SHOW-ME ZERO

SAFER PEOPLE • SAFER VEHICLES • SAFER SPEEDS • SAFER INFRASTRUCTURE • SAFER RESPONSE

MISSOURI DEPARTMENT OF TRANSPORTATION

Missouri's Strategic Highway Safety Plan
2026-2030

SHOW-ME

ZERO

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MoDOT | Missouri's Strategic Highway Safety Plan | 2026-2030

Are you from Missouri? Is your hometown Auxvasse, Mound City, or Edina? Did you grow up in Highlandville, Winona, or Sturgeon? There are dozens of towns like these in Missouri that boast populations right around 1,000.

Could you imagine if one of these towns were to suddenly disappear? What if about 1,000 people were just gone? Wouldn't that be something that people talk about? Wouldn't it make national news? Wouldn't we try desperately to find out what happened, and then devise a plan to ensure that it never happens again?

In a way, this does happen every single year.

On average, about 1,000 people die on Missouri roads annually. And that's actually an improvement over previous years. We shouldn't rest until a problem of this magnitude is solved.

As far as the Missouri Coalition for Roadway Safety is concerned, we won't.

In the following pages, you will see a candid view of Missouri's roadway safety problem. You will see where we intend to focus our efforts based on real-world data. You will find everyday solutions that anyone can do to help alleviate our crash problem. We won't rest until the number of people whose lives are lost on Missouri roads is zero.

Show me zero!

Besides setting the overall safety direction for the next five years, Show-Me Zero also articulates the overall goal of the coalition.

THIS GOAL IS OUR VISION:	*Steadily decrease fatal and serious injury crashes for all users of the Missouri transportation system.*
OUR MISSION IS THE WAY WE ACCOMPLISH THE GOAL:	*Truly understand the state of highway safety in Missouri, then improve it by heightening the safety of people, vehicles, speeds, infrastructure, and crash responses.*

CONTENTS

A Safe System

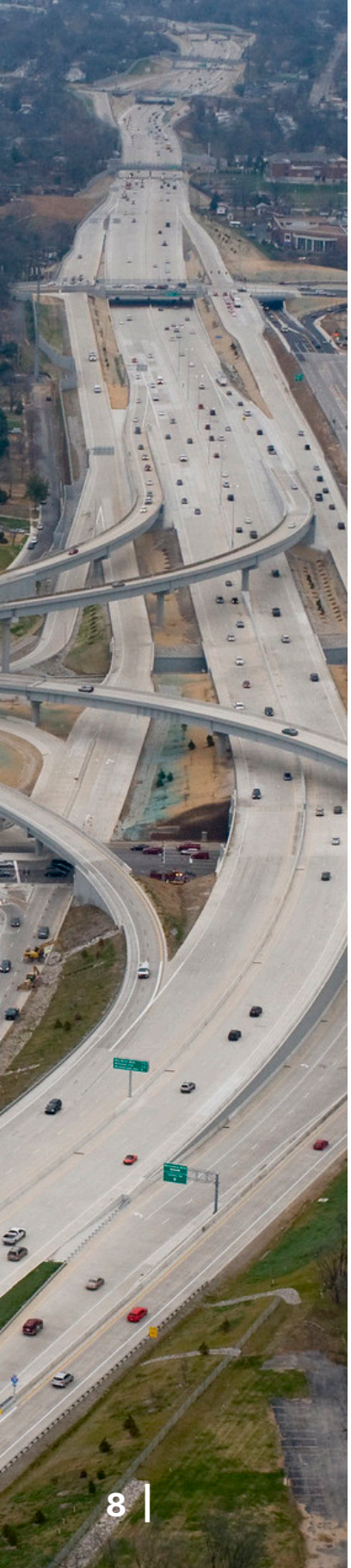
Highway safety is not a one-size-fits-all proposition. There are simply too many variables, and the nature of crashes is just too random for that to be the case. Realistic solutions need to be comprehensive and redundant. There may be an answer.

Within the past decade, the United States has increasingly embraced a comprehensive approach to highway safety known as the Safe System Approach (SSA). The concept was developed in the 1990s in Sweden and has steadily gained traction globally since then. It is built around people and holds safety as its highest priority.

This approach operates under six philosophical principals:

- **Death and Serious Injuries are Unacceptable** – There is no number—however small—of crash-related death or serious injury that is acceptable, other than zero.
- **Humans Make Mistakes** – Whether consciously or without realizing it, every user of the transportation system is capable of making harmful choices. To the extent possible, the system should be able to accommodate these mistakes.
- **Humans Are Vulnerable** – It doesn't take a great deal of kinetic energy to injure or kill a human, and the energy released in a vehicle crash usually far exceeds that threshold.
- **Responsibility is Shared** – Highway safety is not the sole responsibility of any single agency. No organization alone is wholly responsible. Highway safety is influenced by every citizen of Missouri, and there is something that every citizen can do.
- **Safety is Proactive** – If an agency waits until a tragedy occurs before it addresses safety, then it is too late. The damage is done. Rather, they should analyze data to identify safety risks and effectively apply countermeasures.
- **Redundancy is Crucial** – Layers of protection should be applied so that if one safety mechanism fails, another can take its place.

These concepts guide the Safe System Approach; five elements make it work.



These elements add layers of redundancy to the system so that if one fails, one or more of the others may save a life. The five elements are:

Safer People – Traffic safety starts with people. Most crashes are the result of choices people make and better decisions can mean better safety.

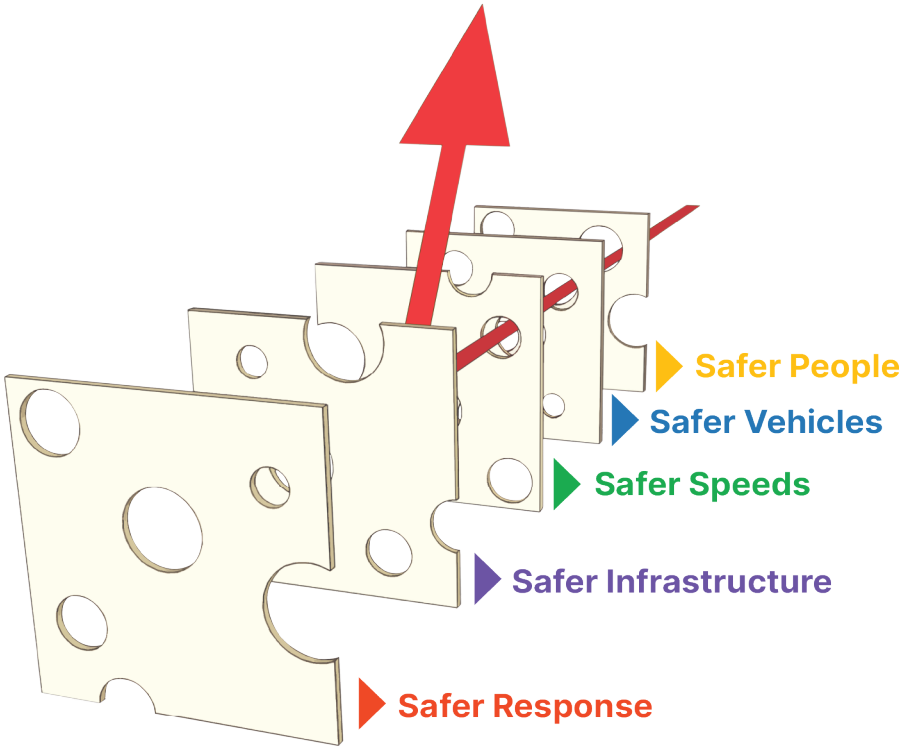
Safer Vehicles – Our roads are teeming with a variety of vehicle types with various levels of associated risk. Maximizing the safety of each will help avoid or minimize crash outcomes.

Safer Speeds – Kinetic energy is directly associated with speed. Safe speeds balance traffic movement with more favorable crash outcomes.

Safer Infrastructure – The built environment of our transportation system is inextricably linked to safety. Proper accommodations for vehicles and active users alike increase overall safety.

Safer Response – Despite the other elements, crashes still occur. In these cases, a timely response and effective post-crash care may still save a life or prevent serious injury.

The safe system elements add layers of redundancy to the system so that if one fails, one or more of the others may save a life.



For the first time since its inception in 2004, Missouri's strategic highway safety plan will be wholly patterned around the SSA. The chapters of this publication are named for, and contain the philosophy behind, the safe system principals. The emphasis areas—our critical traffic safety concerns—are categorized according to the safe system elements as are their solutions.

Death and Serious Injury are Unacceptable

A Safer Missouri

1969 was quite a year. America successfully landed two men on the moon and brought them safely home to tell about it. Half a million youth descended on a dairy farm in upstate New York and changed the culture forever with a music festival called Woodstock. On the other side of the world, the war in Vietnam raged on with no end in sight.

Missouri was fighting a war of its own—and not faring very well. The number of people killed on Missouri roads hit an all time high of 1,521 that year.

Since then, we have managed to cut that number by more than half. But that's not enough.

What is enough? Should we aim to cut the number of fatalities by half again? Should we strive to have only 100 traffic fatalities statewide each year? Should we aim for 10? One?

If so, who should those 100 people be? Who should be among the 10? Who should be that one person who never makes it home?

Of course, the only reasonable answer can be "no one." Zero is the only number of highway fatalities we can tolerate in our state. That is why this plan is based on the principle that death and serious injury are unacceptable!

But is that even possible?

Zero is the only number of highway fatalities we can tolerate in our state. That is why this plan is based on the principle that death and serious injury are unacceptable!

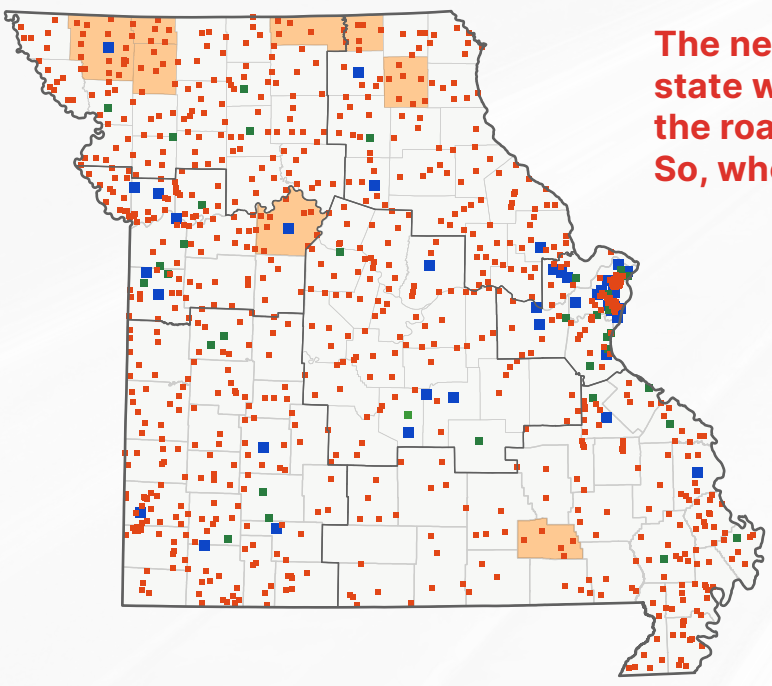
Of course it is. Through their Vision Zero efforts, the city of Hoboken, NJ has not had a single traffic fatality in the past seven years. Hoboken is half a continent away from Missouri, but a city its size is roughly equivalent to either Blue Springs, St. Peters, or Joplin. Imagine those cities with no fatal traffic crashes.

You don't have to stretch your imagination too far. There are 74 cities in Missouri with populations over 5,000—40 of those over 10,000—that had zero traffic fatalities in 2024. There are over 800 more small towns where no one died on a Missouri roadway.

