Southwest Missouri Regional Traffic Safety Plan

VISION ZERO

Notice:

The information contained within this document is intended solely for planning purposes and should not be construed as a final design for any project. All findings, recommendations, conceptual designs, cost estimates, and commentary are based on the current data and conditions, which are subject to change. Comprehensive analysis and detailed engineering design will be required prior to the implementation of any recommendations presented herein.

This notice aligns with the Harry S Truman Coordinating Council's (HSTCC) commitment to regional planning and the strategic objectives outlined in the Infrastructure Investment and Jobs Act (IIJA). This document was partially funded through grants from the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and the United States Department of Transportation (USDOT). The views and opinions expressed in this document do not necessarily reflect those of the USDOT or any other federal agency.

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Contents

KEY TERMS:

AARP - American Association of Retired Persons
ACS - American College of Surgeons
ATLS - Advanced Trauma Life Support
CDC - Centers for Disease Control and Prevention
CDBG - Community Development Block Grant
FHWA - Federal Highway Administration
FTA - Federal Transit Administration
HIN - High-Injury Network
HSTCC - Harry S. Truman Coordinating Council
IIHS - Insurance Institute for Highway Safety
IIJA - Infrastructure Investment and Jobs Act
JATSO - Joplin Area Transportation Study Organization
MCHD - McDonald County Health Department
MIEMSS - Maryland Institute for Emergency Medical Services Systems
MoDOT - Missouri Department of Transportation
NHTSA - National Highway Traffic Safety Administration
RSCP - Road Safety Comprehensive Plan
SS4A - Safe Streets for All
SVI - Social Vulnerability Index
TAC - Technical Advisory Committee
TEAP - Traffic Engineering Assistance Program
USDOT - United States Department of Transportation
Vision Zero - A strategy aimed at eliminating all traffic fatalities and severe injuries
WHO - World Health Organization

Harry S. Truman Coordinating Council - Member Communities

Jasper County:

- Village of Airport Drive
- City of Alba
- City of Asbury
- Village of Avilla
- Town of Brooklyn Heights
- City of Carl Junction
- City of Carterville
- City of Carthage
- Village of Carytown
- City of Duenweg
- City of Duquesne
- Town of Fidelity
- City of Jasper
- City of Joplin
- Village of La Russell
- City of Neck City
- City of Oronogo
- City of Purcell
- Village of Reeds
- City of Sarcoxie
- City of Waco
- City of Webb City

Barton County:

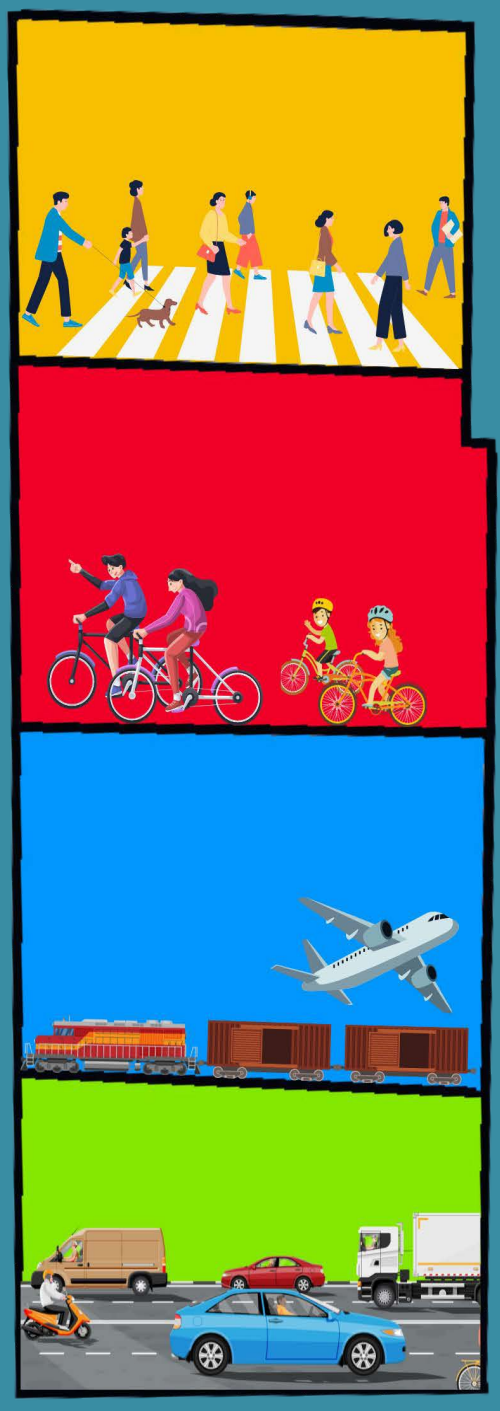
- City of Golden City
- City of Lamar
- City of Lamar Heights
- City of Liberal
- City of Mindenmines

Newton County:

- Cliff Village
- Village of Dennis Acres
- City of Diamond
- Fairview
- City of Granby
- Village of Grand Falls Plaza
- Village of Leawood
- Town of Loma Linda
- City of Neosho
- Village of Newtonia
- Village of Redings Mill
- Village of Ritchey
- Village of Saginaw
- City of Seneca
- Village of Shoal Creek Estates
- Shoal Creek Drive Village
- City of Stark City
- Village of Stella
- Village of Wentworth

McDonald County:

- City of Anderson
- City of Goodman
- Village of Jane
- City of Lanagan
- City of Noel
- City of Pineville
- City of Southwest City



Executive Summary

The implementation of the Vision Zero Action Plan will be an ongoing process, involving regular evaluation and adjustment of our strategies based on data and feedback. By continuously monitoring our progress and making necessary changes, we can stay on track to achieve our goal of **zero traffic fatalities and serious injuries by 2040**. Together, we can create a safer, more equitable transportation system for all residents of Southwest Missouri.

Community engagement and stakeholder collaboration are essential components of this plan. We have worked closely with local boards, committees, and residents to gather input and feedback, ensuring that the strategies and actions we implement are aligned with the needs and priorities of our community. This collaborative approach helps build public support for Vision Zero initiatives and fosters a culture of traffic safety.

A significant aspect of the Vision Zero Action Plan is the focus on vulnerable road users, including pedestrians, cyclists, and motorcyclists. These groups are disproportionately affected by severe crashes, and our strategies prioritize their safety. By improving pedestrian and bicycle infrastructure, implementing safer speed limits, and enhancing road designs, we aim to reduce the risks for these users and ensure that our roads are safe for everyone.

The plan is built on the Safe System approach, which recognizes that human errors are inevitable, and thus, our transportation network must be designed to minimize the consequences of these mistakes. This involves creating safer road environments through engineering solutions, such as road diets and protected bike lanes, and promoting safer behaviors through education and policy changes. Our goal is to create a transportation system where even if a crash occurs, it does not result in fatal or serious injuries.

The Vision Zero Action Plan for Southwest Missouri is a comprehensive initiative aimed at eliminating all traffic fatalities and severe injuries in Jasper, Newton, Barton, and McDonald counties by 2040. This ambitious goal reflects our commitment to the safety and well- being of all road users, acknowledging that any loss of life or serious injury on our roads is unacceptable. By adopting a data-driven approach and focusing on high-risk areas, we can identify the most critical safety issues and implement effective solutions.

Traffic Crash Summary (2020–2024)
Focusing on a five-year period from **2020 to 2024**, a comprehensive study was conducted within the Harry S Truman Coordinating Council (HSTCC) region to examine trends in traffic-related fatalities and injuries across Southwest Missouri. During this timeframe, **253 individuals tragically lost their lives**, while an additional **943 sustained serious injuries**. Beyond these most severe outcomes, **6,007 others suffered minor injuries**, underscoring the widespread and lasting impacts of roadway crashes. Each of these numbers reflects not only physical harm but also the significant emotional, social, and financial stresses borne by families and communities throughout the region.

The persistence of these statistics, both at the national level and within our local communities, underscores the urgent need for a thorough analysis. This study sought to investigate the specific locations, causes, and contributing factors associated with these incidents, with the ultimate objective of reducing and eventually eliminating such devastating outcomes.

The research encompassed a review of past and ongoing projects, as well as an assessment of municipal and county enforcement policies and safety programs currently in place across several communities within the region.
Furthermore, the study identified opportunities for communities to refine existing policies or implement new ones that could enhance safety through capital projects and new development initiatives.

Introduction

Vision Zero:

No traffic deaths
or serious injuries

What is Vision Zero?

Vision Zero is a comprehensive strategy that aims to eliminate all traffic fatalities and severe injuries, while simultaneously promoting safe, healthy, and equitable mobility for everyone. This initiative goes beyond traditional road safety measures by addressing the root causes of traffic incidents and focusing on systemic changes. Vision Zero emphasizes the importance of a holistic approach that incorporates engineering, enforcement, education, and emergency response to create a transportation environment where all users, including drivers, pedestrians, and cyclists, can coexist safely. By adopting Vision Zero, communities commit to prioritizing human life and well-being over speed and convenience.

Central to Vision Zero is the Safe System approach, which acknowledges that human errors are inevitable and therefore, the design and operation of our roads must be adapted to account for these mistakes. Unlike conventional road safety practices that often place the onus on individual road users, the Safe System approach shifts the focus to creating a forgiving road environment. This involves implementing measures such as traffic calming, improved road design, and the use of advanced technology to reduce the likelihood of severe injuries or fatalities when accidents occur. By designing roads that accommodate human fallibility, Vision Zero aims to transform the way we think about traffic safety.

The Safe System approach is grounded in the understanding that safety is a shared responsibility among all stakeholders, including policymakers, urban planners, traffic engineers, law enforcement, and the community at large. It calls for a collaborative effort to create a cohesive network of safe roads, vehicles, and behaviors. This means integrating safety into every stage of transportation planning and development, from the initial design of infrastructure to the implementation of safety regulations and public awareness campaigns.

By fostering a culture of shared responsibility, Vision Zero seeks to ensure that every aspect of the transportation system works together to protect human lives. Moreover, Vision Zero places a strong emphasis on equity, recognizing that traffic fatalities and severe injuries disproportionately affect vulnerable populations, such as pedestrians, cyclists, children, the elderly, and low-income communities.

The initiative strives to create an inclusive transportation system that addresses these disparities and ensures that everyone has access to safe mobility options. This involves targeted interventions in high-risk areas, equitable distribution of resources, and inclusive community engagement to understand and address the specific needs of different groups. By prioritizing equity, Vision Zero aims to create a safer and more just transportation system for all.

9 Components *of a* Strong Vision Zero Commitment

Based on the experiences of early-adopter cities in the United States, these nine components have proven to be an effective high-level framework for communities considering a Vision Zero commitment. While these are not the only factors to consider, they are critical aspects to ensure a strong and lasting commitment to Vision Zero.

POLITICAL COMMITMENT

The highest-ranking local officials (Mayor, City Council, City Manager) make an official and public commitment to a Vision Zero goal to achieve zero traffic fatalities and severe injuries among all road users (including people walking, biking, using transit, and driving) within a set timeframe. This should include passage of a local policy laying out goals, timeline, stakeholders, and a commitment to community engagement, transparency, & equitable outcomes.

MULTI-DISCIPLINARY LEADERSHIP

An official city Vision Zero Taskforce (or Leadership Committee) is created and charged with leading the planning effort for Vision Zero. The Taskforce should include, at a minimum, high-ranking representatives from the Office of the Mayor, Police, Transportation (or equivalent) and Public Health. Other departments to involve include Planning, Fire, Emergency Services, Public Works, District Attorney, Office of Senior Services, Disability, and the School District.

ACTION PLAN

Vision Zero Action Plan (or Strategy) is created within 1 year of initial commitment and is implemented with clear strategies, owners of each strategy, interim targets, timelines, & performance measures.

EQUITY

City stakeholders commit to both an equitable approach to Vision Zero by establishing inclusive and representative processes, as well as equitable outcomes by ensuring measurable benchmarks to provide safe transportation options for all road users in all parts of the city.

COOPERATION & COLLABORATION

A commitment is made to encourage meaningful cooperation and collaboration among relevant governmental agencies & community stakeholders to establish a framework for multiple stakeholders to set shared goals and focus on coordination and accountability.

SYSTEMS-BASED APPROACH

City leaders commit to and prioritize a systems-based approach to Vision Zero — focusing on the built environment, systems, and policies that influence behavior — as well as adopting messaging that emphasizes that these traffic losses are preventable.

DATA-DRIVEN

City stakeholders commit to gather, analyze, utilize, and share reliable data to understand traffic safety issues and prioritize resources based on evidence of the greatest needs and impact.

COMMUNITY ENGAGEMENT

Opportunities are created to invite meaningful community engagement, such as select community representation on the Taskforce, broader community input through public meetings or workshops, online surveys, and other feedback opportunities.

TRANSPARENCY

The city's process is transparent to city stakeholders and the community, including regular updates on the progress on the Action Plan and performance measures, and a yearly report (at minimum) to the local governing board (e.g., City Council).

For more visit the Vision Zero Network at visionzeronetwork.org.
Questions or ideas? Contact leah@visionzeronetwork.org.

VISION ZERO NETWORK

Vision Zero has had a significant impact on road safety in Sweden since its adoption in 1997. The country has consistently demonstrated one of the lowest road fatality rates in the world due to the implementation of Vision Zero policies.

Key Swedish Statistics:

Road Fatalities Reduction: In 1997, the year Vision Zero was launched, Sweden recorded about 7 road deaths per 100,000 people. By 2016, this had
dropped to 2.8 deaths per 100,000 people, reflecting a nearly 60% reduction in fatalities.

Overall Fatalities: In 1997, Sweden had 541 road fatalities. By 2020, that number had decreased to 204 fatalities, showing a marked decline in traffic deaths over two decades.

Safety on the Roads: Between 2000 and 2020, Sweden managed to cut its total road fatalities by more than 50%, largely through innovations in road design, lower speed limits, improved vehicle safety, and enhanced enforcement measures.
Fatality Rate: In 2020, Sweden's road fatality rate was 1.7 deaths per 100,000 people, one of the lowest globally and far below the European Union average of around 5 deaths per 100,000 people at that time.

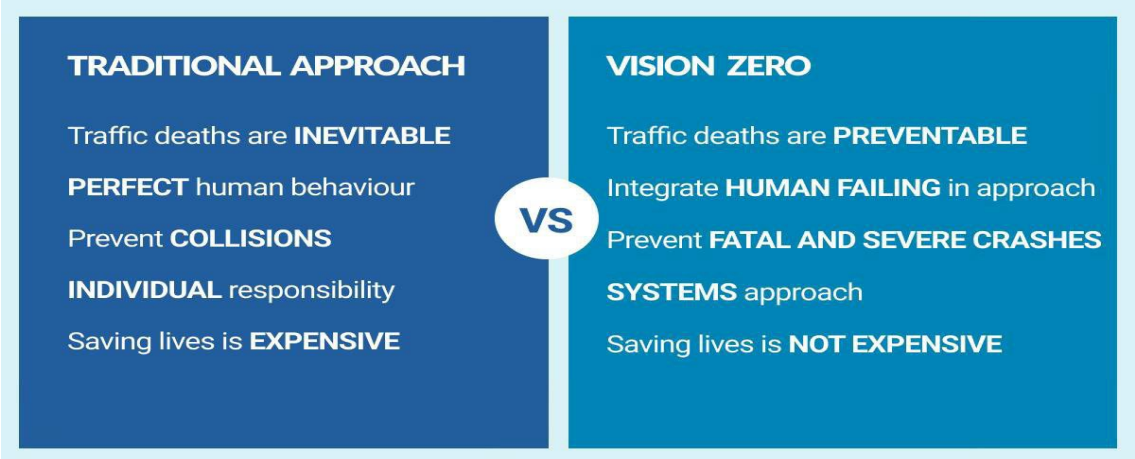
Measures Contributing to the Decline

Infrastructure Improvements: Sweden has implemented widespread infrastructure upgrades, including the installation of 2+1 roads (two lanes with a middle alternating lane for overtaking, separated by barriers), which have been instrumental in reducing head-on collisions. Speed Management: The introduction of lower speed limits in urban areas and high- risk zones has significantly decreased the severity of accidents.

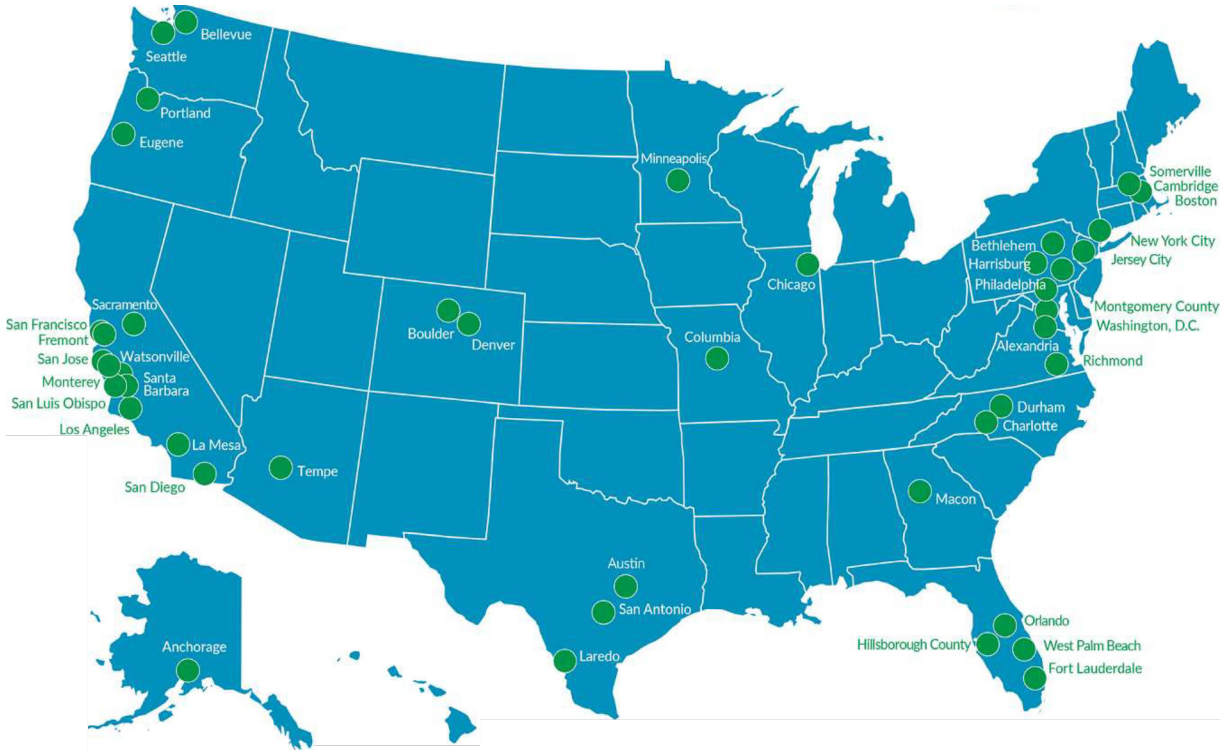
Pedestrian and Cyclist Safety: Sweden has invested heavily in creating safe crossings, separated cycle paths, and traffic calming measures in cities to protect vulnerable road users.

Alcohol and Drug Policies: Sweden has stringent laws against impaired driving, contributing to a reduction in fatalities related to alcohol and drugs.

Vision Zero's success in Sweden demonstrates that a holistic approach combining infrastructure improvements, vehicle safety technologies, and strict enforcement can dramatically reduce road fatalities. The Swedish model has served as an inspiration for many other countries to adopt similar policies in their efforts to improve road safety.



Several U.S. cities have adopted Vision Zero to eliminate traffic fatalities and severe injuries through a data-driven, multidisciplinary approach. Here are some key Vision Zero cities:



New York City, NY (2014): Lowered speed limits, redesigned intersections, expanded protected bike lanes, and increased traffic enforcement. NYC has seen reduced traffic fatalities.

San Francisco, CA (2014): Focused on pedestrian safety, street redesigns, and traffic calming measures.

Seattle, WA (2015): Lowered speed limits, increased pedestrian crossings, and added protected bike lanes, contributing to a decrease in fatalities.

Los Angeles, CA (2015): Targeted speed reductions, high-injury network analysis, and infrastructure improvements to enhance safety.

Boston, MA (2015): Implemented speed reductions, street redesigns, and safer crosswalks to enhance safety.

Portland, OR (2015): Used data to focus on speed management and multimodal street design for pedestrians and cyclists.

Chicago, IL (2017): Invested in pedestrian refuge islands, traffic signal upgrades, and protected bike lanes to reduce crash risks.

Washington, D.C. (2015): Improved pedestrian safety with safer crosswalks, curb extensions, and speed limit reductions.

Austin, TX (2015): Prioritized speed limit reductions, pedestrian and cyclist infrastructure, and safety awareness campaigns.

Denver, CO (2016): Targeted infrastructure improvements in high-crash areas.

These cities continue to prioritize infrastructure changes, enforcement, and public education to reduce traffic fatalities and serious injuries, following Vision Zero's holistic approach.

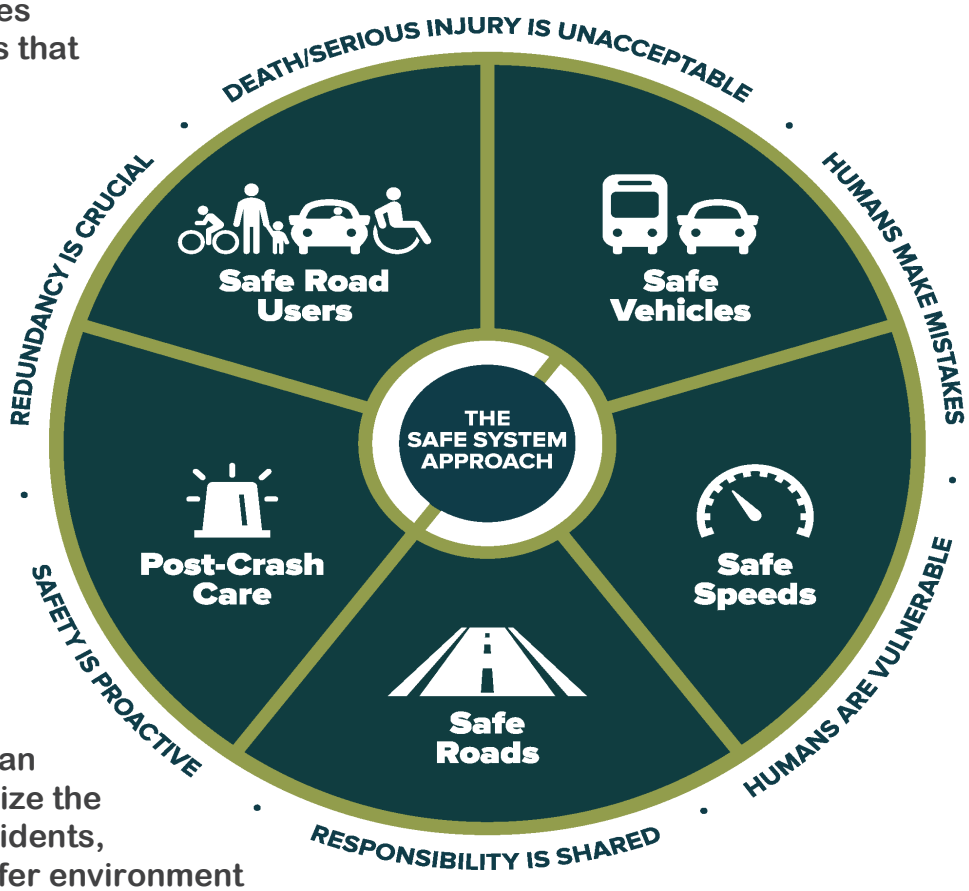
A Vision Zero City meets the following minimum standards:

- Sets clear goal of eliminating traffic fatalities and severe injuries
- The Mayor has publicly, officially committed to Vision Zero
- A Vision Zero plan or strategy is in place, or the Mayor has committed to doing so in clear time frame.
- Key departments (including Police, Transportation and Public Health) are engaged

The Safe System Approach

This Plan serves as the comprehensive roadmap for the Southwest Missouri Region's ambitious goal of achieving Vision Zero—zero traffic fatalities and serious injuries on its roadways. At its core, the Plan is built upon the Safe System Approach, a forward-thinking framework that prioritizes human life and health above all else. Unlike traditional safety methods that focus primarily on driver behavior, the Safe System Approach operates on the premise that while human mistakes are inevitable, the consequences should not be deadly or severely harmful.

This strategy emphasizes designing road systems that are inherently safer, recognizing that every element of the transportation network from the layout of streets and intersections to the vehicles and speed limits—is crucial in preventing crashes and reducing their severity when they occur.



The Plan incorporates a holistic perspective that considers the vulnerability of the human body and aims to minimize the physical impacts of accidents, ultimately creating a safer environment for all road users, including drivers, cyclists, and pedestrians. Through coordinated efforts among engineers, policymakers, public health officials, law enforcement, and community advocates. This Plan charts the course toward a future where fatal and serious traffic injuries are eliminated in the Southwest Missouri Region.

Safe System Principles

The Safe System Approach is guided by six core principles designed to create a safer transportation environment that minimizes the risk of fatal and serious injuries. These principles provide the foundation for Vision Zero efforts and road safety strategies. Below are the six key principles of the Safe System Approach:

Death/Serious Injury is Unacceptable

While no crashes are desirable, the Safe System approach prioritizes crashes that result in death and serious injuries, since no one should experience either when using the transportation system.

Safety is Proactive

Proactive tools should be used to identify and mitigate latent risks in the transportation system, rather than waiting for crashes to occur and reacting afterwards.

Responsibility is Shared

All stakeholders (transportation system users and managers, vehicle manufacturers, etc.) must ensure that crashes don't lead to fatal or serious injuries.

Humans Make Mistakes

People will inevitably make mistakes that can lead to crashes, but the transportation system can be designed and operated to accommodate human mistakes and injury tolerances and avoid death and serious injuries.

Humans Are Vulnerable

People have limits for tolerating crash forces before death and serious injury occurs; therefore, it is critical to design and operate a transportation system that is human-centric and accommodates human vulnerabilities.

Redundancy is Crucial

Reducing risks requires that all parts of the transportation system are strengthened, so that if one part fails, the other parts still protect people.

Safe System Elements

Making a commitment to zero deaths means addressing every aspect of crash risks through the five elements of a Safe System, shown below. These layers of protection and shared responsibility promote a holistic approach to safety across the entire transportation system. The key focus of the Safe System approach is to reduce death and serious injuries through design that accommodates human mistakes and injury tolerances.

The Safe System Approach shifts the focus from blaming individuals for crashes to creating a system that is resilient to human error. By addressing the five key elements— safe road users, safe vehicles, safe speeds, safe roads, and post-crash care—this approach aims to prevent fatalities and serious injuries, making the transportation network safer for everyone. Collaboration across sectors, including road designers, policymakers, vehicle manufacturers, health professionals, and the public, is essential to successfully implementing this approach and achieving the vision of zero traffic deaths.

Safe Road Users

While designing safer roads and vehicles is critical, road users also play a fundamental role in creating a safer system. Safe road user behaviors include adherence to traffic laws, such as obeying speed limits and traffic signals, using seatbelts, avoiding distractions, and never driving under the influence of drugs or alcohol. Education and enforcement efforts help promote these safe behaviors. Vulnerable users, such as pedestrians, cyclists, and motorcyclists, must be given special consideration, with infrastructure and policies in place to protect them. Encouraging a culture of safety, where road users take responsibility not only for their own safety but for the safety of others, is a key part of this element.

Safe Vehicles

Safe vehicles are equipped with advanced safety technologies that help prevent crashes and protect occupants and other road users. Vehicle safety includes features such as airbags, electronic stability control, lane-keeping assistance, automatic emergency braking, and crash avoidance systems. Ensuring that vehicles meet high safety standards and encouraging the adoption of newer technologies can significantly reduce the chances of crashes and mitigate the effects of collisions when they do occur. Encouraging regular vehicle maintenance and inspections is also crucial to ensure that safety systems perform as intended.

Safe Speeds

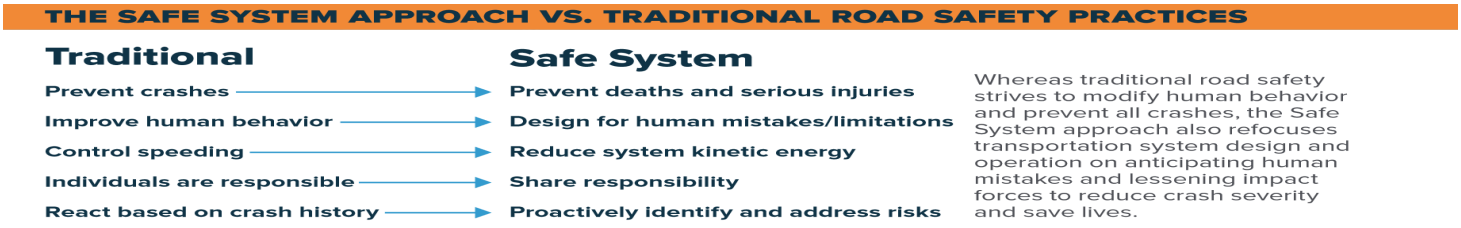
Managing vehicle speeds is essential to reducing both the likelihood of a crash and the severity of injuries when crashes occur. Safe speeds are those that are appropriate for the specific road conditions, road types, and the presence of vulnerable users. This can involve setting speed limits based on the context of the area, such as lower speeds in residential or pedestrian-heavy zones and higher speeds on highways. Implementing speed management measures like traffic calming techniques, speed bumps, and automated speed enforcement can also play a key role. The relationship between speed and injury severity is critical; lower speeds reduce stopping distances and impact forces, helping to save lives.

Safe Roads

Safe roads are designed to prevent crashes from occurring and to reduce the severity of crashes when they do happen. This involves creating roadways that are forgiving of human error and ensure that road designs account for the needs of all users—pedestrians, cyclists, motorcyclists, and drivers. Elements such as roundabouts, medians, pedestrian crossings, protected bike lanes, and clear road signage are examples of design features that contribute to safe roads. The goal is to ensure that roads are not just efficient for travel but inherently safer by design, minimizing the opportunities for conflict between different road users.

Post-Crash Care

Despite the best efforts to prevent crashes, some crashes will inevitably occur. Post-crash care focuses on ensuring that when accidents do happen, those involved receive timely and effective medical attention. This includes quick emergency response times, the availability of trained first responders, well-equipped hospitals and trauma centers, and the ability to coordinate care across different services. Improving the survivability of crashes also involves measures like encouraging bystander first aid training and ensuring that the road network is accessible for emergency vehicles. Post-crash care also involves providing rehabilitation for those injured in crashes to facilitate recovery and reintegration into everyday life.



Demographics

The Southwest Missouri region, comprising Barton, Jasper, Newton, and McDonald counties, presents a unique blend of rural and urban environments. Nestled within the Ozarks' foothills, these counties are characterized by rich agricultural lands, vibrant communities, and a mix of small towns and growing urban centers. Each county contributes to the region's economic diversity, from manufacturing hubs and retail centers to agricultural production and local businesses. This diverse landscape creates a community with strong ties to tradition, yet with growing opportunities for development and modernization.

The region's geographic location is strategic, with major transportation corridors like Interstate 44 and U.S. Highway 71 facilitating movement and commerce. This accessibility supports regional growth by connecting local businesses to broader markets and providing residents with access to services and employment opportunities within and beyond Southwest Missouri. The area’s transportation network is integral to its economic vitality, influencing everything from commuting patterns to economic development initiatives.

Purpose of the Report

This demographic report aims to provide a detailed analysis of the population characteristics, socio-economic conditions, and transportation dynamics within Barton, Jasper, Newton, and McDonald counties. By examining key demographic trends, income and employment data, educational attainment, and transportation infrastructure, this report seeks to offer insights that can inform future planning, investment, and community initiatives across the region.

As the region navigates challenges such as economic shifts, population changes, and transportation needs, understanding these factors becomes crucial for effective decision-making. This report serves as a resource for local government officials, community organizations, and stakeholders seeking to enhance the quality of life for residents, promote sustainable growth, and improve connectivity within and between communities.

Key Demographic and Economic Trends

The counties in Southwest Missouri share common demographic and economic trends, but each has distinct characteristics that shape its community profile. Population growth has been steady in urban areas like Joplin, while rural areas continue to face challenges such as declining populations and economic disparities. The median age across the counties reflects a blend of young families and an aging population, which has implications for service delivery, workforce needs, and community engagement.

Economic diversity is a hallmark of the region, with manufacturing, healthcare, retail, and agriculture serving as primary economic drivers. While the median household income varies between counties, there are consistent challenges with poverty rates exceeding state and national averages in some areas. These disparities highlight the need for targeted economic development and workforce training programs to enhance local job opportunities and improve the standard of living for all residents.

Transportation and Connectivity

Transportation plays a pivotal role in the daily lives of residents across Barton, Jasper, Newton, and McDonald counties. Key highways like I-44 and U.S. Highway 71 provide vital links to larger metropolitan areas, including Springfield, Missouri, and Tulsa, Oklahoma. These corridors not only support regional trade and tourism but also influence local commuting patterns and access to services.

While urban centers like Joplin benefit from more extensive transportation options, rural communities often face challenges with limited public transit availability, making private vehicles the primary mode of transportation. Addressing these disparities and improving transportation infrastructure is essential for enhancing mobility, reducing travel times, and supporting economic growth across the region.

This report will explore these demographic and socio-economic factors in greater detail for each county, providing a comprehensive understanding of the current landscape and future opportunities for development in Southwest Missouri. The following sections delve into the individual profiles of Barton, Jasper, Newton, and McDonald counties, focusing on their unique characteristics and shared challenges.

The demographic, socio-economic, and transportation data for Barton, Jasper, Newton, and McDonald counties in Missouri were compiled from various sources, including:

U.S. Census Bureau: Data from the most recent American Community Survey (ACS) for population, age distribution, race, income, and educational attainment across all counties.

Missouri Department of Economic Development: Regional economic reports detailing income levels, poverty rates, and employment statistics for each county.

Bureau of Labor Statistics (BLS): Information on unemployment rates, employment sectors, and workforce trends in Barton, Jasper, Newton, and McDonald counties.

Missouri Department of Transportation (MoDOT): Transportation infrastructure data, including major highways, commuting patterns, and public transit options.

Regional Planning Commissions:
- Harry S Truman Coordinating Council: Planning and demographic analysis for Jasper, Newton, and Barton counties.
- Southwest Missouri Council of Governments (SMCOG): Data relevant to regional planning and socio-economic trends.

County and Local Government Websites: Additional data on community services, local projects, and transportation improvements specific to each county.

Educational Institutions: Missouri Southern State University and Crowder College reports on regional education levels and workforce development initiatives.

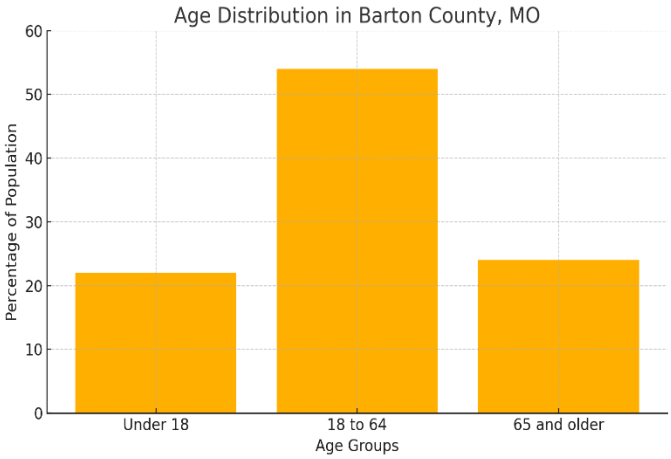
Barton County Demographics and Socio-Economics

Population and Demographics

Barton County, Missouri, is a rural community situated in the northwestern corner of Southwest Missouri. It has a predominantly agricultural base, with smaller towns and a close-knit population. Key demographic data for Barton County includes:

- Total Population: Approximately 11,500 people.

- Median Age: 43 years, indicating an older-than-average population compared to many urban areas, which can have implications for healthcare and social services.



- Under 18: Approximately 22% of the population, highlighting a significant proportion of young families.

- 18 to 64: Around 54%, representing the primary working-age group.

- 65 and older: About 24%, a larger percentage than state and national averages, suggesting a growing need for senior services and healthcare.

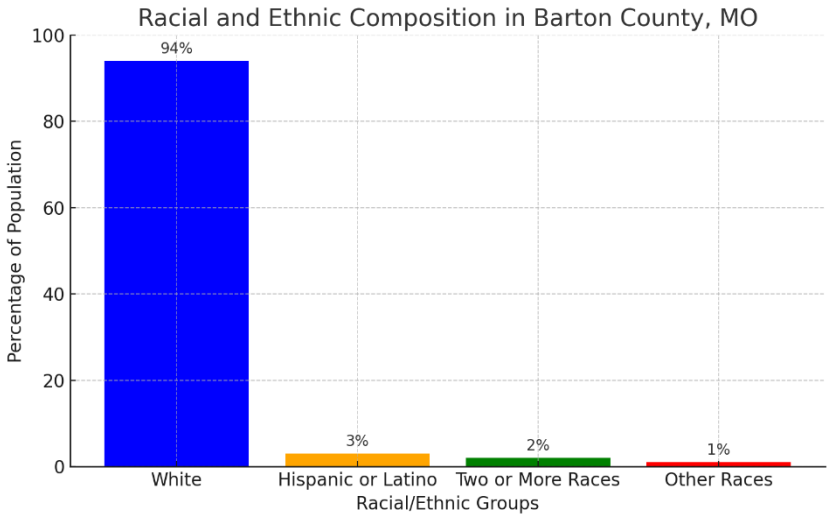
- Racial and Ethnic Composition:

  - White: 94%

  - Hispanic or Latino: 3%

  - Two or More Races: 2%

  - Other Races: 1%



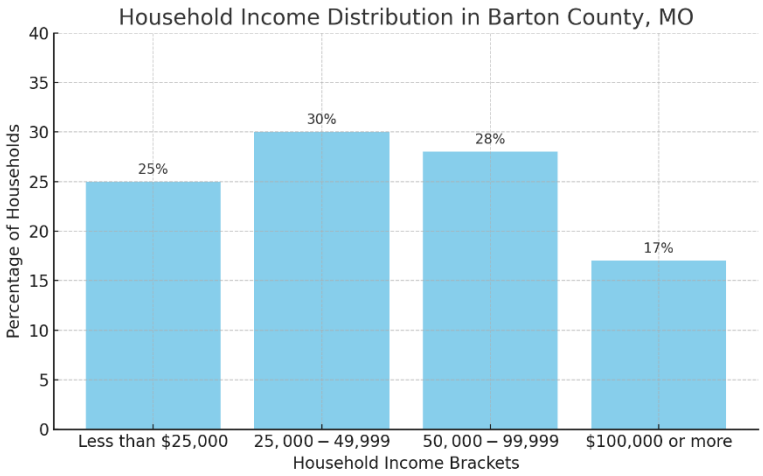
- Household Size: The average household size in Barton County is about 2.4 people, with a mix of single-family homes and multi-generational households reflecting the county's traditional rural character.

Social Economics

Barton County's economy is largely shaped by its agricultural roots, local businesses, and a small but stable labor force. The following socio-economic factors illustrate the community's strengths and challenges:

- Median Household Income: Approximately $42,000, lower than both state and national medians, reflecting the rural economic base and limited high-wage job opportunities.

- Per Capita Income: Around $22,000, which is indicative of the county's lower income levels per resident compared to more urbanized regions.



Income Distribution:

- Households earning less than $25,000: About 25%, highlighting economic challenges for a significant portion of the population.

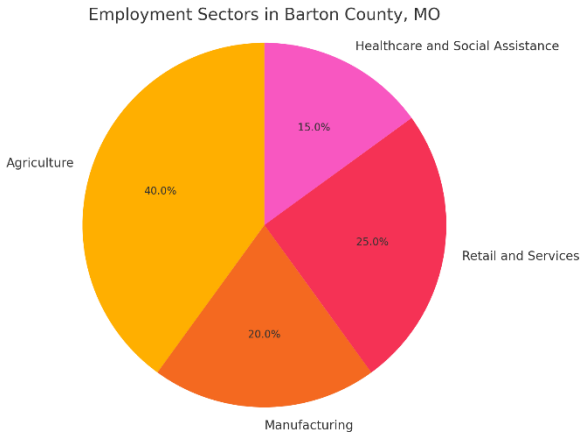
- Households earning between $25,000 and $49,999: Approximately 30%.
- Households earning $50,000 to $99,999: Around 28%.

- Households earning $100,000 or more: About 17%, reflecting a smaller proportion of higher-income households.

- Poverty Rate: Approximately 17%, which is above the state average, indicating economic difficulties for many families, including food and housing insecurity.

- Education:
  - High school diploma or higher: About 88% of residents have completed high school or obtained a GED.
  - Bachelor's degree or higher: Around 15%, suggesting opportunities for improving access to higher education and technical training to diversify the local workforce.
  - The focus on vocational education and skills training helps address workforce needs in agriculture and small-scale manufacturing.

- Employment Sectors:



- Agriculture: Dominates the local economy, with many residents engaged in farming and related services.

- Manufacturing: Though smaller in scale compared to nearby urban counties, there are some small manufacturing businesses providing local employment.

- Retail and Services: Includes a mix of small businesses and essential services supporting the community.

- Healthcare and Social Assistance: An important sector due to the county's aging population, with a need for expanded senior care facilities and services.

Transportation Data

Transportation is crucial to Barton County's connectivity, given its rural nature and the need for access to nearby urban centers for goods, services, and employment. The following transportation-related data highlights key aspects of the county's infrastructure and challenges:

- Major Highways:
  - U.S. Highway 71: A primary route running north-south through the county, providing access to larger cities like Joplin, Missouri, and Pittsburg, Kansas.
  - State Highways: Several state highways, such as Missouri Routes 43 and 126, serve as key connectors within the county and to adjacent regions.

- Commute Patterns:
  - The average commute time for Barton County residents is around 25 minutes, reflecting the rural spread and the need to travel for work and services.
  - Most residents rely on personal vehicles for commuting, with limited public transportation options, a common challenge in rural Missouri.
  - Carpooling: Approximately 10% of the working population carpools, indicating community reliance on shared travel due to economic constraints or limited access to alternative transportation.

- Public Transportation:
  - Public transportation is minimal, with demand-responsive services available primarily for seniors and people with disabilities through local community services.
  - The lack of fixed-route transit services means many residents depend heavily on personal vehicles for mobility, which can be a barrier for low-income households or those without reliable transportation.

- Transportation Challenges:
  - Road Maintenance: As in many rural counties, road maintenance is a priority due to wear from agricultural equipment and the need for safe travel conditions, especially during winter.
  - Access to Services: The distance to healthcare, educational institutions, and other essential services is a significant factor in the lives of Barton County residents, often requiring trips to larger nearby cities like Joplin or Carthage for specialized services.
  - Regional Connectivity: While Barton County benefits from its location along key transportation routes, improving local road quality and safety remains a focus for community leaders.

Summary
Barton County is a community with deep agricultural roots and a strong sense of local identity. Its demographic profile shows an aging population, moderate economic challenges, and a reliance on traditional industries. Efforts to diversify the economy through education and skills training, combined with targeted improvements in transportation infrastructure, can support a more sustainable future for Barton County residents. Understanding these socio-economic and transportation dynamics is critical for planning initiatives that aim to enhance the quality of life and economic resilience in Barton County.

Jasper County Demographics and Socio-Economics

Population and Demographics

Jasper County, home to the regional hub city of Joplin, is the most populous county in the four-county area. It features a mix of urban and rural communities, contributing to diverse population characteristics.

- Total Population: Approximately 124,000 people, with Joplin as the largest urban center.

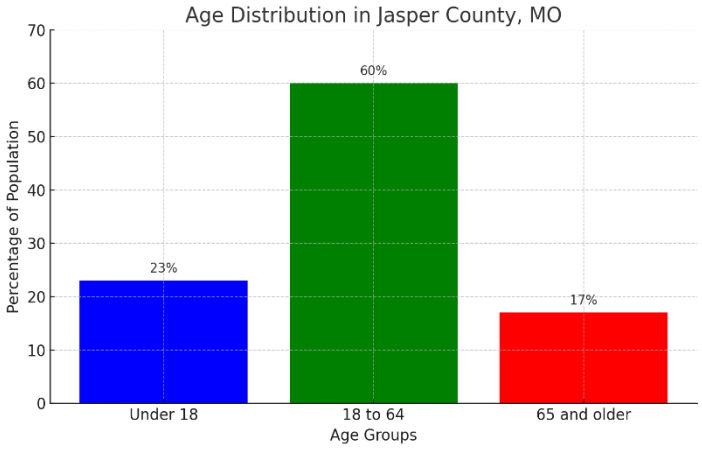
- Median Age: 38 years, reflecting a balance of young families, working-age adults, and a significant senior population.

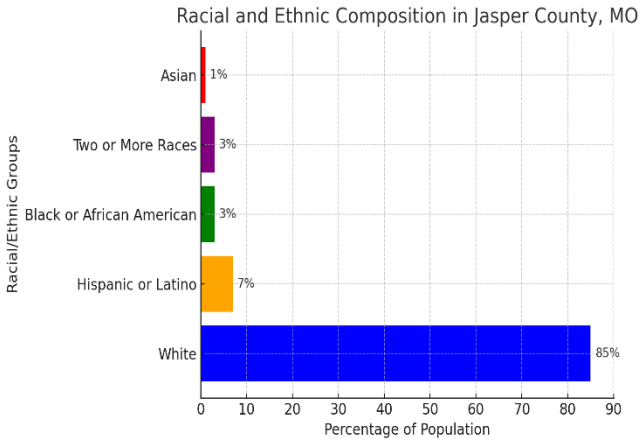
- Age Distribution:

  - Under 18: Approximately 23%, indicating a robust youth population.

  - 18 to 64: Around 60%, representing the primary labor force.

  - 65 and older: About 17%, showing a need for age-friendly services and healthcare.





- Racial and Ethnic Composition:

  - White: 85%

  - Hispanic or Latino: 7%

  - Black or African American: 3%

  - Two or More Races: 3%

  - Asian: 1%

- Household Size: The average household size is about 2.5 people, reflecting both traditional and multi-generational households typical of urban and suburban settings.

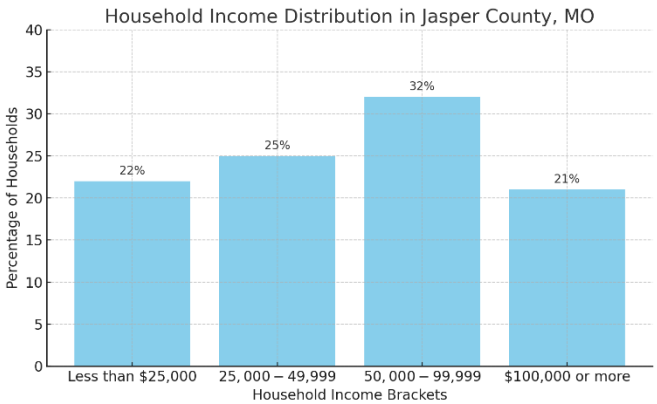
Social Economics

Jasper County's economy is more diversified than its rural neighbors, with healthcare, manufacturing, and retail trade playing key roles. The socio-economic conditions reflect a mix of opportunity and need.

- Median Household Income: Approximately $47,000, close to the state average, highlighting a balanced economic environment with both higher and lower income brackets.

- Per Capita Income: Around $24,000, indicating varied earning power within the population.

Income Distribution:



- Households earning less than $25,000: About 22%.

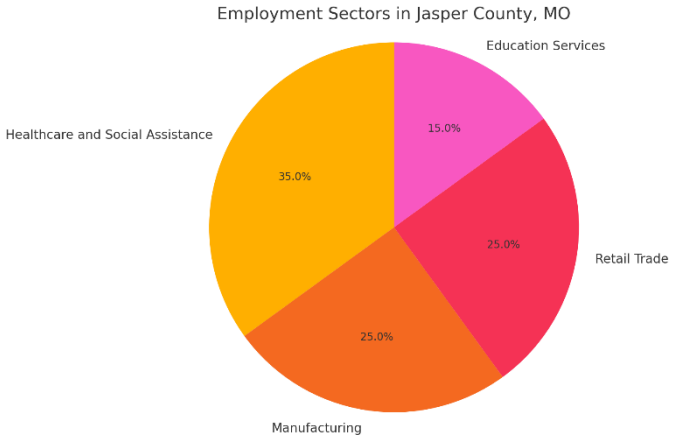
- Households earning between $25,000 and $49,999: Approximately 25%.

- Households earning $50,000 to $99,999: Around 32%.

- Households earning $100,000 or more: About 21%.

- Poverty Rate: Around 16%, indicating economic disparities, particularly in urban areas like Joplin where access to services and job opportunities varies.

- Education:
  - High school diploma or higher: About 88% of residents.
  - Bachelor's degree or higher: Around 20%, slightly below the national average, with ongoing efforts to improve higher education access through local institutions like Missouri Southern State University.



- Employment Sectors:
  - Healthcare and Social Assistance: Largest sector, reflecting Joplin's role as a regional healthcare center.

  - Manufacturing: Key employer, with a variety of products including food production and industrial goods.

  - Retail Trade: Significant due to Joplin's position as a shopping hub for the region.

  - Education Services: Contributing to local employment through schools and higher education institutions.

Transportation Data

Transportation is a major influence on Jasper County's economic activity and connectivity, with its location along I-44 and US Highway 71 making it a central transit point.

- Major Highways:
  - I-44: A key corridor facilitating east-west travel and commerce, connecting to Springfield and beyond.
  - US Highway 71: Vital for north-south movement, linking Joplin to Kansas City and Arkansas.
  - Route 66: Historic route that enhances tourism and cultural connections in the area.

- Commute Patterns:
  - Average commute time: Approximately 20 minutes, benefiting from the county's developed road network.
  - Public Transportation: Joplin offers limited fixed-route bus services through the MAPS system, providing mobility for residents without access to personal vehicles.
  - Carpooling and Ride-Sharing: Moderate participation, especially for workers commuting to nearby rural areas.

- Transportation Challenges:
  - Traffic Congestion: Concentrated around Joplin, especially during peak hours.
  - Road Maintenance: Ongoing projects to improve road conditions and expand infrastructure to support regional growth.
  - Regional Connectivity: Efforts are underway to improve connections to rural communities in the county, enhancing economic integration.

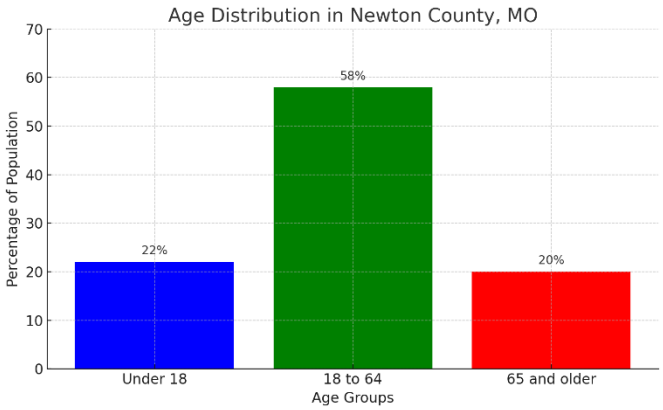
Newton County Demographics and Socio-Economics

Population and Demographics

Newton County, located south of Jasper County, combines small-town charm with the presence of industrial centers, offering a mix of rural and suburban living.

- Total Population: Approximately 58,000 people.

- Median Age: 39 years, with a mix of families and an aging population.



- Age Distribution:

- Under 18: Approximately 22%.

- 18 to 64: Around 58%.

- 65 and older: About 20%, indicating a need for senior-focused services.

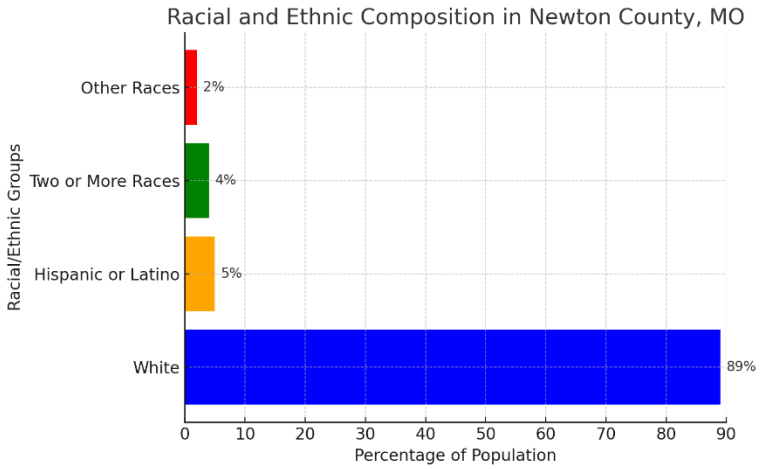
- Racial and Ethnic Composition:

- White: 89%

- Hispanic or Latino: 5%

- Two or More Races: 4%

- Other Races: 2%



- Household Size: Average household size is about 2.6 people, with many families living in close-knit communities.

Social Economics

Newton County's economy benefits from its proximity to Joplin, with a strong base in manufacturing, agriculture, and local services.

- Median Household Income: Around $45,000, reflecting a stable economic base with a mix of higher and lower income levels.

- Per Capita Income: Approximately $23,000.

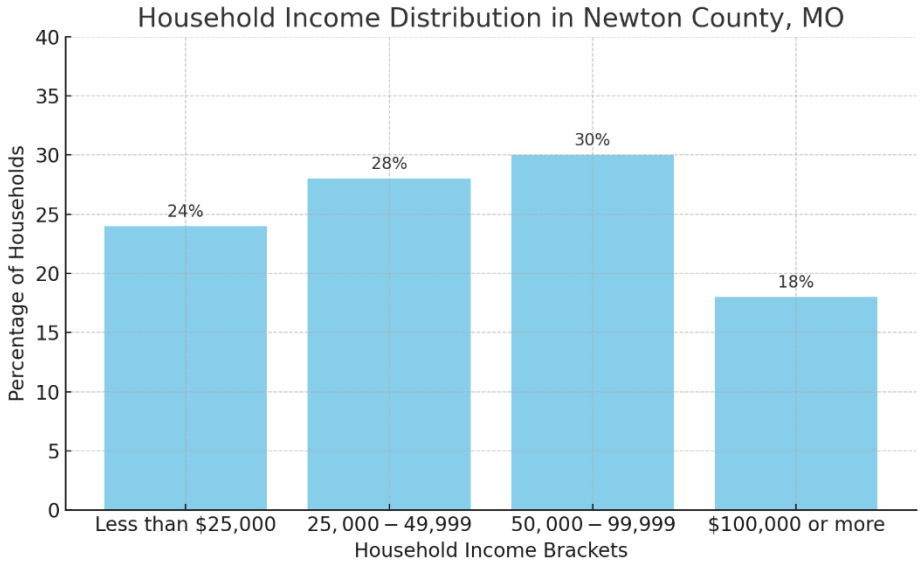
Income Distribution:

- Households earning less than $25,000: About 24%.

- Households earning between $25,000 and $49,999: Approximately 28%.

- Households earning $50,000 to $99,999: Around 30%.

- Households earning $100,000 or more: About 18%.



- Poverty Rate: Approximately 15%, with challenges in accessing higher-paying job opportunities, particularly in more rural areas.

- Education:
  - High school diploma or higher: 87% of residents.
  - Bachelor's degree or higher: 18%, indicating a need for expanded educational programs and workforce training.

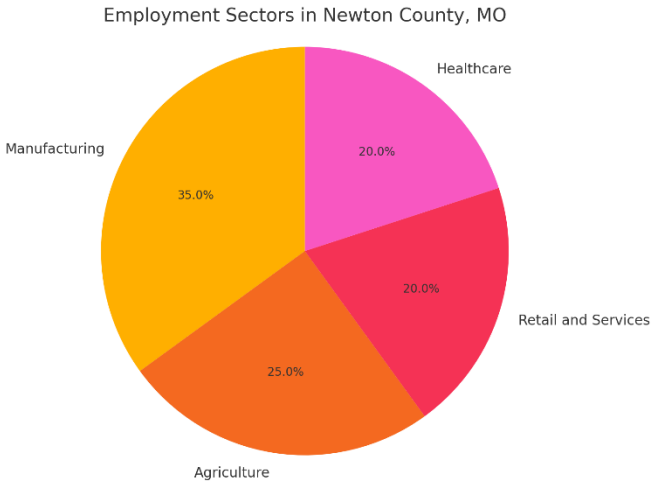
- Employment Sectors:

- Manufacturing: Significant contributor to the local economy, with companies producing a range of goods.

- Agriculture: Important in rural areas, focusing on crops and livestock.

- Retail and Services: Provides essential goods and services to residents.

- Healthcare: Growing sector, supporting the needs of an aging population.



Transportation Data

Transportation infrastructure is a critical aspect of Newton County's connectivity to the broader region.

- Major Highways:
  - I-49: Provides north-south connectivity, crucial for access to larger markets.
  - State Highways: Numerous routes facilitate local travel and connect to Joplin.

- Commute Patterns:
  - Average commute time: Approximately 22 minutes.
  - Public Transportation: Limited, with demand-responsive services available for seniors and people with disabilities.
  - Vehicle Reliance: High, with most residents using personal vehicles for daily commutes.

- Transportation Challenges:
  - Road Maintenance: A priority for rural areas with heavy agricultural traffic.
  - Access to Public Services: Distance to healthcare and other services presents challenges for some residents.

McDonald County Demographics and Socio-Economics

Population and Demographics

McDonald County is a predominantly rural county on the border with Arkansas, known for its agricultural heritage and scenic beauty.

- Total Population: Approximately 23,000 people.

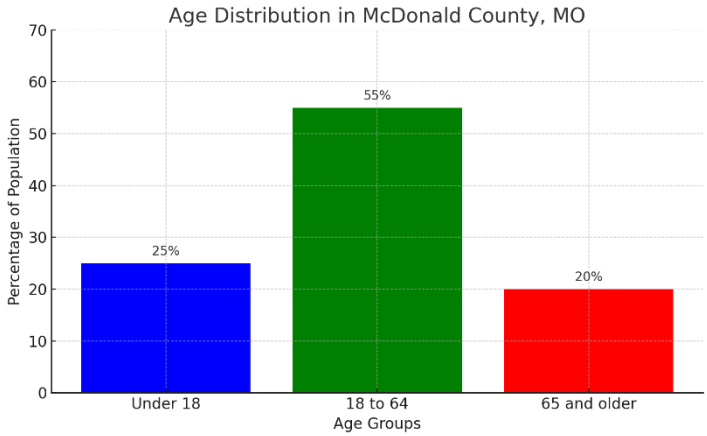
- Median Age: 39 years.

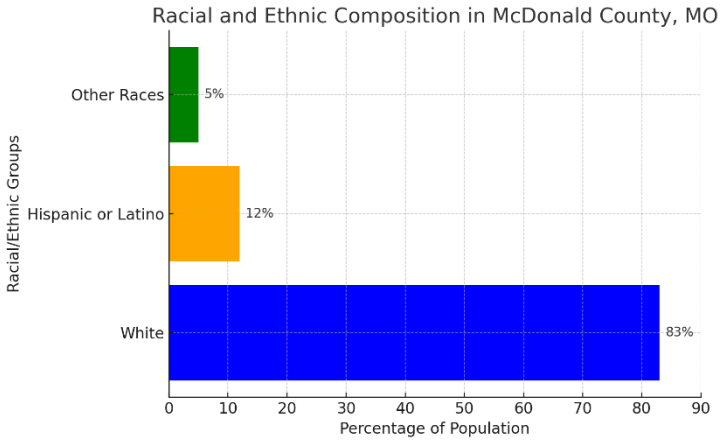
- Age Distribution:

  - Under 18: Approximately 25%.

  - 18 to 64: Around 55%.

  - 65 and older: About 20%.





- Racial and Ethnic Composition:
  - White: 83%
  - Hispanic or Latino: 12%
  - Other Races: 5%

- Household Size: Average household size is about 2.8 people, reflecting larger family sizes typical of rural areas.

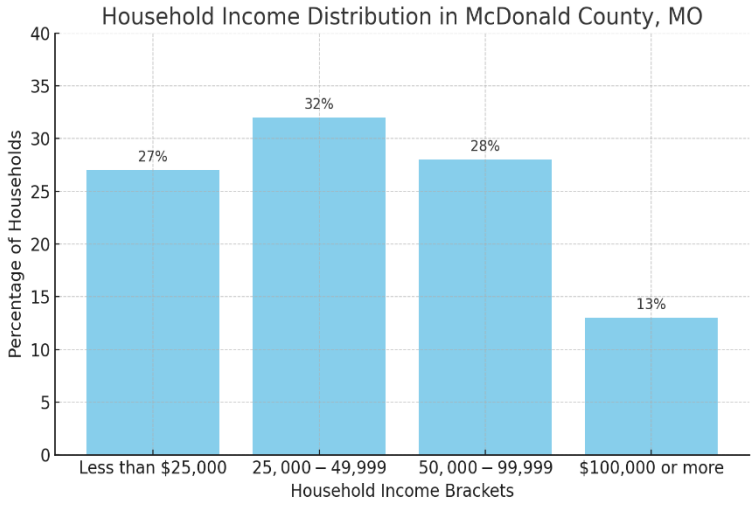
Social Economics

McDonald County's economy is closely tied to agriculture, with a focus on poultry farming, as well as small-scale manufacturing.

- Median Household Income: Around $40,000, below state and national averages.

- Per Capita Income: About $20,000.

Income Distribution:



- Households earning less than $25,000: 27%.

- Households earning between $25,000 and $49,999: 32%.

- Households earning $50,000 to $99,999: 28%.

- Households earning $100,000 or more: 13%.

- Poverty Rate: Approximately 20%, indicating economic challenges, particularly among agricultural workers and lower-income families.

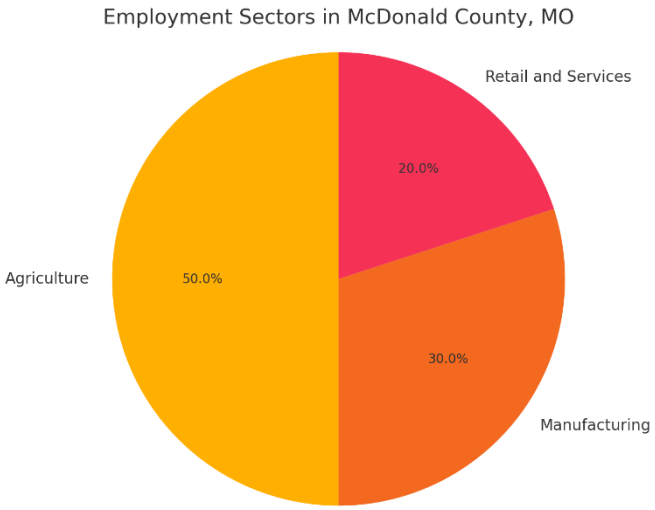
- Education:
  - High school diploma or higher: 85%.
  - Bachelor's degree or higher: 14%, reflecting limited access to higher education.

- Employment Sectors:

  - Agriculture: Dominant sector, especially poultry production.

  - Manufacturing: Smaller-scale production facilities provide local jobs.

  - Retail and Services: Limited, with most major shopping done outside the county.



Transportation Data

Transportation is crucial for McDonald County's residents due to its rural nature.

- Major Highways:
  - US Highway 71

: Essential for regional travel and access to Arkansas.
  - State Routes: Support local connectivity.

- Commute Patterns:
  - Average commute time: 25 minutes.
  - Public Transportation: Minimal, making car ownership essential.
  - Commuting Outside the County: Common, with many residents traveling to nearby cities for work.

- Transportation Challenges:
  - Rural Road Conditions: Ongoing need for improvements.
  - Limited Transit Access: A barrier for low-income residents without personal vehicles.

Equity in the Southwest Missouri Vision Zero Plan

Achieving the goal of eliminating traffic fatalities and serious injuries across Southwest Missouri requires a strong commitment to equity. Recognizing and addressing the disproportionate impacts of traffic safety issues on vulnerable communities is essential to building a transportation system that works for everyone. The Southwest Missouri Vision Zero Plan integrates equity throughout its framework to ensure that safety improvements benefit all residents, especially those who have historically faced social, economic, and environmental challenges.

This Plan aligns with the Safe System Approach, which emphasizes that human error is inevitable and should not lead to severe injury or death. By focusing on equity, the Plan takes intentional steps to reduce safety risks for individuals and communities that have experienced historical disadvantages, persistent poverty, and social vulnerability. In doing so, the Southwest Missouri Vision Zero Plan aims to create a safer and more inclusive transportation system for all.

Identifying Vulnerable Communities

To ensure equity is prioritized in transportation safety, this Plan employs criteria to identify vulnerable populations and communities that face disproportionate challenges. These criteria include:

- Areas of Persistent Poverty: Defined by the U.S. Department of Transportation (USDOT) as counties or census tracts where 20% or more of the population has lived in poverty over an extended period.
- Historically Disadvantaged Communities: Identified by USDOT as populations and geographic areas systematically denied opportunities to fully participate in economic, social, and civic life.
- Social Vulnerability Index (SVI): Developed by the Centers for Disease Control and Prevention (CDC) and the Agency for Toxic Substances and Disease Registry (ATSDR), the SVI measures how external stresses, such as natural disasters or human-caused events, affect community health.

By using these frameworks, the Plan highlights communities where residents may be more vulnerable to traffic safety issues, ensuring that recommended actions target the greatest need.

Criteria for Defining Vulnerable Populations

To address the needs of vulnerable communities, this Plan focuses on several critical dimensions of disadvantage, including:

1. Transportation Access Disadvantage: Communities where residents face longer travel times and higher transportation costs to access essential services like healthcare, employment, and education.
2. Health Disadvantage: Communities characterized by adverse health outcomes, higher

rates of disability, and greater environmental exposures, such as poor air quality.
3. Environmental Disadvantage: Areas with disproportionately high levels of environmental hazards, such as elevated air pollution and older housing stock that may contain lead-based paint.
4. Economic Disadvantage: Regions with high levels of poverty, unemployment, low educational attainment, and limited local job opportunities.
5. Resilience Disadvantage: Communities particularly vulnerable to the effects of climate change, such as extreme weather events.
6. Equity Disadvantage: Communities where a significant percentage of the population (age 5 and older) speak English "less than well," indicating potential barriers to accessing transportation services and safety information.

Social Vulnerability Factors

In addition to the categories above, the Social Vulnerability Index (SVI) provides insight into additional factors that influence a community's ability to withstand external stresses. These factors include:

- Socioeconomic Status: Residents living below 150% of the poverty line, those without a high school diploma, and households experiencing housing cost burdens or lacking health insurance.
- Household Characteristics: Communities with a higher proportion of residents over 65 years old, under 17 years old, or living with disabilities. Single-parent households and those with limited English proficiency are also more vulnerable.
- Racial and Ethnic Minorities: Populations such as Hispanic or Latino individuals, Black or African Americans, Native Americans, and other racial or ethnic minorities often face systemic challenges that increase their vulnerability to traffic safety risks.
- Housing Type and Transportation: Areas with high concentrations of multi-unit housing, mobile homes, crowded living conditions, lack of vehicle access, and group quarters housing.

Equity in Action

The Southwest Missouri Vision Zero Plan identifies and prioritizes investments in communities that exhibit high levels of disadvantage based on the above criteria. To ensure that these investments effectively improve safety, recommended actions have been developed with equity in mind. This includes making sure that transportation infrastructure improvements, education campaigns, and enforcement strategies are applied in a way that benefits the most vulnerable communities without reinforcing existing disparities.

For instance, special care is taken to ensure that policing and enforcement efforts, which are part of many traffic safety strategies, do not disproportionately affect communities of color or areas of persistent poverty. Over-policing in these communities can lead to unintended consequences, such as increased mistrust of law enforcement and exacerbation of existing social and economic inequalities. The Vision Zero Plan advocates for balanced and fair approaches to enforcement that prioritize safety without contributing to disparities.

Moving Forward with Equity

By integrating equity into the Southwest Missouri Vision Zero Plan, the region takes a proactive step toward addressing the root causes of traffic safety disparities. The Plan's recommended actions aim to ensure that all residents, regardless of their background or circumstances, have access to a safe transportation system that supports their mobility and well-being.

Through continued data analysis, community engagement, and partnerships with local organizations, the Plan will remain responsive to the evolving needs of vulnerable communities. By doing so, Southwest Missouri can make meaningful progress toward achieving its Vision Zero goals while promoting equity and inclusion across the region.

Equity Analysis Overlap and HIN

The maps on the following pages reflect areas where high injury routes intersect with historically disadvantaged communities and areas with persistent poverty by overlaying crash data with demographic and socioeconomic indicators. Here's how these relationships are illustrated:

1. High Injury Network (HIN): The maps identify key corridors with a high concentration of severe crashes, such as those leading to fatalities or serious injuries. These routes, which include major highways and busy intersections, are highlighted to prioritize safety interventions.

