unexpected actions of others on the road or changing roadway conditions. According to NHTSA, motorcyclists are about 28 times more likely to die in a traffic crash compared to occupants in passenger vehicles and five times more likely to be injured.

Ohio is consistently among the top five states for registered motorcycles in the country. So, the sheer volume of motorcycles in the state is going to translate into more crashes. Over the past five years, motorcycle deaths and serious injuries steadily increased until 2023 when the data showed a slight downtick in serious injury crashes.

Serious Injuries and fatalities most often happen by the motorcycle departing the roadway, 37%, and at intersections, 35%, where they are less likely to be seen.

How does Ohio move the needle and decrease deaths and serious injuries? By approaching the responsibility to motorcycle safety as a shared responsibility between drivers and riders. Motorcyclists can avoid serious crashes by being visible and well trained, by wearing a USDOT-compliant helmet to avoid serious head injuries, and obeying the speed limit. This avoids roadway departure crashes where riders can be thrown and are more likely to hit another object.

Drivers are responsible for looking out for motorcycles which can be more difficult to see because of their size. Together, riders and drivers can help eliminate serious injury and fatal crashes.

Top Ohio Strategies

Develop and implement engagement and outreach programs with data-driven safety messages to motorcyclists and motorists.

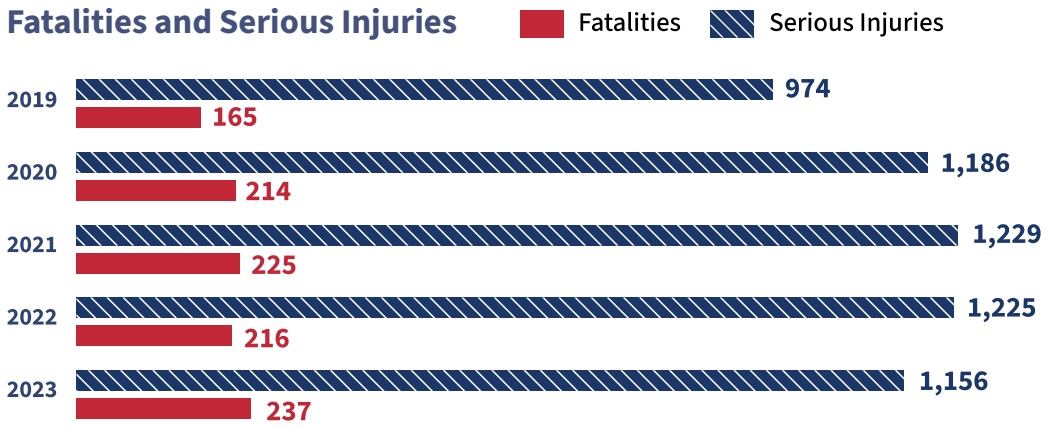
Increase accredited motorcycle training enrollment and attendance and remove barriers for training enrollment.

Fatalities and Serious Injuries

Approximately 2/3 Not Wearing Helmet

Motorcycles

Fatalities and Serious Injuries



Link to Data

Overlapping Emphasis Areas

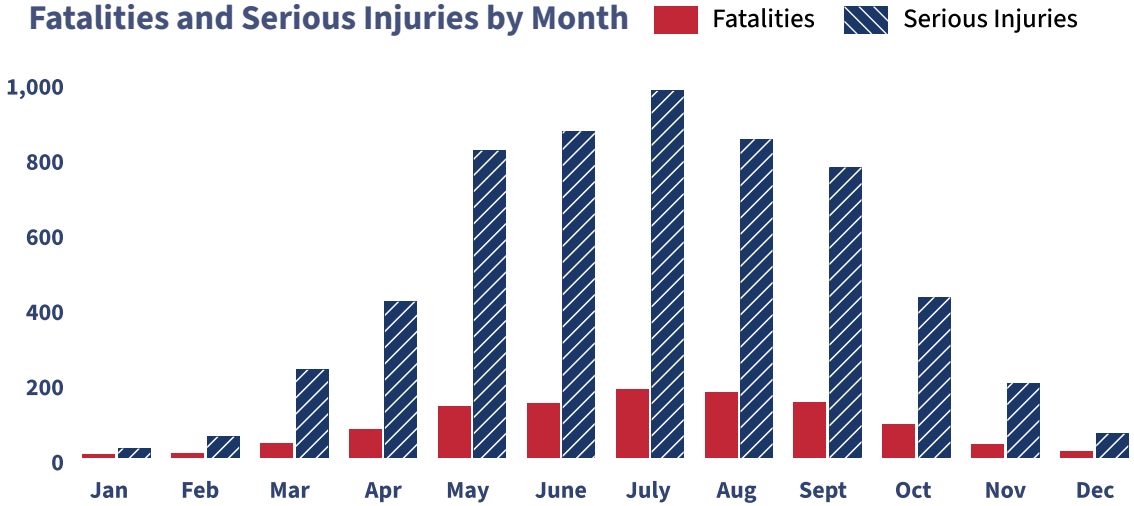
37% Roadway Departure

35% Intersection

26% Speed

25% Young Driver

Fatalities and Serious Injuries by Month



Link to Data

Top 10 States for Motorcycle Registration

802,500 California

736,004 New York

650,201 Florida

451,746 Arkansas

424,385 Ohio

399,881 Montana

371,946 Pennsylvania

342,485 Texas

291,539 Illinois

280,182 Wisconsin

https://www.statista.com/statistics/191002/number-of-registered-motorcycles-in-the-us-by-state/

Commercial Motor Vehicles

Ohio is a well-established base for companies moving goods around the globe, being just a one-day drive from more than 60% of the U.S. and Canadian populations. This, along with having the nation's fifth largest interstate system, fourth highest number of rail lines, eighth highest maritime tonnage, and second highest number of intermodal facilities, makes Ohio a pivotal point in the global marketplace.

Crashes involving a Commercial Motor Vehicle (CMV) accounted for about 14% of all fatalities in Ohio, and about 7% of serious injuries. This is a decrease from the percentages reported in the previous SHSP update, with 17% of fatalities and 10% of serious injuries involving a CMV. That decrease occurred despite a rise in freight traffic between 2020 and 2023 which was largely driven by a surge in e-commerce during the pandemic.

Ohio is home to just over 45,000 registered freight carriers and nearly 290,000 registered commercial vehicles. However, around 46% of all truck traffic in Ohio both originates and ends outside the state. The Public Utilities Commission of Ohio (PUCO) and Ohio State Highway Patrol (OSHP) maintain a robust and effective inspection and compliance review program of drivers and vehicles registered in Ohio, supported by the fact that in nearly two thirds of all crashes involving a CMV, the other driver was at fault.

Many of the top overlapping Emphasis Areas from the previous SHSP continue to be elevated based on 2019-2023 data. This includes intersections – involved in 35% of all CMV crashes, roadway departure – involved in 33% of all CMV crashes, and young drivers – involved in 26% of all CMV crashes. A new top overlapping Emphasis Area is lack of seat belt use – involved in 33% of all CMV crashes.

CMV safety in work zones continues to be a focus area for the State of Ohio. Although these crashes account for a relatively low percentage of all CMV crashes, they have been increasing in recent years.

Top Ohio Strategies

Maintain a commercial motor vehicle (CMV) inspection program for both new and existing carriers to evaluate safety performance and identify/correct safety risks.*

Provide CMV safety education and awareness activities to carriers, commercial drivers, and the public.*

Improve CMV safety in work zones.*

Expand the use of data and technology to identify and target high CMV crash corridors and crash variables to improve safety.*

Explore opportunities regarding the use and implementation of vehicle safety technology.

**In alignment with Ohio's Commercial Motor Vehicle Safety Plan (CVSP)*

Percentage of All Ohio Fatalities and Serious Injuries

14% Fatalities

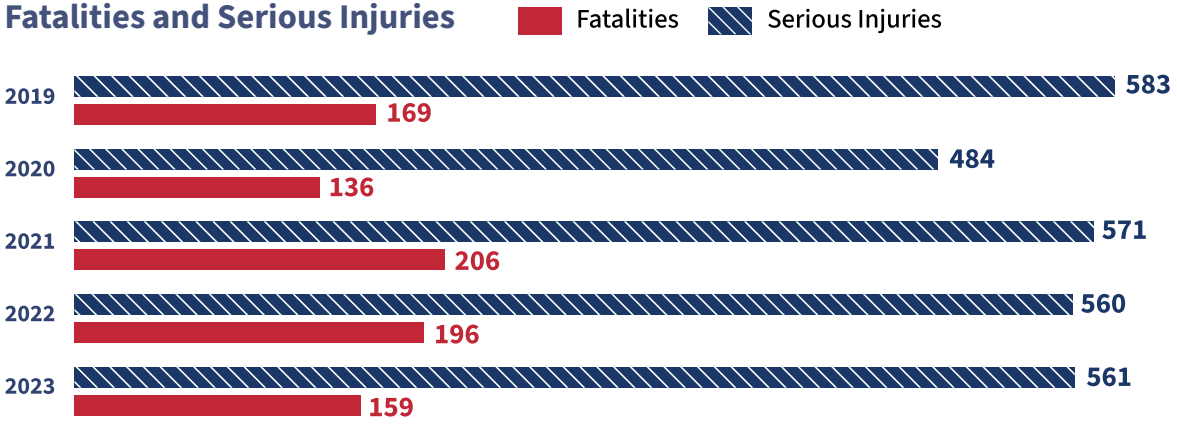
7% Serious Injuries

63% Caused by Other Drivers

26% Involved Young Drivers

Commercial Motor Vehicles

Fatalities and Serious Injuries



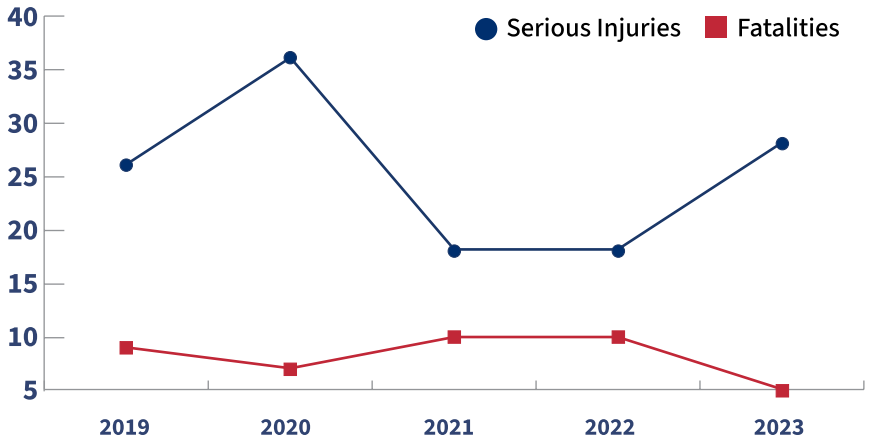
Link to Data

Annual Million Vehicle Miles Traveled (mVMT)* by Vehicle Type

**on state owned roadways*

	2019	2020	2021	2022	2023
Total mVMT	75,226	64,398	72,081	71,964	73,672
mVMT Cars	65,649	56,067	62,528	62,314	63,609
mVMT Trucks	9,577	8,331	9,554	9,649	10,063

Fatalities and Serious Injuries in Work Zones



Link to Data

Fatalities and Serious Injuries by Road Type

31% Interstate/Freeways

7% Local Road

40% Arterial Road

5% Other Freeway/Expressway

17% Collector Road

1% Other

Overlapping Emphasis Areas

35% Intersection

33% Roadway Departure

33% Seat Belt

26% Young Driver

23% Older Driver

22% Speed

Distracted Driving

Ohio is fighting a long-term battle to prevent distractions behind the wheel. Over the past decade, more people have acquired smartphones and in-vehicle technology, and they have become more comfortable using the technology behind the wheel. It is a behavior that endangers the driver and the people walking, cycling, and driving around them.

Good news is Ohio passed a primary enforcement, hands-free law in 2023 to discourage electronic distractions while driving. The law gives law enforcement officers more tools to see and stop dangerous distractions before they lead to a crash.

According to cell phone data, the law has led to significant reductions in cell phone use while driving across Ohio. Ohio has also seen a decline in fatalities and serious injuries since the hands-free law was passed. However, the actual number of crashes involving electronic distractions is unknown because it remains more difficult for officers to prove unless a driver admits to the distraction in a crash.

Using an electronic device while driving to text, scroll, or navigate pulls the driver's attention away from the road, slows reaction times to hazards and leads to unacceptable deaths and serious injuries. More work is needed over the next few years to collect accurate data on cell phone use and better understand driver attitudes to help Ohio develop more effective strategies to prevent these crashes.

Ohio State Patrol Distracted Driving Violations by Year

	2020	2021	2022	2023	2024*
OSHP Distracted Driving Violations	9,337	11,650	8,921	9,018	27,823

***Distracted driving law in effect**

Top Ohio Strategies

Explore new data sources, including telematics, to develop a more accurate, complete picture of electronic distractions in Ohio, including when and where distractions are more likely to occur. Use the information to develop more targeted and effective prevention strategies.

Use focus groups, surveys, and research methods to develop more effective resources and materials to educate road users on the dangers of distractions and shift their behavior to encourage focused driving.

Develop new resources to assist law enforcement in enforcing and educating the public about driving distractions and the law.

Fatalities and Serious Injuries*

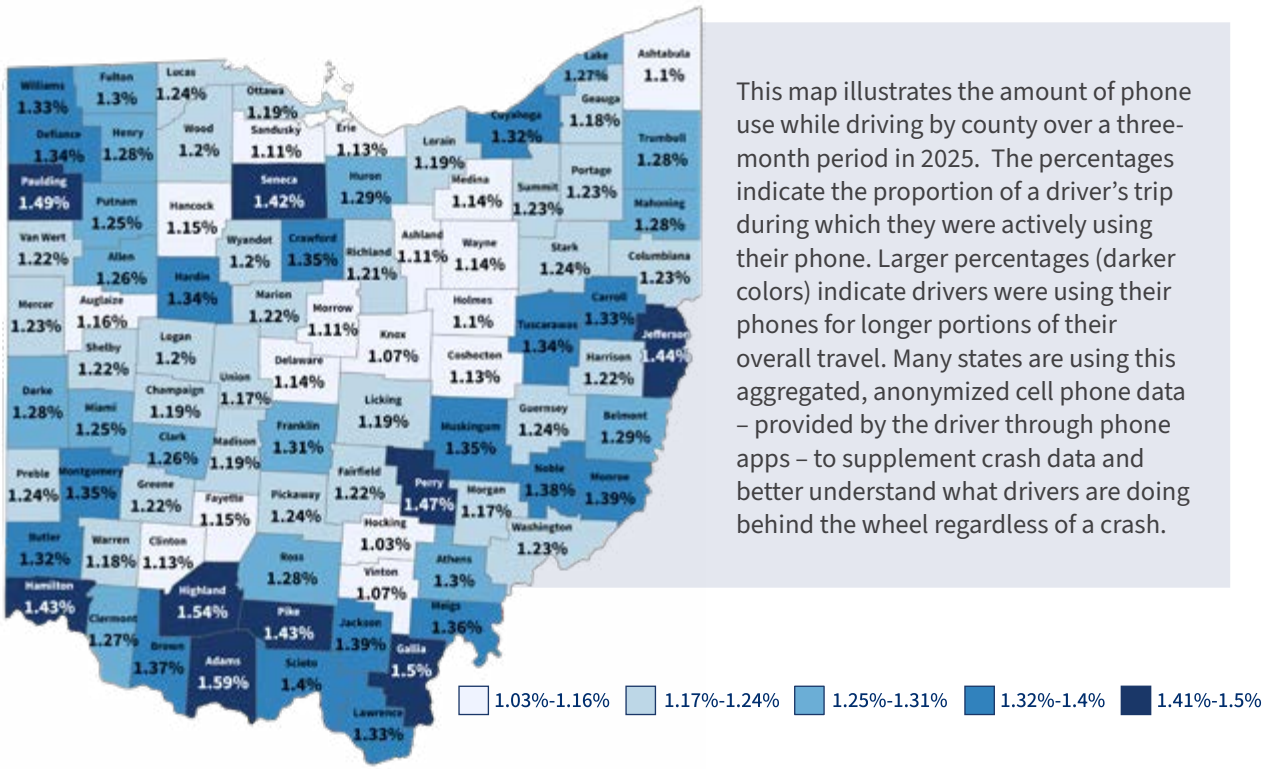
186 Fatalities

1,881 Serious Injuries

***These values are often under reported**

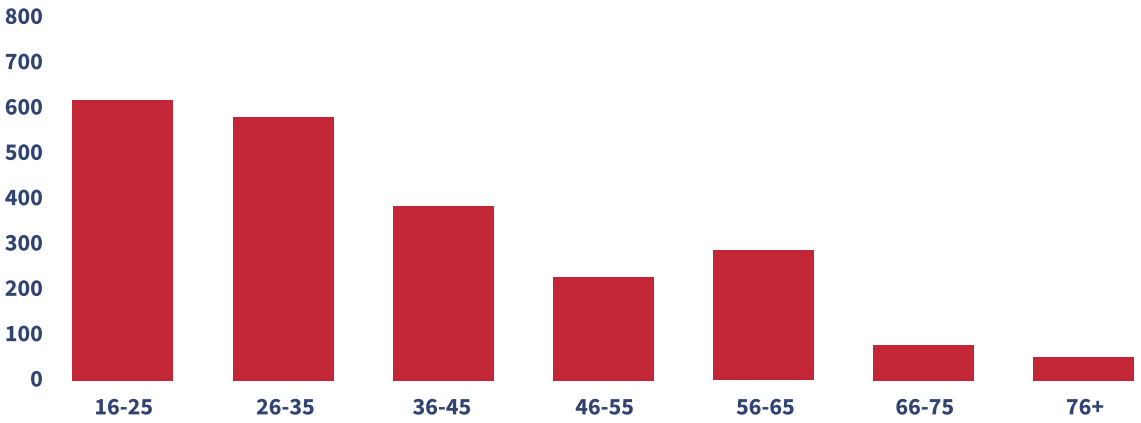
Distracted Driving

Percentage of Hand-Held Phone Use While Driving by County



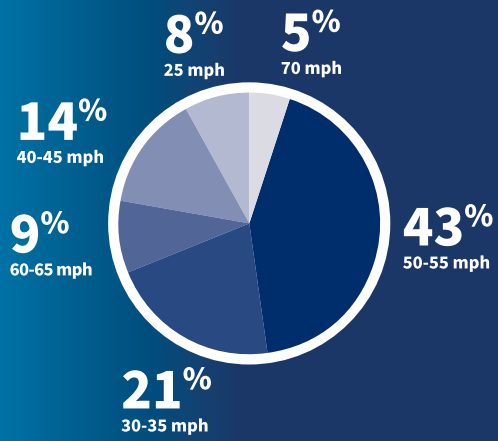
This map illustrates the amount of phone use while driving by county over a three-month period in 2025. The percentages indicate the proportion of a driver's trip during which they were actively using their phone. Larger percentages (darker colors) indicate drivers were using their phones for longer portions of their overall travel. Many states are using this aggregated, anonymized cell phone data – provided by the driver through phone apps – to supplement crash data and better understand what drivers are doing behind the wheel regardless of a crash.