Let's think bigger. In 2024, the following eight counties in Missouri had zero traffic fatalities:

- Carter
- Gentry
- Knox
- Nodaway
- Putnam
- Saline
- Schuyler
- Worth

If nothing else, these numbers demonstrate that big victories are possible (even common) in small places. We can make our families, our schools, or our neighborhoods fatality-free. Then we can build onto that success in the cities and counties where we live. The data proves this is possible.



The next step is creating a state where nobody dies on the roadways—anywhere! So, where is your zero?

Locations with zero fatalities in 2024

- Cities over 10,000
- Cities 5,000-10,000
- Under 5,000
- Counties

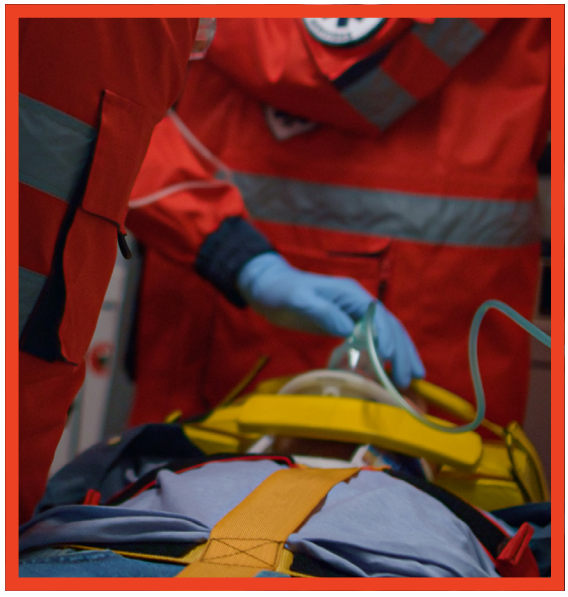
Humans are Vulnerable

The State of Safety in Missouri

Nearly every Sunday, a player gets injured in an NFL football game. And it's no wonder. The average weight of an NFL linebacker is 240 lbs. Their average speed is 17.3 miles per hour. When a person traveling at that speed collides with another coming on at a similar speed, injuries are almost expected.

Humans are vulnerable; they break relatively easily.

Now imagine a couple of vehicles colliding at highway speeds. Worse yet, imagine a vehicle striking a pedestrian. Pickup trucks are the best-selling vehicles in the United States, and their average weight is 5,000 lbs. A common—albeit conservative—highway speed is 65 miles per hour. In a highway crash, the total energy can be 300 times that of even the most violent NFL hit. The same vulnerable humans are using the transportation system, and they are not wearing helmets or shoulder pads. Is it any wonder that people get killed and injured in highway crashes?



This inherent vulnerability in humans contributes to thousands being killed or injured on our roadways every year. This frailty is the very thing our highway safety efforts are aimed at mitigating.

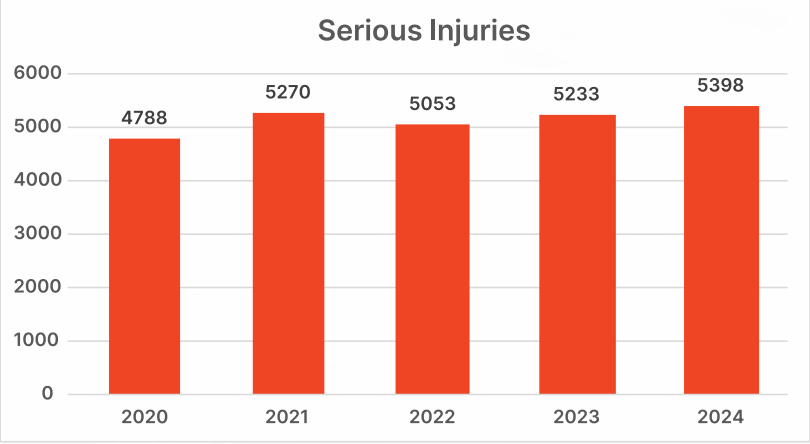
Between 2020 and 2024, 5,006 people lost their lives on Missouri roadways.

While this number is unacceptable, the year-by-year data reveals a modest, yet sustained, decrease from the 1,000-plus fatalities that occurred in 2021 and 2022.

Serious injuries are also unacceptable, yet between 2020 and 2024, 25,777 travelers were seriously injured on the Missouri roadway system.

Contrary to fatalities, this statistic is trending in the wrong direction with a modest but steady increase since 2022. It is a stark illustration of just how vulnerable we are.

The state of highway safety in Missouri has garnered some national attention—just not the sort of attention we like to see. In their 2025 Roadmap to Safety, the Advocates for Highway and Auto Safety listed Missouri in their "Danger Zone" because of our number of fatalities, and safety laws still needing to be passed.



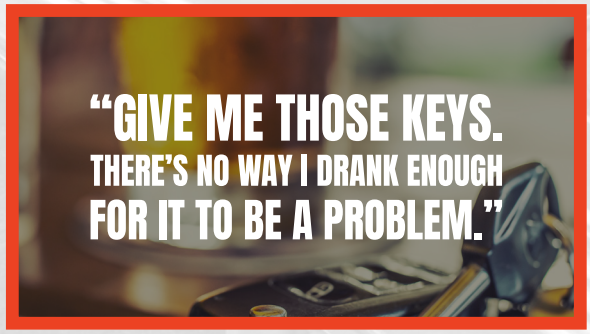
None of this should be construed as a condemnation of Missouri's highway safety efforts. The safety community in Missouri has worked tirelessly over the past three decades to make the transportation system safer. The efforts are working. In terms of fatalities per 100 million vehicle miles traveled, Missouri ranks 28th in the nation. That is an improvement of five places since the first Blueprint for Highway Safety set our direction in 2004.

Even with these gains, however, humans are still vulnerable; we still get injured and killed when we experience the kinetic energy expended in a vehicular crash. If we wish to bring our fatalities and serious injuries down—eventually to zero—we should turn our attention to the shared responsibility of preserving life on the Missouri transportation system.

MISSOURI RANKS 28TH IN THE NATION IN FATALITIES PER MILLION VEHICLE MILES TRAVELED, AN IMPROVEMENT SINCE THE FIRST BLUEPRINT FOR HIGHWAY SAFETY IN 2004

Humans Make Mistakes

It has been said that good judgment comes from experience, and experience comes from bad judgment. It's a clever saying, and mostly true, but out on the road, there is not always a chance to learn from poor judgment. On the highway, mistakes can change lives forever—or end them.



As users of the transportation system, we make judgment calls or choices every time we are on the road.

Maybe our choices aren't always this dramatic. Sometimes they can be almost subconscious or instinctive. But they do play a tremendous role in the safety of our roadways. Choices are a constant part of the driving experience, and we don't always choose correctly. Humans make mistakes.

From 2020 to 2024, at least 73% (nearly three quarters) of all traffic fatalities involved risky behavior. Whether because of being unbelted, distracted, substance-impaired, or drowsy, somebody's mistake cost them, or somebody else, their life. The choice to speed or drive aggressively also contributed to these crashes. Since these behaviors are not always identified or reported, mistakes may account for far more fatalities than just three-quarters.

Human mistakes aren't always the result of a conscious choice to participate in risky behavior. For example, traffic crashes are the single greatest cause of death for teens in the United States. Part of the problem with this age group is simply the

From 2020 to 2024, at least 73% (nearly three quarters) of all traffic fatalities involved risky behavior.

inexperience that comes with being a new driver. On the other end of the spectrum, senior drivers also experience more crashes than their middle-aged counterparts. Even though seniors tend to make safer behavioral choices while driving, natural changes to the human body over time may hamper the ability to drive safely.

Drivers may not be aware of the visual or stopping limitations of larger commercial vehicles. Inexperienced operators may use off-highway vehicles in a manner not consistent with their purpose and beyond their operational capability. Furthermore, the sprawling nature of the built environment in our cities may even subconsciously encourage users to engage in more risky behaviors, like driving too fast or crossing the roadway at unexpected locations.

In the following sections, we will examine these and other areas in greater depth and propose a set of solutions that anyone can implement to counteract the effects of everyday mistakes on the roadway.

Mistakes are an unfortunate part of the human experience, but our transportation system should accommodate those mistakes to the extent possible.

Safety is Proactive

Emphasis Areas

It is difficult to predict where or when the next traffic crash will happen, and it does not make a lot of sense to try. Similarly, upgrading every roadway feature at a particular location following a crash seems irrational; the very next crash may occur right down the road. It's like closing a barn door after a horse has already escaped.

While the specific times and places of crashes cannot be predicted, the types of crashes most likely to occur and the types of roadways they are most likely to occur on, can be. By studying historical crash data trends and associated risk factors, an agency can identify the crash types that are most critical to overcome.

In studying Missouri's data, the coalition defined the areas in which we should expend our time, money, and energy to achieve our vision of decreasing fatal and serious injury crashes. These are Missouri's most prevalent crash types over time—a reasonably good indicator that if left untreated, they will continue to be problematic.

The following 12 traffic safety concerns shown in the data analysis, proved to be the most critical for Missouri and so became our emphasis areas. They are categorized according to the safe system elements. Proactive countermeasure application in these same areas will increase the safety of Missouri's transportation system.

The following pages will present more details and statistics for each emphasis area, as well as a few key items Missouri is doing well, and a few others that we need to be cautious of.

SAFER PEOPLE:

- Distracted Driving
- Unrestrained Occupants
- Impaired Driving
- Teen Drivers
- Older Drivers

SAFER VEHICLES:

- Motorcycles
- Commercial Motor Vehicles
- Off-highway Vehicles

SAFER SPEEDS

- Speeding and Aggressive Driving

SAFER INFRASTRUCTURE

- Vulnerable Road Users
- Critical Roadway Locations

SAFER RESPONSE

- Post-crash Care

Distracted Driving

While the human brain can quickly alternate between competing tasks, it is actually incapable of executing more than one cognitive burden at a time. No one can really multitask, so the already complicated task of safely operating a vehicle is sharply degraded when a driver becomes distracted.

There are many distractions. Smartphones and other devices keep getting more advanced, apps are getting more entertaining, and communications seem increasingly urgent. Even the controls of modern vehicles—many of them touch screen—require drivers to break eye contact with their surroundings to complete necessary functions.

None of this is helpful for reducing crashes. It is evident on Missouri roadways that drivers are not giving their full attention to the complicated task of driving. Distracted driving fatalities have steadily increased to an all-time high of 106 in both 2023 and 2024. That's over 11% of all traffic fatalities in the state. Furthermore, telematics data indicates that as many as one in three traffic crashes involves phone use within 1 minute of the crash.

The coalition isn't standing idly by, however. Missouri's Buckle Up Phone Down (BUPD) program is on the forefront of raising awareness of the issue and encouraging all drivers—especially the young—to resist the distracting temptations on the road.

DISTRACTED DRIVING FATALITIES HAVE STEADILY INCREASED TO AN ALL-TIME HIGH OF 106 IN 2023 AND 2024.

UNDER THE NEW LAW, DRIVERS ARE PROHIBITED FROM:

PHYSICALLY HOLDING A CELLPHONE WITH ANY PART OF THE BODY

MANUALLY SENDING OR READING TEXT-BASED MESSAGES

RECORDING OR SENDING VIDEO, VIDEO CALLS OR SOCIAL MEDIA POSTS

WATCHING A VIDEO OR MOVIE

The state of Missouri has also enacted a distracted driving law for all drivers. The Siddens-Bening hands-free law prohibits all drivers from manually engaging with electronic devices. Consequences range from a $150 fine for the first offense to seven years in prison if the violation contributes to a fatal crash. Enforcement began in January 2025, which should start a downward trend in deaths due to this very preventable behavior.