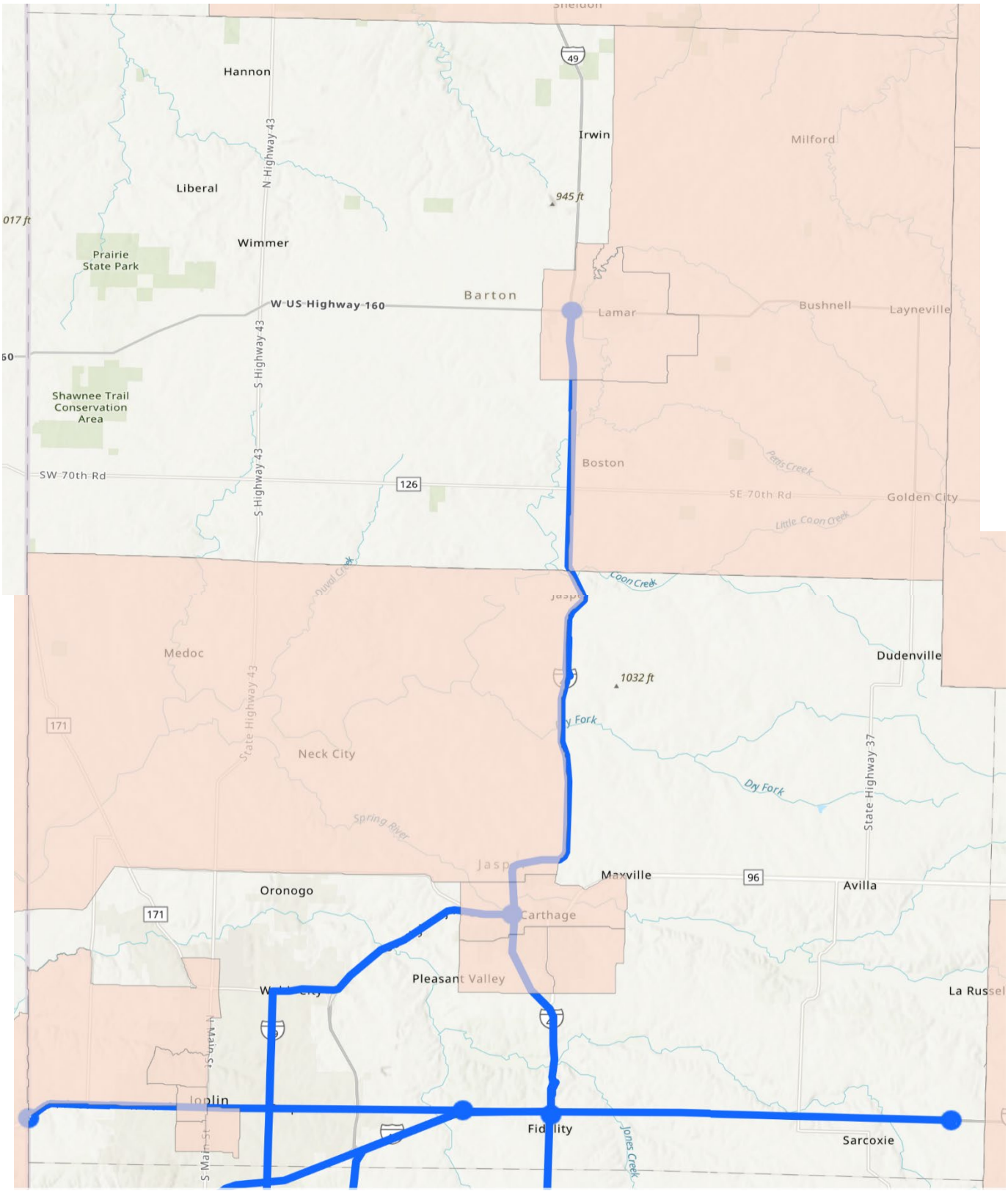
2. Equity Criteria: The plan employs criteria like areas of persistent poverty, defined as regions where at least 20% of the population has lived below the poverty line for an extended period. This helps in pinpointing vulnerable communities that are more likely to suffer from traffic-related issues due to limited access to safe infrastructure.

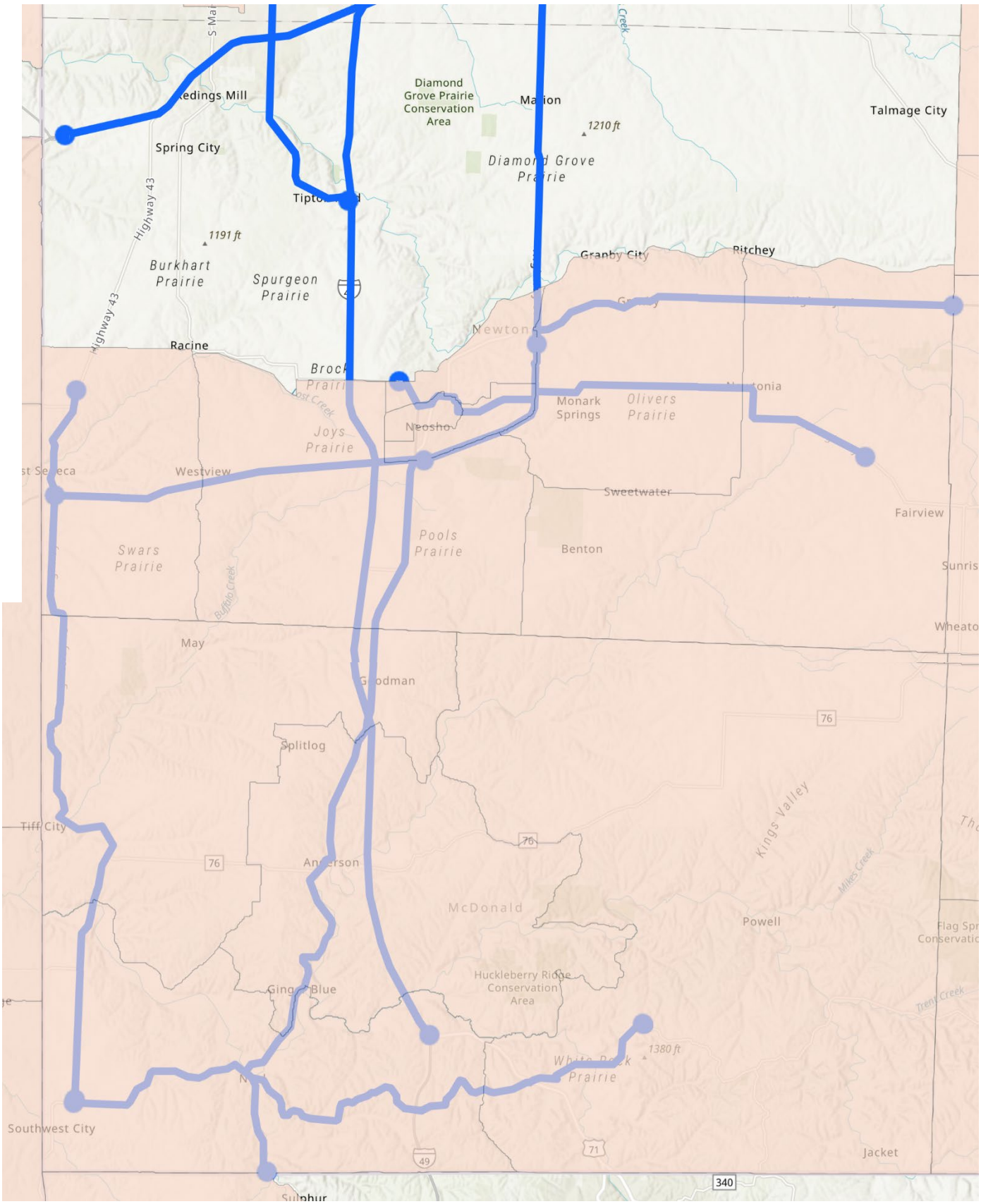
3. Overlay Analysis: By mapping high injury corridors alongside demographic data, the plan identifies intersections between crash-prone areas and communities that are economically disadvantaged or have faced historical marginalization. This allows for targeted investments in safety measures like improved lighting, enhanced pedestrian crossings, and traffic calming in areas with the greatest need.

This integration of data ensures that the recommended safety measures are directed not just at reducing overall crash rates but at addressing disparities in safety outcomes. It aligns with the plan's commitment to equity, ensuring that safety improvements benefit those communities that are most at risk.

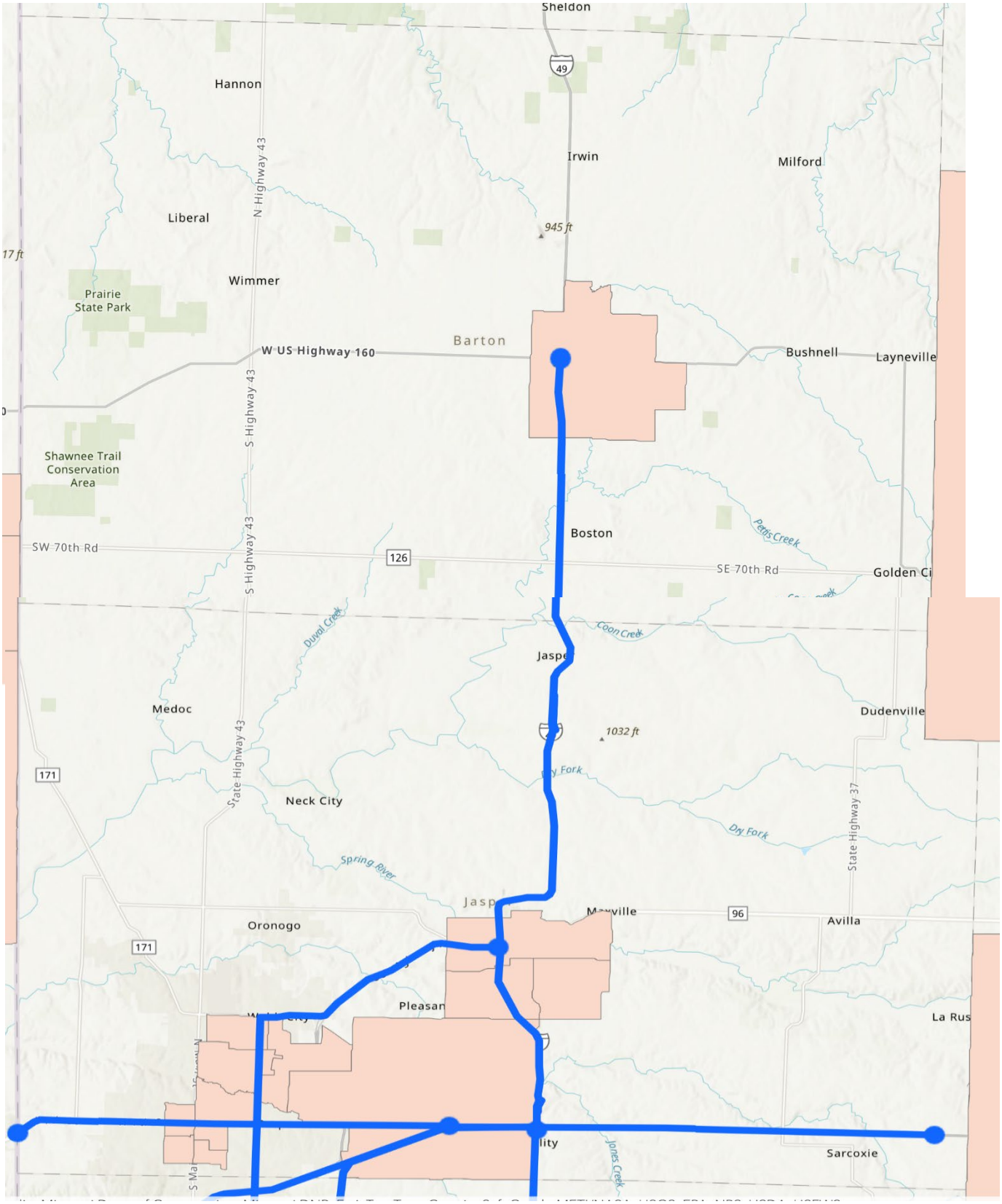
Identifying Vulnerable Communities

Historically Disadvantaged Communities

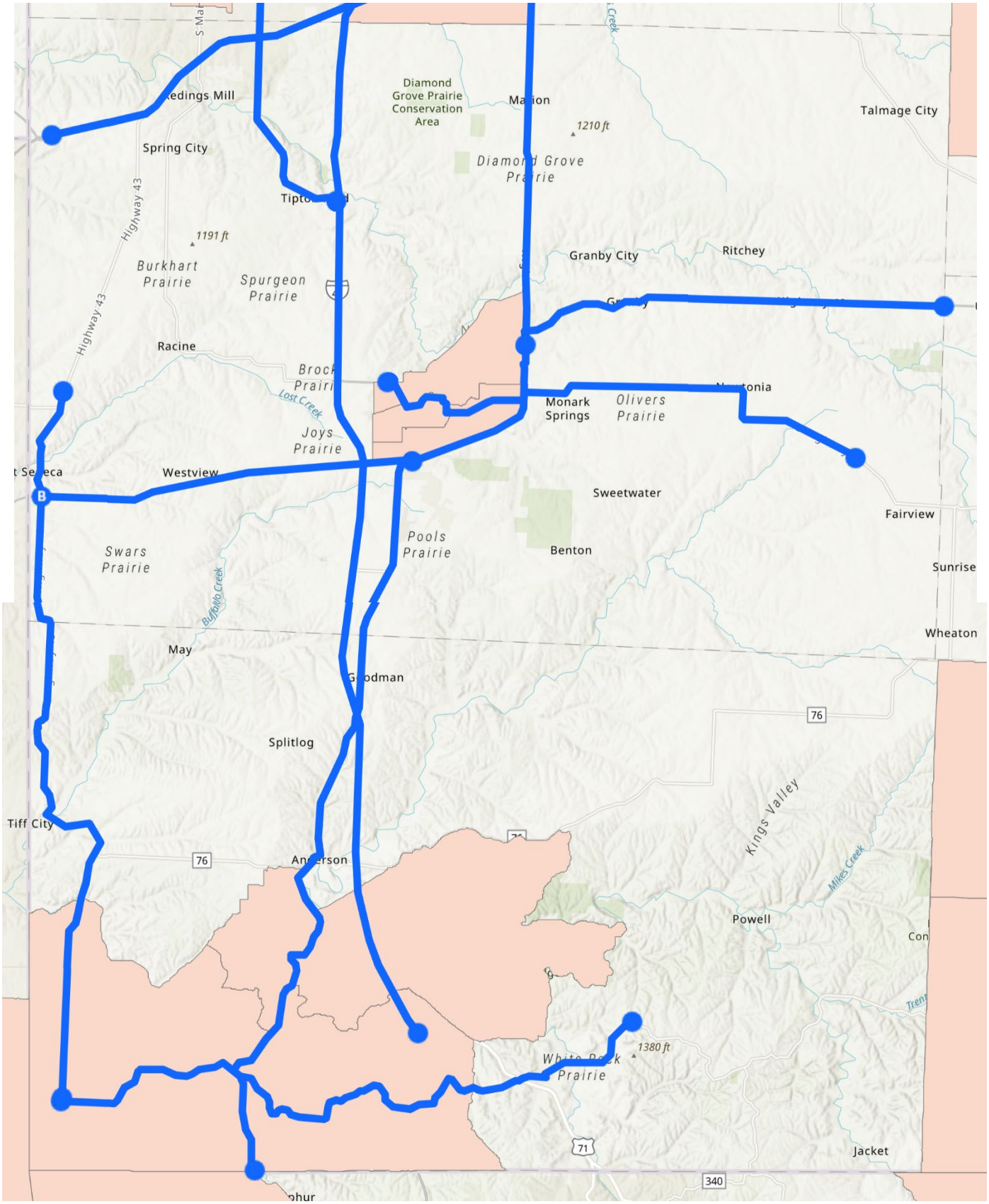



Diamond Grove Prairie Conservation Area
Talmage City
1210 ft
Spring City
Diamond Grove Prairie
Highway 43
1191 ft
Burkhart Prairie
Spurgeon Prairie
Granby City
Ritchey
Newton
Racine
Monark Springs
Olivers Prairie
Joys Prairie
Neosho
Westview
Sweetwater
Fairview
Swars Prairie
Pools Prairie
Benton
May
Splitlog
Tiff City
Kings Valley
McDonald
Powell
Huckleberry Ridge Conservation Area
1380 ft
Southwest City
Jacket
76
49
71
340

Areas of Persistent Poverty



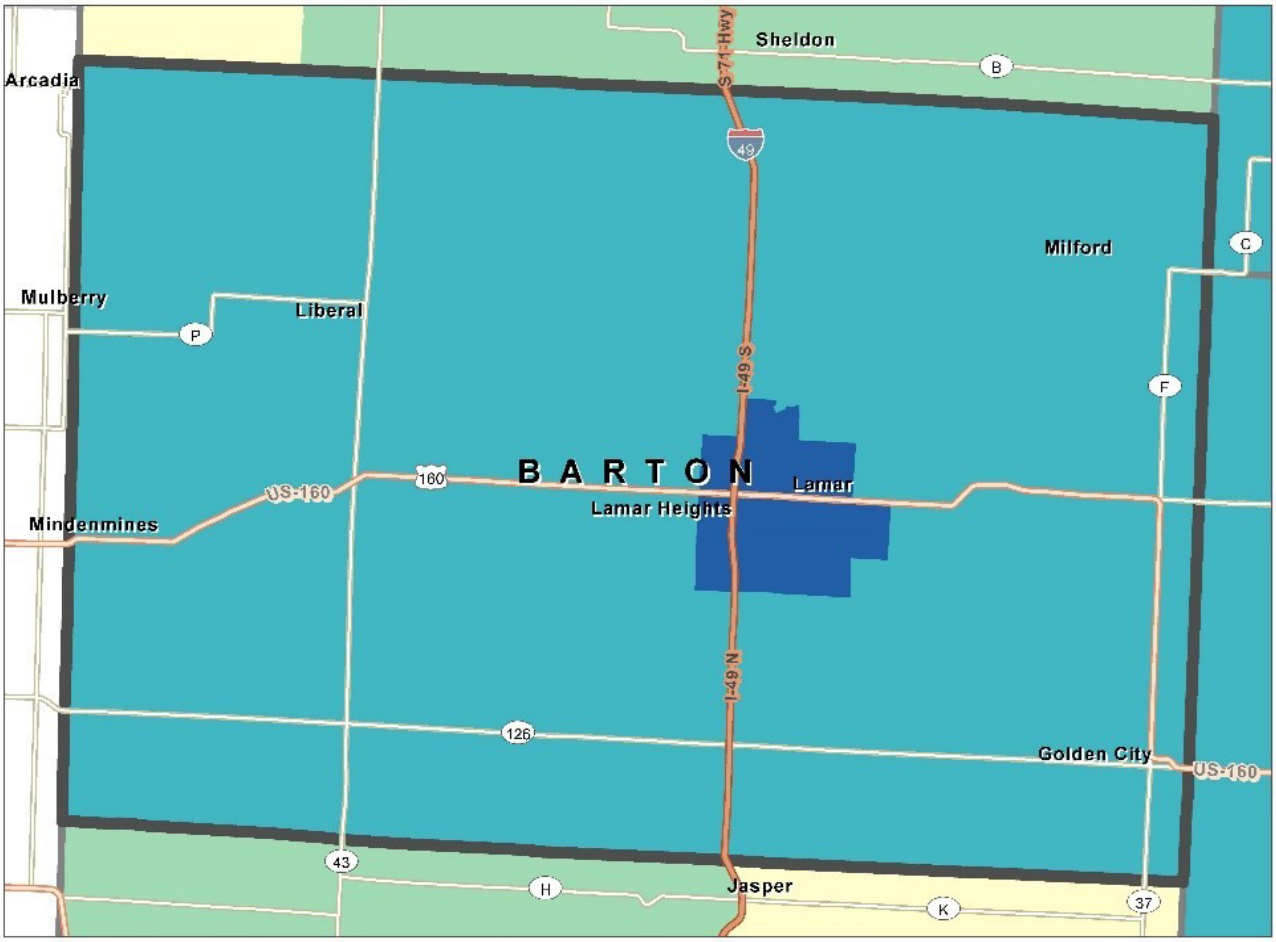
Areas of Persistent Poverty (cont)



CDC/ATSDR Social Vulnerability Index 2022

BARTON COUNTY, MISSOURI

Overall Social Vulnerability[1]



Highest (Top 4th) | Vulnerability (SVI 2022)[2] | Lowest (Bottom 4th)

Data Unavailable[3]

0 1 2 4 6
Miles

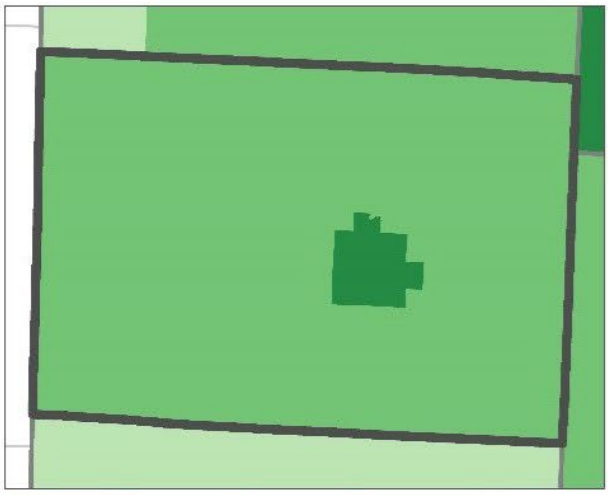
Social vulnerability refers to a community's capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters, such as tornadoes or disease outbreaks, to human-caused threats, such as toxic chemical spills. The **CDC/ATSDR Social Vulnerability Index (CDC/ATSDR SVI 2022)[4] County Map** depicts the social vulnerability of communities, at census tract level, within a specified county. CDC/ATSDR SVI 2022 groups **sixteen census-derived factors** into **four themes** that summarize the extent to which the area is socially vulnerable to disaster. The factors include economic data as well as data regarding education, family characteristics, housing, language ability, ethnicity, and vehicle access. Overall Social Vulnerability combines all the variables to provide a comprehensive assessment.

ATSDR Agency for Toxic Substances and Disease Registry

GRASP Geospatial Research, Analysis, and Services Program

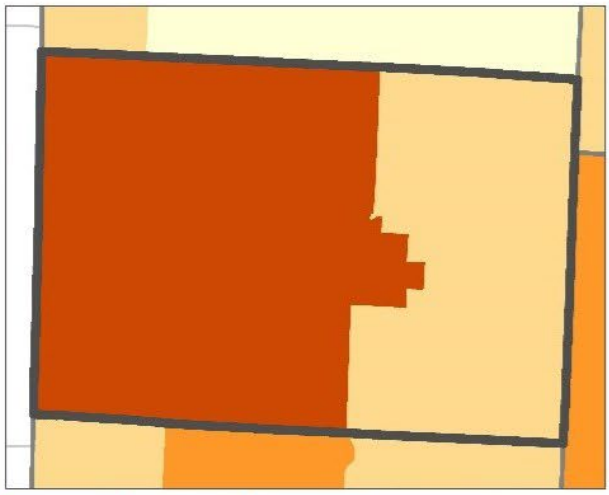
CDC/ATSDR SVI Themes

Socioeconomic Status[5]



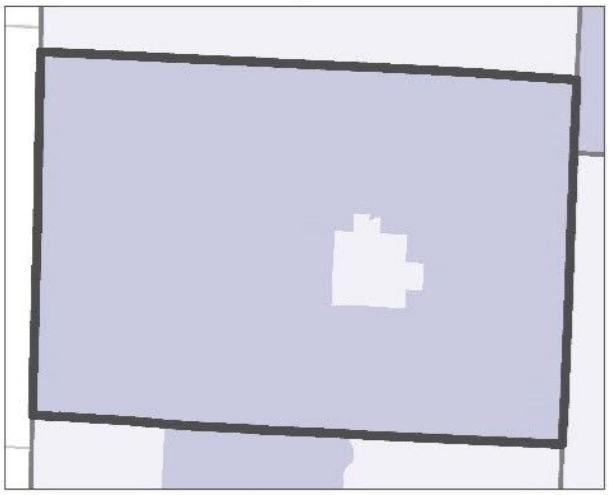
Highest (Top 4th) | Vulnerability (SVI 2022)[2] | Lowest (Bottom 4th)

Household Characteristics[6]



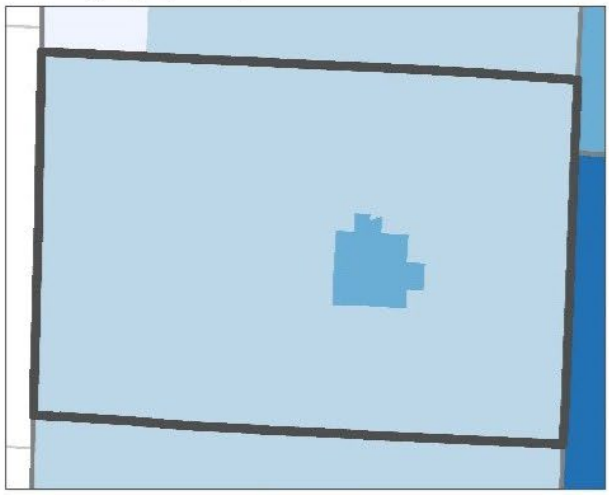
Highest (Top 4th) | Vulnerability (SVI 2022)[2] | Lowest (Bottom 4th)

Racial and Ethnic Minority Status[7]



Highest (Top 4th) | Vulnerability (SVI 2022)[2] | Lowest (Bottom 4th)

Housing Type/Transportation[8]



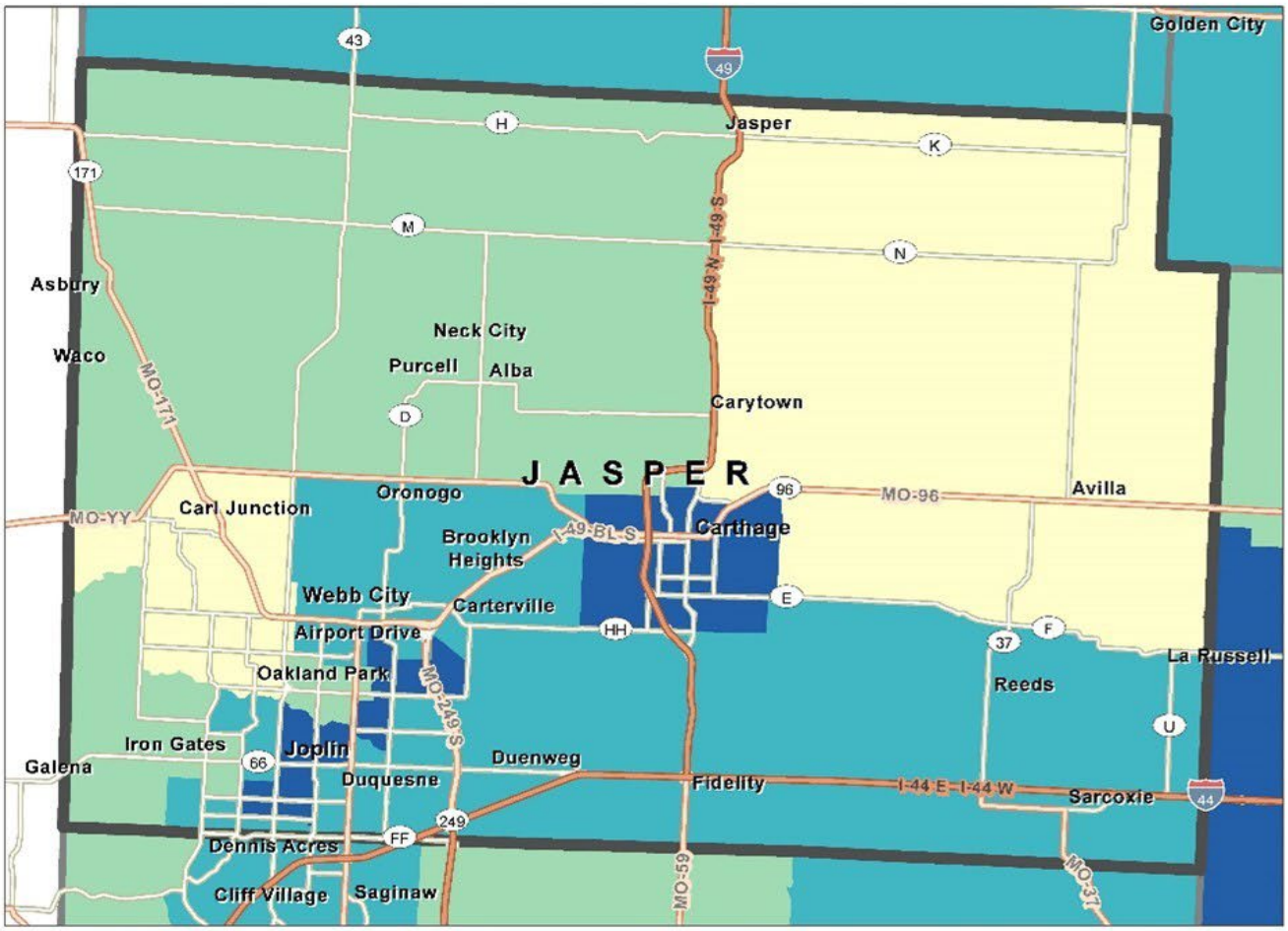
Highest (Top 4th) | Vulnerability (SVI 2022)[2] | Lowest (Bottom 4th)

Data Sources: [1]CDC/ATSDR/GRASP, U.S. Census Bureau, ArcGIS StreetMap Premium.
Notes: [1]Overall Social Vulnerability: All 16 variables. [3]One or more variables unavailable at census tract level. [4]The CDC/ATSDR SVI combines percentile rankings of U.S. Census American Community Survey (ACS) 2018-2022 variables, for the state, at the census tract level. [5]Socioeconomic Status: Below 150% Poverty, Unemployed, Housing Costs Burden, No High School Diploma, No Health Insurance. [6]Household Characteristics: Aged 65 and Older, Aged 17 and Younger, Civilian with a Disability, Single-Parent Household, English Language Proficiency. [7]Race/Ethnicity: Hispanic or Latino (of any race); Black and African American, Not Hispanic or Latino; American Indian and Alaska Native, Not Hispanic or Latino; Asian, Not Hispanic or Latino; Native Hawaiian and Other Pacific Islander, Not Hispanic or Latino; Two or More Races, Not Hispanic or Latino; Other Races, Not Hispanic or Latino. [8]Housing Type/Transportation: Multi-Unit Structures, Mobile Homes, Crowding, No Vehicle, Group Quarters.
Projection: NAD 1983 StatePlane Missouri Central FIPS 2402.
References: Flanagan, B.E., et al., A Social Vulnerability Index for Disaster Management. *Journal of Homeland Security and Emergency Management*, 2011. 8(1).
CDC/ATSDR SVI web page: https://www.atsdr.cdc.gov/placeandhealth/svi/index.html.

CDC/ATSDR Social Vulnerability Index 2022

JASPER COUNTY, MISSOURI

Overall Social Vulnerability[1]



Social vulnerability refers to a community's capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters, such as tornadoes or disease outbreaks, to human-caused threats, such as toxic chemical spills. The **CDC/ATSDR Social Vulnerability Index (CDC/ATSDR SVI 2022)[4] County Map** depicts the social vulnerability of communities, at census tract level, within a specified county. CDC/ATSDR SVI 2022 groups **sixteen census-derived factors** into **four themes** that summarize the extent to which the area is socially vulnerable to disaster. The factors include economic data as well as data regarding education, family characteristics, housing, language ability, ethnicity, and vehicle access. Overall Social Vulnerability combines all the variables to provide a comprehensive assessment.

ATSDR Agency for Toxic Substances and Disease Registry

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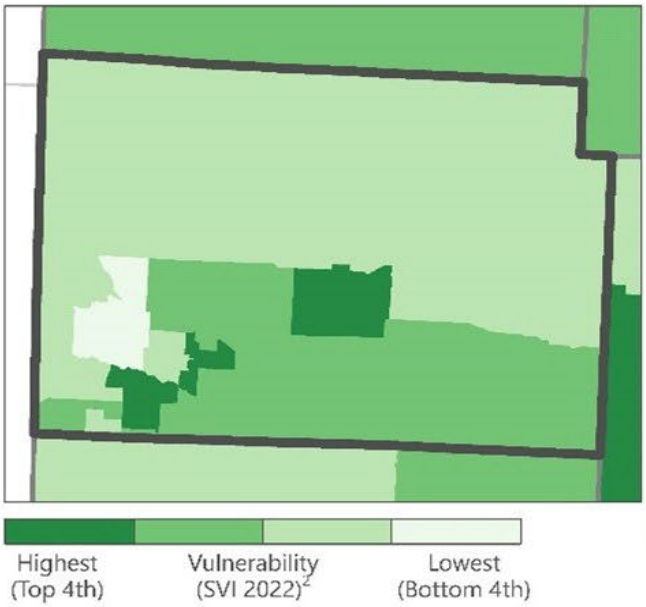
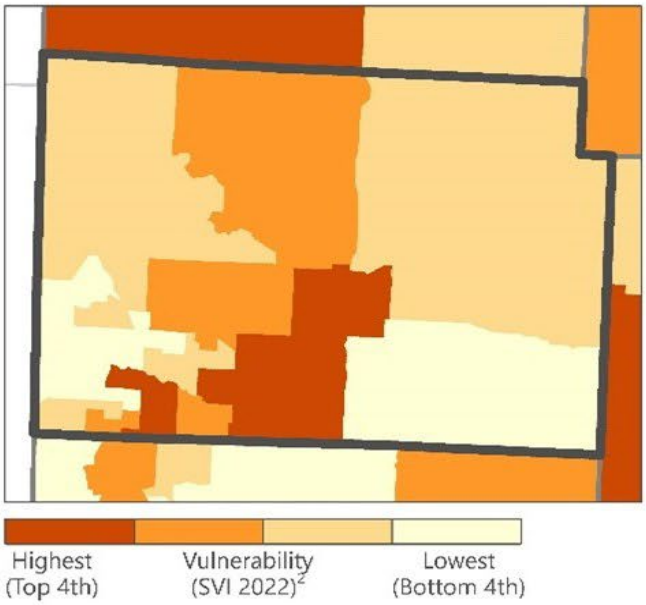
CDC/ATSDR SVI Themes

Socioeconomic Status[5]



Highest (Top 4th) | Vulnerability (SVI 2022)[2] | Lowest (Bottom 4th)

Household Characteristics[6]



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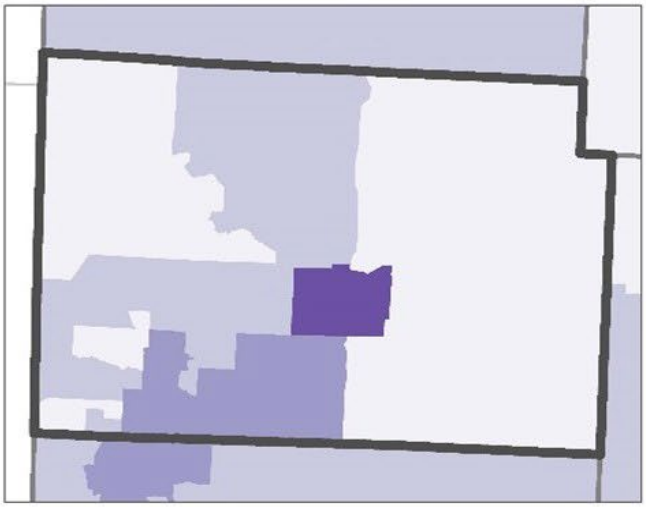
Racial and Ethnic Minority Status[7]



Highest (Top 4th) | Vulnerability (SVI 2022)[2] | Lowest (Bottom 4th)

Housing Type/Transportation[8]

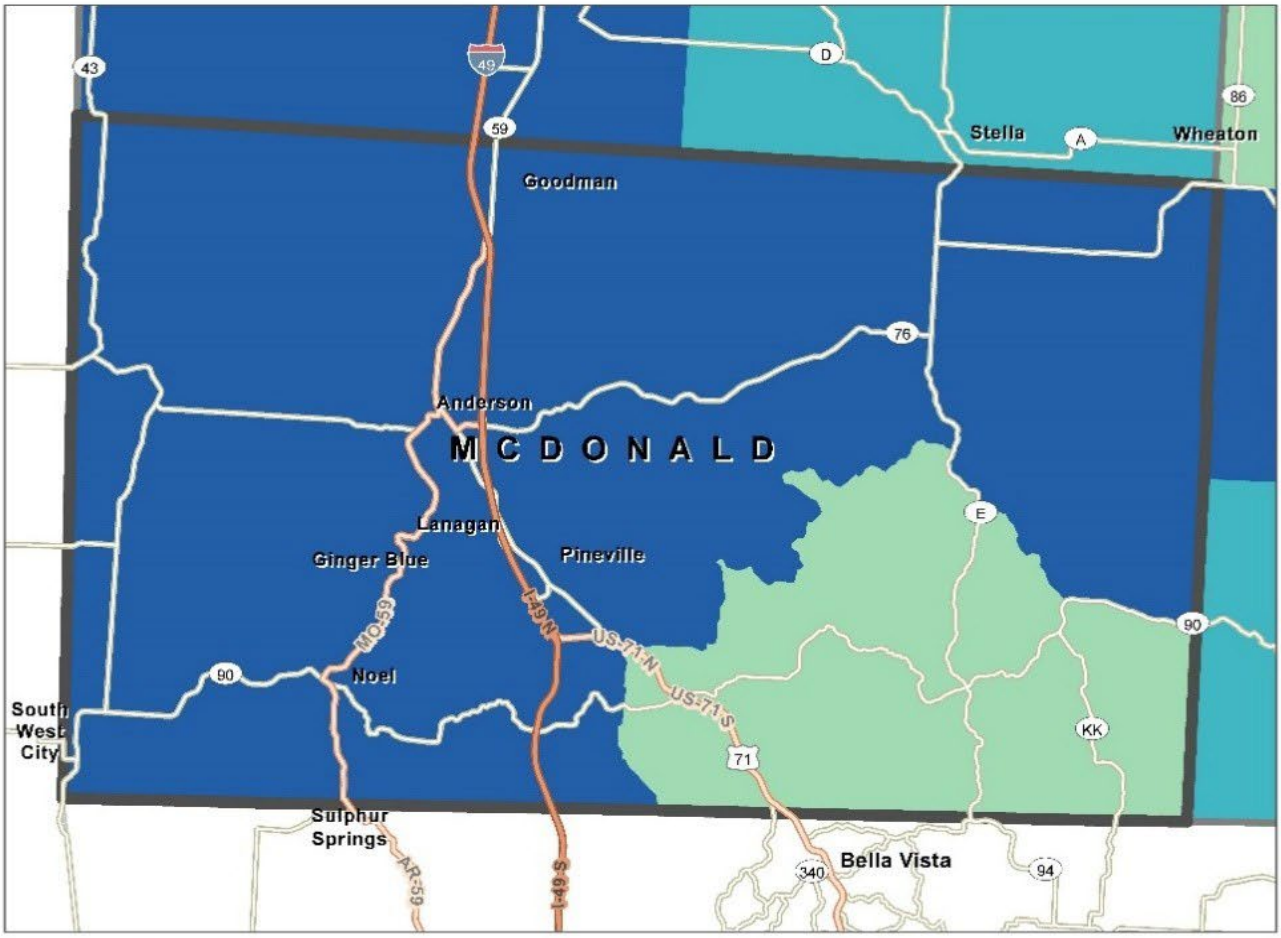
Highest (Top 4th) | Vulnerability (SVI 2022)[2] | Lowest (Bottom 4th)

Data Sources: [2]CDC/ATSDR/GRASP, U.S. Census Bureau, ArcGIS StreetMap Premium.
Notes: [1]Overall Social Vulnerability: All 16 variables. [2]One or more variables unavailable at census tract level. [4]The CDC/ATSDR SVI combines percentile rankings of U.S. Census American Community Survey (ACS) 2018-2022 variables, for the state, at the census tract level. [5]Socioeconomic Status: Below 150% Poverty, Unemployed, Housing Costs Burden, No High School Diploma, No Health Insurance. [6]Household Characteristics: Aged 65 and Older, Aged 17 and Younger, Civilian with a Disability, Single-Parent Household, English Language Proficiency. [7]Race/Ethnicity: Hispanic or Latino (of any race); Black and African American, Not Hispanic or Latino; American Indian and Alaska Native, Not Hispanic or Latino; Asian, Not Hispanic or Latino; Native Hawaiian and Other Pacific Islander, Not Hispanic or Latino; Two or More Races, Not Hispanic or Latino; Other Races, Not Hispanic or Latino. [8]Housing Type/Transportation: Multi-Unit Structures, Mobile Homes, Crowding, No Vehicle, Group Quarters.
Projection: NAD 1983 StatePlane Missouri Central FIPS 2402.
References: Flanagan, B.E., et al., A Social Vulnerability Index for Disaster Management. *Journal of Homeland Security and Emergency Management*, 2011. 8(1).
CDC/ATSDR SVI web page: https://www.atsdr.cdc.gov/placeandhealth/svi/index.html.

CDC/ATSDR Social Vulnerability Index 2022

MCDONALD COUNTY, MISSOURI

Overall Social Vulnerability[1]



Highest (Top 4th) | Vulnerability (SVI 2022)[2] | Lowest (Bottom 4th)

Data Unavailable[3]

0 1 2 4 6
Miles

Social vulnerability refers to a community's capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters, such as tornadoes or disease outbreaks, to human-caused threats, such as toxic chemical spills. The **CDC/ATSDR Social Vulnerability Index (CDC/ATSDR SVI 2022)[4] County Map** depicts the social vulnerability of communities, at census tract level, within a specified county. CDC/ATSDR SVI 2022 groups **sixteen census-derived factors** into **four themes** that summarize the extent to which the area is socially vulnerable to disaster. The factors include economic data as well as data regarding education, family characteristics, housing, language ability, ethnicity, and vehicle access. Overall Social Vulnerability combines all the variables to provide a comprehensive assessment.

ATSDR Agency for Toxic Substances and Disease Registry

GRASP Geospatial Research, Analysis, and Services Program

CDC/ATSDR SVI Themes

Socioeconomic Status[5]

Household Characteristics[6]

Racial and Ethnic Minority Status[7]

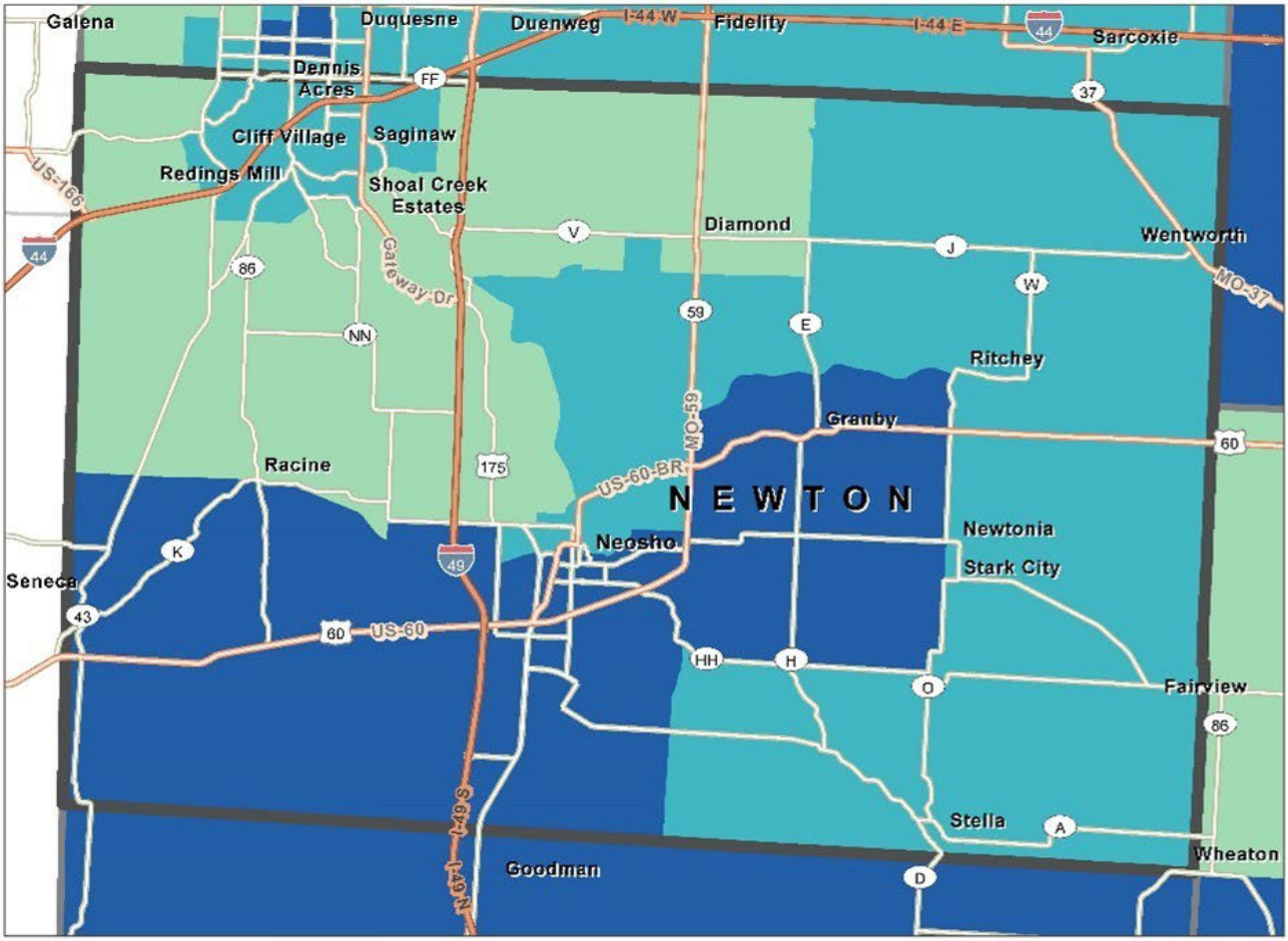
Housing Type/Transportation[8]

Data Sources: [2]CDC/ATSDR/GRASP, U.S. Census Bureau, ArcGIS StreetMap Premium.
Notes: [1]Overall Social Vulnerability: All 16 variables. [3]One or more variables unavailable at census tract level. [4]The CDC/ATSDR SVI combines percentile rankings of U.S. Census American Community Survey (ACS) 2018-2022 variables, for the state, at the census tract level. [5]Socioeconomic Status: Below 150% Poverty, Unemployed, Housing Costs Burden, No High School Diploma, No Health Insurance. [6]Household Characteristics: Aged 65 and Older, Aged 17 and Younger, Civilian with a Disability, Single-Parent Household, English Language Proficiency. [7]Race/Ethnicity: Hispanic or Latino (of any race); Black and African American, Not Hispanic or Latino; American Indian and Alaska Native, Not Hispanic or Latino; Asian, Not Hispanic or Latino; Native Hawaiian and Other Pacific Islander, Not Hispanic or Latino; Two or More Races, Not Hispanic or Latino; Other Races, Not Hispanic or Latino. [8]Housing Type/Transportation: Multi-Unit Structures, Mobile Homes, Crowding, No Vehicle, Group Quarters.
Projection: NAD 1983 StatePlane Missouri Central FIPS 2402.
References: Flanagan, B.E., et al., A Social Vulnerability Index for Disaster Management. *Journal of Homeland Security and Emergency Management*, 2011. 8(1).
CDC/ATSDR SVI web page: https://www.atsdr.cdc.gov/placeandhealth/svi/index.html.

CDC/ATSDR Social Vulnerability Index 2022

NEWTON COUNTY, MISSOURI

Overall Social Vulnerability[1]



Highest (Top 4th) | Vulnerability (SVI 2022)[2] | Lowest (Bottom 4th)

Data Unavailable[3]

0 1.25 2.5 5 7.5
Miles

Social vulnerability refers to a community's capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters, such as tornadoes or disease outbreaks, to human-caused threats, such as toxic chemical spills. The **CDC/ATSDR Social Vulnerability Index (CDC/ATSDR SVI 2022)[4] County Map** depicts the social vulnerability of communities, at census tract level, within a specified county. CDC/ATSDR SVI 2022 groups **sixteen census-derived factors** into **four themes** that summarize the extent to which the area is socially vulnerable to disaster. The factors include economic data as well as data regarding education, family characteristics, housing, language ability, ethnicity, and vehicle access. Overall Social Vulnerability combines all the variables to provide a comprehensive assessment.

ATSDR Agency for Toxic Substances and Disease Registry

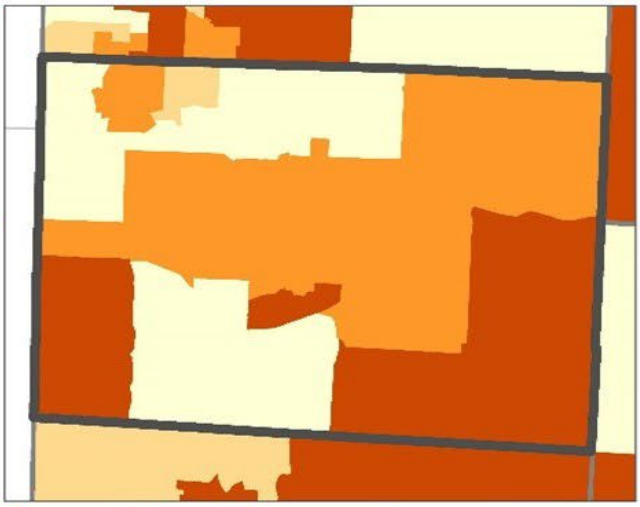
GRASP Geospatial Research, Analysis, and Services Program

CDC/ATSDR SVI Themes

Socioeconomic Status[5]

Highest (Top 4th) | Vulnerability (SVI 2022)[2] | Lowest (Bottom 4th)

Household Characteristics[6]

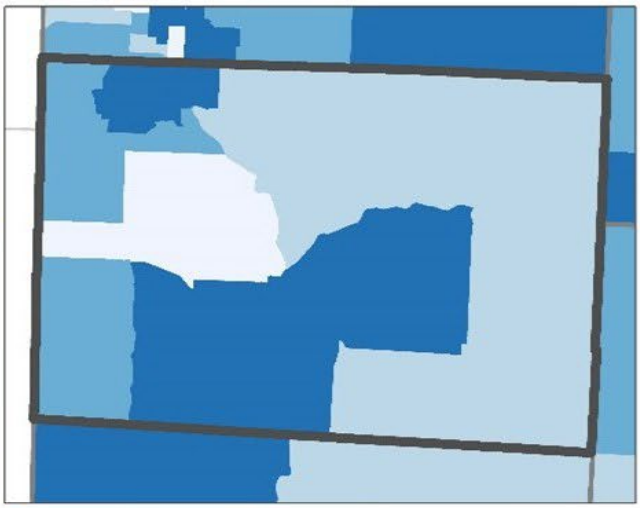


Highest (Top 4th) | Vulnerability (SVI 2022)[2] | Lowest (Bottom 4th)

Racial and Ethnic Minority Status[7]

Highest (Top 4th) | Vulnerability (SVI 2022)[2] | Lowest (Bottom 4th)

Housing Type/Transportation[8]

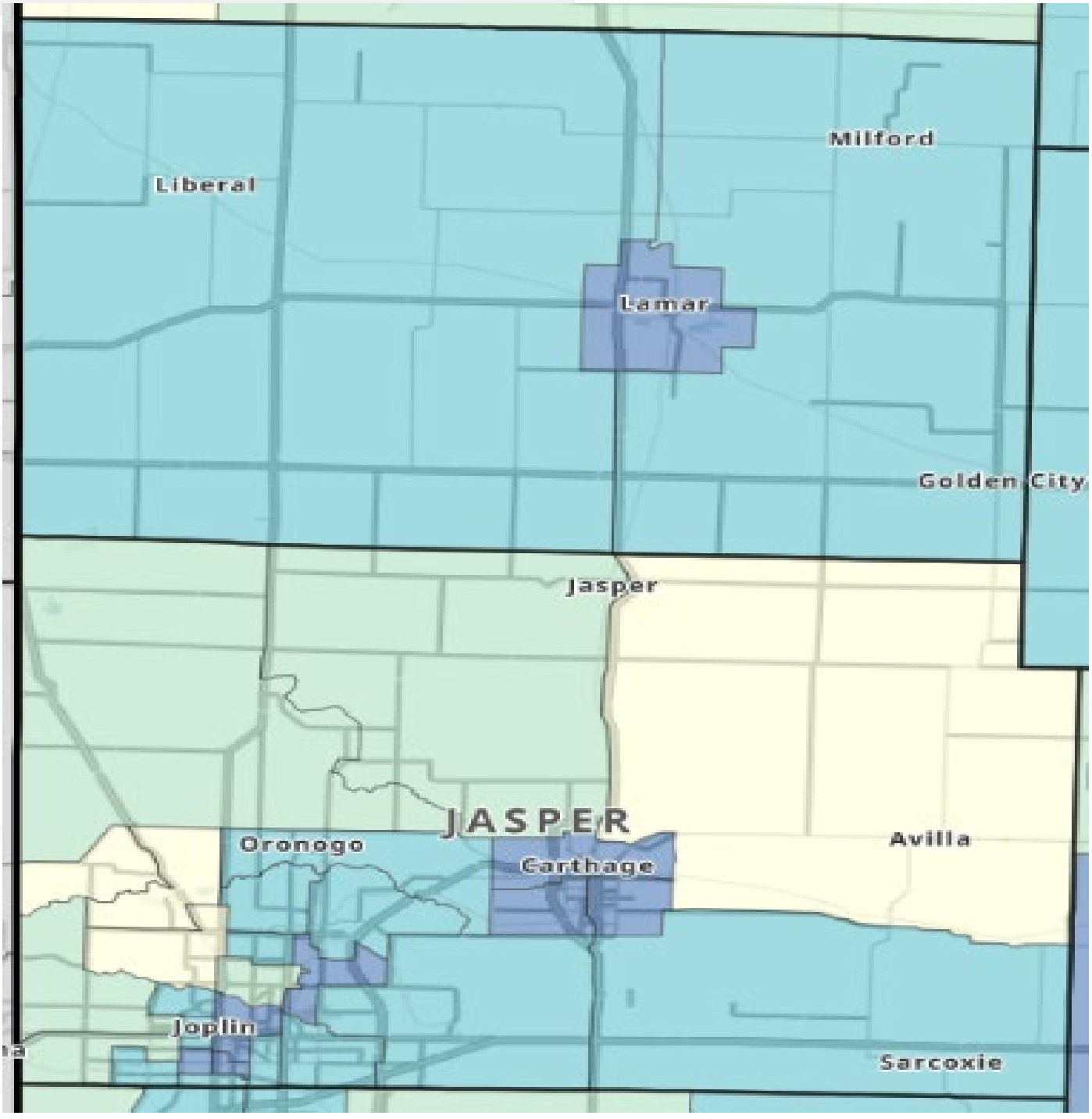


Highest (Top 4th) | Vulnerability (SVI 2022)[2] | Lowest (Bottom 4th)

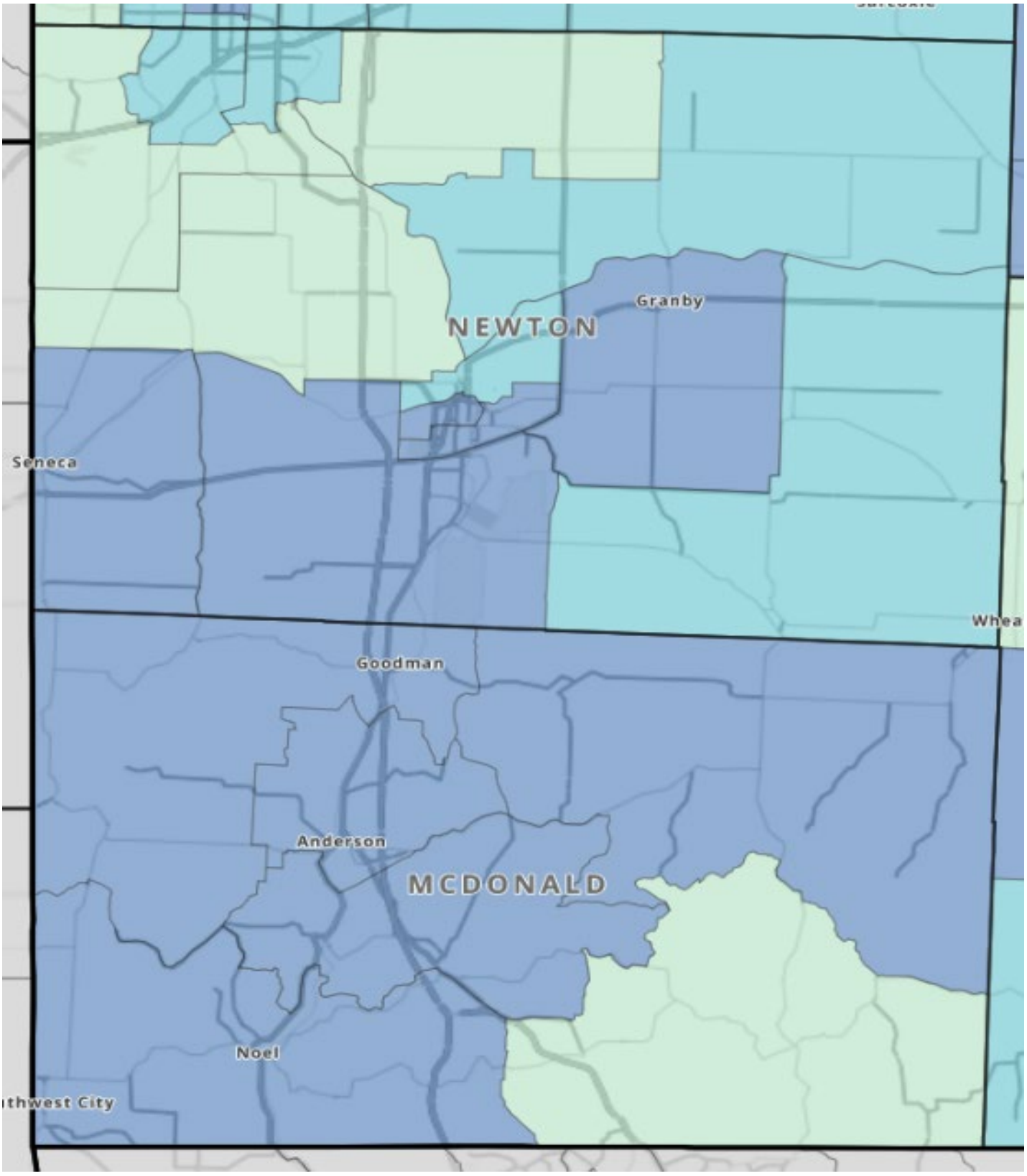
Data Sources: [2]CDC/ATSDR/GRASP, U.S. Census Bureau, ArcGIS StreetMap Premium.
Notes: [1]Overall Social Vulnerability: All 16 variables. [2]One or more variables unavailable at census tract level. [4]The CDC/ATSDR SVI combines percentile rankings of U.S. Census American Community Survey (ACS) 2018-2022 variables, for the state, at the census tract level. [5]Socioeconomic Status: Below 150% Poverty, Unemployed, Housing Costs Burden, No High School Diploma, No Health Insurance. [6]Household Characteristics: Aged 65 and Older, Aged 17 and Younger, Civilian with a Disability, Single-Parent Household, English Language Proficiency. [7]Race/Ethnicity: Hispanic or Latino (of any race); Black and African American, Not Hispanic or Latino; American Indian and Alaska Native, Not Hispanic or Latino; Asian, Not Hispanic or Latino; Native Hawaiian and Other Pacific Islander, Not Hispanic or Latino; Two or More Races, Not Hispanic or Latino; Other Races, Not Hispanic or Latino. [8]Housing Type/Transportation: Multi-Unit Structures, Mobile Homes, Crowding, No Vehicle, Group Quarters.
Projection: NAD 1983 StatePlane Missouri Central FIPS 2402.
References: Flanagan, B.E., et al., A Social Vulnerability Index for Disaster Management. *Journal of Homeland Security and Emergency Management*, 2011. 8(1).
CDC/ATSDR SVI web page: https://www.atsdr.cdc.gov/placeandhealth/svi/index.html.

Social Vulnerability Factors

Overall SVI Missouri: Statewide Comparison
By Census Tract | 2022



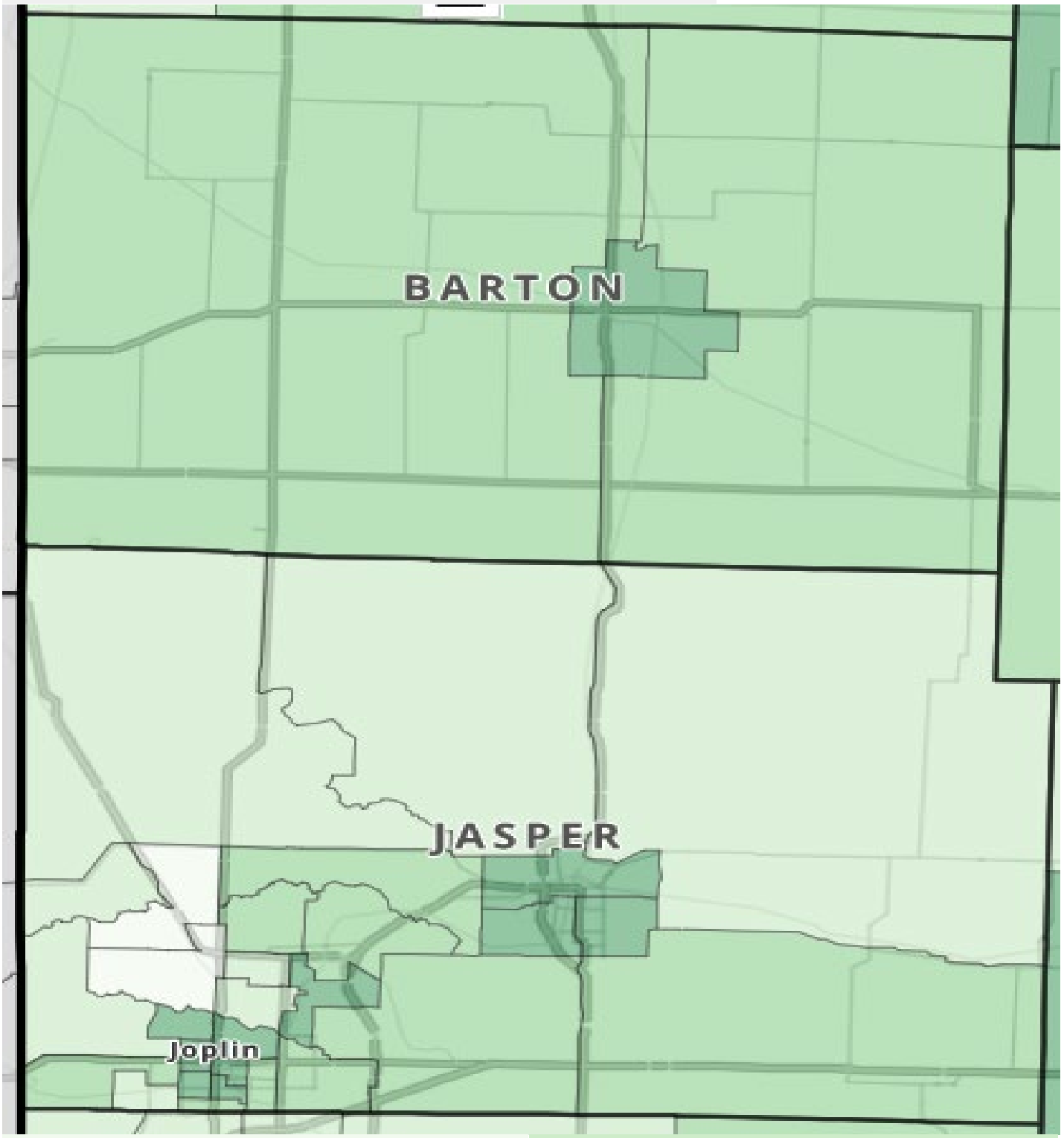
Low | Low-Medium | Medium-High | High



Low	Low-Medium
Medium-High	High

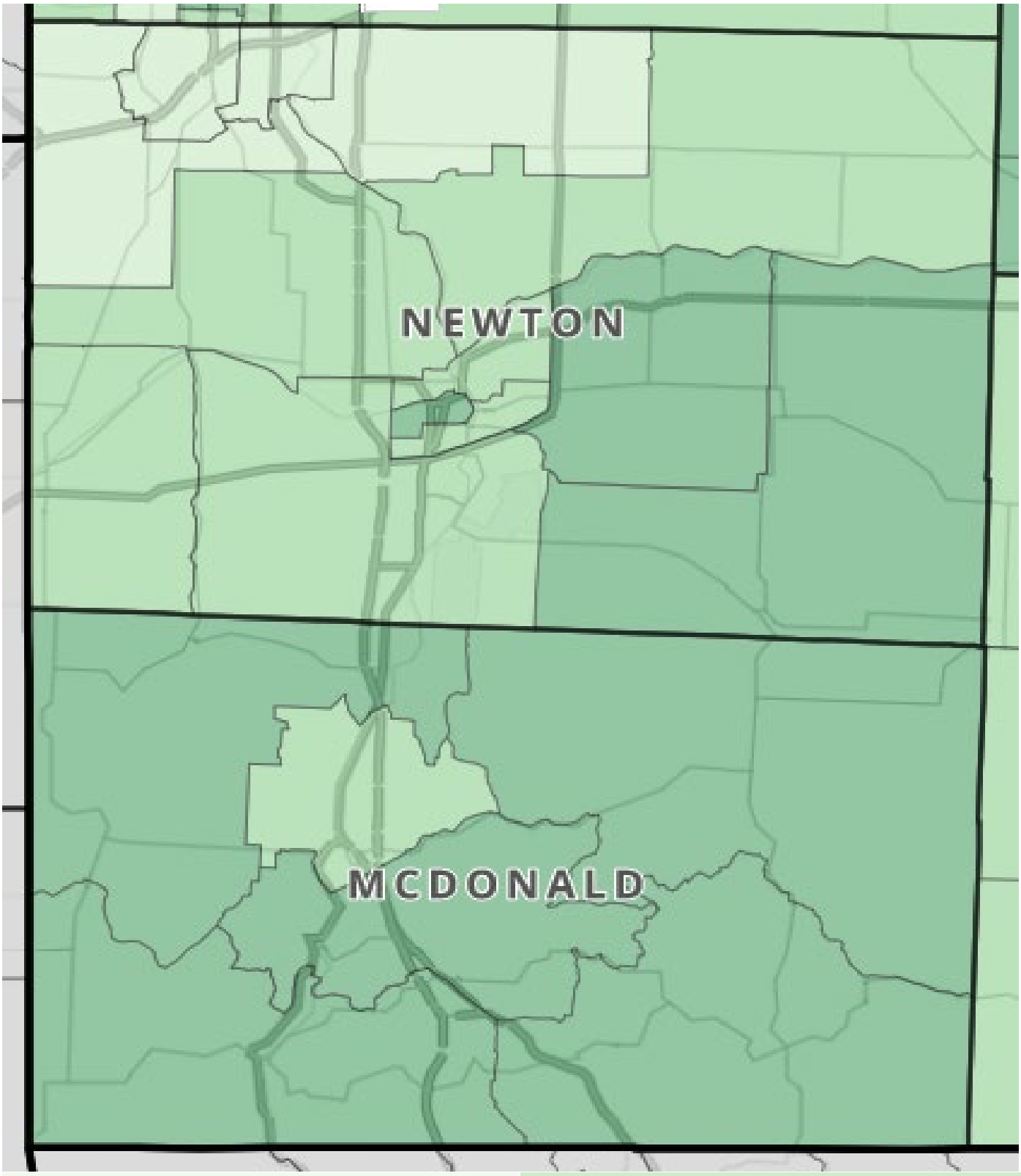
Socioeconomic Status Missouri: Statewide Comparison