Fatalities and Serious Injuries by Age



Link to Data

Distracted Driving Fatalities and Serious Injuries by Posted Speed



Overlapping Emphasis Areas

49% Roadway Departure

39% Seat Belt

36% Young Driver

34% Intersection

24% Speed

Pedestrians and Bicycles

Walking and biking are vital modes of transportation for many Ohioans including those connecting to transit. Walking and biking in Ohio are embraced for their multifaceted benefits, contributing to healthier individuals, a cleaner environment, economic vitality, and stronger communities.

Pedestrians and bicyclists are at a disadvantage when walking along roads without sidewalks and riding in mixed traffic when sharing the road with motor vehicles. Separated facilities such as shared use paths and sidewalks are key to removing conflicts involving Ohio's bicyclists and pedestrians with motor vehicles.

Bicycle and pedestrian crashes are more likely to result in death and serious injury. In Ohio, bicycle and pedestrian serious injury crashes have increased between 2019 and 2023. Pedestrian fatalities made up 12% of all motor vehicle related fatalities resulting in the loss of 794 lives. Although the number of bicyclist fatalities decreased from 2019 to 2023, 22 people lost their life during this period.

Most fatal and serious injuries involving pedestrians and bicyclists occur on local roads. Crashes involving pedestrians and cyclists are more likely to occur on roads that lack dedicated infrastructure like sidewalks, bike lanes, paths, and clearly marked crossings. When they occur, they are often catastrophic.

There are a number of contributing factors that place pedestrians and bicyclists at risk, such as failure to yield, other improper action, following too closely, ran stop sign, etc .

Drivers' behavior, including driving distracted, impairment, or speeding, puts pedestrians and bicyclists at greater risk. Speeding reduces the likelihood that a pedestrian or bicyclist will survive a crash by reducing a driver's field of vision and increasing stopping distance. Other primary contributing factors of improper crossing and other improper action make up 45% of fatal and serious injury crashes involving pedestrians.

Top Ohio Strategies

Support context-sensitive decision-making through the development of a statewide context classification guide.

Develop educational materials for roadway users.

Promote and support projects that seek to develop safe, comfortable facilities for vulnerable road users.

Provide training and technical assistance related to quick build projects.

Strengthen ongoing coordination and collaboration between ODOT and its partners.

This Emphasis Area and its strategies serve as Ohio's updated Vulnerable Road User Safety Assessment.

Pedestrian

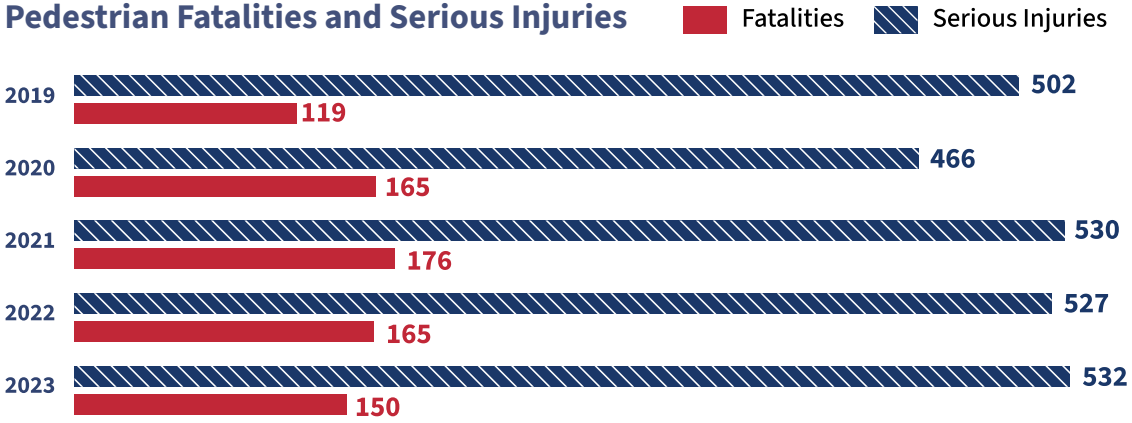
12%	7%
Fatalities	Serious Injuries

Bicycle

2%	2%
Fatalities	Serious Injuries

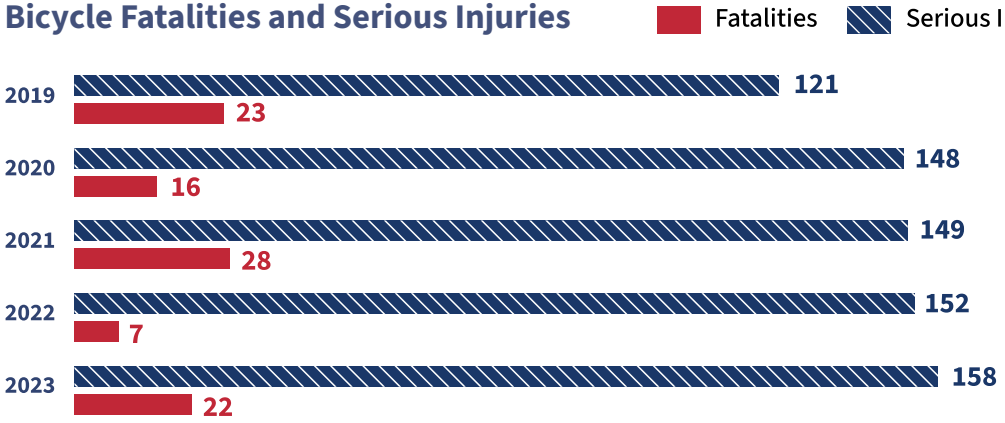
Pedestrian and Bicycles

Pedestrian Fatalities and Serious Injuries



Link to Data

Bicycle Fatalities and Serious Injuries



Link to Data

Fatalities and Serious Injuries by Jurisdiction

	Local vs. State Roads		Type of Local Road		
Emphasis Area	**Local**	**State**	**City**	**County**	**Township**
Bicycle	88%	10%	71%	12%	5%
Pedestrian	81%	17%	70%	8%	4%

Fatalities and Serious Injuries by Road Type

50%
Arterial Road

25%
Local Road

19%
Collector Road

6%
Interstate/Freeways

Urban vs. Rural

86%

14%

Highway Railroad Crossing

Ohio is a freight state with extensive transportation infrastructure including the nation's fifth largest interstate system and fourth highest number of rail lines. There are over 5,000 miles of active rail and about 123,000 miles of roadway all intersecting throughout Ohio.

Highway-railroad crashes make up less than 1% of Ohio's annual traffic deaths and serious injuries, but when they do happen, the outcomes are often tragic and severe. Due to their seriousness and the high number of crossings in the state, Ohio continues to include highway-railroad crossing safety as a focus area in its SHSP.

Over the past five years, crossing crashes involving serious injuries and deaths have continued to decrease. All of the 28 fatalities at grade crossings between 2019 and 2023 occurred at crossings equipped with gates. These crashes primarily occurred because motorists drove around lowered gates or stopped/stalled on the crossing.

Fatalities and Serious Injuries Occurred at

62%
Gates and Flashing Lights

29%
Passive Warning Systems (such as crossbucks)

9%
Flashing Lights

Top Ohio Strategies

Expand the use of new and proven crash prevention methods at grade crossings.

Reduce the overall number of public grade crossings in Ohio.

Support education and outreach efforts to increase grade crossing safety.

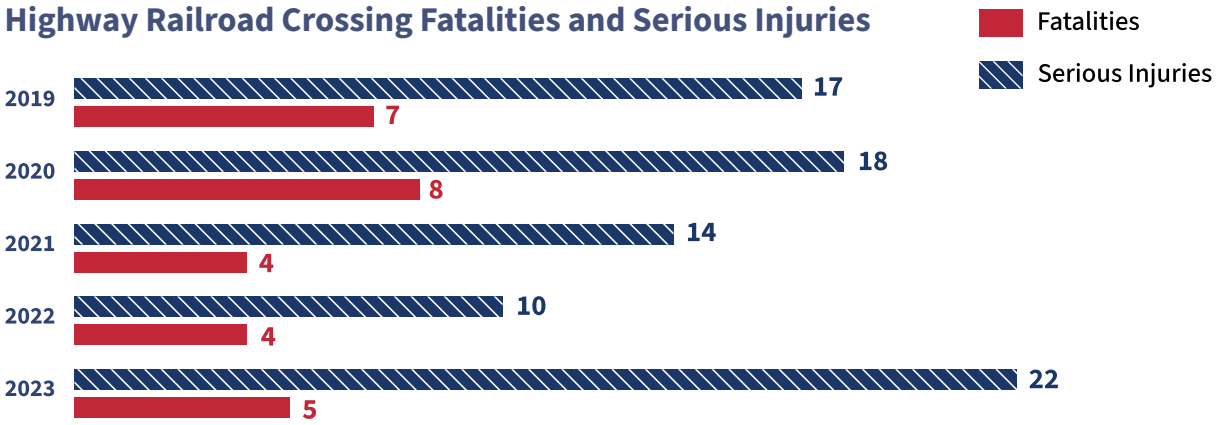
Use advanced data and technology to improve the identification of high-risk highway-rail grade crossings.

3RD
Largest Number of Crossings in the Nation

5,629
Railroad Public Road Crossings

Highway Railroad Crossing

Highway Railroad Crossing Fatalities and Serious Injuries



Link to Data

Total Railroad Crossing Crashes Decreased by 4%

Fatal Railroad Crossing Crashes Decreased by 37%

Fatalities and Serious Injuries by Driver Action

50% Went Around Gates

21% Did Not Stop

16% Stopped on Crossing

7% Went Through Gates

5% Other

1% Stopped Then Proceeded

Fatalities and Serious injuries by Warning Device Through the Years

	Gates	Lights	Crossbucks
2019	21	1	2
2020	23	0	3
2021	17	0	1
2022	11	0	3
2023	21	2	4

Connected and Automated Vehicles

As automotive technology advances, Ohioans stand to gain even greater safety benefits on the road.

Someday, automated driving systems—often referred to as automated vehicles—may take full control behind the wheel, stepping in when we're unable or simply prefer not to drive. That future is no longer science fiction; the first wave of the connected and automated vehicle (CAV) revolution is already on Ohio's roads.

Each year, more vehicles are equipped with advanced crash avoidance technologies such as adaptive cruise control, lane-keeping assistance, blind spot detection, rearview cameras, and automated emergency braking. These features are already helping reduce risks like roadway departures, sideswipes, speeding, and distracted driving—laying the groundwork for a safer, smarter transportation system.

While fully automated or "self-driving" vehicles are still in the research and development phase, progress is accelerating. Companies are rigorously testing systems limited to on-road deployments in highly urbanized areas without snow like Phoenix, AZ and San Francisco, CA, with remote human operators closely monitoring performance. As of 2022, at least 18 states—including Ohio—have or were actively involved in testing.

Over the next five years, these innovations will help shape new safety strategies and policy approaches. With leadership from organizations like DriveOhio, the state is not only tracking progress but also championing the responsible deployment of CAVs to advance highway safety goals and prepare for the mobility future.

Top Ohio Strategies

Increase the number of partnerships with Ohio K-12 educators, higher education, and research institutions, to develop Ohio's workforce and research new technologies in collaboration with industry, with an emphasis on safety.

Increase the number of public/private CAV partnerships, pilots and deployments in all regions of the state.

Advance Ohio's work in CAV standards and specifications and the state's influence in national conversations on CAV.

Continue to promote and expand CAV awareness, education, and training opportunities, in collaboration with partners.

Vehicle safety promises to be one of automation's biggest benefits. Higher levels of automation, referred to as automated driving systems, remove the human driver from the chain of events that can lead to a crash.

Source: www.nhtsa.gov/vehicle-safety/automated-vehicles-safety

Data

It is essential that states leverage timely, accurate, complete, uniform, integrated, and accessible safety data to identify the most prevalent causes of fatalities and serious injuries on public roads in their SHSPs and can track progress in addressing them.

Ohio's Traffic Records Coordinating Committee (TRCC), led by the Ohio Department of Public Safety, serves as the central team dedicated to enhancing the quality, accessibility, and integration of traffic safety data. The TRCC acts as a data champion within the SHSP process, ensuring reliable and accessible traffic safety data is available to inform decision-making, evaluate strategies, and ultimately, improve highway safety.

Access to comprehensive transportation data sets empowers the Emphasis Area teams to make informed decisions when they meet to develop strategies and actions to address the roadway safety challenges facing Ohioans. The results of this analysis are instrumental in shaping data-driven strategies aimed at reducing the frequency and severity of serious injury and fatal crashes. This approach helps safety partners identify key issues, set evidence-based priorities, and design programs that save lives by directly targeting the trends observed on Ohio's roads.

Integrating data across crash reports, roadway characteristics, injury outcomes, citations and adjudications, driver records, vehicle data, and more, creates a complete picture of crash dynamics and those involved. Understanding contributing factors sheds light on effective strategies for prevention and mitigation.

At the heart of this work is Ohio's commitment to "getting the data right." This guiding principle drives ongoing efforts to automate and streamline data systems, ensuring users at all levels—across agencies and disciplines—can make smarter, faster safety decisions. Through the TRCC, Ohio has invested millions in roadway inventory, EMS data systems, and analytical tools, while many agencies have also implemented their own innovations to further strengthen the state's traffic safety data infrastructure.

Top Ohio Strategies

Improve data collection and management.

Improve data accessibility.

Enhance data integration.

Support data analysis efforts across agencies.

Having clear insight into how, when, where, who, and why crashes have occurred are the underpinnings of a comprehensive safety analysis.

Post Crash Care

> "Innovations in care could reduce the number of people who are alive when first responders arrive, but later die, potentially saving thousands of lives a year."
>
> *- NHTSA Deputy Administrator Sophie Shulman*
> *Keynote remarks at Post-Crash Care Summit:*
> *The Role of EMS in Reducing Roadway Deaths & Injury*

Evidence-based solutions will be critical to reducing death and disability; for example, Shulman cited lessons learned on military battlefields related to trauma care that can directly inform a better approach to post-crash care.

The FHWA defines Post-Crash Care as: "enhancing the survivability of crashes through expedient access to medical care, while creating a safe working environment for vital first responders and preventing secondary crashes through robust traffic incident management practices."

The State of Ohio and its communities are already beginning to advance strategies that improve post-crash care by participating in NHTSA's Traffic Incident Management Responder Training and deploying drones to crash sites.

42%

of adult crash victims were alive at time EMS arrived, but later died *(FARS)*

55%

of child crash victims were alive at time EMS arrived, but later died *(FARS)*

Historically, some concerns related to Post-Crash Care have included:

- **Lack of coordination between Post-Crash Care Community (PCC) and other traffic safety disciplines**
- **Poor data quality and linkages**
- **Post-crash survivability**
- **Inadequate protection of first responders**
- **Inadequate resources, funding**
- **Insufficient training for law enforcement and general public**
- **Lack of inventory of helicopters and clearing zones**

Notable Examples in Post-Crash Care

City of Dublin, Ohio

The Drone as First Responder (DFR) program uses semi-autonomous drone technology to respond quickly to emergencies. When a 911 or police call comes in, a drone can be launched from a rooftop docking site and fly to a scene. DFR provides officers with real-time video streaming so they can make informed decisions and improve response efforts.

In trauma care, the "golden hour" refers to the crucial first hour after a severe injury, during which prompt medical intervention significantly improves chances of survival.

The Dublin Police's DFR program will support deploying autonomous drones to auto crashes depending on the location, time of day and significance of the crash. The use of the DFR will help coordinate police response based on the seriousness of the crash or the traffic congestion. An overhead view of a crash can inform first responders of the quickest route to the scene, where to block roadways, and where to divert traffic to ensure other motorists can safely navigate around the scene.