Continue:

- Promoting BUPD
- Enforcing the state's hands-free law
- Partnering with advocacy groups to effect change

Beware:

- Increasingly engaging devices coming to market
- Deeply embedded cultural norms of distraction

Unrestrained Driving

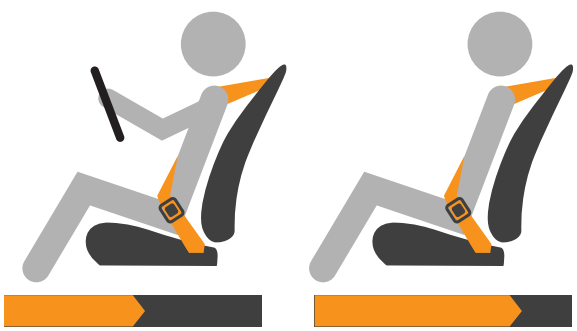
An object in motion stays in motion; it's one of the most fundamental laws of physics. In a car traveling at highway speeds, your body is that object. If the vehicle suddenly stops as it does in a crash, you keep traveling at the same speed until something stops you. That could be the windshield, the ground, a tree, but ideally, it would be your seatbelt or child passenger seat.

They are simple but powerful solutions. Take a moment to buckle yourself in, check your passengers and restrain your children. It's the single greatest way to increase the likelihood of surviving a crash. Approximately 88% of drivers and passengers on Missouri roadways buckle up. The other 12% account for nearly two thirds of vehicle occupants killed in traffic crashes.

SEAT BELTS: THE FACTS

Wearing a seat-belt reduces the risk of a fatal injury by:

Up to **45%** for front seat occupants



Up to **60%** for rear seat occupants

Source: National Safety Council
National Library of medicine

SAFER PEOPLE

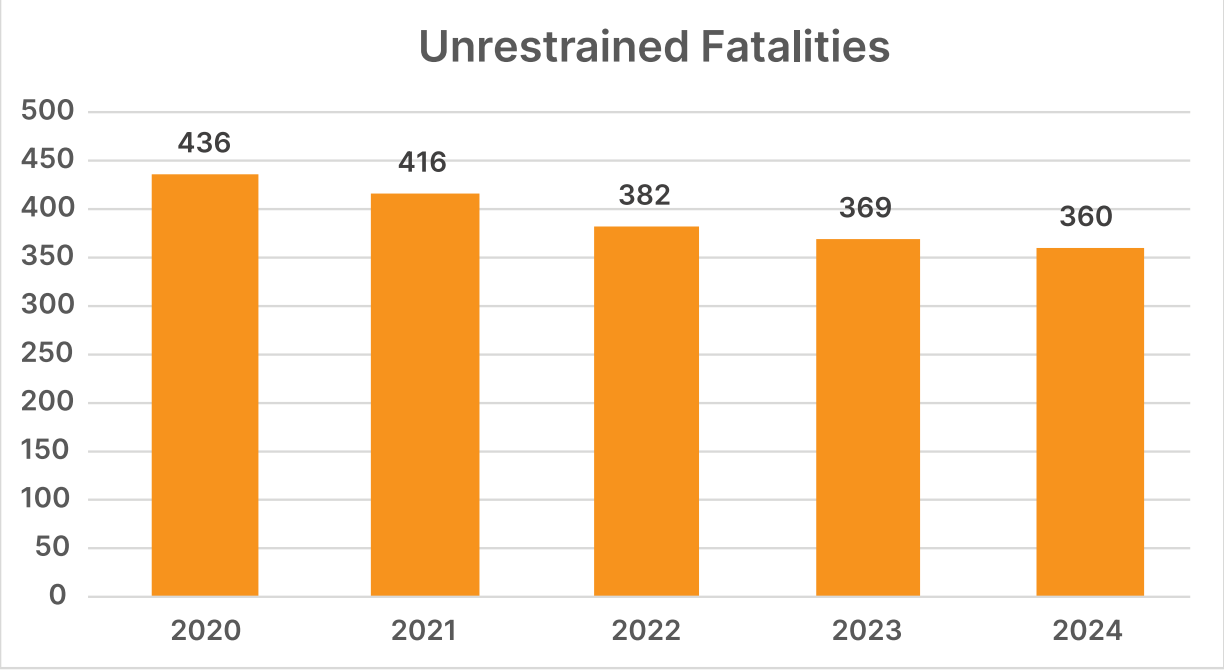
For each of the past five years, about 400 lives were lost annualy on Missouri roadways because of unrestrained vehicle occupants. Due to efforts like Missouri's BUPD and Click-it-or-Ticket campaigns drawing much needed attention to the issue, seatbelt use is slowly increasing statewide. Consequently, the number of unbelted fatalities has steadily decreased since 2020. Occupant protection is a critical milestone in the pursuit of zero fatalities and serious injuries in our state.

Continue:

- Promoting BUPD
- Providing child passenger seats and training to eligible recipients
- Positive role modeling for youth and adolescent passengers

Beware:

- Lack of serious consequence for seatbelt infractions
- Widespread opposition or indifference to restraint use among certain demographics



Impaired Driving

Alcohol and drugs do the same thing to the human body. They impair judgment, slow reaction time, and reduce coordination. Where the task of driving is concerned, this is a recipe for disaster. Tragic stories abound with otherwise innocent lives shattered because of someone's poor decision to drive impaired. And that's just it; if you choose to drive impaired, the life you change might not be your own.

Substance impaired driving (alcohol and drugs) is a problem that continues to plague Missouri. These fatalities are down significantly from the statistical spikes realized throughout the COVID-19 pandemic, but even discounting 2020 and 2021, the numbers still average 188 traffic deaths per year.

Without the efforts of our media partners, groups like Mothers Against Drunk Driving (MADD), and the dedicated officers in law enforcement agencies, the number of impaired driving fatalities would undoubtedly be even higher.

IMPAIRED DRIVING FATALITIES HAVE DECREASED BY 36% OVER THE PAST FIVE YEARS.

SAFER PEOPLE

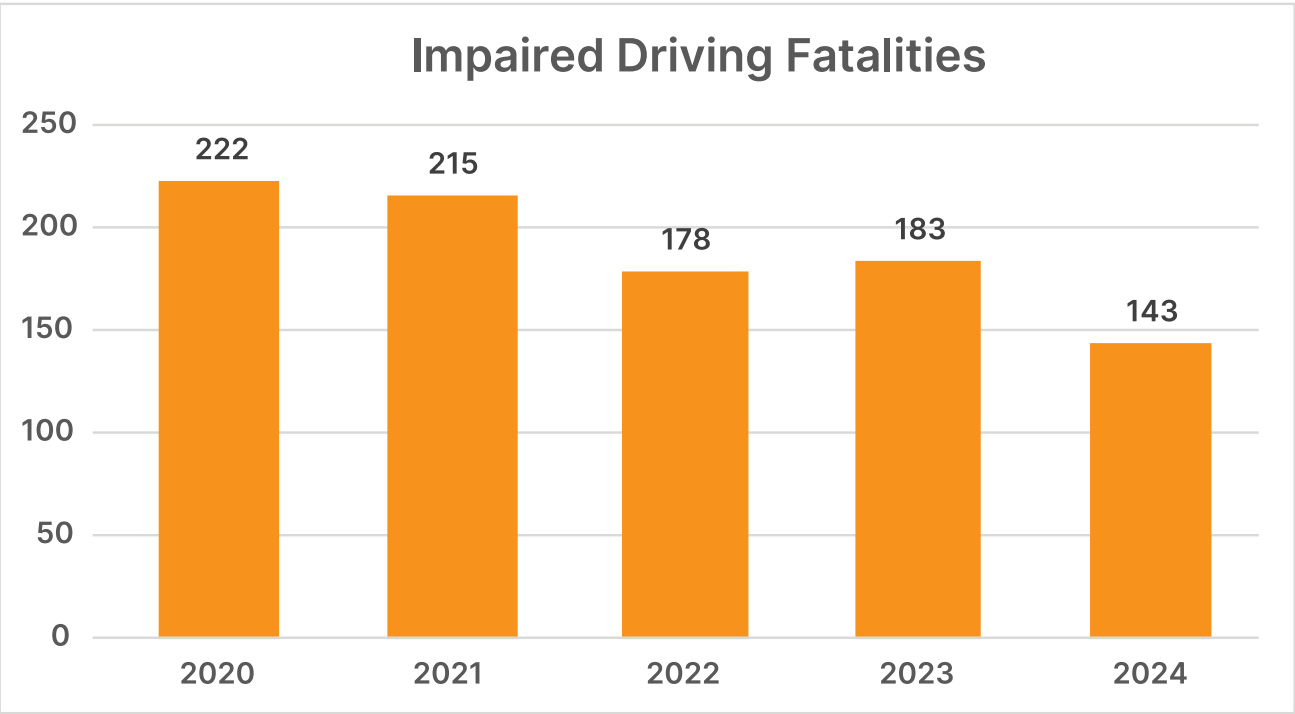
There has never been a better time for all drivers to become safer people and avoid getting behind the wheel after consuming alcohol or drugs. Eliminating the needless tragedy of impaired driving fatalities is an important step toward zero deaths and serious injuries in Missouri.

Continue:

- Using media messaging to combat substance impaired driving
- Partnering with advocacy groups
- Conducting saturation patrols

Beware:

- Lack of public understanding of cannabis impairment
- Complicated prosecution of cannabis impaired driving cases

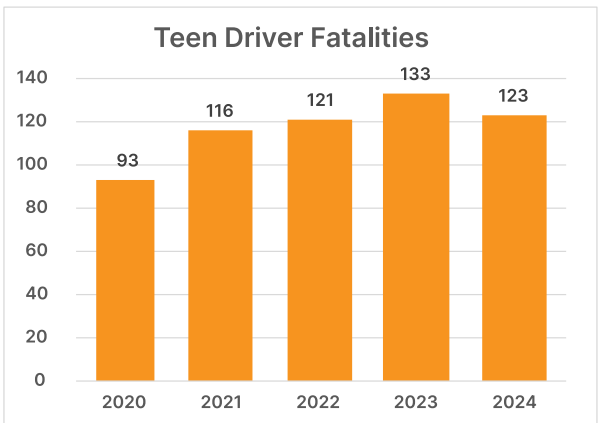


Teen Drivers

Have you ever performed a difficult task, without error, the first time you tried? It is possible, of course, but usually not the case. Success is usually a series of trials and errors by which one steadily perfects their methods. Driving is a complicated task; there are a lot of moving parts.

Teen drivers in Missouri have, at most, 48 months of licensed experience. Most of them have less. This sort of inexperience often leads to poor decision-making such as not using seat belts, giving in to distractions, and driving too fast. But even if teens make the best behavioral decisions behind the wheel, their abilities to regulate speed, judge distances, take evasive action, or recover from an off-road event or skid are still under development.

So, it is no surprise that teen driving fatalities in Missouri are an area of concern. The number of deaths involving a teen driver has steadily risen since 2020, peaking at 133 in 2023 and only decreasing slightly in 2024. But there's also encouraging news. Teens from many parts of the state are eager, not only to be good drivers themselves, but also to demonstrate and reach out to their peers with safe driving habits. Through programs like Teens Taking Action to Prevent Traffic Crashes (TRACTION), these students are doing their part to lower the number of deaths and serious injuries on our roadways.



Continue:

- Partnering with teens for traffic safety through programs like TRACTION
- Hosting driving clinics like BRAKES and Ford Driving Skills for Life
- Maintaining productive relationships with schools and driver education entities

Beware:

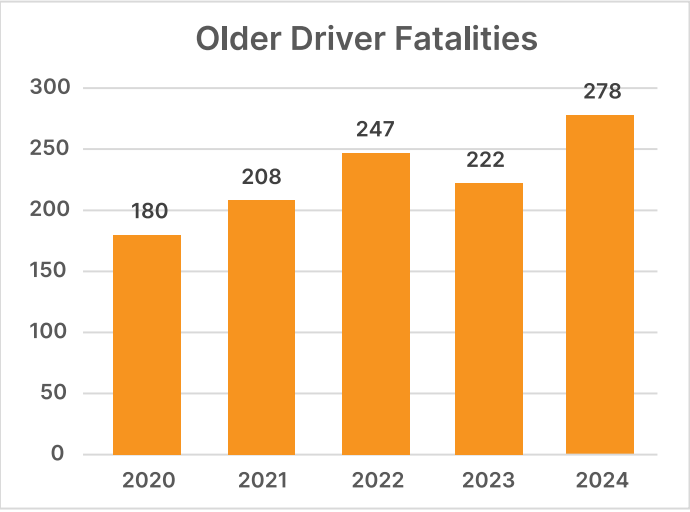
- Dynamic nature of teen culture
- Absence or inaccessibility of driver education programs
- Ignorance or misinterpretation of graduated driver licensing laws

Older Drivers

By the time a person gets to be a senior (65 years of age or older), they've figured out a great deal about many aspects of life. In the driving arena, this knowledge born of experience, translates to better driving habits like operating at the speed limit, wearing seat belts, and eliminating distractions. By habit alone, this demographic should be our safest drivers.