By Census Tract | 2022



Low | Low-Medium

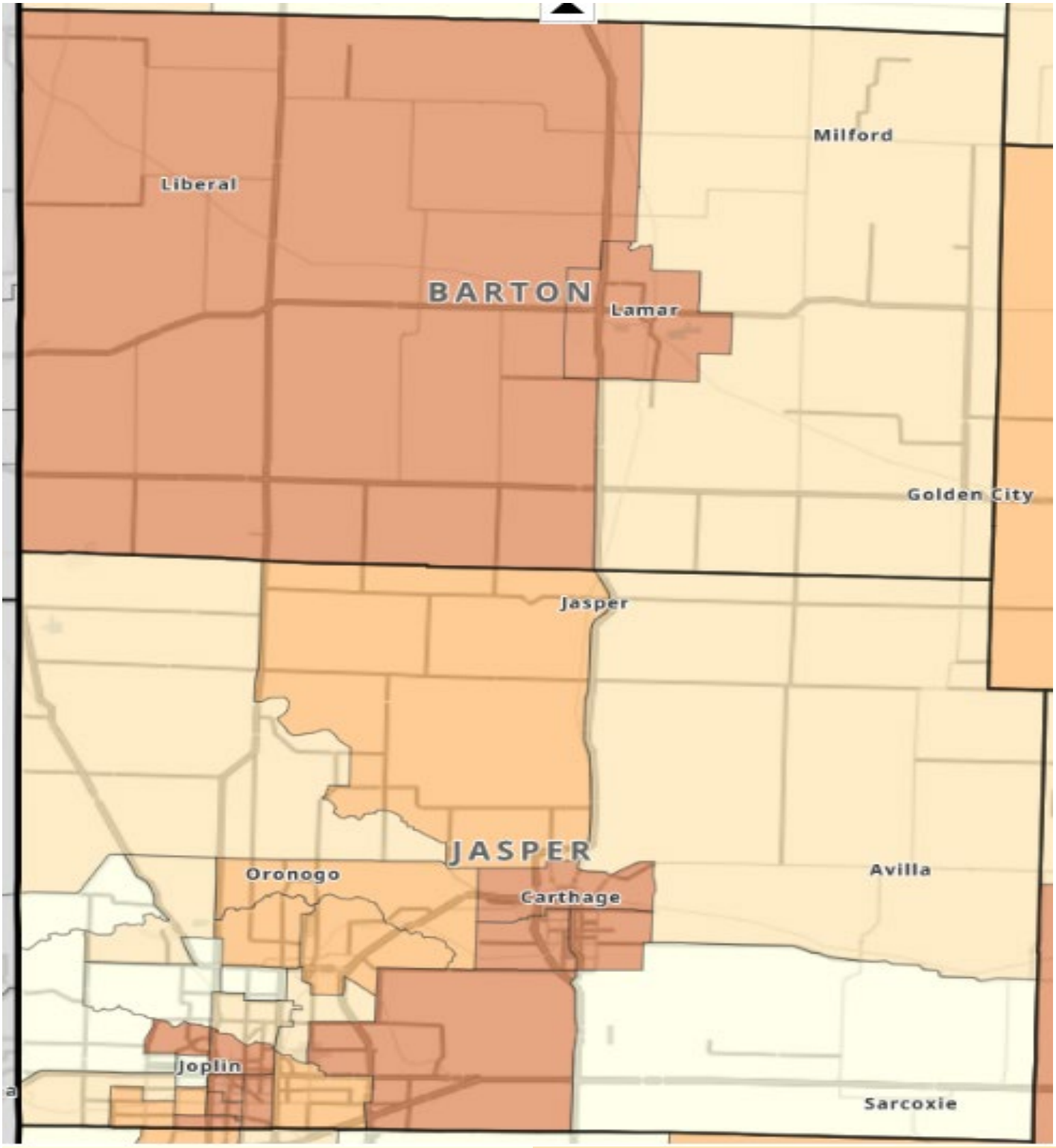
Medium-High | High


NEWTON
MCDONALD
Low
Low-Medium
Medium-High
High

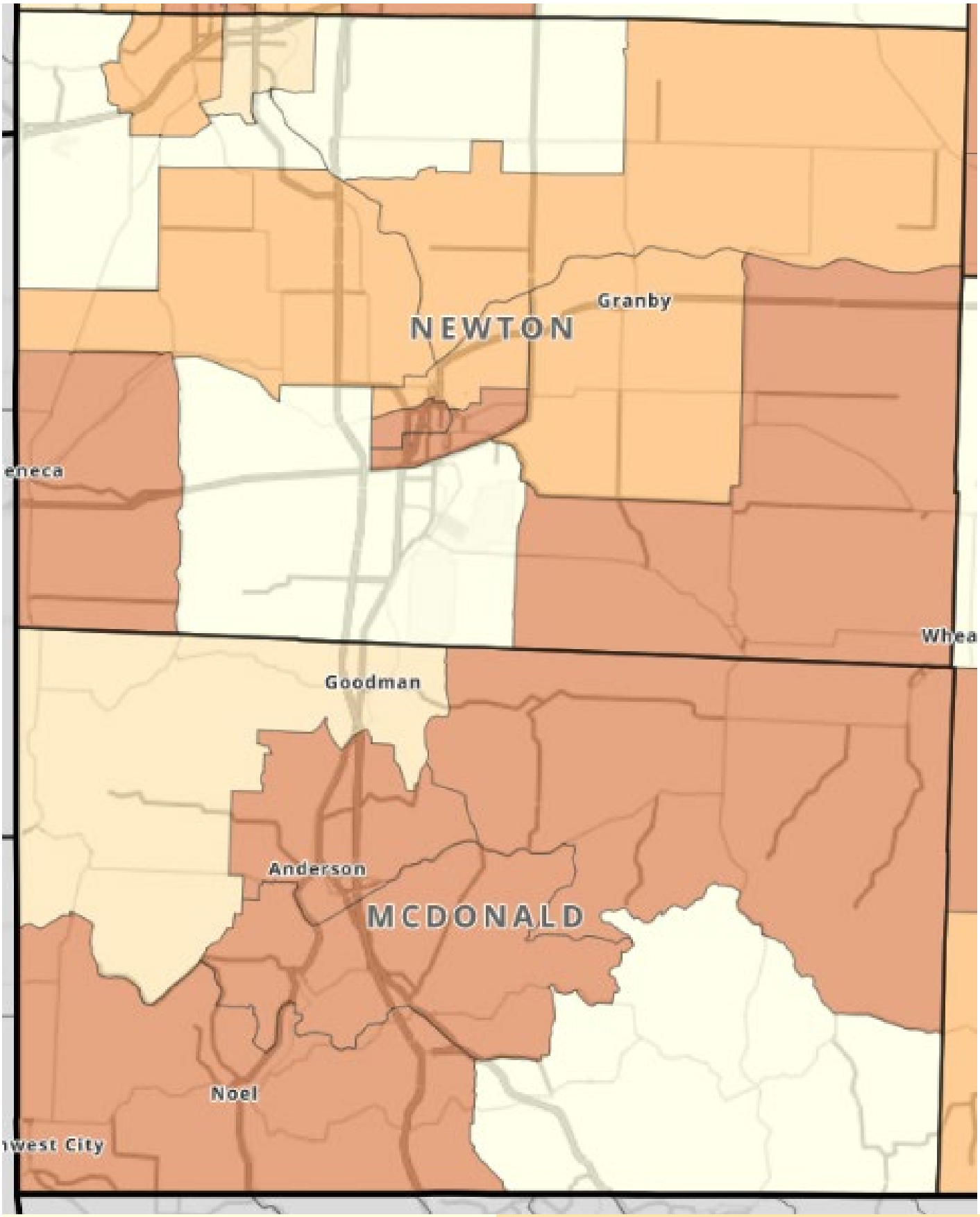
Household Characteristics

Missouri: Statewide Comparison

By Census Tract | 2022



Low	Low-Medium
Medium-High	High

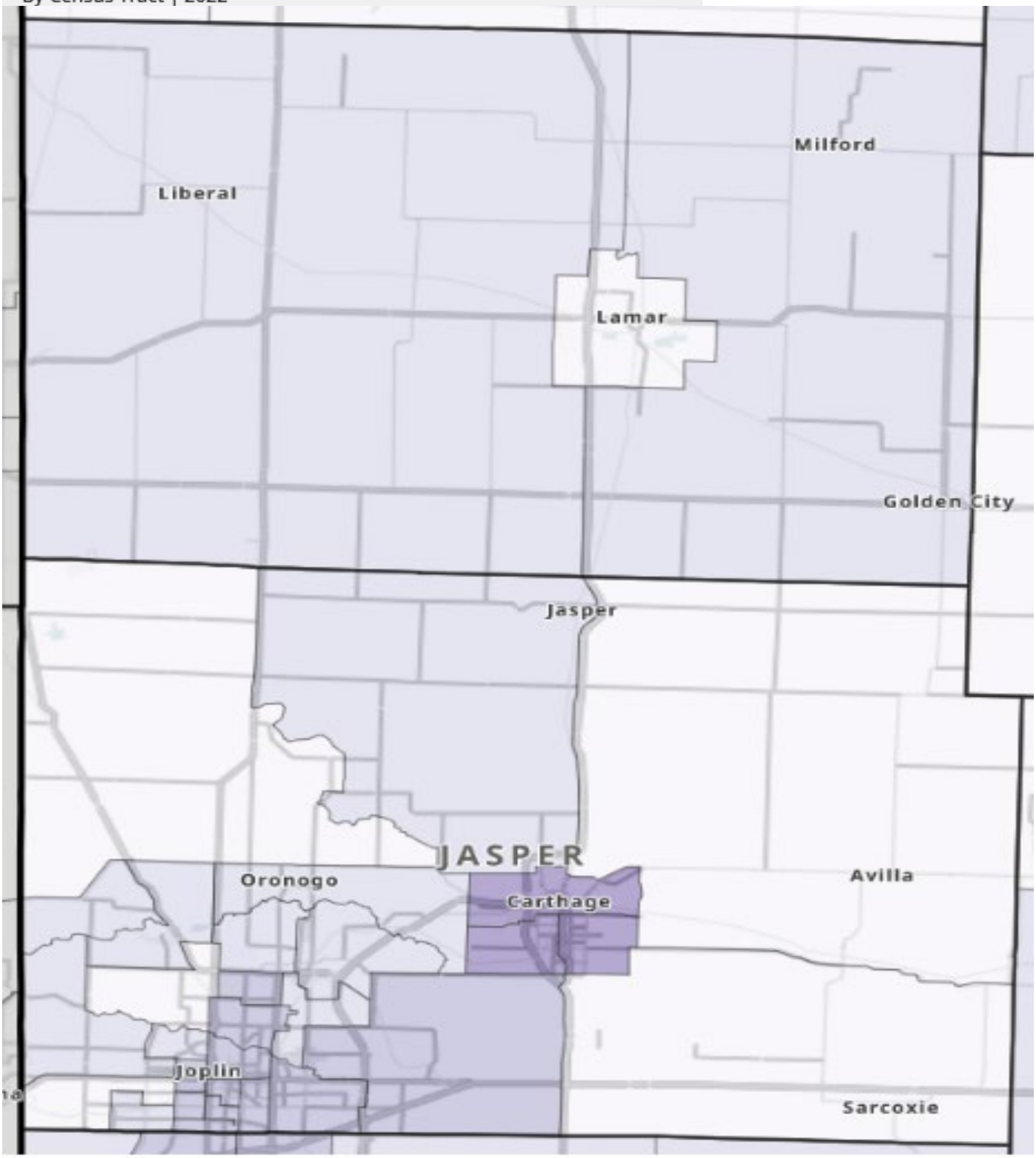


Low	Low-Medium
Medium-High	High

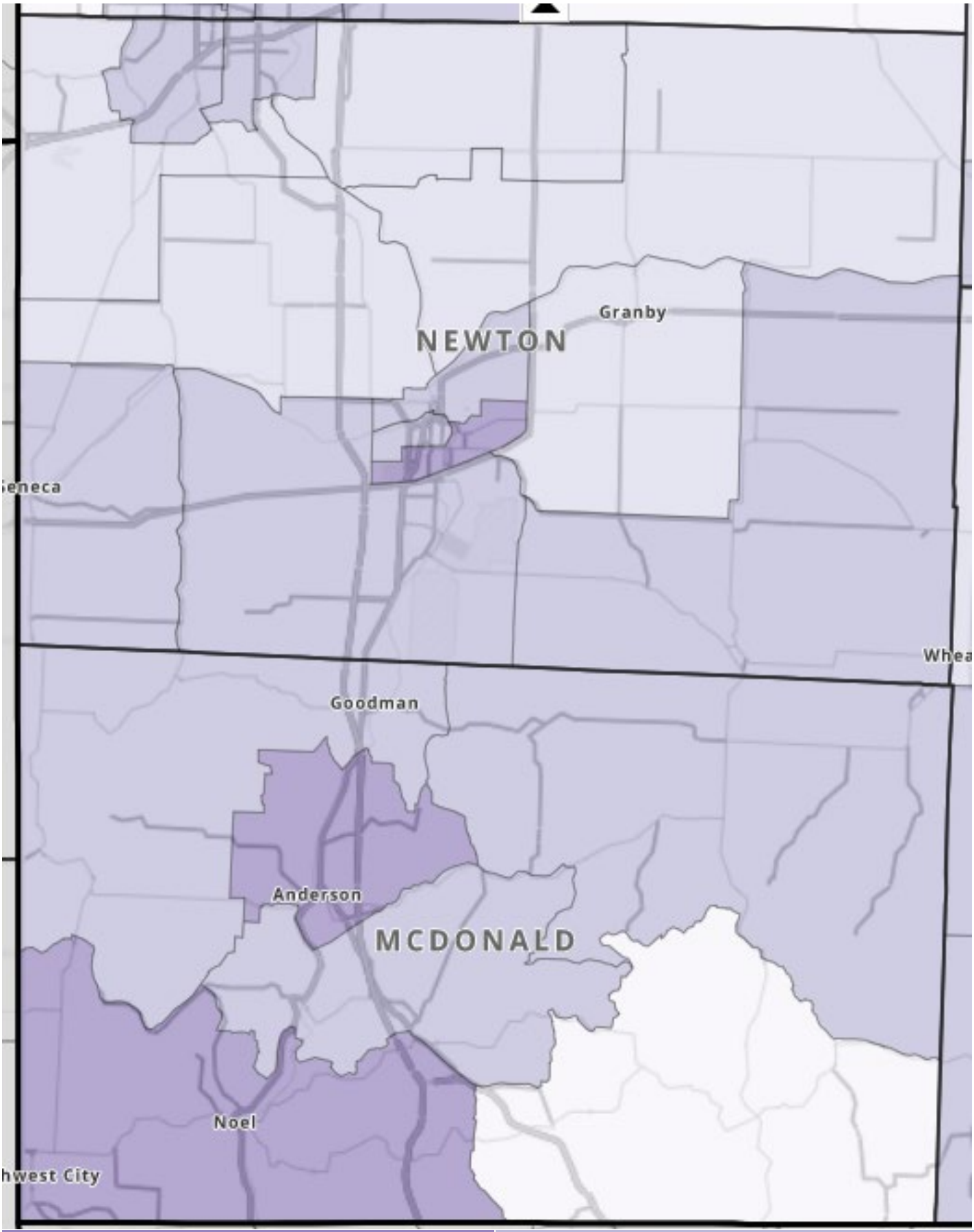
Racial & Ethnic Minority Status

Missouri: Statewide Comparison

By Census Tract | 2022



High	Medium-High
Low-Medium	Low

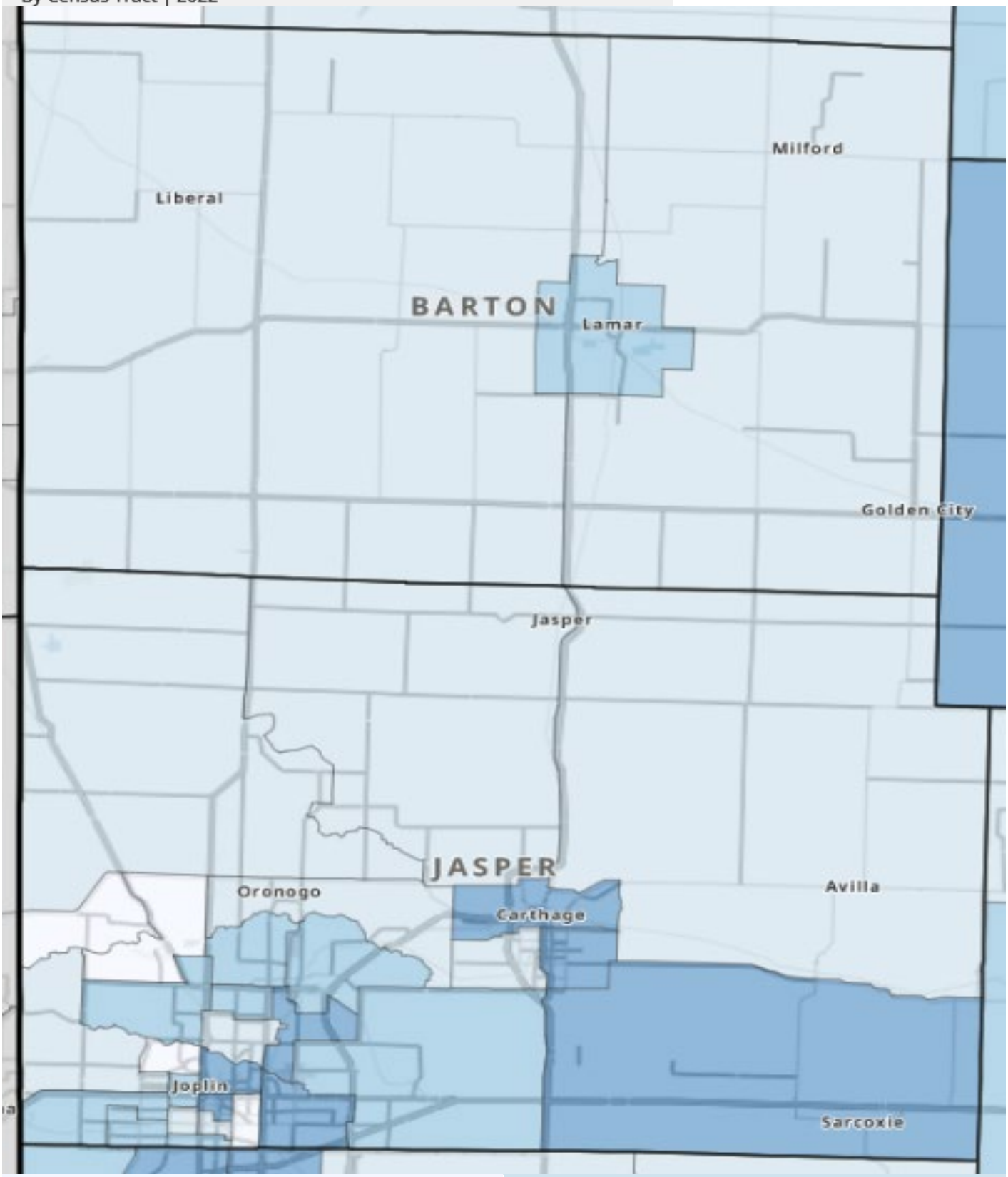


High	Medium-High
Low-Medium	Low

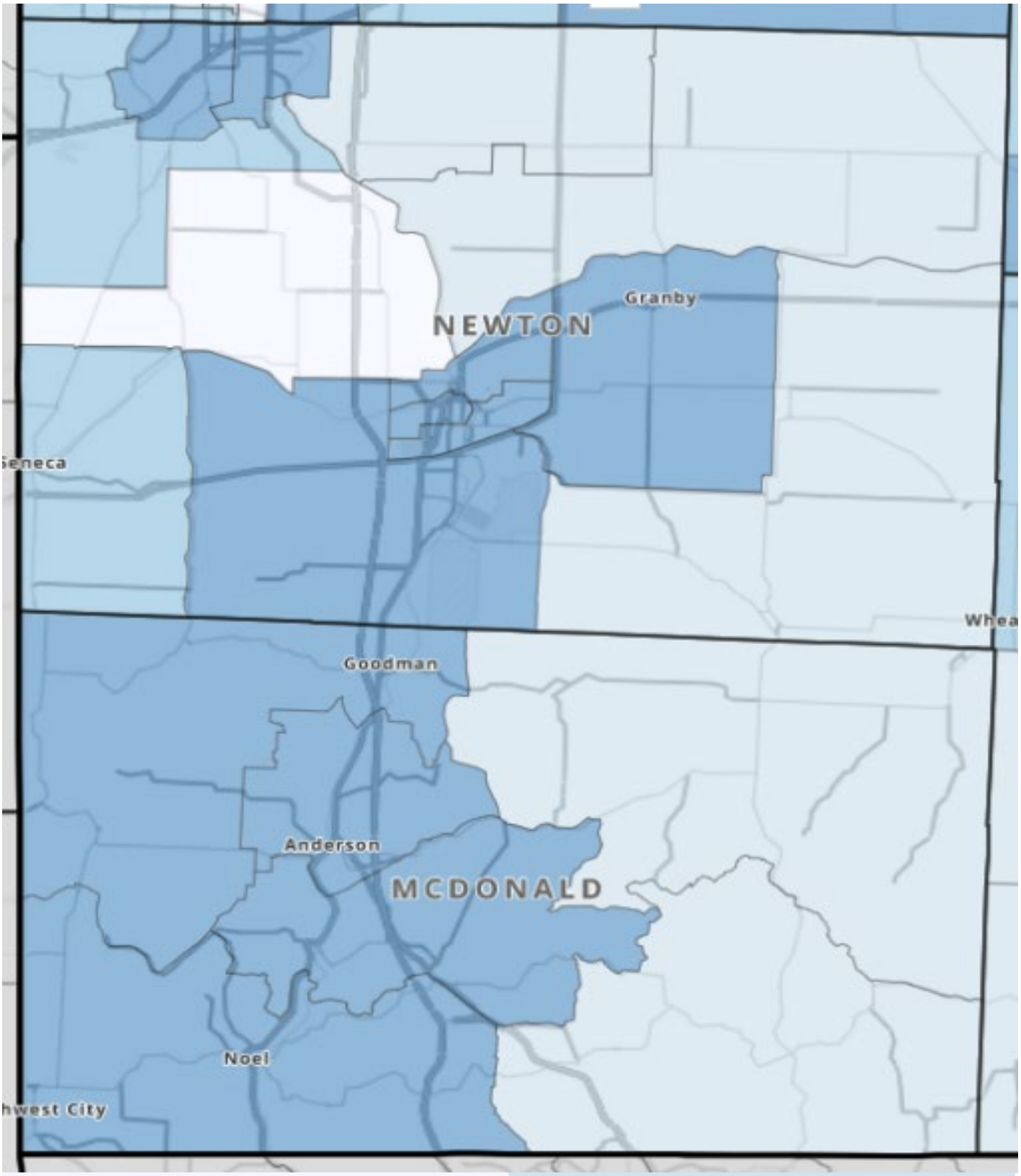
Housing Type & Transportation

Missouri: Statewide Comparison

By Census Tract | 2022



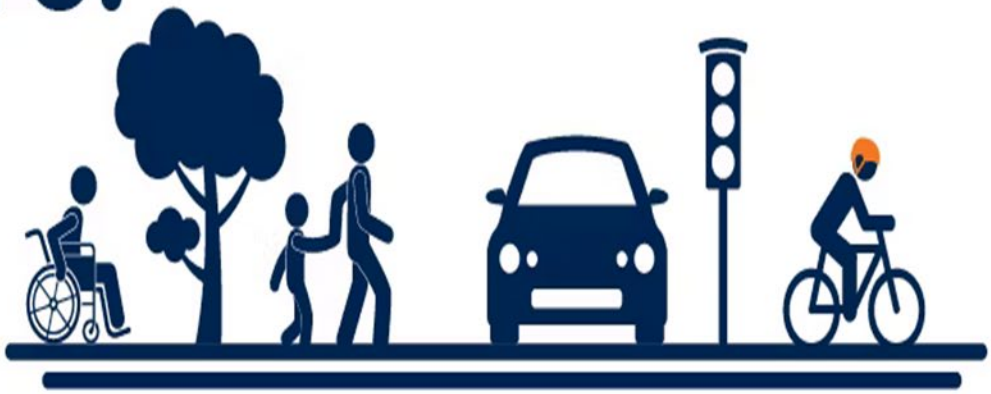
Low	Low-Medium
Medium-High	High


NEWTON
Granby
Goodman
Anderson
MCDONALD
Noel
Low
Low-Medium
Medium-High
High

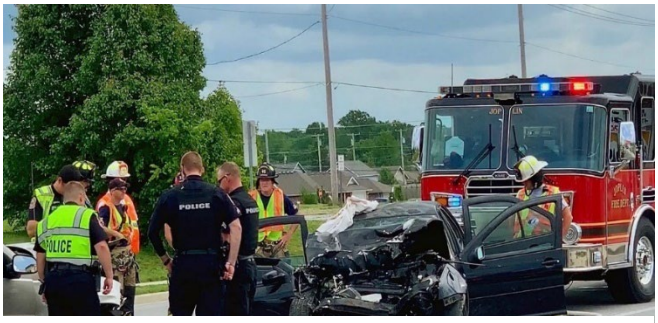
Southwest Missouri Crash Statistics (2020-2024)

Vision Zero:

No traffic deaths
or serious injuries



This section provides an in-depth analysis of traffic crashes in Jasper, Newton, McDonald, and Barton counties in Southwest Missouri. The data covers various aspects, including crash types, severity levels, lighting and weather conditions, and other contributing factors such as driver behavior and road conditions. The analysis identifies key trends, such as high-risk locations and peak times for crashes, and highlights specific areas of concern, like intersections and rural roads. Following sections will present data-driven recommendations for improving road safety, such as targeted enforcement, infrastructure upgrades, public awareness campaigns, and policy changes aimed at reducing crashes and enhancing overall traffic safety in the region.



Traffic fatalities in Jasper, Newton, Barton, and McDonald counties have been a persistent and serious issue over the past five years. The data from 2019 to 2023 reflects troubling trends, with significant implications for public safety and infrastructure planning in Southwest Missouri.

Traffic Crash Summary for Southwest Missouri Counties

Jasper County:

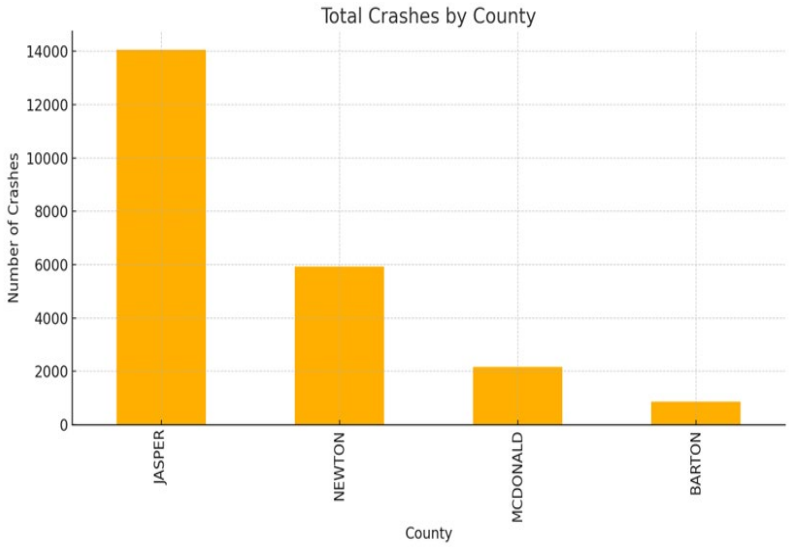
- Total crashes: 13,543
- Fatal crashes: 97
- Minor injuries: 3,416
- Property damage: 10,656
- Serious injuries: 406

Newton County:

- Total crashes: 5,950
- Fatal crashes: 94
- Minor injuries: 1,728
- Property damage: 4,428
- Serious injuries: 325

McDonald County:

- Total crashes: 2,113
- Fatal crashes: 43
- Minor injuries: 626
- Property damage: 1,516
- Serious injuries: 164



Barton County:

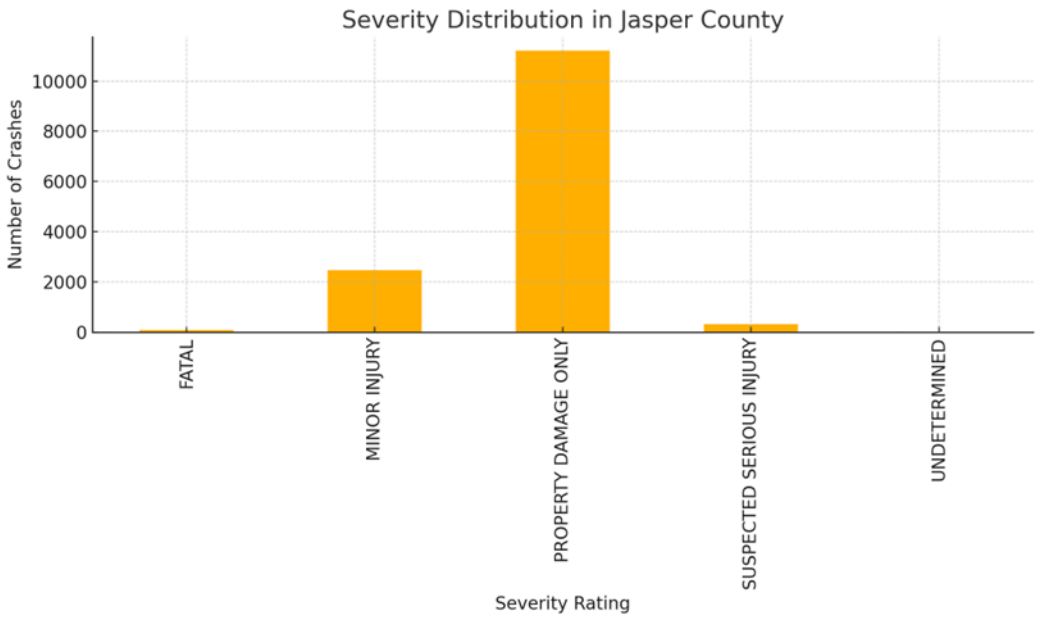
- Total crashes: 824
- Fatal crashes: 18
- Minor injuries: 216
- Property damage: 625
- Serious injuries: 45

Total crashes: 22,491

Fatal crashes: 253
Minor injuries: 6,007
Property damage: 17,265
Serious injuries: 943

Jasper County Crash Data Analysis

Jasper County accounts for the largest share of crashes among the four counties, with a total of 13,543 crashes recorded during the five-year period.



Fatal Crashes:

The county experienced 92 fatal crashes, resulting in 97 fatalities. These incidents underscore the need for targeted safety interventions in high-risk corridors. The presence of major highways such as I-44 and U.S. Route 71, combined with heavy traffic volumes, contributes significantly to the elevated crash risk. Both urban and rural areas face challenges: urban centers like Joplin experience frequent intersection-related crashes, while rural roadways see higher speeds and lower seat belt use, amplifying crash severity. Contributing factors often include speeding, impaired driving, and failure to use seat belts.

Injury Crashes:

Jasper County reported 2,472 crashes involving minor injuries (3,416 individuals injured) and 323 crashes resulting in serious injuries (406 individuals injured). These injury crashes represent a substantial portion of the county's total, highlighting the persistent risk to roadway users.

Property Damage Only:

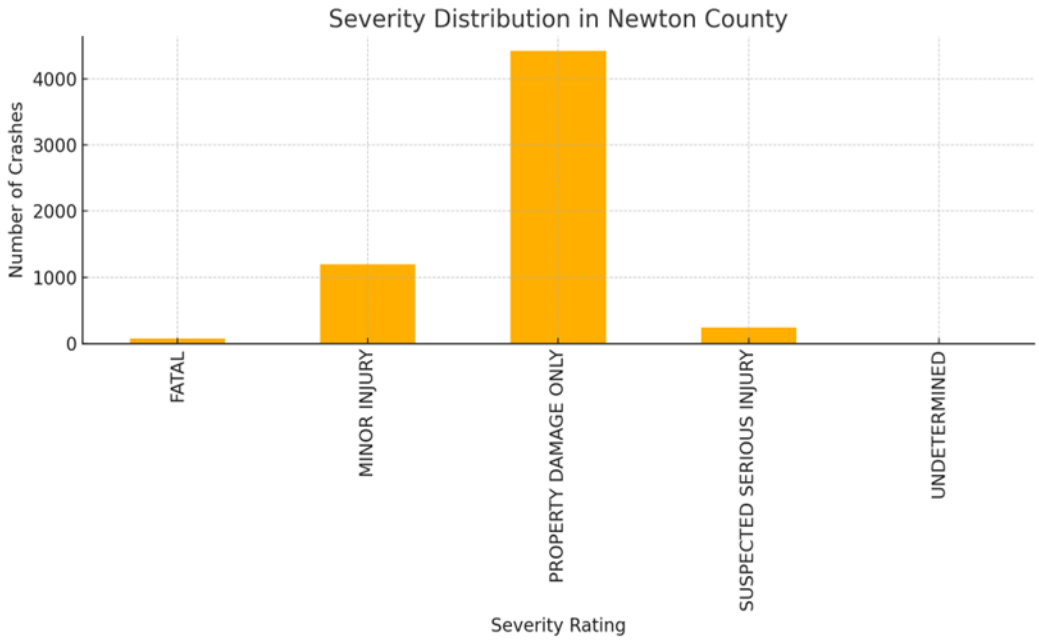
The majority of incidents — 10,656 crashes — were classified as property damage only. While these crashes did not result in direct physical harm, they carry significant financial costs and impact quality of life through roadway disruptions and vehicle losses.

Common Crash Causes:

Frequent crash types included rear-end collisions, left-turn crashes, and out-of-control vehicles. These patterns were especially notable on high-volume routes such as MO-171 and MO-43, where roadway design, traffic congestion, and driver behaviors converge to elevate risk.

Newton County Crash Data Analysis

Newton County recorded a total of 5,950 crashes during the five-year period, ranking second in the region for overall crash frequency.



Fatal Crashes:

The county experienced 88 fatal crashes, resulting in 94 fatalities. Much of Newton County is rural, with winding roads and limited infrastructure investment compared to more urbanized areas. These conditions heighten crash severity, especially when combined with high speeds, impaired driving, and lack of seat belt use. Fatalities on rural roadways are particularly concerning, as delayed emergency response times can make the difference between survival and loss of life.

Injury Crashes:

A total of 1,178 crashes resulted in minor injuries (1,728 individuals injured), while 255 crashes led to serious injuries (325 individuals injured). These figures highlight the county's significant burden of crash-related injuries, which affect families and communities across both rural and urban areas.

Property Damage Only:

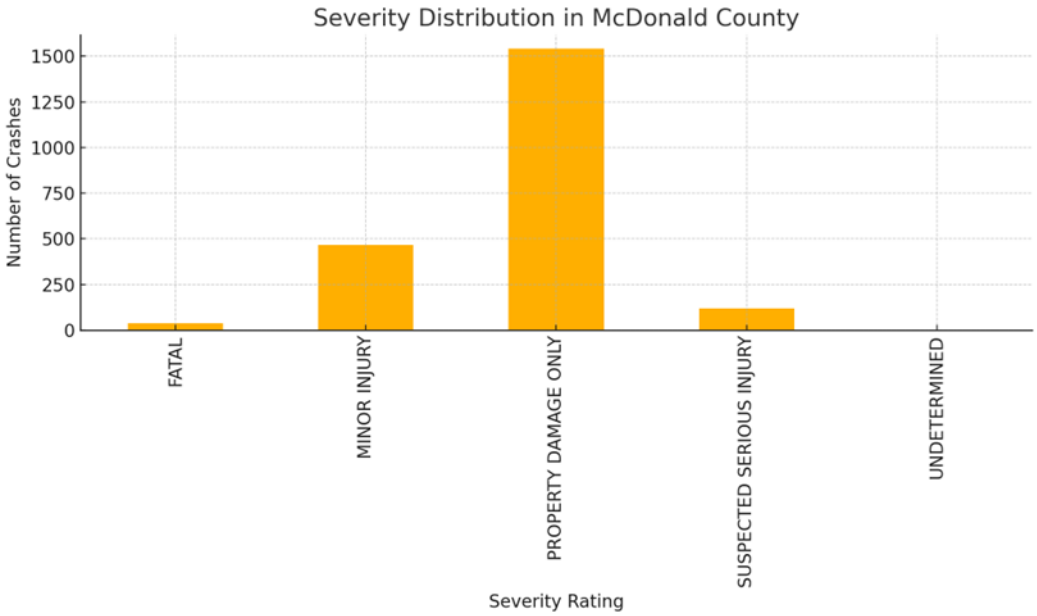
The majority of incidents — 4,428 crashes — were classified as property damage only. Although these crashes did not cause physical injuries, they impose considerable financial costs on residents and local infrastructure.

Key Insights:

Similar to Jasper County, Newton County crashes were frequently caused by rear-end collisions and out-of-control vehicles. State highways in particular emerged as problem areas, where roadway design, higher speeds, and driver behavior combine to increase crash risk.

McDonald County Crash Data Analysis

McDonald County reported a total of 2,113 crashes between 2020 and 2024. While this represents fewer overall crashes than neighboring counties, the severity of incidents remains a significant concern.



Fatal Crashes:

The county experienced 38 fatal crashes, resulting in 43 fatalities. Given the county's size and population, this is a relatively high proportion of serious crashes. Known for its scenic routes and seasonal tourist traffic, McDonald County faces unique safety challenges. Visitors unfamiliar with the local roadway network, combined with narrow and winding rural roads, create conditions that heighten crash risk. Fatal crashes are often linked to head-on collisions and single-vehicle run-off-road crashes where drivers lose control on curves. Delayed emergency response times in rural areas further compound the likelihood of fatalities.

Injury Crashes:

A total of 436 crashes resulted in minor injuries (626 individuals injured), while 123 crashes caused serious injuries (164 individuals injured). These crashes underscore the continued need for roadway improvements and public safety initiatives in both local communities and tourist areas.

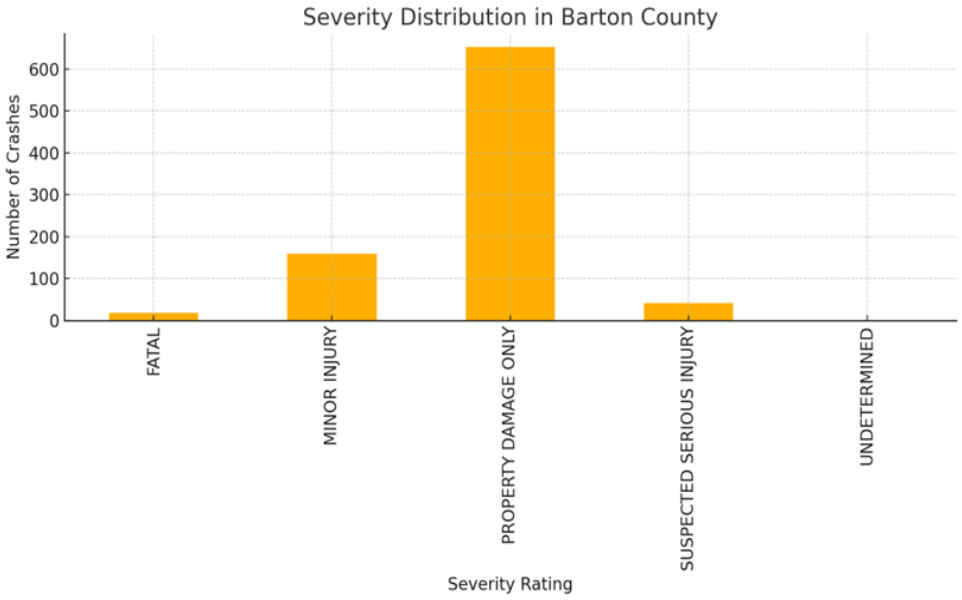
Property Damage Only:

The largest share of crashes — 1,516 incidents — were classified as property damage only. While these crashes did not result in physical harm, they nevertheless impose financial costs and disrupt local mobility.

Key Insights:

Crashes frequently occurred on rural routes with poor lighting, steep grades, or sharp curves. Adverse weather conditions such as rain, ice, and snow also contributed significantly to crash frequency and severity, emphasizing the need for both infrastructure upgrades and driver education campaigns tailored to rural roadway safety.

Barton County Crash Data Analysis



Barton County recorded the fewest crashes among the four-county region, with a total of 824 crashes reported between 2020 and 2024. While overall numbers are lower than in larger counties, the severity of incidents remains a pressing concern.

Fatal Crashes:

The county experienced 17 fatal crashes, resulting in 18 fatalities. Although the absolute number of fatal crashes is smaller compared to Jasper or Newton counties, the relative severity of incidents is high. Most fatalities occur on rural roadways, where speeding, single-vehicle run-off-road crashes, and limited enforcement contribute to increased risk. Delays in emergency response can also exacerbate outcomes, making rural crashes particularly deadly.

Injury Crashes:

Barton County reported 144 crashes involving minor injuries (216 individuals injured) and 38 crashes resulting in serious injuries (45 individuals injured). While injury crash totals are lower than in surrounding counties, their presence highlights ongoing roadway safety challenges.

Property Damage Only:

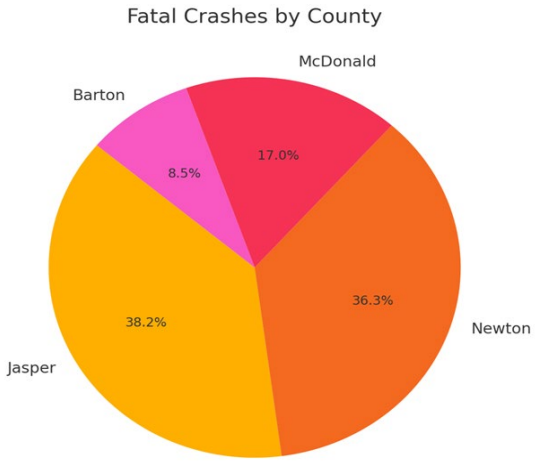
The majority of crashes — 625 incidents — were classified as property damage only. These non-injury crashes still impose costs on residents and the local economy while underscoring the need for proactive roadway improvements.

Key Insights:

Barton County's older roadway infrastructure, much of which predates modern design and safety standards, contributes to crash risks. Combined with common rural driving behaviors such as speeding and inconsistent seat belt use, these factors sustain a persistent threat of serious crashes despite lower overall crash volumes.

Comparative Analysis

A comparative review of crash data across the four counties highlights several important trends and distinctions in roadway safety outcomes.



Crash Volume:

Jasper County leads the region by a substantial margin, with 13,543 total crashes, far exceeding the crash volumes of the other counties. This elevated figure can be attributed to Jasper's larger population centers, higher traffic density, and a more complex roadway network that includes major highways and heavily traveled corridors. Newton County ranks second with 5,950 crashes, followed by McDonald County with 2,113 crashes, while Barton County recorded the fewest at 824 crashes.

These disparities underscore the variability of traffic conditions across Southwest Missouri. Jasper County faces challenges driven by high-volume urban and highway traffic, Newton and McDonald counties contend with rural roadway safety risks, and Barton County's smaller network still presents critical issues tied to roadway age, design limitations, and rural crash severity.

Fatalities:

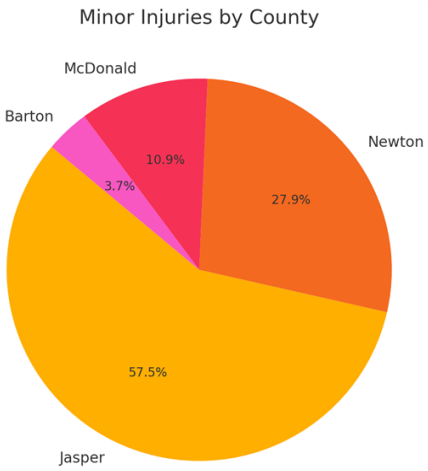
While Jasper County leads the region in total crash volume, Newton County presents a particularly concerning trend in fatal crashes. Newton County experienced 88 fatal crashes resulting in 94 fatalities, nearly matching Jasper County's 92 fatal crashes resulting in 97 fatalities, despite Jasper's far higher overall crash volume. This indicates that crashes in Newton County are often more severe or occur in environments that elevate fatality risk, such as rural highways and winding secondary roads.

McDonald County recorded 38 fatal crashes (43 fatalities), and Barton County reported 17 fatal crashes (18 fatalities). Although these totals are lower in absolute numbers, they represent a substantial proportion of each county's overall crash volume, underscoring that smaller counties still face significant roadway safety challenges.

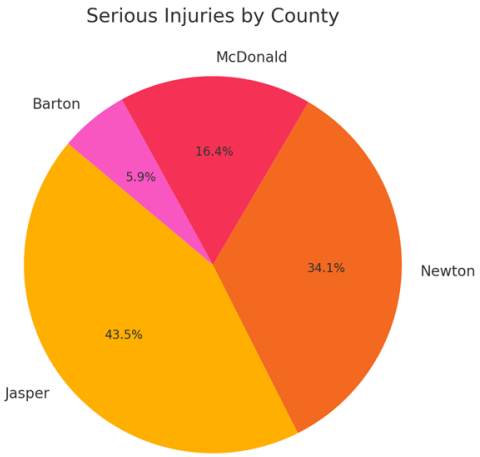
Taken together, this analysis suggests that Newton County has a disproportionately high rate of fatal crashes, pointing to a combination of roadway conditions, driver behaviors, and rural response challenges as contributing factors.

Injuries:

When examining injury-related crashes, both Jasper and Newton counties stand out, though with different patterns. Jasper County recorded 2,472 crashes involving minor injuries (3,416 individuals injured) and 323 crashes involving serious injuries (406 individuals injured). This reflects a high overall frequency of injury crashes, though many resulted in less severe outcomes.

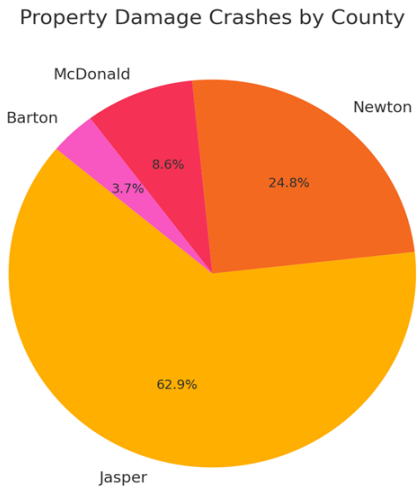


Newton County, while reporting fewer overall minor injury crashes — 1,178 crashes (1,728 individuals injured) — showed a concerning number of serious injury crashes, with 255 incidents (325 individuals injured), only slightly fewer than Jasper despite its lower overall crash volume.



McDonald County reported 436 minor injury crashes (626 individuals injured) and 123 serious injury crashes (164 individuals injured), while Barton County documented 144 minor injury crashes (216 individuals injured) and 38 serious injury crashes (45 individuals injured).

These trends suggest that while Jasper County bears the highest burden of injury crashes overall, Newton County's crashes are disproportionately severe, producing fatalities and serious injuries at higher rates relative to its total crash count. McDonald and Barton counties, though experiencing fewer total crashes, still face significant challenges, particularly on rural roads where roadway conditions and emergency response limitations exacerbate crash outcomes.



Property Damage:

Crashes resulting in property damage without physical injury represent the majority of incidents across all four counties. Jasper County again leads in this category, with 10,656 property damage-only crashes, followed by Newton County with 4,428 crashes. McDonald County recorded 1,516 property damage-only crashes, while Barton County documented 625 crashes of this type.

Although these incidents did not result in fatalities or injuries, their impact is nonetheless significant. Property damage-only crashes carry substantial financial costs for residents, insurers, and local governments, while also causing disruptions to traffic flow and roadway operations. The prevalence of these crashes across the region emphasizes that, while prevention of fatalities and serious injuries remains the top priority, strategies should also account for the economic and logistical burdens of non-injury crashes.

Conclusion:

The comparative analysis of Jasper, Newton, McDonald, and Barton counties highlights the complex and varied nature of roadway safety challenges across Southwest Missouri. Each county presents distinct conditions and outcomes that require tailored strategies to effectively reduce crashes, fatalities, and injuries.

Jasper County, with a population of approximately 122,000 and the highest traffic density in the region, recorded the largest number of crashes — 13,543 between 2020 and 2024. Its scale of roadway activity makes it a critical area of focus. Targeted efforts in Jasper should emphasize reducing overall crash volume through strategies such as enhanced traffic enforcement, roadway design improvements, and community education campaigns. These measures will help lessen the burden on emergency services, infrastructure, and local communities.

Newton County, home to about 58,000 residents, experienced 5,950 crashes but stood out for its disproportionately high number of fatal and serious injury crashes — 88 fatal crashes (94 fatalities) and 255 serious injury crashes (325 serious injuries). This pattern suggests that crashes in Newton are more severe, often tied to high speeds, impaired driving, and rural roadway conditions. Safety planning here should prioritize preventing severe outcomes, with a focus on improving roadway lighting, signage, safety barriers, and targeted enforcement in high-risk corridors.

McDonald County (population ~22,000) and Barton County (population ~11,600) reported lower overall crash volumes — 2,113 and 824 crashes, respectively — yet still face significant challenges. Fatal and serious injury crashes in these rural counties remain a concern, exacerbated by narrow roadways, higher travel speeds, and longer emergency response times. Investments in infrastructure maintenance, roadway modernization, visibility enhancements, and community-based safety programs will be essential to mitigate risks and reduce severity.

Across all four counties, property damage-only crashes accounted for the majority of incidents. Jasper reported 10,656 PDO crashes, Newton 4,428, McDonald 1,516, and Barton 625. While these crashes did not cause physical harm, they imposed substantial financial and logistical costs. Nonetheless, the primary focus of safety planning must remain on preventing fatalities and serious injuries, which have the most profound impacts on families and communities.

In conclusion, Southwest Missouri requires a comprehensive, data-driven approach to roadway safety. Jasper County should focus on reducing crash frequency, Newton County must target its high rate of severe outcomes, and McDonald and Barton counties need tailored strategies to address rural roadway risks. By combining infrastructure improvements, targeted enforcement, public education, and cross-county collaboration, the region can make measurable progress toward its Vision Zero goal of eliminating traffic fatalities and serious injuries.

Crash Summary by Mode

A comprehensive review of traffic crashes in Jasper, Newton, McDonald, and Barton counties reveals clear differences in crash patterns depending on the mode of travel.

Vehicle-Related Crashes:

The overwhelming majority of incidents were vehicle-related crashes, with 22,815 crashes recorded during the five-year period. This category includes collisions between motor vehicles, vehicles and animals, and other unspecified crash types. The most common patterns were rear-end collisions, right-angle crashes at intersections, and sideswipe collisions involving parallel traffic. These crash types are strongly influenced by driver behavior (e.g., distraction, speeding, failure to yield), roadway design, and environmental factors such as poor visibility or adverse weather. Collisions with animals, particularly deer and dogs, were also frequent in rural areas, highlighting the unique challenges of roadway safety outside urban centers.

Pedestrian Crashes:

A total of 124 crashes involved pedestrians. Though they represent a small proportion of the overall total, these crashes are highly significant because of their severity. Pedestrian crashes typically occur in urban centers, near schools, or at crosswalks where foot traffic is heavy. Key contributing factors include vehicle speed, driver attentiveness, and pedestrian visibility. The high likelihood of fatalities or serious injuries makes pedestrian safety a critical concern for the region.

Bicycle Crashes:

There were 95 crashes involving bicycles across the four counties. Bicycle crashes frequently occur on roadways where cyclists share space with motor vehicles, often in areas lacking dedicated cycling infrastructure. The vulnerability of cyclists means that even relatively low-speed crashes can result in serious injuries. Contributing factors include

Note on Mode Totals:
The crash totals presented by mode (vehicle, pedestrian, bicycle) are drawn directly from MoDOT's crash reporting system. Because a single crash can involve multiple modes (for example, a vehicle striking a pedestrian or a vehicle colliding with a bicycle), crashes may be counted in more than one category. As a result, the mode-specific totals (22,815 vehicle, 124 pedestrians, 95 bicycle) do not add up exactly to the official regional total of 22,491 crashes for 2020–2024. The regional total should be used as the definitive count, while the mode-specific figures provide valuable insight into the distribution and nature of crash types.

inadequate bike lanes, poor pavement conditions, limited visibility, and driver inattention, particularly during nighttime or low-light conditions.

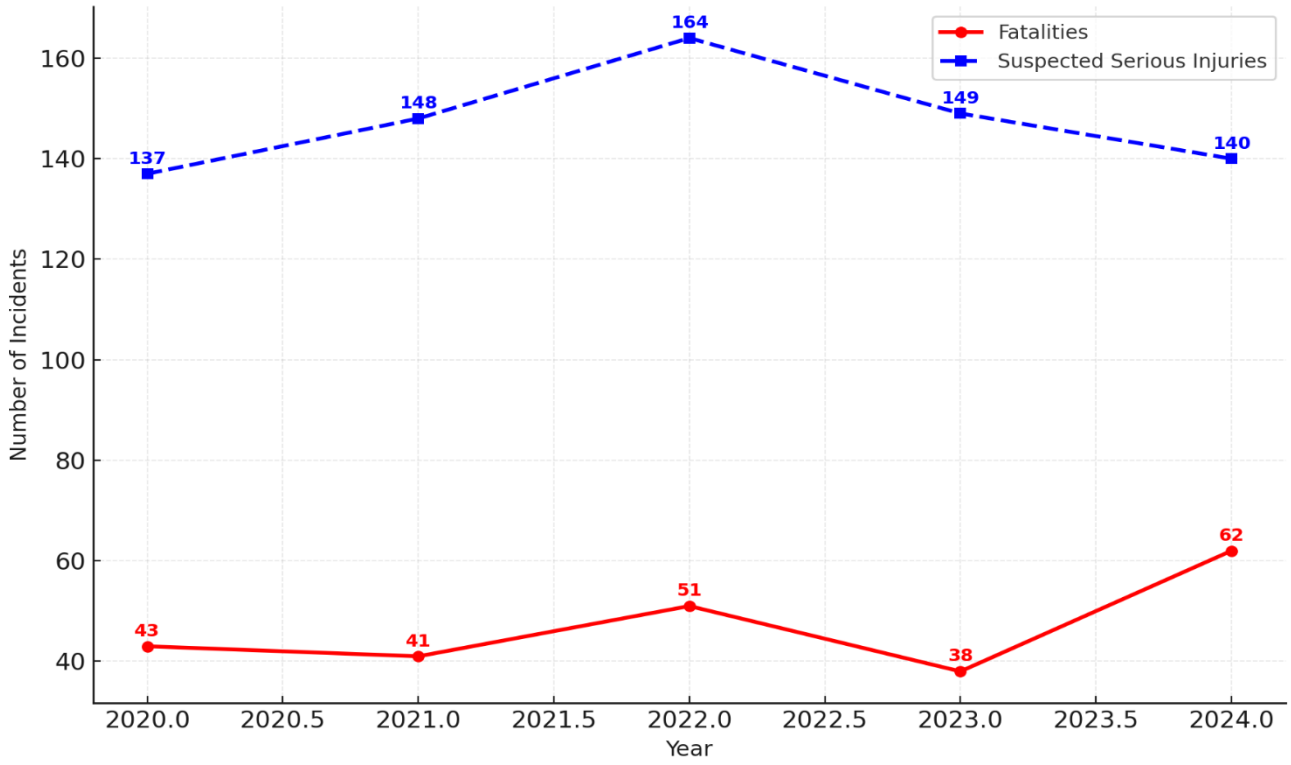
Key Takeaway:

Although vehicle-related crashes dominate the overall crash landscape, pedestrian and bicycle crashes—while far less frequent—carry a disproportionately high risk of severe injury or fatality. Understanding these mode-specific patterns is critical for developing effective safety strategies. By examining not only the mode of travel, but also the roadway conditions, driver behaviors, and environmental factors associated with each type of crash, planners and stakeholders can better tailor interventions to reduce both the frequency and severity of crashes across Southwest Missouri.

Serious Injuries and Fatalities

The issue of roadway deaths and injuries in Southwest Missouri, as depicted in the 2020–2024 crash data, underscores an urgent need for sustained and enhanced traffic safety interventions. During this period, the region recorded 253 fatalities and 943 serious injuries, alongside thousands of additional minor injuries. While year-to-year fluctuations occurred, the persistent burden of fatalities and the high number of suspected serious injuries highlight deep, systemic safety challenges. These outcomes demonstrate that, although certain strategies may have reduced some of the most catastrophic crashes, serious injuries continue to rise as a critical concern. The long-term impacts on individuals, families, and communities reinforce the importance of addressing not only crash prevention, but also crash severity, through comprehensive, data-driven approaches to roadway safety.

TRAFFIC FATALITIES AND SERIOUS INJURIES IN JASPER, BARTON, NEWTON, AND MCDONALD COUNTIES (2020-2024)



Fatalities Trend (2020–2024)

The data show that traffic fatalities in Southwest Missouri have remained persistent but unstable, with annual figures ranging from 38 to 62 deaths. This pattern underscores the ongoing challenge of reducing fatal crashes in the region.

The peak in 2022, with 51 fatalities, may reflect external factors such as increased post-pandemic travel or broader socioeconomic conditions. While fatalities fell to 38 in 2023, the rebound to 62 fatalities in 2024 demonstrates that the problem remains entrenched and that year-to-year fluctuations do not equate to long-term progress. Fatal crashes continue to be a deadly and recurring issue for roadway users, highlighting the need for sustained and comprehensive safety strategies.

Serious Injuries

Suspected serious injuries remain a critical concern. Between 2020 and 2022, serious injuries rose from 137 to 164 incidents, a 20% increase in just three years. Although numbers dipped slightly to 149 in 2023 and 140 in 2024, the overall trend confirms that hundreds of individuals each year are sustaining life-altering injuries.

These injuries often result in long-term disabilities, loss of income, and ongoing healthcare needs, creating ripple effects for families, communities, and local healthcare systems. The prevalence of serious injuries signals gaps in roadway safety infrastructure, such as inadequate pedestrian crossings, outdated rural roadways, and insufficient protective barriers. It also points to the need for stronger enforcement of speed limits, impaired driving laws, and seat belt usage, as well as expanded public education campaigns on roadway safety.

Broader Implications

The consequences of these fatalities and serious injuries extend well beyond the victims themselves. Crashes impose financial costs on communities, including higher insurance premiums, lost productivity, and the expense of emergency response and healthcare. They also create a climate of fear and diminished trust in roadway safety.

Importantly, the data raise equity concerns. Many rural communities lack essential infrastructure, such as adequate lighting, signage, and safe pedestrian or cycling facilities. Without targeted investments, residents in these areas remain disproportionately exposed to the risks of serious crashes.

Common Severity Factors

Several factors contribute to the persistence of severe crashes across Southwest Missouri:

- **Rural Road Risks**: Narrow lanes, sharp curves, and a lack of guardrails or rumble strips increase hazards.
- **High-Risk Behaviors**: Speeding, impaired driving, and seat belt noncompliance remain prevalent, raising crash severity.
- **Infrastructure Challenges**: Aging roads often fail to meet modern design standards; widening lanes, improving signage, and adding barriers could reduce risk.
- **Emergency Response Delays**: In rural areas, longer response times increase the likelihood that crashes result in fatalities.

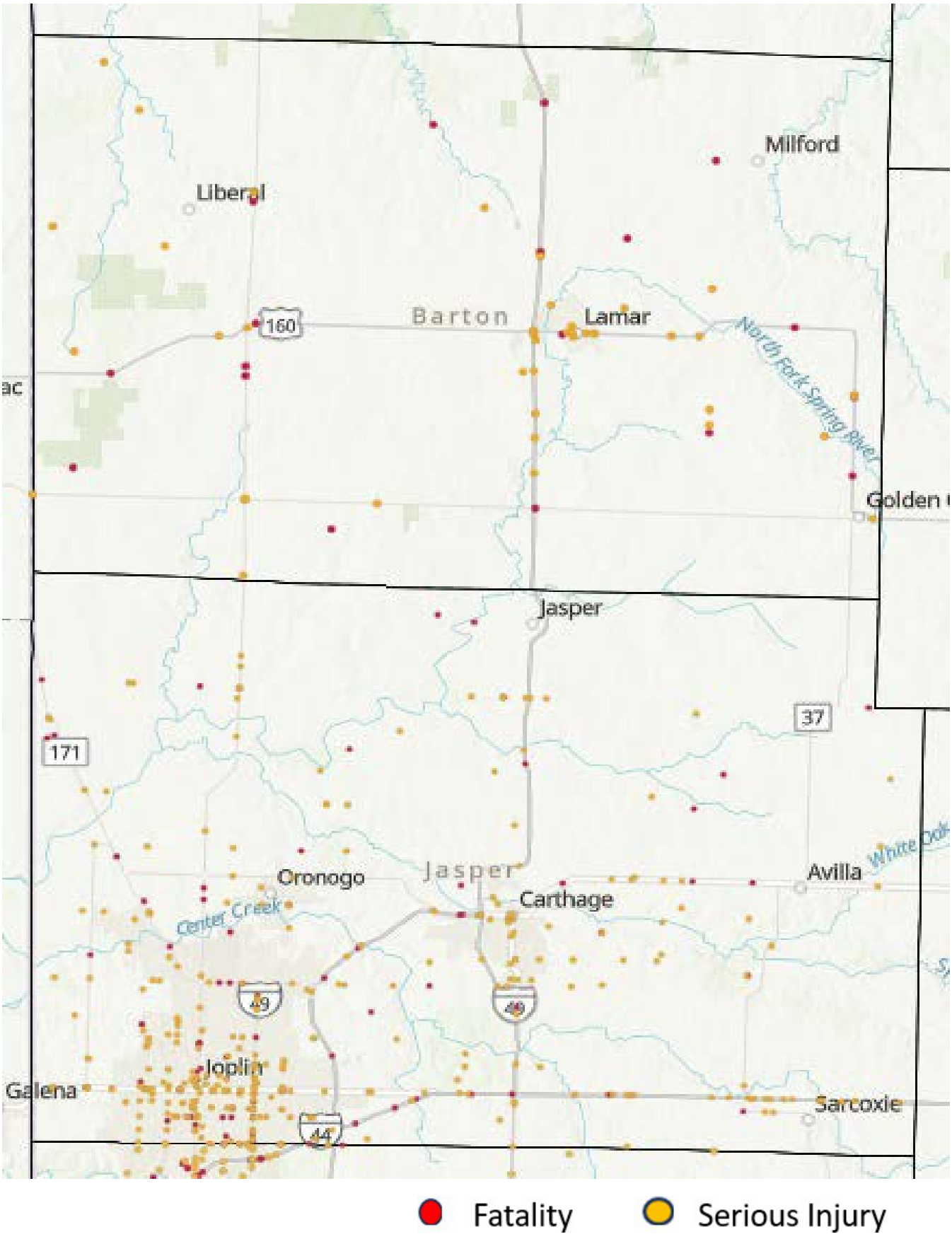
Call to Action

The 2020–2024 data underscores the urgent need for targeted interventions in Jasper, Newton, Barton, and McDonald counties. Key strategies include:

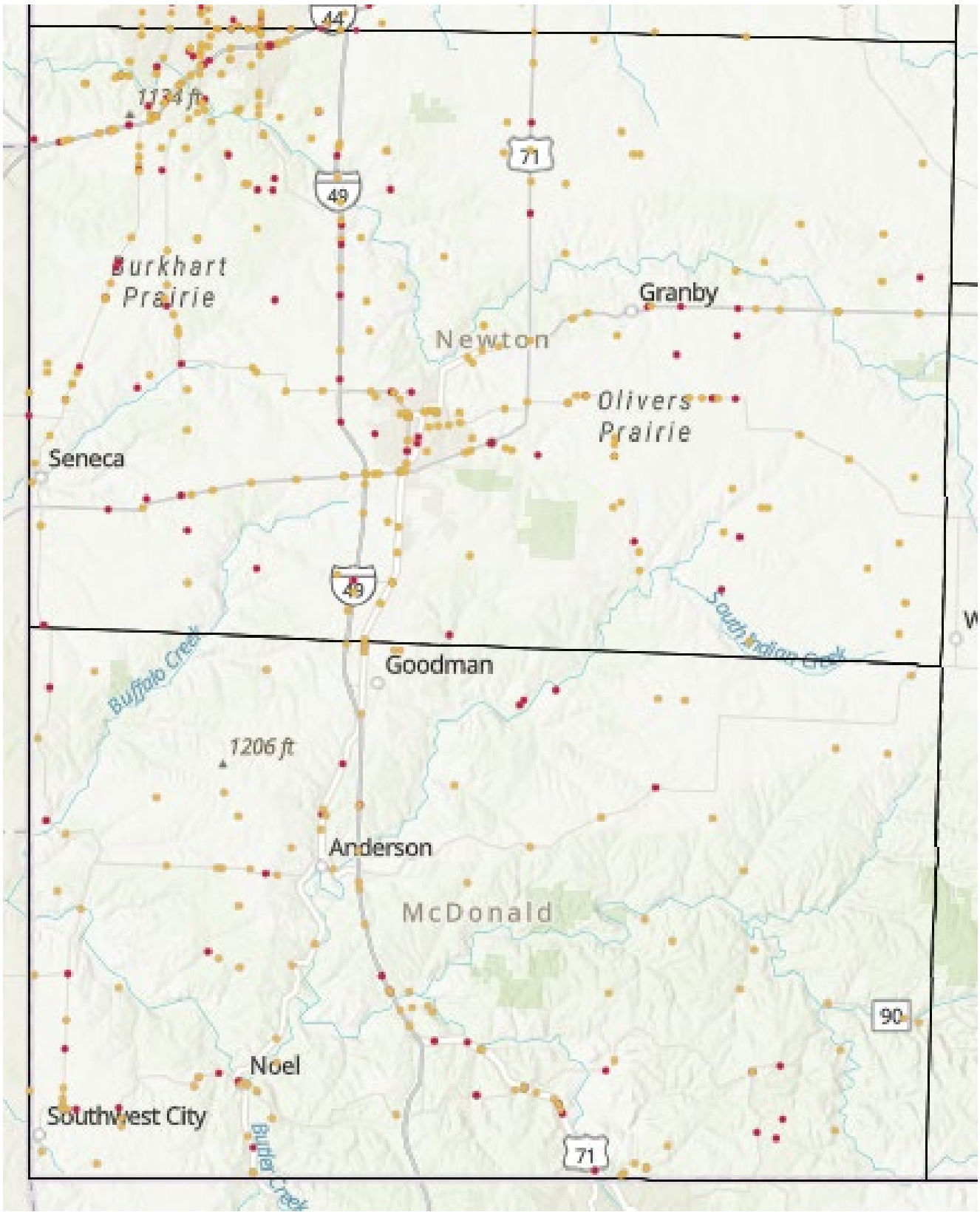
- **Infrastructure improvements (safer road design, lighting, and protective barriers)**
- **Enhanced law enforcement (speeding, impaired driving, and seat belt use)**
- **Public safety campaigns tailored to local behaviors and risks**
- **Improved emergency response systems, especially in rural areas**

By combining data-driven strategies with community engagement, Southwest Missouri can begin reversing current trends, reduce fatalities and serious injuries, and create safer roads for all.

Serious Injuries and Fatalities (2020-2024)



Serious Injuries and Fatalities (2020-2024)



A Decade of Rising Transportation Fatalities: A Comprehensive Analysis of State and National Trends

An extensive review of transportation safety data was conducted not only for the most recent five-year period in Southwest Missouri but also extending back to 2010. This broader historical lens is essential for understanding the true scope of transportation-related fatalities and their growth over the past decade. The data clearly demonstrate that the rise in roadway deaths is not a sudden or localized occurrence, but a prolonged and escalating national issue.

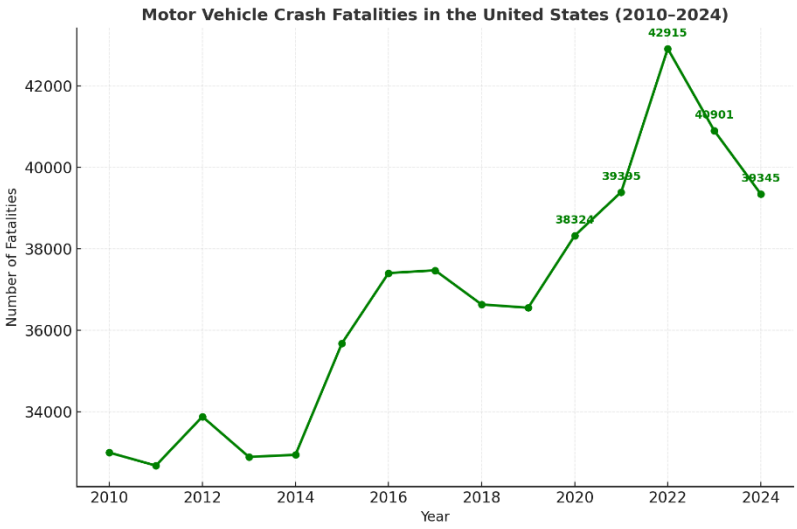
National Perspective:
Over the past decade, the United States has experienced a steady and troubling increase in transportation-related fatalities across all modes—passenger vehicles, pedestrians, cyclists, motorcyclists, and commercial vehicles. Each mode exhibits a similar upward trajectory, reflecting systemic safety challenges that extend far beyond individual states or regions. The persistence of this growth underscores that traffic safety is a nationwide public health crisis affecting communities of all sizes.

Missouri Perspective:
Missouri mirrors these national patterns. Fatalities have risen consistently in both urban and rural contexts, from congested metropolitan roadways to rural highways. The state's fatality trends track closely with the national data, reinforcing that the same widespread factors—such as distracted driving, higher travel speeds, impaired driving, and infrastructure limitations—are at play across Missouri. This parallel growth confirms that the issue is deeply rooted and systemic, rather than the result of isolated local conditions.

Shared Impacts:
The growth in fatalities is evident across diverse roadway environments, modes of travel, and user groups. Motorists, pedestrians, cyclists, and motorcyclists alike are facing higher risks, pointing to a broad-based safety challenge rather than a problem confined to a single category of road user. This trend also highlights equity concerns, as both large cities and small rural communities are experiencing the consequences of rising traffic deaths.

Implications:
The consistency of these increases over more than a decade highlights the urgency of action. Whether driven by changes in traffic patterns, the rise of distracted driving, or insufficient safety infrastructure, the upward trend paints a clear picture: transportation fatalities have been rising steadily since 2010, at both state and national levels.

In conclusion, the extended timeframe of this analysis provides a stark reminder that roadway fatalities are part of a long-term, escalating pattern. The alignment of Missouri's data with national trends underscores that transportation safety challenges are systemic, widespread, and unresolved. Addressing this crisis will require sustained commitment, data-driven strategies, and coordinated action across all levels of government and the public to reverse the momentum and save lives.



National Vehicle Fatalities

The chart depicting motor vehicle crash fatalities in the United States from 2010 to 2024, based on National Highway Traffic Safety Administration (NHTSA) data, reveals critical trends in roadway safety. Over this period, the number of fatalities shows phases of relative stability as well as periods of alarming growth.

From 2010 to 2014, fatalities remained relatively stable, ranging between 32,000 and 34,000 deaths annually. Between 2015 and 2017, fatalities began to climb sharply, peaking at 37,473 in 2017. This increase is linked to factors such as greater vehicle miles traveled, distracted driving, and other high-risk behaviors.

In 2018 and 2019, fatalities declined slightly, stabilizing around 36,000 deaths per year. However, this trend reversed dramatically in 2020 with the onset of the COVID-19 pandemic. Despite fewer cars on the road, fatalities rose sharply due to higher travel speeds, impaired driving, and lower seat belt use.

This troubling upward trend peaked in 2022, with 42,915 deaths, the highest level in more than a decade. In 2023, fatalities declined to 40,901, reflecting modest improvement, and early estimates for 2024 indicate 39,345 deaths, the lowest level since before the pandemic.

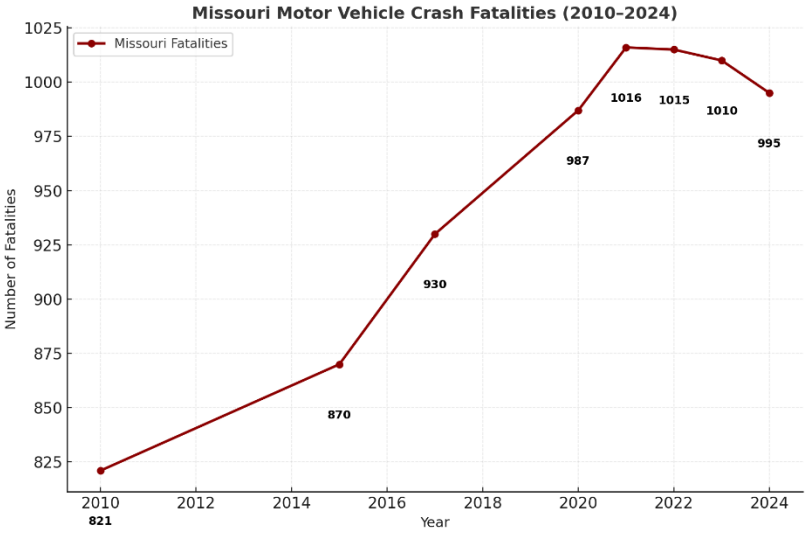
These recent declines are encouraging but do not erase the broader reality: over the last decade, national motor vehicle fatalities have climbed substantially, underscoring systemic and persistent safety challenges that continue to affect every roadway user group.

Missouri Vehicle Fatalities

Missouri has closely mirrored national trends in motor vehicle crash fatalities, with a clear and troubling rise, particularly in recent years. In 2010, Missouri recorded approximately 821 traffic fatalities. Following several years of relative stability and modest fluctuations, the state began to see a gradual increase. By 2015, fatalities had climbed to 870, and by 2017, the total reached 930, paralleling national patterns of increased travel and risky driving behaviors such as speeding and distracted driving.

The pandemic years accelerated this escalation. In 2020, Missouri recorded 987 fatalities, despite lower overall traffic volumes, as drivers engaged in higher-risk behaviors including impaired driving and lower seat belt use. The upward trajectory continued in 2021, with 1,016 fatalities, marking one of the state's highest fatality counts in recent history.

Preliminary data for 2022 and beyond indicate that fatalities have remained elevated, underscoring the persistent nature of the challenge. Missouri's experience reflects the same forces shaping national outcomes: increased speeding, impaired driving, reduced law

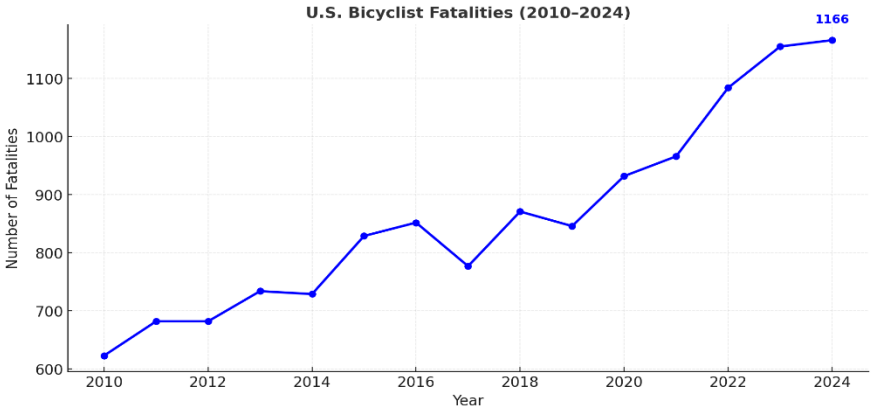


enforcement visibility, and systemic roadway safety gaps.