Ultimately, drone technology serves as "eyes in the sky" for first responders and offers them the ability to plan and optimize their response while still in route to the scene, shaving precious minutes off the time it takes for crash victims to receive care.

The July 2023 Annals of Emergency Medicine cites research showing prehospital blood product resuscitation has demonstrated greater than predicted survival with a 37% reduction in 30-day mortality among severely injured civilian patients.

Some Ohio municipalities, including Cleveland, have already begun Prehospital Blood Programs. Other states are already seeing its benefits.

Lee County, Florida

The Division of Emergency Medical Services, known as Lee County EMS, has deployed fresh whole blood (FWB) in the field. Lee County, whose largest city is Ft. Myers, is supporting and coordinating a countywide EMS system and 21 fire departments.

Long used by the U.S. military and more recently in combat support hospitals, whole blood is being utilized in the field. It is being deployed for car crash victims and other trauma cases in non-military emergency response. With the loss of blood, an individual loses hemoglobin and the ability to carry oxygen that needs to get distributed to the tissues for survival. Historically, emergency medical technicians (EMTs) have been focused on stopping bleeding and blood pressure restoration. Often a liquid like normal saline is administered; however, it dilutes the amount of hemoglobin. So, while blood pressure can be restored, the patient loses some ability to oxygenate their organs and tissues.

One of the initial evaluations an emergency department physician completes when a patient arrives is to assess the patient for their candidacy for whole blood. By making this assessment and administering whole blood in the field, patients are more likely to stabilize, oxygenate their tissues, and survive.

Lee County EMS is also using drones to drop automated external defibrillators (AEDs) and are contemplating adding EpiPens, Narcan and tourniquets onboard.

Ultimately, Lee County is leveraging critical care techniques along with drone technology to improve post-crash care, hurricane, and emergency response.

The State of Ohio, Ohio municipalities, and emergency responders across the country are focused on post-crash care and improving patient outcomes from trauma like car crashes. ODOT is committed to launching a new Emphasis Area in 2026 to focus on post-crash care and develop strategies and action steps that will save lives.

High Risk Rural Roads

High Risk Rural Roads (HRRR) in Ohio are defined as rural routes—such as county and township roads—that experience a higher rate of fatal and injury crashes compared to other roads with similar features. These include rural major collectors, minor collectors, and local roads.

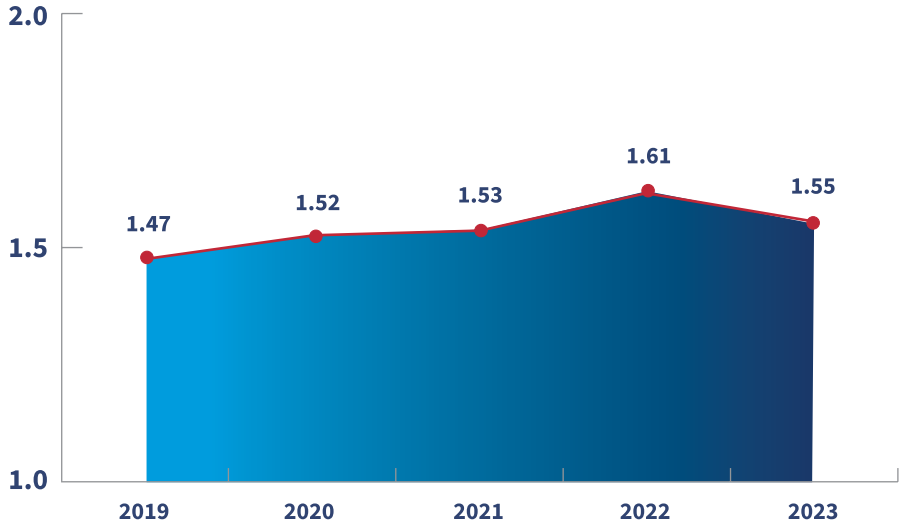
Each year, ODOT identifies and prioritizes roadway locations for potential safety studies or improvements. Ohio was among the first states to fully adopt AASHTOWare's Safety Analyst software to guide this process statewide. Safety Analyst applies advanced statistical methods to pinpoint intersections and road segments with the greatest potential for crash reduction, focusing on locations with higher-than-expected crash frequencies and severe crashes. This data-driven approach increases efficiency and cost-effectiveness, enabling ODOT to examine fewer sites while addressing a larger share of crashes. Additionally, due to Ohio's significant Amish population, the department also evaluates sites where Amish-related crashes have occurred to determine if further safety analysis is warranted.

ODOT typically studies up to 200 locations across the state annually. These locations are grouped by type of roadway including the following rural roads:

- Rural Intersection
- Rural Segment – Non Freeway
- Rural Freeway

The Fixing America's Surface Transportation Act (FAST Act) continued the rule that requires states to monitor fatality rates on rural collector and rural local roads and obligate a specified amount of funding for high risk rural roads if the fatality rate increases over the most recent two years of data. The IIJA extended surface transportation programs and this rule. This special rule currently applies to Ohio.

Rural Road Fatality Rate (Including Freeways)



Link to Data

Prevention

Ohio has long been a leader in highway safety, working diligently to make travel safer for everyone using its roadways. Unfortunately, crashes involving ODOT workers and contractors still occur far too frequently. Reducing or eliminating situations where these crashes can happen is critical to improving safety.

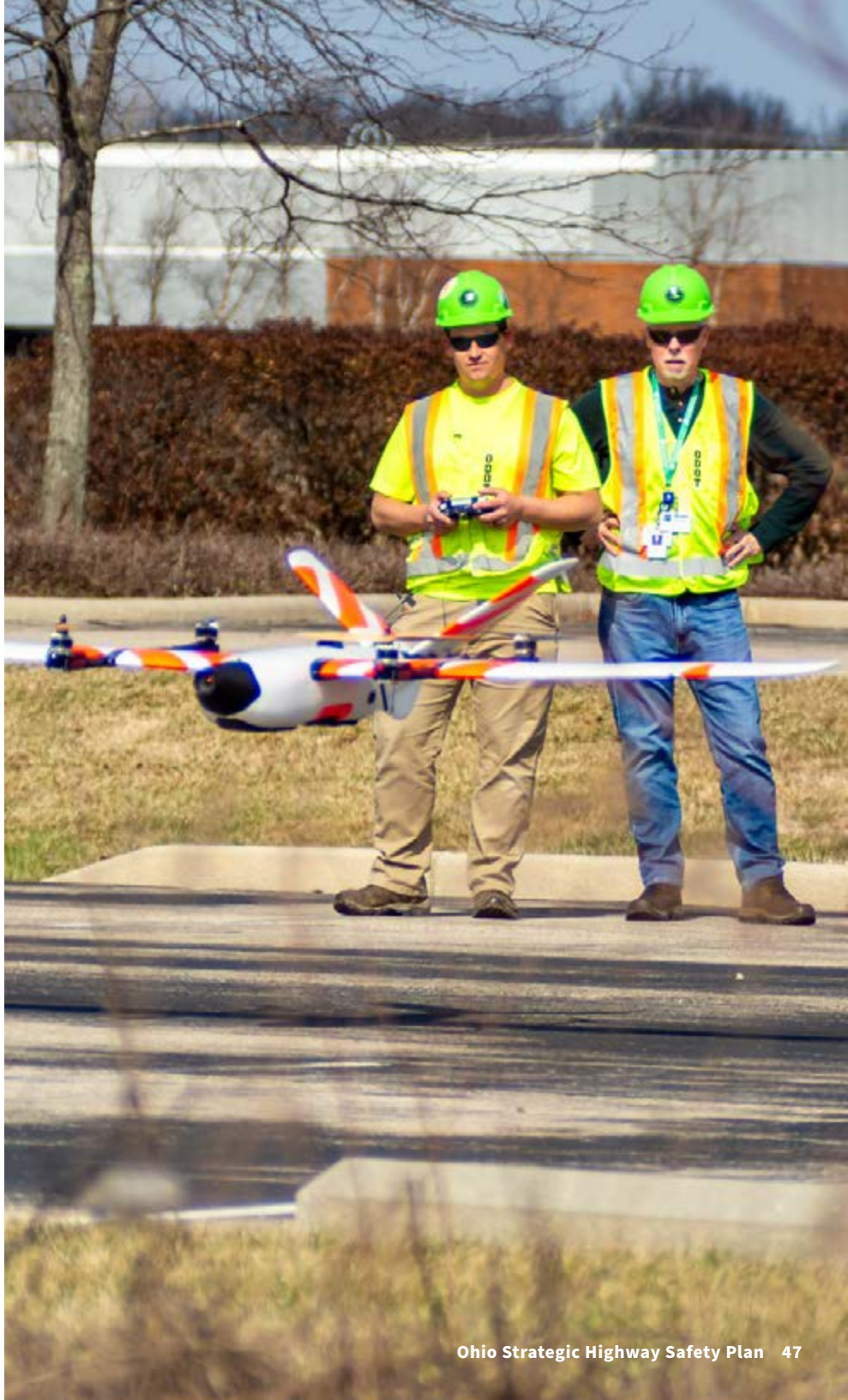
In 2018, ODOT established DriveOhio, a statewide center for advancing transportation technologies. DriveOhio serves as Ohio's hub for smart mobility innovations, both on the ground and in the air. A key part of this initiative is the Uncrewed Aircraft Systems (UAS) Center in Springfield, which provides drone-based solutions and support for public and private sector partners.

The UAS Center is revolutionizing ODOT operations by developing technologies that reduce the need for workers to operate in dangerous, high-traffic areas. Tasks that once required crews to be in close proximity to fast-moving vehicles can now be performed remotely. This not only keeps workers out of harm's way but also reduces the need for lane closures, enhancing safety for workers and the traveling public.

Despite these advances, ODOT crews, vehicles, and equipment continue to face a troubling number of crashes. As of mid-2025, there have already been 72 incidents involving ODOT crews being struck; a sharp increase from the same period in 2024. In total, there were 84 such incidents in 2024 and 56 in 2023. Work zone crashes over those two years resulted in injuries to 14 ODOT employees and nine contractors, with one contractor tragically losing their life.

ODOT remains committed to eliminating worker-vehicle conflicts by integrating cutting-edge drone technologies into its daily operations. As a national leader in transportation innovation, ODOT is not only improving efficiency but also setting a new standard for safety. The ultimate goal: a future where no workers are injured or killed while serving on Ohio's roads

One standout example is the UAS Center's support of bridge inspections. By using drones to capture high-resolution video and imagery of bridge components, such as beams, decks, and piers, inspectors can perform thorough evaluations without stepping into traffic or using climbing crews. This significantly reduces the risk of falls and minimizes disruptions to drivers.



Safety Partners

Ohio is grateful to be able to collaborate with a wide range of agencies, organizations, and advocates toward a shared goal of eliminating fatal and serious injury crashes.

This network of supporters provided critical input throughout the development of Ohio's SHSP. Their insight and experience helped the state develop an updated plan which identifies a broad range of Safe System Approach strategies encompassing engineering, education, enforcement, and emergency response with consideration to all users' needs. The agencies and organizations listed here deserve to be recognized for their contributions to this plan and continued commitment to improving traffic safety across Ohio.

List of Partners

- AAA
- AARP
- American Bikers Aimed Toward Education of Ohio (ABATE)
- Area Agencies on Aging
- American Traffic Safety Services Association (ATSSA)
- City and County Health Departments
- County Engineering Offices
- County Engineers Association of Ohio (CEAO)
- County Sheriff's Offices
- County Veterans Service Commission
- DriveOhio
- Family, Career and Community Leaders of America (FCCLA)
- Federal Highway Administration (FHWA)
- Federal Motor Carrier Safety Administration (FMCSA)
- Hospitals throughout Ohio
- Local Government Officials
- Metropolitan Planning Organizations (MPOs) and other Regional Planning Agencies
- Motorcycle Ohio
- Municipal Engineering Departments
- Municipal Police Departments
- National Highway Traffic Safety Administration (NHTSA)
- Ohio Association of Regional Councils (OARC)
- Ohio Bicycle Federation
- Ohio Department of Aging (ODA)
- Ohio Department of Education (ODE)
- Ohio Department of Health (ODH)
- Ohio Department of Natural Resources (ODNR)
- Ohio Department of Public Safety (ODPS)
- Ohio Department of Transportation (ODOT)
- Ohio Local Technical Assistance Program (LTAP)
- Ohio Rail Development Commission (ORDC)
- Ohio Students Against Destructive Decisions (SADD)
- Ohio State Highway Patrol (OSHP)
- Ohio Turnpike and Infrastructure Commission
- Public Transit Agencies
- Public Utilities Commission of Ohio (PUCO)
- Railway Companies
- Safe Communities Programs
- Universities and Colleges throughout Ohio

Appendix A

Emphasis Area Strategies and Action Steps

Appendix A Emphasis Area Strategies and Action Steps Contents

Roadway Departure

Emphasis Area Leader: Jeremy Thompson, ODOT

Strategy #1: Reduce roadway departure crashes on higher risk roads through systemic treatments.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.1	ODOT HSIP, CEAO	Incorporate a context sensitive crash analysis into process for prioritizing roadway segments for roadway departure crashes.	• Requirements established • Priority layer created/updated regularly	Year 2, ongoing	**Modified Ongoing Action**		**X**			
1.2	ODOT HSIP, CEAO	Continue providing assistance for implementation of systemic treatments on priority segments.	• Funding provided annually • Number of priority segments improved	Year 1, ongoing	**Modified Ongoing Action**		**X**			
1.3	ODOT ORE, ODOT HSIP, CEAO	Continue to institutionalize systemic safety treatments.	• Policies/standards for various treatments developed	Year 1, ongoing	**Modified Ongoing Action**		**X**			
1.4	ODOT HSIP	Track and evaluate impact of HSIP funded systemic safety projects on roadway departure crashes.	• Evaluation process established • Number of projects evaluated • Number of roadway departure crashes on priority segments that have been improved	Year 1, ongoing	**Modified Ongoing Action**		**X**			

Strategy #2: Provide assistance and resources to local agencies to improve roadway departure safety.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.1	ODOT HSIP, CEAO	Provide assistance to CEAO striping program to install improved marking and materials.	• Number of routes and line-miles that striping is installed	ongoing	**Continued Ongoing Action**		**X**			
2.2	ODOT HSIP, CEAO	Work with CEAO and locals on locating tre es, ditches, and utility poles in clear zones/right of way (RW) for mitigation.	• Locations identified • Funding provided for mitigation	ongoing	**Modified Ongoing Action**		**X**			
2.3	ODOT HSIP, CEAO	Promote use of SafetyEdge and other roadway departure proven safety Countermeasures systemically.	• More widespread adoption by locals to use these treatments systemically	Year 1, ongoing	**New Action**		**X**			

Strategy #3: Promote and enhance existing LTAP and Local Programming resources for roadway departure safety.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.1	Ohio LTAP, ODOT HSIP	Maintain the Township Sign Program.	• Number of townships that have received signs	ongoing	**Continued Ongoing Action**		**X**			
3.2	Ohio LTAP	Update Ball Bank Indicator & Curve Study Toolbox, promote it as a resource.	• Videos updated and promoted	ongoing	**Modified Ongoing Action**		**X**			
3.3	Ohio LTAP	Continue to offer e-learning course for identifying and locating hazards in the clear zone and right of way.	• Number of training courses offered/Number of personnel that attend	ongoing	**Modified Ongoing Action**		**X**			

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.4	Ohio LTAP	Complete development of of e-learning road diet and Ohio RSA (in person) course.	• Remaining road diet course modules are developed and published • Ohio RSA course developed and offered	Year 2, ongoing	**New Action**		**X**		**X**	
3.5	Ohio LTAP, OTSO	Apply for grant funding to host National Highway Institute (NHI) courses on RwD countermeasures and newly developed engineering strategies to combat Roadway Departure.	• Grant funding applications submitted	Annually	**Ongoing Action**		**X**			

Strategy #4: Review ODOT policy and standards for roadway departure crashes.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
4.1	ODOT ORE, ODOT HSIP, ODOT Operations	Review existing ODOT maintenance policies and standards for opportunities to mitigate roadway departure crashes.	• Maintenance policies reviewed and updated	Year 2, Ongoing	**Modified Ongoing Action**		**X**			
4.2	ODOT ORE, ODOT HSIP	Review and update minimum standards for lane widths, shoulder widths and combinations to reduce crashes. Incorporate context classification.	• Combinations examined • Combinations published	Year 2, ongoing	**Modified Ongoing Action**		**X**			

Strategy #5: Explore nuances of different context environments to better inform future priorities and strategies.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
5.1	ODOT HSIP	Explore the efficacy of lane assist technology in relationship to roadway departure crashes.	• Crash data research initiated	Year 2-3	**New Action**		**X**	**X**		
5.2	ODOT HSIP	Explore relationship with severe roadway departure crashes and distance from trauma centers, access to cell phone service.	• Study/analysis completed	Year 2-3	**New Action**					**X**
5.3	ODOT HSIP, ODOT ORE	Explore Clear Zone requirements in combination with FSI roadway departure crashes. Assess potential for vertical objects to encourage slower speeds, mitigate roadway departure crashes.	• Study initiated, study submitted to TRB, NCHRP	Year 4	**New Action**		**X**		**X**	