Irrespective of good habits behind the wheel, however, seniors are more likely to be injured or killed in a crash due to natural, age-related fragility. The human body naturally declines over time and cannot withstand the forces imparted in a crash the way younger occupants may. This same regression can hamper the ability to safely operate a motor vehicle. People are also living longer, which means there are more senior drivers than ever. By necessity, many of them are also keeping their keys longer.

Traffic fatalities involving older drivers are on the rise and are up 54% since 2020 in Missouri.



Many new technological advances in vehicles enhance the safety of older drivers including:

Source: Senior Lifestyles Mag

Continue:

- Providing better, more visible highway signing and pavement markings
- Supporting older driver education programs like Keep Your Keys
- Requiring more frequent license renewals for drivers over 70

Beware:

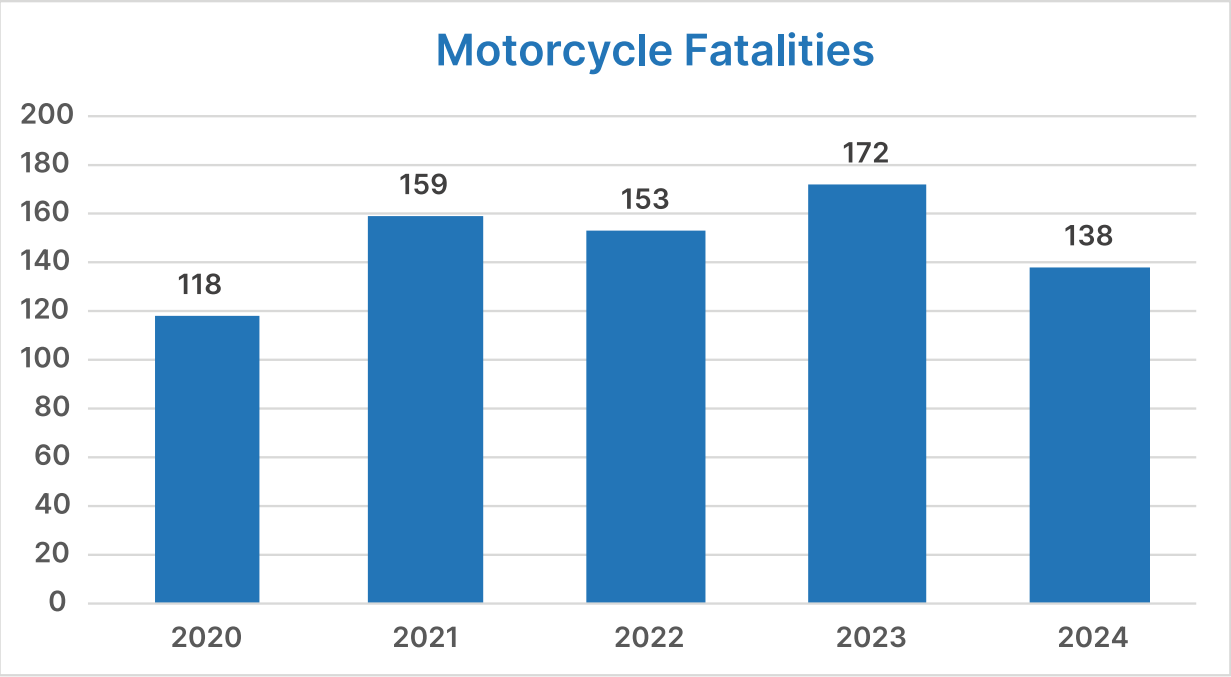
- Reluctance to relinquish driver license when needed
- Lack of training on safety features in newer cars

Motorcycles

Driving in a passenger vehicle has been likened to crawling into a thin metal box on four wheels and being hurdled toward another at high speed, with only a narrow stripe of paint separating you. It's hyperbole to be sure, but also fairly accurate. Now imagine doing that same thing with half the wheels, none of the metal, and no restraints.

Riding a motorcycle is riskier than driving a car or truck. Nationwide, motorcyclists are 28 times more likely to die in a crash and five times more likely to be injured.

The metal frame and shell that protect the former are conspicuously missing for the latter, leaving motorcycle riders more vulnerable to roadside obstacles, the roadway itself, and to weather. The smaller visual profile of a motorcycle makes it more difficult for other drivers to see. Their light weight and reduced frictional contact also make them more vulnerable to roadway obstacles such as loose gravel, potholes, or uneven surfaces.



SAFER VEHICLES

From 2020 to 2024, 15% of all traffic fatalities in Missouri were motorcyclists. The state's motorcycle concerns are further complicated by the 2020 repeal of a long-standing law requiring riders to wear helmets. The very next year, motorcycle fatalities shot up by more than a third, and on average, they have remained there since.

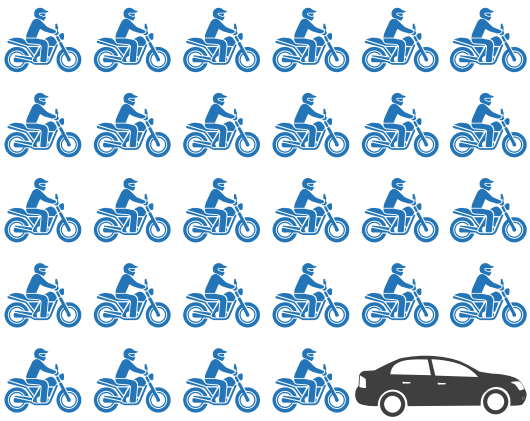
Continue:

- Supporting and working for a state law requiring helmets for all riders
- Strong motorcycle education, outreach, and messaging

Beware:

- Cultural sense that safety is weakness
- Once revoked, helmet laws rarely get reinstated

MOTORCYCLISTS ARE 15% OF TRAFFIC FATALITIES IN MISSOURI.



MOTORCYCLISTS ARE 28 TIMES MORE LIKELY TO BE KILLED ON U.S. HIGHWAYS THAN CAR OCCUPANTS.

NHTSA. Motorcycle Safety. https://www.nhtsa.gov/road-safety/motorcycles

Commercial Motor Vehicles

When millions of people stayed home during the COVID-19 pandemic and began to obtain their goods through the internet, the country witnessed an explosion in e-commerce. By 2021, this economic engine had roared to a 34% increase and has generally sustained a rising trend since. Somehow, all those goods have to get to consumers' homes.

That's where commercial motor vehicles (CMV) come in. For decades, they have been the workhorses of commerce, supporting manufacturing supply chains and delivering products to stores and homes. They have also safely transported millions of passengers to schools and other destinations. The nation simply could not survive economically without the services of CMVs.

SAFER VEHICLES

But CMVs come with their own set of safety challenges. Their sheer size and weight require more distance to stop and more time to maneuver. Their weight also imparts more kinetic energy in crashes, often resulting in more severe injuries. Drivers may suffer from fatigue, and CMV equipment requires frequent maintenance to remain in safe working order.

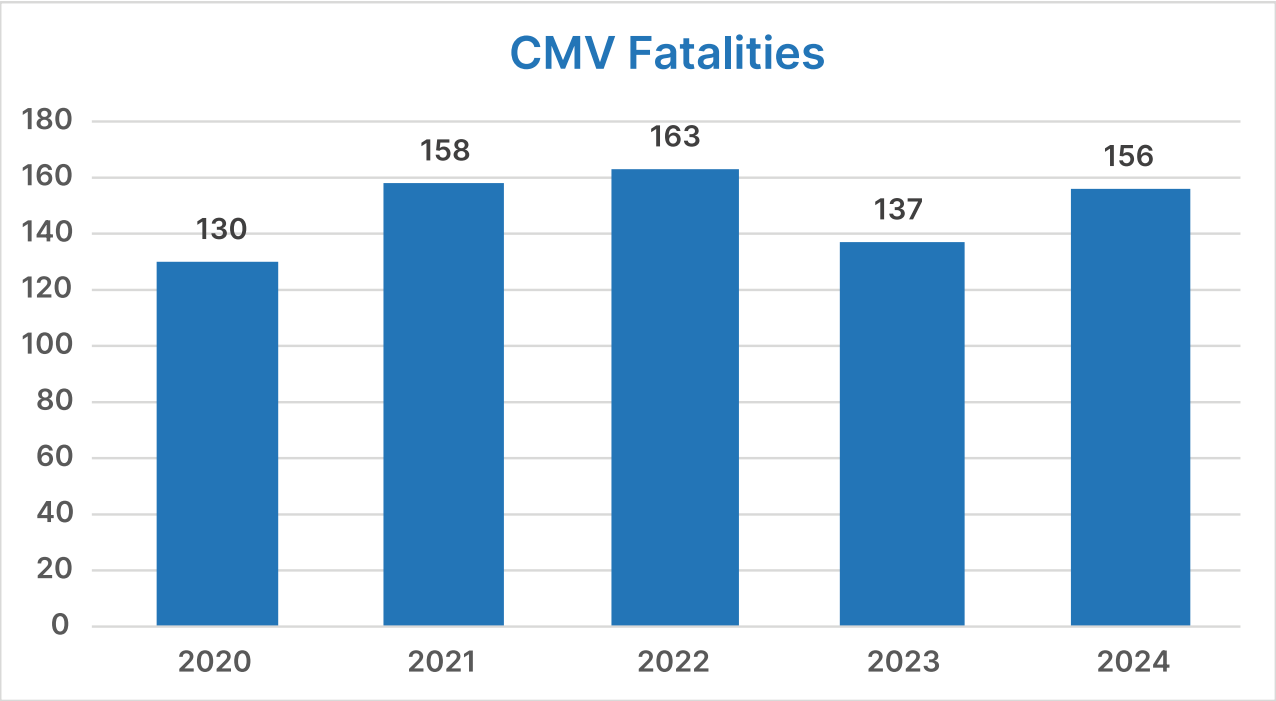
From 2020 to 2024, CMVs were involved in 16% of all fatal and serious injury crashes in Missouri. It should be noted, however, that only 28% of the time did those crashes result solely from the commercial operator's actions. The solutions needed to increase safety in this area are as much the responsibility of the other road users as CMV operators.