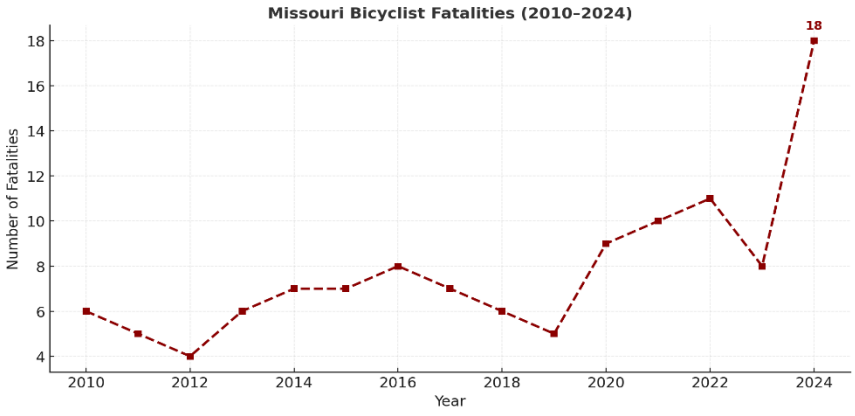
Taken together, the past decade demonstrates that Missouri's roadway safety crisis is part of a broader national pattern. Both state and national data confirm that motor vehicle fatalities are not only persistent but increasing, demanding sustained, coordinated interventions in enforcement, infrastructure, public education, and emergency response.

National Bicycle Fatalities

According to the Insurance Institute for Highway Safety (IIHS) and the Highway Loss Data Institute (HLDI), bicyclist fatalities in crashes with motor vehicles have reached alarming levels, underscoring the urgent need for enhanced road safety measures. In 2022, 1,084 bicyclists were killed, the highest number recorded at that time. This figure represented a 75% increase since 2010, when bicyclist deaths were at their lowest in recent history.



The upward trend continued into recent years. In 2023, 1,155 bicyclist deaths were reported, followed by a further rise in 2024 with 1,166 fatalities, marking a new all-time high. These numbers illustrate the sustained and escalating risk faced by cyclists nationwide.



The data highlight important demographic shifts. In 2022, 89% of bicyclist deaths involved individuals aged 20 and older, a group that has experienced nearly a fivefold increase in fatalities since 1975. In contrast, fatalities among bicyclists under 20 have declined by 88% since 1975, reflecting the effectiveness of safety measures targeting youth, such as helmet laws, Safe Routes to School initiatives, and education campaigns.

Gender disparities remain significant, with male bicyclists accounting for the vast majority of fatalities across all years. Bicyclists consistently represent about 2% of all motor vehicle crash deaths annually, underscoring the need for targeted safety interventions to protect this vulnerable road user group.

Missouri Bicycle Fatalities

From 2010 to 2014, Missouri recorded relatively low and stable numbers of bicyclist deaths, fluctuating between 4 and 7 fatalities annually. This period of stability suggested that safety efforts, such as education campaigns and infrastructure improvements, were helping to limit fatalities.

Between 2015 and 2017, fatalities rose slightly to 7–8 deaths per year, coinciding with growth in urban cycling and recreational riding. By 2018 and 2019, fatalities declined modestly to 5–6 per year, indicating temporary improvements tied to awareness and safety campaigns.

During the COVID-19 pandemic years (2020–2022), Missouri saw a noticeable increase, with 9–11 bicycle fatalities annually, reflecting both rising cycling activity and riskier motorist behaviors on less congested roads.

The most concerning increases have occurred recently. In 2023, Missouri recorded 15 bicyclist deaths, according to the Missouri Coalition for Roadway Safety, representing a sharp rise from prior years. This was followed in 2024 by 18 bicyclist deaths, more than double the annual totals typical of the previous decade.

Key Insights

Missouri's trajectory mirrors the national rise in bicycle fatalities, with recent years marking the highest levels in decades. The surge from single digits in the 2010s to 15 in 2023 and 18 in 2024 highlights the vulnerability of cyclists amid changing traffic dynamics.

To address these risks, Missouri will require:

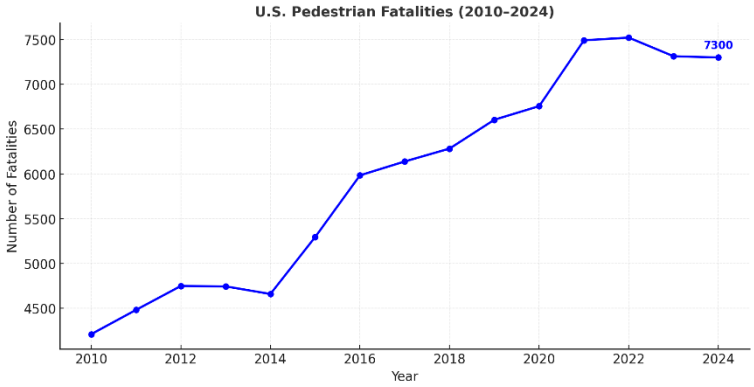
- Expanded protected cycling infrastructure and safer intersection design.
- Targeted enforcement of speed, impaired driving, and right-of-way laws.
- Public education campaigns focused on both drivers and cyclists.
- Adaptive strategies that respond to shifts in travel behavior, such as increased commuter and recreational cycling.

National Pedestrian Fatalities

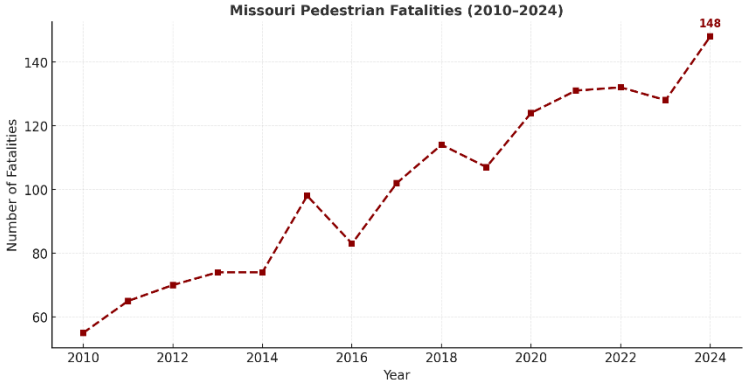
Pedestrian fatalities remain one of the most urgent roadway safety issues in the United States. According to the National Highway Traffic Safety Administration (NHTSA), 7,522 pedestrians were killed in motor vehicle crashes in 2022, representing about 18% of all traffic deaths. This marked an 83% increase since 2009, when pedestrian deaths were at their lowest level.

In 2023, pedestrian fatalities declined slightly to 7,314, the first meaningful decrease in several years. While this is a positive shift, it still reflects one of the highest annual totals in decades. Early NHTSA estimates for 2024 suggest another modest decline, though complete figures are not yet available. Even with these recent decreases, pedestrian deaths remain at historically elevated levels compared to the past two decades.

Adults aged 20 and older continue to account for the majority of pedestrian deaths, underscoring the greater risks faced by adults walking along or across roadways. Contributing factors include urbanization, distracted driving, and the growing prevalence of larger vehicles such as SUVs and pickups, which create more severe impacts when collisions occur.



Missouri Pedestrian Fatalities



Missouri has mirrored the national trend, with a troubling and persistent rise in pedestrian deaths since 2010. According to NHTSA and MoDOT data, the state recorded 55 pedestrian fatalities in 2010, increasing to 70 by 2012 and 74 by 2014. A sharp spike occurred in 2015, when fatalities rose to 98, ushering in a new period of elevated risk.

Fatalities remained high in the following years, reaching 102 in 2017, 114 in 2018, and 107 in 2019. The most dramatic escalation coincided with the pandemic years: 124 deaths in 2020, 131 in 2021, and 132 in 2022, the highest totals in more than a decade.

The Missouri Coalition for Roadway Safety reported 128 pedestrian deaths in 2023, followed by a record-setting 148 fatalities in 2024. This represents nearly a threefold increase from 2010, highlighting the severity of the crisis and the urgent need for stronger protections for pedestrians statewide.

Key Insights

Both nationally and in Missouri, pedestrian fatalities have risen sharply since 2010, with recent totals at historically high levels despite modest declines in 2023 and 2024 nationally. Missouri, however, has not seen such relief and instead set a new statewide record in 2024. These outcomes highlight the role of:

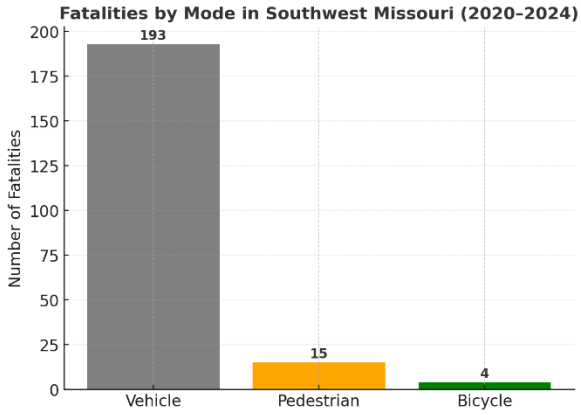
- Distracted driving and speeding as persistent causes.
- The prevalence of larger vehicles like SUVs, which increase pedestrian fatality risk.

- Infrastructure gaps in many communities, especially rural and suburban areas lacking sidewalks, safe crossings, or adequate lighting.
- Emergency response delays in rural areas, which increase the likelihood of fatal outcomes.

Fatalities by Mode in SW Missouri (2020-2024)

The problem of fatal crashes in Southwest Missouri is multifaceted, involving different modes of transportation and a wide variety of contributing factors. Each mode—vehicles, pedestrians, and bicycles—presents unique challenges, yet together they paint a sobering picture of roadway safety in the region. From 2020 through 2024, the four counties of Jasper, Newton, Barton, and McDonald recorded 253 total fatalities. Of these, 193 were vehicle-related crashes, 15 involved pedestrians, and 4 involved bicyclists.

While the vast majority of crashes involved motor vehicles, the smaller share of pedestrian and bicycle fatalities is no less significant. In fact, when compared to exposure levels, the risks faced by pedestrians and cyclists are disproportionately high. This section examines each mode in detail, exploring the contributing factors, environments, and implications for future safety planning.



Vehicle-Related Fatal Crashes

Vehicle-related crashes overwhelmingly account for the majority of fatalities in Southwest Missouri—193 deaths, or 90.1% of all fatalities between 2020 and 2024. These crashes include collisions between passenger vehicles, large trucks, motorcycles, and single-vehicle incidents where a motorist struck a fixed object, animal, or roadway hazard.

Several consistent factors drive these outcomes:

- Speeding and high-speed environments: Rural highways and major arterials allow for higher travel speeds, and crashes at these speeds are far more likely to result in fatalities. In rural areas especially, vehicles traveling at 55–65 mph leave drivers and passengers with little chance of survival in the event of a collision.

- Impairment: Driving under the influence of alcohol or drugs continues to be a leading cause of fatal vehicle crashes. Impairment reduces reaction time, clouds judgment, and increases the likelihood of lane departure or high-speed impact.

- Distracted driving: Cell phone use, in-vehicle technology, and other distractions are an

increasing factor in serious crashes. Even momentary lapses in attention can have deadly consequences on fast-moving rural roads or at busy intersections.

- Failure to obey traffic laws: Red-light running, failure to yield, and disregard for stop signs frequently contribute to intersection-related crashes, particularly in urban areas like Joplin.

- The combination of rural and urban settings in these counties complicates traffic safety management. In urban centers, congestion, intersections, and the mix of multiple road users elevate risks. In rural areas, high speeds, curves, and limited enforcement presence combine with longer emergency response times, making fatal outcomes more likely.

- Animal-related crashes also represent a notable share of fatalities. Collisions with deer and livestock are common in the region, especially during nighttime and seasonal migration periods. While these crashes fall into the vehicle category, they present unique challenges that call for wildlife crossing infrastructure, improved driver awareness, and roadway design considerations. Similarly, crashes with fixed objects such as trees, poles, or ditches often result in fatal outcomes, reflecting a mix of roadway design, driver error, and hazardous conditions.

Taken together, vehicle-related fatalities underscore the need for comprehensive strategies that combine engineering improvements (such as median barriers and rumble strips), behavioral countermeasures (education campaigns, enforcement of impaired and distracted driving laws), and post-crash interventions (faster emergency response in rural areas).

Pedestrian Fatal Crashes

Although pedestrians accounted for only 15 fatalities (7.8%) between 2020 and 2024, this figure is significant given how few trips in Southwest Missouri are made on foot compared to vehicle travel. Pedestrian deaths are especially troubling because they highlight gaps in infrastructure and exposure to risks that motor vehicle occupants do not face.

Common conditions and contributing factors include:

- Inadequate infrastructure: Many pedestrian crashes occur in areas lacking sidewalks, crosswalks, or pedestrian signals. Without these basic facilities, pedestrians are forced to walk along roadway shoulders or cross multi-lane highways, putting them in direct conflict with high-speed traffic.

- High-risk locations: Pedestrian fatalities are concentrated in urban and suburban areas with higher pedestrian activity but insufficient safety facilities. Busy corridors in Joplin and other population centers often lack continuous sidewalks or safe mid-block crossings.

- **Low-light conditions: A large proportion of pedestrian fatalities occur at dawn, dusk, or nighttime, when visibility is reduced. Limited or malfunctioning street lighting, pedestrians wearing dark clothing, and lack of reflective materials further reduce driver detection time.**

- **Rural vulnerabilities: In smaller towns and rural communities, pedestrians may face even greater risks due to higher vehicle speeds, limited lighting, and the absence of designated pedestrian facilities.**

Pedestrian crashes have ripple effects beyond the individual victims. They often concentrate in specific corridors or intersections, revealing systemic problems in roadway design. They also reinforce equity concerns, as residents without reliable vehicle access are disproportionately exposed to these risks.

Addressing pedestrian safety requires a multi-pronged approach:

- **Expanding sidewalks, crosswalks, and pedestrian-controlled signals.**
- **Improving lighting and visibility along high-risk corridors.**
- **Launching education campaigns targeting both drivers and pedestrians about safe crossing behaviors.**
- **Enhancing enforcement of speeding and failure-to-yield laws in urban centers.**

Bicycle Fatal Crashes

Between 2020 and 2024, Southwest Missouri recorded 4 bicyclist fatalities (2.1% of the total). While the absolute number is smaller than pedestrian or vehicle fatalities, the severity of these crashes is high and highlights the vulnerability of cyclists in the regional transportation system.

Key contributing factors include:

- **Lack of dedicated infrastructure: Few roadways in Southwest Missouri include bike lanes, shoulders, or shared-use markings. Cyclists are often forced into narrow travel lanes with motor vehicles, creating unsafe conditions.**

- **Driver behavior: Inattentive driving, aggressive maneuvers, and failure to yield at intersections play a role in many bicycle crashes. Even minor errors by drivers can have fatal consequences for cyclists.**

- **Rural challenges: Cyclists riding in rural areas face unique hazards, including high-speed roads, limited shoulders, and long distances between intersections. These conditions create limited opportunities for cyclists to cross safely or avoid fast-moving vehicles.**

- **Urban conflicts: In Joplin and other towns, cyclists often share congested roadways**

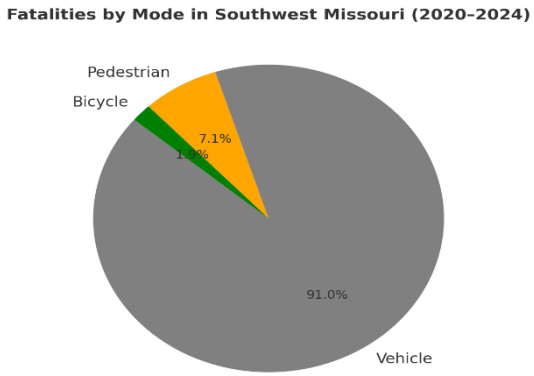
with vehicles. The absence of bike-friendly design, such as protected lanes or clear sharrows, contributes to confusion and unsafe interactions between motorists and cyclists.

Like pedestrian fatalities, each bicycle fatality resonates strongly with the community, both because of the loss of life and because it underscores systemic gaps in roadway design and education. The lack of safe cycling options discourages active transportation, undermining public health and sustainability goals while increasing risks for those who do choose to bike.

Addressing bicyclist safety will require:

- Expanding safe cycling infrastructure, including protected lanes and wide shoulders.
- Increasing signage and markings to clarify shared use of roadways.
- Educating drivers on how to safely share the road with cyclists.
- Promoting helmet use and visibility among cyclists.

Although vehicle crashes dominate, the vulnerability of pedestrians and cyclists makes even small numbers of fatalities significant. Their share of total crashes is small, but their exposure levels are far lower, meaning they face disproportionately higher risks per trip compared to motor vehicle users.



Location-Based Analysis

While this section highlights how fatal crashes differ by mode, it is equally important to understand where these crashes occur. Patterns in crash locations often reveal risks tied to roadway design, community layout, and land use. The following chapter will dive deeper into the geographic distribution of crashes across jurisdictions, identifying the communities, corridors, and intersections most impacted by fatal and serious injury crashes.

The goal is not only to reduce the number of fatal crashes but also to create a safer, more inclusive transportation environment for all road users. By addressing the unique risks faced by pedestrians and cyclists through targeted infrastructure improvements, public education, and enhanced enforcement, Southwest Missouri can foster a community where residents and visitors feel secure in their daily travels, promoting healthier and more sustainable transportation choices.

Crash Profiles by Jurisdiction

Vision Zero:
No traffic deaths
or serious injuries

Crash Profiles by Jurisdiction (2020–2024)

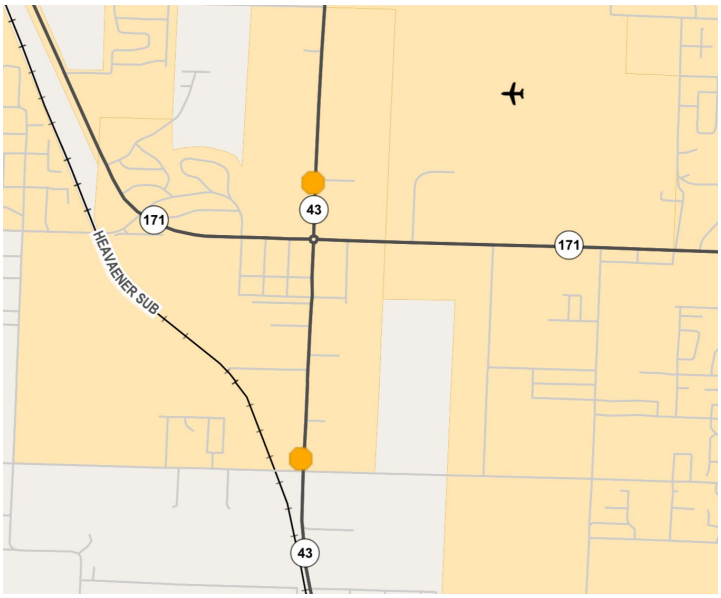
Understanding how and why crashes occur at the local level is essential to achieving Vision Zero in Southwest Missouri. While regional statistics, the High Injury Network, and equity overlays highlight broad trends, they do not capture the unique conditions present in each city, town, and village. This chapter provides detailed **jurisdiction-specific crash profiles** for all 35 incorporated municipalities within Barton, Jasper, Newton, and McDonald counties where serious injuries or fatalities occurred, based on crash data from **2020–2024**.

Each profile includes:

- **Crash Snapshot:** A five-year summary of total, fatal, and suspected serious injury crashes.
- **Locations and Patterns:** Key corridors, intersections, and contributing crash factors identified through MoDOT STARS data and local field observations.
- **Common Conditions and Issues:** Notable roadway, environmental, and behavioral patterns that elevate crash risk.
- **Safety Recommendations:** Targeted actions in engineering, enforcement, education, and emergency response that align with Vision Zero strategies.

By examining crashes through a **jurisdictional lens**, this chapter helps community leaders, planners, and residents see how broader regional issues manifest locally. The profiles serve as both a diagnostic tool and a roadmap—providing clear, data-driven steps to reduce serious injuries and fatalities in every community, while reinforcing the region's collective commitment to safer streets.

Airport Drive, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 0
- Serious Injury Crashes: 2
- Primary Corridors: MO 43

Crash Summaries

Crash 1: MO 43 at CRD Fountain Road

- Date/Time: June 1, 2021 – 7:30 PM
- Crash Type: Single-vehicle roadway departure.
- Conditions: Daylight, clear weather, dry road surface.
- Details: Vehicle ran off the road, impacting a culvert and driveway.
- Outcome: Driver transported to Freeman West Hospital.

Crash 2: MO 43 at CST Northeast Street

- Date/Time: May 27, 2021 – 4:00 PM
- Crash Type: Two-vehicle crash; hydroplaning led to a head-on collision, both vehicles left the roadway.
- Conditions: Dark with streetlights on, rainy weather, wet road surface.
- Details: Hydroplaning caused loss of control; both vehicles departed roadway after collision.
- Outcome: All occupants transported to Mercy Hospital (Joplin).

Patterns & Risk Factors

- Both serious crashes occurred on MO 43, a high-speed corridor with multiple residential and commercial access points.
- The first crash occurred in daylight, clear conditions, while the second happened in rainy, dark conditions, highlighting roadway surface and visibility challenges.
- Key risk factors: driver control loss, wet-weather hydroplaning, and roadside fixed-object hazards.
- Residents often cite speeding, lack of roadway lighting, and unsafe driveways/turning movements as concerns.

Recommended Safety Actions

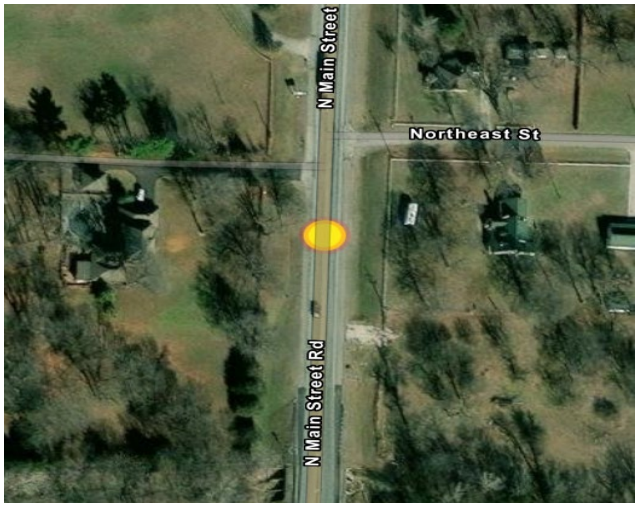
Engineering Countermeasures

1. Install/upgrade roadway lighting, especially near CST Northeast Street.
2. Refresh pavement markings to improve nighttime visibility and lane discipline.
3. Apply high-friction surface treatment (HFST) at wet-weather crash locations.

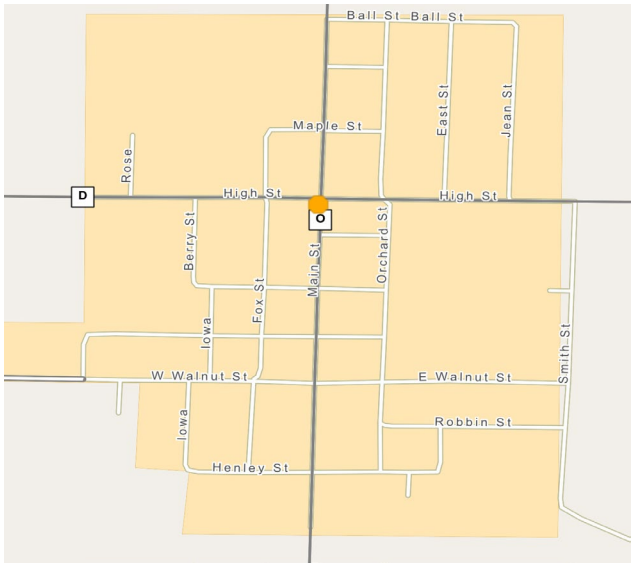
4. **Add centerline and shoulder rumble strips to mitigate driver inattention.**
5. **Improve roadside clear zones by addressing culverts/driveway hazards.**
6. **Coordinate with MoDOT to manage access points along MO 43.**

Education & Enforcement

- **Community awareness campaign on wet-weather driving and rural roadway departure risks.**
- **Targeted speed enforcement along MO 43 to address community speeding concerns.**



Alba, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 0
- Serious Injury Crashes: 1
- Primary Corridors: Route O, Route D

Crash Summaries
Crash 1: Route O at Route D

- Date/Time: September 14, 2021 – 4:35 PM
- Crash Type: Single-vehicle crash during U-turn maneuver.
- Conditions: Daylight, clear weather, dry road surface.
- Details: Vehicle lost control during U-turn at the Route O/Route D junction.
- Outcome: Driver sustained serious injuries and was transported for medical treatment.

Patterns & Risk Factors

- Only one serious injury crash was recorded during the reporting period.
- Risk factors include U-turn maneuvers at rural intersections with limited design features.
- Environmental conditions were favorable, suggesting roadway geometry and driver error as contributing factors.

Recommended Safety Actions

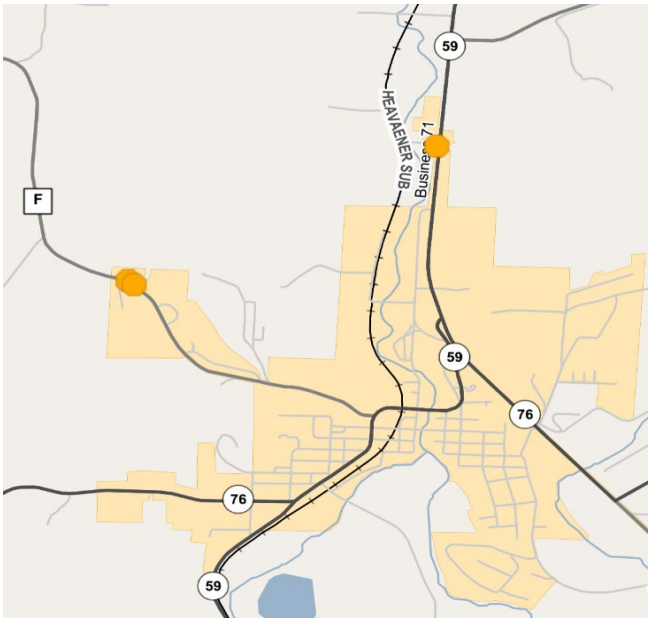
Engineering Countermeasures

1. Improve intersection signage and pavement markings at Route O/Route D.
2. Consider restricting or redesigning U-turn movements where geometry creates safety issues.
3. Review shoulder and clear zone conditions to mitigate run-off-road risk.

Education & Enforcement

- Driver awareness campaign on safe turning and U-turn maneuvers.
- Enforcement focused on unsafe or illegal turning movements at rural intersections.

Anderson, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 0
- Serious Injury Crashes: 3
- Primary Corridors: RT F E, MO 59

Crash Summaries

Crash 1: RT F E at [nearby location not specified]

- Date/Time: September 19, 2022 – 8:24 PM
- Crash Type: U - Turn.
- Conditions: Dark, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 2: MO 59 at [nearby location not specified]

- Date/Time: March 19, 2023 – 2:08 PM
- Crash Type: Head On.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 3: RT F E at [nearby location not specified]

- Date/Time: February 28, 2024 – 4:11 PM
- Crash Type: U - Turn.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Patterns & Risk Factors

- Crashes concentrated on primary corridors and rural connectors.
- Predominantly favorable weather conditions suggest geometry/behavior factors.

Recommended Safety Actions

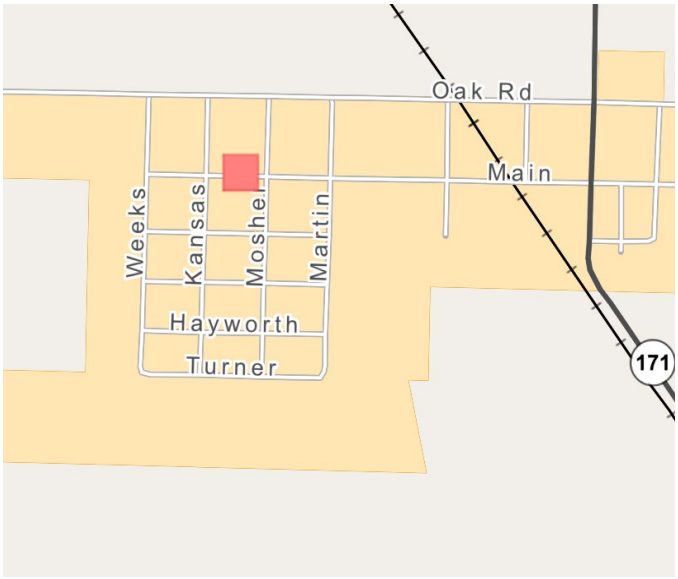
Engineering Countermeasures

1. Refresh pavement markings and add enhanced delineation at key approaches.
2. Evaluate intersection control and turn movements; consider improved signage and stop/turn controls as warranted.
3. Improve roadside clear zones and address fixed-object hazards near intersections and driveways.
4. Coordinate with MoDOT on access management and corridor speeds where applicable.

Education & Enforcement

- **Targeted enforcement on speeding and unsafe turning movements.**
- **Community outreach on rural intersection safety and loss-of-control prevention.**

Asbury, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 1
- Serious Injury Crashes: 0
- Primary Corridors: CST Main (E)

Crash Summaries
Crash 1: CST Main E at CST Mosher

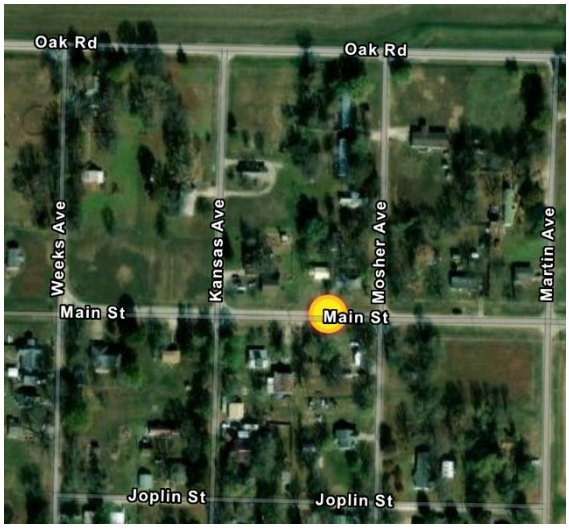
- Date/Time: May 20, 2023 – 8:25 PM
- Crash Type: Single-vehicle roadway departure (loss of control).
- Conditions: Daylight, Clear, Dry road surface.
- Details: Vehicle left the roadway (off-road) and struck fixed objects (tree/utility pole).
- Outcome: Fatal crash.

Patterns & Risk Factors

- Single fatal departure crash involving fixed objects along a city street.
- Favorable weather and dry pavement suggest geometry/visibility/driver factors rather than adverse weather.

Recommended Safety Actions

Engineering Countermeasures

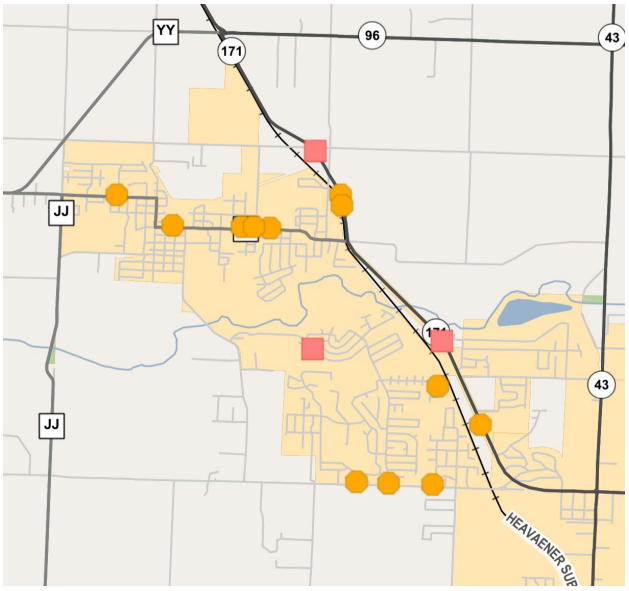


1. Improve delineation and advance warning on CST Main near CST Mosher (chevrons, reflectors, edge lines).
2. Address roadside clear zone hazards (trim vegetation, relocate/protect utility poles, evaluate guardrail/curbing where warranted).
3. Review speed setting and traffic control; consider traffic calming or targeted enforcement zones if speeding is present.
4. Ensure pavement markings and signs meet retroreflectivity standards for low-light conditions.

Education & Enforcement

- Targeted enforcement on speed and lane discipline along CST Main.
- Community messaging on departure-crash risks and nighttime visibility.

Carl Junction, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 3
- Serious Injury Crashes: 12
- Primary Corridors: MO 171, Route Z, CRD Fir Road

Crash Summaries

Crash 1: MO 171 S at CST Sunset Dr

- Date/Time: May 17, 2021 – 12:44 PM
- Crash Type: Head-on collision.
- Conditions: Daylight, Cloudy, Wet road surface.
- Outcome: Fatal crash.

Crash 2: MO 171 S at CRD Ivy

- Date/Time: March 19, 2023 – 12:05 PM
- Crash Type: Head-on collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Fatal crash.

Crash 3: CST Fairway Dr E at CST Fairway Cir

- Date/Time: October 19, 2024 – 6:00 PM
- Crash Type: Other (single-vehicle).
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Fatal crash.

Crash 4: RT Z E at CST Elliot Dr

- Date/Time: January 29, 2022 – 9:45 AM
- Crash Type: Pedalcycle crash.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider transported for medical treatment.

Crash 5: CST Briarbrook Ln E at CST Bunker Ln (EJ)

- Date/Time: May 13, 2022 – 10:01 PM
- Crash Type: Loss of control.
-
- Conditions: Dark, no street lighting, Clear, Dry road surface.
- Outcome: Occupants transported for medical treatment.

Crash 6: MO 171 S at Bridge K0905

- **Date/Time: June 15, 2021 – 4:35 PM**
- **Crash Type: Left-turn crash.**
- **Conditions: Daylight, Clear, Dry road surface.**
- **Outcome: Occupants transported for medical treatment.**

Crash 7: CRD Fir Rd E at CST Briarview Dr

- **Date/Time: May 23, 2021 – 2:30 PM**
- **Crash Type: Head-on collision.**
- **Conditions: Daylight, Clear, Dry road surface.**
- **Outcome: Occupants transported for medical treatment.**

Crash 8: MO 171 S at Bridge H0013

- **Date/Time: August 14, 2021 – 12:55 AM**
- **Crash Type: Loss of control.**
- **Conditions: Dark, no street lighting, Clear, Dry road surface.**
- **Outcome: Occupants transported for medical treatment.**

Crash 9: RT Z E at CST Ashmore Dr

- **Date/Time: December 1, 2020 – 6:16 PM**
- **Crash Type: Pedalcycle crash.**
- **Conditions: Dark, streetlights on, Cloudy, Dry road surface.**
- **Outcome: Rider transported for medical treatment.**

Crash 10: MO 171 S at Bridge H0013

- **Date/Time: May 30, 2021 – 8:41 AM**
- **Crash Type: Sideswipe collision.**
- **Conditions: Daylight, Clear, Dry road surface.**
- **Outcome: Occupants transported for medical treatment.**

Additional Serious Injury Crashes (Summarized)

- **December 3, 2022** – Left-turn crash at CRD Fir Rd E / CST Briarbrook Dr, clear/dry conditions.
- **February 5, 2024** – Pedestrian struck at CST Main St S / RT Z, daylight conditions.
- **April 27, 2024** – Loss of control at RT Z E / CST Grimes St, daylight, cloudy, dry.
- **August 23, 2024** – Loss of control at RT Z E / CST Miller St, daylight, clear, dry.
- **September 21, 2024** – Left-turn angle crash at CRD Fir Rd E / CST Hickory Pl, dark, clear, dry.

Patterns & Risk Factors

- Three fatal crashes on **MO 171**, including two head-on collisions, highlight corridor dangers.

- **Route Z** and **Fir Road** show recurring serious crashes, including turning and run-off-road types.
- Vulnerable road user crashes: 2 pedalcycle and 1 pedestrian crash.
- Most crashes occurred in **clear, dry conditions**, suggesting driver behavior, access design, and roadway geometry as key issues.

Accident Hot Spots

- Location: MO 171 corridor through Carl Junction
- Crash Count: 3+ crashes (including 2 head-on fatalities)
- Common Crash Types: Head-on and turning conflicts
- Conditions: Daylight, mostly clear/dry
- Contributing Factors: High speeds, frequent access points, and turning maneuvers

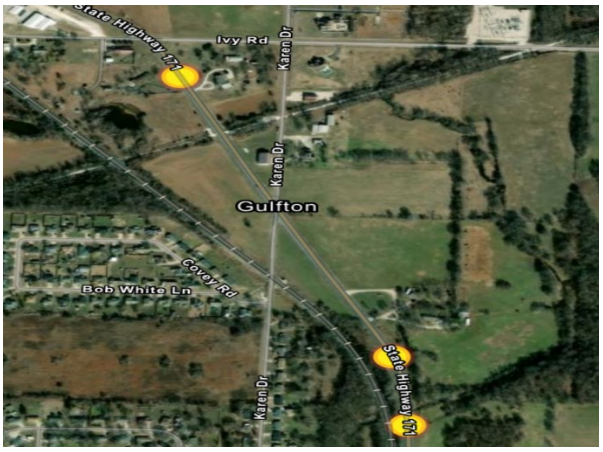
Recommended Safety Actions

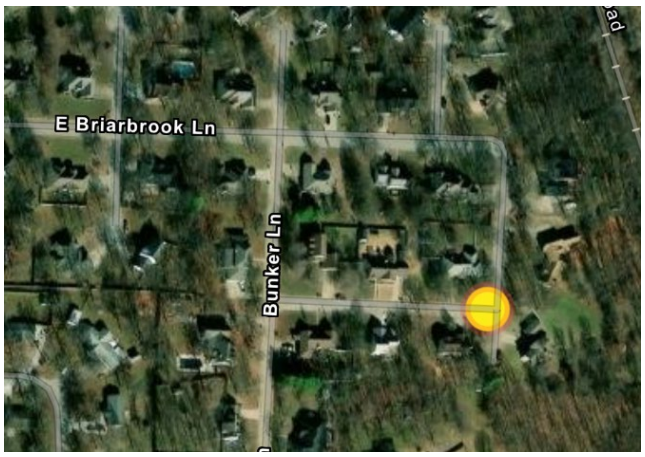
Engineering Countermeasures

1. Install median barriers or consider restricted crossing U-turns (RCUTs) on MO 171.
2. Upgrade lighting and signage at intersections on Route Z and Fir Road.
3. Improve turn lanes and signal timing/phasing at high-volume intersections.
4. Address roadside hazards and improve clear zones.
5. Conduct a corridor safety audit on MO 171 and Route Z.

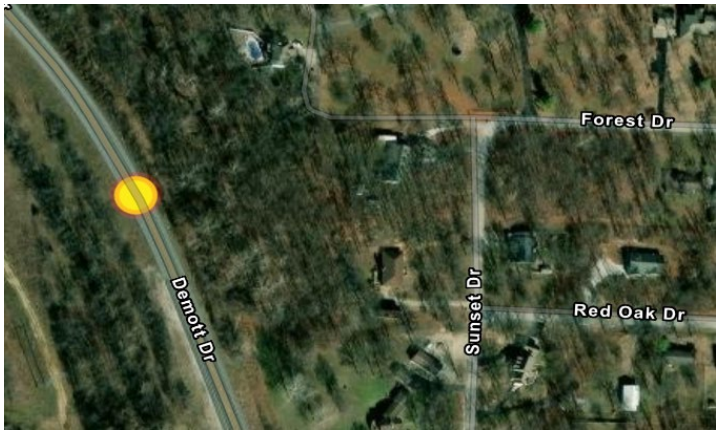
Education & Enforcement

- Enforcement focus on speeding and unsafe passing on MO 171.
- Community outreach on safe turning and access management.
- Pedestrian and bicycle safety campaigns on city streets.






Tee Ln
Briarbrook Dr
Turf Ln
Green Ln
Fairway Dr
Fairway Dr


Forest Dr
Demott Dr
Sunset Dr
Red Oak Dr


W Walnut St
Elliott Dr

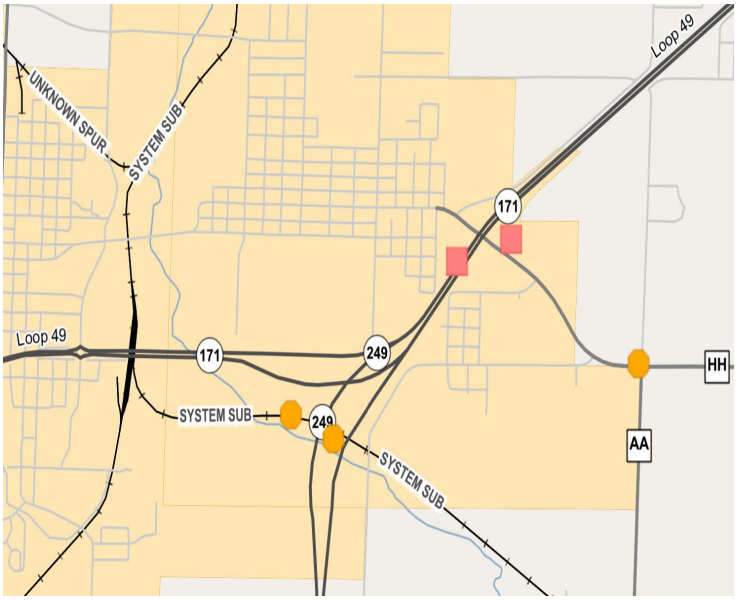

Cypress Ln
State Highway 171


Water St
N Main St
W Pennell St
Carl Junction
Pennell St


Club Park
Anita Plz
Birch St
Timber Ln
Carl Junction
Fire Protection
District Station 4
Fir Rd
Fortune Ln


Miller St
N Grimes St
Pennell St
Pennell St
Ashmore Dr

Carterville, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 2
- Serious Injury Crashes: 3
- Primary Corridors: MO 171, RP RTHH to MO171S, RP MO171S to MO249S

Crash Summaries

Crash 1: MO 171 at [nearby location not specified]

- Date/Time: May 17, 2021 – 4:00 PM
- Crash Type: Head-on collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Fatal crash.

Crash 2: MO 171 at [nearby location not specified]

- Date/Time: March 19, 2023 – 12:05 PM
- Crash Type: Head-on collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Fatal crash.

Crash 3: RP RTHH TO MO171S S at [nearby location not specified]

- Date/Time: October 24, 2020 – 10:30 PM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark, no street lighting, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 4: RP MO171S TO MO249S S at [nearby location not specified]

- Date/Time: June 2, 2021 – 2:35 PM
- Crash Type: Left turn, right-angle conflict.
- Conditions: Daylight, Clear, Dry road surface .
- Outcome: Rider/occupant transported for medical treatment.

Crash 5: MO 171 at [nearby location not specified]

- Date/Time: July 31, 2024 – 8:30 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Additional Serious/Fatal Crashes (Summarized)

- None beyond the five listed above in 2020–2024.

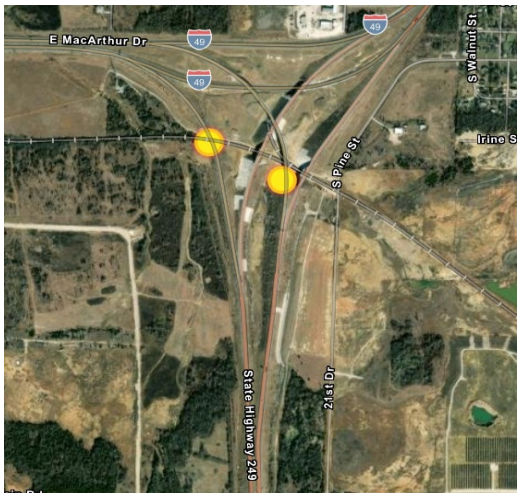
Patterns & Risk Factors

- Multiple severe crashes on **MO 171**, including **two fatalities** tied to high-speed, divided-highway operations.
- Mix of crash types includes head-on and single-vehicle loss-of-control, with most occurring under **clear, dry** conditions, indicating behavior/geometry factors more than weather.
- Turning movements on ramp connectors (RP segments) also present conflict potential.

Recommended Safety Actions

Engineering Countermeasures

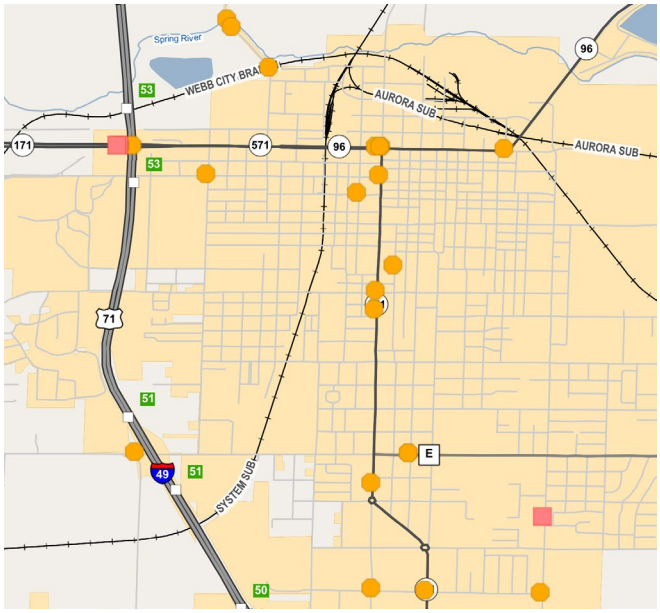
1. Evaluate median treatments or restricted crossing U-turns (RCUTs) along MO 171 to reduce head-on potential.
2. Upgrade signing/markings and delineation on MO 171 approaches and ramp connectors; ensure retroreflectivity.
3. Assess shoulder/clear zone conditions and protect or relocate fixed objects.
4. Review intersection/merge areas for left-turn and right-angle conflicts; adjust signal timing or add turn lanes where warranted.



Education & Enforcement

- Targeted enforcement for speeding and aggressive maneuvers along MO 171.
- Driver outreach on safe merging/turning at ramp connectors and high-speed approaches.

Carthage, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 3
- Serious Injury Crashes: 25
- Primary Corridors: MO 96, MO 571, CST Main Street

Crash Summaries (First 10 Expanded)
Crash 1: MO 96 E at RP 3499

- Date/Time: April 22, 2020 – 4:06 PM
- Crash Type: Rear-end collision.
- Conditions: Daylight, Rain, Wet road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 2: CST Main St S at RT E

- Date/Time: August 3, 2020 – 11:12 AM
- Crash Type: Right-angle crash.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 3: CST McGregor St S at CST Walnut St

- Date/Time: August 7, 2020 – 6:24 PM
- Crash Type: Pedestrian crash.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 4: MO 96 E at MO 571

- Date/Time: August 14, 2020 – 10:46 AM
- Crash Type: Left-turn right-angle crash.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 5: CST S River St S at CST George Phelps Blvd

- Date/Time: August 28, 2020 – 9:28 PM
- Crash Type: Avoidance crash.
- Conditions: Dark, no street lighting, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 6: MO 96 E at RP 105392

- **Date/Time: December 31, 2020 – 7:50 PM**
- **Crash Type: Loss of control.**
- **Conditions: Dark, streetlights on, Cloudy, Wet road surface.**
- **Outcome: Fatal crash.**

Crash 7: CST High St E at CST Francis St

- **Date/Time: March 16, 2021 – 7:03 PM**
- **Crash Type: Pedestrian crash.**
- **Conditions: Daylight, Clear, Dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Crash 8: MO 571 S at CST George Phelps Blvd

- **Date/Time: August 31, 2021 – 7:00 PM**
- **Crash Type: Right-angle crash.**
- **Conditions: Daylight, Clear, Dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Crash 9: CST W Fairview Ave E at RP 919572

- **Date/Time: November 5, 2021 – 4:30 PM**
- **Crash Type: Left-turn right-angle crash.**
- **Conditions: Daylight, Clear, Dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Crash 10: CST Maple St S at CST 11th St

- **Date/Time: November 12, 2021 – 7:32 PM**
- **Crash Type: Pedestrian crash.**
- **Conditions: Dark, no street lighting, Clear, Dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Additional Serious/Fatal Crashes (Summarized)

- **Crashes include roadway departures, left-turn conflicts, pedestrian crashes, and collisions on MO 96 and MO 571 between 2022–2024.**
- **Multiple additional serious crashes occurred at MO 571 intersections and on local connectors (Fairview Ave, Civil War Rd, Southside Blvd).**
- **Remaining cases show a mix of wet-weather rear-ends and dry-condition run-off-road events.**

Patterns & Risk Factors

- **Concentration of crashes on MO 96 and MO 571, with frequent turning and angle conflicts.**
- **Multiple pedestrian crashes in downtown Carthage, suggesting vulnerable road user risks.**

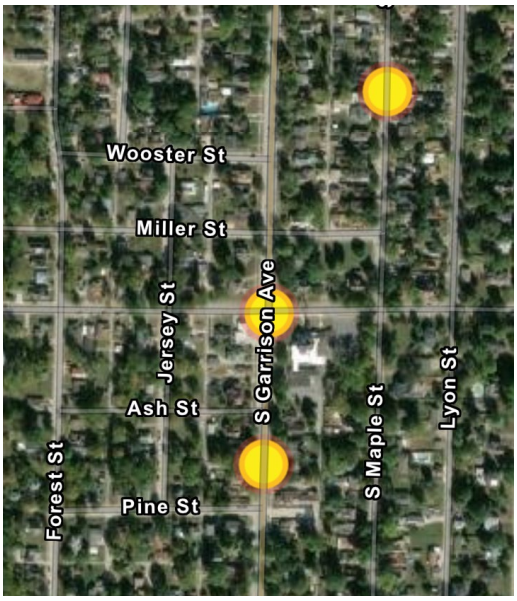
- Many serious crashes occurred under **clear/dry conditions**, pointing to driver behavior, intersection design, and speed issues.
- A wet-weather fatal crash on MO 96 highlights need for skid resistance and drainage review.

Accident Hot Spots

- Location: MO 96 E at RP 105392
- Crash Count: 3+ crashes (including a fatal).
- Common Crash Types: Loss of control and turning conflicts.
- Conditions: Mix of daylight and dark, wet-weather involvement.
- Contributing Factors: High-speed approaches, limited visibility, turning conflicts.

Recommended Safety Actions

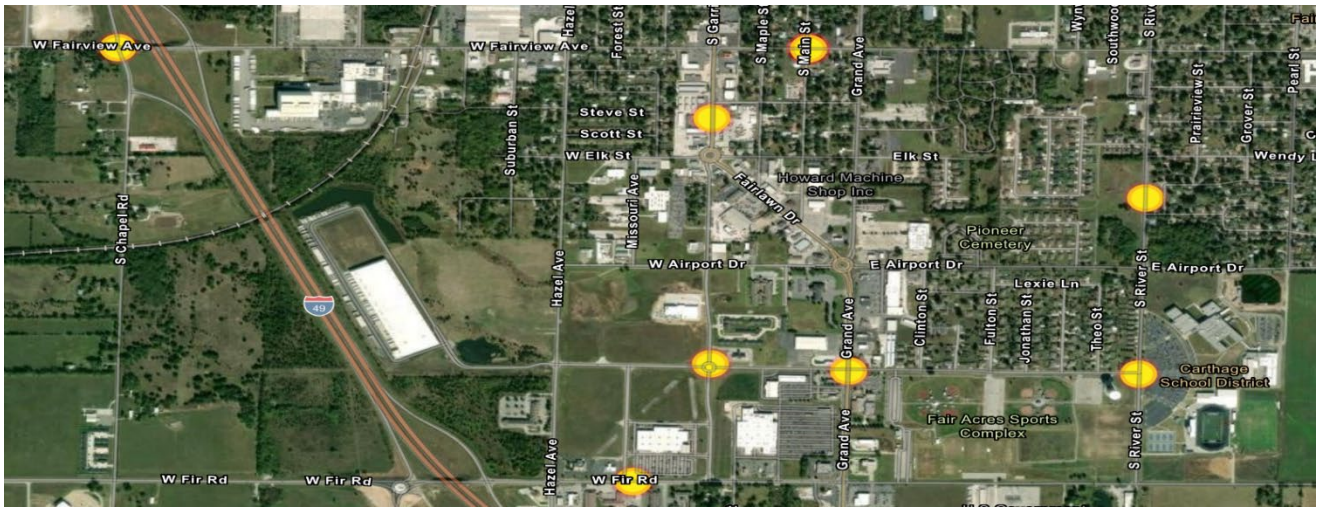
Engineering Countermeasures

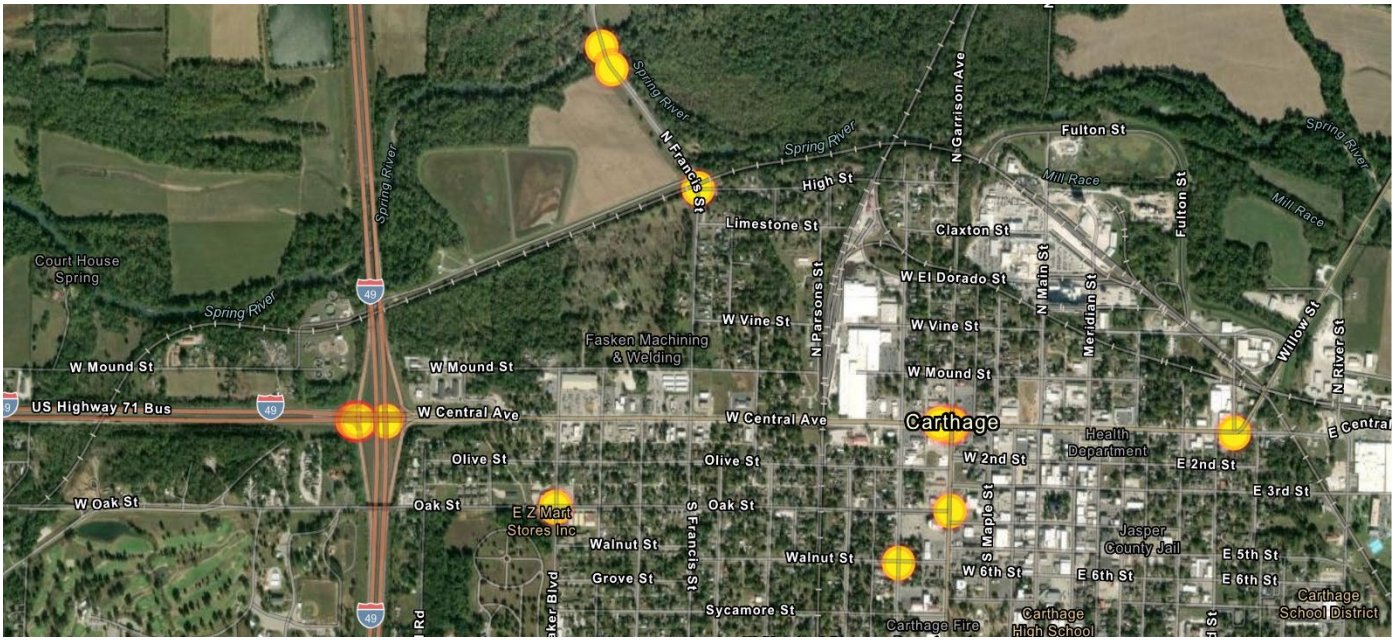


1. Conduct corridor safety audits along MO 96 and MO 571.
2. Upgrade signals, turn lanes, and access control at high-volume intersections.
3. Install pedestrian safety enhancements (crosswalk visibility, lighting, traffic calming downtown).
4. Apply high-friction surface treatment (HFST) at wet-weather crash sites.
5. Review roadside hazards and improve clear zones.

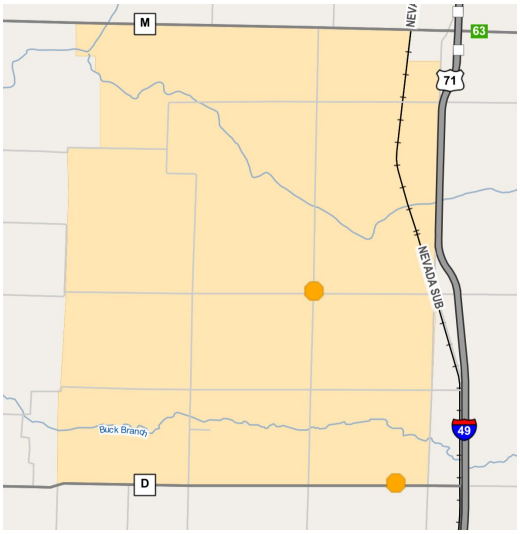
Education & Enforcement

- Targeted enforcement on speeding, red-light running, and pedestrian yielding.
- Community campaigns on safe turning and pedestrian awareness.




Spring River
N Francis St
Spring River
N Garrison Ave
Fulton St
Spring River
Mill Race
High St
Mill Race
Fulton St
Limestone St
Claxton St
Court House Spring
W El Dorado St
N Main St
Spring River
W Vine St
W Vine St
Meridian St
Willow St
Fasken Machining & Welding
N Parsons St
N River St
W Mound St
W Mound St
W Mound St
US Highway 71 Bus
W Central Ave
W Central Ave
Carthage
Health Department
E Central
Olive St
Olive St
W 2nd St
E 2nd St
W Oak St
Oak St
E Z Mart Stores Inc
S Oak St
E 3rd St
S Maple St
Walnut St
Walnut St
Jasper County Jail
E 5th St
W 6th St
E 6th St
E 6th St
Grove St
S Francis St
Sycamore St
Carthage Fire
Carthage High School
Carthage School District

Carytown, Missouri



Snapshot (2020–2024)

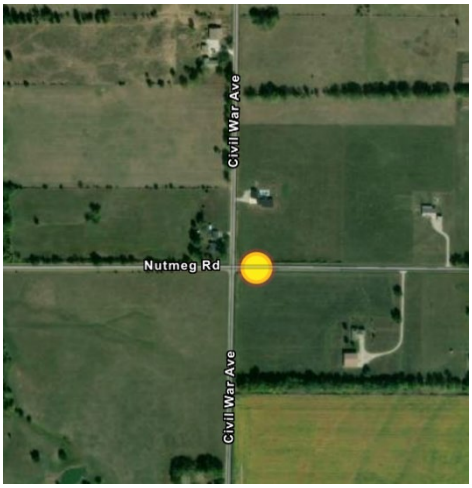
- Fatal Crashes: 0
- Serious Injury Crashes: 2
- Primary Corridors: Route D, CST Nutmeg Road

Crash Summaries
Crash 1: RT D E at CRD 140

- Date/Time: July 8, 2020 – 8:00 AM
- Crash Type: Loss of control (single-vehicle).
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 2: CST Nutmeg Rd E at CRD Civil War Road

- Date/Time: March 29, 2021 – 10:00 AM
- Crash Type: Loss of control (single-vehicle).
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.



Patterns & Risk Factors

- Both crashes were **loss-of-control, single-vehicle departures**.
- Occurred in **daylight, clear, dry conditions**, suggesting driver error or roadway geometry, not adverse weather.
- No fatalities, but consistent roadway departure pattern shows potential risk on rural connectors.

Recommended Safety Actions

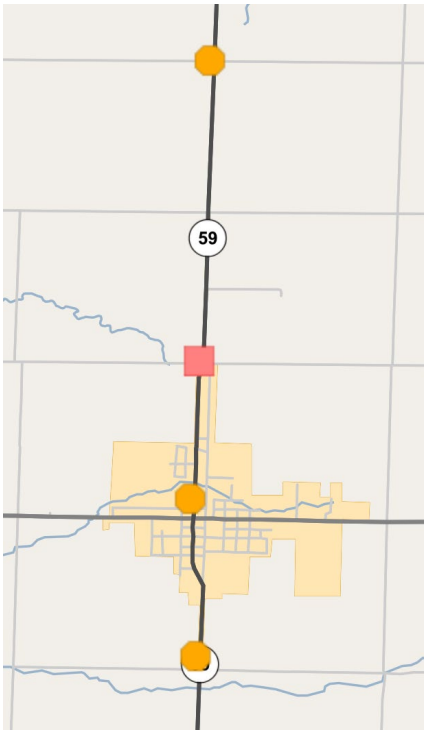
Engineering Countermeasures

1. Add shoulder/edge line rumble strips on Route D and Nutmeg Road to reduce roadway departures.
2. Install curve warning signs or chevrons where geometry is a factor.
3. Evaluate roadside hazards and improve clear zones.

Education & Enforcement

- Outreach on safe driving in rural areas, especially loss-of-control prevention.
- Enforcement focused on speeding on rural connectors.

Diamond, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 1
- Serious Injury Crashes: 3
- Primary Corridors: MO 59

Crash Summaries

Crash 1: MO 59 S at CRD Cherry Rd

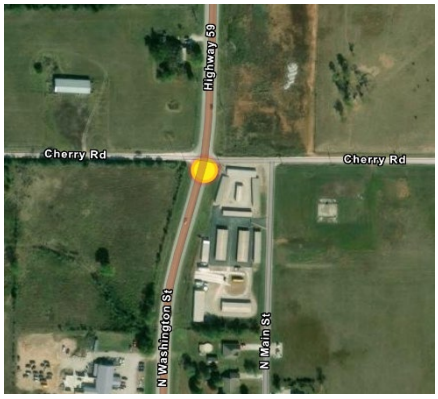
- Date/Time: June 30, 2022 – 4:42 PM
- Crash Type: Single-vehicle loss of control.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Fatal crash.

Crash 2: MO 59 S at CRD Elder Rd

- Date/Time: February 27, 2020 – 6:05 AM
- Crash Type: Left-turn crash.
- Conditions: Dark, no street lighting, Cloudy, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 3: MO 59 S at CST Maple

- Date/Time: December 22, 2021 – 1:51 PM
- Crash Type: Loss of control (single-vehicle).
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.



Crash 4: MO 59 S at CRD Aspen Rd

- Date/Time: September 23, 2020 – 8:45 PM
- Crash Type: Rear-end collision.
- Conditions: Dark, no street lighting, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Patterns & Risk Factors

- All crashes occurred on **MO 59**, a rural high-speed corridor through Diamond.
- Mix of crash types: **loss of control, left-turn, and rear-end**.
- One fatality due to roadway departure (loss of control).
- Two crashes occurred in **dark, unlit conditions**, raising visibility and lighting concerns.
- Majority under **clear, dry conditions**, pointing toward driver behavior and roadway design as contributing factors.

Recommended Safety Actions

Engineering Countermeasures

1. Add lighting and signage at intersections (Cherry Rd, Elder Rd, Aspen Rd).
2. Improve turn lanes and intersection control at MO 59 access points.
3. Consider shoulder/centerline rumble strips and curve delineation.
4. Review roadside hazards and provide guardrail/clear zone protection.

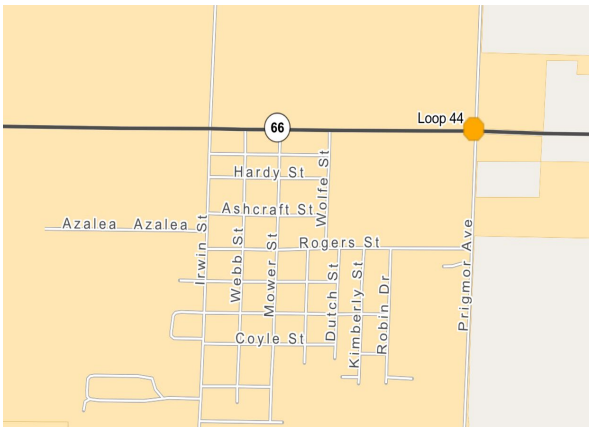
Education & Enforcement

- Targeted speed and nighttime enforcement on MO 59.
- Community outreach on safe turning and rear-end avoidance.

Duenweg, Missouri

Snapshot (2020–2024)

- Fatal Crashes: 0
- Serious Injury Crashes: 1
- Primary Corridors: MO 66



Crash Summaries
Crash 1: MO 66 E at CST Prigmor Ave

- Date/Time: November 15, 2021 – 6:36 PM
- Crash Type: U-turn crash.
- Conditions: Dark, no street lighting, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Patterns & Risk Factors

- Single serious crash on the **MO 66** corridor.
- Occurred at night without street lighting, highlighting **visibility** concerns at the Prigmor Ave junction.
- Dry/clear conditions suggest **driver behavior/turning movement** factors rather than weather.

Recommended Safety Actions

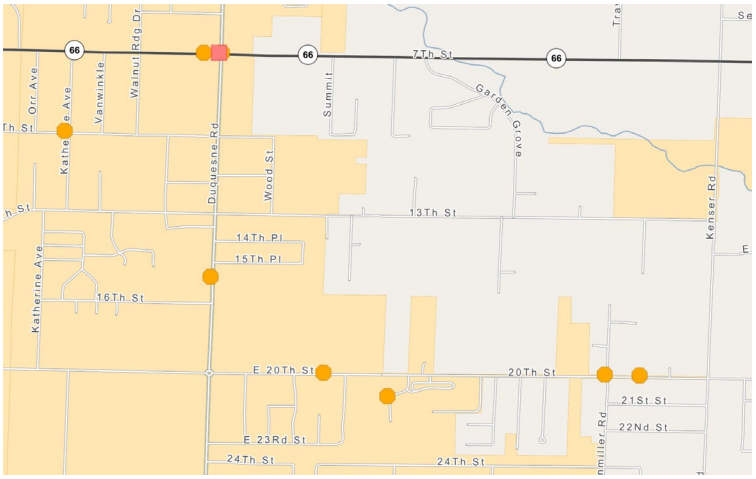
Engineering Countermeasures

1. Improve lighting and signage at MO 66 / Prigmor Ave.
2. Evaluate U-turn and turning movement control; consider channelization or turn restrictions if warranted.
3. Refresh pavement markings and add enhanced delineation.

Education & Enforcement

- Nighttime enforcement on unsafe/illegal U-turns and speed near the junction.
- Community messaging on safe turning behavior on high-speed corridors.

Duquesne, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 1
- Serious Injury Crashes: 8
- Primary Corridors: MO 66, CRD 20th St, CST Duquesne Rd

Crash Summaries

Crash 1: CRD 20th St E at CRD Reinmiller Rd

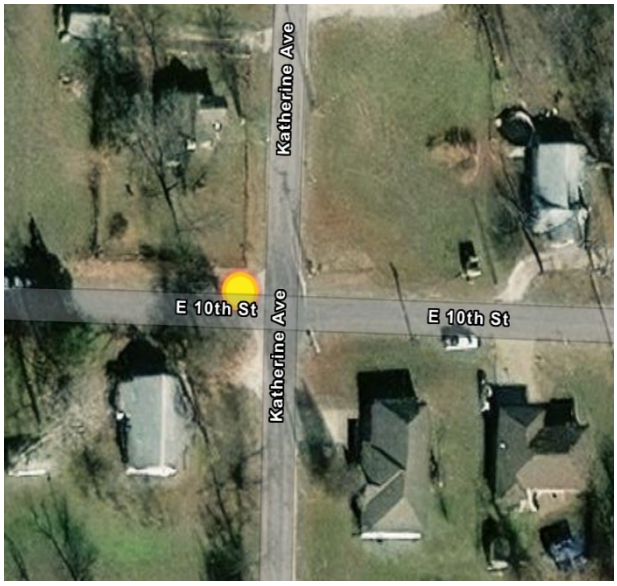
- Date/Time: April 30, 2020 – 6:40 PM
- Crash Type: Left-turn right-angle collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 2: CST Duquesne Rd S at CST 15th Pl

- Date/Time: January 29, 2021 – 7:00 PM
- Crash Type: Loss of control (single-vehicle).
- Conditions: Dark, streetlights on, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 3: CRD 20th St E at CST Wisconsin Ave

- Date/Time: April 13, 2021 – 7:27 PM
- Crash Type: Left-turn right-angle collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.



Crash 4 (Fatal): MO 66 E at CST Duquesne Rd

- Date/Time: July 3, 2021 – 8:47 AM
- Crash Type: Right-angle collision (3 vehicles).
- Conditions: Daylight, Cloudy, Dry road surface.
- Fixed Objects Struck: Street light support, traffic sign post/support, curb.
- Outcome: Fatal crash.

Crash 5: MO 66 E at CST Duquesne Rd

- **Date/Time: July 10, 2021 – 12:24 PM**
- **Crash Type: Left-turn right-angle collision.**
- **Conditions: Daylight, Clear, Dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Crash 6: MO 66 E at CST Duquesne Rd

- **Date/Time: January 31, 2022 – 5:25 PM**
- **Crash Type: Rear-end collision.**
- **Conditions: Daylight, Clear, Dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Crash 7: CRD 20th St E at CRD Indiana

- **Date/Time: June 30, 2022 – 1:28 PM**
- **Crash Type: Left-turn right-angle collision.**
- **Conditions: Daylight, Clear, Dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Crash 8: CRD 20th St E at CST Ohio Ave

- **Date/Time: November 3, 2022 – 7:45 PM**
- **Crash Type: Right-angle collision.**
- **Conditions: Dark, streetlights on, Clear, Dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Crash 9: PVT East Middle School S at PVT Private Dr

- **Date/Time: April 6, 2024 – 4:12 PM**
- **Crash Type: Loss of control (single-vehicle).**
- **Conditions: Daylight, Cloudy, Dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Crash 10: MO 66 E at CST Duquesne Rd

- **Date/Time: September 17, 2024 – 7:06 PM**
- **Crash Type: Rear-end collision.**
- **Conditions: Daylight, Clear, Dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Patterns & Risk Factors

- **Fatal crash and multiple serious crashes at MO 66 & Duquesne Rd**, confirming it as a high-risk intersection.
- Multiple **left-turn and angle collisions** along 20th St (Wisconsin, Indiana, Ohio).
- Most crashes occurred under **clear/dry conditions**, pointing to design, visibility, and behavior rather than weather.
- Nighttime lighting issues contributed to certain crashes.