Intersections

Emphasis Area Leader: Brenton Bogard, ODOT

Strategy #1: Advance the use of new technologies that make intersections safer.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.1	ODOT HSIP	Review and update complex intersection data in AASHTOWare to improve data accuracy and network screening capabilities.	• Updated list for complex intersections	End of Year 3	**New Action**		**X**			
1.2	ODOT HSIP	Identify ramp intersections with the greatest risk for wrong way driving. Review locations and potential countermeasures to mitigate risk with each ODOT District.	• List of locations developed • Number of locations reviewed with Districts	End of Year 2	**New Action**		**X**			
1.3	ODOT OTSMO	Identify safety/operations issues by using signal analytics. Use findings to implement near real-time signal timing adjustments or plan for medium-term safety improvements.	• Process established for reviewing intersections • Number of intersections reviewed • Number of signal timing adjustments made (and/or longer-term improvements identified)	Year 1, ongoing	**New Action**		**X**			

Strategy #2: Implement proven and low-cost systematic safety improvements to reduce severe intersection crashes.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.1	ODOT HSIP	Promote the use of all-way stop intersections by performing systemic screening using AASHTOWare tools, and distributing results.	• Priority list developed and distributed, updated annually	Year 1, ongoing	**New Action**		**X**			
2.2	ODOT OTSMO	Develop and publish standards for the use of flexible backplates on signal retrofit projects.	• Standards developed • Design guidelines in the TEM and SDRP updated	End of Year 2	**New Action**		**X**			
2.3	ODOT OTSMO	Research effectiveness of the Flashing Yellow Arrow (FYA) pilot projects. If found to be effective, publish additional guidance on when/where to consider implementation and encourage use. Include one-page summary of before/after study results.	• Research conducted • Guidance published • Design guidelines in the TEM and SDRP updated • Priority list (of intersections with excess left turn crashes) developed and distributed	End of Year 2	**Modified Ongoing Action**		**X**			
2.4	ODOT OTSMO	Continue statewide signal timing analysis program that provides consultant assistance to ODOT Districts and local governments to analyze and update signal timing. Include evaluation of pedestrian facilities during signal timing field work, and phase changes (protected turns) based on field observations of queues and crash data.	• Number of analyses conducted • Number of intersections with signal timing updated	Year 1, ongoing	**Continued Ongoing Action**		**X**			
2.5	ODOT ORE	Develop and publish guidance on the application of overhead signal flashers.	• Guidance developed and published	End of Year 2	**Modified Ongoing Action**		**X**			

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.6	ODOT ORE	Develop and publish guidance on the application of Light Emitting Diode (LED) enhanced warning/regulatory signs, including potential legal considerations.	• Guidance developed and published	End of Year 2	**Modified Ongoing Action**		**X**			
2.7	ODOT ORE, ODOT HSIP	Promote the implementation of quick-build intersection safety improvements by developing relevant resources (before/after studies, case studies, etc.) and allocating HSIP funding for implementation.	• Resources developed • HSIP funding allocated	End of Year 2	**New Action**		**X**			

Strategy #3: Educate roadway users on the types of crashes that occur at intersections, new intersection types, signals, and laws.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.1	ODOT HSIP	Continue work with DPS and BMV to update Ohio Digest of Motor Vehicle Laws and driver education materials to include discussion of new intersection types and features.	• Review of existing manual and materials completed • Recommended materials and information developed/shared	End of Year 2	**Continued Ongoing Action**	**X**				

Strategy #4: Develop and implement a comprehensive plan to address angle and left turn crashes at intersections.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
4.1	ODOT HSIP	Promote the use of roundabouts by performing systemic screening using AASHTOWare tools and distributing results.	• Statewide and District priority lists developed and distributed	Year 1, update annually	**New Action**		**X**		**X**	
4.2	ODOT HSIP	Integrate ODOT's ICE tool into project planning processes, including offering additional training and publishing example case studies.	• Additional guidance material developed (including online resources and training/webinars)	End of Year 2	**Modified Ongoing Action**		**X**			
4.3	ODOT HSIP	Incorporate the Safe System Roadway Design Hierarchy into HSIP project selection and scoping.	• HSIP scoring metrics and guidance updated	End of Year 2	**New Action**		**X**		**X**	
4.4	ODOT HSIP, ODOT ORE	Promote the Safe System Roadway Design Hierarchy throughout the Project Development Process to ensure it is considered during scoping and design. Incorporate into relevant guidance documents (e.g., PIP, NEPA, Safety Study Guidelines, L&D, MDG).	• Recommended changes to guidance documents identified • Updates and impacts regularly communicated with District Leadership • Trainings held with District staff	Coordinate with context classification implementation (ideally by end of Year 2)	**New Action**		**X**		**X**	
4.5	ODOT HSIP	Promote the advancement of RCUT intersections by performing systemic screening using AASHTOWare tools and distributing results.	• Statewide and District priority lists developed and distributed	Year 1, update annually	**New Action**		**X**			

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
4.6	ODOT ORE	Expand corridor access management policies and incorporate access management considerations into project scoping processes (e.g., update resurfacing guidelines to require assessment of existing driveways on high-crash corridors, incorporate access management as safety countermeasure, etc.).	• Opportunities to incorporate additional access management requirements identified • Policies/guidelines updated with additional access management requirements	End of Year 3	**New Action**		**X**			

Strategy #5: Develop and implement additional guidance to address pedestrian and bicyclist safety at intersections.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
5.1	ODOT HSIP	Develop and publish a context classification guide that incorporates geometric design considerations based on the surrounding environment and land use characteristics.	• New guidance document developed and published • Training on new guidance developed	End of Year 2	**New Action**		**X**		**X**	
5.2	ODOT HSIP	Synthesize research and best practices regarding intersection design impacts on bike/ped safety. Consider factors such as LOS, intersection size, speed, etc. Use findings to identify changes to existing Ohio manuals and guidelines.	• Summary of research and best practices completed • Potential manual updates identified	End of Year 3	**New Action**		**X**		**X**	

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
5.3	ODOT ORE	Update design guidelines (MDG, TEM, SDRP, SCDs, etc.) to align with the latest PROWAG updates.	• Design guidelines updated and published	Year 1, ongoing	**New Action**		**X**			
5.4	ODOT ORE	Incorporate the Safe System Roadway Design Hierarchy into relevant manuals (e.g., MDG, L&D, etc.) to encourage separation of vulnerable road users at urban intersections.	• Design guidelines updated	Year 1, ongoing	**Modified Ongoing Action**		**X**			
5.5	ODOT ORE	Develop and publish guidance to provide flexibility in use of LOS on projects, especially at locations with pedestrian and bicycle activity. Incorporate guidance into relevant manuals (e.g., SHAMM, L&D, OATS, etc.).	• Design guidelines developed and published	Year 1, ongoing	**New Action**		**X**		**X**	
5.6	ODOT ORE, ODOT HSIP	Integrate existing guidance from MDG for intersection design elements such as Leading Pedestrian Intervals (LPI), into the TEM and other relevant manuals. Identify other opportunities to highlight these proven safety countermeasures.	• Relevant manuals updated • Trainings and other resources updated and distributed	Year 1, ongoing	**Modified Ongoing Action**		**X**			

Strategy #6: Develop and implement additional guidance to address CMV safety at intersections.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
6.1	ODOT OTSMO	Evaluate the use of all-red extensions at signalized intersections with heavy truck volumes. Develop and publish guidance that includes before/after data. Incorporate relevant updates to the TEM, SDRP, and OATS to define criteria to be considered (truck percentages, crash frequency).	• Evaluation completed • Guidance developed and published • Relevant manuals updated	End of Year 3	**Modified Ongoing Action**		**X**			
6.2	ODOT OTSMO	Expand the use of queue discharge detection warning devices.	• Number of locations where devices are installed	End of Year 3	**New Action**		**X**			
6.3	ODOT HSIP, Drive Ohio	Investigate availability and use of telematics data to help prioritize safety improvements.	• Research completed • Telematics data integrated into decision-making	End of Year 3	**Modified Ongoing Action**		**X**			

Strategy #7: Promote and enhance existing LTAP and Local Programming resources for intersection safety.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
7.1	Ohio LTAP	Host Annual Ohio Roundabouts Conference.	• Conference hosted annually	Annually	**Ongoing Action**		**X**		**X**	
7.2	OhioLTAP, OTSO	Apply for grant funding to host National Highway Institute (NHI) courses on intersection safety countermeasures and newly developed engineering strategies to combat intersection crashes.	• Grant funding application submitted	Annually	**New Action**		**X**			
7.3	Ohio LTAP	Identify up to three current in-person intersection safety courses and convert to eLearning.	• Courses identified • Courses available via eLearning	Year 1, end of Year 5	**New Action**		**X**			

Young Drivers

(Ages 15 to 25)

Emphasis Area Leader: Kimberly Schwind, Ohio Traffic Safety Office (OTSO)

Strategy #1: Use peer-to-peer programs to educate teens about key traffic safety topics.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.1	OTSO, SADD	Partner with SADD to conduct peer-to-peer programs in high schools focused on key traffic safety topics.	• Number of students reached annually • Number of SADD members	Year 1, ongoing	**Modified Ongoing Action**	**X**				
1.2	OTSO, FCCLA	Partner with FCCLA to conduct peer-to-peer programs in high schools focused on key traffic safety topics.	• Number of events or topics • Number of students reached	Year 1, ongoing	**Modified Ongoing Action**	**X**				
1.3	OTSO, OSU HECAOD	Utilize college peer educators, student leaders, and the Ohio Collegiate Impaired Road Use Prevention Network to conduct education at college campuses on key traffic safety topics.	• Programs developed • Number of campuses engaged • Number of students reached	Year 1, ongoing	**New Action**	**X**				

Strategy #2: Conduct media campaigns and outreach activities to educate young drivers and their families about safe driving practices.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.1	OTSO	Continue to update and evaluate mass media campaigns aimed at young drivers and their families.	• Campaigns launched • Annual gross impressions	Year 1, ongoing	**Modified Ongoing Action**	**X**				
2.2	OTSO, SADD	Partner with SADD to train representatives to conduct AAA Northwest's *Shifting Gears: The Blunt Truth About Marijuana and Driving* in Ohio high schools.	• Number of trainings conducted • Number of people trained • Number of students reached	Year 1, ongoing	**New Action**	**X**				
2.3	OTSO, OSU HECAOD, ODHE	Partner with Ohio State University (OSU) - Higher Education Center for Alcohol and Drug Misuse Prevention and Recovery (HECAOD) and the Ohio Department of Higher Education (ODHE) to promote safe driving practices to college students.	• Campaigns launched • Number of campaign impressions • Number of campuses engaged • Number of interventions implemented	Year 1, ongoing	**New Action**	**X**				
2.4	Safe Commun-ities Coalitions	Deliver young driver-related traffic safety messages, resources, and programs in communities that have a young driver issue identified in its crash problem identification, through Safe Communities Coalitions and partnerships with community organizations.	• Communities reached • Resources delivered • Number of events • Number of people reached	Year 1, ongoing	**Modified Ongoing Action**	**X**				

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.5	ODH, CIAG	Partner with the Child Injury Action Group (CIAG) to increase the number of resources made available to members of the CIAG occupant protection subcommittee.	• Counties reached • Number of times resources are shared • Number of times GDL toolkit is accessed	Year 1, ongoing	**New Action**	**X**				
2.6	OTSO	Launch a RideShare program targeting older youthful drivers (21-25) to encourage them to plan alternative modes of transportation when consuming impairing substances.	• Program launched • Number of rides redeemed • Number of impressions on campaign outreach • OVI-related fatalities during campaign periods	Year 1, ongoing	**New Action**	**X**				

Strategy #3: Remove barriers to and enhance the driver training experience for Ohio families.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.1	OTSO	Evaluate the effectiveness of a mobile application to track and guide families through the required supervised driving hours.	• Evaluation completed	Year 2-5	**New Action**	**X**				
3.2	OTSO	Provide scholarships to low-income students to complete driver training.	• Number of students that receive scholarships	Year 1, ongoing (funding dependent)	**New Action**	**X**				

Safe Speeds

Emphasis Area Leader: Jeremy Thompson, ODOT

Strategy #1: Continue prioritizing speed management initiatives and develop a network analysis for speed management

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.1	ODOT HSIP, OSHP, ODPS	Continue to Implement high visibility '"safety corridors'" focused on speeding and distracted driving.	• Number of safety corridors • Total miles of safety corridors • Reduction in crash frequency • Reduction in crash severity	Year 1, ongoing	**Continued Ongoing Action**	X	X		X	
1.2	ODOT HSIP	Provide funding to enforce speeds within specified high speed fatal and serious injury corridors, including work zones.	• Reduction in crash frequency • Reduction in crash severity • Reduction in excess (20 mph+) speeding • Funding prioritized for identified corridors	Year 1, ongoing	**Continued Ongoing Action**	X	X		X	
1.3	ODOT HSIP, OHSP	Collaborate with Data Emphasis Area to make crash and speed data more easily available to local jurisdictions.	• Update data availability/accessibility	Year 1, ongoing	**Modified Ongoing Action**		X		X	
1.4	ODOT HSIP, ODOT ORE	Continue to collect data and research techniques on the most effective strategies to control speeds in work zones. (Reference IN, MI, KY, WV, PA, etc.)	• Findings presented to executive management on potential ideas/strategies	Year 1, ongoing	**Modified Ongoing Action**	X	X		X	
1.5	ODOT HSIP	Research Intelligent Speed Assist use and efficacy in other states (GA, VA, WA, DC, etc.).	• Findings presented to executive management on potential ideas/strategies	Year 1, ongoing	**New Action**	X			X	
1.6	ODOT HSIP	Develop network analysis for Speed Management.	• Plan is published	Years 3-4	**New Action**	X	X		X	

Strategy #2: Continue to update the speed setting process for Ohio.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.1	ODOT ORE	Incorporate guidance from the Context Classification Guide into the speed setting process and relevant manuals.	• Ohio manuals updated to reflect context classification guidance	Year 2	**New Action**		**X**		**X**	
2.2	ODOT Operations, ODOT HSIP, Speed Zoning Committee	Explore USLIMITS3 (when available) and update the speed zoning study process used by ODOT and local jurisdictions.	• Changes to Transportation Engineering Manual (TEM) completed • Recommended changes to Ohio Revised Code (ORC) compiled	Ongoing	**Modified Ongoing Action**		**X**		**X**	
2.3	ODOT Traffic Operations, ODOT LTAP	Update and disperse guidance materials and training to understand speed limits and regulations established by the ORC.	• Materials established, posted online, and distributed	Year 1, ongoing	**Modified Ongoing Action**				**X**	
2.4	ODOT Traffic Operations	Continue statewide subscription of speed data. Explore options for ease of availability/ accessibility for agencies to access.	• Speed data purchased • Number of agencies using the data	Year 1, ongoing	**Modified Ongoing Action**		**X**		**X**	
2.5	ODOT HSIP, ODOT DSRTs, ODOT LTAP	Engage with local agencies regarding Statutory Speed Limits and the Speed Zoning Process and its affect on local road safety.	• Number of localities each District engages with	Year 1, ongoing	**New Action**				**X**	
2.6	ODOT HSIP, ODOT ORE	Assess impact of Target Speed Pilot Program. Conduct before/after evaluation and use findings to inform relevant manual updates.	• Summary of Target Speed Pilot assessment developed and published • Potential manual updates identified	Year 2	**New Action**		**X**		**X**	

Strategy #3: Market communication and educational messages that focus on high-risk drivers.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.1	ODOT Comms, OTSO, LPAs	Develop effective Public Service Announcements (PSAs) related to safe speed to be communicated to the public, focus on target audiences.	• PSAs developed • PSAs distributed and aired	Year 2, ongoing	**Modified Ongoing Action**	**X**			**X**	
3.2	ODOT, OTSO, MPOs, RTPOs	Coordinate with safety partners in development and marketing of speed related safety messaging (e.g., BMV, large employers, schools, Motorcycle Ohio).	• Materials developed and distributed	Year 1, ongoing	**Modified Ongoing Action**	**X**			**X**	

Strategy #4: Review and implement national research and best practices related to speed.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
4.1	ODOT ORE	Develop and continue recommendations on speed management standards based on best practice review which could include landuse and zoning for locals agencies.	• Recommendations and/or standards developed	Year 2	**New Action**		**X**		**X**	
4.2	ODOT ORE	Marry existing design standards and manuals with context classification guidance.	• Roadway Design Standards Updated	Year 2	**New Action**		**X**		**X**	

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
4.3	ODOT HSIP, ODOT ORE	Perform Ohio-specific study on the comprehensive relationship between capacity, speed, and safety outcomes.	• Study Completed	Year 3	**New Action**		**X**		**X**	
4.4	ODOT HSIP, ODOT ORE	Research how decision-making based on model inputs (i.e., 20 year traffic projections) influence safety outcomes.	• Synthesis of research completed	Ongoing, Year 1	**New Action**		**X**		**X**	
4.5	ODOT HSIP	Fund projects that right-size existing roads for today (i.e., high injury, overbuilt roads –> reduce lanes and use proven safety countermeasures).	• Funding allocated to projects	Ongoing	**New Action**		**X**		**X**	

Strategy #5: Promote and enhance existing LTAP and Local Programming resources for speed safety.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
5.1	Ohio LTAP, OTSO	Apply for grant funding to host National Highway Institute (NHI) courses on speed safety and newly developed engineering strategies to combat speed related crashes.	• Grant funding application submitted	Annually	**Ongoing Action**	**X**			**X**	
5.2	Ohio LTAP	Identify current in-person speed related safety course and convert to eLearning.	• Course identified • Course available through eLearning	Year 1, Year 3	**New Action**	**X**			**X**	