Continue:

- Cultivating strong relationships with the CMV industry
- Communicating safety concepts like the "no-zone" to passenger car drivers

Beware:

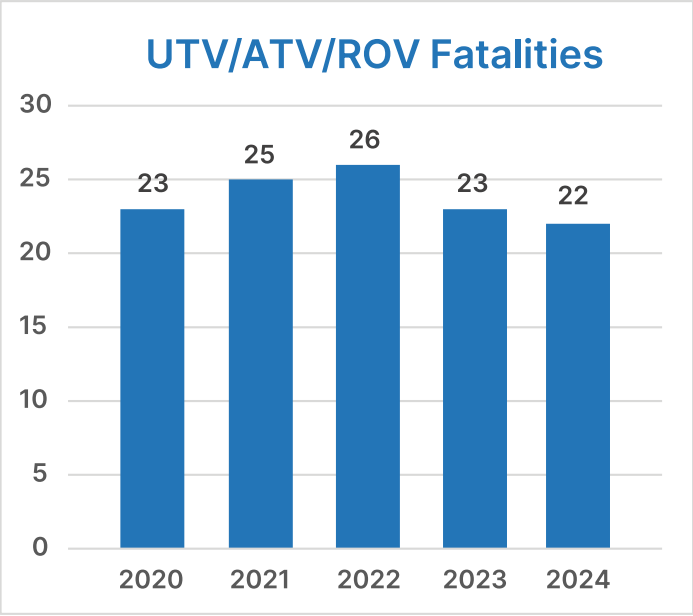
- General lack of understanding of CMV operational limitations
- Lack of driver education programs
- Minimal requirements for CMV driver training programs



Off-HighwayVehicle Fatalities

Have you been to any large outdoor stores lately? Any farm and home centers or big box home improvement retailers? You can scarcely stroll through the front doors without first passing a row of shiny new off-highway vehicles (OHV) lining the walkway. This vehicle class consists of utility task, all-terrain, and recreational off-highway vehicles (UTV/ATV/ROV), and their popularity has soared in recent years due to their affordability, versatility, and recreational value.

But as popular as these vehicles are, their use also comes with some inherent risk. Riders—especially children—are rarely properly trained in their safe operation. The vehicles themselves—some legal to operate in a limited fashion on Missouri roadways—can achieve relatively high speeds without the same protective offerings of a passenger car (e.g., roll protection, passenger restraints, etc.). These machines may also become unstable and more rollover prone as different sizes of riders can significantly change their centers of gravity.



For the past five years, OHV fatalities have remained mostly steady (about 2% of total fatalities). But on average, fatalities have increased 57% and serious injuries 107% over their levels a decade ago. Injury levels may be even higher due to unreported crashes on private property. Nationwide, Missouri ranks first in UTV and ROV fatalities, and third in all OHV fatalities.

Continue:

- Providing awareness and outreach programs like UTV Aware
- Developing an ATV simulator to assist safety education
- Monitoring emerging crash trends

Beware:

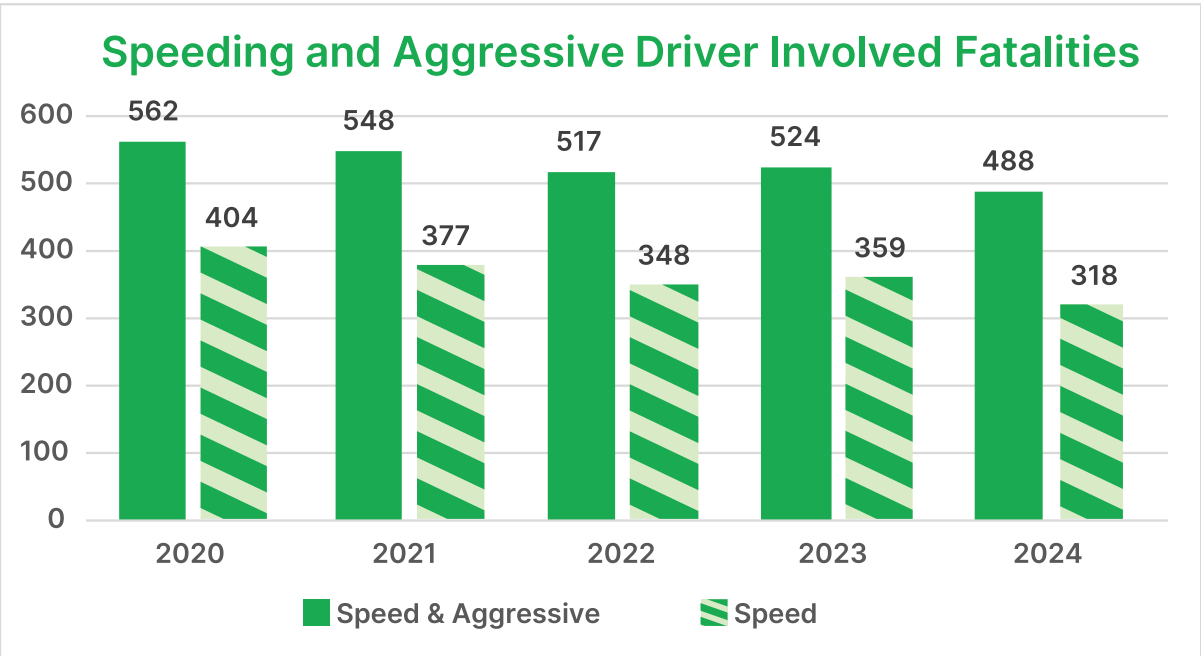
- Multiple loopholes in the agricultural restriction for use on highways
- Varying OHV laws in disparate locations
- Loose age restrictions for operation on private property

Speeding and Aggressive Driving

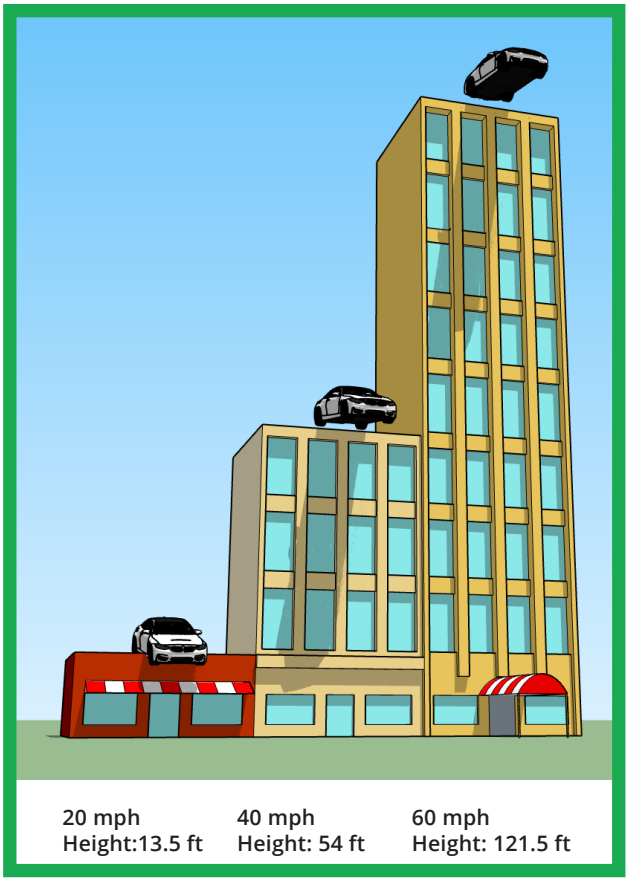
Life moves quickly and people always seem to be in a hurry. Whether they're getting a kid to ball practice, trying to make an appointment, or racing to be at work on time, they are driving faster than they normally would. Unfortunately, when they're hurrying, drivers tend to make more mistakes.

Over half of Missouri's fatalities involve aggressive driving. While this category includes elements such as following too closely, improper lane use, and improper passing; a major component of it is speed. Why is speed so critical? When drivers speed, they are at greater risk of losing control of the vehicle, and a greater distance is required for them to stop after perceiving a threat.

Speed and crash energy are also directly related: the product of vehicle mass and the square of vehicle speed. By definition, doubling the speeds involved in a crash will quadruple the total crash energy. So, higher speed crashes usually lead to more severe injuries. Higher speeds can also lower the effectiveness of occupant protection systems in the car such as seat belts and air bags, as well as roadway departure countermeasures like guardrail and pavement friction.



SAFER SPEED



In 2024, speeding crashes accounted for 33% of all traffic fatalities in Missouri, but these numbers are slowly and steadily decreasing. Sustaining and even accelerating this decrease is an important step on the way to zero fatalities and serious injuries.

Continue:

- Applying due diligence to setting and adjusting speed limits
- Using chevron and speed-advisory signing consistently
- Conducting high-visibility speed enforcement

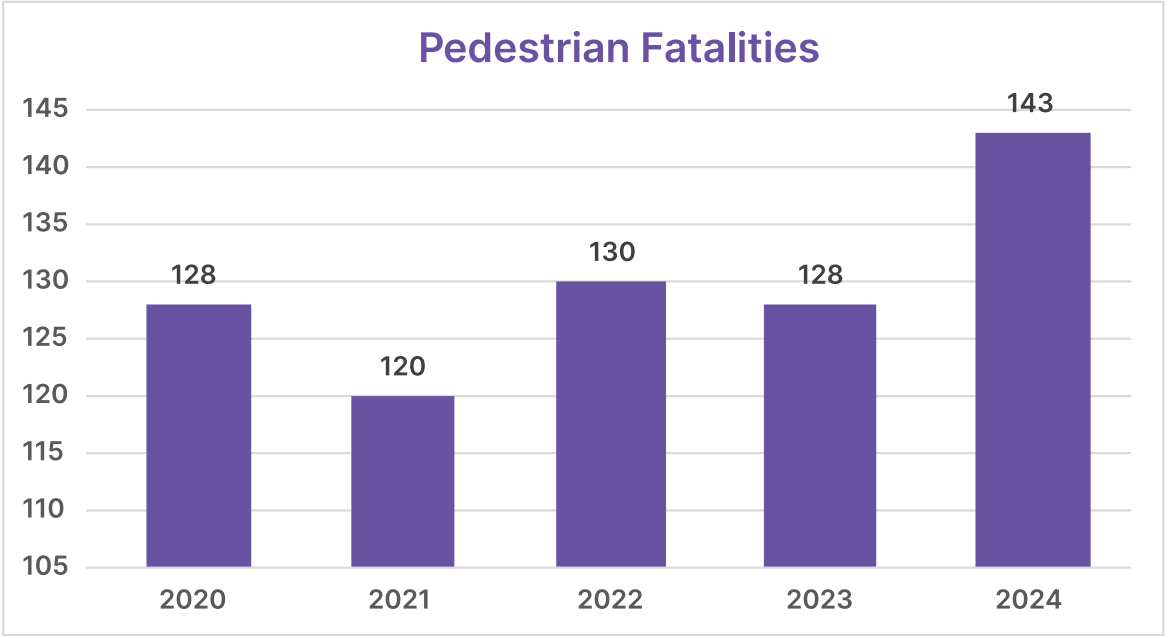
Beware:

- Public perception that speeding is a "victimless crime"
- Demand for enforcement outstripping supply during certain times of the year
- Modern vehicle performance is faster than some Missouri roads can accommodate

Vulnerable Road Users (VRU)

The built environment around a transportation system has a direct impact on the safety of vulnerable road users—primarily bicyclists, pedestrians, and wheelchair users. Trip destinations are located an inordinate distance from origins. Roadways may be too wide to cross efficiently, there may be limited crossing opportunities, or the crossings may not be obvious to traffic.

A challenge for transportation agencies is that the built environment is just that—built. Proper planning of future development can account for safe active transportation. But most cities and towns have been built for decades, and they were built primarily for cars.



SAFER INFRASTRUCTURE

This is evident in our state where, in 2024, the League of American Bicyclists ranked Missouri 49th out of 50 for bicycle friendliness, partly due to the second-lowest infrastructure rating in the nation. Similarly, the Safe Routes Partnership ranked our state last in the nation for supporting active transportation.

In 2024, Missouri's pedestrian deaths rose to an all-time high of 143. Clearly, this statistic is not in line with the Show-Me Zero vision. But it's not too late. Even though our state's infrastructure has been built for years, there are several attainable solutions detailed in this plan that can make real change for our most vulnerable road users.