Accident Hot Spots

- Location: MO 66 & CST Duquesne Rd
- Crash Count: 3+ (includes 1 fatal and multiple serious)
- Common Crash Types: Right-angle, left-turn, and rear-end
- Conditions: Mix of daylight and dark, mostly dry
- Contributing Factors: High speeds, turning conflicts, and roadside obstacles

Recommended Safety Actions

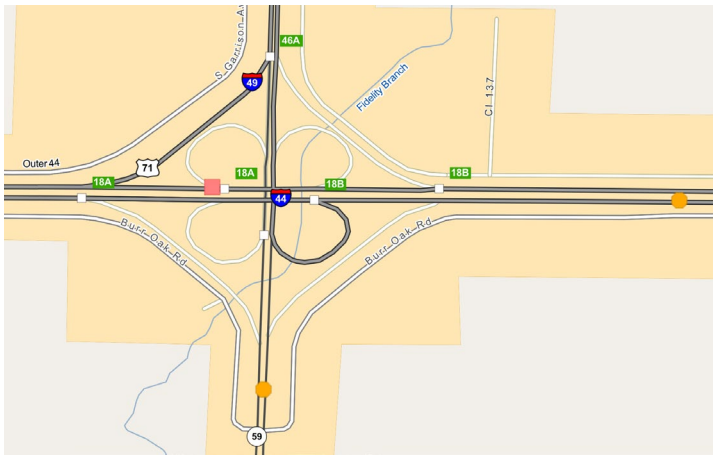
Engineering Countermeasures

1. Add or upgrade protected left-turn phases and extend turn bays at MO 66 & Duquesne Rd.
2. Improve lighting, signage, and access management along MO 66.
3. Add turn lanes, adjust signal timing, and improve sight lines along 20th St intersections.
4. Consider corridor safety audit for MO 66 through Duquesne.

Education & Enforcement

- Targeted enforcement on red-light running, failure to yield, and speeding at MO 66 & Duquesne Rd.
- Local campaigns on safe turning gaps and intersection awareness..

Fidelity, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 1
- Serious Injury Crashes: 2
- Primary Corridors: I-44, MO 59

Crash Summaries
Crash 1 (Fatal): IS 44 W at RP 3281

- Date/Time: March 26, 2020 – 3:50 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark with street lights on, Cloudy, Dry road surface.
- Outcome: Fatal crash.

Crash 2: MO 59 N at CRD Burr Oak Rd

- Date/Time: February 10, 2023 – 6:15 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Daylight, Cloudy, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 3: IS 44 E at ERM East IS 44 Mile 19.0

- Date/Time: May 3, 2024 – 5:15 PM
- Crash Type: Rear-end collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Patterns & Risk Factors

- Mix of **interstate (I-44) and rural highway (MO 59)** crashes.
- Two crashes involved **loss of control/out of control** events.
- One fatal crash occurred on I-44 during early morning hours under dark, cloudy conditions.
- Serious crashes highlight both **rural road departure risk (MO 59)** and **rear-end conflicts on interstate segments**.
- Clear/dry conditions suggest contributing factors include driver behavior, speed, and roadway geometry.

Recommended Safety Actions

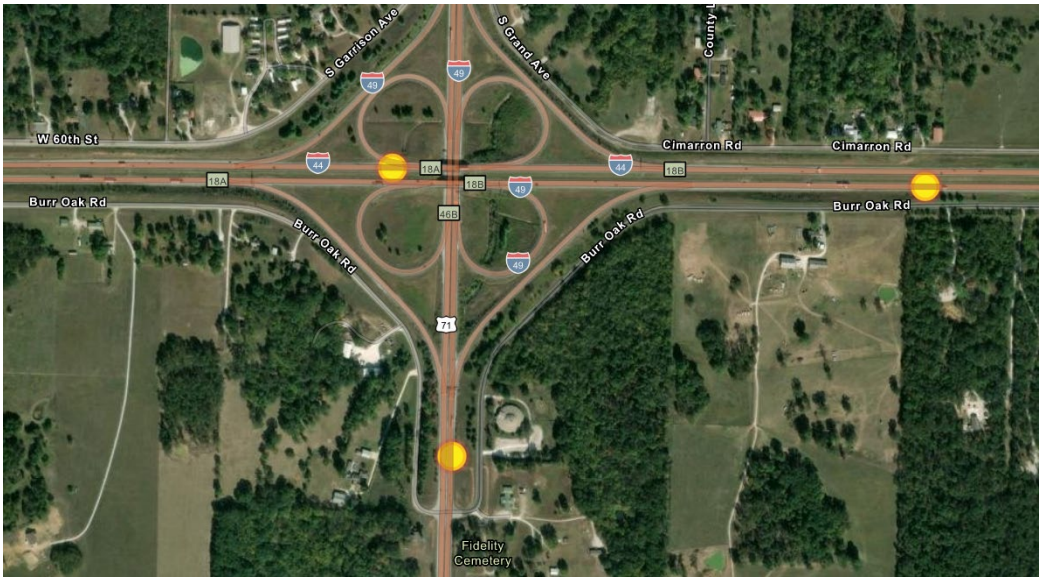
Engineering Countermeasures

1. Improve delineation and lighting along I-44 rural segments near Fidelity.
2. Evaluate guardrail and clear zone protection where run-off-road events occur.
3. Consider HFST (high-friction surface treatment) at I-44 curves/ramps.

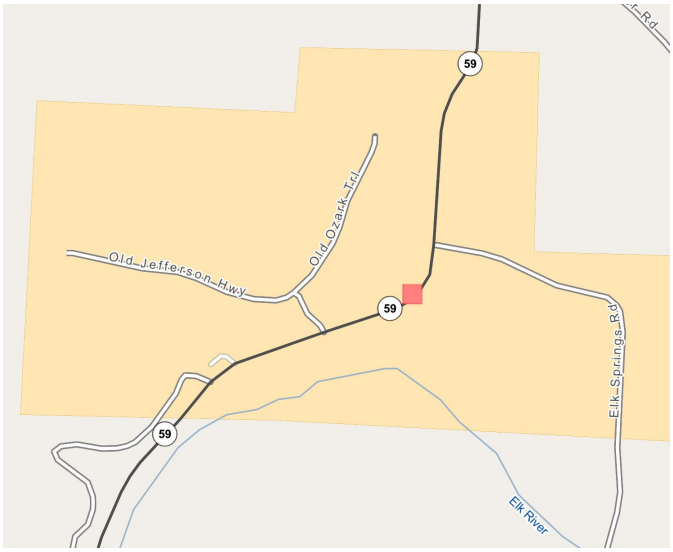
4. **Add intersection/curve warning signage on MO 59 at Burr Oak Rd.**

Education & Enforcement

- **Emphasize driver alertness and speed management on interstate and rural highways.**
- **Enforcement for following distance and unsafe lane changes on I-44.**



Ginger Blue, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 1
- Serious Injury Crashes: 0
- Primary Corridors: MO 59

Crash Summaries
Crash 1 (Fatal): MO 59 S at CRD Elk Springs Rd

- Date/Time: May 10, 2024 – 12:00 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark with street lights off, Unknown weather, Unknown road surface.
- Outcome: Fatal crash.

Patterns & Risk Factors

- Single crash, but occurred under **dark, unlit conditions**, raising nighttime visibility concerns.
- Lack of reliable condition data (weather and surface) limits environmental interpretation.
- The crash highlights **nighttime rural highway risks** on MO 59.

Recommended Safety Actions

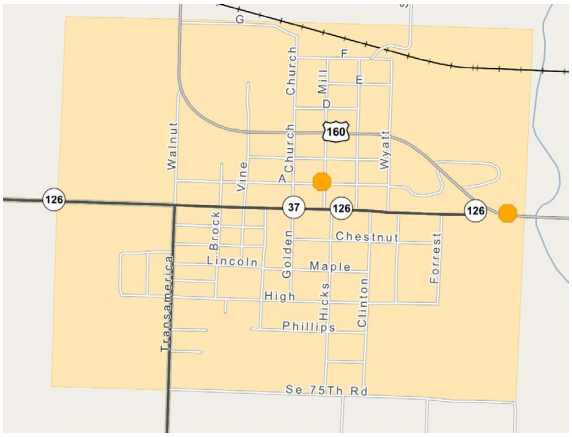
Engineering Countermeasures

1. Add or upgrade roadway lighting at the MO 59 & Elk Springs Rd corridor.
2. Review curve alignment and add reflective signage/chevrons.
3. Assess roadside hazards and improve clear zones.

Education & Enforcement

- Promote nighttime and rural driving awareness.
- Enforcement focus on speeding and safe vehicle handling in low-light areas.

Golden City, Missouri

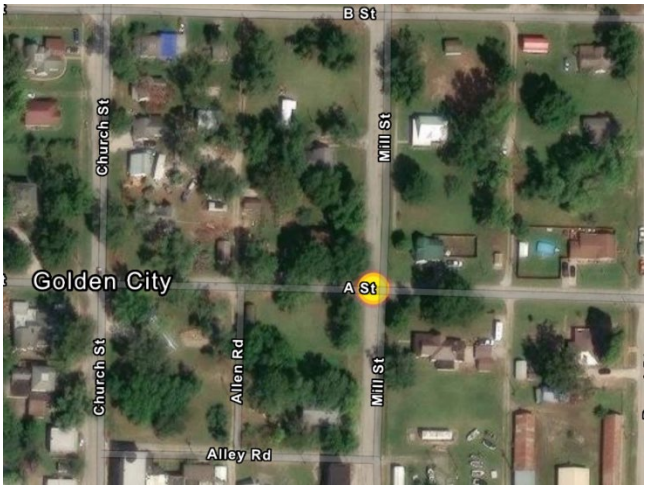


Snapshot (2020–2024)

- Fatal Crashes: 0
- Serious Injury Crashes: 2
- Primary Corridors: US 160, CST A

Crash Summaries
Crash 1: US 160 E at MO 37

- Date/Time: August 8, 2022 – 10:55 AM
- Crash Type: Other (two-vehicle).
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.



Crash 2: CST A E at CST Mill

- Date/Time: April 15, 2024 – 1:10 PM
- Crash Type: Right-angle collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Patterns & Risk Factors

- Both serious crashes occurred in **clear, dry daylight**—indicating behavior and intersection control are key factors.
- Intersections on **US 160/MO 37** and **CST A/Mill** show **turning/angle conflict** potential.

Recommended Safety Actions

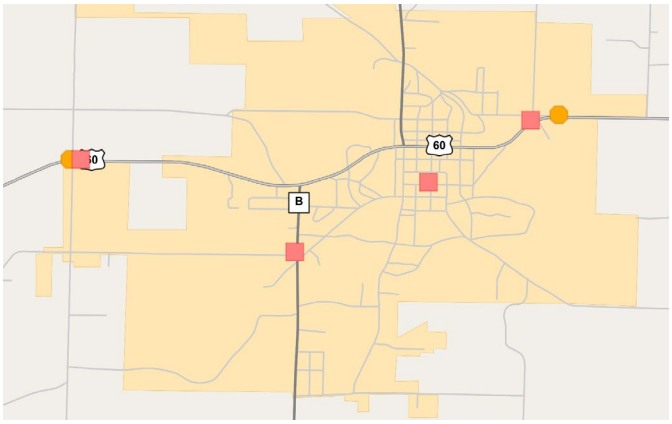
Engineering Countermeasures

1. Enhance intersection control and sight distance at US 160/MO 37 and CST A/Mill (signing/markings, stop control visibility).
2. Consider protected turn lanes or signal timing improvements if warranted by volumes.
3. Refresh high-visibility pavement markings and add advance warning signs.

Education & Enforcement

- Enforcement on failure-to-yield and unsafe turning at key intersections.
- Outreach on scanning and gap selection at rural/transition intersections.

Granby, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 4
- Serious Injury Crashes: 2
- Primary Corridors: US 60, CST Pine St, RT B

Crash Summaries

Crash 1: US 60 E at CRD City Limit Rd

- Date/Time: March 26, 2021 – 4:54 PM
- Crash Type: Rear-end collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 2: US 60 E at CST Vista Ln

- Date/Time: December 12, 2022 – 6:00 AM
- Crash Type: U-turn crash.
- Conditions: Dark, no street lighting, Cloudy, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 3 (Fatal): US 60 E at CST Franklin Ave

- Date/Time: March 15, 2024 – 8:19 AM
- Crash Type: Left-turn right-angle collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Fatal crash.

Crash 4 (Fatal): US 60 E at CST Franklin Ave

- Date/Time: March 22, 2024 – 2:48 PM
- Crash Type: Left-turn right-angle collision.
- Conditions: Daylight, Cloudy, Dry road surface.
- Outcome: Fatal crash.

Crash 5 (Fatal): CST Pine St E at CST Cole St

- Date/Time: October 10, 2024 – 5:24 PM
- Crash Type: Pedalcycle crash.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Fatal crash.

Crash 6 (Fatal): RT B S at CRD Tower Rd

- Date/Time: October 31, 2024 – 7:32 PM
- Crash Type: Pedestrian crash.
- Conditions: Dark, no street lighting, Clear, Dry road surface.
- Outcome: Fatal crash.

Patterns & Risk Factors

- **Two separate fatal left-turn/angle crashes at US 60 & Franklin Ave** within a week → strong indication of turning conflict risk.
- Vulnerable road users represented in **two fatalities** (one pedestrian on RT B, one pedalcyclist on Pine St).
- Majority under **clear/dry daylight**, suggesting design, visibility, and driver behavior concerns; nighttime lighting is a factor for the RT B pedestrian fatality.

Accident Hot Spots

- Location: US 60 E at CST Franklin Ave
- Crash Count: 2 fatal crashes (Note: below 3; not included as a formal hot spot per your rule. Flagging here for visibility only.)

Recommended Safety Actions

Engineering Countermeasures

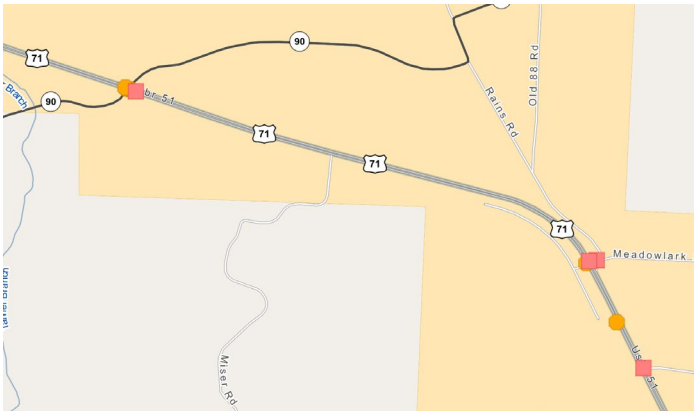
1. **US 60 & Franklin Ave:** Consider protected left-turn phases, increased offset/length for turn bays, and access management near approaches.
2. **Pine St & Cole St:** Ped/bike safety upgrades (enhanced crosswalks, lighting, traffic calming).
3. **RT B at Tower Rd:** Nighttime visibility improvements (lighting, signing, reflectivity); evaluate shoulder/clear zone protection.
4. Expand high-visibility markings and add advance intersection warning on US 60 corridor within city limits.

Education & Enforcement

- Targeted enforcement on failure-to-yield left turns and pedestrian yielding.
- Outreach on pedestrian/bicycle safety and gap acceptance at high-speed approaches.

Jane, Missouri

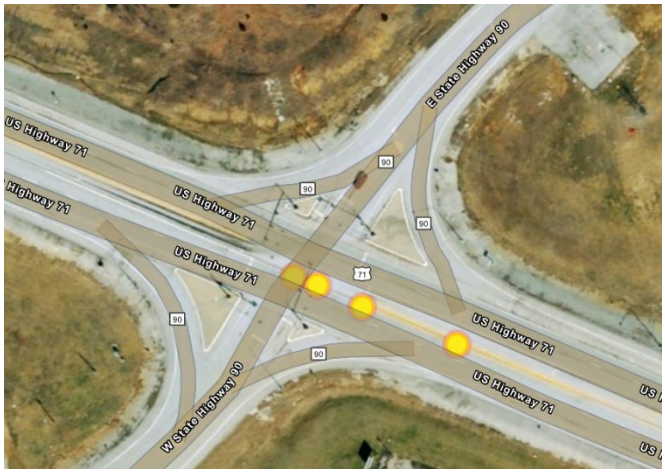
Snapshot (2020–2024)



- Fatal Crashes: 4
- Serious Injury Crashes: 5
- Primary Corridors: US 71, US 71 connector to Rains Rd

Crash Summaries

Crash 1: US 71 S at MO 90



- Date/Time: June 30, 2020 – 6:45 PM
- Crash Type: Rear-end collision.
- Conditions: Daylight, Cloudy, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 2: US 71 S at MO 90

- Date/Time: September 19, 2020 – 3:55 AM
- Crash Type: Loss of control (single-vehicle).
- Conditions: Dark, no street lighting, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 3 (Fatal): US 71 N at CRD RAINS RD

- Date/Time: December 19, 2020 – 9:50 PM
- Crash Type: Rear-end collision.
- Conditions: Dark, streetlights on, Clear, Dry road surface.
- Outcome: Fatal crash.

Crash 4: US 71 S at MO 90

- Date/Time: June 18, 2021 – 12:10 AM
- Crash Type: Loss of control (single-vehicle).
- Conditions: Dark, no street lighting, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 5: US 71 S at MO 90

- Date/Time: August 19, 2021 – 6:15 PM

- Crash Type: Left-turn right-angle collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 6 (Fatal): US 71 S at MO 90

- Date/Time: July 28, 2021 – 6:08 PM
- Crash Type: Left-turn right-angle collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Fatal crash.

Crash 7 (Fatal): US 71 N at CRD Little Missouri Rd

- Date/Time: February 10, 2022 – 8:00 AM
- Crash Type: Left-turn right-angle collision.
- Conditions: Daylight, Cloudy, Dry road surface.
- Outcome: Fatal crash.

Crash 8: US 71 N at CST Church St

- Date/Time: May 17, 2022 – 2:17 PM
- Crash Type: Rear-end collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 9 (Fatal): US 71 N connector to CRD Rains Rd / CRD Rains Rd

- Date/Time: September 20, 2024 – 1:40 PM
- Crash Type: Loss of control (single-vehicle).
- Conditions: Daylight, Cloudy, Dry road surface.
- Outcome: Fatal crash.

Patterns & Risk Factors

- **US 71 & MO 90** is a recurring severe-crash location (rear-ends, left-turn/angle conflicts, nighttime loss-of-control).
- Multiple fatalities include **left-turn/angle conflicts** and **run-off-road** events on the corridor and connector.
- Many crashes in **clear/dry** conditions → behavior, turning movements, and access design are critical contributors.
- Nighttime, unlit segments factor into several loss-of-control crashes.

Recommended Safety Actions

Engineering Countermeasures

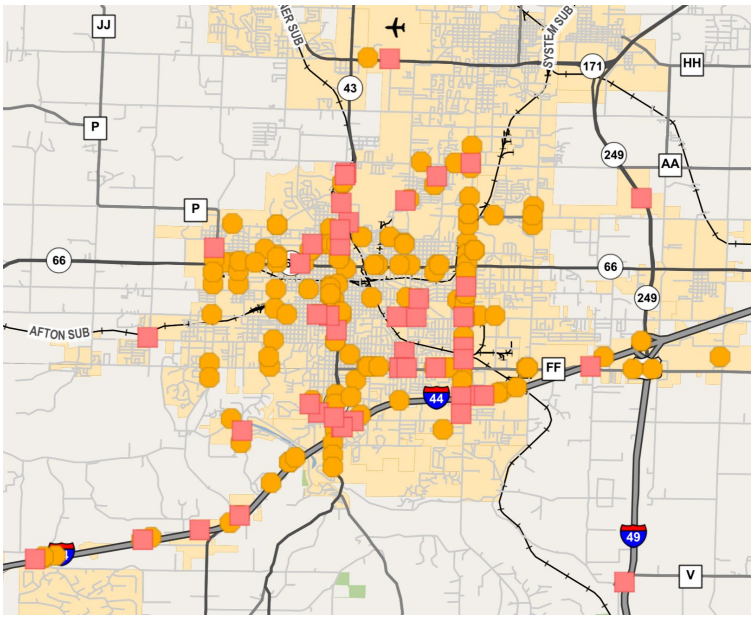
1. **US 71 & MO 90:** Consider protected left-turn phasing, extended turn bays, and access management near approaches.

2. **Improve lighting and delineation on unlit segments of US 71 and the Rains Rd connector.**
3. **Add HFST or other skid-resistance treatments at loss-of-control segments.**
4. **Evaluate speed management and signing in transition zones approaching intersections.**

Education & Enforcement

- **Enforcement on speed, following distance, and failure-to-yield left turns.**
- **Outreach on nighttime driving and safe turning gaps at high-speed junctions.**

Joplin, Missouri

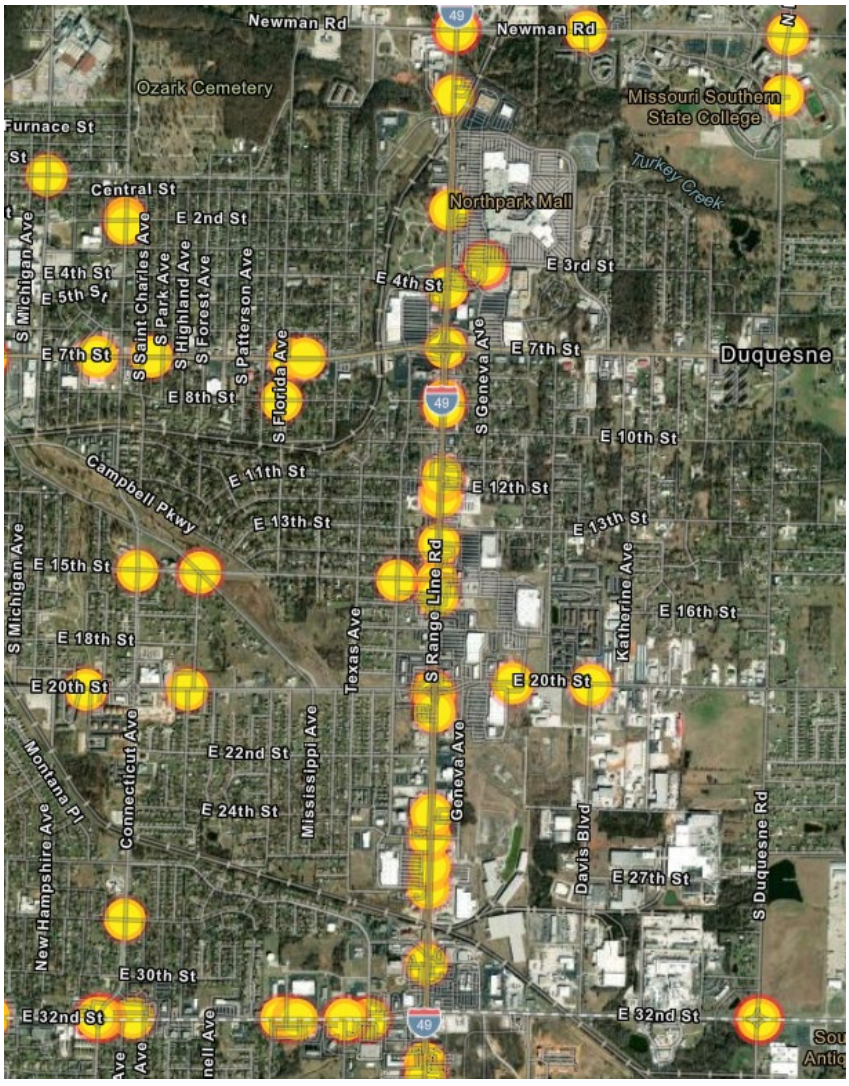


Snapshot (2020–2024)

- Fatal Crashes: 49
- Serious Injury Crashes: 165
- Primary Corridors: LP 49, RT FF, MO 43

Crash Summaries (First 10 Expanded)
Crash 1: IS 44 W at ERM West IS 44 Mile 11.2

- Date/Time: January 5, 2020 – 2:18 PM
- Crash Type: Out of control.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.



Crash 2: LP 49 S at West of CST Range Line Rd

- Date/Time: January 30, 2020 – 3:20 PM
- Crash Type: Pedestrian.
- Conditions: Daylight, Cloudy, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 3: CST 15th St E at LP 49

- Date/Time: February 26, 2020 – 7:51 PM
- Crash Type: Left turn.
- Conditions: Dark with street lights on, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 4: CST 26th St E at CST Range Line Rd

- Date/Time: March 7, 2020 – 12:08 PM
- Crash Type: Right angle.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 5: RT FF E at CST Duquesne Rd

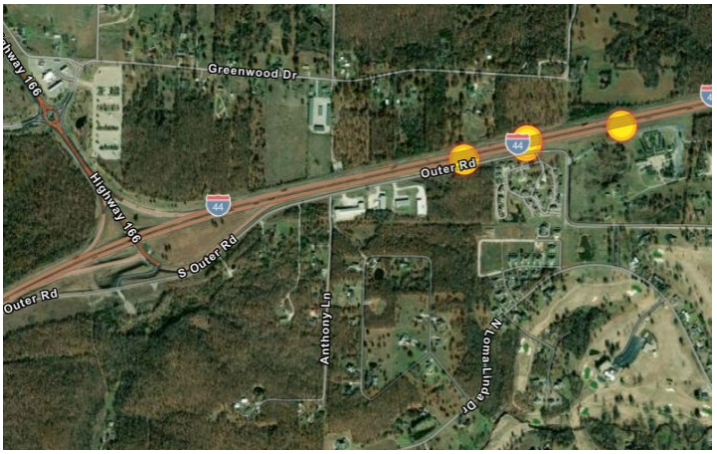
- Date/Time: March 11, 2020 – 2:23 PM
- Crash Type: Left turn.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 6: CST 20th St E at CST Illinois Ave

- Date/Time: March 11, 2020 – 5:10 PM
- Crash Type: Right angle.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 7: MO 43 S at Bridge J0339

- Date/Time: March 21, 2020 – 11:19 PM
- Crash Type: Pedestrian.
- Conditions: Dark with street lights on, Cloudy, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.



Crash 8: CST Murphy Blvd E at CST Illinois Ave

- Date/Time: April 20, 2020 – 4:13 PM
- Crash Type: Right angle.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 9: CST 20th St E at CST Arizona Ave

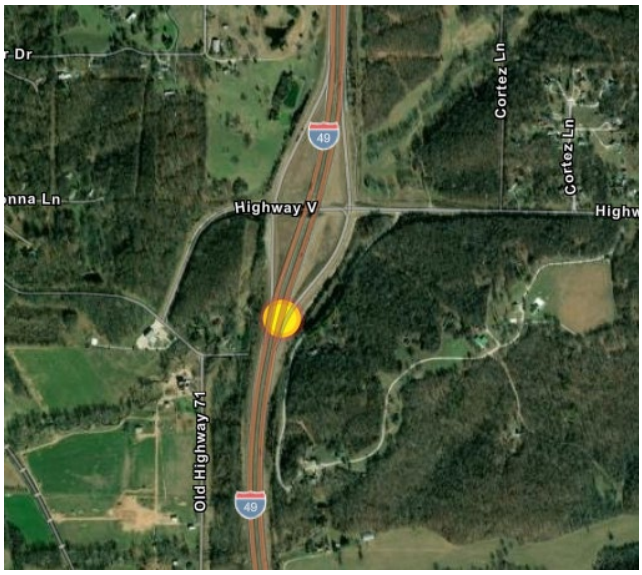
- Date/Time: April 20, 2020 – 4:28 PM
- Crash Type: Right angle.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 10: CST 43rd St E at CST Pearl Ave

- Date/Time: June 18, 2020 – 10:46 AM
- Crash Type: Out of control.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Fatal crash.

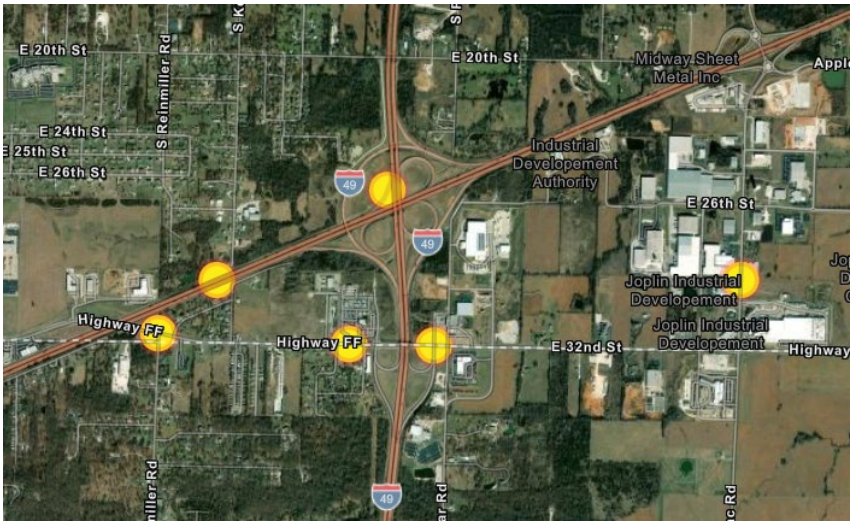
Additional Serious/Fatal Crashes (Summarized)

- 204 additional serious/fatal crashes from 2020–2024 across interstate, loop, state routes, and city streets.
- Common patterns include **left-turn/right-angle conflicts** at signalized intersections, **run-off-road/out of control** events, and **vulnerable road users** (pedestrian/pedalcycle) on urban arterials.
- Crashes are frequent on and around **LP 49**, **RT FF** (Duquesne corridor), **MO 43**, and major east–west city streets (e.g., 15th, 20th, 26th).



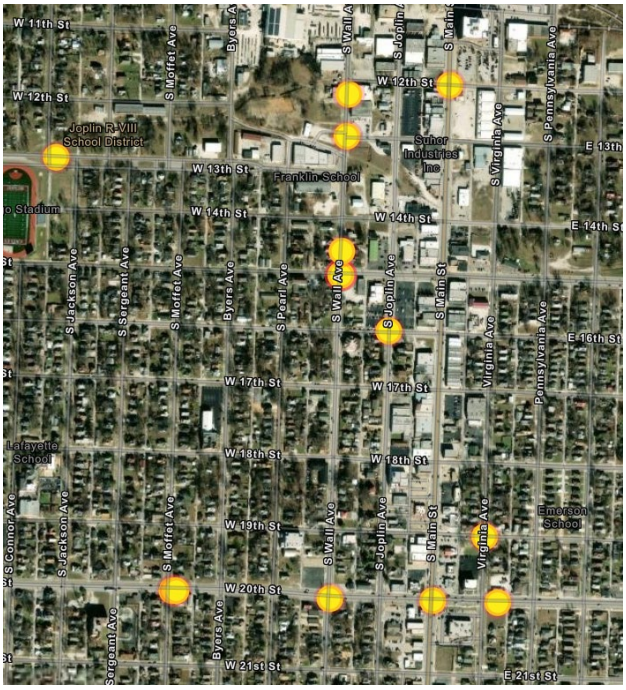
Patterns & Risk Factors

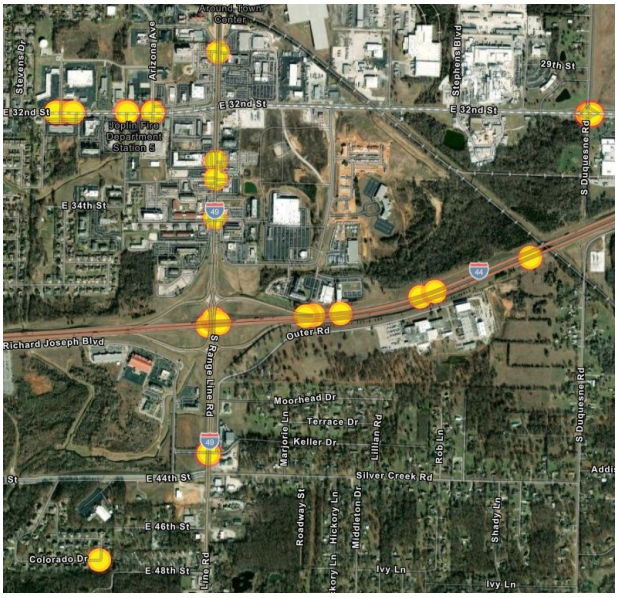
- High volume corridors with numerous access points produce **turning and angle conflicts**.
- A substantial share occur in **clear, dry conditions**, pointing to behavior, access design, and signal operations rather than weather.
- **Nighttime pedestrian** exposure present on MO 43 and arterials with mixed lighting.

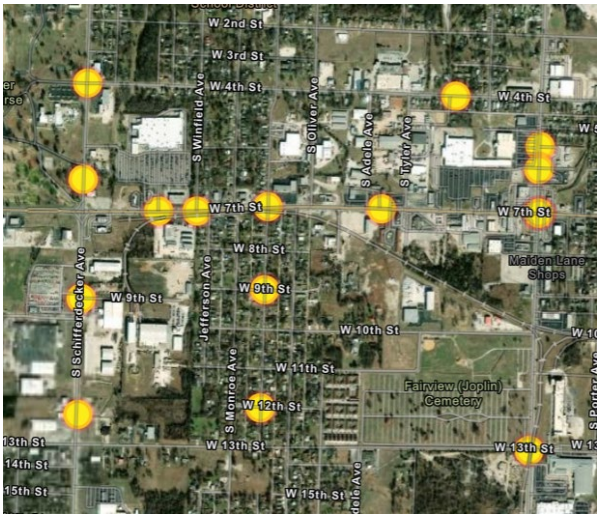


Accident Hot Spots

- Location: **MO 43 S at Bridge J0339**
  - Crash Count: 5
  - Common Crash Types: Head on (2), Out of control (2), Pedestrian (1)
- Location: **CST Wall Ave N at CST 15th St**
  - Crash Count: 4
  - Common Crash Types: Right angle (3), Dog (1)
- Location: **RT FF E at CST Duquesne Rd**
  - Crash Count: 4
  - Common Crash Types: Left turn (4)
- Location: **RT FF E at CST Connecticut Ave**
  - Crash Count: 4
  - Common Crash Types: Left turn (1), Pedalcycle (1), Rear end (1)
- Location: **RT FF E at CST Indiana Ave**
  - Crash Count: 3
  - Common Crash Types: Head on (1), Rear end (1), Out of control (1)







Recommended Safety Actions

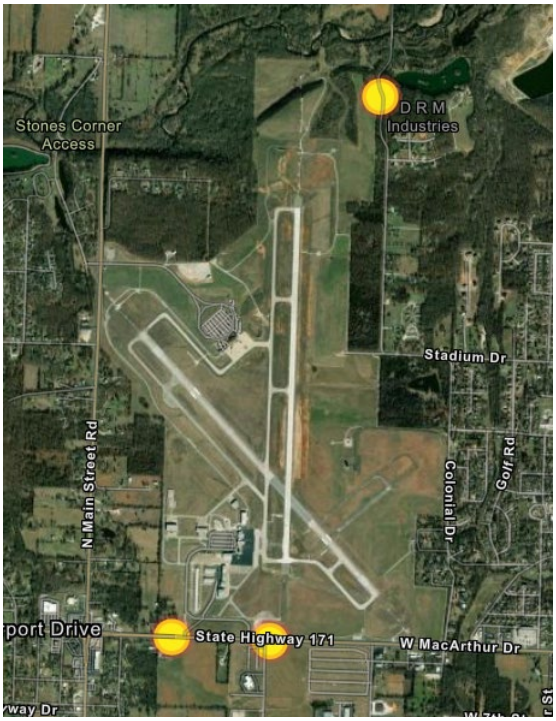
Engineering Countermeasures

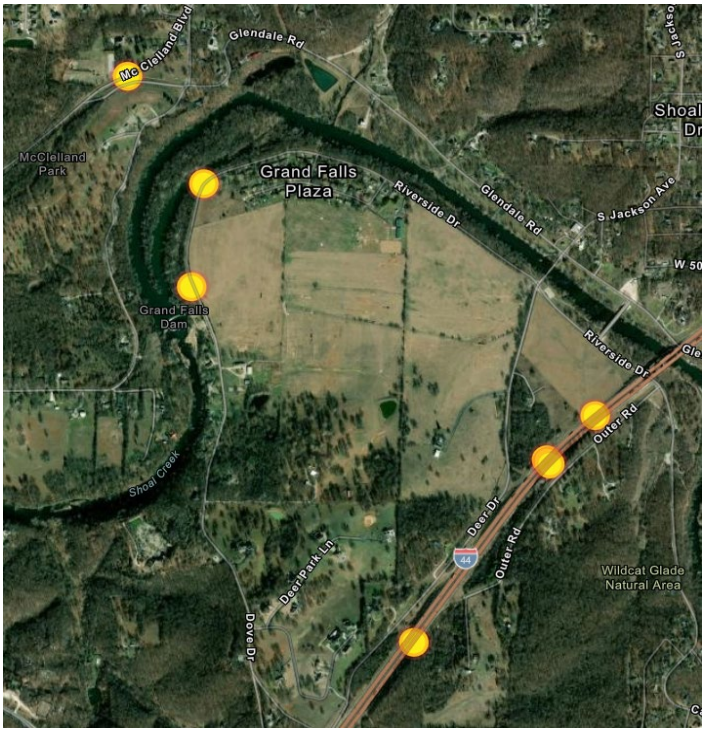
1. **Signalized intersections (15th, 20th, 26th, Range Line):** Expand protected turn phasing, adjust cycle lengths/offsets, lengthen turn bays, improve detection.
2. **RT FF corridor (Duquesne–Connecticut–Indiana):** Access management, protected lefts/RCUTs where warranted, enhanced intersection lighting and conspicuity.
3. **MO 43 at Bridge J0339 area:** Median/containment review, rumble strips, delineation; evaluate pedestrian lighting and crossings.
4. **Corridor-wide:** High-friction surface treatment (HFST) at run-off-road segments; refresh markings and add conspicuity upgrades.

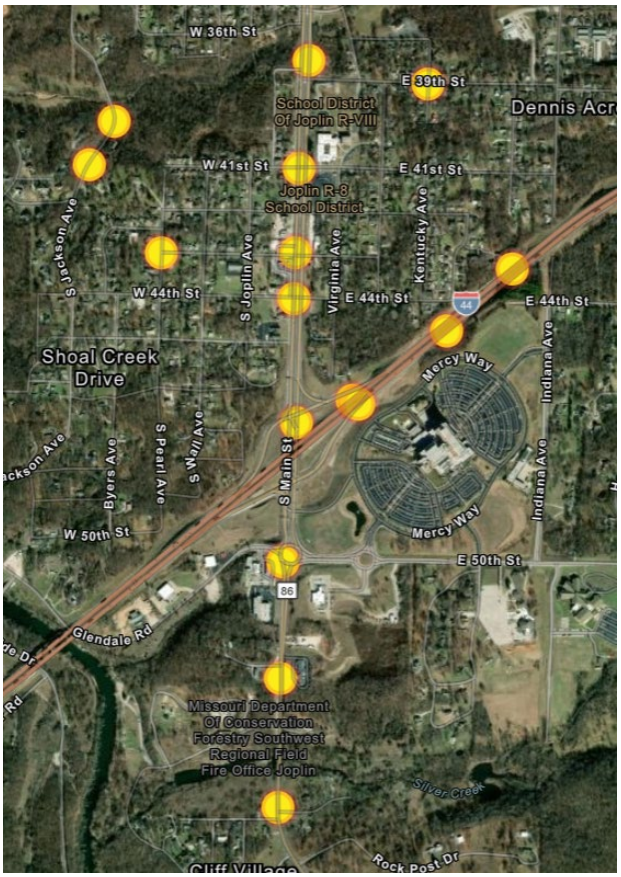
Education & Enforcement

- Enforcement on **failure-to-yield left turns**, **red-light running**, **speed**, and **following distance** on LP 49 and major arterials.

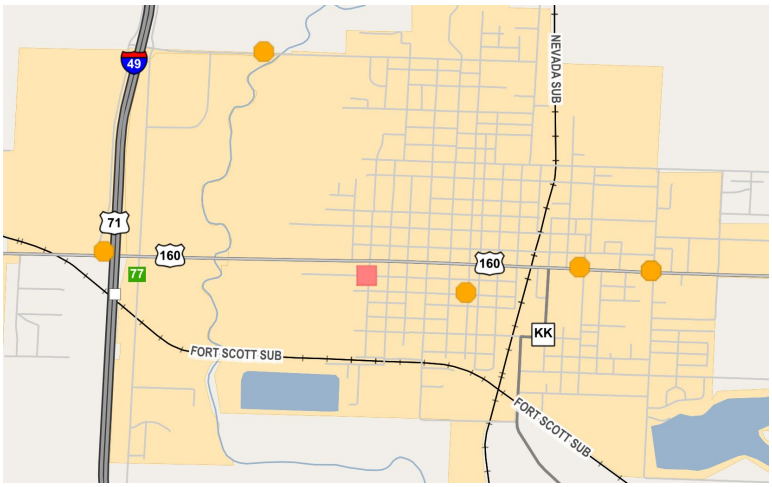
- **Outreach on pedestrian safety and nighttime visibility on MO 43 and downtown corridors.**







Lamar, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 1
- Serious Injury Crashes: 6
- Primary Corridors: US 160, CST Maple (S), CRD NE 5th Rd (E)

Crash Summaries

Crash 1: CST Poplar (S) at CST E 14th St

- Date/Time: May 30, 2020 – 10:38 AM
- Crash Type: Pedalcycle.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 2: US 160 (E) at CST Hagny St

- Date/Time: March 17, 2021 – 6:28 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark – unknown, Rain, Wet road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 3: CRD NE 5th Rd (E) at CST 1st St

- Date/Time: June 8, 2022 – 5:35 PM
- Crash Type: Out of control (single-vehicle).
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 4: US 160 (E) at CST College

- Date/Time: September 20, 2022 – 9:25 AM
- Crash Type: Other (two-vehicle).
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 5 (Fatal): CST Maple (S) at CST W 13th St

- Date/Time: December 19, 2022 – 5:33 PM
- Crash Type: Out of control (single-vehicle).

- Conditions: Dark with street lights on, Freezing, Dry road surface.
- Outcome: Fatal crash.

Crash 6: US 160 (E) at CST Hagny St

- Date/Time: March 10, 2023 – 6:05 PM
- Crash Type: Right-angle collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 7: RP IS49S to US160 (W) at US 160

- Date/Time: April 13, 2023 – 11:17 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Patterns & Risk Factors

- Crashes recur along **US 160** and at city street connectors (Maple, Hagny, College).
- Several **single-vehicle loss-of-control** events (including the fatal crash).
- Most occurred in **clear/dry daylight**; one fatal crash involved **freezing conditions after dark**.
- One **pedalcycle** serious-injury crash indicates vulnerable road-user exposure.

Recommended Safety Actions

Engineering Countermeasures

1. **US 160 corridor:** Enhance turn-lane markings, signing, and access management at Hagny St and College.
2. **Maple & W 13th:** Improve nighttime delineation/retroreflectivity; review surface friction and drainage for freeze-prone conditions.
3. Add centerline/shoulder rumble strips on rural connectors with loss-of-control patterns.
4. Review roadside clear zones and protect/relocate fixed objects along departure segments.

Education & Enforcement

- Targeted enforcement on speed and following distance near US 160 intersections.
- Community outreach on winter driving, nighttime visibility, and single-vehicle departure prevention.

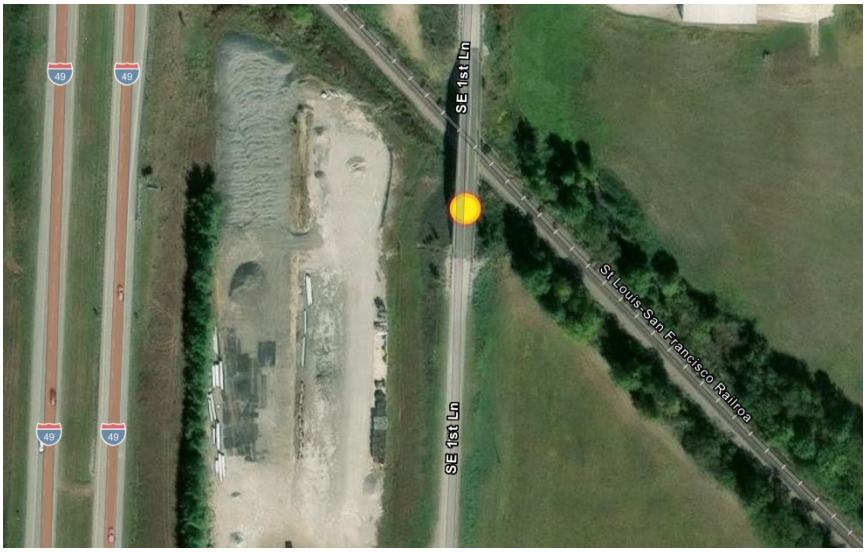
Lamar Heights, Missouri

Snapshot (2020–2024)

- Fatal Crashes: 0
- Serious Injury Crashes: 1
- Primary Corridors: E OR 49

Crash Summaries
Crash 1: E OR 49 S at Bridge B0393

- Date/Time: June 11, 2020 – 8:10 AM
- Crash Type: Head-on collision.
- Conditions: Daylight, Cloudy, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.



Patterns & Risk Factors

- Single serious crash on the **E OR 49** corridor (likely Old Route 49 frontage/connector).
- Occurred in **daylight, dry conditions**, pointing to driver behavior or passing/turning conflicts rather than weather.

Recommended Safety Actions

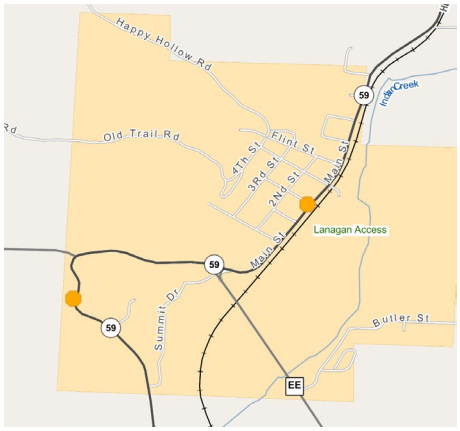
Engineering Countermeasures

1. Review centerline markings and passing/no-passing zones near Bridge B0393.
2. Add enhanced delineation and shoulder/edge lines across the bridge approaches.
3. Evaluate roadside protection and clear zones along the structure.

Education & Enforcement

- Targeted enforcement on unsafe passing and following distance.
- Public messaging on head-on risk on two-lane connectors.

Lanagan, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 0
- Serious Injury Crashes: 2
- Primary Corridors: MO 59

Crash Summaries

Crash 1: MO 59 S at CST Hillcrest Dr

- Date/Time: May 22, 2020 – 6:45 AM
- Crash Type: Head-on collision.
- Conditions: Daylight, Cloudy, Wet road surface.
- Outcome: Rider/occupant transported for medical treatment.

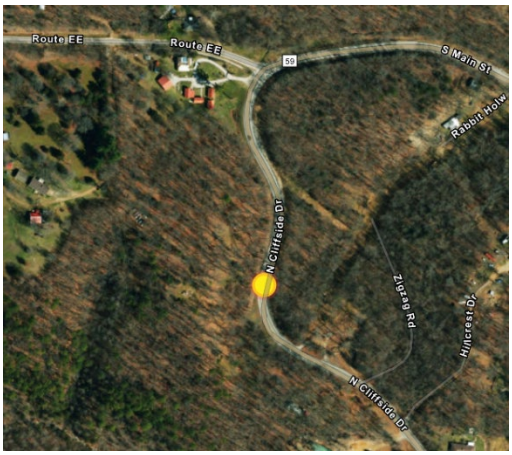
Crash 2: MO 59 S at CST Pearl St

- Date/Time: July 12, 2024 – 10:07 PM
- Crash Type: Rear-end collision.
- Conditions: Dark with street lights off, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Patterns & Risk Factors

- Both serious crashes occurred on **MO 59**, indicating corridor-level safety concerns.
- Mix of **head-on** (daytime, wet) and **rear-end** (nighttime, unlit) suggests issues with **visibility, speed, and following distance**.
- No fatalities in the period, but injury severity indicates value in proactive treatment.

Recommended Safety Actions



Engineering Countermeasures

1. Improve **nighttime visibility** (lighting and retroreflective markings) near CST Pearl St.
2. Review **passing/no-passing** zones and add centerline/shoulder **rumble strips** where feasible.
3. Evaluate **drainage and surface friction** at MO 59 & Hillcrest Dr for wet-weather performance.
4. Consider **turn lane** or access management treatments if turning volumes warrant.

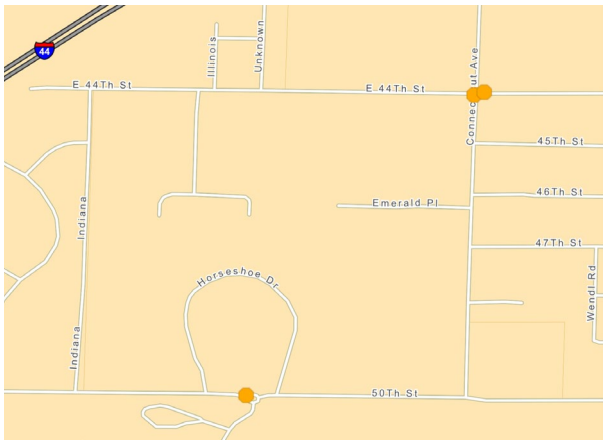
Education & Enforcement

- Targeted enforcement on **speed** and **following distance** along MO 59.
- Community messaging on **wet-weather braking** and **nighttime driving**.

Leawood, Missouri

Snapshot (2020–2024)

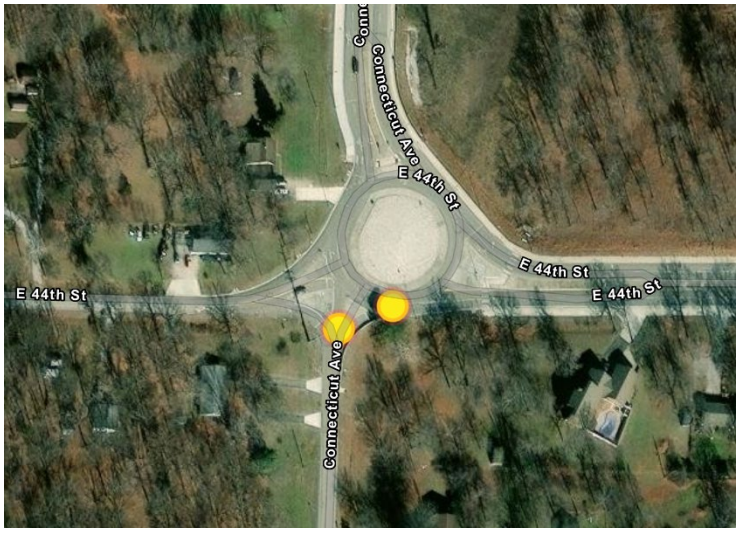
- Fatal Crashes: 0
- Serious Injury Crashes: 3
- Primary Corridors: CST 50th St, CST E 44th St, CST Connecticut Ave



Crash Summaries

Crash 1: CST 50th St E at PVT Joplin South Middle School (WJ)

- Date/Time: August 7, 2020 – 6:15 PM
- Crash Type: Out of control (single-vehicle).
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.



Crash 2: CST Connecticut Ave S at CST E 44th St

- Date/Time: August 19, 2021 – 7:06 PM
- Crash Type: Fixed object (single-vehicle).
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 3: CST E 44th St E at CST Connecticut Ave

- Date/Time: October 16, 2021 – 5:11 PM
- Crash Type: Right-angle collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Patterns & Risk Factors

- All three serious crashes clustered on **E 44th St and Connecticut Ave area**, indicating local intersection and roadway departure risks.
- Occurred in **clear, dry daylight**, suggesting behavior, access, and intersection control as leading contributors.
- No fatalities during 2020–2024.

Recommended Safety Actions

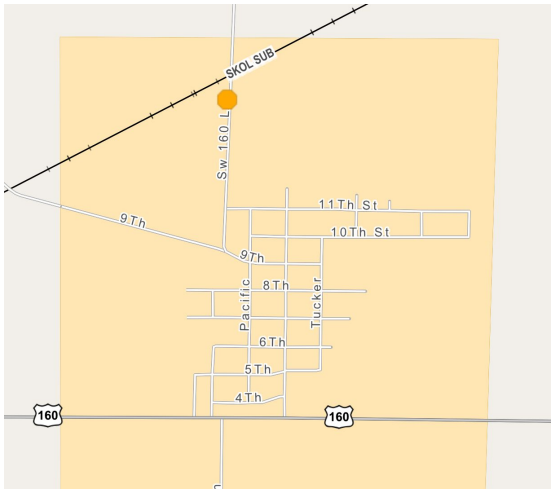
Engineering Countermeasures

1. Improve intersection control and sight distance at **E 44th St / Connecticut Ave** (signing/markings; consider all-way stop if warranted).
2. Add edge-line/centerline **rumble strips** or delineator posts near school approaches on **50th St**; review school-zone signing.
3. Refresh high-visibility pavement markings and install advance intersection warning where approach speeds are high.

Education & Enforcement

- Targeted enforcement on **speed** and **failure-to-yield** near E 44th/Connecticut and the school approach.
- Community outreach on neighborhood driving near schools and intersections.

Mindenmines, Missouri

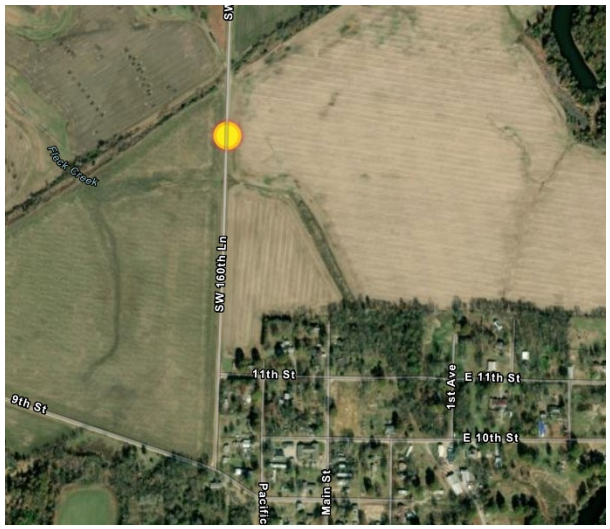


Snapshot (2020–2024)

- Fatal Crashes: 0
- Serious Injury Crashes: 1
- Primary Corridors: CRD SW 160 Ln

Crash Summaries
Crash 1: CRD SW 160 Ln S at CST 11th St

- Date/Time: May 27, 2020 – 12:05 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark with street lights off, Cloudy, Wet road surface.
- Outcome: Rider/occupant transported for medical treatment.



Patterns & Risk Factors

- Single serious crash on a local connector under **dark, unlit, wet** conditions → visibility and wet-weather traction are key concerns.
- No fatalities recorded in 2020–2024.

Recommended Safety Actions

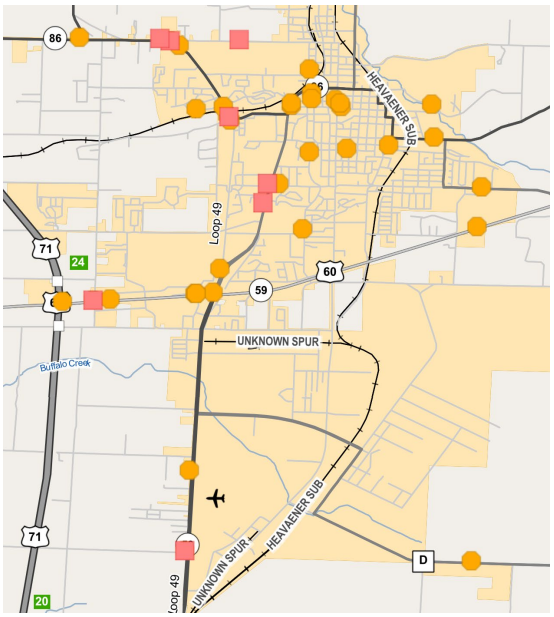
Engineering Countermeasures

1. Improve nighttime visibility (retroreflective markings/signs) along **CRD SW 160 Ln** near 11th St.
2. Evaluate drainage and pavement friction for **wet-weather** performance.
3. Consider edge-line delineators or shoulder treatments on rural approaches.

Education & Enforcement

- Emphasize **nighttime** and **wet-weather** driving practices.
- Spot enforcement on speed and lane discipline during low-visibility periods.

Neosho, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 8
- Serious Injury Crashes: 37
- Primary Corridors: MO 86, US 60, MO 59

Crash Summaries (First 10 Expanded)

Crash 1: CST Oakridge Dr S at CST Gooch Rd

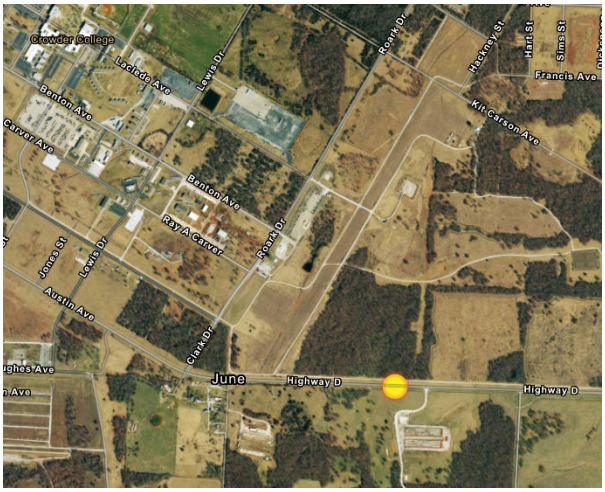
- Date/Time: February 9, 2020 – 4:30 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark with street lights off, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 2 (Fatal): BU 60 E at CST South St

- Date/Time: May 11, 2020 – 4:30 PM
- Crash Type: Right angle.
- Conditions: Daylight, Cloudy, Wet road surface.
- Outcome: Fatal crash.

Crash 3: MO 59 S at LP 49 (SJ)

- Date/Time: June 24, 2020 – 6:00 AM
- Crash Type: Right angle.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.



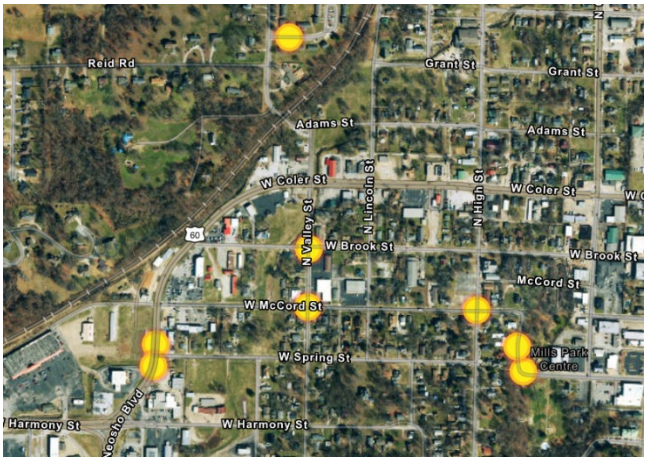
Crash 4: MO 86 E at CRD Gateway Dr

- Date/Time: July 24, 2020 – 8:55 AM
- Crash Type: Left-turn right-angle collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 5: US 60 E at CRD Cemetery Road

- **Date/Time: August 18, 2020 – 7:45 AM**
- **Crash Type: Out of control (single-vehicle).**
- **Conditions: Daylight, Clear, Dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Crash 6: CST W Spring St E at CST Spring Hill



- **Date/Time: November 19, 2020 – 6:30 PM**
- **Crash Type: Out of control (single-vehicle).**
- **Conditions: Dark with street lights off, Clear, Dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Crash 7: LP 49 S at CST Neosho Blvd

- **Date/Time: November 27, 2020 – 3:24 PM**
- **Crash Type: Out of control (single-vehicle).**
- **Conditions: Daylight, Clear, Dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Crash 8: CST Hilldale Dr E at CST Ozark Dr

- **Date/Time: December 10, 2020 – 11:22 PM**
- **Crash Type: Out of control (single-vehicle).**
- **Conditions: Dark with street lights off, Clear, Dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Crash 9: RT HH E at CST Lindsey Ln

- **Date/Time: January 6, 2021 – 10:04 AM**
- **Crash Type: Right angle.**
- **Conditions: Daylight, Cloudy, Wet road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

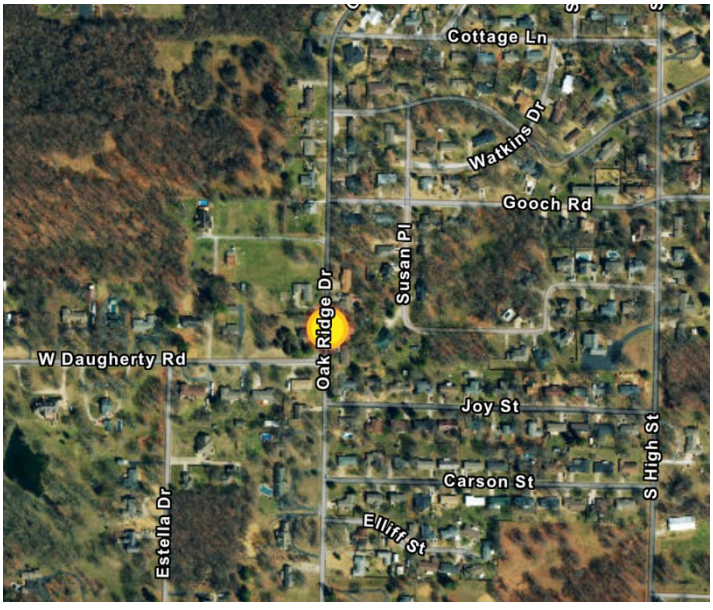
Additional Serious/Fatal Crashes (Summarized)

- Plus **35** additional serious/fatal crashes across MO 86, US 60, MO 59, LP 49, and city streets.
- Crash type distribution (all 45): Out of Control **17**, Rear End **6**, Right Angle **5**, Left Turn **4**, Head On **3**, Pedestrian **3**, Left Turn Right Angle Collision **2**, Pedalcycle **2**, Sideswipe **2**, Other **1**.
- Conditions: **Daylight 32**; **Dark—lights on 7**; **Dark—lights off 6**. Surface: **Dry 41**, **Wet 4**.

Patterns & Risk Factors

- Strong concentration of severe crashes on **MO 86** and **US 60** corridors.
- Many incidents in **clear, dry** conditions → driver behavior, turning conflicts, and access density likely contributors.
- Mix of **single-vehicle run-off-road** (out-of-control) and **intersection conflicts** (left-turn/right-angle), with some **nighttime** and **unlit** segments involved.

Accident Hot Spots



- **MO 86 E at CST Harmony St** — 4 crashes; common types: Left Turn (2), Out of Control (1), Rear End (1).
- **US 60 E at CST Lusk Dr** — 3 crashes; common types: Rear End (1), Head On (1), Left Turn (1).
- **MO 86 E at CST Baxter St (SJ)** — 3 crashes; common types: Out of Control (1), Rear End (1), Sideswipe (1).
- **US 60 E at CRD Kodiak Rd** — 3 crashes; common types: Left Turn (1), Rear End (1), Out of Control (1).

Recommended Safety Actions

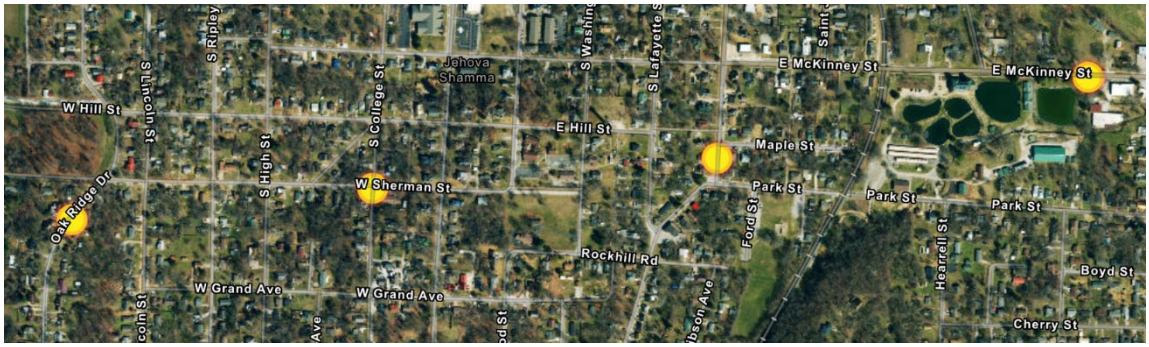
Engineering Countermeasures

1. **MO 86 (Harmony/Baxter nodes):** Add/protect left-turn phasing, extend turn bays, improve intersection lighting and conspicuity.

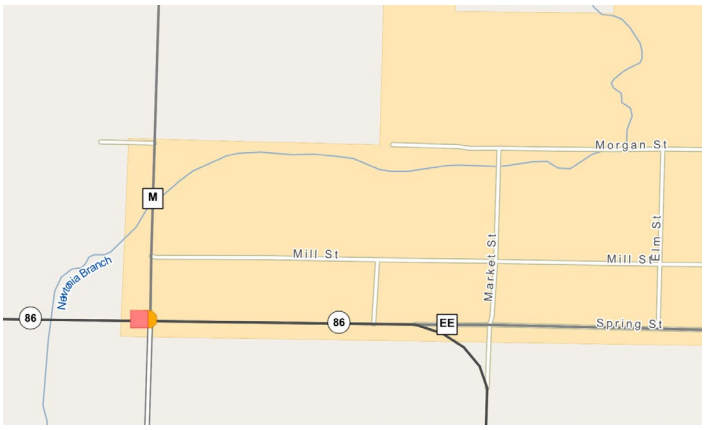
2. **US 60 (Lusk/Kodiak nodes):** Access management, improved signing/markings, consider raised medians or RCUTs if warranted.
3. **Run-off-road segments (out-of-control pattern):** Shoulder/centerline rumble strips, enhanced curve delineation, and consider HFST where friction is an issue.
4. Refresh high-visibility pavement markings and add advance intersection warning on approach legs with higher speeds.

Education & Enforcement

- Targeted enforcement on **failure-to-yield left turns**, **following distance**, and **speed** at hot-spot intersections.
- Community outreach on **nighttime visibility** and **rural highway** driving behaviors.



Newtonia, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 1
- Serious Injury Crashes: 1
- Primary Corridors: MO 86

Crash Summaries
Crash 1 (Fatal): MO 86 E at CRD Starling

- Date/Time: June 13, 2023 – 4:25 PM
- Crash Type: Angle.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Fatal crash.

Crash 2: MO 86 E at CRD Starling

- Date/Time: October 12, 2024 – 11:17 AM
- Crash Type: Avoiding.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Patterns & Risk Factors

- Both severe crashes occurred at the **same location (MO 86 & CRD Starling)**, indicating a localized risk at this junction.
- **Clear, dry daylight** conditions for both events suggest intersection control/visibility and turning or evasive maneuvers as key factors.

Recommended Safety Actions

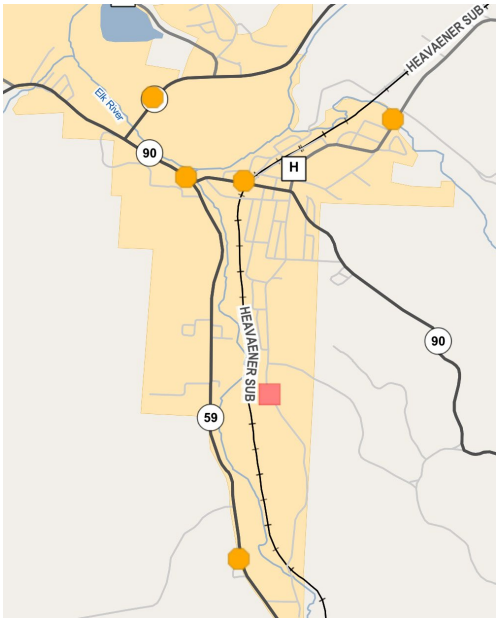
Engineering Countermeasures

1. Improve intersection control at **MO 86 & CRD Starling** (advance warning signs, stop sign conspicuity, consider turn lanes).
2. Enhance sight distance and approach **delineation** (chevrons, reflectors, markings).
3. Review approach speeds and consider speed feedback or targeted enforcement at the junction.

Education & Enforcement

- Outreach on **gap acceptance** and **safe evasive maneuvers** at rural intersections.
- Focused **speed and yielding** enforcement near CRD Starling.

Noel, Missouri



Snapshot (2020–2024)

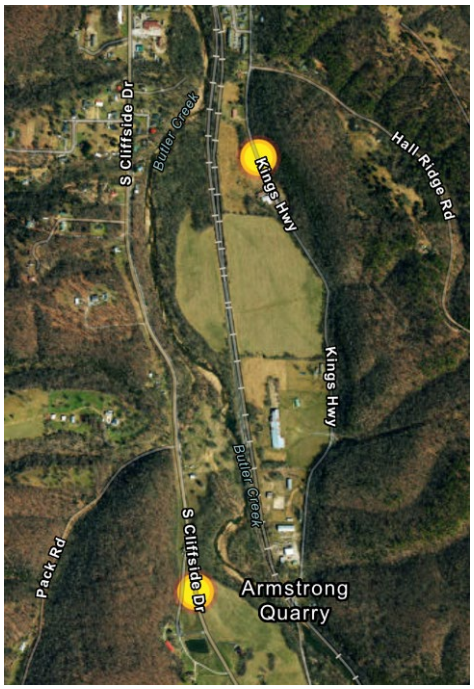
- Fatal Crashes: 1
- Serious Injury Crashes: 5
- Primary Corridors: MO 59, CST S Kings Hwy, MO 90

Crash Summaries

Crash 1: MO 90 E at CST Foster St

- Date/Time: July 16, 2021 – 4:07 PM
- Crash Type: Pedalcycle.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 2: MO 59 S at PVT Cave Rd (SJ)



- Date/Time: March 11, 2022 – 8:59 PM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark, streetlights on, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 3: MO 59 S at CRD Silver Rd

- Date/Time: August 18, 2022 – 9:20 PM
- Crash Type: Head-on collision.
- Conditions: Dark, streetlights off, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 4: MO 59 S at Bridge A3956

- Date/Time: October 24, 2024 – 7:10 AM
- Crash Type: Head-on collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 5: CST S Kings Hwy S at CRD Hall Rdg Rd

- Date/Time: November 2, 2024 – 12:00 AM
- Crash Type: Pedestrian.
- Conditions: Dark, streetlights off, Clear, Dry road surface.
- Outcome: Fatal crash.