Impaired Driving

Emphasis Area Leader: Dustyn Fox, Ohio Traffic Safety Office

Strategy #1: Sustain a data-driven and high visibility impaired driving enforcement program

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.1	OSHP, Local Law Enforcement	Conduct high visibility alcohol impaired driving enforcement activity (overtime enforcement, saturation patrols and/or check points) at strategic times throughout the year including required blitzes and the national campaign based on local fatal/serious injury crash problem identification.	• Number of overtime hours worked annually • Number of impaired driving citations annually	Year 1, ongoing	**Continued Ongoing Action**	**X**				
1.2	OSHP, Local Law Enforcement	Conduct overtime enforcement focused on drug impaired drivers using Advanced Roadside Impaired Driving Enforcement (ARIDE) certified officers.	• Number of overtime hours worked annually • Number of impaired driving citations annually	Year 1, ongoing	**Continued Ongoing Action**	**X**				
1.3	OIU	Interview suspect/ witnesses of alcohol involved fatal and serious injury crashes to collect information to "trace back" where the **alcohol** was consumed prior to crash.	• Number of trace back investigations annually	Year 1, ongoing	**Continued Ongoing Action**	**X**				

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.4	OIU	Conduct traceback investigations of fatal and serious injury crashes for adults 21 and over after consumption and/or sale of a **cannabis** product at a licensed permit premise. Additionally, conduct traceback investigations when a person under 21 purchased, in possession, under the influence, and/or furnished cannabis.	• Number of trace back investigations annually	Year 1, ongoing	**New Action**	**X**				
1.5	OSHP, Local Law Enforcement	Conduct classes to certify officers as Drug Recognition Experts (DREs).	• Number of certified DREs • Number of DRE callouts annually	Year 1, ongoing	**Continued Ongoing Action**	X				
1.6	OSHP and OPOTA	Conduct ARIDE courses for law enforcement officers.	• Number of officers trained in ARIDE courses	Year 1, ongoing	**Continued Ongoing Action**	X				
1.7	ODH	Train and certify law enforcement across the state on new instruments to ensure consistency and establish competency.	• Number of law enforcement trained annually	Year 1, ongoing	**Continued Ongoing Action**	**X**				
1.8	TSRP	Provide training and education to prosecutors on how to prosecute impaired driving offenses utilizing Traffic Safety Resource Prosecutors.	• Number of trainings conducted • Number of attendees	Year 1, ongoing	**New Action**	**X**				
1.9	OSHP	Ensure the services of a forensic toxicologist to analyze blood test results and provide expert testimony in impaired driving cases.	• Days to receive results from agency and sent for testing does not exceed 21 days	Year 1, ongoing	**New Action**	**X**				
1.10	OSHP	Launch a recidivism task force.	• Task Force convened	Year 1	**New Action**	**X**				

Strategy #2: Implement an impaired driving mass media campaign and outreach efforts using delivery methods that reach specific segments of the targeted population.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.1	OTSO	Implement a paid media campaign modeled after the NHTSA National Communications Plan and using an appropriate mix of impaired driving messages around the national alcohol mobilization, other impaired related holidays and throughout each year.	• Annual gross impressions (number of people reached)	Year 1, ongoing	**Continued Ongoing Action**	**X**				
2.2	Safe Communities Coalitions	Have each countywide Safe Communities coalition deliver alcohol and drug impaired driving messages and programs throughout the year, including a countywide kick-off event for Drive Sober or Get Pulled Over.	• Number of events annually. • Number of people reached annually. • Number of materials distributed annually.	Year 1, ongoing	**Continued Ongoing Action**	**X**				

Older Road User: Alternative Transportation

Emphasis Area Leader: Kimberly Schwind, OTSO

Subcommittee Leaders: Christine Happel, Age Friendly Innovation Center, OSU College of Social Work ; Sean Bartlett, Central Ohio Area Agency on Aging (COAAA)

Strategy #1: Centralize and distribute information on alternative transportation options in Ohio.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.1	COAAA, Age-Friendly, ODOT Transit, Mobility Managers	Conduct and update hot spot analysis and comprehensive map of older adult population density and transit services available across the state.	• Hot spot update completed • Sharable map based on analysis created	Year 1	**Continued Ongoing Action**	**X**	**X**			
1.2	COAAA, Age-Friendly, ORU Education Subcommittee, Mobility Managers	Research existing resources and develop new resources on the transition from driving and available transportation options. Distribute these resources throughout Ohio, with a special focus on information identified in Action Step 1.1.	• Handouts for CarFit resource bags created • Mobility planning resource developed • Resources distributed	Year 1	**New Action**	**X**	**X**			
1.3	COAAA, Age-Friendly, MPOs and RTPOs, Mobility Managers	Assess feasibility of a statewide expansion of GOhio Mobility as a statewide hub for alternative transportation options.	• Feasibility assessed	Year 3	**New Action**	**X**	**X**			
1.4	ORU AT Subcommitee, COAAA, Age-Friendly	Research and compile existing resources to increase pedestrian safety and post-crash care, and post them on the ORU landing page, as a centralized hub.	• Digital list of links on ORU website • Conversations with partners (travel trainers, Vision Zero Columbus, etc.)	Year 2	**New Action**	**X**				**X**

Strategy #2: Expand or replicate mobility options for older road users to support safe routes to age in place.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.1	Age-Friendly, Mobility Managers	Expand upon results from the recent statewide mobility management survey by conducting in-depth interviews with mobility managers and transportation providers in priority counties (Meigs, Montgomery, Union, Franklin).	• Interviews conducted	Year 1	**New Action**	**X**	**X**			
2.2	Age-Friendly, Mobility Managers	Work with Mobility Managers to conduct four in-depth focus groups in priority counties (Meigs, Montgomery, Union, Franklin).	• Focus groups conducted	Year 1 (four focus groups)	**New Action**	**X**	**X**			
2.3	Age-Friendly, ORU Education Subcommittee	Develop final report on findings from the Safe Routes to Age in Place through engagement with Mobility Managers and Older Residents project.	• Report developed in collaboration with Education & Infrastructure subcommittees	Year 2	**New Action**	**X**	**X**			
2.4	Age-Friendly, ORU Education Subcommittee	Disseminate the final information and report to key stakeholders throughout Ohio.	• Key stakeholders identified • Report distributed to key stakeholders	Year 2	**New Action**	**X**	**X**			

Strategy #3: Create a circulator toolkit and provide technical support for transit and aging organizations.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.1	Age-Friendly	Gather information on current Ohio and national initiatives.	• Information gathered	Year 1	**New Action**	**X**	**X**			
3.2	Age-Friendly	Secure funding for a subject matter expert to develop a circulator toolkit.	• Subject matter expert identified • Funding secured	Year 1	**New Action**	**X**	**X**			
3.3	Age-Friendly, ORU Education Subcommittee	Design and publish a circulator toolkit.	• Toolkit created, designed, published	Year 2	**New Action**	**X**	**X**			
3.4	Age-Friendly	Provide technical support from a subject matter expert to support communities looking to start circulators.	• Technical support provided to communities	Year 3-5	**New Action**	**X**	**X**			

Older Road User: Education

Emphasis Area Leader: Kimberly Schwind, OTSO

Subcommittee Leader: Katie Wright, Ohio Department of Transportation

Strategy #4: Update Stay Fit to Drive branding and messaging.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
4.1	ORU Education Subcommittee, OSU	Conduct messaging research, such as focus groups and surveys.	• Research conducted	Year 1	**New Action**	**X**	**X**			
4.2	ORU Education Subcommittee	Use findings from Action Step 4.1 to develop three different campaigns, including updated branding and logo, messaging and materials. *(Note: Exact campaign type TBD based on research results - education, outreach, advertising, etc.)*	• Logo and branding updated • Key messages updated • Campaign concepts developed • Materials updated when reprinting • Landing page updated	Year 1, ongoing for materials reprints	**New Action**	**X**	**X**			
4.3	ORU Education Subcommittee	Conduct concept testing of proposed campaigns, such as focus groups and/or surveys.	• Campaign concepts tested • Campaigns design and messaging finalized based on testing feedback	Year 1 and early Year 2	**New Action**	**X**	**X**			

Strategy #5: Increase awareness and availability of information, resources, and tools to improve older road users' safety and mobility.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
5.1	ORU Education Subcommittee	Using the new campaigns developed in Strategy 4, conduct campaigns to reach key audiences.	• Campaigns developed and implemented • Impressions tracked	Years 2-5	**New Action**	**X**	**X**			

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
5.2	ORU Education Subcommittee	Develop and/or update materials that support the work of the Older Road User Subcommittees, CarFit, including Older Driver Safety Awareness Week and Senior Day at the Ohio State Fair.	• Materials created and/or updated for ORU Subcommittees • Annual mini campaign created and implemented for Older Driver Safety Awareness Week • Outreach and communications created and conducted at Senior Day at the Ohio State Fair and other events	Ongoing	**Modified Ongoing Action**	**X**	**X**			
5.3	ORU Education Subcommittee	Conduct campaigns or other outreach efforts to support Older Road User Subcommittees.	• Campaigns or other outreach efforts developed and implemented for ORU subcommittees	Ongoing	**Modified Ongoing Action**	**X**	**X**			
5.4	ORU Education Subcommittee	Continue to update and market the Older Road User landing page (https://Transportation.Ohio.gov/olderdrivers).	• Landing page updated & refreshed • Landing page URL included on all ORU materials • Landing page linked on other relevant partners' websites	Ongoing	**Modified Ongoing Action**	**X**	**X**			
5.5	COAAA, ORU Education Subcommittee	Research feasibility of statewide senior mobility summit for older road users, caregivers, and professionals.	• Feasibility assessed	Year 2	**New Action**	**X**	**X**			
5.6	ORU Education Subcommittee, ORU AT Subcommittee, COAAA, Age-Friendly	Research and compile existing resources to increase pedestrian safety and post-crash care, and post them on the ORU landing page, as a centralized hub	• Digital list of links on ORU website • Conversations with partners (travel trainers, Vision Zero Columbus, etc.)	Year 2	**New Action**	**X**				**X**

Strategy #6: Increase access to programs and activities that help older road users stay mobile.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
6.1	COAAA, AARP, ORU Education Subcommittee	Identify and promote programs and activities that help older road users stay mobile.	• Programs identified • Recommendations made for materials or other promotion methods • Materials developed • Materials distributed	Ongoing	**Modified Ongoing Action**	**X**	**X**			
6.2	COAAA	Increase CarFit's reach across Ohio.	• Number of new technicians • Number of returning hosts • Number of events hosted in each ODOT district • Number of CarFit events • Number of attendees at CarFit events	Ongoing	**Modified Ongoing Action**	**X**	**X**			
6.3	COAAA, ORU Education Subcommittee	Develop strategies for CarFit volunteer training and retention.	• Strategies developed • Number of volunteers trained • Number of volunteers retained	Ongoing	**Modified Ongoing Action**	**X**	**X**			
6.4	COAAA, ORU Education Subcommittee, ORU AT Subcommittee, Mobility Managers	Research existing transit travel training programs around the state. Create a handout that centralizes the travel training information and promotes the programs.	• Training programs researched • Training program promoted • Materials created • Materials distributed	Years 2, 3	**New Action**	**X**	**X**			

Older Road User: Infrastructure

Emphasis Area Leader: Kimberly Schwind, OTSO

Subcommittee Leader: Katie Wright, Ohio Department of Transportation

Strategy #7: Evaluate the use and installation of roadway improvements that compensate for the impacts of aging on safe driving.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
7.1	ODOT HSIP	Identify areas that are overrepresented in fatal and injury older road user crashes.	• Map/ list of overrepresented areas	Year 1	**New Action**	**X**	**X**			
7.2	ODOT HSIP	Track and evaluate implementation of roadway improvements in the areas identified in 7.1 that benefit older road users.	• Number of projects/locations implemented • Documentation of evaluation findings	Year 2	**New Action**	**X**	**X**			
7.3	ODOT HSIP	Evaluate effects of target speed program improvements on older road user safety to inform future improvement implementation.	• Analysis conducted • Documentation of evaluation findings	Year 2	**New Action**	**X**	**X**		**X**	
7.4	ODOT HSIP	Add areas and information from 7.1 to the Safety Map Viewer for consideration in Safety Program Application reviews.	• Map added to Safety Map Viewer	Year 2	**New Action**	**X**	**X**			

Strategy #8: Raise awareness and provide training on infrastructure designs that impact older road user safety.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
8.1	ODOT HSIP	Analyze specific facility types that are overrepresented in older road user fatal and serious injury crashes. Compare crash data analysis and survey results of Older Road Users.	• Research conducted • Recommendations made for additional materials, actions	Year 1	**New Action**	**X**	**X**			
8.2	ODOT HSIP	Work with Education Subcommittee to develop resources based on the analysis conducted in Action Step 8.1.	• Materials developed • Materials distributed	Year 2	**New Action**	**X**	**X**			
8.3	Ohio LTAP, OTSO	Apply for grant funding to host National Highway Institute (NHI) courses on older road user safety and newly developed engineering strategies to older road user crashes.	• Grant funding application submitted	Annually	**Ongoing Action**		**X**			
8.4	ODOT HSIP, Ohio LTAP	Create and disseminate existing course(s) to educate engineers, city planners, etc. on the recommended infrastructure and operational improvements to improve the safety of older road users.	• Course completed • Handouts created • Number of course participants	Year 3	**New Action**	**X**	**X**		**X**	
8.5	Ohio LTAP	Convert current older road user safety course to eLearning.	• Course available through eLearning	Year 3	**New Action**					

Strategy #9: Evaluate safety improvements that support safer active transportation for older road users.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
9.1	ODOT HSIP	Using the analysis from 7.1, identify locations that are overrepresented in fatal and injury pedestrian and bicycle crashes involving older road users.	• Research conducted • Recommendations made for additional materials/actions	Year 2	**New Action**	**X**	**X**			
9.2	ODOT HSIP	Track and evaluate implementation of roadway improvements in the areas identified in 9.1 that benefit older road users walking and biking.	• Number of projects/locations implemented • Documentation of evaluation findings	Year 3	**New Action**	**X**	**X**			
9.3	ODOT HSIP	Add areas and information from 9.1 to the Safety Map Viewer for consideration in Safety Program Application reviews.	• Map added to Safety Map Viewer	Year 3	**New Action**	**X**	**X**			

Older Road User: Medically At-Risk Drivers

Emphasis Area Leader: Kimberly Schwind, OTSO

Subcommittee Leader: Julie Dominik, Cleveland Clinic

Strategy #10: Support the assessment process to evaluate a driver's ability to drive safely through public outreach and partnerships with law enforcement

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
10.1	ORU Medically At-Risk Subcommittee, Local Law Enforcement, ODOT HSIP	Target law enforcement agencies in areas that are overrepresented in fatal and injury older road user crashes ("hotspots") to use Driver Orientation Screen for Cognitive Impairment (DOSCI).	• Hotspots identified • Number of new agencies using DOSCI	Year 1	**New Action**	**X**	**X**			
10.2	ORU Medically At-Risk Subcommittee	Research and implement a method to track law enforcement officers' use of DOSCI (e.g., locations, law enforcement agency, add to MCTs in cruisers, add to BMV 2308, etc.).	• Data collection options researched • Tracking tool developed • Tracking tool implemented	Year 1	**New Action**	**X**	**X**			
10.3	ORU Medically At-Risk Subcommittee	Determine feasibility of adding DOSCI to current peace officers' continuing education.	• Research conducted	Year 1	**New Action**	**X**	**X**			

Strategy #11: Educate medical professionals on the recognition, assessment, and reporting of older medically at-risk drivers.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
11.1	ORU Medically At-Risk Subcommittee, ORU Education Subcommittee	Create a mini working group to determine the resources healthcare professionals want (include Ohio's medical schools), on content for resources and to provide feedback on content.	• Research of best practices completed • Working group convened • Healthcare professionals and medical school representatives surveyed	Year 1	**New Action**	**X**	**X**			
11.2	ORU Medically At-Risk Subcommittee, ORU Education Subcommittee	Develop toolkit based on recommendations from action step 11.1 for healthcare professionals. *(Include a PDF and link to physician referral letter in the toolkit.)*	• Toolkit developed • Test market feasibility determined	Year 2	**New Action**	**X**	**X**			
11.4	ORU Medically At-Risk Subcommittee	Create driver safety questions to add to existing screening tool(s) for physicians, nurse practitioners (NP), or physician assistants (PA) to utilize with patients.	• Questions created • Screening tools identified • Questions added to screening tools	Year 1	**New Action**	**X**	**X**			
11.4	ORU Medically At-Risk Subcommittee, ORU Education Subcommittee	Add physician referral letter to ORU landing page.	• Letter added to landing page	Year 1	**New Action**	**X**	**X**			

Strategy #12: Educate legal community professionals on issues involving older medically at-risk drivers.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
12.1	ORU Medically At-Risk Subcommittee, ORU Education Subcommittee	Create mini working group of legal professionals who work with older drivers to determine resources needed.	• Mini working group convened	Year 2	**New Action**	**X**	**X**			
12.2	ORU Medically At-Risk Subcommittee, ORU Education Subcommittee	Create resources for legal professionals, including judges, elder care attorneys, paralegals and their staff.	• Resources developed	Year 2-3	**New Action**	**X**	**X**			
12.3	ORU Medically At-Risk Subcommittee, ORU Education Subcommittee	Distribute resources developed in Action Step 12.2 to legal professionals.	• Legal professionals distribution list developed • Partners identified to assist with distribution • Resources distributed	Year 3, ongoing	**New Action**	**X**	**X**			