Continue:

- Promoting VRU facilities and accommodations in roadway design
- Cultivating a constructive rapport with advocacy organizations
- Providing alternative transportation options for non-drivers

Beware:

- Reluctance of public works agencies to change infrastructure policies to accommodate VRU
- Increasing size and weight of the vehicle fleet
- Public perception that VRU accommodations are not needed

Critical Roadway Locations

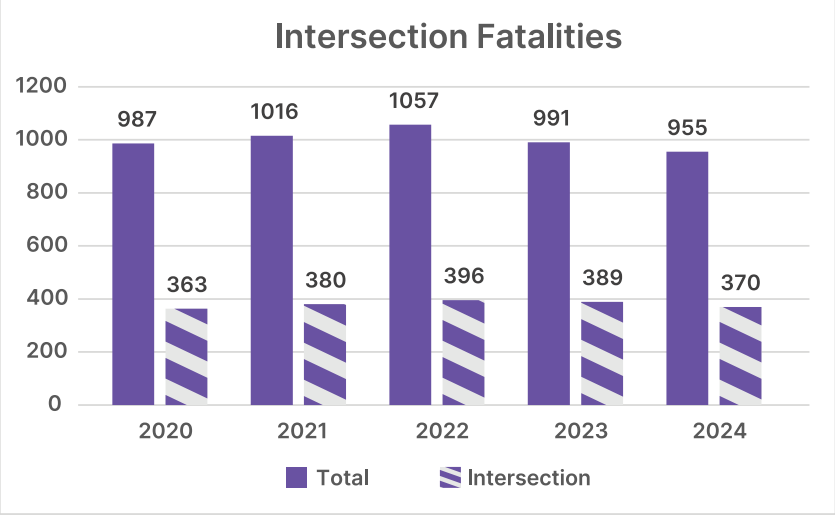
They may look as simple as lines printed on maps or meandering lanes across inspirational posters, but highways are actually complex systems with dozens of elements that must all work in concert to provide safe and efficient travel. There are a lot of moving parts; a lot can go wrong. In Missouri—as with the nation—fatal crashes seem to happen in two specific areas more than any other: roadsides and intersections. That's why we call these critical roadway locations. If a driver does not keep their vehicle within the travel lane, the chances of a severe crash increase dramatically. Intersections are points of inherent conflict and can be some of the most complex environments drivers ever negotiate.

Over the past five years in Missouri, lane departure has been a factor in over 75% of traffic fatalities. Likewise, intersections have been the scene of 38% of traffic fatalities. These numbers are drastic, but there are things we can do.

Design standards are constantly being refined to account for these critical locations and transportation agencies at all levels are quick to adopt them. But hundreds of miles of roadside and thousands of intersections in Missouri were built to an older standard. The most likely solutions for these sections are remedial measures. These strategies are detailed in the final chapter of this plan.

SAFER INFRASTRUCTURE

Over the past five years in Missouri, lane departures have been a factor in over 75% and intersections have been the scene of 38% of traffic fatalities.



Continue:

- Incorporating safety considerations into all projects
- Using the state-of-the-practice standards for new designs
- Contributing to nationwide safety research

Beware:

- Existing infrastructure built for older generation vehicles and speeds
- Tendency to eliminate safety improvements when project budgets are tight
- Deterioration of existing facilities

Post-crash Care

Highway safety in general, and the Show-Me Zero vision in particular, are best accomplished by eliminating crashes. But even if all four of the preventative safe system elements fail, the medical care that someone receives after a crash may still save their life. Nationwide, 42% of adults and 55% of children who eventually died as the result of an automobile crash, were alive when first responders arrived on scene.

The whole purpose of post-crash care is to increase the chances of a victim surviving a crash by providing timely and pertinent medical care. While this concept has been around since the dawn of the automobile, the Safe System Approach has catapulted it to the forefront as an approach to highway safety. But like any emerging solution, there are growing pains.

States like Missouri, that are just adding post-crash care as a strategy, may experience difficulty knowing where to start. Nor do they always know the extent of the problem because the pertinent statistics are not always present in traditional data streams. There are some medical practices like transfusing whole blood in a pre-hospital setting, or stopping bleeding with tourniquets, that are not being used to the fullest extent—or maybe not at all.

Continue:

- Training law enforcement personnel on Stop-the-Bleed techniques
- Providing information and outreach on trauma
- Considering new programs like pre-hospital blood transfusions to accelerate treatment

Beware:

- Shortages of blood
- Smaller ambulance districts may not have personnel or resources to start IVs or transfuse

SAFER RESPONSE

This safety area is also hampered by a lack of resources. Missouri has scores of dedicated and skilled first responders, but there are limited numbers of 911 dispatchers and EMTs available. And while every square foot of Missouri falls within an ambulance district, there are multiple areas that emergency services cannot reach in time.

CRITICAL RESPONSE TO TRAFFIC INCIDENTS IN MISSOURI

NATIONWIDE, 42% OF ADULTS AND 55% OF CHILDREN WHO EVENTUALLY DIED AS THE RESULT OF AN AUTOMOBILE CRASH WERE ALIVE WHEN FIRST RESPONDERS ARRIVED ON SCENE

CHALLENGES

EMS RESOURCES

Dispatcher and EMS Availability

RESPONSE TIME

Ambulance Delay

PRE-HOSPITAL CARE

Whole Blood Transfusion and Tourniquets

Source: Governors Highway Safety Association (GHSA)

Redundancy is Crucial and Responsibility is Shared

As illustrated throughout this plan, Missouri has a fatal and serious injury crash problem. In fact, if our goal is zero fatalities and serious injuries, then any number other than zero is a problem.

Ending the needless tragedy of traffic fatalities and serious injuries in Missouri is not the sole responsibility of the Missouri Department of Transportation. Neither does it fall entirely to the Missouri State Highway Patrol or Department of Public Safety. It is not the sole responsibility of advocacy groups, universities, or county and municipal public works. Rather, every person living in or traveling through the state of Missouri bears some part of the responsibility for achieving zero lives lost on the state's roadways. Responsibility is shared.

The following section of this plan is all about solutions, and there is something for everyone. To allow for a more straightforward application, they are arranged according to who can most likely accomplish the work. They are also coded according to the safe system element to which they apply. In this manner, should one element fail, another may be there to take its place in either preventing a crash or saving a life after a crash. Redundancy is crucial.

The coalition intentionally devised straightforward and uncomplicated strategies. The solutions presented in the following pages are those that will have the largest safety impact for the effort involved. To make significant gains toward zero, we all just need to identify and apply the solutions as we are able.

Missouri has a fatal and serious injury crash problem. Who can help solve it?

You can.
Everybody can.
Everybody must.

FAMILIES AND INDIVIDUALS

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Always demonstrate positive driving behaviors: ■ Buckle up and ensure all passengers are properly restrained. ■ Put down your phone and other electronic devices. ■ Obey speed limits and maintain plenty of space. ■ Never drive drowsy or under the influence of any substance, including prescription medications. If walking or riding your bike, use roads and facilities appropriately: ■ Use sidewalks, shared use paths and bike lanes, if available. ■ Cross the street at visible, marked locations. ■ Put your phone in your pocket and keep headphone volumes low. ■ At night, be sure to wear clothing that is highly visible. ■ If riding a bike, always wear a helmet.	✓		✓	✓	
If you find yourself stranded along the roadway: ■ Make yourself visible by turning on vehicle hazard lights. ■ Remove your vehicle from the travel lanes if involved in a non-injury crash. ■ Remain in your vehicle with your seat belt on until help arrives.	✓	✓			✓
Have conversations with children early on about the importance of car seats, booster seats and seat belts. Explain the risks and potential consequences associated with excessive speed, distraction and impaired driving.	✓		✓		
Request your child's school promote traffic safety and participate in available traffic safety programs	✓				
Monitor the driving skills of family members as they age or face changes in physical and cognitive abilities. Be prepared to have a conversation and intervene when necessary.	✓				
Take advantage of highway safety courses and workshops in your community, many of which are free. Visit www.savemolives.com for a full listing.	✓				
Stay in touch with teen culture to better communicate driving safety.	✓				
Purchase the safest vehicle practicable.		✓			

BUSINESSES AND CORPORATIONS

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Adopt a corporate policy requiring seat belt use for all employees on company time.					
Adopt a corporate policy restricting the use of handheld electronic devices while driving on company time.					
Provide traffic safety information to customers explaining how they can help create safer roads. Visit www.savemolives.com for available resources.					
Provide incentives or discounts for customers participating in safe driving behaviors in all vehicles.					
Take the Buckle Up Phone Down challenge and host a BUPD day/ week, encouraging all employees to participate (www.modot.org/ bupd).					
Promote traffic safety during workplace safety meetings.					
Adopt a corporate speed policy and monitor and enforce it through telematics.					
Provide appropriate training (e.g., occupant protection, safety features, safe operation, etc.) to buyers of new vehicles					
Encourage proper client training before insuring UTV/ATV					
Train employees on safe use of UTV/ATV					

SCHOOLS (ALL LEVELS)

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Participate in available traffic safety programs geared toward youth, many of which are free. Visit www.savemolives.com for a full listing.					
Task a student organization (FCCLA, SADD, Student Council, etc.) with raising awareness and initiating changes in driver behavior among students and staff.					
Host a Buckle Up Phone Down day/week, encouraging all students, parents and staff to take the BUPD pledge (www.modot.org/bupd).					
Partner with Parents as Teachers, preschools and elementary schools to provide families with information on child passenger safety.					
Provide traffic safety information to all students during freshman/ sophomore orientation and promote awareness during health classes.					

SCHOOLS (ALL LEVELS)

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Promote the MCRS Smart Riders program for elementary-aged students (www.savemolives.com).	✓				
Conduct regular child seat safety checks at daycares, preschools and elementary schools.	✓				
Promote driver safety programs available to college students. Visit www.savemolives.com for a full listing.	✓				
To the extent possible, reinstate drivers' education programs	✓	✓	✓		
Add a UTV/ATV aspect to hunter safety courses, agriculture classes, or organizations like 4H or FFA.	✓	✓	✓		
Host traffic gardens where even the youngest students can begin learning traffic safety and operation in a mock roadway setting.	✓				
Keep contacts lists for school administrators up to date to help traffic safety organizations establish and maintain efficient working relationships with schools.	✓				
Incorporate real CMV content into existing drivers' education programs to teach students how to safely interact with these vehicles.		✓			

CIVIC AND COMMUNITY

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Take the Buckle Up Phone Down challenge and promote it to members and the community (www.modot.org/bupd).	✓				
Work with schools, community leaders and elected officials to adopt public policy and/or deliver infrastructure improvements to increase safety.	✓			✓	
Conduct safety outreach: ■ Host or sponsor presentations, workshops, training, and other events to promote traffic safety for various driver groups and vehicles. ■ Partner with groups like Show Me Farm Safety to communicate proper UTV/ATV operation.	✓	✓	✓	✓	
Study the example of other jurisdictions that practice traffic safety well and emulate them.	✓	✓	✓	✓	✓
Conduct rallies or meals for officers before targeted enforcement patrols or saturation events.	✓		✓		

CITIES AND COUNTIES

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Provide critical highway safety information and training to newly elected officials, administrators, department heads and other positions of leadership.	✓	✓	✓	✓	
Adopt policies and ordinances that reinforce a culture of safety: ■ Adopt a policy requiring seat belt use for all county/city officials and employees when conducting official business. ■ Adopt a policy restricting the use of handheld electronic devices while driving for all county/city officials and employees when conducting official business. ■ Enact a primary seat belt ordinance allowing enforcement of seat belt use as a stand-alone violation. ■ Enact an ordinance restricting the use of handheld electronic devices for all drivers.	✓	✓			
Make a commitment to vigorous, visible traffic enforcement.	✓		✓		
Upgrade computer-aided dispatch systems and protocols to ensure responders are sent to the correct location the first time and receive critical information to provide an appropriate level of care.					✓
Launch a 911 system accessible to all residents, preferably a Smart 911 system.					✓
Implement safety improvements in infrastructure projects.				✓	
Adopt design standards that encourage alternate modes of travel and enhance safety for pedestrians, bicyclists and other active transportation users.		✓	✓	✓	
Use traffic offender programs to educate first-time or repeat offenders on the risks and societal impacts of poor driving decisions.	✓				
Research the use of DWI and drug courts for treating repeat impaired driving offenders.	✓				
Take advantage of external safety grant opportunities	✓		✓	✓	✓
Provide reliable elder transit services	✓				
Require a written safety test before issuing a permit for operating UTV or ATV on county roads	✓	✓	✓		
Develop and implement a local road safety plan (LRSP)	✓	✓	✓	✓	✓