Crash 6: MO 59 S at CRD Deer Run Rd

- **Date/Time: December 1, 2024 – 9:55 PM**
- **Crash Type: Out of control (single-vehicle).**
- **Conditions: Dark, streetlights off, Clear, Dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Patterns & Risk Factors

- **Most severe crashes cluster along MO 59 through Noel (head-on and loss-of-control).**
- **Nighttime, unlit conditions factor into multiple events, including the fatal pedestrian crash on S Kings Hwy.**
- **Mix of crash types (head-on, out-of-control, pedalcycle) under clear/dry conditions suggests behavior, speed, and visibility are key contributors.**

Recommended Safety Actions

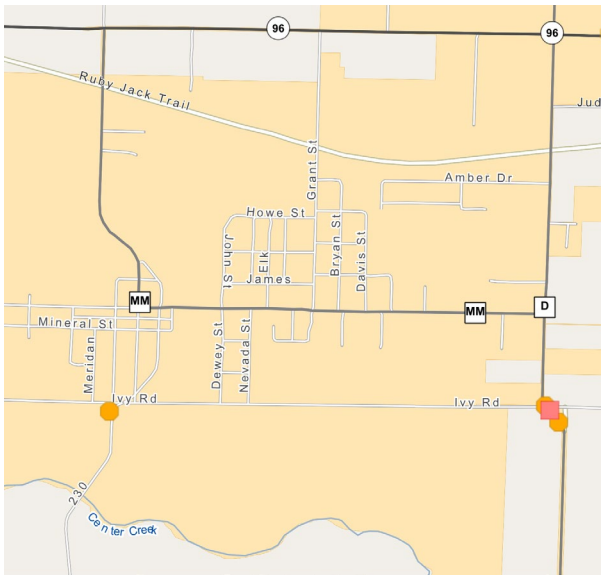
Engineering Countermeasures

1. **MO 59 corridor: Improve delineation and lighting at rural/transition segments; evaluate centerline/shoulder rumble strips.**
2. **Assess passing/no-passing zones and consider median treatments or turn lanes where feasible to reduce head-on risk.**
3. **S Kings Hwy (Hall Ridge Rd area): Enhance pedestrian lighting, crosswalk visibility, and traffic calming.**

Education & Enforcement

- **Nighttime enforcement emphasizing speed, impaired driving, and pedestrian awareness.**
- **Community outreach on rural corridor safety and safe overtaking practices.**

Oronogo, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 1
- Serious Injury Crashes: 4
- Primary Corridors: RT D, MO 96, CRD 230 S

Crash Summaries

Crash 1: RT D E at CRD Ivy Rd

- Date/Time: June 19, 2020 – 3:18 PM
- Crash Type: Out of control (single-vehicle).
- Conditions: Daylight, clear weather, dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 2 (Fatal): RT D E at CRD Ivy Road

- Date/Time: July 18, 2020 – 7:05 PM
- Crash Type: Out of control (single-vehicle).
- Conditions: Daylight, clear weather, dry road surface.
- Outcome: Fatal crash.

Crash 3: MO 96 E at RT D

- Date/Time: September 17, 2022 – 2:05 PM
- Crash Type: Out of control (single-vehicle).
- Conditions: Daylight, clear weather, dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 4: CRD 230 S at CST 4th St

- Date/Time: August 22, 2023 – 5:50 PM
- Crash Type: Head-on collision.
- Conditions: Daylight, clear weather, dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 5: RT D E at CO RTD to CRD Ivy Rd

- **Date/Time: October 26, 2023 – 11:49 PM**
- **Crash Type: Out of control (single-vehicle).**
- **Conditions: Dark, street lights off, clear weather, dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Patterns & Risk Factors

- **Repeated run-off-road/out-of-control events on RT D (including the fatal crash).**
- **One head-on on a local connector (CRD 230 S at 4th St) suggests potential lane discipline or passing issues.**
- **Most crashes in clear, dry, daylight conditions → behavior/speed and roadway geometry likely contributors; one nighttime, unlit event on RT D.**

Recommended Safety Actions

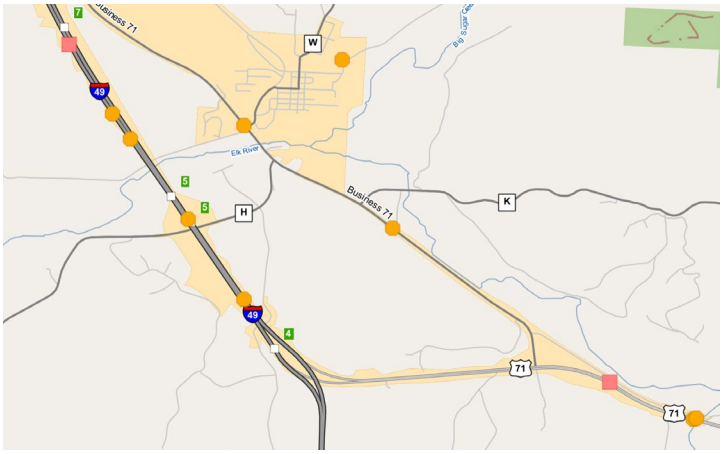
Engineering Countermeasures

1. **RT D corridor: Add/refresh edge lines and chevrons; consider shoulder/centerline rumble strips and HFST on curve/departure segments.**
2. **CRD 230 S at 4th St: Review sight distance and approach control; evaluate centerline treatments to reduce head-on risk.**
3. **Upgrade retroreflectivity of signs/markings and consider targeted lighting at RT D locations with nighttime crashes.**

Education & Enforcement

- **Enforcement on speed and lane discipline along RT D and CRD 230 S.**
- **Community messaging on rural curve navigation and nighttime driving.**

Pineville, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 2
- Serious Injury Crashes: 9
- Primary Corridors: IS 49, US 71, BU 71

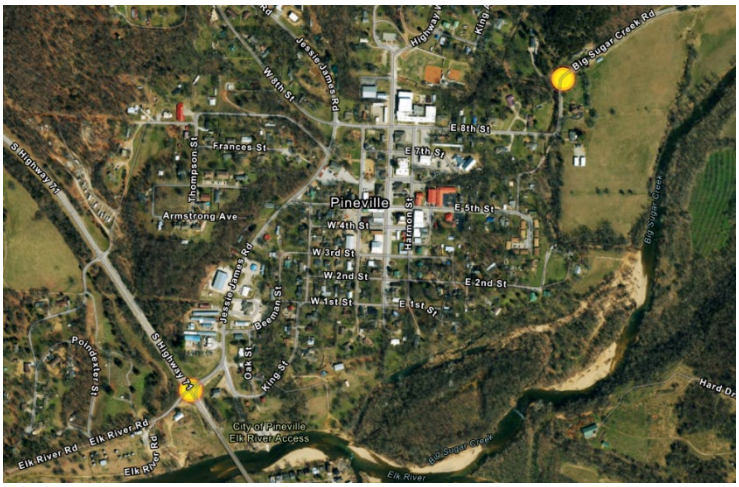
Crash Summaries (First 10 Expanded)
Crash 1: US 71 N at BRIDGE A6651

- Date/Time: April 3, 2020 – 1:15 PM
- Crash Type: Out of control.
- Conditions: Daylight, rain, wet road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 2: IS 49 N at ERM North IS 49 Mile 6.0

- Date/Time: May 2, 2021 – 4:17 PM
- Crash Type: Head-on.
- Conditions: Daylight, cloudy, wet road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 3: BU 71 S at CRD Havenhurst Dr

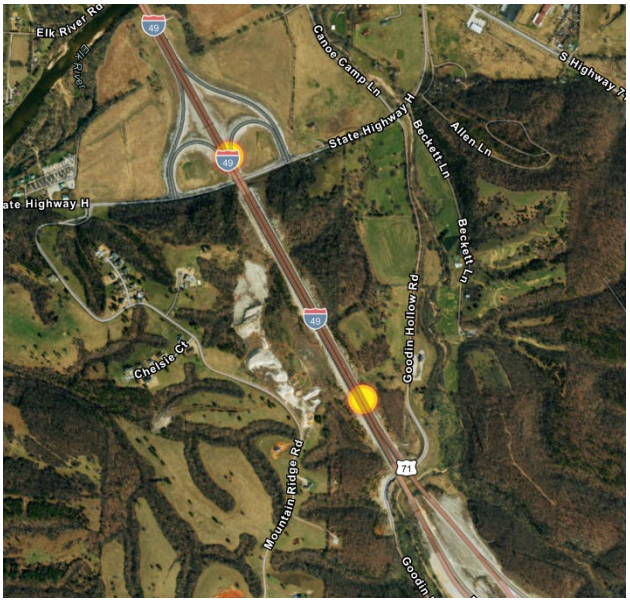


- Date/Time: July 24, 2021 – 9:23 PM
- Crash Type: Rear-end.
- Conditions: Dark with street lights on, clear, dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 4 (Fatal): IS 49 S at ERM South IS 49 Mile 7.2

- Date/Time: October 20, 2021 – 1:32 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark with street lights off, clear, dry road surface.
- Outcome: Fatal crash.

Crash 5: IS 49 N at ERM North IS 49 Mile 5.4

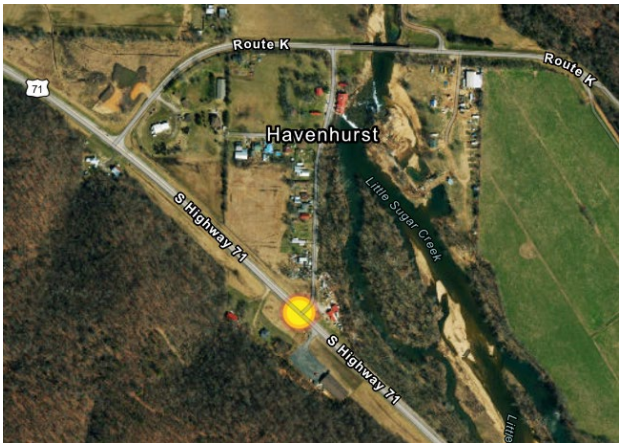


- Date/Time: October 21, 2021 – 11:00 AM
- Crash Type: Parking or parked car.
- Conditions: Daylight, clear, dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 6 (Fatal): US 71 N at CRD Brush Creek Rd

- Date/Time: September 6, 2022 – 9:35 PM
- Crash Type: Wrong way on divided highway.
- Conditions: Dark with street lights off, clear, dry road surface.
- Outcome: Fatal crash.

Crash 7: US 71 S at BRIDGE A6650



- Date/Time: November 25, 2022 – 8:26 PM
- Crash Type: Out of control.
- Conditions: Dark with street lights off, clear, dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 8: BU 71 S at RT W

- Date/Time: October 20, 2023 – 3:49 PM
- Crash Type: Left turn.
- Conditions: Daylight, clear, dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

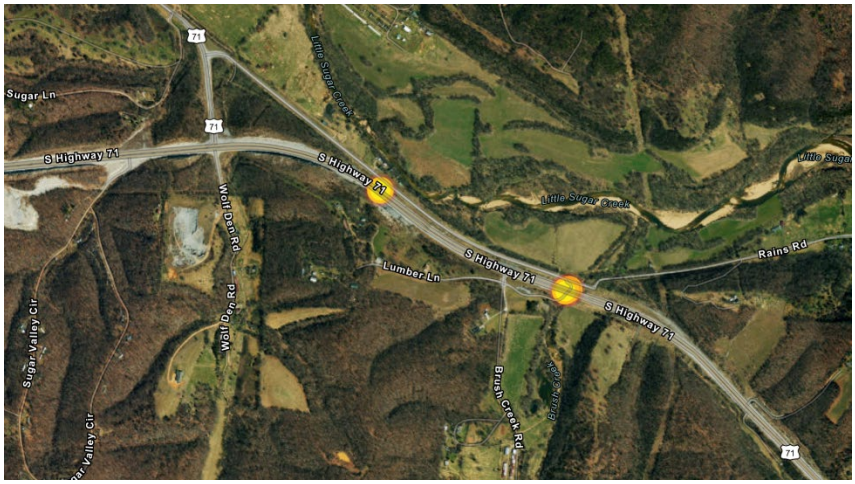
Crash 9: IS 49 S at ERM South IS 49 Mile 6.8

- Date/Time: November 4, 2024 – 5:14 PM
- Crash Type: Out of control.
- Conditions: Dawn/dusk, rain, wet road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 10: IS 49 S at ERM South IS 49 Mile 6.6

- Date/Time: November 18, 2024 – 3:26 PM
- Crash Type: Out of control.
- Conditions: Daylight, rain, wet road surface.
- Outcome: Rider/occupant transported for medical treatment.

Additional Serious/Fatal Crashes (Summarized)



- November 18, 2024 – 7:58 PM | CST Big Sugar Rd S at CST 8th St | Out of control | Dark with street lights off, rain, wet | Serious.

Patterns & Risk Factors

- Corridor concentration on **IS 49/US 71/BU 71** with several **run-off-road/out-of-control** events.
- **Wrong-way fatality** on US 71 (divided highway) indicates median/access and signing issues.
- Multiple crashes in **rain/wet** conditions and **nighttime/unlit** segments.

Recommended Safety Actions

Engineering Countermeasures

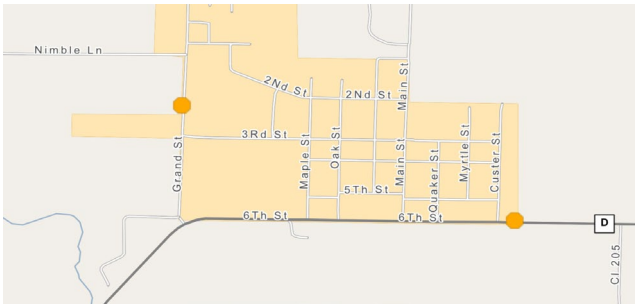
1. **IS 49/US 71:** Review median treatments and **wrong-way detection/signing** at ramps; enhance interchange lighting and delineation.
2. Apply **HFST** and add/refresh **edge/centerline rumble strips** on departure-prone segments.
3. Improve drainage and pavement friction where wet-weather loss of control appears.
4. Evaluate protected turn movements and conspicuity at **BU 71/RT W** and similar intersections.

Education & Enforcement

- Targeted enforcement on **speed**, **impaired driving**, and **nighttime visibility**.
- Outreach on wet-weather driving and divided-highway lane discipline.

Purcell, Missouri

Snapshot (2020–2024)



- Fatal Crashes: 0
- Serious Injury Crashes: 2
- Primary Corridors: RT D, CST Grand St

Crash Summaries
Crash 1: RT D E at CRD 6th St (EJ)

- Date/Time: January 28, 2021 – 5:19 PM
- Crash Type: Rear-end collision.
- Conditions: Daylight, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 2: CST Grand St S at CST 3rd St

- Date/Time: February 3, 2024 – 1:30 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark with street lights off, Clear, Dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Patterns & Risk Factors

- Small sample, but mix of **rear-end at a state route junction** and **nighttime single-vehicle loss of control** on a local street.
- One crash occurred under **dark, unlit** conditions → nighttime visibility/delineation may be a factor.

Recommended Safety Actions

Engineering Countermeasures

1. **RT D @ 6th St:** Improve advance warning and approach markings; evaluate turn-lane storage or signage to reduce rear-end risk.
2. **Grand St @ 3rd St:** Add/upgrade lighting and edge-line/centerline delineation; check surface condition and drainage.
3. Refresh retroreflective signs and pavement markings on key approaches.
4. Consider centerline/shoulder **rumble strips** where geometry and width allow.

Education & Enforcement

- Targeted enforcement for **following distance** and approach speeds at RT D intersections.
- Community messaging on **nighttime driving** and lane control on local streets.

Redings Mill, Missouri

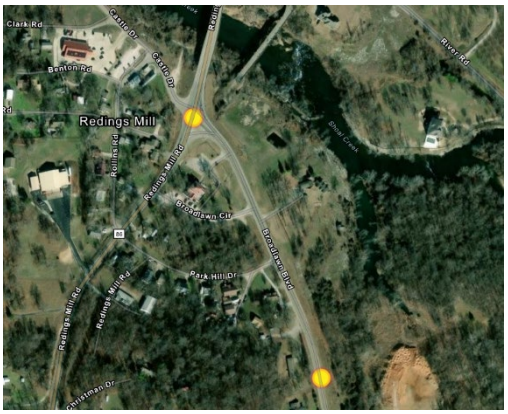
Snapshot (2020–2024)

- Fatal Crashes: 0
- Serious Injury Crashes: 2
- Primary Corridors: MO 86, RT NN

Crash Summaries

Crash 1: MO 86 E at CST Castle Drive

- Date/Time: May 30, 2021 – 3:30 PM
- Crash Type: Left turn.
- Conditions: Daylight, Cloudy, Dry road surface.
- Details: Two-vehicle intersection conflict (turning/angle).
- Outcome: Rider/occupant transported for medical treatment.



Crash 2: RT NN S at CST Brandi Ln

- Date/Time: August 12, 2023 – 10:48 PM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark with street lights off, Cloudy, Dry road surface.
- Details: Single-vehicle roadway departure.
- Outcome: Rider/occupant transported for medical treatment.

Patterns & Risk Factors

- Small sample shows **intersection turning conflict** on MO 86 and a **nighttime, unlit single-vehicle departure** on RT NN.
- Mix suggests attention to **lighting/visibility** and **turning movement control** at key junctions.

Recommended Safety Actions

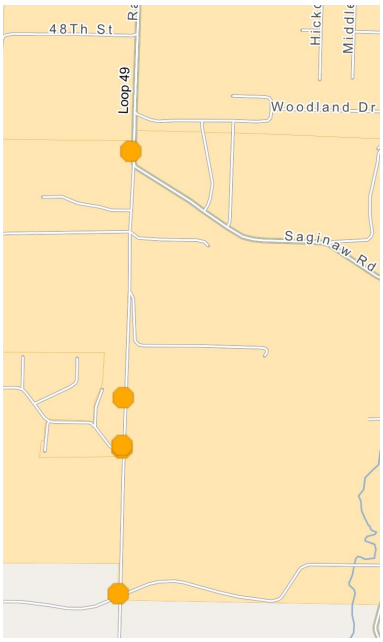
Engineering Countermeasures

1. **MO 86 @ Castle Dr:** Enhance intersection conspicuity (advance warning, turn-lane markings); assess protected turn phasing if warranted.
2. **RT NN (Brandi Ln area):** Improve nighttime delineation (edge lines, chevrons, reflectors); consider shoulder/centerline rumble strips on departure-prone segments.
3. Refresh retroreflective signs/markings along both corridors.

Education & Enforcement

- Targeted enforcement on **failure-to-yield left turns** and **nighttime speed control**.
- Community outreach on safe turning gaps and rural nighttime driving.

Saginaw, Missouri



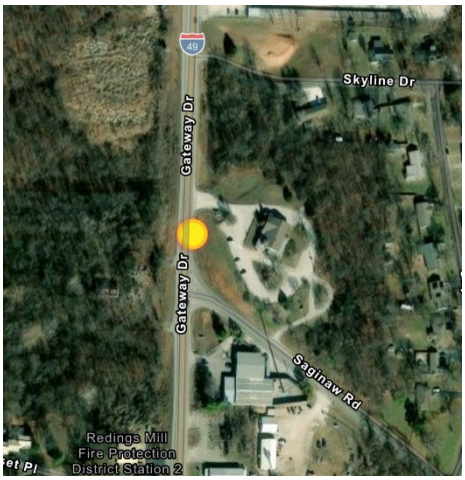
Snapshot (2020–2024)

- Fatal Crashes: 0
- Serious Injury Crashes: 5
- Primary Corridors: LP 49

Crash Summaries

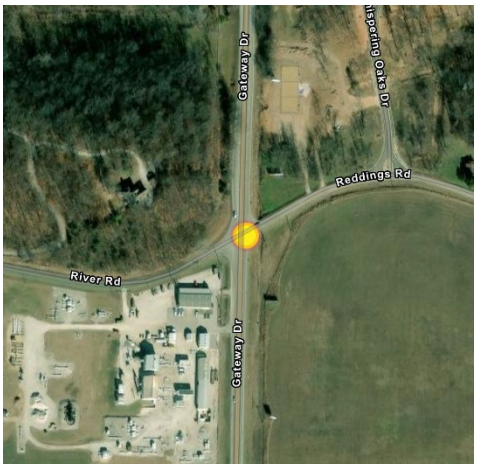
Crash 1: LP 49 S at CRD River Road

- Date/Time: May 3, 2021 – 4:08 PM
- Crash Type: Left-turn right-angle collision.
- Conditions: Daylight, cloudy, dry road surface.
- Details: Two-vehicle intersection conflict during a turning movement.
- Outcome: Rider/occupant transported for medical treatment.



Crash 2: LP 49 S at CST Wildwood Dr

- Date/Time: October 19, 2021 – 7:20 PM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark with street lights off, clear, dry road surface.
- Details: Vehicle left the roadway.
- Outcome: Rider/occupant transported for medical treatment.



Crash 3: LP 49 S at CST Wildwood Dr

- Date/Time: October 20, 2022 – 9:20 PM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark with street lights off, clear, dry road surface.
- Details: Vehicle departed the roadway on approach to the intersection.
- Outcome: Rider/occupant transported for medical treatment.

Crash 4: LP 49 S at CST Saginaw Rd

- Date/Time: May 16, 2024 – 3:21 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark with street lights off, rain, wet road surface.
- Details: Loss of control in wet, unlit conditions.
- Outcome: Rider/occupant transported for medical treatment.

Crash 5: LP 49 S at CST Wildwood Dr

- Date/Time: November 15, 2024 – 3:25 PM
- Crash Type: Head-on collision.
- Conditions: Daylight, clear, dry road surface.
- Details: Opposing-direction conflict near the intersection.
- Outcome: Rider/occupant transported for medical treatment.

Patterns & Risk Factors

- Repeated severe crashes at **LP 49 & Wildwood Dr** (three separate incidents), indicating an intersection hot spot.
- Mix of **run-off-road** and **head-on** with one **turning/angle** crash → suggests approach speed, access/turning control, and potential sight-distance issues.
- Several events in **dark, unlit** conditions; one in **rain/wet** conditions.

Accident Hot Spots

- **LP 49 S at CST Wildwood Dr** — 3 crashes (two out-of-control single-vehicle, one head-on).

Recommended Safety Actions

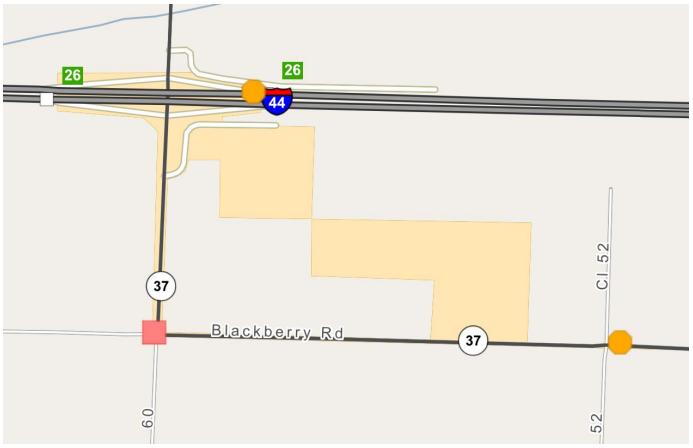
Engineering Countermeasures

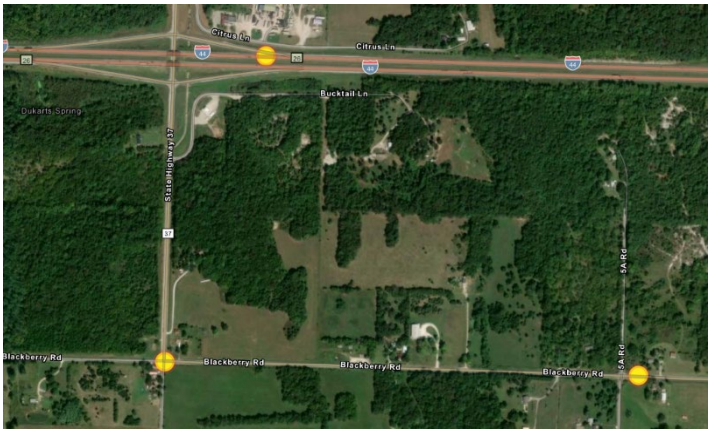
1. **LP 49 & Wildwood Dr:** Improve intersection conspicuity and control (advance warning, turn-lane channelization, protected lefts if warranted), enhance lighting.
2. Add **edge/centerline rumble strips** and high-visibility markings on LP 49 approaches; evaluate **HFST** where loss-of-control recurs.
3. Review **sight distance**, signing, and access near Wildwood Dr and Saginaw Rd approaches.

Education & Enforcement

- Targeted enforcement on **speed**, **lane discipline**, and **failure-to-yield** at LP 49 intersections.
- Community messaging on **nighttime** and **wet-weather** driving on rural high-speed corridors.

Sarcoxie, Missouri





Snapshot (2020–2024)

- Fatal Crashes: 1
- Serious Injury Crashes: 2
- Primary Corridors: MO 37, IS 44

Crash Summaries

Crash 1: MO 37 S at CRD 52

- Date/Time: March 12, 2020 – 12:00 AM
- Crash Type: Head-on collision.
- Conditions: Daylight, clear, dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 2 (Fatal): MO 37 S at CRD 60

- Date/Time: November 29, 2022 – 3:46 PM
- Crash Type: Right-angle collision.
- Conditions: Daylight, clear, dry road surface.
- Outcome: Fatal crash.

Crash 3: IS 44 W at RP 2228

- Date/Time: July 3, 2023 – 7:11 AM
- Crash Type: Avoiding maneuver (single-vehicle).
- Conditions: Daylight, clear, dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Patterns & Risk Factors

- Severe crashes are split between **MO 37** (two intersection/opposing-direction events) and **IS 44** (single-vehicle evasive maneuver).
- All occurred in **clear, dry, daylight** conditions → behavior, turning gaps, and high-speed approach dynamics are likely contributors.

Recommended Safety Actions

Engineering Countermeasures

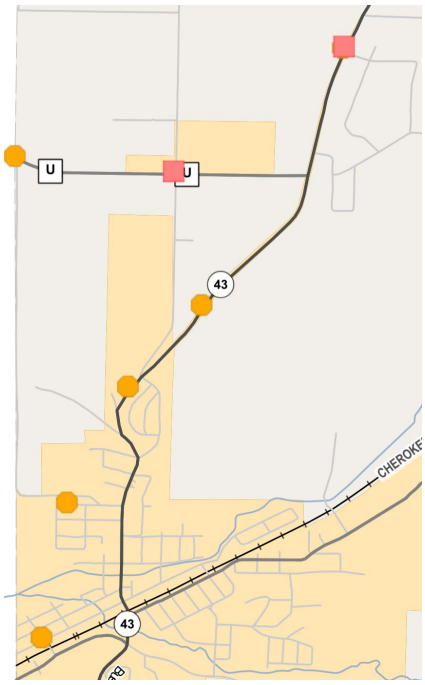
1. **MO 37 at CRD 52 & CRD 60:** Enhance intersection conspicuity and approach control; review protected turn movements and sight distance; consider turn-lane storage/offsets.

2. **IS 44 near RP 2228:** Review shoulder condition, delineation, and rumble strips; evaluate HFST if evasive/loss-of-control recurs.
3. Refresh high-visibility markings and retroreflective signing on rural approaches.

Education & Enforcement

- Targeted enforcement on **speed**, **passing**, and **failure-to-yield** along MO 37.
- Outreach on safe **evasive maneuvers** and following distance on freeways.

Seneca, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 2
- Serious Injury Crashes: 6
- Primary Corridors: MO 43, RT U, CST Oneida

Crash Summaries

Crash 1: MO 43 S at PVT Avalon Ln

- Date/Time: July 4, 2022 – 9:51 AM
- Crash Type: Rear-end collision.
- Conditions: Daylight, clear, dry road surface.
- Details: Following-distance/queue conflict on approach.
- Outcome: Fatal crash.

Crash 2: CST Oneida St E at CST Billings Ave

- Date/Time: July 6, 2022 – 4:39 AM
- Crash Type: Right-angle collision.
- Conditions: Daylight, clear, dry road surface.
- Details: Two-vehicle intersection conflict (turning/angle).
- Outcome: Rider/occupant transported for medical treatment.

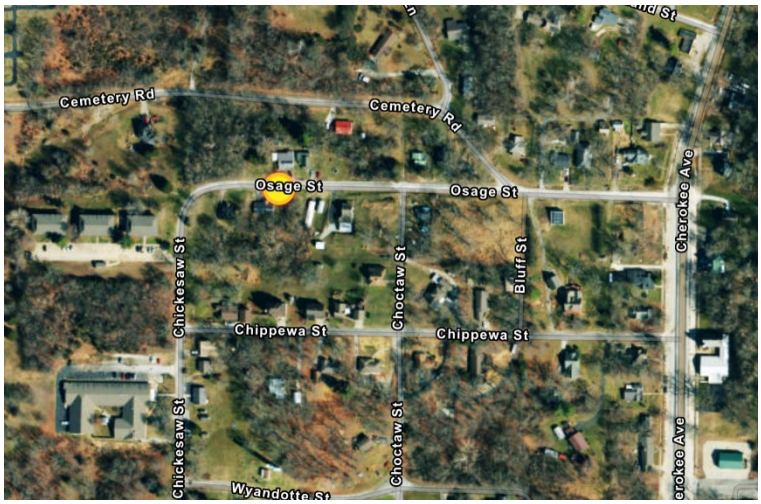
Crash 3: MO 43 S at PVT Avalon Ln

- Date/Time: September 2, 2022 – 11:16 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Daylight, clear, dry road surface.
- Details: Single-vehicle roadway departure.
- Outcome: Rider/occupant transported for medical treatment.

Crash 4: MO 43 S at CRD Bethel Rd

- Date/Time: November 3, 2022 – 3:51 PM
- Crash Type: Head-on collision.
- Conditions: Daylight, clear, dry road surface.
- Details: Opposing-direction conflict in lane/while passing.
- Outcome: Rider/occupant transported for medical treatment.

Crash 5: CST Osage St E at CST Checkesaw St



- Date/Time: July 6, 2023 – 12:22 PM
- Crash Type: Pedalcycle.
- Conditions: Daylight, cloudy, dry road surface.
- Details: Vehicle struck a bicyclist.
- Outcome: Rider/occupant transported for medical treatment.

Crash 6: RT U E at CRD Bethel Rd

- Date/Time: April 4, 2024 – 7:21 AM
- Crash Type: Right-angle collision.
- Conditions: Daylight, clear, dry road surface.
- Details: Two-vehicle intersection conflict (turning/angle).
- Outcome: Fatal crash.

Crash 7: MO 43 S at CRD Bethel Rd

- Date/Time: April 12, 2024 – 3:58 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark with street lights off, clear, dry road surface.
- Details: Single-vehicle roadway departure.
- Outcome: Rider/occupant transported for medical treatment.

Crash 8: RT U E at PVT State Line Rd

- Date/Time: May 6, 2024 – 5:31 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark with street lights off, clear, dry road surface.
- Details: Single-vehicle roadway departure.
- Outcome: Rider/occupant transported for medical treatment.

Patterns & Risk Factors

- Corridor concentration on **MO 43** and **RT U**; repeated incidents near **CRD Bethel Rd** (MO 43 & RT U approaches).
- **Two fatalities**: a rear-end on MO 43 (Avalon Ln) and a right-angle at RT U & Bethel Rd.
- Several crashes in **dark, unlit** conditions (early-morning departures), plus a **pedalcycle** crash on local streets.

Recommended Safety Actions

Engineering Countermeasures

1. **MO 43 & CRD Bethel Rd / RT U & Bethel Rd:** Enhance intersection conspicuity (advance warning, high-visibility markings), evaluate protected turn phases/turn lanes.
2. **Run-off-road segments (2024 night crashes):** Add/refresh edge/centerline **rumble strips**, improve curve/approach delineation, and consider **HFST** where appropriate.
3. **Local streets (Oneida, Osage/Checkesaw):** Refresh markings and signing; review bicycle accommodation and sight distance.

Education & Enforcement

- Targeted enforcement on **following distance**, **speed**, and **failure-to-yield** at MO 43/RT U approaches.
- Community outreach on **nighttime driving** and **bicycle awareness** on local streets.

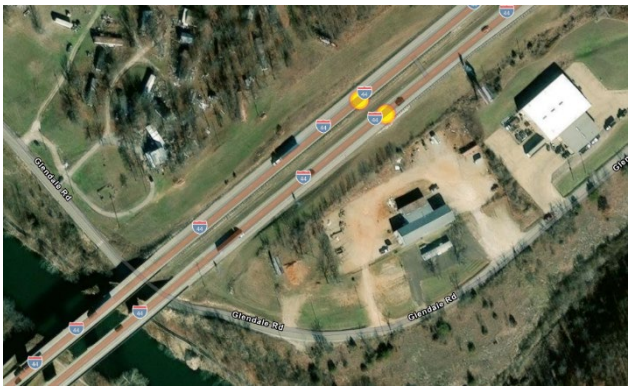
Shoal Creek Drive, Missouri

Snapshot (2020–2024)

- Fatal Crashes: 1
- Serious Injury Crashes: 1
- Primary Corridors: IS 44

Crash Summaries

Crash 1: IS 44 W at ERM West IS 44 Mile 6.2



- Date/Time: August 19, 2021 – 4:12 PM
- Crash Type: Rear-end collision.
- Conditions: Daylight, rain, wet road surface.
- Details: Following-distance/queue conflict on freeway approach.
- Outcome: Rider/occupant transported for medical treatment.

Crash 2 (Fatal): IS 44 E at ERM East IS 44 Mile 6.2

- Date/Time: September 10, 2024 – 3:02 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark with street lights off, clear, dry road surface.
- Details: Single-vehicle roadway departure.
- Outcome: Fatal crash.

Patterns & Risk Factors

- Both severe crashes occurred on **IS 44** near Mile 6.2 (opposite directions), indicating a corridor-specific risk segment.
- Different contributing contexts: **wet-weather rear-end** vs. **nighttime, unlit single-vehicle departure** → suggests needs around **visibility/delineation, wet-weather friction, and queue awareness**.

Recommended Safety Actions

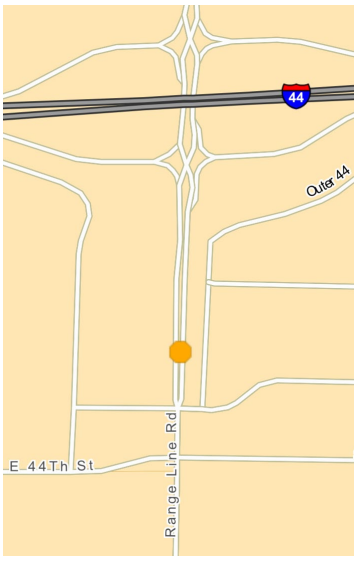
Engineering Countermeasures

1. **IS 44 Mile ~6.2 segment:** Enhance nighttime **delineation**, shoulder/edge rumble strips, and review guardrail/clear zone.
2. Apply **HFST** or assess pavement friction if wet-weather rear-end/lossof-control recurs.
3. Review **merge/exit signing** and advance queue warning if congested periods occur.

Education & Enforcement

- Enforcement of **following distance** and **speed** during rain events.
- Public messaging on **nighttime freeway driving** and maintaining lanes in unlit conditions.

Silver Creek, Missouri

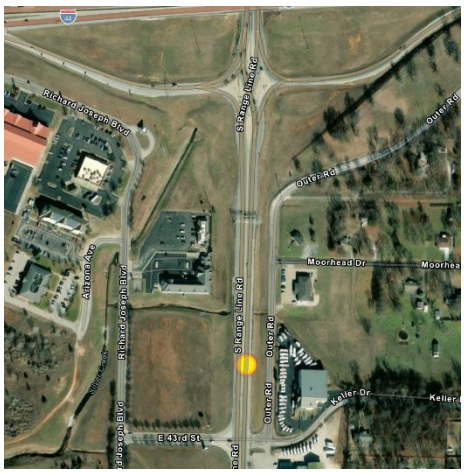


Snapshot (2020–2024)

- Fatal Crashes: 0
- Serious Injury Crashes: 1
- Primary Corridors: LP 49

Crash Summaries
Crash 1: LP 49 N at CST E 43rd St

- Date/Time: December 20, 2020 – 2:04 PM
- Crash Type: Out of control (single-vehicle).
- Conditions: Daylight, clear, dry road surface.
- Details: Single-vehicle roadway departure.
- Outcome: Rider/occupant transported for medical treatment.



Patterns & Risk Factors

- Single severe crash on **LP 49** under clear, dry, daytime conditions → behavior/speed and roadway geometry more likely than weather.

Recommended Safety Actions

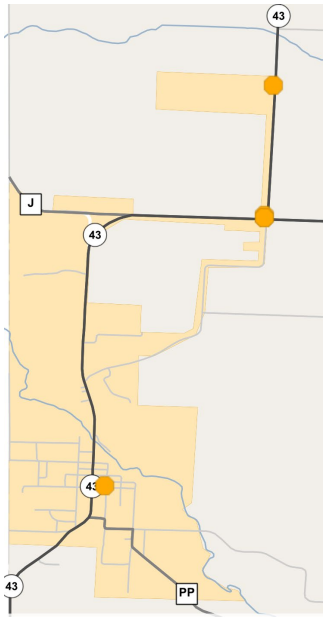
Engineering Countermeasures

1. Enhance **edge-line/centerline delineation** and add **rumble strips** where feasible along LP 49 approaches to E 43rd St.
2. Review **shoulder condition and clear zone** at the departure segment; consider **HFST** if friction is low.
3. Refresh high-visibility **markings/signing** on approaches.

Education & Enforcement

- Focused enforcement on **speed** and **lane discipline** along LP 49.
- Public messaging on rural **run-off-road** risks in clear conditions.

Southwest City, Missouri



Snapshot (2020–2024)

- Fatal Crashes: 0
- Serious Injury Crashes: 5
- Primary Corridors: MO 43, MO 90, Comanche St

Crash Summaries

Crash 1: MO 43 S at MO 90

- Date/Time: June 11, 2020 – 5:25 PM
- Crash Type: Out of control (single-vehicle).
- Conditions: Daylight, clear, dry road surface.
- Details: Single-vehicle roadway departure.
- Outcome: Rider/occupant transported for medical treatment.

Crash 2: MO 43 S at MO 90

- Date/Time: August 30, 2020 – 10:27 PM
- Crash Type: Right-angle collision.
- Conditions: Dark (lighting unknown), clear, dry road surface.
- Details: Two-vehicle intersection conflict (turning/angle).
- Outcome: Rider/occupant transported for medical treatment.

Crash 3: MO 43 S at MO 90

- Date/Time: April 11, 2021 – 1:40 PM
- Crash Type: Right-angle collision.
- Conditions: Daylight, cloudy, dry road surface.
- Details: Two-vehicle intersection conflict (turning/angle).
- Outcome: Rider/occupant transported for medical treatment.

Crash 4: CST E Comanche St E at CST Birks St

- Date/Time: May 25, 2023 – 5:42 PM
- Crash Type: Pedalcycle.
- Conditions: Daylight, clear, dry road surface.
- Details: Vehicle struck a bicyclist.
- Outcome: Rider/occupant transported for medical treatment.

Crash 5: MO 43 S at MO 90

- **Date/Time: November 17, 2023 – 6:40 AM**
- **Crash Type: Out of control (single-vehicle).**
- **Conditions: Dark with street lights off, rain, wet road surface.**
- **Details: Single-vehicle roadway departure.**
- **Outcome: Rider/occupant transported for medical treatment.**

Patterns & Risk Factors

- **Clear clustering at MO 43 & MO 90 (four serious crashes) with a mix of right-angle conflicts and run-off-road events.**
- **One bicycle crash on Comanche St indicates vulnerable road user exposure on local streets.**
- **Crashes span daylight and dark; one occurred in rain/wet conditions → approach speed, visibility/lighting, and intersection control likely contributors.**

Accident Hot Spots

- **MO 43 S at MO 90 — 4 crashes (right-angle and out-of-control patterns).**

Recommended Safety Actions

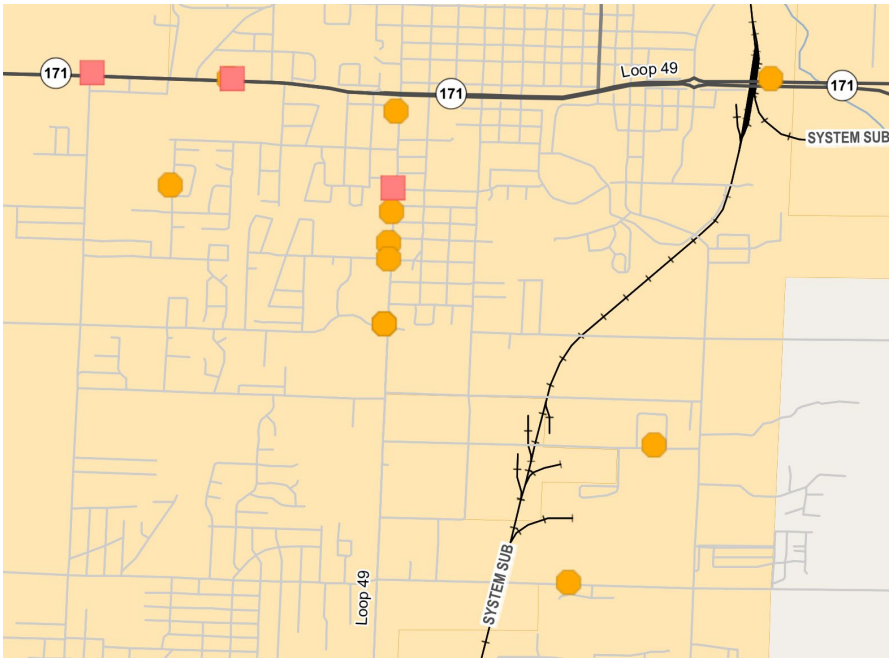
Engineering Countermeasures

1. **MO 43 & MO 90: Improve intersection conspicuity (advance warning, high-visibility markings), evaluate protected left-turn phasing and turn-lane storage; review lighting.**
2. **Address run-off-road risk on approaches (enhanced edge lines/chevrons, centerline/shoulder rumble strips, consider HFST if friction is an issue).**
3. **Comanche & Birks: Improve bike visibility and accommodation (signing, markings, sight distance review).**

Education & Enforcement

- **Targeted enforcement on failure-to-yield, speed, and night/wet-weather driving at the MO 43/MO 90 approaches.**
- **Community outreach on bicycle awareness and safe turning gaps.**

Webb City, Missouri



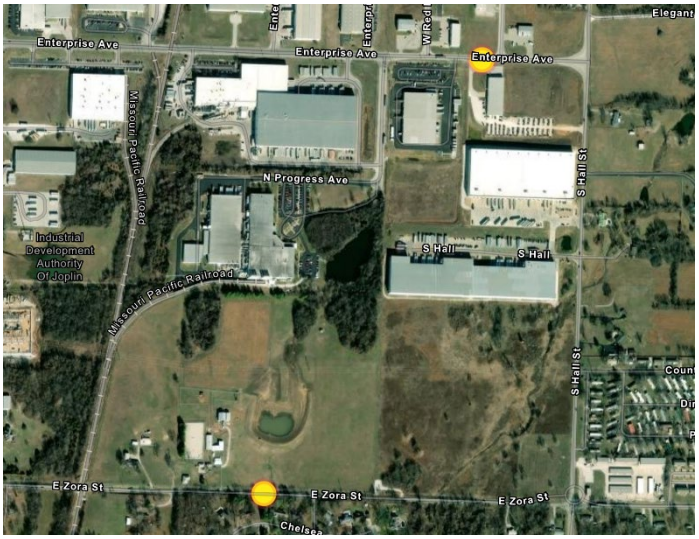
Snapshot (2020–2024)

- Fatal Crashes: 3
- Serious Injury Crashes: 12
- Primary Corridors: LP 49, MO 171

Crash Summaries (First 10 Expanded)

Crash 1: LP 49 S at CST Fountain Rd

- Date/Time: October 3, 2020 – 9:54 PM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark with street lights on, clear, dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

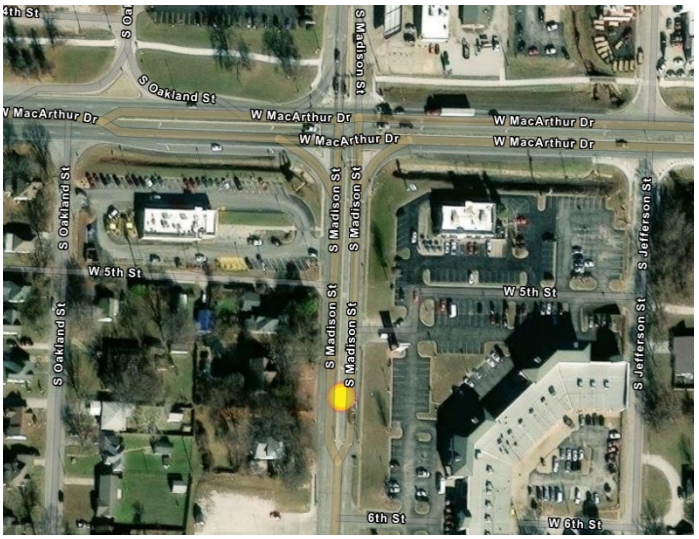


Crash 2: MO 171 N at Bridge A3470

- Date/Time: March 7, 2021 – 2:19 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark with street lights off, clear, dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 3: LP 49 S at CST Fountain Rd

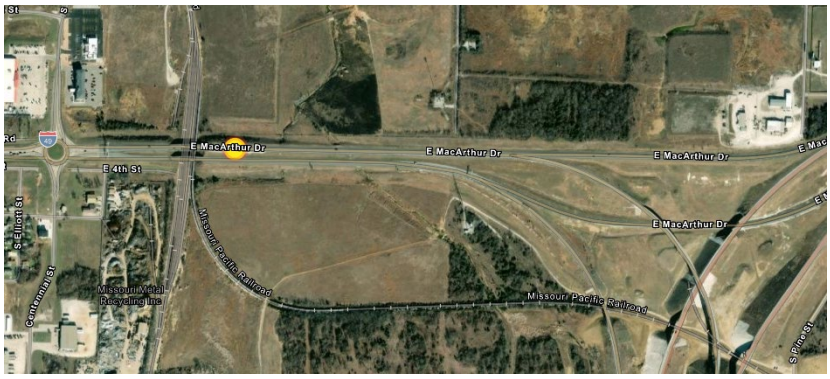
- Date/Time: June 6, 2021 – 4:29 PM
- Crash Type: Left turn (turning/angle).
- Conditions: Daylight, cloudy, dry road surface.
- Outcome: Rider/occupant transported for medical treatment.



Crash 4 (Fatal): MO 171 S at CST College St

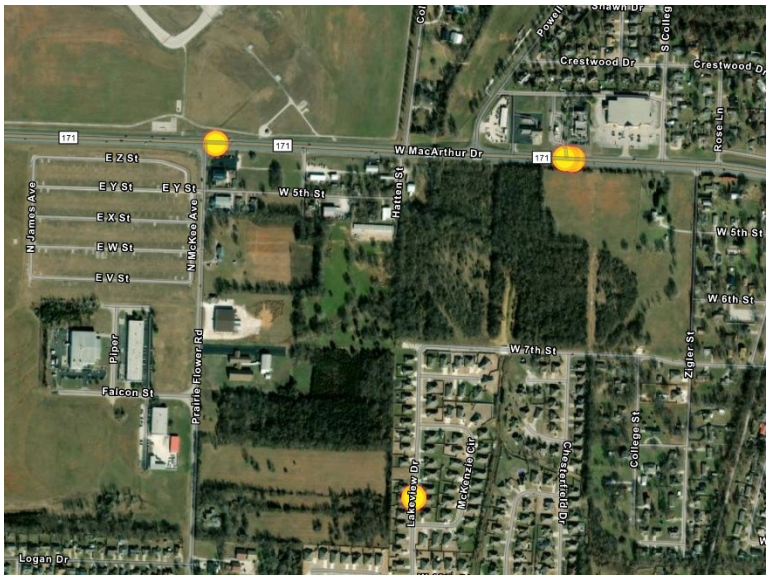
- Date/Time: September 22, 2021 – 12:49 PM
- Crash Type: Out of control (single-vehicle).

- Conditions: Daylight, clear, dry road surface.
- Outcome: Fatal crash.



Crash 5: LP 49 S at CST 13th St

- Date/Time: October 11, 2021 – 2:52 PM
- Crash Type: Left turn (turning/angle).
- Conditions: Daylight, clear, dry road surface.
- Outcome: Rider/occupant transported for medical treatment.



Crash 6: MO 171 S at CST Powell Dr

- Date/Time: December 24, 2021 – 12:38 PM
- Crash Type: Left-turn right-angle collision.
- Conditions: Daylight, clear, dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 7 (Fatal): MO 171 S at CST Prairie Flower Rd

- Date/Time: March 20, 2022 – 3:04 AM
- Crash Type: Out of control (single-vehicle).
- Conditions: Dark with street lights on, clear, dry road surface.
- Outcome: Fatal crash.

Crash 8: LP 49 S at CST 11th St

- Date/Time: July 9, 2022 – 9:48 PM
- Crash Type: Left-turn right-angle collision.
- Conditions: Dark with street lights on, clear, dry road surface.
- Outcome: Rider/occupant transported for medical treatment.

Crash 9 (Fatal): LP 49 S at CST 10th St

- Date/Time: November 10, 2023 – 6:47 PM
- Crash Type: Pedestrian.
- Conditions: Dark with street lights off, clear, dry road surface.
- Outcome: Fatal crash.

Crash 10: LP 49 S at CST 14th St

- **Date/Time: April 16, 2024 – 10:05 AM**
- **Crash Type: Out of control (single-vehicle).**
- **Conditions: Daylight, cloudy, dry road surface.**
- **Outcome: Rider/occupant transported for medical treatment.**

Additional Serious/Fatal Crashes (Summarized)

- **July 4, 2024 – 5:40 PM | CST Enterprise Ave E at CST E Red Iron Dr | Head-on | Daylight, cloudy, dry | Serious.**
- **July 22, 2024 – 12:56 AM | CST Lakeview Dr S at CST McKeenzie Cir (SJ) | Parking or parked car | Dark, no lights, clear, dry | Serious.**
- **August 10, 2024 – 11:14 AM | LP 49 S at CST E Fountain Rd | Left turn | Daylight, cloudy, dry | Serious.**
- **August 21, 2024 – 12:53 AM | CST E Zora St E at CST Wellington Ave | Avoiding | Dark, no lights, clear, dry | Serious.**
- **October 6, 2024 – 3:20 PM | LP 49 S at CST 5th St | Passing | Daylight, clear, dry | Serious.**

Patterns & Risk Factors

- **Strong corridor focus on LP 49 (10th–14th St and Fountain Rd nodes) and MO 171 (College St, Powell Dr, Prairie Flower Rd).**
- **Mix of single-vehicle run-off-road and turning/right-angle conflicts; one pedestrian fatality at LP 49 & 10th St.**
- **Many crashes in clear, dry conditions; several occurred at night, including a fatal in unlit conditions.**

Recommended Safety Actions

Engineering Countermeasures

1. **LP 49 urban intersections (10th–14th, Fountain/E Fountain): Enhance conspicuity and protected left-turn phasing, review turn-lane storage, and refresh high-visibility markings.**
2. **Pedestrian safety at LP 49 & 10th St: Improve lighting, crossing visibility, and consider refuge/median treatments if feasible.**
3. **MO 171 segments (College, Powell, Prairie Flower): Strengthen curve/approach delineation; add centerline/shoulder rumble strips; evaluate HFST where run-off-road patterns recur.**

4. **Check access density and driveway operations along both corridors; apply access management where practical.**

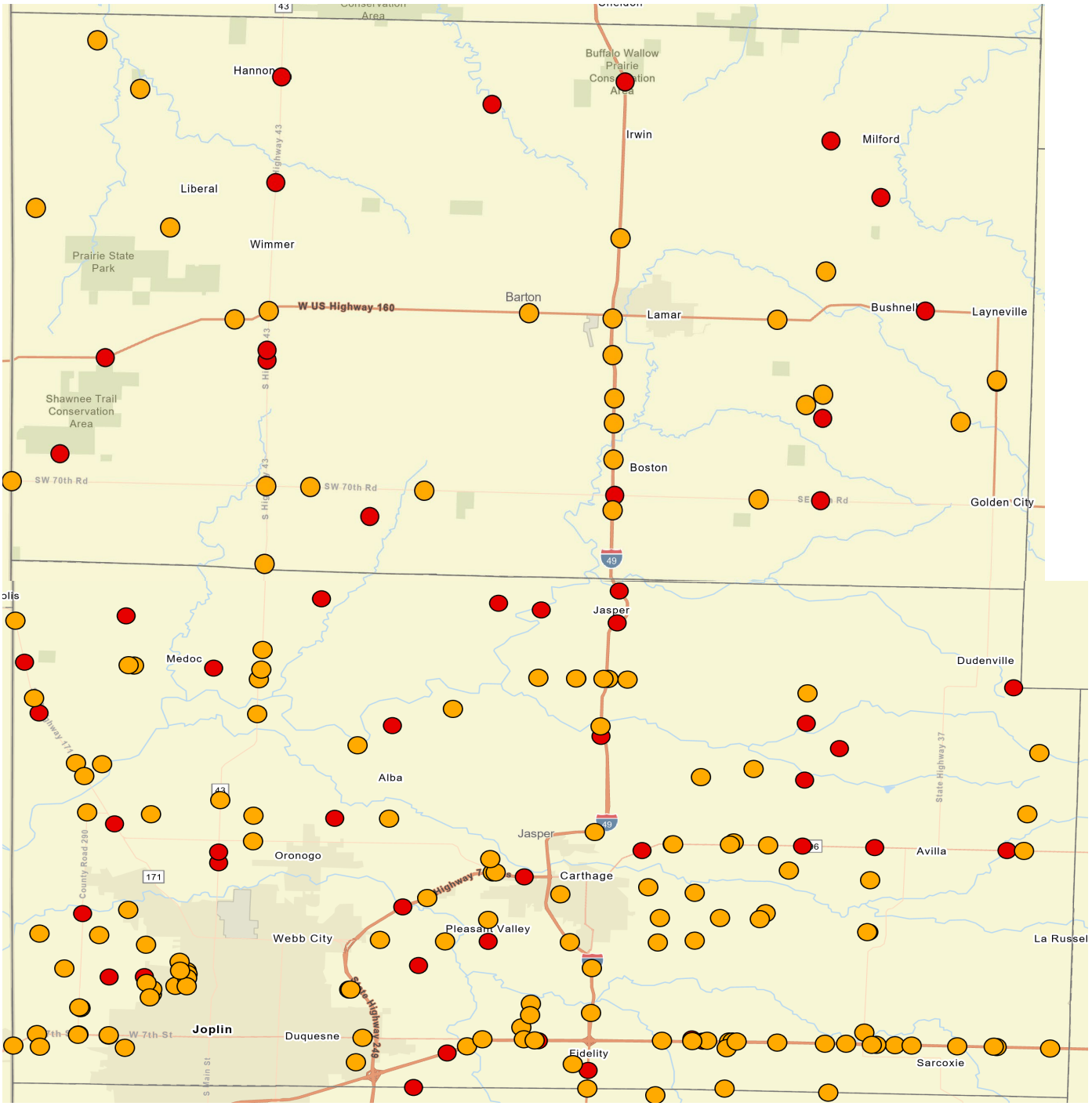
Education & Enforcement

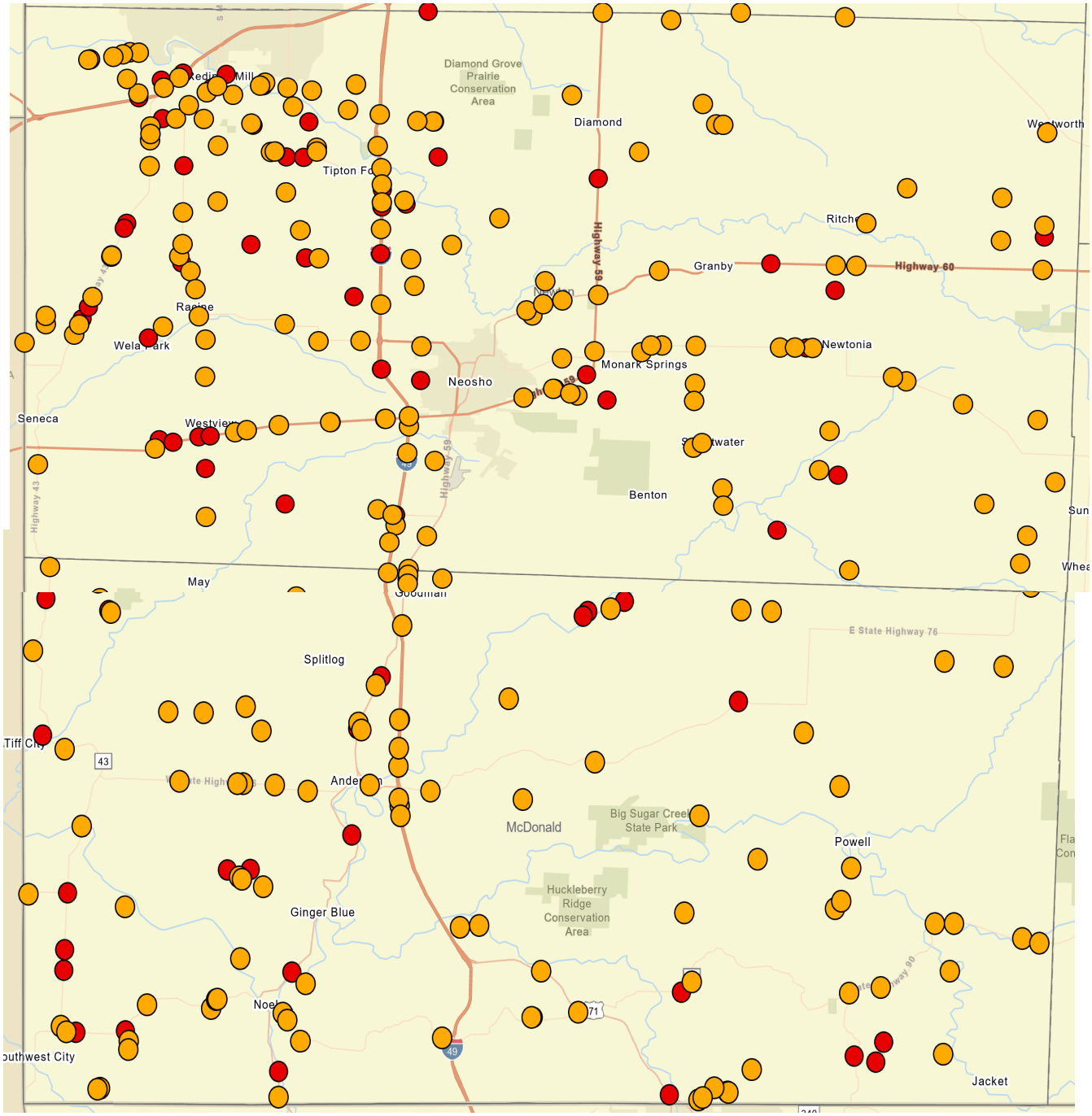
- **Targeted enforcement on left-turn yielding, speed, and nighttime visibility violations along LP 49/MO 171.**
- **Community outreach on pedestrian awareness and maintaining control on high-speed approaches.**

County/State Jurisdiction (Non-city/Unincorporated)

Snapshot (2020–2024)

- Fatal Crashes: 144
- Serious Injury Crashes: 398
- Total Severe Crashes: 542
- Primary Corridors (by severe-crash volume): IS 49 (34), US 60 (27), MO 86 (26), MO 90 (25), IS 44 (21), MO 59 (18), RT NN (14), MO 96 (13), MO 66 (12), RT E (12), RT H (11), MO 76 (10), RT M (9), US 160 (8)





Severe-Crash Overview (where and how people are getting seriously hurt)

Severe crashes outside incorporated municipalities occur primarily along state highways (US-60, I-49/US-71, MO-43, MO-59, and MO-86) and at county-road junctions with those routes. The dominant patterns, supported by the five-year CSVs you provided, are:

- **Crash type mix (all non-city severe):**
  - Out of Control / Lane-Departure: 316 (≈58%)
  - Head-On: 53 (≈10%)
  - Right-Angle (incl. left-turn conflicts): 41 + 11 "left-turn right-angle" + 13 "left-turn" (≈12%)
  - Rear-End: 37 (≈7%)
  - Avoiding/Evasive: 16 (≈3%)
  - Pedestrian: 7 (≈1%)
  - Other / passing / sideswipe / animal, etc.: remainder
- **Lighting, weather, and surface:**
  - Lighting: Daylight 348 (64%); Dark—no street lights 181 (33%); Dark—lights on 5; Dawn/Dusk 4; Unknown 4.
  - Weather: Clear 354 (65%), Cloudy 158 (29%), Rain 20 (4%), Frozen precip ~8 (<2%), fog/mist 1, unknown 1.
  - Surface: Dry 475 (88%), Wet 51 (9%), Ice/Snow/Mud ~14 (3%), unknown/slush 2.
  - Takeaway: Environment is usually benign—crash severity here is more about speed, geometry, and control than storm events.
- **When they happen (time-of-day buckets):** Night (7p–6a) **187**, Midday (10a–4p) **162**, PM peak (4p–7p) **124**, AM peak (6a–10a) **69**. A **nighttime over-representation** exists relative to exposure.
- **Year-by-year severe totals:**
  2020: 90 (23 fatal / 67 serious)
  2021: 114 (30 / 84)
  2022: 114 (31 / 83)
  2023: 112 (23 / 89)
  2024: 112 (37 / 75) ← **highest annual fatal count** in the five-year window.

Why rural severe crashes are worse (context + your prior brief):
• Higher operating speeds (55–70 mph) → kinetic energy and injury risk.
• Limited lighting and longer EMS response times.
• Freight + agricultural traffic mixing with local trips.
• Risk behaviors: impairment, fatigue, belt non-use.
• Wildlife (deer) leading to loss-of-control and secondary impacts.

Recurring Severe-Crash Locations (Hot Spots, 2020–2024)

1. US 60 E @ RT HH — 6 (Fatal 3 / Serious 3)
   - Types: Right-angle (3), left-turn (1), left-turn right-angle (1), U-turn (1).
   - Light: Mostly daylight (4), some dark/no-lights (2).
   - Surface/Weather: Dry (all); clear/cloudy split.
2. MO 43 S @ RT BB — 4 (Fatal 1 / Serious 3)
   - Types: Right-angle (2), out-of-control (2).
   - Light: Half daylight, half dark/no-lights.
3. MO 43 S @ RT M — 4 (Fatal 1 / Serious 3)
   - Types: Right-angle (2), angle (1), out-of-control (1).
   - Light: All four at night with no street lighting.
4. US 60 E @ CRD Heron — 3 (Fatal 0 / Serious 3)
   - Types: Rear-end (1), right-angle (1), out-of-control (1).

    - Light: All daylight; dry surface.
5. MO 59 S @ CRD Deer Creek Rd — 3 (Fatal 1 / Serious 2)
    - Types: All out-of-control; two wet-surface events.
6. MO 86 E @ CRD Shetland Rd — 3 (Fatal 1 / Serious 2)
    - Types: Head-on (1), left-turn right-angle (1), out-of-control (1).
    - Light: All daylight; dry, clear/cloudy conditions.
7. MO 90 E @ CRD Brush Creek Rd — 3 (Fatal 2 / Serious 1)
    - Types: All out-of-control; two nighttime/daytime mix; dry.
8. CRD Peace Church Ave S @ CRD W Zora St — 3 (Fatal 2 / Serious 1)
    - Types: All out-of-control; mostly dark/no-lights.
9. CRD Bear Hollow Rd E @ CRD Tyson Rd — 3 (Serious 3)
    - Types: All out-of-control; 2 night / 1 day; clear/dry.
10. MO 59 S @ CRD McDonald Rd — 3 (Serious 3)

- Types: Out-of-control (2), rear-end (1); mainly daylight/dry.

Pattern across hot spots: Unsignalized state-route intersections with county roads (e.g., US-60@RT-HH, MO-43@RT-M/BB, MO-86@Shetland) and high-speed rural segments with run-off-road recurrence. Night, unlit conditions feature prominently at MO-43@RT-M and several county-road sites.

Crash Summaries (Hotspot-Based; first 10 expanded)

Crash 1: US 60 E @ RT HH

- Date/Time: March 13, 2020 – 7:00 PM
- Crash Type: Right angle
- Conditions: Dark (no street lights), cloudy, dry surface
- Outcome: Serious injury (transport)

Crash 2: US 60 E @ CRD Heron

- Date/Time: March 18, 2020 – 1:35 PM
- Crash Type: Rear end
- Conditions: Daylight, cloudy, dry
- Outcome: Serious injury (transport)

Crash 3: MO 59 S @ CRD Deer Creek Rd

- Date/Time: April 5, 2020 – 1:01 AM
- Crash Type: Out of control (lane departure)
- Conditions: Dark (no lights), rain, wet surface
- Outcome: Serious injury (transport)

Crash 4: MO 86 E @ CRD Shetland Rd

- Date/Time: April 24, 2020 – 2:00 PM

- **Crash Type: Out of control (lane departure)**
- **Conditions: Daylight, cloudy, dry**
- **Outcome: Serious injury (transport)**

Crash 5: US 60 E @ RT HH

- **Date/Time: June 2, 2020 – 4:20 PM**
- **Crash Type: Left turn (turning/angle)**
- **Conditions: Daylight, cloudy, dry**
- **Outcome: Fatal crash**

Crash 6: MO 43 S @ RT M

- **Date/Time: June 28, 2020 – 3:00 AM**
- **Crash Type: Out of control**
- **Conditions: Dark (no lights), clear, dry**
- **Outcome: Serious injury (transport)**

Crash 7: US 60 E @ RT HH

- **Date/Time: August 21, 2020 – 4:00 PM**
- **Crash Type: Right angle**
- **Conditions: Daylight, clear, dry**
- **Outcome: Serious injury (transport)**

Crash 8: MO 59 S @ CRD Deer Creek Rd

- **Date/Time: November 14, 2020 – 10:00 AM**
- **Crash Type: Out of control**
- **Conditions: Daylight, cloudy, wet surface**
- **Outcome: Fatal crash**

Crash 9: MO 43 S @ RT M

- **Date/Time: April 12, 2021 – 10:50 PM**
- **Crash Type: Right angle**
- **Conditions: Dark (no lights), cloudy, dry**
- **Outcome: Serious injury (transport)**

Crash 10: MO 43 S @ RT BB

- **Date/Time: July 26, 2021 – 4:40 PM**
- **Crash Type: Right angle**
- **Conditions: Daylight, clear, dry**
- **Outcome: Fatal crash**

Additional Hotspot Narratives (remaining hotspot crashes by location)

US 60 E @ RT HH — total 6 (Fatal 3 / Serious 3)

- Mix of right-angle/left-turn conflicts and one U-turn event; all dry surface.
- Daylight dominates with some dark/no-lights cases.
- Years: 2020 (3), 2021 (1), 2022 (2).
- Implication: High-speed, unsignalized intersection with recurring turning-movement crashes → consider RCUT/turn-lane solutions and lighting.

MO 43 S @ RT M — total 4 (Fatal 1 / Serious 3)

- Two right-angle, one angle, one departure; all at night with no street lighting.
- Years: one each in 2020–2023 → persistent nighttime risk.
- Implication: Night visibility/detection + gap acceptance and approach speed control are key.

MO 43 S @ RT BB — total 4 (Fatal 1 / Serious 3)

- Right-angle and departure mix; half night, unlit.
- Years: one each in 2021–2024 → repeat risk across the window.
- Implication: Channelization/turn lanes, conspicuity, and speed management.

US 60 E @ CRD Heron — total 3 (Serious 3)

- One each: rear-end, right-angle, departure; daylight and dry.
- Implication: Queueing/awareness and turn-control; consider advance warning and auxiliary lanes.

MO 59 S @ CRD Deer Creek Rd — total 3 (Fatal 1 / Serious 2)

- All lane-departure, two wet-surface crashes; two at night.
- Implication: HFST candidate; delineation/rumble strips, shoulder/clear-zone upgrades.

MO 86 E @ CRD Shetland Rd — total 3 (Fatal 1 / Serious 2)

- Head-on, left-turn right-angle, and departure; all daylight.
- Implication: Median/centerline treatment, protected lefts/turn lanes, and sight-distance improvements.

MO 90 E @ CRD Brush Creek Rd — total 3 (Fatal 2 / Serious 1)

- All departure crashes; clear/dry; mixed day/night.
- Implication: Run-off-road countermeasures (chevrons, edgelines, rumble, HFST), targeted enforcement.

CRD Peace Church Ave S @ CRD W Zora St — total 3 (Fatal 2 / Serious 1)

- All departure, mostly dark/no-lights.