Strategy #13: Maintain resources produced by Medically At-Risk Subcommittee.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
13.1	ORU Medically At-Risk Subcommittee, ORU Education Subcommittee	Review materials produced by the Medically At-Risk Subcommittee with the Education Subcommittee, at least once per SHSP plan cycle for needed updates.	• Materials reviewed • Materials updated	Ongoing	**New Action**	**X**	**X**			

Seat Belts

Emphasis Area Leader: Emily Davidson, Ohio Traffic Safety Office (OTSO)

Strategy #1: Sustain high visibility seat belt-related enforcement in jurisdictions and at times with a disproportionate number of unrestrained occupant-related fatalities and serious injuries.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.1	Local Law Enforcement	Conduct highly visible enforcement activities at strategic times throughout the year consistent with the NHTSA Communications Calendar including required blitzes and the national campaign, based on local fatal/serious injury crash problem identification.	• Number of overtime hours worked annually • Number of seat belt citations annually	Year 1, ongoing	**Continued Ongoing Action**	X				
1.2	OSHP	Conduct seat belt TAC squads during the designated holiday Click It Or Ticket (CIOT) mobilization and the national May CIOT mobilization.	• Number of overtime hours worked annually • Number of seat belt citations annually	Year 1, ongoing	**Continued Ongoing Action**	X				

Strategy #2: Implement media campaigns and outreach efforts using delivery methods that reach young drivers with messages about unsafe driving practices.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.1	OTSO	Implement a paid media campaign modeled after the NHTSA National Communications Plan and using an appropriate mix of seat belt use messages around the national seat belt mobilization and throughout each year.	• Annual gross impressions (number of people reached)	Year 1, ongoing	**Continued Ongoing Action**	X				

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.2	Safe Communities Coalitions	Have each countywide Safe Communities coalition deliver seat belt usage messages and programs throughout the year including a countywide kick-off event for CIOT.	• Number of events annually • Number of people reached annually • Number of materials distributed annually	Year 1, ongoing	**Continued Ongoing Action**	**X**				
2.3	OTSO	Educate Ohioans on why seat belt usage is important through Ohio-Specific social norming messaging campaigns that cover topics such as the dangers of not wearing a seat belt, the importance of wearing a seat belt in the back seat, and alignment with other key traffic messages, such as Phones Down.	• Annual gross impressions (number of people reached)	Year 1, ongoing	**New Action**	**X**				
2.4	OTSO, SADD, Local Law Enforcement	Continue to promote elementary school seat belt programs to educate young students and families about the importance of wearing a seat belt.	• Number of students law enforcement is reimbursed for training	Year 1, ongoing	**New Action**	**X**				
2.5	OTSO and National Safety Council	Encourage all employers whose employees drive (both pool and personal cars) to have a policy requiring safety belt use for all occupants and work with the National Safety Council to post all employer policy and education materials on oh.ourdrivingconcern.org.	• National Safety Council web analytics	Year 1, ongoing	**New Action**	**X**				

Strategy #3: Conduct research on seat belt usage and motivating factors.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.1	OTSO and Ohio State University (OSU)	Conduct research on back and front seat belt usage to discover why people don't buckle up as often in the back seat and the best ways to encourage them to buckle up in all seating positions.	• Conduct literature review	Year 1-2	**New Action**	**X**				
3.2	OTSO and Ohio State University (OSU)	Conduct research on motivating factors to wear a safety belt.	• Develop and complete survey	Year 1	**New Action**	**X**				

Motorcycles

Emphasis Area Leader: Michelle Piko, Motorcycle Ohio

Strategy #1: Develop and implement engagement and outreach programs with data-driven safety messages to motorcyclists and motorists.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.1	OTSO	Develop safety messaging directed at motorcyclists about safe behaviors such as getting motorcycle endorsements and training, riding at safe speeds and unimpaired.	• Messaging Developed	Year 1	**Modified Ongoing Action**	**X**			**X**	
1.2	Motorcycle Ohio	Develop a Motorcycle Safety Information Packet to disperse to community partners on key information to share with their constituents. Partners can include Safe Communities Coalitions, law enforcement agencies, tourism bureaus, etc.	• Packet created and distributed	Year 1, ongoing	**New Action**	**X**			**X**	
1.3	Motorcycle Ohio, OTSO	Pursue NHTSA funding for impairment and wearing a helmet advertising.	• NHTSA funding application pursued	Annually	**New Action**	**X**				
1.4	OTSO	Work with media buyer to distribute messaging from 1.1 and 1.3 to target audiences in priority locations.	• Messages shared publicly to targeted audiences	Years 2-5	**Modified Ongoing Action**	**X**			**X**	

Strategy #2: Increase accredited motorcycle training enrollment and attendance and remove barriers for training enrollment.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.1	Motorcycle Ohio, BMV	Advertise motorcycle training through the BMV and other partners like dealerships and insurance companies. Focus advertisements in areas with higher motorcycle crash instances.	• Training advertisements are implemented	Year 1	**New Action**	**X**			**X**	
2.2	Motorcycle Ohio	Seek authorization to provide training to those without a motorcycle Temporary Instruction Permit on closed training courses.	• Training may be offered to those without a Temporary Instruction Permit	Year 2	**New Action**	**X**				
2.3	Motorcycle Ohio	Offer training enrollment on a rolling calendar year.	• Training calendar offerings updated	Year 1	**New Action**	**X**				

Strategy #3: Promote and enhance existing LTAP & Local Programming resources for motorcycle safety.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.1	Ohio LTAP	Create course on street maintenance and work zone issues for motorcycles on local roadways.	• Course Created	Year 3	**New**		**X**			
3.2	Ohio LTAP	Deploy course through in-person training at local public agencies throughout the state.	• Course Deployed	Year 3-5	**New Action**		**X**			

Commercial Motor Vehicles

Emphasis Area Leader: Alan Martin, PUCO

Strategy #1: In alignment with Ohio's Commercial Motor Vehicle Safety Plan (CVSP), maintain a commercial motor vehicle (CMV) inspection program for both new and existing carriers to evaluate safety performance and identify/correct safety risks.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.1	OSHP, PUCO	Implement a six-level inspection program, which conducts inspections at the roadside, or at appropriate facilities, to evaluate the safety of CMV drivers and carriers in Ohio.	• Number of inspections conducted and reported in the national database annually	Year 1, ongoing	**Continued Ongoing Action**	**X**		**X**		
1.2	PUCO	Conduct comprehensive reviews of the entire safety operation of a carrier, including employee interviews and vehicle inspections, when significant safety performance and compliance problems are identified.	• Number of comprehensive reviews conducted annually	Year 1, ongoing	**Continued Ongoing Action**	**X**		**X**		
1.3	PUCO	Conduct on- or off-site safety audits with all new interstate motor carrier companies to ensure they understand safe behaviors on the roadway and the federal and state regulations that motor carriers are required to follow.	• Number of on-site safety audits conducted annually • Number of off-site audits conducted annually	Year 1, ongoing	**Continued Ongoing Action**	**X**		**X**		

Strategy #2: In alignment with Ohio's CVSP, provide CMV safety education and awareness activities to carriers, commercial drivers, and the public.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.1	PUCO, OSHP	Continue to provide safety talks to industry personnel at carrier facilities and public forums. Include "Just Drive" program content within the talks.	• Number of safety talks given annually	Year 1, ongoing	**Modified Ongoing Action**	**X**				
2.2	PUCO	Present information at state trucking association meetings on actions to improve safety.	• Number of meetings each year where safety topics are presented	Year 1, ongoing	**Continued Ongoing Action**	**X**				
2.3	OSHP	Identify and engage in opportunities to inform the public on safe driving behavior near commercial vehicles. Engagement opportunities may include large-scale events such as the State Fair and other relevant public outreach programs.	• Number of materials distributed annually	Year 1, ongoing	**Modified Ongoing Action**	**X**				
2.4	OSHP	Continue to offer training to law enforcement officers on the dangers of unsafe commercial vehicle driving behaviors.	• Number of trainings conducted	Year 1, ongoing	**New Action**	**X**				

Strategy #3: In alignment with Ohio's CVSP, improve CMV safety in work zones.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.1	ODOT ORE	Review and implement the research findings and recommendations from the report titled *Investigation of Commercial Motor Vehicle (CMV)-Related Crashes in Ohio Work Zones*.	• Design standards and policies updated	End of Year 4	**New Action**		**X**			

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.2	ODOT ORE, ODOT OTSMO	Continue to research effectiveness of Queue Detection Warning Systems in permanent applications. Based on findings, identify ways to integrate their use for temporary work zones.	• Research completed • Design standards updated, as needed	End of Year 3	**New Action**		**X**			
3.3	ODOT ORE	Expand education and outreach to decision makers, District Construction Engineers, and designers regarding impacts when cuts are made during the maintenance of traffic phases of construction.	• Development of increased guidance for designers and engineers • Information shared at OTEC and Contractor conferences and meetings	End of Year 2, present annually	**New Action**		**X**			
3.4	ODOT OTSMO	Expand the use of in-cab communications for work zone safety messages by presenting on the positive safety benefits of use.	• Presentations given at relevant conferences and meetings	Year 1, ongoing	**Modified Ongoing Action**	**X**				
3.5	ODOT ORE, ODOT HSIP	Develop and disseminate educational materials about events that can cause large variations in vehicle speeds in work zones (e.g., excessively slow-moving vehicles, work vehicles entering and exiting the construction area, less than optimal pavement conditions, and reduced entrance ramp lengths) to CMV and non-CMV drivers.	• Educational material developed and published	Year 1, ongoing	**New Action**	**X**				

Strategy #4: In alignment with Ohio's CVSP, expand the use of data and technology to identify and target high CMV crash corridors and crash variables to improve safety.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
4.1	OSHP	Review crash data to identify high crash corridors and high crash variables. Pursue grant opportunities for increased enforcement and education focused in these areas.	• High crash variables identified, and reviewed annually • Number of grants pursued and targeted enforcement events completed	Year 1, ongoing	**New Action**	**X**	**X**			
4.2	PUCO	Engage with experts to identify opportunities for strategically using predictive data analysis systems to improve CMV safety.	• Research completed and opportunities for new data integration identified	End of Year 3	**New Action**		**X**			

Strategy #5: Explore opportunities regarding the use and implementation of vehicle safety technology.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Time-frame	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
5.1	TRC	Evaluate passive, active, and aftermarket safety (PAAS) features to understand and document their safety benefit and create educational materials to inform future acquisition of vehicles. This could include recommended steps for an organization to take, such as offering employee training, including safety in the acquisition plan for new vehicles, and policies to implement.	• Evaluation conducted • Materials developed and distributed	Year 3	**New Action**			**X**		

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Time-frame	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
5.2	TRC	Create driver training materials on proper use of recommended PAAS technologies. Explain safety benefits and limitations. Training should cover specific details, such as importance of using technology, alerts to expect, why to leave features active, and expectations of driver vs. technology (i.e., Forward Collision Warning (FCW) will not engage brakes).	• Training materials developed	Year 3	**New Action**	**X**		**X**		

Distracted Driving

Emphasis Area Leader: Michelle May, ODOT

Strategy #1: Explore new data sources, including telematics, to develop a more accurate, complete picture of electronic distractions in Ohio, including when and where distractions are more likely to occur. Use the information to develop more targeted and effective prevention strategies.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.1	ODOT HSIP, OTSO, OSHP	Research potential data sources.	• Resources identified • Data analyzed	Year 1, ongoing	**New Action**	**X**				
1.2	ODOT HSIP, OTSO, OSHP	Using the data, identify and develop prevention strategies.	• Opportunities identified, evaluated, and implemented	Year 2, ongoing	**New Action**	**X**				

Strategy #2: Use focus groups, surveys, and research methods to develop more effective resources and materials to educate road users on the dangers of distractions and shift their behavior to encourage focused driving.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	a	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.1	ODOT HSIP, OTSO, OSHP	Implement focus group research to determine which resources, messages, and materials are most effective in shifting behavior.	• Focus groups surveyed • Resources recommended	Year 1, ongoing	**New Action**	**X**				
2.2	ODOT HSIP, OTSO, OSHP	Develop the materials recommended through the focus group research.	• Materials developed, published and distributed	Year 2-3, ongoing	**New Action**	**X**				

Strategy #3: Develop new resources to assist law enforcement in enforcing and educating the public about driving distractions and the law.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.1	ODOT HSIP, OTSO, OSHP	Convene with Law Enforcement to review updated data from Strategy 1 to determine when and where to enforce and educate about distracted driving.	• Distracted Driving enforcement/ education times and locations identified	Year 1, ongoing	**New Action**	**X**				
3.2	ODOT HSIP, OTSO, OSHP	Using focus group recommendations from Strategy 2, create law enforcement resources/materials regarding distracted driving laws.	• Resources developed, published and distributed by Law Enforcement	Year 2, ongoing	**New Action**	**X**				

Pedestrian and Bicycle: Planning & Policy

Emphasis Area Leader: Cait Harley, ODOT

Strategy #1: Encourage and support statewide, regional, and local planning activities dedicated to the needs of Vulnerable Roadway Users (VRU).

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.1	ODOT, MPOs, RTPOs	Update and promote core planning resources and provide technical assistance on studies and plans.	• Number of resources updated • Number of non-motorized studies/plans completed	Year 1, ongoing	**Modified Ongoing Action**		**X**		**X**	
1.2	ODOT	Develop and publish statewide maps, plans, and priorities related to VRU safety.	• New maps or layers developed (i.e., priority buggy corridors, etc.) • Statewide systemic safety analysis updated • Statewide AT Demand and Need analyses updated • Statewide pedestrian and bicycle plan updated and published	Year 2, ongoing	**Ongoing Action**		**X**			
1.3	ODOT	Develop a statewide context classification guide to serve as a supplemental resource on land use and context-sensitive approaches to transportation planning, policy, and project development.	• Ohio contexts defined • Guide published • Number of resources integrating the guide • Number of practitioners trained on guide and related applications	Year 3	**New Action**		X		X	

Strategy #2: Mainstream accommodations for VRUs into project scoping, design, and construction.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.1	ODOT	Continue to evaluate the relationship between land use and VRU safety and document emerging uses for using context classification.	• Best practices produced • Updates to planning guidance and tools completed	Year 3	**Ongoing Action**		**X**		**X**	
2.2	ODOT	Review and enhance the Project Development Process (PDP) to include additional consideration for VRU needs and context.	• PDP updates published	Year 3, ongoing	**Modified Ongoing Action**	**X**				
2.3	ODOT	Develop a toolbox and other resources related to VRU safety countermeasures (e.g., road diets, buggy lanes, gateway treatments, traffic calming, crosswalk markings, demonstration projects, etc.).	• Toolkits published	Year 3	**New Action**		**X**			
2.4	ODOT, MPOs, RTPOs, LPAs	Encourage local and regional integration of context sensitive design and other decision making.	• Number of practitioners trained in context sensitive approaches • Number of complete streets policies adopted • Number of policies or procedures updated to reference land use context	Year 3	**New Action**		**X**		**X**	

Strategy #3: Review ODOT procedures and manuals that impact roadway design decision-making.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.1	ODOT	Continue to update the speed zone study process based on national and state best practices.	• Speed zone study process updated	Year 3	**New Action**				**X**	
3.2	ODOT, MPOs, RTPOs	Research traffic forecasting practices and consider updated guidance for state and regional traffic models.	• Support funding for research secured • Research conducted • Guidance updated	Year 4	**New Action**		**X**			
3.3	ODOT	Participate in research regarding peak hour vehicle Level of Service (LOS) requirements to mitigate impact on VRUs.	• LOS requirements updated based on research • Additional Performance Measures of Effectiveness (MOEs) evaluated	Year 2	**New Action**		X		X	
3.4	ODOT	Continue to update Multimodal Design Guide (MDG), Location & Design Manual (L&D), Transportation Engineering Manual (TEM), and other design manuals pertaining to VRU accommodations, traffic control, and facility design.	• Annual updates published	Ongoing	**Modified Ongoing Action**		X		X	

Strategy #4: Seek opportunities to support the maintenance of dedicated VRU facilities.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
4.1	ODOT, LPAs	Define current active transportation maintenance roles, responsibilities, and resources within the state.	• Updates to RIMR or a standalone resource published	Year 2, ongoing	**Ongoing Action**		**X**			
4.2	ODOT	Develop a maintenance cost estimating tool that can assist in the development of planning-level cost estimates for annual maintenance.	• Tool developed and published	Year 3	**New Action**		**X**			
4.3	ODOT, MPOs, RTPOs, LPAs	Conduct a best practice scan on opportunities to better consider facility lifecycle costs and longevity in funding awards.	• Findings integrated into project selection	Year 5	**New Action**		**X**			

Strategy #5: Provide clarity within the Ohio Revised Code that impacts VRU safety.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
5.1	ODOT, LPAs, Advocacy Partners	Address legislative ambiguities related to implementing sidewalk and bikeway projects.	• Ambiguities and best practices documented	Year 3	**Modified Ongoing Action**		**X**			
5.2	ODOT, LPAs, Advocacy Partners	Clarify rules governing roadway behavior and interactions between motorists and non-motorists at intersections and crossings.	• Clarifications and best practices documented	Year 3	**Modified Ongoing Action**	**X**				