LAW ENFORCEMENT

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Make a commitment to vigorous, visible traffic enforcement using data-driven deployment.	✓				
Develop new mobilization campaigns that specifically focus on speeding and aggressive driving. Prioritize enforcement on corridors with high levels of pedestrian activity or with a high frequency of crashes related to speeding and aggressive driving.	✓		✓		
Expand and strengthen the Drug Evaluation and Classification program by training more officers in Standardized Field Sobriety Testing, Advanced Roadside Impaired Driving Enforcement and Drug Recognition Experts.	✓				
Train all officers in identifying signs of impaired and distracted driving and prioritize disrupting these behaviors during routine patrols.	✓				
Participate in statewide enforcement campaigns such as Click It or Ticket and Drive Sober or Get Pulled Over.	✓		✓		
Support public policy initiatives proven to increase safety for all road users.	✓	✓	✓	✓	
Implement electronic reporting of motor vehicle crashes and submit reports to the Statewide Traffic Accident Records System within 30 days.	✓			✓	✓
Adopt an agency policy requiring seat belt use for all officers.	✓	✓			
Adopt an agency policy restricting the use of handheld electronic devices while driving for all officers except in emergency situations.	✓				
Adopt a zero-tolerance policy when enforcing seat belt use, including child safety seats and booster seats.	✓	✓			
Proactively enforce seat belt use in jurisdictions with a primary seat belt ordinance. Develop mobilization and awareness campaigns to promote the ordinance.	✓	✓			
Proactively enforce the primary seat belt component of Missouri's graduated driver license and for drivers of Commercial Motor Vehicles.	✓				
Develop and implement blood draw policies for suspected impaired drivers by coordinating with hospitals, prosecutors and law enforcement officers certified as phlebotomists.	✓				
Participate in outreach efforts to raise community awareness of highway safety.	✓		✓		

LAW ENFORCEMENT

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Warn drivers about secondary offenses (seatbelts, distraction, etc.) if tickets cannot be written.					
When needed for older drivers, conduct the driver orientation screen for cognitive impairment (DOSCI)					
Use school resource officers (SRO) to bring traffic safety practices directly to teens.					
Stress graduated drivers' licensing stipulations to new drivers at the time of licensing.					
Volunteer to become trained in Stop the Bleed practices. Carry and use tourniquets.					

PROSECUTORS AND COURTS

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Research the use of DWI and drug courts for treating repeat impaired driving offenders.					
Collaborate with law enforcement agencies to expedite the issuance of search warrants for suspected DWIs.					
Collaborate with law enforcement agencies on proper protocols, standards and documentation needed for suspected DWIs.					
Participate in law enforcement saturation patrols to gain further insight into DWI investigations.					
Consider limits on diversion and plea agreements for repeat offenders.					
Continue education by attending webinars on traffic safety topics like occupant protection, ignition interlocks, and phlebotomy					

HEALTH PROVIDER AND EMERGENCY RESPONDERS

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Upgrade computer-aided dispatch systems and protocols to ensure responders are sent to the correct location the first time and receive critical information to provide an appropriate level of care, including: ■ • Support of in-vehicle, crash reporting technology (e.g., OnStar). ■ • Proper use of emergency lights.					
Participate in traffic incident management courses and/or training exercises.					

HEALTH PROVIDER AND EMERGENCY RESPONDERS

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Educate citizens on emergency preparedness and properly responding to emergency vehicles: ■ Moving over and slowing down. ■ Getting safely away from the scene or remaining in vehicle with seat belts on. ■ Having emergency medical information on hand (ICE, File of Life/ Car seat ID).					
Arrange for EMS and fire departments to teach pedestrian and bicycle safety to children by conducting safety rodeos and traffic gardens					
Encourage EMS agencies to adopt NHTSA Office of EMS Provider and Patient Safety in Ambulance.					
Work with family physicians and public health departments to educate patients on safe driving habits and identifying indicators of declining driving skills amongst family members.					
Provide all first responders with high visibility roadside apparel.					
Adopt an agency policy requiring seat belt use for all employees conducting official business.					
Adopt an agency policy restricting the use of handheld electronic devices while driving for all employees except in emergency situations.					
Provide adequate restraints for patients and responders during transport.					
Certify hospital staff to educate new parents on child passenger safety and to perform child seat safety checks prior to leaving the hospital.					
Conduct regular safety check events for the public (car seats, helmets, etc.).					
Train and encourage non-medical responders like police and firefighters to provide basic first aid like tourniquet application.					
Strive to transport patients from crash to emergency room within 60 minutes—the so-called golden hour.					
Train and employ more EMT staff and dispatchers—as young as 18—to assuage short-staffing and burnout.					
Administer whole blood in the pre-hospital setting.					
Train firefighters and responders to adapt to new technology (e.g., EV battery fires, triangulating locations from cell signals, auto crash detection, etc.).					

PUBLIC WORKS AND ENGINEERING

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Use data-driven safety analysis to identify, prioritize and quantify safety impacts of roadway improvements: ■ Conduct road safety assessments. ■ Establish safe, reasonable and consistent speed limits for specific roadway segments. ■ Prioritize safety improvements based on expected reductions in fatal and serious injury crashes. ■ Adopt a "safe system" mindset, evaluating all projects for safety improvements. ■ Implement a Safety Circuit Rider program to assist local agencies with data analysis.					
Reduce lane departure and run-offroad crashes through engineering countermeasures, such as: ■ Chevrons and curve warning signs. ■ Centerline and edge line markings. ■ Centerline and edge line rumble strips. ■ Enhanced roadside delineation. ■ High friction surface treatment in curves. ■ Safety EdgeSM design for all paving operations. ■ Shoulder areas or widened clear zones adjacent to the roadway. ■ Removing, relocating or shielding fixed objects and potential obstacles.					
Reduce intersection crashes by improving visibility, simplifying driver decisions and reducing conflict points: ■ Warning signs for inconspicuous intersections. ■ Retroreflective backplates on signals. ■ Dedicated turn lanes. ■ Restricted turning movements (right-in, right-out only; roundabouts; J-turns). ■ Improve sight distance at intersections, including rail crossings. ■ Keep vegetation trimmed so that signs and intersections are visible. ■ Protected left turn signal phasing for high-volume conflicting movements. ■ Increased spacing between intersections. ■ Implement yellow change intervals for all signalized intersections based on location specific details. ■ Advanced signal systems that dynamically adjust timing plans based on conditions. ■ Acceleration lanes for at-grade entrances onto high-volume or high-speed roadways. ■ Expand current light and gate projects at rail crossings. ■ Close rail crossings or create grade separated intersections at rail crossings.					

PUBLIC WORKS AND ENGINEERING

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Provide safer facilities and accommodations for vulnerable road users even if it is not the primary scope. Remember agencies are responsible for all modes of transportation—not just motor vehicles—within their jurisdictions: ■ High-visibility and/or raised crosswalks. ■ Refugee islands at wider crossings. ■ Pedestrian safety beacons, such as rectangular rapid flashing beacons or pedestrian hybrid beacons signals. ■ Pedestrian intervals at signalized intersections. ■ Pedestrian countdown heads at signalized intersections. ■ Road diets and/or traffic calming features. ■ Bicycle lanes/facilities. ■ Roadway lighting. ■ Enhanced signing and marking. ■ Seek specialized grants to fund additional VRU improvements. ■ Provide border connectivity with active transportation facilities in neighboring states.					
Adequately communicate information for construction projects and new designs. ■ Design work zones to ensure advance warning, visibility and safe passage for all road users, including the use of "smart work zones" when appropriate (dynamic message signs, queue warning systems, intrusion alerts, etc.). ■ Require the use of high-visibility signs in good condition and high-visibility, reflective personal protection equipment in work zones. ■ Provide educational materials and/or simulations to explain new designs considered complex, intimidating or less safe by the public.					
Take advantage of technology solutions to reduce the likelihood of crashes. ■ Use intelligent transportation systems to detect and warn of high-risk or adverse conditions. ■ Support ongoing implementation of crash avoidance systems in vehicles by maintaining retroreflectivity levels for signs and markings and by sharing traveler information and traffic control data with mobile providers.					
Integrate safety into routine planning processes.					
Implement strategies for older drivers included in the Handbook for Designing Roadways for the Aging Population.					

PUBLIC WORKS AND ENGINEERING

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Install transportation systems management and operations strategies that can improve roadway safety for work zones and traffic incident management areas.			✓	✓	
Resist the temptation to remove safety improvements from projects because of budget concerns or public pressure.	✓		✓	✓	
Design from the users' perspective. If possible, ride along the route in a CMV, or traverse the segment in a wheelchair to experience design deficiencies firsthand.	✓	✓		✓	
Deploy clear communication and build informed consent for innovative or unknown countermeasures that may be perceived as unpopular.	✓				

METROPOLITAN PLANNING ORGANIZATIONS AND REGIONAL PLANNING COMMISSIONS

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Establish an interdisciplinary safety committee to lead organizational actions for incorporating safety into all transportation related functions.	✓			✓	
Promote proven engineering countermeasures (see Public Works on page 36) and include safety as a scoring criterion in project prioritization and selection.				✓	
Encourage cities to adopt a Vision Zero (www.visionzeronetwork.org) approach to addressing transportation safety, including Complete Streets or Livable Streets.	✓			✓	
Make safety an overarching theme and core element of transportation plans, including regional Metropolitan Transportation Plans.				✓	
Emphasize safety when prioritizing improvements among various modes of transportation, considering how increased multimodal alternatives and operational projects can reduce the likelihood of crashes.				✓	
Participate in Missouri Coalition for Roadway Safety meetings and activities. Visit www.savemolives.com for more information.	✓				
Educate member agencies on the significance of highway safety and how their agencies can contribute to a safer road system.	✓				
Seek or provide safety grant-writing assistance for communities that may lack the personnel.	✓	✓	✓	✓	✓

STATE OFFICIALS & AGENCIES

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Provide visible leadership that prioritizes safety at the highest levels and promotes a goal of achieving zero roadway fatalities by 2030. Keep the conversation active.					
Establish a legislative task force to consider laws most poised to reduce roadway fatalities and serious injuries in Missouri. Consider: ■ Primary seat belt law for all drivers and all passengers. ■ Increased fines and/or points for violating seat belt and child safety seat laws. ■ A primary hands-free law prohibiting all drivers from using handheld electronic devices. ■ An all-rider helmet requirement for bicyclists and motorcyclists. ■ Child passenger safety laws requiring rear-facing car seats until age two and combined age, height and weight criteria for booster seats. ■ Enhanced graduated driver license requirements. ■ First offender ignition interlock program. ■ Safe passing law to increase vehicle clearance from bicyclists. ■ Increased penalties for operating vehicle without proper endorsements. ■ Basic speed law wherein drivers can be cited for driving too fast for conditions					
Provide critical highway safety information to newly elected officials during orientation.					
Consider additional requirements and proficiencies for obtaining or renewing a driver license. ■ Ensure prospective drivers are equipped with updated information for obtaining or renewing their license (e.g., Missouri's Driver Guide). ■ Develop and distribute a guide specifically for older drivers. ■ Re-testing older driver for skills before license renewals. ■ Educate examiners on indicators of declining driving skills. ■ License endorsement for UTV/ATV. ■ More rigorous motorcycle licensing ■ Tiered licensing per various motorcycle sizes.					
Commit agency resources to participate in highway safety efforts. Consider: ■ Supporting new public policy. ■ Participating in safety advocacy groups. ■ Educating employees on highway safety. ■ Distributing safety information to more Missourians.					