- **Implication: Nighttime conspicuity and speed management on approach; evaluate roadside hazards.**

CRD Bear Hollow Rd E @ CRD Tyson Rd — total 3 (Serious 3)

- **All departure, clear/dry; 2 night / 1 day.**
- **Implication: Curve/approach delineation, shoulder/clear-zone, and targeted night enforcement.**

MO 59 S @ CRD McDonald Rd — total 3 (Serious 3)

- **Departure (2) and rear-end (1); mostly daylight/dry.**
- **Implication: Edgeline/rumble, access/driveway operations review, and advance warning.**

Patterns & Risk Factors (synthesis)

- **Systemic lane-departure problem on high-speed rural routes (IS 49, US 60, MO 86/90/59/43) under clear/dry conditions.**
- **Nighttime, unlit over-representation at several hot spots (e.g., MO-43 @ RT-M) → conspicuity and speed.**
- **Turning/angle conflicts recur at unsignalized state-route intersections with county roads (US-60@RT-HH; MO-43@RT-BB/M; MO-86@Shetland).**
- **Freight exposure on US-60/I-49 corridors drives severity in rear-end/rollover events; rural EMS time magnifies outcomes.**
- **Seasonality & weather are secondary: most severe crashes occur on dry roads in clear/daylight, signaling behavior/geometry (not storms) as primary targets.**

Recommended Safety Actions

Systemic Measures (corridor-wide)

1. **Rumble strips: Install/refresh centerline & shoulder rumble strips on state routes with recurring lane-departure (MO-43/59/86/90; US-60; IS-49 ramps/frontage).**
2. **Enhanced delineation: High-retro edgelines, chevrons, post-mounted delineators, RPMs on curves and approaches; prioritize night/unlit segments.**
3. **HFST program: Deploy High-Friction Surface Treatment at wet-crash curves and frequent departures (e.g., MO-59 @ Deer Creek Rd segment; MO-90 Brush Creek area).**
4. **Roadside safety: Address culverts, embankments, bridge rails, fixed objects; expand clear-zone where feasible.**
5. **Wildlife mitigation: Targeted deer warning signage, brush clearing, and hotspots for fencing/reflectors where practical.**

Intersection & Access Safety (hotspot-specific)

- **US-60 @ RT-HH (6 crashes): Consider RCUT or signal warrant evaluation; at minimum add protected turn lanes, advance warning flashers, high-vis markings, and lighting.**
- **MO-43 @ RT-M (4) & RT-BB (4): Night lighting, turn-lane channelization, oversized STOP/STOP AHEAD with beacons, sight-distance clearing; evaluate speed feedback displays.**
- **MO-86 @ Shetland (3): Protected left or offset left-turns, centerline/median treatment to cut head-ons; lighting & markings refresh.**
- **US-60 @ CRD Heron (3): Advance queue warning, right/left-turn lanes, signing upgrades.**
- **County-road nodes (Deer Creek, McDonald, Peace Church @ W Zora, Bear Hollow @ Tyson): STOP enhancements (LED borders), lighting at night-prone nodes, edgeline/chevrons on approaches, driveway/access review.**

Behavioral & Operations

- **Speed & nighttime enforcement targeting MO-43 nodes and recurring departure corridors.**
- **Impairment & fatigue campaigns focused on rural drivers and late-night travel.**
- **Seatbelt emphasis in rural areas; freight safety messaging (following distance, work-zone awareness).**
- **Deer season communications to reduce over-correction departures.**

Implementation Roadmap

0–12 months (Quick Wins)

- **Retime/augment advance warning at US-60@RT-HH; install LED STOP and STOP AHEAD beacons at RT-M/RT-BB and county-road nodes.**
- **Refresh edgelines/centerlines and install delineators/chevrons at the listed curves; deploy portable speed feedback signs.**
- **Launch nighttime enforcement waves on MO-43 and seasonal deer campaign.**

12–36 months (Capital & Surface Treatments)

- **Turn-lane packages and lighting at the three highest-risk nodes (US-60@RT-HH; MO-43@RT-M; MO-43@RT-BB).**
- **HFST on departure-prone segments (MO-59@Deer Creek; MO-90@Brush Creek; candidates to be confirmed in field review).**
- **Access management near problem nodes (driveways, approach alignments).**

Funding & Partnerships

- **Prioritize projects for HSIP eligibility (systemic rumble/HFST, rural intersection safety), STBG for intersection packages, and—where interstate ramps are implicated—coordinate with MoDOT for interstate-adjacent improvements.**
- **Support submittals with CMF references for rumble, HFST, RCUTs, and lighting.**

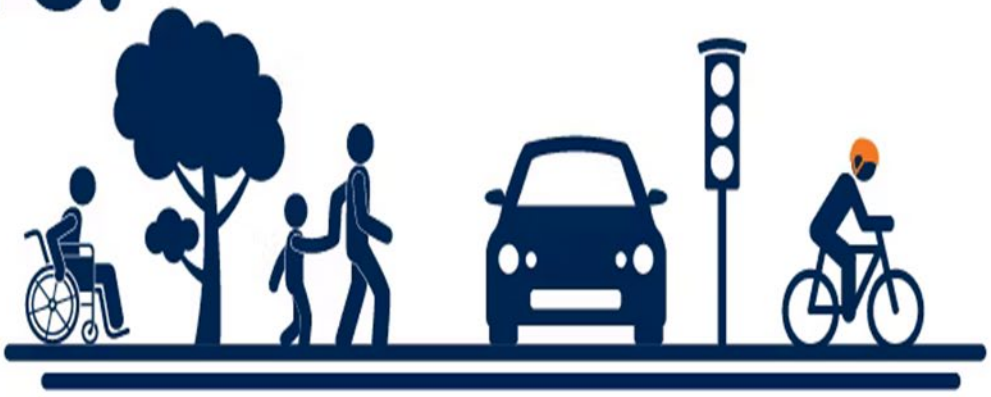
Monitoring & Evaluation

- **Outcome metrics: fatal/serious KSI counts & rates, lane-departure KSI, nighttime KSI, intersection KSI.**
- **Process metrics: miles of rumble installed, number of intersections improved, HFST sites completed.**
- **Before/after windows: 3-year pre vs. 3-year post per site; use Empirical Bayes where feasible.**
- **Transparency: publish an annual Rural Safety Scorecard summarizing progress.**

All Modes High Injury Network

Vision Zero:

No traffic deaths
or serious injuries



Introduction

An effective traffic safety plan begins by pinpointing where the most severe harm occurs. The High Injury Network (HIN) is the subset of streets and highways that accounts for a disproportionate share of the region's fatal and serious-injury crashes. Although these corridors represent less than 8% of the roughly 3,700 centerline miles across Jasper, Newton, McDonald, and Barton counties, they are responsible for nearly 40% of the region's most severe outcomes during 2020–2024 (MoDOT, 2024). This concentration means that targeted investments on a small portion of the system can deliver outsized safety gains.

The HIN is not a list of "dangerous roads" so much as a lens on the conditions that elevate risk. Across the region, severe outcomes cluster on corridors that share common characteristics:

- High operating speeds and complex speed transitions (rural highway segments feeding town centers)
- Frequent conflict points (unsignalized intersections, multiple driveways, short turn bays)
- Limited pedestrian and bicycle facilities (gaps in sidewalks, crossings, and bike accommodations)
- Low visibility (inadequate lighting, horizontal/vertical curvature, roadside obstructions)

Focusing on these corridors enables agencies to prioritize proven countermeasures—from roadway design upgrades (median/shoulder treatments, roundabouts, access management, lighting) and speed management, to targeted enforcement and community education. By directing resources to the HIN, Southwest Missouri can save the most lives fastest, accelerating progress toward the region's Vision Zero goal of eliminating traffic fatalities and serious injuries.

Defining the High Injury Network

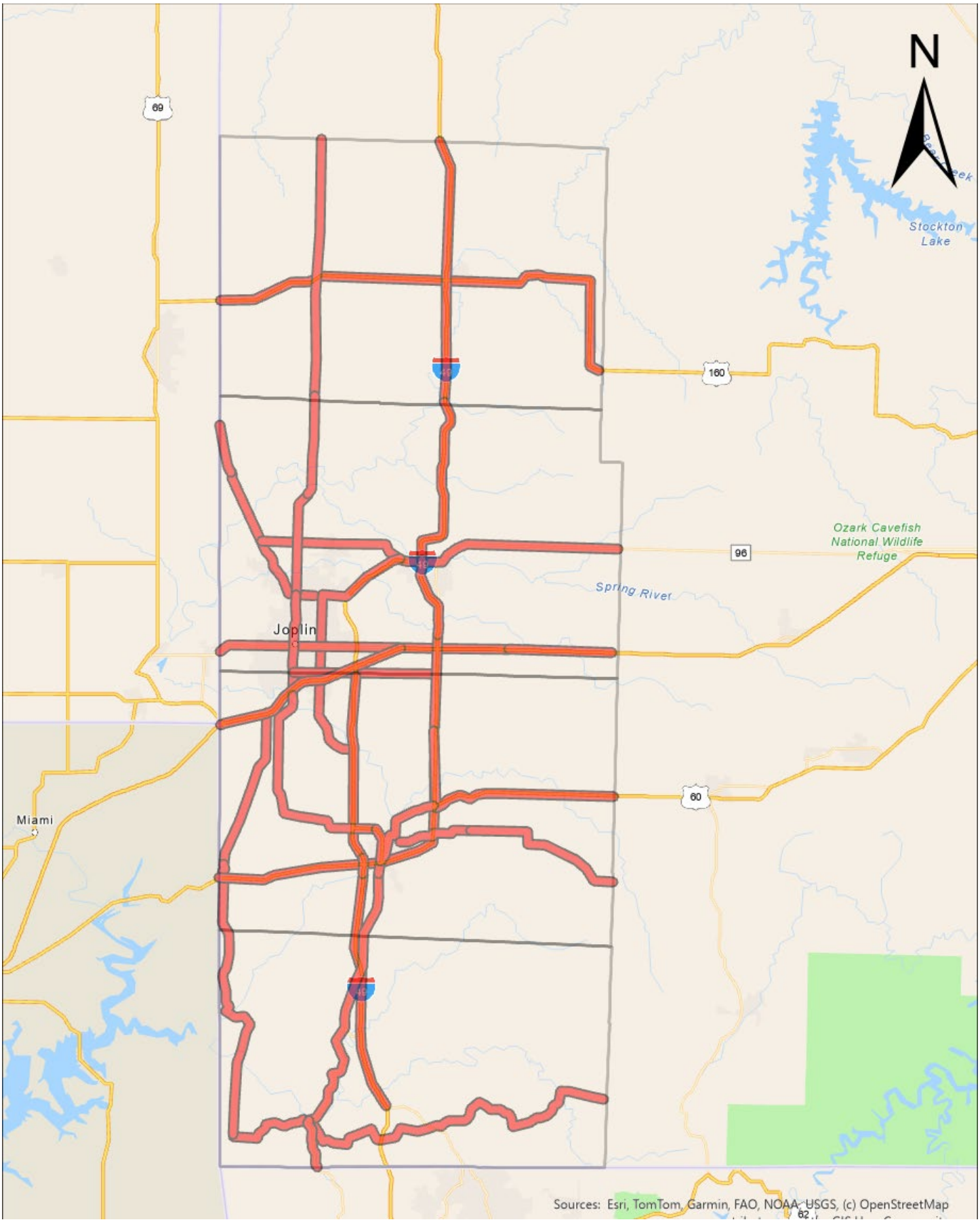
Between 2020 and 2024, a total of 973 severe crashes (235 fatal and 738 serious-injury) were recorded in Jasper, Newton, McDonald, and Barton counties. Of these, 366 severe crashes occurred on just fifteen roadways, which together make up only a small portion of the 3,700-mile regional network. This means that just 15 corridors account for nearly 38% of all the region's most serious crashes (MoDOT, 2024).

The Top 15 High-Injury Corridors are:

1) **MO 43 South – 70 crashes**
2) **LP 49 South (I-49 South Loop / Rangeline Road) – 51 crashes**
3) **MO 86 East – 44 crashes**
4) **US 60 East – 39 crashes**
5) **MO 59 South – 33 crashes**
6) **I-44 East – 28 crashes**
7) **I-44 West – 27 crashes**
8) **MO 90 East – 26 crashes**
9) **MO 66 East – 24 crashes**
10) **RT FF East – 24 crashes**
11) **MO 171 South – 23 crashes**
12) **MO 96 East – 21 crashes**
13) **I-49 North – 20 crashes**
14) **US 160 East – 18 crashes**
15) **MO 171 North – 18 crashes**

Key Findings

- **Concentration of risk: Just 15 corridors account for nearly 4 in 10 of all severe crashes in the region.**
- **Mix of road types: The list includes interstates, regional arterials, and rural highways, showing that crash risk is not confined to any single roadway class.**
- **Common characteristics: High speeds, frequent intersections or access points, limited shoulders, inadequate pedestrian/bicycle facilities, and poor lighting are recurring factors.**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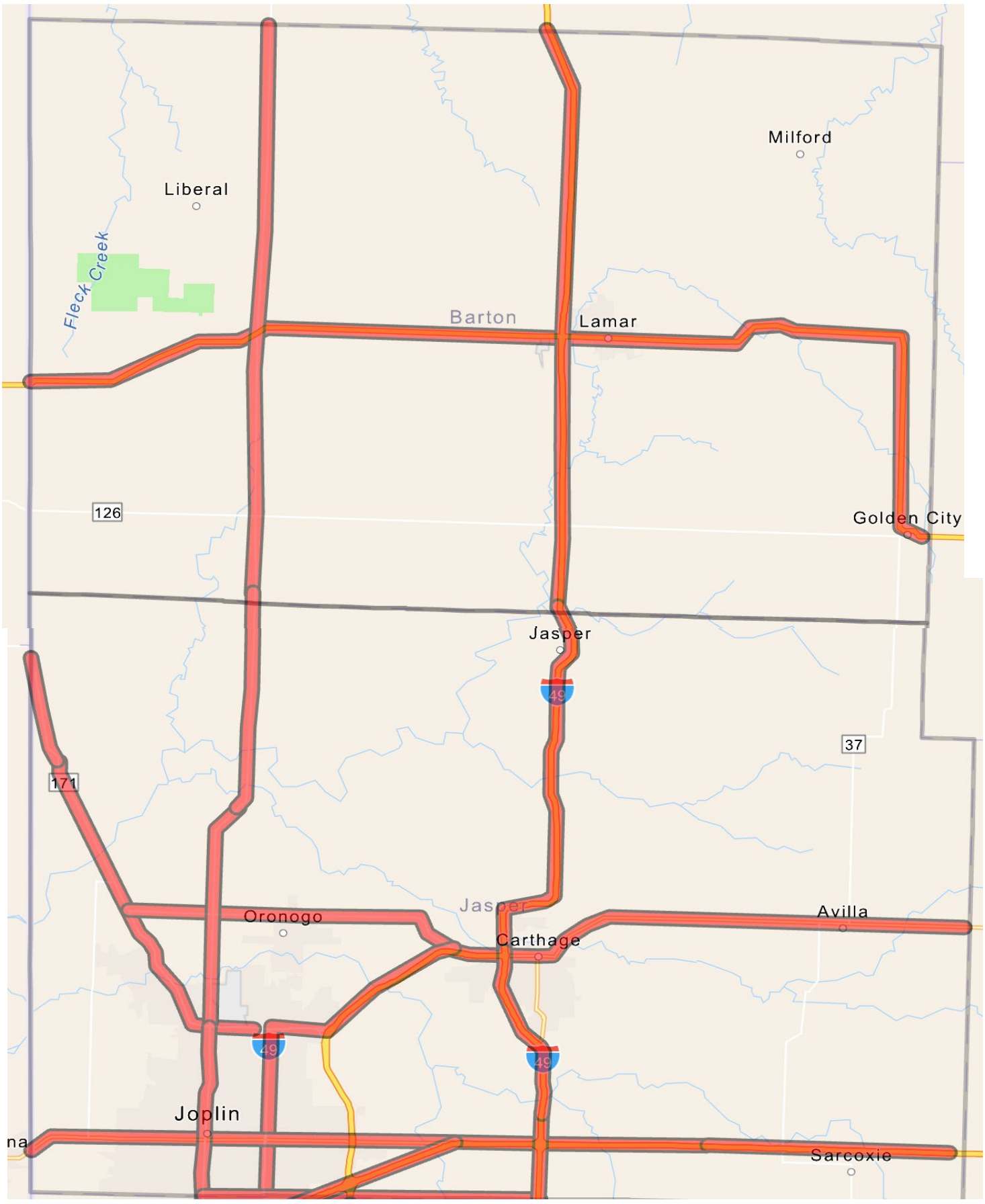
Ozark Cavefish National Wildlife Refuge
Spring River
Joplin
Miami
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap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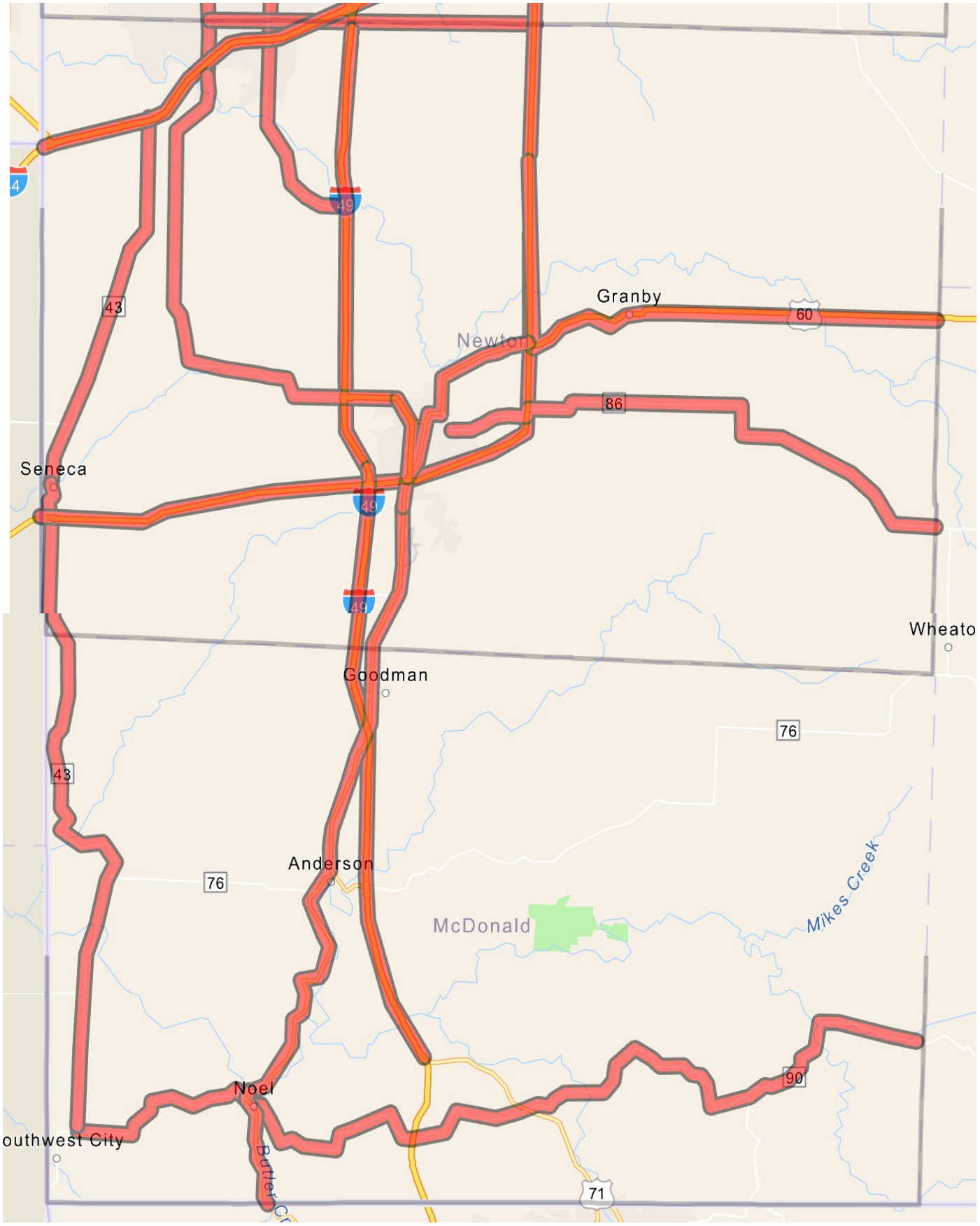
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Detailed Analysis of Each High-Injury Corridor

1. MO Highway 43 South – 70 Crashes (26.4 miles)

- **Crash Patterns:** High frequency of right-angle and rear-end collisions, especially at unsignalized intersections. Run-off-road crashes are also common due to limited shoulders.
- **High-Risk Conditions:** Daylight and dry-weather crashes dominate, indicating speed and driver behavior (rather than poor visibility or weather) as key factors.
- **Unique Challenges:** Serves as both a regional connector and local route, mixing freight, farm vehicles, and passenger traffic. Frequent driveway access adds conflict points.
- **Potential Interventions:** Add roundabouts or signals at high-volume intersections; improve shoulder width; install lighting and signage; consider access management strategies.

2. LP 49 South (I-49 South Loop / Rangeline Road) – 51 Crashes (23.1 miles)

- **Crash Patterns:** Rear-end and side-impact crashes predominate, particularly during congestion. Multi-vehicle incidents are frequent in commercial areas.
- **High-Risk Conditions:** Crashes occur in both wet and dry conditions, with many clustered during peak shopping and commuting times.
- **Unique Challenges:** High retail density along Rangeline Road increases traffic volumes and turning movements, with frequent access points contributing to conflict.
- **Potential Interventions:** Deploy adaptive traffic signals; add raised medians to reduce left-turn conflicts; expand lanes at key bottlenecks; enforce speed management.

3. MO Highway 86 East – 44 Crashes (17.7 miles)

- **Crash Patterns:** Mix of run-off-road incidents and head-on collisions, reflecting curved alignment and limited passing opportunities.
- **High-Risk Conditions:** Nighttime and wet-weather crashes are disproportionately high.
- **Unique Challenges:** A rural corridor with sharp curves, narrow shoulders, and inconsistent pavement conditions.
- **Potential Interventions:** Widen shoulders; install rumble strips and chevrons on curves; resurface with higher-traction materials; improve roadway lighting.

4. US 60 East – 39 Crashes (33.8 miles)

- **Crash Patterns:** Frequent rear-end and T-bone crashes at rural intersections; occasional cross-median collisions.
- **High-Risk Conditions:** Daytime crashes under clear conditions dominate, suggesting driver inattention and speed differentials between local and through traffic.
- **Unique Challenges:** Serves both local rural communities and long-distance through travel, creating varied speed environments.
- **Potential Interventions:** Add median barriers; redesign intersections with dedicated turn lanes; adjust signal timing where applicable; implement speed enforcement.

5. MO Highway 59 South – 33 Crashes (14.1 miles)

- **Crash Patterns:** High proportion of loss-of-control and head-on crashes, often on curved segments or where grades change abruptly.
- **High-Risk Conditions:** Wet-weather crashes are frequent, pointing to pavement condition and drainage issues.
- **Unique Challenges:** The corridor supports a mix of local, agricultural, and freight vehicles on a relatively narrow alignment.
- **Potential Interventions:** Improve drainage systems; resurface with skid-resistant materials; install curve warning systems; evaluate shoulder widening.

6. Interstate 44 East – 28 Crashes *(~32.1 miles)*

- **Crash Patterns:** Rear-end crashes tied to congestion near interchanges; high-speed lane-departure crashes; secondary crashes following initial incidents or shoulder stops.
- **High-Risk Conditions:** Daytime, clear-weather crashes are common (volume + speed differentials). Weather spikes (rain/ice) add run-off-road and multi-vehicle pileups.
- **Unique Challenges:** Heavy freight mix with passenger vehicles; short acceleration/deceleration lanes at older interchanges; limited recovery zones; complex weaving near major ramps.
- **Potential Interventions:** Lengthen merge/diverge lanes; install/extend median barriers and high-tension cable where feasible; deploy queue warning systems and dynamic speed management near recurrent bottlenecks; add truck climbing lanes on grades; ramp metering at high-conflict interchanges.

7. Interstate 44 West – 27 Crashes *(~30.5 miles)*

- **Crash Patterns:** Multi-vehicle collisions in platoons; rear-end crashes in slowdowns; single-vehicle lane departures in night/low-visibility conditions.
- **High-Risk Conditions:** Nighttime and shoulder-area conflicts (disabled vehicles, emergency pull-offs); weather-driven spikes (fog/icing) on bridge decks and shaded curves.
- **Unique Challenges:** Long-distance freight corridors with fatigue risk; interchange spacing that induces last-second lane changes; limited ITS coverage in rural segments.
- **Potential Interventions:** Expand ITS (cameras, variable message signs, weather-responsive speed advisories); enhance delineation (chevrons, retroreflective post markers); high-friction surface treatments on curves/bridges; rumble strip refresh; targeted enforcement for following too closely and lane discipline.

8. MO 90 East – 26 Crashes *(~24.5 miles)*

- **Crash Patterns:** High share of single-vehicle run-off-road and head-on collisions on curved, low-shoulder segments; intersection angle crashes at local road junctions.
- **High-Risk Conditions:** Daylight and wet-pavement crashes indicate speed + traction issues; dusk/night crashes in segments with limited lighting.
- **Unique Challenges:** Rural geometry (narrow lanes/shoulders, sharp curvature, limited sight distance) and mixed traffic (local, agricultural, recreational).
- **Potential Interventions:** Shoulder widening and edge-line rumble strips; systematic curve treatments (advance warning, chevrons, delineators); resurfacing with high-skid aggregates on priority curves; selective lighting at high-crash nodes; access management to reduce unexpected turning movements.

9. MO 66 East – 24 Crashes *(~14.6 miles)*

- **Crash Patterns:** Intersection-related angle and turning crashes; rear-ends around congested access points; occasional pedestrian exposure near commercial clusters.
- **High-Risk Conditions:** Mostly daytime/dry crashes—behavioral and operational issues more than weather; peak-period spikes around driveway-dense segments.
- **Unique Challenges:** Legacy highway with mixed urban/rural cross-sections; many unsignalized intersections and driveways; sporadic pedestrian activity without consistent facilities.
- **Potential Interventions:** Access management (raised medians, driveway consolidation); modernize signal phasing (protected turns, dilemma-zone protection); add turn pockets and channelization; pedestrian upgrades (marked crossings, refuge islands) through activity centers; speed management at town gateways.

10. Route FF East – 24 Crashes *(mileage TBD)*

- **Crash Patterns:** Run-off-road and opposite-direction crashes consistent with two-lane rural facilities; localized clusters at skewed intersections and crest vertical curves.
- **High-Risk Conditions:** Night/dusk crashes in low-light segments; wet-weather traction issues on older pavement; animal-strike involvement in fringe/rural zones.
- **Unique Challenges:** Constrained right-of-way, narrow shoulders, roadside fixed objects close to the travelway; limited passing zones leading to risky overtakes.
- **Potential Interventions:** Systemic low-cost package: shoulder widening, centerline/edge-line rumble strips, clear-zone improvements (remove/relocate hazards), curve signing and delineation refresh; targeted high-friction surface treatments; selective lighting at clustered crash nodes; consider centerline hard separations (double-yellow with flexible delineators) on documented head-on segments.

11. MO 171 South – 23 Crashes *(mileage TBD)*

- **Crash Patterns:** A mix of rear-end and right-angle collisions at unsignalized intersections and access points; run-off-road crashes on curves and at transition segments approaching towns.
- **High-Risk Conditions:** Daylight/dry-pavement crashes dominate (operational/behavioral factors). Nighttime spikes occur where lighting is limited and access density is high.
- **Unique Challenges:** Corridor functions as a regional connector with **speed transitions** (65→45 mph) near development nodes; numerous driveways and minor road junctions create **frequent conflict points**; occasional heavy/slow vehicles (freight, agricultural) introduce speed differentials.
- **Potential Interventions:**
  - **Access management** (median treatments, driveway consolidation, right-in/right-out).
  - **Intersection upgrades** (turn lanes, protected phasing, roundabouts at high-injury nodes).
  - **Speed management** at gateways (dynamic feedback signs, coordinated limits, lane narrowing via striping).
  - **Roadway lighting** and enhanced **dilemma-zone protection** on higher-speed signals.

12. MO 96 East – 21 Crashes *(mileage TBD)*

- **Crash Patterns:** Angle and turning crashes at spaced rural intersections; run-off-road on horizontal curves; rear-ends near short turn bays by activity centers.
- **High-Risk Conditions:** Clear-weather, daytime crashes indicate **operational and sight-distance issues**; wet-pavement events emerge on older surfaces and sharper curves.

- **Unique Challenges:** Legacy two-lane segments with **limited shoulders** and intermittent passing zones; rolling topography yields **crest vertical curves** that obscure opposing traffic; driveway clusters near rural businesses.
- **Potential Interventions:**
  - **Systemic curve treatments** (advance warnings, chevrons, enhanced delineation).
  - **Shoulder widening** with **edge-line rumble strips**; **high-friction surface treatment** at priority curves.
  - **Intersection enhancements** (offset turn lanes, improved sight triangles, lighting).
  - **Access management** near clusters (shared drives, frontage connections).

13. I-49 North – 20 Crashes (~78.4 miles across study area)

- **Crash Patterns:** Rear-end and sideswipe crashes tied to **weaving near interchanges**; severe single-vehicle lane departures at high speeds; occasional multi-vehicle pileups following a primary incident.
- **High-Risk Conditions:** Volume-related daytime crashes near ramps; weather-related spikes (rain/fog/ice) on bridges and shaded curves; nighttime incidents involving disabled vehicles on shoulders.
- **Unique Challenges:** Long interstate reach with **interchange spacing** that induces last-second maneuvers; **freight-passenger mixing** and grade changes; limited ITS coverage in rural stretches for early warning.
- **Potential Interventions:**
  - **Ramp/merge lengthening**, auxiliary lanes, and **weave management** (lane continuity, signing/striping).
  - **ITS expansion** (queue warning, dynamic speed advisories, camera/DTM coverage).
  - **Median/shoulder safety** (cable barrier gaps closed, improved refuge areas).
  - **Targeted enforcement** (tailgating, lane discipline) and **weather-responsive operations**.

14. US 160 East – 18 Crashes *(mileage TBD)*

- **Crash Patterns:** T-bone and rear-end crashes at rural intersections; run-off-road/head-on collisions on undivided, higher-speed segments; occasional animal strikes at night.
- **High-Risk Conditions:** Daytime/dry crashes at intersections (gap acceptance, high approach speeds); night crashes in low-light segments; wet-pavement loss-of-control on curves.
- **Unique Challenges:** Mixed function as **regional arterial and town connector**—rapid **speed transitions**; **limited turn lanes** and inconsistent sight distance; scattered driveways and field entrances.
- **Potential Interventions:**
  - **Turn lane programs** at recurring conflict points; **intersection control** upgrades (roundabouts or signals with protected phasing).

- **Median/centerline treatments** (centerline rumble strips, selective median barriers where feasible).
- **Lighting** at high-injury nodes; **high-visibility backplates** and **advance warning flashers** at priority junctions.
- **Curve friction upgrades** and chevrons; **wildlife mitigation** (signing, vegetation management).

15. MO 171 North – 18 Crashes *(mileage TBD)*

- **Crash Patterns:** Rear-end and angle crashes at access points and minor road intersections; lane-departure events on curves or where cross-section narrows.
- **High-Risk Conditions:** Predominantly **daylight/dry** (behavioral/operational); dusk/night incidents where **lighting is absent** and **glare/sight distance** are issues.
- **Unique Challenges:** Transitional corridor with **growth pressure**—new drives and side streets increase conflict density; **inconsistent cross-section** (shoulder width, turn bay availability) leads to surprise maneuvers.
- **Potential Interventions:**
  - **Access management** (shared access, spacing, channelization, raised medians).
  - **Continuous left-turn lanes** or **targeted turn pockets** at clusters; consider **roundabouts** at severe crash intersections.
  - **Shoulder widening and rumble strips**; **lighting** at key nodes and **enhanced signing**.
  - **Gateway speed strategies** (speed feedback signs, lane narrowing via striping, pavement markings).

The roadway network across Jasper, Newton, McDonald, and Barton counties spans approximately **3,700 centerline miles** and includes a mix of interstates, state highways, arterial streets, and local rural roads (MoDOT, 2024). Within this vast system, most roads record relatively few severe crashes. However, analysis of crash data from **2020 to 2024** reveals that a **small fraction of the system—the top 15 corridors—account for nearly 38% of all fatal and serious injury crashes**. This concentration highlights a striking imbalance: while the vast majority of roads operate at comparatively low risk, a limited set of highways and arterials pose a much higher danger to drivers, pedestrians, and cyclists.

This imbalance is clear when examining individual corridors:

- **MO Highway 43 South** stands out as the region's single highest-risk roadway, serving as both a commuter and freight route. With **70 severe crashes in just five years**, its combination of high speeds, limited shoulders, and frequent access points makes it a priority for intervention.
- **I-49 South Loop (Rangeline Road)** is another critical corridor, connecting retail centers and economic hubs in the Joplin metropolitan area. Congestion, frequent

turning movements, and multiple access points contribute to its **51 severe crashes**, many of which are multi-vehicle incidents.

- **MO Highway 86 East and US 60 East** illustrate the challenges of **regional connectors** that serve both rural residents and long-distance travelers. Their higher speed limits, limited safety infrastructure, and occasional poor visibility create conditions where even minor driver errors often result in severe outcomes.
- **Interstate 44 (East and West segments)** further demonstrates the scale of the issue, with **55 combined severe crashes** tied to the high volumes of truck traffic, high-speed lane departures, and short merge/diverge lanes near interchanges.

Collectively, these corridors illustrate how severe crashes are not randomly distributed but rather **clustered along specific routes with recurring risk factors**: high speeds, heavy traffic volumes, inadequate facilities for non-motorized users, and insufficient traffic control at conflict points.

By identifying and targeting safety improvements along this **High Injury Network**, communities and transportation partners in Southwest Missouri can make measurable progress in reducing severe crashes. Concentrating resources on these corridors ensures that limited funding delivers the **greatest possible impact on lives saved and injuries prevented**, aligning local efforts with the broader **Vision Zero** framework (FHWA, 2024).

Enhancing Traffic Safety in the Joplin Metropolitan Area: Aligning High-Injury Corridor Improvements with JATSO's Vision Zero Plan

Several of the high-injury routes identified in this analysis are situated within the Joplin metropolitan area, which means they fall under the jurisdiction of the Joplin Area Transportation Study Organization (JATSO). As the designated Metropolitan Planning Organization (MPO) for the Joplin metro area, JATSO plays a critical role in coordinating transportation planning and improvements across the region. This includes oversight of key traffic corridors, facilitating regional collaboration, and ensuring that transportation projects align with broader safety and mobility goals.

JATSO's responsibilities encompass a range of activities, such as traffic analysis, transportation modeling, and planning for future infrastructure needs. This regional planning approach is crucial for the effective management of high-injury routes, especially those that experience high volumes of traffic and complex safety challenges. The organization's leadership in traffic planning makes it a vital partner in efforts to address safety concerns on roadways like portions of Interstate 44, MO Highway 43, and Rangeline Road, which are all critical to the area's transportation network and economic vitality.

A cornerstone of JATSO's commitment to improving roadway safety is its adoption of a Vision Zero Plan. Vision Zero is a global initiative that aims to eliminate all traffic-related fatalities and severe injuries by fostering a proactive, systemic approach to traffic safety. Unlike traditional traffic safety programs that often focus solely on driver behavior, Vision Zero emphasizes that no loss of life is acceptable and that the transportation system should be designed to account for human error. The plan focuses on creating safer street designs, reducing speeds, enhancing enforcement, and fostering a culture of safety through community engagement and public education.

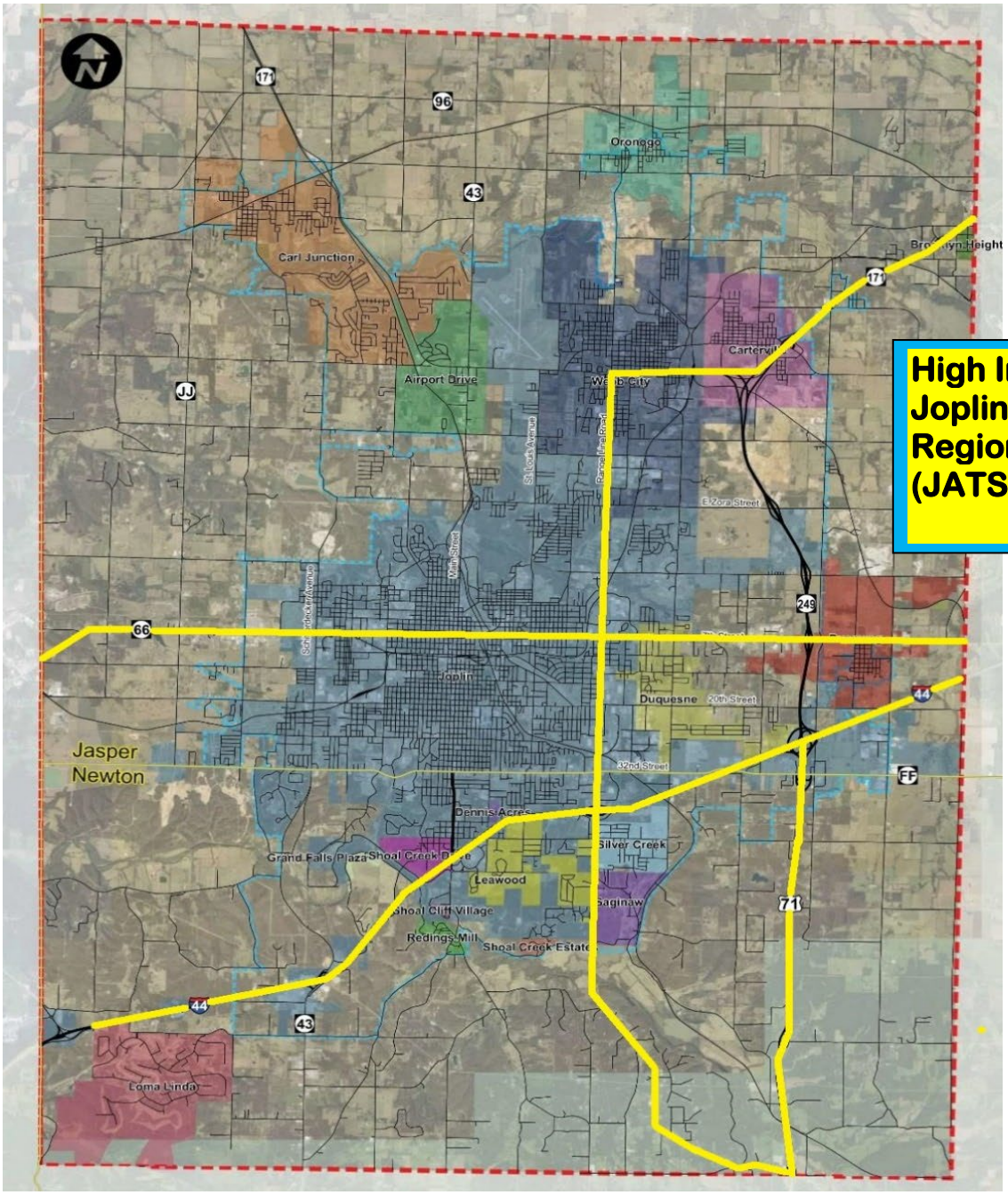
The JATSO Vision Zero Plan includes detailed strategies and data-driven recommendations for addressing high-risk areas, particularly those within the metropolitan boundary. For example, the plan might recommend interventions like improved intersection designs, enhanced pedestrian crossings, and speed management strategies on high-traffic corridors. These recommendations are tailored to the unique characteristics of each route, considering factors such as traffic volume, crash history, and the presence of vulnerable road users like pedestrians and cyclists.

Given the complexity and high-traffic nature of these routes, it is essential that all safety improvements for roadways within the Joplin metropolitan area align with the Vision Zero framework outlined by JATSO. Doing so not only ensures that safety interventions are consistent with regional goals but also allows for the leveraging of JATSO's expertise and resources in implementing effective, long-term solutions. The Vision Zero Plan's holistic approach is particularly valuable for addressing high-injury corridors that are shared across municipal boundaries or that serve as critical connectors between urban and rural areas.

For stakeholders, including city planners, law enforcement, and community organizations, referring to the JATSO Vision Zero Plan provides a roadmap for best practices in traffic safety. It helps to ensure that proposed solutions are evidence-based, feasible, and tailored to the specific needs of the Joplin area. This coordination is key to addressing the

challenges posed by these high-injury routes and achieving the ultimate goal of zero traffic-related deaths and serious injuries across the region.

In summary, the high-injury routes within the Joplin metropolitan area benefit from the strategic oversight of JATSO and its commitment to Vision Zero principles. By adhering to the recommendations within the JATSO Vision Zero Plan, the region can implement targeted improvements that address the root causes of crashes, reduce traffic-related fatalities and injuries, and create safer, more accessible roadways for all users. This approach not only improves safety on these critical corridors but also strengthens the overall transportation system, contributing to a more vibrant, connected, and secure community.



High Injury Routes in Joplin Metropolitan Region (JATSO MPO)

Aligning High-Injury Corridor Improvements with Carthage's Vision Zero Plan

Some of the high-injury routes identified in this analysis are also situated within Carthage. As a proactive city committed to traffic safety, Carthage has developed and adopted a comprehensive Vision Zero Action Plan aimed at eliminating fatal and serious injury crashes by 2035. The city's leadership and strategic planning position it as a critical participant in regional safety enhancements.

Carthage's Vision Zero Plan is part of the broader Safe Streets and Roads for All (SS4A) initiative and is designed to align with regional transportation safety goals. This plan is vital for managing high-risk corridors and integrating improvements that address traffic safety holistically. The plan not only outlines strategies for addressing accident-prone routes but also emphasizes collaboration with public officials, consultants, and community stakeholders to enhance safety measures.

The City of Carthage focuses on several key elements, including safety analysis, community engagement, and equitable project selection to ensure a balanced approach to traffic management. This involves leveraging data from traffic volume, crash history, proximity to schools, and the presence of vulnerable road users to guide project prioritization. The commitment includes policy adjustments, infrastructure redesigns, and comprehensive monitoring to achieve significant reductions in traffic incidents.

Carthage's Vision Zero strategy involves detailed recommendations tailored to specific routes, including intersection redesigns, enhanced pedestrian and bicycle facilities, and speed management solutions. This targeted approach considers each corridor's unique characteristics, enabling solutions that prioritize safety while maintaining traffic flow and accessibility. The plan emphasizes that safety improvements should be equitable, particularly for disadvantaged areas that may otherwise be overlooked.

For city planners, law enforcement, and community partners, the Carthage Vision Zero Plan serves as a roadmap for best practices in traffic safety. By following these guidelines, stakeholders can implement effective, data-driven strategies that enhance public safety and align with regional transportation goals. The focus on collaboration and evidence-based planning supports a unified effort to reduce traffic-related fatalities and injuries.

In summary, by aligning safety efforts with the Carthage Vision Zero Plan, we can address high-injury routes with coordinated, impactful improvements. Carthage's leadership in traffic safety provides a model for regional initiatives, fostering safer, more connected communities and contributing to a robust transportation system that prioritizes the well-being of all road users.

Aligning High-Injury Corridor Improvements with Webb City's Upcoming Vision Zero Plan

The City of Webb City, Missouri, has been awarded a FY 2024 Planning and Demonstration Grant in the amount of $119,794 from federal funding to support the development of a comprehensive safety action plan. This project, named the "Webb City Safety Plan," represents a proactive step toward enhancing roadway safety and reducing traffic-related fatalities within the city.

With a population of approximately 13,165 residents, Webb City operates primarily within a rural land-use context. Despite the lower-density setting, Webb City has experienced two traffic fatalities over recent years (2017-2021), underscoring the importance of a focused safety initiative. The Webb City Safety Plan will address these concerns by analyzing high-risk corridors, proposing evidence-based interventions, and setting measurable targets to reduce crash rates, protect vulnerable road users, and improve overall traffic safety.

While this grant is not specifically allocated to underserved communities, Webb City's commitment to inclusivity ensures that the benefits of the safety plan will extend to all residents. An emphasis on equitable safety measures across neighborhoods will promote safe and accessible streets for all, enhancing both quality of life and community cohesion.

The plan's development process will be closely coordinated with Webb City leadership and community stakeholders to ensure that it aligns seamlessly with the city's long-term Vision Zero goals. By working in concert with local officials, planners, and community members, the Webb City Safety Plan will build on local knowledge, address specific safety concerns, and tailor solutions to the community's unique characteristics. This collaborative approach will also involve feedback loops to adapt the plan based on community input and evolving needs, maintaining Webb City's commitment to transparency and stakeholder engagement.

Additionally, the Webb City Safety Plan will harmonize with regional and national safety initiatives, including the Safe Streets and Roads for All (SS4A) program. This alignment with SS4A ensures that Webb City is not only adhering to best practices in traffic safety but also contributing to a cohesive regional strategy to eliminate traffic-related fatalities.

In summary, by developing this comprehensive safety action plan in collaboration with city leadership and community stakeholders, Webb City is setting a foundation for future infrastructure improvements, policy changes, and safety programs that pave the way toward a safer, more connected, and resilient city for all road users.

Addressing the High Injury Network

Identifying the High Injury Network (HIN) makes it possible to focus resources where they will save the most lives. Rather than spreading safety investments thinly across the entire roadway system, this targeted approach concentrates on corridors with the greatest potential for reducing fatal and serious injury crashes. A comprehensive strategy for addressing the HIN in Jasper, Newton, McDonald, and Barton counties rests on four pillars: engineering, enforcement, education, and data-driven evaluation.

1. Engineering Improvements

Roadway Design Enhancements

Improving the physical design of HIN corridors is among the most effective strategies for preventing severe crashes. Treatments such as centerline and edge-line rumble strips, wider shoulders, enhanced signage, and improved roadway lighting reduce run-off-road and head-on collisions. At high-crash intersections, the installation of roundabouts or protected signal phasing has been proven to significantly cut the risk of severe side-impact and angle crashes (FHWA, 2024).

Pedestrian and Cyclist Safety

Several HIN corridors—such as MO Highway 43 South and Rangeline Road—lack adequate pedestrian and bicycle infrastructure. This absence puts vulnerable road users at heightened risk of fatal crashes. Adding marked crosswalks, refuge islands, protected bike lanes, and enhanced crossing signals can transform these corridors into safer, more inclusive spaces for all users (NHTSA, 2024).

2. Enforcement and Regulation

Speed Management

Speed remains a leading factor in crash severity, particularly on rural interstates like I-44 and I-49. Targeted speed limit adjustments, paired with enforcement, can reduce both crash frequency and severity. Speed feedback signs, corridor-based enforcement, and automated speed cameras in proven high-risk segments are cost-effective tools for changing driver behavior (FHWA, 2024).

Targeted Enforcement Strategies

Deploying law enforcement strategically on HIN corridors can deter unsafe behaviors such as impaired driving, distracted driving, and reckless passing. Coordinating with state and local agencies ensures that enforcement aligns with crash data, concentrating on the highest-risk locations and times of day (NHTSA, 2024).

3. Education and Public Awareness

Public Awareness Campaigns

Engineering and enforcement work best when paired with efforts to educate drivers and communities. Campaigns that emphasize seat belt use, safe speeds, sober driving, and distraction-free travel can influence long-term behavior. Tailoring campaigns to corridors with known risks reinforces local relevance and increases effectiveness.

Community Engagement

Local voices are essential in shaping effective safety solutions. Hosting public workshops, community forums, and outreach events provides residents an opportunity to identify concerns and contribute ideas. Partnerships with schools, businesses, and civic organizations can amplify messaging and foster a culture of shared responsibility for safety (FHWA, 2024).

4. Data-Driven Approaches

Ongoing Crash Analysis

Continuous monitoring of crash data allows agencies to identify emerging hot spots, track seasonal patterns, and evaluate crash causation factors. Integrating crash data with traffic volume, land use, and roadway characteristics ensures interventions remain current and targeted.

Performance Monitoring and Evaluation

Evaluating the success of interventions is vital for accountability and continuous improvement. Tracking outcomes—such as reductions in severe crashes, average travel speeds, or emergency response times—provides evidence of impact. This data-driven feedback loop ensures that limited resources are used efficiently and that strategies evolve as conditions change (MoDOT, 2024).

Conclusion

The High Injury Network in Jasper, Newton, McDonald, and Barton counties represents the region's greatest opportunity to make measurable progress toward Vision Zero. With nearly 38% of all severe crashes concentrated on just 15 corridors, targeted improvements in these locations can significantly reduce the human and economic toll of roadway crashes.

By combining engineering countermeasures, proactive enforcement, public education, and data-driven evaluation, the region can create safer streets for all users. Collaboration between transportation planners, law enforcement, elected officials, and community members is essential to success. Together, these efforts will move Southwest Missouri closer to a future where traffic-related deaths and life-altering injuries are no longer accepted as inevitable, but eliminated altogether.

Contributing Factors

Human Contributing Factors

Traffic safety is shaped as much by human decisions as by roadway conditions. Across Barton, Jasper, McDonald, and Newton counties, the cumulative effect of **impaired driving, distraction, speeding, and aggressive driving** continues to create dangerous conditions for everyone on the road. These behaviors are among the most preventable causes of crashes, yet they remain the leading contributors to fatalities and serious injuries in the region.

From **2020 to 2024**, the four-county area experienced **253 traffic fatalities and 712 serious injuries**. Analysis of crash-level data shows that a majority of these severe outcomes can be traced to human factors: drivers choosing to speed, drive impaired, engage with distractions, or act aggressively. For example, **163 severe crashes involved impaired drivers**, while **385 severe crashes were tied to aggressive driving behaviors**. These numbers reinforce that most roadway deaths and life-altering injuries are not inevitable—they are preventable consequences of risky behaviors.

Each of these factors magnifies crash risks in different ways:

- **Impaired driving** reduces reaction time and judgment.
- **Distracted driving** diverts eyes, hands, and attention from the road.
- **Speeding** reduces stopping distance and multiplies crash forces.
- **Aggressive driving** creates conflict and unpredictability that heightens severity.

Together, these human choices account for a disproportionate share of the region's fatalities and serious injuries. This chapter examines the role of each factor in detail, combining **local crash statistics from 2020–2024** with national research to show why these behaviors are so dangerous, and what interventions are most effective in countering them.

Speeding

Speed is one of the most influential factors in both the likelihood and severity of roadway crashes. Higher speeds increase stopping distances, reduce a driver's ability to detect and respond to hazards, and amplify the energy released during a collision. This relationship is especially dangerous for vulnerable road users such as pedestrians and cyclists, who face a far greater risk of fatal outcomes when struck by faster-moving vehicles.

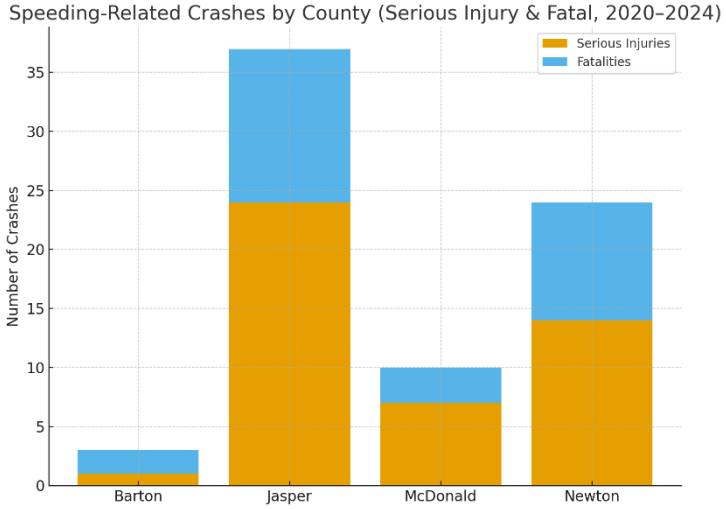
To fully understand the role of speed in crash fatalities, it is essential to consider its multiple effects:

- **Crash severity:** The force of impact grows exponentially with speed, greatly increasing the probability of death or serious injury.
- **Reaction time:** At higher speeds, drivers have far less time to recognize threats and take corrective action.
- **Stopping distance:** The faster a vehicle is traveling, the longer it takes to stop, even under optimal conditions.

- **Vulnerability of pedestrians:** At 20 mph, most pedestrians survive a collision; at 40 mph, the chance of survival drops dramatically.

These dynamics illustrate why speeding is consistently identified as a major contributor to traffic deaths and life-altering injuries.

The analysis of speed-related crashes across four counties—Barton, Jasper, McDonald, and Newton—reveals important insights into the frequency, severity, and trends of these incidents. Speeding remains a significant factor contributing to serious injuries and fatalities in these counties, highlighting the need for targeted interventions to improve road safety.



Barton County

Barton County recorded **3 speed-related crashes** between 2020 and 2024. While the total number is small, the severity is striking: **2 of the 3 crashes were fatal**, and the remaining crash resulted in a serious injury. This means that two-thirds of speed-related crashes in Barton ended in a fatality.

Although Barton's overall crash volume is lower than the other counties, the data highlights that even a handful of speeding incidents can have devastating consequences. The pattern underscores the need for **proactive speed management**, particularly on rural highways where higher speeds, fewer enforcement resources, and longer emergency response times create conditions where crashes are more likely to be fatal.

Jasper County

Jasper County experienced the highest number of speed-related crashes in the region, with **37 incidents recorded between 2020 and 2024**. Of these, **13 crashes were fatal** and **24 resulted in serious injuries**, making speeding a persistent and deadly problem in this county.

As the most urbanized of the four counties, Jasper faces unique challenges. The city of Joplin and surrounding areas have **high traffic volumes, frequent intersections, and a mix of local and through traffic**, all of which create opportunities for high-risk speeding behavior. In many cases, crashes occur where speeding combines with congestion or turning movements, amplifying the likelihood of multi-vehicle and severe collisions.

These trends highlight the urgent need for **urban-specific interventions** in Jasper County, such as traffic calming on arterial roads, stricter enforcement in high-crash corridors, and public education campaigns targeting risky behaviors. Without these measures, Jasper is likely to remain the county most burdened by speed-related severe crashes.

McDonald County

McDonald County recorded **10 speed-related crashes** between 2020 and 2024. Of these, **3 were fatal** and **7 caused serious injuries**. While the overall number of crashes is moderate compared to Jasper, the proportion of severe outcomes is high, reflecting the unique risks of McDonald's largely rural roadway network.

Narrow, winding highways, limited lighting, and frequent curves create conditions where excessive speed can quickly result in loss of control. Combined with long emergency response times typical of rural areas, crashes that might have been survivable elsewhere often result in fatalities here. Addressing these risks will require **infrastructure improvements**, such as curve warning systems, enhanced signage, and shoulder widening, along with community-based education to raise awareness about the dangers of speeding on rural roads.

Newton County

Newton County experienced **24 speed-related crashes** during the five-year period, including **10 fatal crashes** and **14 serious injury crashes**. The high proportion of fatal outcomes indicates that speeding remains one of the most serious contributors to traffic deaths in the county.

Much like McDonald, Newton County's challenges are shaped by its mix of rural highways and smaller communities. High travel speeds, coupled with road design issues such as sharp curves and limited visibility, create a deadly combination. Crashes in Newton often occur on roadways where speed limits are high but safety features such as rumble strips, wider shoulders, or protective barriers are lacking.

These findings point to the need for **targeted enforcement and roadway design interventions** in Newton County. Strategies such as speed feedback signs, enforcement campaigns in known high-risk corridors, and roadway treatments like high-friction pavement can reduce the likelihood of speed-related crashes and improve survivability when they occur.

Regional Implications

The analysis of speed-related crashes across Barton, Jasper, McDonald, and Newton counties underscores the persistent and deadly role of excessive speed in roadway safety. While the overall number of speed-related crashes is smaller than other contributing factors, their severity is disproportionate: nearly one-third of these incidents resulted in fatalities.

Key patterns emerge when comparing the four counties:

- **Jasper County** leads in the number of speed-related crashes, reflecting its urban environment where congestion, frequent intersections, and risky driver behavior intersect to create repeated crash risks.
- **Newton County** shows a high concentration of fatalities among its speed-related crashes, indicating that excessive speed on rural highways often has catastrophic consequences.

- **McDonald and Barton counties**, though reporting fewer total crashes, highlight how rural conditions—limited lighting, sharp curves, and delayed emergency response—make even a small number of speeding incidents disproportionately deadly.

Together, these findings emphasize that **speeding is not confined to any single setting**. In urban areas, it interacts with congestion and turning conflicts; in rural counties, it magnifies the risks of limited infrastructure and longer response times. Addressing speed-related crashes across the region will therefore require a **dual strategy**:

- **Urban corridors** need traffic calming, stricter enforcement, and community outreach to discourage risky behaviors in dense, high-conflict areas.
- **Rural highways** need engineering upgrades such as enhanced curve treatments, high-friction pavement, and speed feedback systems to help drivers maintain safe speeds in challenging conditions.

By implementing these measures, the region can reduce the disproportionate toll of speed-related crashes and move closer to the broader Vision Zero goal of eliminating traffic deaths and serious injuries.

The Dynamics of Speed and Crash Severity

The relationship between speed and crash severity is exponential rather than linear. This means that as speed increases, the risk of severe injury or fatality grows disproportionately. When a vehicle collides with another object, the force of the impact is primarily determined by its speed. The kinetic energy involved in a crash increases with the square of the speed, meaning that doubling a vehicle's speed quadruples the energy released upon impact. For example, a crash at 60 mph will release four times the energy of a crash at 30 mph.

This dramatic increase in energy results in significantly more severe damage to vehicles, and more importantly, a greater likelihood of severe injuries or fatalities to the occupants and other road users involved.

According to data from the World Health Organization (WHO), a 5% increase in average speed leads to a roughly 20% increase in the likelihood of a fatal crash. This statistic underlines the disproportionate impact that even small increases in speed can have on the severity of crashes. Similarly, the National Highway Traffic Safety Administration (NHTSA) in the United States reports that speeding was a contributing factor in 26% of all traffic fatalities in 2021, accounting for over 11,000 deaths. These figures illustrate that managing speed is a critical component of road safety strategies worldwide.

Speed, Reaction Time, and Stopping Distances

Higher speeds directly affect a driver's ability to react to sudden hazards and the distance required to bring a vehicle to a stop. At 20 mph, the total stopping distance (including reaction time and braking distance) is approximately 40 feet. However, at 40 mph, the stopping distance increases to about 120 feet—three times longer. The time it takes for a driver to perceive a hazard and react by applying the brakes, known as the perception-reaction time, is generally around 1.5 seconds under optimal conditions. At

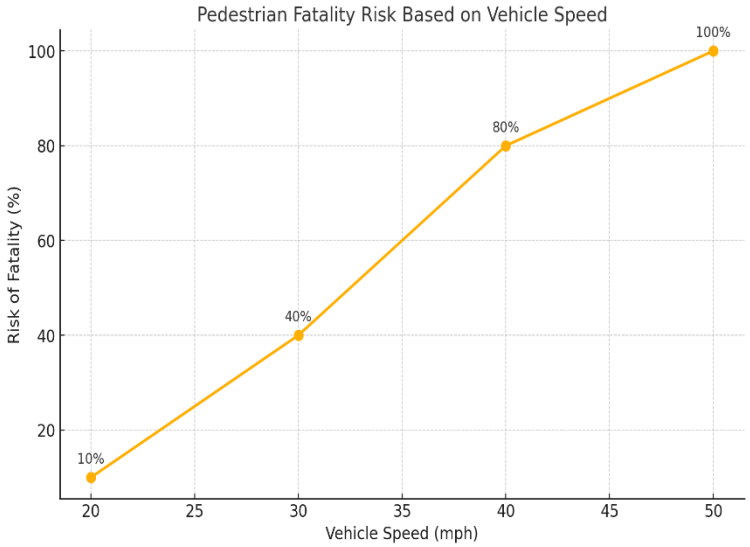
higher speeds, this reaction distance covers much more ground, reducing the opportunity to avoid a collision.

For instance, a vehicle traveling at 60 mph will cover 88 feet in just one second. If a driver spots a pedestrian at a crosswalk or a vehicle pulling out from a side street, the ability to stop or take evasive action is drastically reduced as speed increases. This not only increases the likelihood of a crash but also magnifies its severity due to the higher energy involved.

Risk to Pedestrians: Speed as a Determinant of Survival

The risk to pedestrians in traffic collisions is acutely sensitive to vehicle speeds. Unlike vehicle occupants who benefit from seat belts, airbags, and the structural integrity of a vehicle, pedestrians have no physical protection in a collision. This makes the speed of the vehicle a crucial determinant of the pedestrian's survival. Various studies and statistics have highlighted the stark impact of speed on pedestrian fatalities:

At 20 mph, the risk of a pedestrian being killed in a collision with a vehicle is about 10%. This relatively lower risk is because drivers have more time to react, and the force of impact is significantly less.



At 30 mph, the fatality risk jumps to approximately 40%. This considerable increase illustrates how a modest rise in speed leads to a disproportionate increase in fatal outcomes.

At 40 mph, the risk of fatality for a pedestrian escalates to around 80%, and at speeds above 50 mph, the chances of pedestrian survival are minimal. At these speeds, the force of impact is often lethal, as the human body is unable to withstand the trauma.

According to the Insurance Institute for Highway Safety (IIHS), 69% of pedestrian fatalities in 2021 in the United States occurred in urban settings, where speed management is vital for protecting vulnerable road users. This data emphasizes the importance of speed reduction strategies in areas with high pedestrian activity, such as city centers, residential neighborhoods, and school zones.

Urban Environments, Speed Management, and Safety

Urban environments, with their dense mix of vehicles, pedestrians, and cyclists, are particularly vulnerable to the dangers posed by higher speeds. Speed management in these areas is crucial to reducing crash severity and protecting all road users. Various

studies have shown that speed limits set at 30 mph or lower, combined with traffic-calming measures, can substantially reduce the number of crashes and their severity.

Cities like New York, London, and Oslo have implemented comprehensive speed management policies as part of their Vision Zero initiatives, aiming to eliminate traffic fatalities and serious injuries. Lowering speed limits to 20-25 mph in high-pedestrian areas, alongside implementing traffic-calming measures such as speed bumps, raised crosswalks, pedestrian islands, and narrowing lanes, have been shown to reduce both the number of crashes and their severity. For example, after implementing a city-wide 25 mph speed limit in 2014, New York City saw a 22% reduction in traffic fatalities within four years.

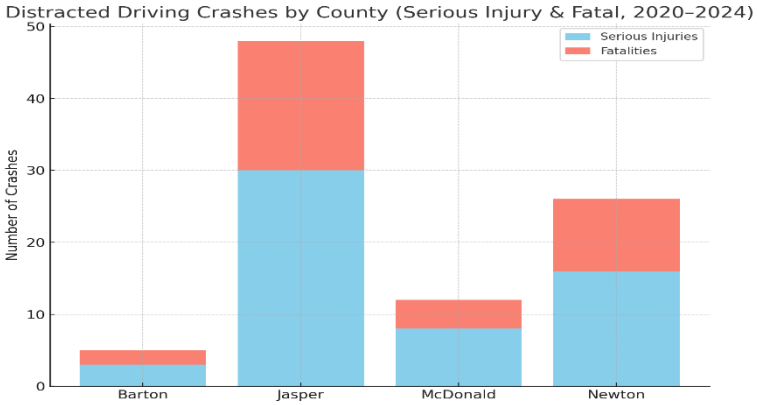
Research shows that lowering speed limits by just 5 mph in urban areas can lead to a significant reduction in crashes. According to a study by the AAA Foundation for Traffic Safety, roads with speed limits of 25 mph or lower had significantly fewer fatal pedestrian crashes compared to roads with speed limits of 35 mph or higher. This data reinforces the value of implementing lower speed limits and other engineering solutions that encourage slower speeds in pedestrian-heavy areas.

Speed is a critical determinant in both the likelihood of a crash occurring and the severity of its outcome. The exponential relationship between speed and crash energy highlights why even small increases in speed can lead to significantly more severe consequences, particularly for vulnerable road users like pedestrians. As statistics and research consistently show, managing speed is not just a matter of reducing the number of crashes but also of mitigating the impact of those that do occur.

In urban settings where pedestrian activity is high, speed management strategies such as lowering speed limits, redesigning streetscapes, and employing traffic-calming measures are vital. These strategies save lives and are essential components of comprehensive road safety plans, such as Vision Zero initiatives. Reducing speed is a proven, effective measure that helps create safer environments for everyone, making roads more forgiving of human error and ultimately saving lives.

Distracted Driving

Distracted driving continues to be a major threat to roadway safety across Barton, Jasper, McDonald, and Newton counties. Whether caused by mobile devices, in-vehicle technology, or other distractions, this behavior removes a driver's eyes, hands, or attention from the road and increases the risk of severe collisions. Even brief lapses can have catastrophic consequences, particularly in complex driving environments.



Barton County

Barton County recorded **5 distracted driving crashes** from 2020 to 2024. Of these, **2 were fatal** and **3 caused serious injuries**. While the total number of

incidents is lower than in other counties, the severity is disproportionately high. Two out of five distracted driving crashes resulted in fatalities, underscoring that even a small number of distracted driving incidents can devastate a community.

Jasper County

Jasper County experienced the highest number of distracted driving crashes, with **48 total** during the period. Among them, **18 were fatal** and **30 led to serious injuries**. As the most urbanized county in the region, Jasper faces unique challenges: high traffic volumes, frequent intersections, and a wide variety of visual and cognitive stimuli. In this environment, distractions further impair drivers' ability to process information and react to hazards, making distracted driving especially dangerous.

McDonald County

McDonald County reported **12 distracted driving crashes**, including **4 fatalities** and **8 serious injuries**. Though the number of crashes is moderate, the proportion of severe outcomes is troubling. Many of McDonald's roadways are rural, where drivers may perceive lower risks and feel more comfortable engaging in distracting behaviors. However, research consistently shows that rural settings often produce more severe crash outcomes due to higher travel speeds and limited emergency response times, magnifying the consequences of distraction.

Newton County

Newton County recorded **26 distracted driving crashes**, with **10 fatal** and **16 serious injury crashes**. The county's relatively high number of incidents highlights the persistent risk posed by driver inattention. Even on roadways that may seem less hazardous than dense urban corridors, distractions behind the wheel can lead to severe outcomes. This reinforces that distracted driving is a universal problem—not limited to cities or highways, but dangerous across all environments.

Regional Implications

The 2020–2024 data clearly shows that distracted driving is a **widespread and deadly factor** across Barton, Jasper, McDonald, and Newton counties. While total crash numbers vary by county, the severity of outcomes remains consistently high, with **20 fatalities and 96 serious injuries** across the region.

Key regional patterns include:

- **Jasper County** stands out with the highest total number of crashes (48), reflecting the risks of distraction in urban environments with heavy traffic volumes, frequent intersections, and numerous visual stimuli.
- **Newton County** recorded 26 incidents, with nearly 40% resulting in fatalities, highlighting the deadly consequences of distraction even outside of high-density urban areas.
- **McDonald County** demonstrates how distraction combines with rural conditions to produce severe outcomes—lower traffic volumes may give drivers a false sense of

safety, yet crashes are more likely to be deadly due to higher travel speeds and longer emergency response times.
- **Barton County**, though reporting fewer crashes, shows that even a small number of distracted driving incidents can devastate communities when two out of five incidents end in fatalities.

These findings underscore that distracted driving is not confined to smartphones or younger drivers—it is a systemic behavioral problem affecting all counties and roadway types. The combination of **driver inattention, high speeds, and complex road conditions** creates a persistent risk for severe crashes across the region.

To address these risks, Southwest Missouri communities will need a **multi-pronged strategy** that includes:

- Stronger **hands-free enforcement policies** to limit mobile device use behind the wheel.
- **Public education campaigns** emphasizing that distraction is as dangerous as impaired driving.
- **Targeted enforcement and awareness efforts** in both urban corridors and rural highways.
- Collaboration with schools, employers, and community organizations to promote safer driving behaviors.

By treating distracted driving as a core safety issue rather than an isolated behavior, the region can reduce the severe outcomes tied to inattention and move closer to its Vision Zero goal.

Broader Issues and Scientific Insights on Distracted Driving

Distracted driving is a complex issue that has become a widespread problem across the United States, exacerbated by the proliferation of mobile technology and in-vehicle infotainment systems. According to the National Highway Traffic Safety Administration (NHTSA), distracted driving claimed 3,142 lives in 2020 alone, and it remains a leading cause of traffic crashes nationwide. Scientific studies have consistently shown that distracted driving significantly affects a driver's response times, situational awareness, and decision-making abilities.

Impact on Response Times: Research by the Virginia Tech Transportation Institute (VTTI) and other safety organizations has demonstrated that texting while driving increases the time a driver spends not looking at the road by up to 400%. This "eyes off the road" time is critical, as studies have found that drivers who text while driving have reaction times that are comparable to those of drunk drivers. A driver sending or reading a text can take their eyes off the road for about 5 seconds. At 55 mph, this is equivalent to driving the length of a football field blindfolded. The delay in response time can lead to a failure to recognize hazards, slower braking responses, and an increased likelihood of veering off the road or colliding with other vehicles or objects.

Cognitive and Visual Distraction: Distracted driving can be categorized into three types: visual (taking eyes off the road), manual (taking hands off the wheel), and cognitive (taking

the mind off driving). Each type of distraction can significantly impair driving performance, but the combination of these factors is particularly dangerous. Cognitive distractions, such as engaging in a phone conversation or interacting with a passenger, reduce the driver's situational awareness and ability to process critical visual information. According to a study by the American Automobile Association (AAA) Foundation for Traffic Safety, cognitive distractions can slow down reaction times, reduce brain activity associated with driving by up to 37%, and increase the likelihood of missed signals or road signs.

The Role of Technology and Multitasking: Modern vehicles equipped with advanced infotainment systems and smartphones have contributed to an increase in multitasking behaviors among drivers. However, scientific evidence shows that the human brain is not capable of effectively multitasking while driving. A study published in the journal Human Factors found that even simple tasks, like tuning the radio or adjusting climate controls, can lead to dangerous levels of distraction. This cognitive overload can have fatal consequences when drivers are required to make split-second decisions.

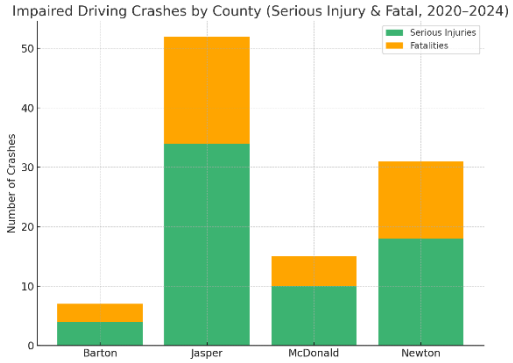
Effects in Urban vs. Rural Settings: While urban areas like Jasper County face unique challenges with traffic volume and diverse distractions, rural counties like McDonald and Newton are not immune to these risks. In rural settings, where traffic enforcement may be less stringent and roads less congested, drivers might underestimate the dangers, leading to higher-risk behaviors. Research from the Insurance Institute for Highway Safety (IIHS) indicates that crashes in rural areas, while less frequent, tend to be more severe due to higher speeds and delayed emergency response times.

Human Factors and Behavioral Psychology: Distracted driving is not just a technological problem but also a deeply rooted behavioral issue. The “It won’t happen to me” mentality often prevails, leading to a culture where distracted driving is normalized despite widespread awareness of its dangers.

Behavioral studies suggest that drivers often underestimate the risks associated with distracted driving and overestimate their ability to multitask safely. This misperception can lead to risky behaviors, such as texting while driving, that significantly increase the likelihood of crashes.

With significant numbers of serious injuries and fatalities resulting from these crashes, it is evident that distracted driving is a complex, multifaceted problem that affects both urban and rural communities. The scientific evidence further supports the need for a comprehensive approach to address distracted driving, combining enforcement, education, technology, and behavioral change strategies. Distracted driving remains a critical road safety challenge that requires continued vigilance, innovation, and a commitment to changing social norms to ensure safer roads for all.

Impaired Driving



Impaired driving remains one of the most serious and preventable causes of traffic fatalities and serious injuries in Southwest Missouri. Whether caused by alcohol, drugs, or a combination of substances, impairment reduces coordination, slows reaction time, and clouds judgment—factors that significantly increase the likelihood of a severe crash. Despite decades of education and enforcement, impaired driving continues to claim lives across both urban and rural communities.

Barton County

Barton County recorded **7 impaired driving crashes** between 2020 and 2024. Of these, **3 were fatal** and **4 caused serious injuries**. While the total number of impaired driving crashes is low compared to other counties, the outcomes are disproportionately severe. Nearly half of these crashes resulted in fatalities, underscoring the extreme risks associated with driving under the influence, especially on rural roads where emergency response times are longer.