Pedestrian and Bicycle: Implementation

Emphasis Area Leader: Cait Harley, ODOT

Strategy #6: Promote and support projects that seek to develop safe, comfortable facilities for VRUs through program funding.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
6.1	ODOT	Encourage projects that provide dedicated facilities to VRUs.	• Amount of funding for dedicated VRU facilities	Year 1, ongoing	**Modified Ongoing Action**			**X**		
6.2	ODOT, MPOs, RTPOs, LPAs	Emphasize projects that re-allocate space for VRUs and/or reduce speeds/volumes on shared facilities.	• Number of road diets, traffic calming projects funded	Year 1, ongoing	**Modified Ongoing Action**		**X**			
6.3	ODOT, MPOs, RTPOs, LPAs	Support projects that promote network build-out and connectivity (including connections to transit).	• Amount of funding on network build-out projects	Year 1, ongoing	**Modified Ongoing Action**	**X**	**X**			
6.4	ODOT, MPOs, RTPOs, LPAs	Implement improvements to the State & US Bike Route System.	• System project list developed • Percent of system with Level of Traffic Stress (LTS) 1 and 2 in urban areas, 3 in rural	Year 1, ongoing	**Modified Ongoing Action**		**X**			
6.5	ODOT, MPOs, RTPOs, LPAs, Advocacy Partners	Encourage implementation of dedicated bus lanes where appropriate.	• Number of projects funded that include dedicated bus lanes	Year 1, ongoing	**New Action**	**X**	**X**			
6.6	ODOT	Develop guide on developing and implementing Quick-Build projects.	• Quick-Build resources developed	Year 2	**New Action**		**X**		**X**	

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
6.7	ODOT, MPOs, RTPOs, LPAs, Advocacy Partners	Provide training and technical assistance related to Quick-Build projects.	• Number of communities assisted • Number of partners trained	Year 2, ongoing	**New Action**		**X**		**X**	

Strategy #7: Support transformational projects along high-risk roadways that increase safety and address user needs.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
7.1	ODOT, MPOs, RTPOs, LPAs	Identify and address high-risk corridors to improve VRU safety.	• High-priority corridors map produced • Number of projects funded on high-priority corridors	Year 1, ongoing	**Modified Ongoing Action**		**X**			
7.2	ODOT	Enhance coordination with other programs to enable higher-cost, complex project delivery.	• Amount of funding awarded • Number of projects initiated	Year 2, ongoing	**Modified Ongoing Action**		**X**			
7.3	ODOT, LPAs	Incorporate bicycle and pedestrian crossings into major highway interchanges (e.g., Diamond, Single-point Urban Interchanges (SPUIs), Restricted Crossing U-Turns, etc.).	• Number of interchange projects incorporating bicycle and pedestrian crossings annually	Year 1, ongoing	**Modified Ongoing Action**		**X**			

Strategy #8: Assist local communities in VRU project development and implementation.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
8.1	ODOT, MPOs, RTPOs	Leverage funding sources to reduce project development burden on local project sponsors.	• Number of projects provided engineering or design assistance	Year 1, ongoing	**Modified Ongoing Action**		**X**			
8.2	ODOT	Expedite non-complex project delivery (Quick Build) through strategic use of non-federal funds and other resources and guidance.	• Guidance or resource on demonstration projects published • Amount of state funding spent on projects	Year 2, ongoing	**New Action**		**X**			
8.3	ODOT	Enhance technical assistance to local governments on participating in Highway Safety Program to advance VRU priorities.	• Number of communities assisted	Year 1, ongoing	**Modified Ongoing Action**		**X**			
8.4	ODOT	Develop ped/bike facility cost estimation tools to assist local partners with estimating realistic project costs.	• Cost estimation resources published	Year 1	**New Action**		**X**			

Pedestrian and Bicycle: Need

Emphasis Area Leader: Cait Harley, ODOT

Strategy #9: Assist local communities with funding challenges.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
9.1	ODOT, MPOs, RTPOs	Encourage creative funding packages or partnerships to address local match challenges.	• Amount of TRC, HSIP, or other funds leveraged	Year 1, ongoing	**Ongoing Action**		**X**			
9.2	ODOT, MPOs, RTPOs	Develop approach for prioritizing critical maintenance needs/projects in program funding.	• Process developed • Percent of program funding spent on maintenance projects	Year 3, ongoing	**Ongoing Action**		**X**			
9.3	ODOT, MPOs, RTPOs	Provide technical assistance on project applications for VRU safety.	• Number of communities assisted	Year 1, ongoing	**Modified Ongoing Action**		**X**			
9.4	ODOT, MPOs, RTPOs, LPAs	Assist local partners with resources to support federal grant development.	• Number trained on new Benefit-Cost Analysis tool • Amount of funding leveraged	Year 1, ongoing	**New Action**		**X**			

Strategy #10: Coordinate with local governments on project delivery challenges.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
10.1	ODOT, MPOs, RTPOs, LPAs	Focus planning and project development assistance in high-need areas.	• Technical assistance provided annually in high need areas	Year 1, ongoing	**Modified Ongoing Action**		**X**			
10.3	ODOT, MPOs, RTPOs, LPAs, Advocacy Partners	Support high-need communities with local match challenges.	• Funding mechanisms identified • Number of communities supported	Year 1, ongoing	**New Action**		**X**			

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
10.3	ODOT, MPOs, RTPOs	Prioritize project development assistance through funding and consultant support as part of funding award packages to high-need communities.	• Percent of funding spent in disadvantaged communities (i.e. High AT Need)	Year 1, ongoing	**Ongoing Action**		X			
10.4	ODOT, MPOs, RTPOs, LPAs, Advocacy Partners	Engage representatives from disadvantaged communities to further inform assistance and priorities.	• Summary of findings documented • Next steps identified	Year 1, ongoing	**New Action**	X	X		X	X

Strategy #11: Produce tools and resources that ensure high need populations are considered within planning, funding, scoping, design, and construction.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
11.1	ODOT, LPAs, Advocacy Groups	Create specialized outreach and engagement materials for traditionally underserved communities.	• Materials/surveys developed • Number of underserved communities engaged	Year 2, ongoing	**Modified Ongoing Action**	X	X			
11.2	ODOT	Develop standardized planning and project selection tools related to safety and need, including people with disabilities.	• Tools produced • AT Need Analysis Map updated • Data on people with disabilities expanded	Year 2, ongoing	**New Action**	X	X			
11.3	ODOT, MPOs, RTPOs, LPAs	Quantify and establish "need" as part of project prioritization, development, and selection procedures.	• Procedures updated • Percent of projects funded in high need communities	Year 2, ongoing	**New Action**		X			
11.4	ODOT, MPOs, RTPOs, LPAs	Encourage funding programs to compare projects of similar community size/density to compete for federal funding.	• Percent of project funding in small, mid, and large size communities	Year 3, ongoing	**New Action**		X			

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
11.5	ODOT, MPOs, RTPOs, LPAs, Advocacy Partners	Ensure projects improve safety for all users and do not unintentionally worsen racial, economic, or geographical disparities.	• Number of projects reconsidered mitigated • Number of projects considered 'reconnecting communities'	Year 1, ongoing	**New Action**	**X**	**X**			

Pedestrian and Bicycle: Data

Emphasis Area Leader: Cait Harley, ODOT

Strategy #12: Expand non-motorized safety data collection and analysis.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
12.1	ODOT	Provide technical assistance to local communities and regional partners to analyze VRU crash data.	• Number of tools developed • Number of agencies assisted	Ongoing	**Modified Ongoing Action**		X		X	
12.2	ODOT, MPOs, RTPOs	Expand the availability of the Level of Traffic Stress (LTS) data across the state.	• Statewide LTS maps published	Year 1, ongoing	**New Action**		X			
12.3	ODOT, MPOs, RTPOs, LPAs	Expand the availability and usage of telematics data and video processing to inform proactive safety improvements (i.e., "near miss" or hard braking data).	• Research options for accessing and using telematics data	Year 3	**New Action**	X	X	X	X	X
12.4	ODOT, ODH, ODPS	Explore data gaps related to injury surveillance, emergency response time, and outcomes.	• White paper on data needs developed	Year 3	**New Action**			X		X

Strategy #13: Develop statewide non-motorized asset inventory.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
13.1	ODOT	Inventory pedestrian and bicycle facilities on State & U.S. Routes.	• Percentage of ODOT system collected • Level of Traffic Stress Analysis completed	Ongoing	**Modified Ongoing Action**		X			

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
13.2	ODOT, MPOs, RTPOs, LPAs	Develop statewide data collection guidance.	• Updated ped/bike data schema • Development of business rules on management and maintenance of data	Ongoing	**Modified Ongoing Action**		**X**			
13.3	ODOT, MPOs, RTPOs, LPAs	Explore asset data collection methods and opportunities beyond State & U.S. Routes.	• Methods and costs for collecting additional data identified and explored	Year 5	**New Action**		**X**			

Strategy #14: Develop and publish non-motorized volume data.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
14.1	ODOT, MPOs, RTPOs, LPAs	Grow statewide non-motorized traffic monitoring program.	• Number of count stations operational/year • Number of local/regional partners integrated into NMDS • Annual report completed	Ongoing	**Modified Ongoing Action**		**X**			
14.2	ODOT, MPOs, RTPOs, LPAs	Utilize technology (i.e. third-party data) and provide assistance to extrapolate non-motorized activity metrics.	• Data company contracted • Resources provided	Ongoing	**Modified Ongoing Action**		**X**			
14.3	ODOT, MPOs, RTPOs, LPAs	Provide resources and assistance for VRU counts (e.g., peds, bikes, buggy counts).	• Short duration counts collected • Equipment installation assistance provided	Year 5	**New Action**		**X**			

Pedestrian and Bicycle: Education

Emphasis Area Leader: Cait Harley, ODOT

Strategy #15: Educate elected officials at all levels about the importance of prioritizing a safe transportation system for VRUs.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
15.1	ODOT, MPOs, RTPOs, LPAs, Advocacy Partners	Work with local communities and partners to provide resources, toolkits, and guidance to communicate directly with local leaders.	• Resources published	Ongoing	**Continued Ongoing Action**	X	X	X	X	
15.2	ODOT, MPOs, RTPOs, LPAs, Advocacy Partners	Promote statewide economic impact study related to bicycle and pedestrian facilities.	• Number of presentations • Number of website visits	Year 1	**New Action**		X			

Strategy #16: Provide bicycle and pedestrian-related technical assistance and education to practitioners, including planners, engineers, law enforcement, and their partners.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
16.1	ODOT, Ohio LTAP	Expand the Local Technical Assistance Program (LTAP) and the Active Transportation Academy to include new VRU safety topics (i.e. Quick Build).	• New training developed • Number of trainees	Ongoing	**Modified Ongoing Action**		X			
16.2	ODOT, Ohio LTAP	Offer Design Training for engineers doing business with ODOT.	• Percentage of consultants with prequalification	Year 1, ongoing	**Ongoing Action**		X			

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
16.3	ODOT, ODPS, LPAs, Advocacy Partners	Conduct law enforcement training to enhance safety of VRUs through community outreach and enforcement (e.g., speed, yielding, driving/parking in bike lane, etc.).	• Number of trainings hosted • Number of officers trained	Year 2, ongoing	**Ongoing Action**	X	X		X	X
16.4	ODOT, ODPS	Recommend OH-1 training enhancements to better report on VRU crashes (e.g., crash types, fault, etc.).	• Crash report training updated	Year 4	**New Action**	X	X		X	

Strategy #17: Develop educational materials for roadway users.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
17.1	ODOT, ODPS, LPAs	Support statewide public safety campaigns.	• Materials developed • Number of impressions	Year 1, ongoing	**New Action**	X	X		X	
17.2	ODOT	Establish and maintain an ODOT clearinghouse for VRU safety education materials.	• Clearinghouse developed	Ongoing	**Modified Ongoing Action**	X	X		X	
17.3	ODOT, ODPS	Increase information available through Drivers Education, Curriculum, BMV, and testing.	• Materials developed • Number of impressions	Year 5	**New Action**	X	X		X	
17.4	ODOT, Ohio LTAP, ODPS, LPAs, Advocacy Partners	Support local and regional educational programs through non-infrastructure funding opportunities.	• Number of non-infrastructure awards • Amount of funding	Year 1, ongoing	**New Action**	X	X	X	X	X

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
17.5	ODOT, ODPS, LPAs, Advocacy Partners	Develop educational materials for roadway users on new infrastructure treatments being built in their community to build awareness and acceptance.	• Materials developed • Number of impressions	Year 3, ongoing	**New Action**	**X**				
17.6	ODOT, ODPS, LPAs, Advocacy Partners	Purchase and distribute safety materials and equipment statewide.	• Number of materials distributed (e.g., bike lights, buggy lights)	Year 1, ongoing	**New Action**	**X**	**X**			
17.7	ODOT, MPOs, RTPOs, LPAs, Advocacy Partners	Encourage reductions in vehicle miles traveled (VMT) by promoting multimodal options.	• Amount of funding for Transportation Demand Management (TDM) projects • Number of materials developed	Ongoing	**Modified Ongoing Action**	**X**	**X**		**X**	

Pedestrian and Bicycle: Collaboration

Emphasis Area Leader: Cait Harley, ODOT

Strategy #18: Strengthen ongoing coordination and collaboration between ODOT and its partners.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
18.1	ODOT, MPOs, RTPOs, LPAs	Target bicycle and pedestrian outreach to high need/demand communities.	• Technical Assistance provided annually in high need/demand areas	Ongoing	**Continued Ongoing Action**		**X**			
18.2	ODOT, MPOs, RTPOs, LPAs	Host regional meetings to coordinate network implementation and project development opportunities.	• Number of attendees at annual meetings	Ongoing	**Modified Ongoing Action**		**X**			
18.3	ODOT, MPOs, RTPOs, Tourism Ohio, LPAs, Advocacy Partners	Increase opportunities to raise awareness and share information through conferences, forums, and training.	• Number of events annually between ODOT and local partners	Ongoing	**Continued Ongoing Action**		**X**			
18.4	ODOT, Advocacy Partners, FHWA, NHTSA	Coordinate with state and federal partners to support improved vehicle safety requirements for VRU.	• Policy updates surrounding vehicle size/weight, ped detection, braking, etc.	Year 5	**New Action**			**X**		
18.5	ODOT, State Agencies, MPOs, RTPOs, LPAs, Advocacy Partners	Maintain a multi-agency advisory committee that meets regularly to discuss VRU safety.	• Number of committee meetings annually	Ongoing	**Modified Ongoing Action**	**X**	**X**			

Strategy #19: Strengthen ongoing coordination and collaboration between ODOT and regional planning organizations, focused on VRU planning and project development.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
19.1	ODOT, MPOs, RTPOs	Better understand regional priorities and use of federal funding to address VRU needs.	• Regional VRU data/needs tracked • Spending on VRU projects tracked	Year 3, ongoing	**New Action**	X	X		X	
19.2	ODOT, MPOs, RTPOs	Coordinate with regional partners on prioritizing projects that improve VRU safety.	• Recommendations developed for MPOs/RTPOs on VRU projects and scoring	Year 1, ongoing	**New Action**	X	X		X	

Strategy #20: Strengthen ongoing coordination and collaboration between ODOT and other state agencies.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
20.1	ODOT, ODH	Maintain strong partnerships between ODOT and ODH through active transportation planning, community engagement, and education.	• Number of coordination meetings annually	Ongoing	**Modified Ongoing Action**	X	X			
20.2	ODOT, ODNR	Maintain and build partnerships between ODOT and ODNR, with a focus on forwarding strategic trail initiatives.	• Number of projects coordinated annually	Ongoing	**Continued Ongoing Action**		X			
20.3	ODOT, ODE, ODPS	Build a partnership between ODOT, ODE, and ODPS to pursue education and enforcement initiatives.	• Number of bicycle/pedestrian materials shared annually	Ongoing	**Continued Ongoing Action**	X	X		X	X

Highway Railroad Crossings

Emphasis Area Leader: Matt Dietrich and Tim Brown, ORDC

Strategy #1: Expand the use of new and proven crash prevention methods at grade crossings. This aligns with the Ohio Highway Rail Grade Crossing State Action Plan (SAP) goal to reduce the number and rate of crashes, incidents, injuries, and fatalities involving trains.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.1	ORDC	Increase the number of locations with active warning devices.	• Number of grade crossings upgraded from passive to active warning systems	Year 1, ongoing	**Continued Ongoing Action**		**X**			
1.2	ORDC, PUCO	Convert existing crossing locations with flashing lights only to flashing lights and gates.	• Number of crossings upgraded	Year 1, ongoing	**Modified Ongoing Action**		**X**			
1.3	ORDC, PUCO	Continue the upgrade and/or modernization of existing active warning devices.	• Number of crossings with circuitry, obsolete equipment, or MUTCD compliance related improvements	Year 1, ongoing	**Modified Ongoing Action**		**X**			
1.4	ORDC	Expand the installation or improvement of devices or other treatments for traffic queue management at crossings. This aligns with the Ohio SAP goal of identifying mitigation efforts to reduce incidents caused by queuing at crossings.	• Number of new or improved locations	Year 1, ongoing	**Modified Ongoing Action**		**X**			
1.5	PUCO, Ohio LTAP	Expand outreach to local government agencies to inform them about funding opportunities available for the installation of supplemental safety enhancements at grade crossings. Follow-up with agencies to encourage submittal of funding applications.	• Number of locations improved • Number of communities met with	Year 1, ongoing	**Modified Ongoing Action**		**X**			