STATE OFFICIALS & AGENCIES

SOLUTION	SAFER PEOPLE	SAFER VEHICLES	SAFER SPEEDS	SAFER INFRSTR.	SAFER RESPONSE
Foster an environment of increased public-private partnerships to leverage additional expertise, resources and opportunities for advancing safety messaging and supporting technologies.					
Explore new ways to support rural and local agencies in identifying safety needs and implementing low-cost, effective countermeasures.					
Collaborate with universities on continued research needs for highway safety advancements.					
Allocate adequate funding for educational, enforcement, engineering and emergency services programs designed to reduce roadway fatalities and serious injuries.					
Provide a consistent brand and messaging for all highway safety partners statewide.					
Develop an annual state of highway safety report for public dissemination.					
Promote recent and existing laws related to highway safety.					
Work to expand the availability of 911 for all residents, preferably Smart 911 systems.					
Adopt an agency policy requiring seat belt use for all state officials and employees while conducting official business.					
Adopt an agency policy restricting the use of handheld electronic devices while driving for all state officials and employees while conducting official business.					
Develop and present clear, concise, and positive outreach and messaging on all critical traffic safety issues.					
Hire and retain dedicated traffic safety professionals and fund their activities outside of regular working hours.					
Re-tool cost share programs to make the process more user-friendly and efficient.					
Consider an active transportation advisory committee to inform departments of transportation on alternate modes.					
Increase monitoring and audits on CDL examiners.					

Glossary

Active Transportation – Human-powered mobility such as walking, biking, or operating a wheelchair.

Backplates – Flat, rectangular panels mounted behind traffic signal heads to improve their visibility. Additional conspicuity may be achieved by affixing retroreflective materials to the panels.

Chevron – A sign displaying a black, rotated V on a yellow background, placed in series along certain curves to guide drivers through the change in alignment.

Countermeasure – Action taken to neutralize a threat.

Complete Streets – A philosophy of designing and operating the transportation system to provide safe access for all users of all ages and abilities, including pedestrians, bicyclists, motorists, and transit users.

Delineation – Use of retroreflective devices or markings on the roadway surface or at the side of the roadway to indicate the alignment, especially at night or in adverse weather.

Drug Recognition Expert – A law enforcement officer trained to recognize impairment in drivers under the influence of drugs other than, or in addition to, alcohol.

Dynamic Message Sign – Stationary traffic control devices capable of displaying one or more alternative messages that provide travelers with real-time, traffic-related information.

Emphasis Area – Specific traffic safety concern that, based on historical data, is a high priority for improvement.

Endorsement – Additional qualification on a driver license allowing the holder to operate certain types of vehicles or haul specific cargo.

Graduated Driver License – A phased licensure process designed to provide new drivers between 15 and 18 years old with progressive levels of experience and permissions in operating a motor vehicle, beginning with an instruction permit and transitioning to an intermediate license and, eventually, a full driver license.

High Friction Surface Treatment – A thin layer of specifically engineered aggregate set in a binder intended to provide increased friction between the road surface and a vehicle's tires; often used in curves or in advance of intersections.

High Risk Rural Roads – A roadway classified as a rural major or minor collector or a rural local road with severe crash experience in the previous five-year period.

Ignition Interlock – Breath-testing device installed in a vehicle that prevents the engine from starting if a certain level of alcohol is detected in the driver's system.

Injury – Physical harm caused to a person. In traffic crashes, injuries are classified as follows:

K–Fatal
A-Serious
B-Minor
C-Possible
O-None

Kinetic Energy – Energy associated with the motion of an object. It is equal to one-half the mass of the object, multiplied by the square of its velocity.

Modes – Ways in which people and goods are transported.

Obstacles – Any roadside object or slope with which a vehicle may interact.

Older Driver – Vehicle operator 65 years of age or older.

Pedestrian – Any person interacting with the roadway without a conveyance. This includes users who are intentionally walking within a road's right of way and those who are unintentionally there because of a disabled vehicle.

Pedestrian Hybrid Beacon – A traffic control device used to stop roadway traffic, when activated, to allow pedestrians to cross the road safely.

Phasing – Sequence and timing of various traffic signal indications that allow vehicles and pedestrians to safely navigate intersections.

Phlebotomy – Practice of drawing blood for evidentiary testing, especially for detection of intoxicants.

Queue – A slow or stopped column of vehicles on the road, due to a traffic incident, construction, or congestion.

Rectangular Rapid Flashing Beacon – A high-frequency flashing LED indication mounted near a crosswalk to draw additional attention to pedestrians while crossing.

Retroreflective – Materials designed to reflect light back to its source rather than scattering it in all directions. This accounts for greater visibility of signs and pavement markings in low-light conditions.

Road Diet – A technique in transportation planning whereby the number of travel lanes and/or effective width of the road is reduced to achieve systemic improvements, often including a reduction in speed.

Roadway Departure – When a vehicle crosses an edge line, a center line, or otherwise leaves the traveled way. Also, Lane Departure.

Roundabout – A circular intersection in which traffic yields to enter, then circulates in a counterclockwise direction around a central island until the desired exit roadway is reached.

Safety Edge – A 30-degree asphalt wedge placed or formed along the edge of roadway pavement intended to allow drivers an easier recovery of the roadway.

Saturation Patrol – Concentrated police effort within a specified geographic area, to enforce a particular type of infraction such as hazardous moving vehicles or impaired driving.

Smart 911 – Technology allowing citizens to provide medical needs through a registered safety profile; information is automatically displayed on the screen for 911 operators to assist in emergency response.

Stop the Bleed – Collaborative effort led by the American College of Surgeons to bring knowledge of bleeding control to the public.

Teen Driver – Passenger vehicle operator 19 years of age or younger.

Telematics – The long-distance transmission of vehicle operational metrics such as speed, restraint use, and distraction.

Tourniquet – Emergency device used to control bleeding by constricting blood flow to a limb.

Traffic Calming – Intentional introduction of such physical roadway features as narrow lanes, bumps and humps, and chicanery for the purpose of slowing traffic.

Traffic Garden – A miniaturized traffic system that enables young children to learn about and practice positive traffic behaviors in a safe, controlled environment.

Traffic Incident Management – A planned and coordinated multi-disciplinary process to detect, respond to, and clear traffic incidents so traffic flow may be restored as quickly as possible.

Whole Blood – Blood that contains all its natural components (red cells, white cells, platelets and plasma). Whole blood is often transfused only in a hospital setting but is showing benefits for field transfusions.

Abbreviations

ATV – All-terrain vehicle

BRAKES – Be Responsible and Keep Everyone Safe

BUPD - Buckle Up Phone Down

CDL – Commercial driver license

CMV - Commercial motor vehicle

DMS – Dynamic message sign

DOSCI - Driver orientation screen for cognitive impairment

DRE – Drug recognition expert

EMS – Emergency medical services

FCCLA - Family, Career and Community Leaders of America

FFA - Future Farmers of America

GDL – Graduated driver license

ITS - Intelligent transportation system

LRSP - Local road safety plan

MADD - Mothers Against Drunk Driving

MCRS - Missouri Coalition for Roadway Safety

MoCARS - Missouri Crash Analysis Reporting System

MoDOT – Missouri Department of Transportation

MSHP – Missouri State Highway Patrol

NHTSA - National Highway Traffic Safety Administration

OHV – Off-highway vehicle

ROV – Recreational off-highway vehicle

SADD – Students Against Destructive Decisions

SAFER – Safety Assessment for Every Roadway

SHSP – Strategic highway safety plan

SFST – Standardized field sobriety testing

TIM – Traffic incident management

TSMO - Transportation systems management and operations

UTV – Utility task vehicle

VRU – Vulnerable road user

Vulnerable Road User Safety Assessment

Almost everyone is a Vulnerable Road User (VRU) at some point in their daily lives. VRUs refer to people using active modes of transportation like walking, operating wheelchairs, bicycling, or scootering. All these people, including you, are especially vulnerable to being killed or seriously injured if they are involved in a traffic crash.

These serious crashes are becoming more common – fatal and serious injury VRU crashes increased more than 50% between 2015 and 2023, compared to a 14% increase in all fatal and serious injury crashes. In addition to thousands of people killed and seriously injured, these VRU crashes resulted in an estimated economic cost of $17.8 billion to the State of Missouri.

Because of this rise and the impact these crashes have on the state, MoDOT created the Vulnerable Road User Safety Assessment as a supplement to the Show-Me Zero plan. To create the plan, MoDOT engaged with over 200 engineers, planners, and elected officials across the state in collaborative workshops, and reviewed every VRU crash on every road in Missouri over the past 10 years.

This work helped identify a Higher Injury Network that shows over half of serious VRU crashes happened on just 0.6% of our roads. A risk assessment also identified specific contextual, roadway configuration, and VRU usage risk factors. These risk factors were used to develop a Higher Risk Network of roads showing where VRU crashes might happen in the future, even if they haven't occurred there yet.

The data analysis and consultation workshops, along with a review of national best practices, helped MoDOT to develop a program of projects, a set of strategies, and an action plan to help achieve the Show-Me Zero goals for VRUs in Missouri.

For more information, use the QR code to access the complete document on MoDOT's website.

SHOW-ME ZERO

SAFER PEOPLE • SAFER VEHICLES • SAFER SPEEDS • SAFER INFRASTRUCTURE • SAFER RESPONSE

We acknowledge the following organizations for participating in the SHSP working group:

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Missouri Department of Public Safety
Missouri Department of Revenue
Missouri Department of Transportation
Missouri Dump Truckers Association
Missouri Highways and Transportation Commission
Missouri Local Technical Assistance Program
Missouri Office of Prosecution Services
Missouri School Bus Contractors Association
Missouri State Highway Patrol
Missourians for Responsible Transportation
Mothers Against Drunk Driving
National Highway Traffic Safety Administration
Northwest Missouri Regional Council of Governments
Owner-Operator Independent Drivers Association
Ozark Foothills Regional Planning Commission
Ozarks Transportation Organization
Phelps County Regional Medical Center
Safe and Sober
Sedalia Police Department
Sedalia School District 200
St. Charles County
Sunrise Beach Police Department
Think First Missouri
Traffic Engineering Consultants
University of Central Missouri
University of Missouri

About Us

The Missouri Coalition for Roadway Safety exists to end fatalities and serious injuries on Missouri roadways by advocating for the prioritization and implementation of proven safety strategies. Through cooperative efforts in education, public policy, enforcement, engineering, and emergency medical services, we encourage all Missourians to take an active role in making our roadways safe for everyone.

Founded in 2004, the MCRS is responsible for developing and implementing the state's strategic highway safety plan. This edition of Show-Me Zero is Missouri's sixth SHSP and will serve as the state's plan from 2026-2030. The purpose of the SHSP is to identify the core issues contributing to severe crashes in Missouri and to identify strategies to mitigate these concerns. Over the past year, a statewide group of individuals from multiple disciplines has worked together to develop this plan. This document represents a consensus on the primary actions Missourians can take during the next five years to reduce traffic fatalities.

To support implementation of the SHSP, the MCRS is represented by locally focused regional coalitions as well as several issue-specific subcommittees. Together, the regional coalitions and subcommittees work to promote the implementation of SHSP strategies at both the state and local levels. Some strategies are as simple as an individual committing to better choices, while others require changes to policies and procedures. Achieving the ultimate goal of zero traffic fatalities will require contributions from all of us. Thus, this plan is for all Missourians.

Any concerned citizens from any traffic-safety-related field are welcome and may become involved with the activities of MCRS. For more information on regional coalitions and how to get involved, visit www.savemolives.com.

Over the next five years, the MCRS will routinely evaluate progress of implementing the SHSP. The MCRS Steering Committee meets quarterly to help ensure regional coalitions and subcommittees are actively promoting implementation of the SHSP within communities. As needed, the Steering Committee will adjust focus and processes to ensure a comprehensive, statewide approach for eliminating traffic fatalities and serious injuries on Missouri roadways.

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Buckle Up. Phone Down. Slow Down. Drive Sober.

Missouri Coalition for Roadway Safety

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www.savemolives.com