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.6	ORDC	In alignment with the Ohio SAP goal of preventing trespasser accidents, incidents, injuries, and fatalities, continue coordination between ORDC and individual railroads to determine the best approaches for the implementation of non-motorized user accommodations at highway-railroad grade crossings.	• Performance of post-diagnostic review meeting with all applicable agencies when non-motorized needs are identified to discuss feasibility/funding	Year 1, ongoing	**Modified Ongoing Action**		**X**			
1.7	ORDC	Develop an audit program for preemption locations to ensure existing rail crossing safety devices and traffic control devices are working as intended. Program should define the frequency of which audits should occur.	• Program formally created • Number of audits performed annually	Year 1, ongoing	**New Action**		**X**			
1.8	ORDC	Continuously monitor blocked crossing data, and as problem crossings are identified work with the railroads and local communities to resolve.	• Data reviewed annually, and coordination performed as needed	Year 1, ongoing	**Modified Ongoing Action**		**X**			
1.9	ORDC	Maintain a program to repair deficient railroad crossing surfaces on the state highway system.	• Program developed • Number of crossing surfaces improved	By end of Year 2	**New Action**		**X**			
1.10	ORDC	Expand ODOT's Project Initiation Package to encourage considerations for implementing design improvements at railroad crossings when undertaking nearby highway improvement projects and increase coordination with ORDC.	• Project Initiation Package updated • Number of crossings improved/upgraded	By end of Year 2	**New Action**		**X**			

Strategy #2: Reduce the overall number of public grade crossings in Ohio.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.1	ORDC	Identify redundant grade crossings and negotiate for closure. Investigate revisions to crossing closure incentives to increase participation.	• Perform research of industry best practices • Use research to draft suggested program changes • Number of crossings closed	Year 1, ongoing	**Modified Ongoing Action**		**X**			
2.2	ORDC	Support community efforts for grade separation by developing federal grant applications for grade separation.	• Number of grant applications submitted	Year 1, ongoing	**Modified Ongoing Action**		**X**			

Strategy #3: In alignment with the Ohio Rail SAP, support education and outreach efforts to increase grade crossing safety.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.1	Ohio Operation Lifesaver	Expand community outreach and public education resources, including safety trains.	• Number of public awareness campaigns published • Promote the use of safety train and help advertise when train rides are occurring	Year 1, ongoing	**New Action**	**X**				
3.2	Ohio Operation Lifesaver	Research existing content in the Ohio Digest of Motor Vehicle Laws and drivers education and identify opportunities for improvement.	• Mark-up existing manual with suggested updates and additions	Year 1, ongoing	**New Action**	**X**				

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.3	Ohio Operation Lifesaver	Expand enforcement efforts by coordinating with law enforcement to increase enforcement at high problem areas, researching other state laws for disobeying warning devices, and identifying potential improvements to Ohio laws to encourage compliance. This aligns with the Ohio SAP goal to improve consistency and effectiveness of enforcement and compliance programs.	• Identify high problem areas, and coordinate with law enforcement • Promote use of positive enforcement campaigns • Conduct research and document findings/recommendations	Year 1, ongoing	**New Action**	**X**				

Strategy #4: Use advanced data and technology to improve the identification of high-risk highway-rail grade crossings to align with the Ohio SAP goal of improving the identification of high-risk highway-rail grade crossings.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
4.1	ORDC, PUCO	Expand near miss data sharing between the state and railroads to help prioritize locations for education outreach and/or infrastructure improvements.	• Where available, review and share near-miss data during pre-diagnostic	By end of Year 3, revisit at least annually	**New Action**	**X**	**X**			
4.2	ORDC	Research effectiveness of various engineering and infrastructure improvements such as four quadrant gates, dynamic detection, and median barriers that reduce ability to circumvent warning devices.	• Research conducted and recommendations for implementation developed • Number of crossings improved	By end of Year 2	**New Action**		**X**			
4.3	ORDC, PUCO	Update existing systematic approach to analysis, evaluation, prioritization, and programming for rail crossing improvement projects.	• State scoring is equal to or better than USDOT data	Year 1, ongoing	**New Action**		**X**			

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
4.4	ORDC, ODOT HSIP	Perform detailed crash analysis to understand the types of crashes occurring near rail crossings. Use data to understand crash hot-spots and potential improvements to rail crossing approaches.	• Data analysis completed, and trends identified	By end of Year 2, update annually	**New Action**		**X**			

Connected and Automated Vehicles

Emphasis Area Leader: Andrew Bremer, DriveOhio

Strategy #1: Increase the number of partnerships with Ohio K-12 educators, higher education, and research institutions, to develop Ohio's workforce and research new technologies in collaboration with industry, with an emphasis on safety.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.1	DriveOhio, ODOT Planning & Research	Continue engaging with students through ODOT's Student Transportation Advancement Research (STAR) Program and include requests for topics that focus on highway safety through deployments of smart mobility technologies.	• Safety topic selected in STAR program	Year 1, ongoing	**New Action**	X	X	X		
1.2	DriveOhio, TRC, ODE, ODHE, Ohio LTAP	Continue expanding free online content in the DriveOhio Educator Toolkit (supporting K-12 education) and the DriveOhio Campus Collection (supporting higher education), including content focused on smart mobility technologies that improve highway safety and workers that maintain highways.	• Number of content modules focused on safety • Number of downloads for Educator Toolkit • Number of downloads for Campus Collection	Year 1, ongoing	**New Action**	X	X	X		
1.3	DriveOhio, ODOT Planning & Research	Conduct automated vehicle (AV) research projects with other states through the ODOT-led pooled fund study for AVs. Partner with the Virginia-led connected vehicle (CV) pooled fund study, where applicable, to join both CV and AV technology to advanced Cooperative Automated Vehicle technology.	• Number of project outcomes incorporated into national practices/approach • Number of states particpating in the pooled fund	Year 1, ongoing	**Continued Ongoing Action**			X		

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.4	DriveOhio, ODOT Planning & Research	Coordinate between ODOT Planning and Research and DriveOhio to link DriveOhio pilots and deployments to ODOT Planning and Research goals and objectives.	• Number of DriveOhio and ODOT coordinated projects • Number of agency objectives identified/ resolved by potential DriveOhio applications/ projects	Year 1, ongoing	**Continued Ongoing Action**	X	X	X		
1.5	DriveOhio, ODOT Const. Admin., ODOT External Workforce Dev.	Engage post-secondary students in technology deployments that require infrastructure including connected vehicle installations and ITS communications to grow their awareness and understanding of these technologies functions in highway safety. This can be done through the Construction Inspection Workforce Program (CIWP) and capstone/classroom projects, leveraging free content and resources available through the DriveOhio Campus Collection website.	• Number of programs partnered with • Number of students engaged	Year 2, ongoing	**New Action**		X	X		
1.6	DriveOhio	Increase awareness of V2X benefits and technology status through workforce education / training events.	• Number of events held per year • Number of local V2X deployments each year	Year 1, ongoing	**New Action**	X	X	X		

Strategy #2: Increase the number of public/private CAV partnerships, pilots, and deployments in all regions of the state.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.1	DriveOhio	Collaborate with product and service providers with an emphasis on safety to enhance the value of those offerings for DriveOhio and ODOT.	• Number of providers where enhanced value	Year 1, ongoing	**New Action**		**X**	**X**		
2.2	DriveOhio, ODOT OTSMO	Develop a new statewide Connected Vehicle Deployment Plan.	• Statewide Connected Vehicle Deployment Plan completed	Year 1, ongoing	**New Action**	**X**	**X**	**X**		
2.3	DriveOhio,TRC	Increase the number of partnerships with private sector innovators to research and develop solutions to transportation issues each year.	• Number of partnerships each year • Number of demonstrations each year	Year 1, ongoing	**Continued Ongoing Action**		**X**	**X**		
2.4	DriveOhio	Share and grant access to USDOT Automated Driving System (ADS) grant data that must be maintained for five years.	• Number of researchers engaging with data • Number of courses utilizing data in the classroom • Number of insights gained • Form to request access added to website	Year 1, ongoing	**New Action**	**X**	**X**	**X**		

Strategy #3: Advance Ohio's work in CAV standards and specifications and the state's influence in national conversations on CAV.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.1	DriveOhio, ODOT Operations	Participate in nationally recognized groups, associations, and organizations such as ITE, ITS Midwest, and ITS America to influence national conversations on CAV.	• Number of meetings attended • Number of presentations at national CAV meetings Incorporation of ODOT divisions into these memberships	Year 1, ongoing	**Continued Ongoing Action**	X	X	X		
3.2	DriveOhio, ODOT Traffic Operations	Influence and produce white papers, specifications, and standards that are promoted by nationally recognized groups, associations and organizations.	• Number of providers where enhanced value	Year 1, ongoing	**Continued Ongoing Action**		X			
3.3	DriveOhio	Expand participation in the Smart Belt Coalition and increase the number of membership states with specific, active projects.	• Number of active projects and demonstrations that span across state boundaries	Year 2, ongoing	**Continued Ongoing Action**		X	X		
3.4	DriveOhio, Ohio UAS Center, ODOT OTSMO	Finalize and implement the ODOT TSMO v2.0 plan which standardizes the use of Uncrewed Aircraft Systems (UAS) in traffic management and safety applications to further integrate UAS into ODOT's traffic management and business functions.	• Release of TSMO plan standardizing the use of UAS in traffic management • Number of safety applications implemented	Year 2, ongoing	**Continued Ongoing Action**		X			X

Strategy #4: Continue to promote and expand CAV awareness, education, and training opportunities, in collaboration with partners.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
4.1	DriveOhio, DriveOhio Alliance Partners	Continue hosting events (DriveOhio Alliance) and supporting partner events (e.g. ITS Midwest, Beta District, PAVE, AAA), featuring content to expand awareness and/or training related to connected and automated vehicle technologies, with focus on safety.	• Number of DriveOhio Alliance events hosted in Ohio • Number of partner events supported by DriveOhio • Number of attendees at DriveOhio Alliance and partner events	Year 1, ongoing	**New Action**		**X**	**X**		
4.2	ODOT Comms, DriveOhio, Ohio LTAP	Present the DriveOhio message to other organizations and expand partnerships with local organizations, trade groups, industry associations, etc.	• Number of presentations per year • Number of social media posts promoting CAV initiatives and projects • Number of media interviews per year • Number of new partnerships per year	Year 1, ongoing	**Continued Ongoing Action**		**X**	**X**		
4.3	DriveOhio, ODOT	Develop training programs for the deployment of CV technology and conduct training sessions with ODOT, Ohio Turnpike, and local infrastructure maintenance personnel.	• Number of people in Ohio that have received training from the materials developed • Number of people outside of Ohio that have received training from the materials developed • Number of educational programs actively using the training materials in their curriculum (number of students received training certification)	Year 1, ongoing	**Continued Ongoing Action**		**X**	**X**		

Data Emphasis Area

Emphasis Area Leader: Brenton Bogard, ODOT

Strategy #1: Improve data collection and management.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.1	ODPS	Promote the Ohio Law Enforcement Information System (OLEIS) program and State of Ohio Law Enforcement Virtual Exchange (SOLVE), and work with third party vendors to report crashes electronically to the state.	• Number of electronic crash submissions annually	Ongoing	**Modified Ongoing Action**	**X**				
1.2	ODPS	Continue to expand the electronic citation program by collaborating with vendors and court systems.	• Percent of law enforcement agencies and courts participating in electronic citation annually	Ongoing	**Continued Ongoing Action**	**X**			**X**	
1.3	ODPS, BMV	Transition paper forms for Bureau of Motor Vehicle (BMV) vehicle and driver information to an electronic format.	• Number vehicle and driver record forms converted • Percent increase in accuracy of vehicle and driver record forms annually	Ongoing	**Continued Ongoing Action**	**X**				
1.4	ODPS, EMS	Complete the Emergency Management Services (EMS) Incident Reporting System (EMSIRS) system update.	• Number of EMS agencies reporting to EMSIRS annually	Ongoing	**Continued Ongoing Action**	**X**				**X**
1.5	ODOT	Enhance the collection of traffic counts on local roads per Highway Performance Monitoring System (HPMS) cycle.	• Continue to meet or exceed the HPMS reporting requirements.	Year 2, ongoing	**New Action**		**X**			

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
1.6	ODPS	Develop a web-based crash reporting system to increase submission of electronic crash data.	• Web-based crash reporting system created	Ongoing	**Continued Ongoing Action**		**X**			
1.7	ODPS	Update the online crash instructional manual with data definitions defined by Model Minimum Uniform Crash Criteria (MMUCC) and ANSI D-16.	• Publish updated Crash Report Procedure Manual	Year 3	**New Action**	**X**				
1.8	ODPS	Explore potential to develop self-reporting crash documentation tool and related resources.	• Opportunities explored • Existing mechanisms identified and summarized	Year 3	**New Action**	**X**	**X**			
1.9	ODOT HSIP	Update Ohio calculated calibration factors in ECAT using modern crash data.	• Number of calibration factors updated each year	Year 1	**New Action**		**X**			

Strategy #2: Improve data accessibility.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.1	ODOT	Continue to provide Highway Safety Information System (HSIS) data annually.	• Number of stakeholders data shared with annually	Year 1, ongoing	**Modified Ongoing Action**	**X**	**X**			
2.2	ODPS	Provide crash data extract as a webservice.	• Crash data extracts service established	Year 1, ongoing	**Continued Ongoing Action**	**X**	**X**			
2.3	ODPS	Provide citation data to agency partners.	• Number of citation data extracts provided to other agencies for review	Year 2, ongoing	**Continued Ongoing Action**	**X**			**X**	

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
2.4	ODOT	Distribute real time travel data to inform motorists of driving conditions through mobile or vehicle applications.	• Number of external agencies consuming ODOT-verified travel data	Year 1, ongoing	**Continued Ongoing Action**	**X**			**X**	**X**
2.5	ODPS, EMS	Implement reporting of all EMS activations to the National Emergency Medical Services Information System (NEMSIS).	• Number of activations sent to the national database	Year 3, ongoing	**Continued Ongoing Action**	**X**				**X**
2.6	ODOT	Collect and publish posted speed limit data where there are gaps in existing data and not included in ongoing data collection efforts.	• Publish posted speed data to internal and external data sources	Year 3	**New Action**	**X**			**X**	
2.7	ODOT, ODPS, ODH	Identify opportunities to encourage, support, and enhance traffic fatality review procedures through improvements to data accessibility and related resources.	• Opportunities identified	Year 2, ongoing	**New Action**	**X**	**X**	**X**	**X**	**X**

Strategy #3: Enhance data integration.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.1	ODPS, ODOT	Update the crash location mapping tool for the OLEIS and Ohio Trooper Information System (OTIS).	• Software update implemented for both software applications	Ongoing	**Continued Ongoing Action**		**X**			

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
3.2	ODPS, EMS, ODOT	Link medical professional injury evaluation reports to the associated crash report.	• Number of medical professional injury evaluation reports linked to a crash report annually	Ongoing	**Continued Ongoing Action**	**X**	**X**			**X**
3.3	ODPS	Conduct a pilot study for linking court adjudication records to the statewide citation repository.	• Methodology to create linkages developed	Year 3	**Continued Ongoing Action**	**X**				
3.4	ODPS	Link citation, crash, vehicle, and driver data sets so that data can be more efficiently analyzed for enforcement decisions and traffic safety mitigation.	• Methodology to create linkages developed	Year 3	**Continued Ongoing Action**	**X**	**X**		**X**	
3.5	ODPS	Link Blood Alcohol Concentration (BAC)/drug toxicology results to Operating a Vehicle Under the Influence (OVI) arrest records electronically.	• System link OVIs to BAC/drug toxicology results created. • Number of OVIs linked to BAC/drug toxicology results annually.	Year 3, ongoing	**Continued Ongoing Action**	**X**				

Strategy #4: Support data analysis efforts across agencies.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
4.1	ODOT, ODPS, PUCO	Identify currently available datasets and data owners, determine gaps in available data, access to the data, and linkages between the data. Develop inventory of information and share with relevant partners. Initiate actions to address identified gaps.	• Inventory of data and ownership information created and maintained • Opportunities for improvements identified	Year 1, ongoing	**Modified Ongoing Action**	**X**				

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
4.2	ODOT, ODPS	Provide data analysis support to meet the SHSP and agency safety plans' data analysis needs, including identification of high-risk user behaviors and roadway data elements on the state and local systems.	• Number of SHSP emphasis area action steps completed with data analysis support. • Number of agency safety plans completed with data analysis support	Ongoing	**Continued Ongoing Action**	**X**	**X**			
4.3	ODPS, ODOT	Coordinate distribution of accurate crash statistics to the public.	• Number of data summaries or reports coordinated annually	Ongoing	**Continued Ongoing Action**	**X**	**X**			

Strategy #5: Integrate Post-Crash Care considerations into Safety Funding application submission criteria and scoring.

Action Step	Leader(s)	Action Steps	Performance Measure(s)	Timeframe	Progress	Safe Road Users	Safe Roads	Safe Vehicles	Safe Speeds	Post Crash Care
5.1	ODOT	Determine the minimum distance/travel time from EMS and Trauma Centers that should be prioritized (e.g. farther than # miles).	• Review of existing research conducted • Recommendations on criteria developed	Year 1 -2	**New Action**		**X**			**X**
5.2	ODOT	*Dependent on Statewide DSRT review and approval*, adjust safety funding application submission criteria and scoring for locations that lack cell phone service or exceed the minimum distance/travel time as determined in Action Step 5.1.	• Review and discussion with DSRT completed • Safety Funding criteria updated and incorporated into project review process	Year 3	**New Action**		**X**			**X**

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