Jasper County

Jasper County had the highest number of impaired driving crashes in the region, with **52 total** incidents. Among them, **18 were fatal** and **34 resulted in serious injuries**. This concentration reflects both the county's larger population and its mix of urban nightlife, suburban corridors, and rural highways. The data suggests that impaired driving is particularly problematic in areas with higher access to alcohol and increased traffic volumes, where risky decisions can impact not just the impaired driver but multiple road users.

McDonald County

McDonald County reported **15 impaired driving crashes**, including **5 fatalities** and **10 serious injuries**. Although the total is moderate, the proportion of severe outcomes is troubling. In a county characterized by scenic rural highways and tourism traffic, impaired driving presents a dangerous combination with winding roads and limited infrastructure. Crashes that might otherwise be survivable in urban areas often prove fatal here due to delayed medical response.

Newton County

Newton County experienced **31 impaired driving crashes** from 2020 to 2024. Of these, **13 were fatal** and **18 caused serious injuries**. The high number of fatal outcomes highlights the significant threat posed by impaired drivers in this county. With a roadway network that blends rural highways and small-town streets, Newton faces unique risks where drivers may underestimate the dangers of "short trips" under the influence, only to encounter high-speed or poorly lit road segments that magnify the risks.

Regional Implications of Impaired Driving

Impaired driving remains a regional threat across Southwest Missouri, cutting across both rural and urban contexts. Between 2020 and 2024, impaired drivers were responsible for **105 severe crashes**, leading to **39 fatalities** and **66 serious injuries** in Barton, Jasper, McDonald, and Newton counties combined. These numbers make impaired driving one of the most preventable causes of life-altering crashes in the region.

The data highlights three regional challenges:

1. **Urban Hotspots vs. Rural Risks**
   Jasper County shows the highest number of impaired crashes, reflecting its larger population, higher traffic density, and urban nightlife environment. However, rural counties like McDonald and Barton face their own risks—particularly severe crashes on winding highways where emergency response times are longer. This contrast shows that impaired driving is not confined to one type of roadway but is a region-wide concern requiring tailored solutions.
2. **Severity Over Frequency**
   While Barton and McDonald counties report fewer impaired driving crashes, the **proportion of fatalities is higher** compared to urban counties. This suggests that in rural contexts, even a small number of impaired crashes can have catastrophic consequences. Limited street lighting, higher travel speeds, and delayed access to emergency care amplify the lethality of impaired driving in rural areas.
3. **Systemic Impact**
   Beyond the individual tragedies, impaired driving places a heavy burden on local resources. Fatal and serious injury crashes strain law enforcement, emergency medical services, and regional hospitals, while also driving up economic costs in the form of medical expenses, insurance claims, and lost productivity. Communities across Southwest Missouri share this burden, reinforcing the need for a coordinated regional strategy.

To effectively reduce impaired driving, interventions must balance **enforcement, education, and access to alternatives**. Urban areas like Joplin may benefit from stricter DUI enforcement, public transit expansion, and safe-ride programs, while rural counties may require mobile sobriety checkpoints, expanded patrols on high-risk corridors, and community-led prevention campaigns. Addressing impaired driving through both **regional collaboration and locally tailored actions** is essential to advancing the Vision Zero goal of eliminating fatalities and serious injuries.

Broader Issues and Scientific Insights on Impaired Driving:

Impaired driving is a complex issue that remains a critical problem across the United States, exacerbated by the easy accessibility of alcohol, drugs, and medications that impair driving abilities. According to the National Highway Traffic Safety Administration (NHTSA), impaired driving is a leading cause of traffic fatalities, responsible for nearly 30 deaths daily in the United States—one death every 50 minutes. This alarming statistic underscores the severity of the issue and the need for effective interventions.

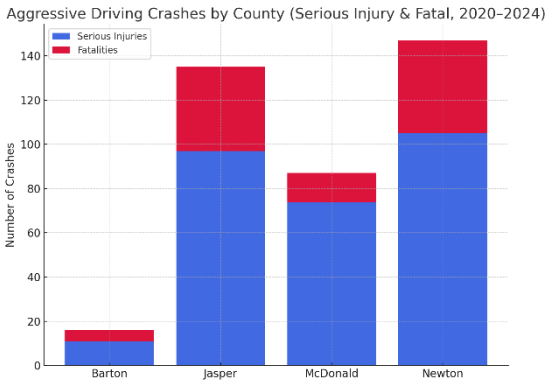
Impact on Reaction Times and Judgment: Alcohol and drugs, including prescription medications, impair the central nervous system, leading to slower reaction times, poor coordination, and impaired judgment. The National Institute on Alcohol Abuse and Alcoholism (NIAAA) states that even at a blood alcohol concentration (BAC) of 0.08%, which is the legal limit in most states, a driver's ability to concentrate, visually track, and process information is significantly compromised. Drivers with a BAC of 0.08% are four times more likely to be involved in a crash compared to sober drivers. Impaired drivers are also less likely to recognize their diminished abilities, leading to risky decision-making and a false sense of control over their driving.

Physical and Cognitive Impairments: Impaired driving is not limited to alcohol; it also includes illicit drugs, prescription medications, and combinations of substances, all of which impair cognitive and motor functions. Alcohol affects brain regions responsible for thinking, reasoning, and muscle coordination—critical abilities for safe driving. A study by the Centers for Disease Control and Prevention (CDC) notes that marijuana use, which is increasing, can impair motor coordination, attention, and reaction times. The combination of alcohol and marijuana is particularly dangerous, as it results in greater impairment than either substance alone, significantly increasing crash risk.

Aggressive Driving

Aggressive driving is one of the most dangerous behavioral factors contributing to traffic crashes in Southwest Missouri. This category includes risky actions such as excessive speeding, tailgating, unsafe passing, erratic lane changes, and running red lights. These behaviors create volatile conditions for all road users, often escalating routine traffic situations into severe or fatal crashes. The 2020–2024 crash data reveals that aggressive driving remains a persistent and deadly problem, responsible for **98 fatalities and 287 serious injuries** across Barton, Jasper, McDonald, and Newton counties.

Barton County



Barton County recorded **5 fatalities** and **11 serious injury crashes** related to aggressive driving. Although the total number of incidents is lower than in the more populous counties, the severity is striking: nearly one-third of Barton's aggressive driving crashes resulted in death. The rural nature of the county—with high-speed highways, limited law enforcement visibility, and longer emergency response times—means that when aggressive driving occurs, it often has catastrophic outcomes. These findings suggest that even small numbers of aggressive driving incidents can have a disproportionate impact in rural areas, warranting interventions such as speed enforcement patrols and road design changes to discourage reckless maneuvers.

Jasper County

Jasper County experienced the highest burden of aggressive driving crashes, with **38 fatalities** and **97 serious injuries**. This makes Jasper the most dangerous county in the region for this behavior. The county's urbanized environment—particularly in and around Joplin—creates conditions where congestion, stress, and higher traffic volumes increase the likelihood of aggressive behaviors like weaving, tailgating, and road rage. The data underscores how aggressive driving thrives in environments with heavy traffic interactions, where one driver's poor decisions can quickly involve multiple vehicles. For Jasper County, targeted safety strategies should focus on corridor redesigns, red-light cameras, and stricter enforcement in high-volume areas to reduce the frequency and severity of these crashes.

McDonald County

McDonald County reported **13 fatalities** and **74 serious injuries** from aggressive driving crashes. These totals highlight that while McDonald is less populated than Jasper or Newton, aggressive driving is still a significant risk. The county's narrow, winding roads and high tourist traffic during certain seasons create conditions where impatient drivers attempt unsafe passing maneuvers or exceed safe speeds on curves. The severity of outcomes is amplified by limited roadway infrastructure and the rural reality of longer emergency response times. McDonald's data suggests a need for both engineering improvements—such as signage and wider shoulders on hazardous corridors—and community-based education efforts that emphasize the risks of reckless driving in rural environments.

Newton County

Newton County experienced the highest number of fatalities from aggressive driving, with **42 deaths** and **105 serious injury crashes** between 2020 and 2024. These figures indicate that aggressive driving is a critical safety challenge for the county. Newton's combination of rural highways and commuter corridors creates an environment where speeding, tailgating, and unsafe passing are common. The high number of severe outcomes points to structural and behavioral issues, including limited roadway lighting, high travel speeds, and delayed emergency medical response. Addressing these problems will require a mix of enforcement, speed management strategies, and roadway modifications to reduce crash severity.

Regional Implications

Aggressive driving is responsible for a staggering share of the region's severe traffic outcomes, accounting for **385 total severe crashes (98 fatalities + 287 serious injuries)** across the four counties from 2020–2024. The data shows that this behavior is not limited to one type of roadway or community:

- **Urban areas like Jasper County** experience the highest number of incidents due to congestion and complex traffic conditions.
- **Rural areas like Barton and McDonald Counties** face fewer crashes overall but disproportionately high fatality rates.

- **Newton County** illustrates the deadliest consequences, with aggressive driving contributing to more fatalities than any other county in the region.

These findings demonstrate that aggressive driving is a **systemic regional issue** requiring multifaceted solutions. Enforcement must be coupled with infrastructure improvements and public education to address both the behaviors and the conditions that enable them. By targeting aggressive driving as a priority, Southwest Missouri can make significant progress toward reducing preventable deaths and serious injuries.

Broader Issues and Scientific Insights on Aggressive Driving

Aggressive driving is not only a localized issue but a widespread problem across the United States, significantly affecting road safety. It is often exacerbated by factors such as high traffic volumes, road congestion, stress, inadequate road infrastructure, and poor driving etiquette. According to the National Highway Traffic Safety Administration (NHTSA), aggressive driving is a leading contributor to traffic fatalities, responsible for a substantial proportion of fatal crashes each year. This alarming trend underscores the critical need for effective interventions that can address the root causes of aggressive driving and mitigate its impact on road safety.

Impact on Reaction Times and Judgment: Aggressive driving encompasses a range of behaviors—such as speeding, tailgating, weaving in and out of traffic, and running red lights—that collectively reduce the margin of error for drivers. These actions significantly reduce the time drivers have to react to unexpected situations, increasing the likelihood of crashes and fatalities. Drivers who engage in aggressive driving often underestimate their risk and overestimate their ability to control dangerous driving conditions, creating a perfect storm for accidents. Studies consistently show that aggressive driving significantly increases the risk of a crash, not only due to the direct actions taken by the aggressive driver but also by influencing the behaviors of other drivers on the road, who may react unpredictably to such behaviors.

Physical and Cognitive Impairments: The physical and cognitive effects of aggressive driving should not be underestimated. Behaviors like speeding, rapid lane changes, and ignoring traffic signals compromise a driver's ability to make quick, rational decisions and reduce overall control of the vehicle. Research has demonstrated that aggressive drivers are less likely to wear seatbelts and more prone to being involved in multiple-vehicle crashes, as their actions often create chaotic and unsafe driving environments. The cognitive overload from aggressive driving can impair judgment, delay reaction times, and lead to a cascading series of errors that culminate in serious accidents.

Environmental and Social Dynamics: Aggressive driving is often more prevalent in certain environmental and social contexts, such as during peak traffic hours, in congested urban areas, and on busy highways. In environments with high traffic volumes and limited road space, such as parts of Jasper County, drivers may experience increased stress and frustration, which can lead to aggressive driving behaviors. Research indicates that congestion and traffic delays can provoke anger and anxiety among drivers, prompting them to engage in risky behaviors as a way to cope with the frustration. Moreover, urban environments with more complex road networks and higher numbers of intersections can provide more opportunities for aggressive driving behaviors, such as running red lights or making illegal turns.

Rural vs. Urban Challenges: While urban areas like Jasper County face unique challenges related to aggressive driving due to high traffic volumes, congestion, and a greater likelihood of road rage incidents, rural counties like McDonald and Newton are not immune to these risks. In rural settings, where roads may be less congested, and law enforcement presence less visible, drivers might mistakenly believe that it is safer to drive aggressively. However, data shows that rural crashes often result in more severe outcomes because of higher average speeds, delayed emergency response times, and lower rates of seatbelt usage. The perceived freedom of driving on less crowded rural roads can lead to overconfidence and a greater propensity for aggressive driving behaviors, which, when combined with high speeds and limited safety measures, can result in fatal crashes.

Behavioral and Cultural Factors: Aggressive driving is deeply rooted in behavioral and cultural factors, which can make it challenging to address through simple regulatory measures alone. Despite widespread awareness of the dangers, many drivers continue to exhibit aggressive behaviors due to social norms, peer influence, and stress-induced responses to traffic conditions. Behavioral studies suggest that drivers' perceptions of risk and their tolerance for aggressive driving are influenced by cultural norms, personal experiences, and the perceived behavior of others on the road. For example, if a driver frequently encounters aggressive driving by others, they may be more likely to adopt similar behaviors. The misperception that aggressive driving is a quick solution to traffic delays or a way to assert dominance on the road can lead to risky behaviors and a higher likelihood of crashes.

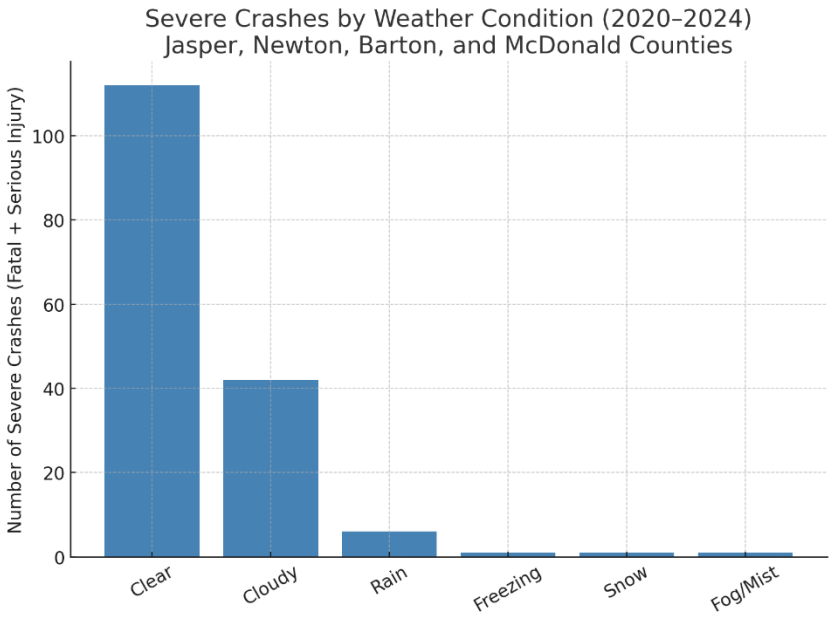
Environmental factors

Environmental factors such as lighting, time of day, weather, and season can significantly influence roadway crashes and fatalities. These elements can affect visibility, road conditions, and driver behavior, contributing to the likelihood and severity of crashes.

Environmental factors play a crucial role in roadway safety. Addressing these factors through better infrastructure, such as improved street lighting, traffic management during peak hours, and road design considerations for adverse weather, is essential to reduce crashes and fatalities. Understanding how these conditions impact driver behavior and roadway safety can help in developing targeted strategies and policies to create safer road environments.

Impact of Weather Conditions

Crash analysis from 2020 to 2024 shows that weather conditions play a role in severe crashes across Jasper, Newton, Barton, and McDonald counties, though driver behavior and traffic conditions remain the primary contributors.



Clear Weather Dominates Crash Statistics:
The majority of severe crashes (**112 incidents**) occurred during clear weather. This outcome highlights that most life-threatening crashes are not caused by poor weather but by human behaviors such as speeding, impaired driving, and distraction. Clear skies may also give drivers a false sense of security, encouraging riskier driving practices.

Cloudy Weather and Elevated Risk:
Cloudy weather was associated with **42 crashes**, making it the second most common condition. Reduced visibility, muted lighting, and slicker road surfaces may all contribute to these incidents. Even minor reductions in visibility can have a noticeable impact on driver safety.

Rain:
Rain contributed to **6 severe crashes**. While fewer than under clear or cloudy conditions, wet roads increase stopping distances and reduce traction. The data suggests many drivers adapt by reducing speeds in rainy conditions, though crashes that do occur are often severe due to loss of control or hydroplaning.

Severe Weather (Freezing, Snow, and Fog/Mist):
Extreme conditions were rare but still present: **1 crash each** under freezing, snow, and

fog/mist conditions. These low numbers reflect either fewer vehicles on the road during severe weather or greater driver caution when conditions are visibly hazardous. However, when crashes do occur, the difficulty of vehicle control in ice, snow, or fog often increases severity.

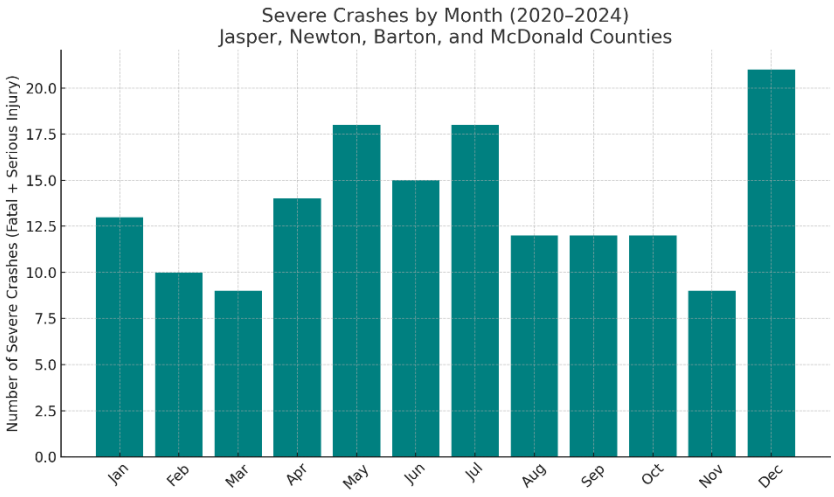
Crash Data Analysis by Month (2020–2024)

The analysis of severe and fatal crashes from 2020 to 2024 across Jasper, Newton, Barton, and McDonald counties reveals clear seasonal trends in roadway safety. The monthly distribution of crashes highlights periods of heightened risk and provides insight into when interventions and enforcement may have the greatest impact.

The totals vary month by month, with **December recording the highest number of severe crashes (21)**. Other high-risk periods include **May and July (18 each)**, along with a steady elevation in late spring and early summer. By contrast, **March and November had the lowest totals (9 each)**, suggesting these transitional months typically see reduced travel demand or fewer risk factors.

This pattern shows that severe crashes in the region are not evenly distributed throughout the year. Instead, they cluster during times of increased travel, particularly **late spring, early summer, and the December holiday season**. These peaks are likely linked to recreational travel, school breaks, and holiday traffic volumes, while the lows in March and November reflect months with less travel activity.

Year-by-Year Observations



- **2020:** Severe crashes were relatively consistent throughout the year, with slightly lower totals in January and February, likely influenced by winter weather and pandemic-related travel reductions.
- **2021:** A dramatic spike occurred in **May**, with 26 severe crashes—the single highest monthly total across the five-year period. This surge likely reflects the easing of pandemic restrictions, pent-up travel demand, and seasonal factors such as construction and recreational driving.
- **2022:** Monthly totals fluctuated, with **April showing a pronounced increase**, possibly related to weather transitions, roadway work, or traffic pattern shifts.

- **2023:** The year saw a general increase compared to earlier years, with **January (14)** and **March (13)** exceeding prior averages. December again reflected sustained holiday travel risks, maintaining high totals.
- **2024:** Preliminary figures continue to reinforce seasonal patterns, with elevated totals in **late spring** and **December**, underscoring consistent risks tied to both travel demand and environmental factors.

Key Takeaway

Across five years of data, a predictable **seasonal rhythm** emerges: severe crashes peak during **late spring, early summer, and December**—months of heightened travel activity—while **March and November consistently report fewer incidents**. This seasonal distribution provides a foundation for **targeted enforcement, public awareness campaigns, and resource allocation**, ensuring that safety efforts are concentrated during periods of greatest risk.

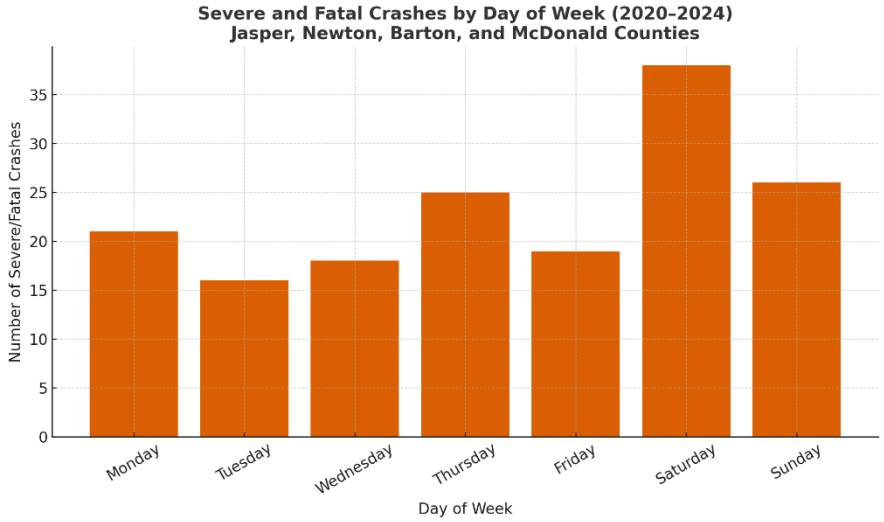
Crash Data Analysis by Day of Week (2020–2024)

An examination of severe and fatal crashes across Jasper, Newton, Barton, and McDonald counties from 2020 to 2024 reveals clear patterns in how crash risks vary throughout the week. Understanding these distributions helps target enforcement, public awareness campaigns, and safety resources to the days of highest concern.

Key Findings

High Incidence on Saturdays and Sundays:
The updated data shows that **Saturday leads all days with 38 severe crashes**, followed by **Sunday with 26 crashes**. These weekend totals reflect increased roadway demand linked to social activities, longer recreational trips, and late-night driving. Impaired driving, speeding, and fatigue are also more common on weekends, amplifying the risks.

Thursday as a Mid-Week Spike:
Thursday recorded 25 severe crashes, making it the third-highest day. This suggests that risks extend beyond weekends, possibly reflecting increased travel for late-week commutes, freight activity, or social outings that begin before the weekend.



Moderate Levels on Monday and Friday:
Monday accounted for 21 crashes and **Friday for 19**, showing that while these days do not lead in totals, they still represent meaningful risks. Monday's lower numbers may reflect

lighter traffic volumes early in the week, while Friday's count indicates elevated risks as travel activity ramps up heading into the weekend.

Lower Totals on Tuesday and Wednesday:
The lowest crash counts were on **Tuesday (16)** and **Wednesday (18)**. While these mid-week days have fewer severe incidents, the consistency of crashes across all days underscores that risks are never absent.

Key Takeaway

From 2020 to 2024, **weekends remain the highest-risk period** for severe crashes in Southwest Missouri, with Saturday in particular standing out as the single most dangerous day of the week. Mid-week travel is comparatively safer, though Thursday shows an unexpected spike in severe incidents. These findings highlight the need for **targeted enforcement and awareness campaigns on weekends and Thursdays**, when social travel, impaired driving, and higher traffic volumes combine to increase risks.

Crash Data Analysis by Time of Day and Lighting Conditions (2020–2024)

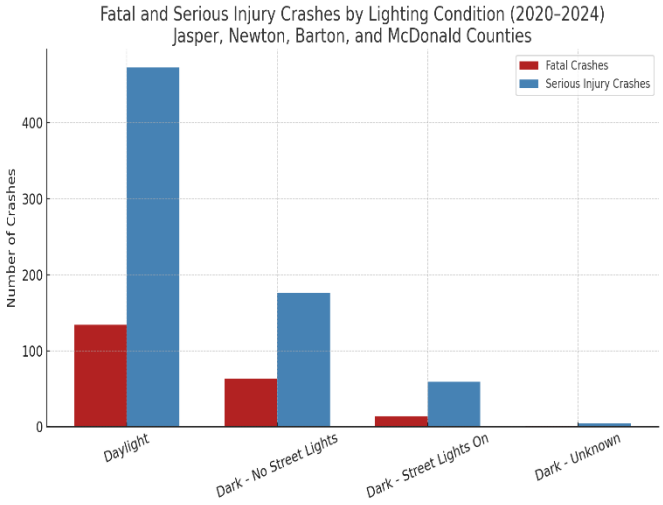
The majority of fatal and serious injury crashes in Jasper, Newton, Barton, and McDonald counties occurred under **daylight conditions**, reflecting the simple fact that traffic volumes are far higher during daytime hours. From 2020 to 2024, a total of **134 fatal crashes and 473 serious injury crashes** were recorded in daylight. While visibility is generally better during the day, the sheer volume of vehicles on the road increases exposure and, therefore, the likelihood of crashes.

However, crashes occurring under **dark conditions**—particularly in areas where street lighting is absent—present a disproportionately high safety concern. Between 2020 and 2024, there were **63 fatal crashes and 176 serious injury crashes** under "dark, no street lights" conditions. These figures highlight the dangers of insufficient lighting on rural highways, county roads, and unlit urban corridors, where reduced visibility can delay driver reaction times and limit hazard recognition.

Even in locations where **street lights were operational**, severe outcomes remained notable. During this period, **14 fatal crashes and 59 serious injury crashes** occurred under "dark with street lights on" conditions. This suggests that while lighting reduces some risk, visibility challenges at night—combined with driver fatigue, speeding, or impairment—continue to elevate crash severity.

A small but significant number of cases also occurred under **dusk, dawn, or "dark unknown" conditions**, where transitional lighting or incomplete reporting likely masked the full picture. Although these categories represent fewer crashes overall, they indicate additional times of risk when visibility is compromised.

County-Level Insights



- **Barton County**: Most severe crashes occurred in daylight (**10 fatalities, 29 serious injuries**). However, **7 fatalities and 10 serious injuries** occurred in unlit dark conditions, demonstrating that rural two-lane roads without lighting remain a major hazard.
- **Jasper County**: The county recorded the highest totals overall, with **58 fatalities and 187 serious injuries** during daylight. Severe nighttime crashes were also significant, with **25 fatalities and 69 serious injuries** in unlit conditions—showing that lighting deficits compound risk in the most heavily traveled county in the region.
- **McDonald County**: Unlit roadways proved especially dangerous, producing **16 fatalities and 64 serious injuries**, nearly matching the totals from daylight conditions (**26 fatalities, 63 serious injuries**). This balance underscores the heightened dangers of rural, winding roads where street lighting is scarce.
- **Newton County**: Daylight accounted for **40 fatalities and 136 serious injuries**, but dark, unlit conditions still produced **15 fatalities and 33 serious injuries**. The combination of high-speed rural corridors and limited roadway lighting highlights critical infrastructure gaps.

Regional Implications

While daylight crashes dominate numerically, **nighttime conditions without adequate street lighting are far deadlier relative to exposure**. This pattern is consistent across all four counties, but it is most pronounced in Jasper and McDonald counties, where rural highways and growth corridors lack sufficient illumination.

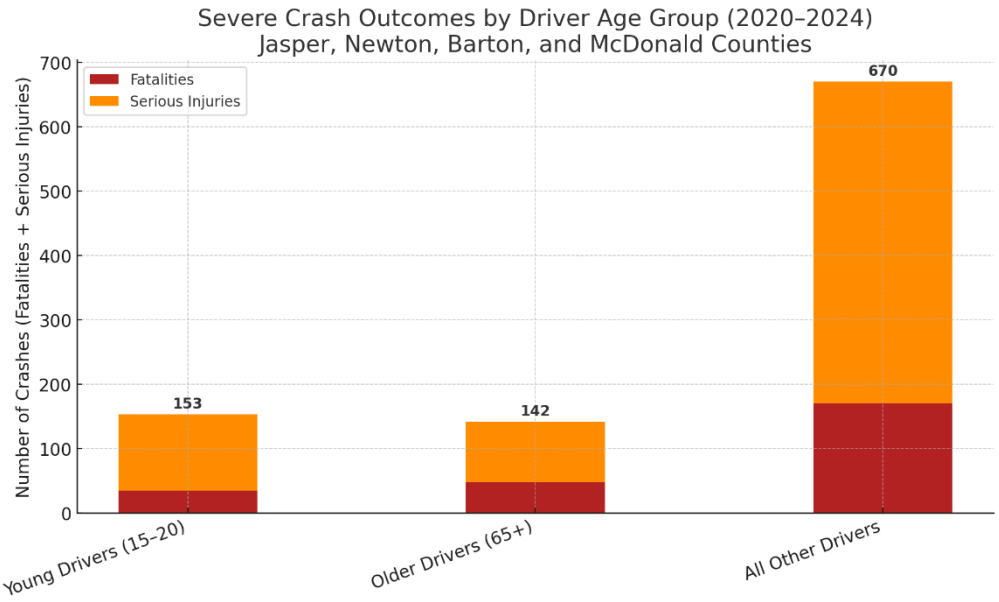
Improving nighttime visibility is a key opportunity for reducing severe crash outcomes. Countermeasures include:

- Systematic **installation and maintenance of roadway lighting** along high-risk corridors.
- Enhanced **reflective pavement markings, signage, and rumble strips** to improve nighttime driver awareness.
- Deployment of **speed management strategies** in rural areas, where darkness and high speeds combine to increase crash severity.
- Conducting **nighttime safety audits** to identify lighting gaps and prioritize improvements.

By pairing these infrastructure improvements with targeted enforcement and public education campaigns, the region can address one of its most consistent safety challenges—reducing the disproportionate risk of fatalities and serious injuries on dark, unlit roadways.

A Focus on Young and Older Drivers (2020–2024)

Between 2020 and 2024, a total of **253 fatalities** were recorded across Jasper, Newton, Barton, and McDonald counties. Of these, **young drivers (ages 15–20) and older drivers (ages 65 and above) accounted for 83 deaths**, representing **33% of all roadway fatalities** in the region. Specifically, **35 fatalities involved drivers aged 15–20**, while **48 involved drivers aged 65 and older**. These two age groups, though often considered vulnerable because of inexperience or age-related decline, are clearly overrepresented in fatal outcomes relative to their share of the driving population.



In addition to fatalities, **712 serious injury crashes** were reported across all ages during the same period. Young drivers were involved in **118 serious injury crashes (17%)**, while older drivers accounted for **94 (13%)**. Together, these two groups contributed to **30% of all serious injury crashes** in the region. This disproportionate impact underscores the importance of developing targeted safety strategies for younger and older drivers while also recognizing that traffic safety challenges extend to all age groups.

These figures highlight two key realities:

1. **Youthful inexperience and risk-taking behaviors** amplify crash severity for young drivers.
2. **Age-related physical and cognitive decline** make older drivers more susceptible to serious injury or death even in less severe crashes.

Addressing these risks requires a comprehensive approach—spanning driver education, infrastructure design, enforcement, and public health strategies—that accounts for the unique vulnerabilities of both young and older drivers.

Crash Risks and Challenges for Young Drivers (Aged 15–20)

Young drivers continue to be overrepresented in severe crash data. Inexperience behind the wheel, coupled with risky behaviors such as speeding, distracted driving, and impaired driving, often results in catastrophic outcomes.

- **Barton County**: 13 crashes involved young drivers, with 3 resulting in fatalities and 10 in serious injuries. While relatively few in number, the severity is disproportionately high, reflecting the dangers posed by rural road conditions and high-speed corridors.
- **Jasper County**: The region's most concerning hotspot, with 82 crashes involving young drivers, including 14 fatalities and 68 serious injuries. Urban traffic density, complex intersections, and risky behaviors like distracted or impaired driving amplify risks.
- **McDonald County**: 12 crashes were linked to young drivers, with 6 fatalities and 6 serious injuries. The balance between fatal and serious injury outcomes indicates the particular hazards of rural and winding roads with inadequate safety features.
- **Newton County**: 38 crashes involved young drivers, with 8 fatalities and 30 serious injuries. This reflects the significant exposure of young drivers in mixed rural-urban environments, particularly along highways and secondary roads with high speed limits.

Key Insight: Across the four counties, **young drivers accounted for 35 fatalities and 118 serious injury crashes**, reinforcing the need for strategies such as **Graduated Driver Licensing (GDL)** programs, expanded defensive driving education, and stricter enforcement of distracted and impaired driving laws.

Crash Risks and Challenges for Older Drivers (Aged 65 and Older)

Older drivers face distinct challenges related to declining vision, slower reaction times, and age-related frailty, which increases the severity of crash outcomes even at lower speeds.

- **Barton County**: 6 crashes involved older drivers, all resulting in serious injuries. While the totals are low, the severity reflects how frailty amplifies outcomes even in minor collisions.
- **Jasper County**: 66 crashes involved older drivers, with 9 fatalities and 57 serious injuries. This highlights the difficulty older drivers face in navigating complex, high-traffic environments and intersections.
- **McDonald County**: 25 crashes were linked to older drivers, split between 12 fatalities and 13 serious injuries. The nearly even distribution underscores the life-threatening nature of rural crashes for older adults.
- **Newton County**: 29 crashes involved older drivers, with 8 fatalities and 21 serious injuries. Patterns here suggest struggles with roadway complexity and reduced adaptability in high-speed environments.

Key Insight: Older drivers were involved in **48 fatalities and 94 serious injury crashes** across the four counties. These outcomes stress the importance of **age-friendly infrastructure design** (better signage, clearer intersections, and enhanced lighting), alongside initiatives such as regular health and vision checks and mobility planning for seniors.

Conclusion: Addressing the Unique Needs of Young and Older Drivers

The data for 2020–2024 clearly demonstrates that young and older drivers represent a disproportionate share of severe crash outcomes in Southwest Missouri. Together, they account for **33% of all fatalities and 30% of all serious injuries**, despite making up a smaller fraction of the driving population.

- **Young drivers** face risks tied to inexperience, overconfidence, and high-risk behaviors. Interventions should emphasize **education, licensing restrictions, and targeted enforcement**.
- **Older drivers** face risks tied to age-related physical limitations and frailty. Interventions should focus on **roadway design improvements, enhanced signage, and mobility support programs**.

By tailoring strategies to these vulnerable groups, while continuing to address system-wide safety issues, Southwest Missouri can make meaningful progress toward reducing fatalities and serious injuries across all age demographics.

How Southwest Missouri Will Achieve Vision Zero

The Path Forward

Addressing the safety challenges highlighted in this safety plan requires a multifaceted approach that encompasses engineering, enforcement, education, and emergency response—often referred to as the "4 E's" of traffic safety.

1. **Engineering: Investments in road design, such as the implementation of roundabouts, median barriers, and improved lighting, can help reduce the likelihood of severe crashes. Infrastructure projects like better pedestrian crossings, protected bike lanes, and clearer road markings are essential to safeguarding vulnerable road users.**

2. **Enforcement: Strengthening the enforcement of traffic laws, including speed limits and impaired driving regulations, is critical. This could involve increasing the presence of law enforcement on roads with high accident rates and utilizing technology such as red-light cameras and speed enforcement cameras to deter dangerous driving behaviors.**

3. **Education: Public education campaigns that promote safe driving behaviors are equally important. These could focus on the dangers of distracted driving, the importance of seat belt use, and the consequences of impaired driving. Engaging the community through schools, workplaces, and social media can help create a culture of safety.**

4. **Emergency Response: Improving the efficiency and effectiveness of emergency medical services can ensure that when crashes do occur, victims receive timely and appropriate care. This includes ensuring that first responders are well-trained and that hospital facilities are equipped to handle serious trauma cases.**

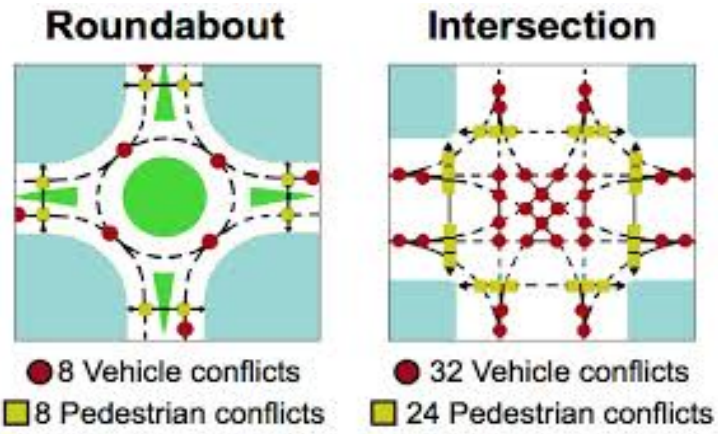
Engineering: Roadway Design Improvements and Speed Control Measures

Roadway Design Improvements

In the Southwest Missouri region, consisting of Jasper, Newton, Barton, and McDonald counties, traffic-related fatalities and serious injuries are significantly influenced by roadway design. The analysis of crash data from 2019-2023 reveals clear patterns in high-risk locations and circumstances, particularly in rural and urban intersections. Implementing roadway design improvements that focus on mitigating these risk factors is essential for reducing the frequency and severity of traffic crashes.

Install Roundabouts at High-Risk Intersections

Intersections, particularly those prone to right-angle (T-bone) collisions, are often the site of severe or fatal crashes. Right-angle crashes are particularly dangerous because they often occur at high speeds and result in direct impact to the sides of vehicles, which are less structurally reinforced than the front or rear of the car.



Data-Driven Approach

According to the Federal Highway Administration (FHWA), converting traditional intersections to roundabouts can reduce injury crashes by as much as 75%. In Jasper County, which accounts for the highest number of crashes, key intersections along major thoroughfares like HH Highway and U.S. Route 71 have been identified as critical points for safety improvements. Studies show that roundabouts significantly reduce both the number and severity of crashes by slowing vehicles down and eliminating conflict points (such as left turns across traffic).

In Newton County, particularly in Neosho and Joplin, traffic flow through intersections like the U.S. Route 60 and State Route 59 corridor could be enhanced with the introduction of roundabouts. Additionally, these roundabouts could serve as a gateway to calming traffic entering these more urbanized areas from rural highways. In rural areas like McDonald County, where intersections often feature two-lane roads with limited signage, roundabouts could be a low-cost, high-benefit solution. The FHWA has consistently recommended roundabouts for rural junctions due to their proven efficacy in slowing traffic and reducing fatal crashes.

Rumble Strips and Roadway Delineation Enhancements

One engineering approach to reduce head-on collisions on high-speed rural roads is the use of rumble strips combined with enhanced roadway delineation. Rumble strips, when installed along the centerline and edges of the road, can alert drivers through tactile vibration and audible noise when they are veering from their lane. This measure is particularly effective in combating drowsy or distracted driving, which is a common cause of rural road accidents.

Data-Driven Approach A report by the Federal Highway Administration (FHWA) highlights that the implementation of centerline rumble strips can lead to a 44% reduction in head-on and opposite-direction sideswipe crashes. When paired with highly visible pavement markings and reflective raised pavement markers, these enhancements can significantly improve nighttime visibility and overall driver awareness.

On roadways such as State Route 43 in Newton County and Highway 59 in McDonald County, where high-speed travel combined with undivided roads contributes to frequent head-on collisions, implementing rumble strips alongside improved road markings would provide an immediate, cost-effective solution. These measures do not require extensive construction or significant right-of-way space, making them suitable for rapid deployment across rural areas.

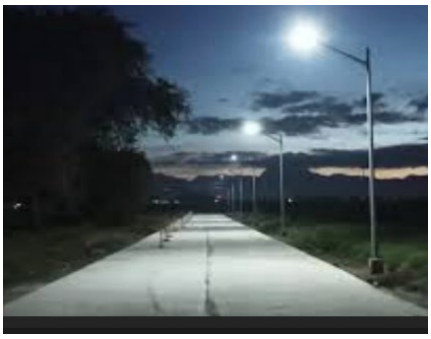
Implement Road Widening on High-Speed Rural Roads

Head-on crashes, particularly on rural roads, tend to be catastrophic because of the speed involved and the limited space for driver error. An effective engineering approach to improve safety on high-speed rural roads is road widening.

Expanding the width of existing lanes or adding paved shoulders provides drivers with additional maneuvering space, reducing the likelihood of crashes caused by sudden lane departures. This measure can also improve recovery space for vehicles, enhancing driver safety in emergency situations.

Data-Driven Approach Studies conducted by the Federal Highway Administration (FHWA) indicate that road widening can lead to a 23% reduction in crashes on rural two-lane roads. On roadways such as State Route 43 in Newton County, Highway 59 in McDonald County, and Highway 96 in Jasper County, where high-speed travel combined with narrow lanes contributes to frequent accidents, road widening could significantly improve safety. Wider lanes and paved shoulders provide vehicles with more space to correct course, reducing the risk of head-on and run-off-road crashes.

Improve Lighting in Both Urban and Rural Areas



Nighttime crashes are disproportionately fatal, as limited visibility hampers drivers' ability to see and react to hazards. In both urban and rural settings, poor lighting has been identified as a contributing factor in serious crashes, especially in pedestrian-heavy areas. Ensuring that streets are well-lit can play a significant role in reducing these crashes.

Data-Driven Approach

According to the National Highway Traffic Safety Administration (NHTSA), 50% of fatal crashes occur at night, even though only 25% of travel happens after dark. Improving lighting infrastructure in areas with high night-time crash frequencies, such as urban centers like Joplin and Neosho, and rural areas like Anderson and Lanagan in McDonald County, could address the visibility issues and reduce the number of fatal accidents.

For rural areas, where large stretches of road remain dark, particularly on high-speed routes, adding consistent lighting at intersections, curves, and pedestrian crossings could dramatically improve visibility. In cities like Joplin and Carthage, increasing the density and quality of street lighting in residential neighborhoods, where pedestrian activity is high, would help ensure the safety of both drivers and vulnerable road users.

Protected Bike Lanes and Safer Pedestrian Crossings

One of the most critical aspects of Vision Zero strategies is protecting vulnerable road users, including pedestrians and cyclists. Pedestrians and cyclists are disproportionately impacted by crashes, particularly in urban environments where vehicles travel at higher speeds and intersections are poorly designed for non-motorized users. Installing protected bike lanes and enhancing pedestrian crossings is vital for reducing fatalities among these groups.

Data-Driven Approach

In Jasper County, particularly in the cities of Joplin and Carthage, crash data highlights an elevated risk for pedestrians and cyclists. High-traffic corridors such as Main Street in Joplin would significantly benefit from the installation of protected bike lanes that include a physical barrier between motor vehicles and cyclists. According to research from the Pedestrian and Bicycle Information Center (PBIC), protected bike lanes can reduce injury risks for cyclists by up to 90%.

In addition to protected bike lanes, the installation of raised pedestrian crossings—especially in downtown areas or near schools—can enhance pedestrian safety by increasing their visibility to drivers and encouraging vehicles to reduce speed. The integration of bollards or other forms of barricades along key pedestrian corridors can provide a further layer of protection, creating a physical separation from vehicular lanes and helping to delineate pedestrian zones clearly and effectively.

In rural areas such as Barton County, where formal pedestrian infrastructure is limited or absent, simple but effective interventions can greatly improve safety. These include flashing pedestrian beacons and clearly marked crosswalks on roads leading to schools, parks, and community centers. Although traffic volumes are typically lower in rural settings, the higher vehicle speeds and lack of designated pedestrian spaces significantly increase the risk to those on foot. Here too, the strategic placement of bollards or low-profile barricades at critical crossing points or near gathering places can serve as both a visual and physical deterrent to vehicles, promoting safer interactions between drivers and pedestrians.

Speed Control Measures

Managing speed is central to reducing both the frequency and severity of crashes. High-speed travel increases the likelihood of crashes and reduces the time available for drivers to react to unexpected hazards. Speed control is especially important in Southwest Missouri, where rural highways with high-speed limits intersect with more urbanized areas, and where speed is a common factor in fatal crashes.

Traffic Calming Devices: Speed Humps and Raised Crosswalks

Traffic calming devices, such as speed humps and raised crosswalks, are proven methods to slow down vehicles in areas where speeding is common. These devices are especially effective in residential neighborhoods, near schools, or in areas where pedestrian traffic is high.

Data-Driven Approach

In Newton County, particularly in the cities of Neosho and Granby, the installation of speed humps in residential neighborhoods and near schools could reduce vehicle speeds and improve safety. Studies from AAA indicate that speed humps can reduce vehicle speeds by as much as 9 mph, which is often the difference between a fatal and non-fatal crash. Furthermore, raised crosswalks near schools or parks create a visual cue for drivers to slow down, thereby reducing the likelihood of pedestrian crashes.

In Joplin and Carthage, where there is a higher volume of vehicle and pedestrian traffic, particularly in downtown areas, traffic calming measures such as curb extensions or narrowed lanes could also be effective. These measures reduce the available space for vehicles to travel at high speeds, encouraging slower driving in areas where pedestrian and bicycle traffic is common.

Speed Management Signage in Rural Areas

Rural areas often experience higher crash severity due to excessive speeding on roads with fewer control measures. While these roads typically have lower traffic volumes, their open nature can lead to higher speeds and reduced attention from drivers. Installing speed management signage, including dynamic speed feedback signs, is a low-cost, effective measure for reducing speed-related crashes.

Data-Driven Approach

According to the Federal Highway Administration (FHWA), dynamic speed feedback signs can reduce speeding by as much as 10%. In areas like State Route 43 and Highway 59 in McDonald County, where speeding has been identified as a key factor in severe crashes, these signs would alert drivers to their speed and encourage self-correction. These signs are particularly effective on long, straight stretches of rural road where drivers may become complacent and exceed safe speeds.

In Barton County, where rural highways connect small towns like Lamar and Liberal, installing rumble strips in combination with speed signage could further alert drivers to upcoming intersections, encouraging them to slow down. Rumble strips provide an audible and tactile warning to drivers, reducing the likelihood of drivers missing critical signage or approaching hazards.

Conclusion

Implementing these engineering and speed control improvements in Southwest Missouri will significantly reduce the number of crashes and fatalities in both rural and urban areas. By prioritizing high-risk intersections for roundabout installation, adding median barriers to rural highways, enhancing street lighting, and protecting vulnerable road users through dedicated bike lanes and pedestrian infrastructure, local agencies can make substantial progress toward the goals of Vision Zero. Additionally, using speed control devices such as humps, raised crosswalks, and speed management signage will further reinforce safe driving behaviors and reduce the risk of high-speed crashes. This multi-pronged approach, grounded in data and tailored to the unique characteristics of Southwest Missouri, is key to creating a safer and more efficient transportation system for all users.

Enforcement: A Comprehensive Strategy

Effective enforcement of traffic laws is a crucial element in reducing the frequency and severity of road crashes. In Southwest Missouri, including the counties of Jasper, Newton, Barton, and McDonald, enforcement efforts must target high-risk behaviors such as speeding, impaired driving, distracted driving, and failure to wear seat belts.

To achieve safer roads, enforcement strategies must incorporate targeted law enforcement in high-risk areas, stricter penalties for violations, automated enforcement tools, and campaigns advocating for essential laws, such as primary seat belt laws and helmet laws. Additionally, a zero-tolerance policy for alcohol and drugs should be implemented to protect public safety and align with broader national and state goals of reducing traffic fatalities.

This section will explore these strategies in greater depth, presenting data-driven arguments for their implementation and expansion across Southwest Missouri.

Targeted Enforcement in High-Risk Areas

Traffic enforcement is most effective when focused on areas with high rates of crashes, particularly during times of increased risky behavior. Based on crash data from 2019 to 2023, Southwest Missouri exhibits patterns where certain locations and times experience higher crash frequencies. Implementing targeted enforcement at these locations, especially during peak hours, is critical for addressing the root causes of crashes, such as speeding and impaired driving.

High-Crash Zones and Timing

The crash analysis from the region shows that roadways like I-44, US Route 71, and State Route 43 are high-risk zones, particularly during peak times such as Friday and Saturday nights. During these periods, there is a heightened risk of impaired driving, speeding, and other risky behaviors that lead to crashes. Therefore, increasing law enforcement presence in these high-crash areas is essential for improving road safety.

Statistical Impact: The National Highway Traffic Safety Administration (NHTSA) reports that targeted law enforcement presence in high-crash zones can reduce traffic crashes by up to 20%. The effectiveness of such enforcement lies in its visibility, which deters drivers from engaging in risky behaviors such as speeding and driving under the influence.

Increase Law Enforcement Presence

To effectively address high-risk crash areas, law enforcement agencies in Southwest

Missouri should focus on scheduling patrols during peak times, such as weekends, when crash rates tend to increase. For example, in Newton County, which has a high incidence of crashes on weekend nights, increased patrolling along highways like US Route 60 and intersections on State Route 59 can help prevent dangerous driving behaviors and improve response times.

Local departments should also take advantage of safety center grants, such as those provided by the Missouri Coalition for Roadway Safety or the Missouri Department of Transportation (MoDOT), to fund enhanced enforcement initiatives like "wolfpacks" or saturation patrols. These operations deploy multiple officers in a concentrated area to aggressively target unsafe driving behaviors, such as speeding or impaired driving.

In Missouri, one successful example is the increased patrols conducted by the Missouri State Highway Patrol (MSHP) under grant funding. During "Operation C.A.R.E." (Combined Accident Reduction Effort) in 2022, MSHP focused on reducing traffic fatalities on high-risk roadways like I-70. They employed saturation patrols and saw a noticeable decline in fatal crashes in those areas. By using a similar approach in Southwest Missouri, local departments can replicate these results, focusing on preventing crashes and ensuring a safer driving environment.

Utilizing available safety grants for saturation patrols can significantly enhance traffic enforcement without overburdening local department budgets.

Automated Enforcement Tools: Speed Cameras and Red-Light Cameras

In addition to increasing officer presence, deploying automated enforcement tools such as speed cameras and red-light cameras can enhance enforcement efforts, particularly in areas with heavy pedestrian traffic or at dangerous intersections. These devices act as force multipliers, allowing law enforcement to monitor compliance with speed limits and traffic signals even when officers are not physically present.

Statistical Impact: According to a study by the Insurance Institute for Highway Safety (IIHS), speed cameras can reduce speeding by up to 63%, and red-light cameras can decrease fatal crashes at intersections by 17%. These numbers suggest that installing automated enforcement tools at high-risk intersections in Southwest Missouri, such as those along I-44 and US Route 71, could significantly reduce crash rates.

Specific Locations for Automated Enforcement
- US Route 60 (Newton County): High incidence of crashes, especially during peak hours.
- Highway 59 near Anderson (McDonald County): Speeding and impaired driving violations are common.
- US Route 71 (Barton County): High traffic volume, frequent speeding violations.

In these areas, automated speed and red-light enforcement would act as both a deterrent and a monitoring tool, ensuring compliance with traffic laws and reducing the likelihood of crashes.

Strict Penalties for High-Risk Behaviors

High-risk behaviors such as speeding, impaired driving, and distracted driving are leading contributors to traffic crashes and fatalities. Increasing penalties for these behaviors is critical for creating a deterrent effect that encourages safer driving habits across Southwest Missouri.

Implementing stricter penalties for these behaviors, such as higher fines or license suspension for repeat offenders, would discourage risky behaviors and improve compliance with traffic laws.

Statistical Impact: According to the Centers for Disease Control and Prevention (CDC), increasing fines for speeding and impaired driving can reduce recidivism rates by up to 30%. In Missouri, speeding fines typically range from $50 to $500 depending on the severity of the offense. Increasing the fine for excessive speeding (e.g., driving 20 mph or more above the limit) could act as a greater deterrent.

Additionally, distracted driving—particularly texting while driving—is a growing problem in the region. A Pew Research Center study found that texting while driving increases the likelihood of a crash by 23 times. By implementing higher fines for distracted driving violations and expanding public awareness campaigns, law enforcement could significantly reduce the frequency of these incidents.

Stricter Enforcement of Traffic Laws

Enforcing traffic laws consistently and strictly is critical to achieving safer roads. Increasing penalties for violations such as speeding, reckless driving, and driving under the influence is a key component of this strategy.

Increased Penalties for Traffic Violations

In Southwest Missouri, where speeding is a significant contributor to fatal crashes, increasing fines for speeding violations could act as a deterrent. Higher fines, mandatory driver education programs, and longer license suspensions for repeat offenders would encourage safer driving behaviors.

Statistical Impact: According to a report by the AAA Foundation for Traffic Safety, states that have implemented stricter penalties for speeding violations have seen a 10-15% reduction in speed-related crashes.

Automated Enforcement

Automated enforcement tools, such as speed cameras and red-light cameras, should be expanded across high-risk areas in Southwest Missouri. These devices have been shown to reduce speeding violations and crashes, especially in urban areas where pedestrian and vehicle interaction is frequent.

Statistical Impact: Studies show that automated enforcement tools can reduce speeding by up to 63% and red-light running by 17%, making them an essential component of any comprehensive traffic safety plan.

Enhanced DUI Checkpoints and Distracted Driving Campaigns

DUI checkpoints, particularly during weekend nights and holidays, are an effective tool for reducing impaired driving. In McDonald County, where impaired driving is a leading cause of crashes, increasing the number and frequency of DUI checkpoints would serve as a deterrent to drivers who might otherwise risk driving under the influence.

Statistical Impact: The NHTSA reports that DUI checkpoints can reduce alcohol-related crashes by up to 20%, particularly when combined with public awareness campaigns that educate drivers about the dangers and consequences of impaired driving.

Distracted driving campaigns could be deployed in partnership with schools and workplaces in urban centers like Joplin and Carthage to reach a broader audience, particularly younger drivers who are more likely to engage in distracted driving.

The Case for Primary Seat Belt Laws: A Critical Step Toward Road Safety

Seat belts are among the most effective safety measures in vehicles, yet seat belt usage remains inconsistent in Missouri. Currently, Missouri only enforces seat belt violations as a secondary offense, meaning that drivers cannot be pulled over solely for failing to wear a seat belt. To address this gap in enforcement, Missouri should adopt primary seat belt laws, which allow law enforcement officers to stop drivers solely for not wearing a seat belt.

Proven Effectiveness in Saving Lives

Research from the National Highway Traffic Safety Administration (NHTSA) shows that seat belts reduce the risk of death in crashes by 45% for front-seat passengers and by 60% for those in light trucks. States with primary seat belt laws, such as California and New York, report seat belt usage rates of over 90%, compared to states like Missouri, where the usage rate hovers around 80% due to the lack of primary enforcement.

Statistical Impact: According to the CDC, primary seat belt laws increase seat belt use by 10-15%, which could prevent thousands of fatalities and serious injuries nationwide. In Missouri, adopting primary seat belt laws could potentially save 200-300 lives annually, particularly in rural areas like Barton County where seat belt usage is lower.

Enhanced Law Enforcement Capability

By adopting primary seat belt laws, law enforcement officers would be empowered to stop and ticket drivers solely for failing to wear a seat belt. This increased enforcement capability would likely lead to higher compliance rates and fewer fatalities.

Zero Tolerance for Alcohol and Drugs: A Crucial Policy for Public Safety

The dangers of impaired driving are well-documented, with nearly 30 people dying daily in the United States as a result of drunk-driving crashes, according to the NHTSA. To combat this issue, Southwest Missouri should adopt a zero-tolerance policy for alcohol and drugs, ensuring that any level of impairment results in strict penalties.

Public Safety Imperative

Impaired driving remains one of the leading causes of fatalities in Southwest Missouri. Jasper and McDonald counties consistently report high rates of alcohol-related crashes. By implementing a zero-tolerance policy, law enforcement would have the authority to issue penalties for any detectable level of impairment, removing the ambiguity that currently allows some drivers to evade harsher consequences.

Statistical Impact: Zero-tolerance policies have been highly effective in countries like Sweden and Japan, where alcohol-related crashes have decreased by 50% since their implementation. In Missouri, a zero-tolerance policy could reduce impaired driving incidents, particularly among younger drivers and repeat offenders.

The Case for Reinstating the Helmet Law in Missouri

Motorcyclists face a disproportionately high risk of injury and death in crashes, particularly those involving head trauma. Despite this, Missouri repealed its helmet law in 2020, allowing motorcyclists over the age of 26 to ride without a helmet if they have insurance.

Since Missouri repealed its universal helmet law, the state has seen a significant rise in motorcycle fatalities. By 2023, the number of motorcycle deaths reached a record high of 174 statewide, marking a 47% increase in fatalities compared to the period before the law was changed. This surge has been directly linked to the repeal

Each year since the law change, Missouri has seen an additional 45 to 55 motorcyclist deaths, with 2023 standing out as the deadliest year on record for motorcycle crashes. Many safety experts, including those from the Missouri Department of Transportation, attribute much of this increase to the reduced use of helmets.

The data shows that out of the 174 motorcyclists killed in 2023, a significant portion were either not wearing helmets or were wearing non-compliant ones, underscoring the impact of the law change on rider safety. Reinstating the helmet law is essential for reducing fatalities and healthcare costs associated with motorcycle crashes.

Public Safety and Healthcare Costs

According to the Insurance Institute for Highway Safety (IIHS), helmets reduce the risk of death by 42% and the risk of head injury by 69%. Since the repeal of Missouri's helmet law, the state has seen an increase in motorcycle-related fatalities and traumatic brain injuries. Reinstating the helmet law could prevent these avoidable tragedies and reduce the burden on emergency services and healthcare systems.

Statistical Impact: A study by the CDC found that states with universal helmet laws save $725 million annually in direct costs associated with motorcycle crashes. Reinstating the helmet law in Missouri could save millions of dollars in healthcare expenses by reducing the severity and frequency of injuries sustained in motorcycle crashes.

Deterrence and Prevention

The certainty of punishment is a powerful deterrent. By enforcing penalties for any level of impairment, Missouri can send a clear message that impaired driving will not be tolerated. This approach would also complement public health goals by discouraging substance use and encouraging healthier behaviors.

Conclusion

By adopting a multifaceted enforcement strategy that includes targeted enforcement in high-risk areas, stricter penalties for high-risk behaviors, advocacy for primary seat belt and helmet laws, and the implementation of zero-tolerance policies for alcohol and drugs, Southwest Missouri can significantly reduce the frequency and severity of traffic crashes. These enforcement measures, combined with the deployment of automated enforcement tools, will create a safer road environment for all users and align with national safety goals such as Vision Zero.

Education: Building a Culture of Safe Drivers

Education is a key pillar of traffic safety, as it helps foster a culture of responsible driving and safer road behaviors. In Southwest Missouri, targeted educational efforts can significantly reduce risky driving behaviors such as distracted driving, impaired driving, and failure to wear seat belts. By focusing on specific demographics, such as younger and older drivers, and through the implementation of public awareness campaigns and school-based programs, communities can work together to reduce traffic fatalities and injuries. In addition, leveraging existing federal and state education grants can provide critical resources to fund these initiatives.

1. Public Awareness Campaigns

Public awareness campaigns are one of the most effective tools in educating the population about the dangers of high-risk driving behaviors and encouraging safer habits. These campaigns can be broad-reaching, focusing on distracted driving, impaired driving, seat belt use, and seasonal risks. By targeting specific demographics—particularly younger drivers, older drivers, and rural communities—these campaigns can be tailored to address the unique challenges faced by these groups.

- **Launch Ongoing Distracted Driving and Impaired Driving Awareness Campaigns**

Distracted driving and impaired driving are two of the leading causes of traffic crashes in Southwest Missouri. National data shows that drivers aged 15-20 are disproportionately represented in distracted driving crashes, as many younger drivers engage in texting or using their smartphones while driving. Additionally, impaired driving, especially during weekends and late nights, continues to be a major cause of fatal crashes in Missouri.

- **The "It Can Wait" Campaign (AT&T)**

One highly successful campaign aimed at reducing distracted driving is the "It Can Wait" campaign, launched by AT&T. This national campaign focuses on educating drivers, particularly younger drivers, about the dangers of texting while driving. The campaign features powerful testimonials from crash survivors and their families, along with interactive experiences, such as virtual reality simulations that allow participants to experience the consequences of distracted driving in a controlled environment. The "It Can Wait" campaign has reached millions of people and could be adopted locally in schools and community centers in Southwest Missouri to target young drivers.

- **Drive Sober or Get Pulled Over (NHTSA)**

For impaired driving, the "Drive Sober or Get Pulled Over" campaign by the National Highway Traffic Safety Administration (NHTSA) has proven highly effective in reducing drunk driving incidents. This campaign runs during high-risk times, such as the holiday season and summer months, when impaired driving incidents tend to spike. The campaign includes targeted enforcement, social media outreach, and partnerships with local law enforcement agencies to emphasize the importance of sober driving. Expanding this campaign locally to bars, restaurants, and event venues in Southwest Missouri could reduce the number of

alcohol-related crashes.

- **Safe Driving Campaigns Targeting Older Drivers**

Older drivers, while experienced, may face challenges related to reaction times, declining vision, and health-related impairments. Educational campaigns targeting this demographic should emphasize defensive driving techniques, the importance of regular health assessments, and adaptive strategies for managing the demands of driving as they age. Additionally, encouraging older drivers to participate in refresher courses, such as the AARP Driver Safety Program, can help them stay sharp and up-to-date with current road safety standards.

Research from the AAA Foundation for Traffic Safety indicates that drivers over the age of 65 are involved in 15% of all fatal crashes, despite making up a smaller portion of the driving population. Educational programs that focus on health assessments (vision checks, cognitive tests, and medication reviews) can reduce the risk of crashes among older drivers by up to 20%. Implementing campaigns in Southwest Missouri through senior centers, healthcare facilities, and community events could help address the specific needs of older drivers.

- **Create Seasonal Safety Campaigns for High-Travel Months**

Crash data from Southwest Missouri reveals that spring and summer months often see a spike in traffic accidents due to increased travel during holidays, vacations, and warmer weather. Seasonal campaigns during these periods can help raise awareness about the dangers of speeding, distracted driving, and impaired driving, particularly during holiday weekends such as Memorial Day, Independence Day, and Labor Day.

- **NHTSA's "Click It or Ticket" Campaign**

One notable seasonal safety campaign is "Click It or Ticket," which focuses on seat belt use during the busy summer travel season. This campaign is coordinated by the NHTSA and law enforcement agencies across the country and has been instrumental in increasing seat belt use. In 2019 alone, the campaign resulted in over 14,000 lives saved due to increased seat belt usage. Southwest Missouri can participate in this national campaign, tailoring it to the region's rural and urban populations to ensure that drivers and passengers buckle up.

- **"Operation Safe Driver Week" (CVSA)**

Another seasonal campaign is "Operation Safe Driver Week" organized by the Commercial Vehicle Safety Alliance (CVSA). This campaign focuses on safe driving behaviors for both commercial and passenger vehicles, with a specific emphasis on speeding, distracted driving, and seat belt use. Conducting a localized version of this campaign in Southwest Missouri, with outreach to commercial drivers and trucking companies, could help address high crash rates involving larger vehicles, particularly on highways such as I-44.

2. School and Community Programs

Engaging schools and communities in traffic safety education is vital for creating long-term behavioral changes, particularly among young drivers and vulnerable road users. By working closely with local schools, law enforcement agencies, and community organizations, these programs can teach teens and the broader community the skills and knowledge necessary to stay safe on the roads.

- **Partner with Local Schools for Teen Driver Safety Programs**

Teen drivers are at a particularly high risk for crashes due to inexperience and higher rates of engaging in risky behaviors such as speeding and texting while driving. Schools in Southwest Missouri can play a crucial role in teaching students about safe driving practices and empowering them to make responsible choices behind the wheel.

- **The National Teen Driver Safety Week**

One effective program is National Teen Driver Safety Week, coordinated annually by the NHTSA. During this week, schools can host events, assemblies, and educational activities designed to raise awareness about the leading causes of crashes among teens, such as distracted driving, impaired driving, and failure to wear seat belts. Incentive-based programs can encourage teens to participate, such as offering scholarships, awards, or free driving lessons for completing safety courses or participating in local campaigns.

- **“Alive at 25” Program**

Another exemplary program is “Alive at 25,” an education course designed by the National Safety Council (NSC) that focuses on the unique challenges faced by young drivers. The program teaches defensive driving techniques, risk assessment, and the consequences of risky driving behaviors. By partnering with local high schools, driver education programs, and youth organizations in Southwest Missouri, “Alive at 25” can be used to reduce crashes among teens aged 15-20, a demographic that is overrepresented in crash data.

- **Offer Incentives for Participation in Safe Driving Initiatives**

Incentives can play a powerful role in encouraging participation in traffic safety programs. Offering rewards such as free driving lessons, discounts on car insurance, or cash prizes can motivate teens and young adults to engage in safe driving initiatives.

- **Toyota’s TeenDrive365 Program**

Toyota’s TeenDrive365 Program is one such initiative that offers interactive experiences, contests, and scholarships to encourage teens to adopt safe driving habits. By creating similar programs tailored to Southwest Missouri and offering incentives, local organizations can increase engagement and build a strong culture of road safety among young drivers.

- **Promote Bicycle and Pedestrian Safety Education in Rural Areas**

Bicycle and pedestrian safety is particularly important in rural areas of Southwest Missouri, where infrastructure may be lacking, and non-motorized road users face heightened risks. Educating both drivers and non-drivers on the importance of sharing the road can reduce crashes and fatalities involving cyclists and pedestrians.

- **Bike Safe, Walk Safe Program**

A program like "Bike Safe, Walk Safe" could be implemented in rural areas of Southwest Missouri to promote awareness about the rules of the road for pedestrians, cyclists, and motorists. This program, originally designed for urban areas, teaches the importance of crosswalk usage, the role of helmet safety, and the importance of reflective gear for cyclists. Through school programs and community workshops, this initiative can be adapted for rural areas where children and adults may not be as familiar with pedestrian and cyclist safety measures.

- **Walk and Bike to School Day**

Another campaign that could be effective in rural areas is Walk and Bike to School Day, an international event that encourages physical activity and highlights the importance of pedestrian and cyclist safety. Partnering with local schools to participate in this event can raise awareness of the challenges faced by non-motorized road users and provide opportunities for infrastructure improvements, such as safer sidewalks and crosswalks in rural communities.

Funding Educational Campaigns and Programs

To ensure the success and sustainability of public awareness and community education programs, securing funding is critical. Several grants are available at the federal and state levels to support traffic safety education initiatives.

The National Highway Traffic Safety Administration (NHTSA) Grants

The NHTSA offers several grants to state and local governments, non-profit organizations, and educational institutions to support traffic safety initiatives. These grants can be used to fund public awareness campaigns, school-based programs, and law enforcement training. Some of the key grants include:

- The State and Community Highway Safety Grant (Section 402): This grant provides funding to states for programs that address a wide range of highway safety issues, including impaired driving, occupant protection, and distracted driving.

- The National Priority Safety Programs (Section 405): This grant offers funding to support

initiatives such as occupant protection, traffic records, and motorcyclist safety.

Safe Routes to School Program (SRTS)

The Safe Routes to School Program (SRTS), funded by the Federal Highway Administration (FHWA), provides funding to communities to create safer environments for children to walk and bike to school. This program can be utilized in rural areas of Southwest Missouri, where infrastructure improvements are needed to ensure the safety of young pedestrians and cyclists. Grants from SRTS can fund the construction of sidewalks, crosswalks, bike paths, and safety education programs.

Missouri Coalition for Roadway Safety

The Missouri Coalition for Roadway Safety offers mini-grants to support local traffic safety education and enforcement initiatives. These grants can be used by community organizations, schools, and local law enforcement agencies to fund public awareness campaigns, teen driver safety programs, and bicycle and pedestrian safety workshops.

Conclusion

By leveraging public awareness campaigns, school-based programs, and community-driven initiatives, Southwest Missouri can build a strong culture of road safety. Educational programs targeting younger drivers, older drivers, and vulnerable road users such as cyclists and pedestrians can reduce the risk of crashes and save lives. Through partnerships with schools, local organizations, and law enforcement, these initiatives can be implemented effectively across the region. Moreover, accessing available education grants will provide the necessary funding to sustain these programs, ensuring that Southwest Missouri continues to make strides toward safer roads for all users.

Emergency Response: Strengthening Coordination and Technology for Faster and More Effective Crash Response

Emergency response plays a critical role in reducing the severity of injuries and saving lives in the aftermath of traffic crashes. In Southwest Missouri, where rural areas like McDonald, Barton, and Newton counties are prone to long response times due to geographic spread and limited infrastructure, improving emergency response is essential for reducing fatalities and serious injuries. Enhancing coordination between emergency services, investing in advanced technology, and building trauma care capacity are crucial strategies to ensure that individuals involved in crashes receive timely and effective care.

1. Enhanced Emergency Response Coordination

In rural areas, the coordination between emergency services—fire departments, Emergency Medical Services (EMS), and law enforcement—is key to improving response times and reducing fatality rates. The challenges posed by geographic isolation, long distances between crash sites and hospitals, and limited staffing at local agencies require a more integrated approach to ensure that help arrives as quickly as possible.

Improve Response Times in Rural Areas

In rural counties like McDonald County, where crashes often occur on remote highways and roads, the time it takes for emergency services to reach the scene can mean the difference between life and death. The National Highway Traffic Safety Administration (NHTSA) has found that delays in response time are a significant factor in rural crash fatalities. While the national average for emergency response times is 18 minutes, rural areas can experience delays of 30 minutes or more, greatly increasing the chances of severe injuries or fatalities.

Coordination Between Local Fire Departments, EMS, and Law Enforcement

Effective emergency response requires seamless communication between local fire departments, EMS, and law enforcement agencies. This coordination can be optimized by creating integrated dispatch systems that centralize the communication process, ensuring that the closest available unit is dispatched to the scene. In Southwest Missouri, this can be accomplished by establishing joint communication centers that serve multiple jurisdictions, reducing confusion and ensuring that all emergency personnel receive the same information in real time.

Data-Driven Approach

A report by the Rural Emergency Medical Services and Trauma Technical Assistance Center (REMSTTAC) suggests that improving coordination between agencies can reduce response times by up to 25% in rural areas. By implementing centralized dispatch systems and shared communication platforms, emergency services in Southwest Missouri could see a significant reduction in response times, ultimately saving lives.

Case Study: Rural Trauma Response Improvement in Wyoming

A similar initiative in rural Wyoming, where trauma response times were reduced by centralizing communication between EMS and law enforcement, resulted in a 30% reduction in response times over a two-year period. This model can be replicated in McDonald, Newton, and Barton counties, where isolated crash sites often experience delays in response due to communication barriers between services.

Training First Responders in Advanced Trauma Care

While improving response times is critical, ensuring that first responders are trained in advanced trauma care is equally important, particularly in rural areas where medical facilities may be far from crash sites. McDonald County, for instance, has limited access to hospitals equipped to handle trauma cases, making it essential that EMS personnel and even local fire departments have the skills to provide life-saving interventions while en route to a hospital.

Trauma Training for EMS and Law Enforcement

First responders in Southwest Missouri should undergo advanced trauma life support (ATLS) training, which equips them with the skills needed to manage severe injuries, control bleeding, and stabilize patients with head, spine, or internal injuries. The American College of Surgeons (ACS) recommends that all EMS personnel and first responders in rural areas receive this type of training to reduce pre-hospital mortality rates.

Statistical Impact

A study published by the Journal of Trauma and Acute Care Surgery found that ATLS training for EMS personnel can reduce the pre-hospital mortality rate in rural trauma patients by up to 40%. Given the challenges of rural EMS in Southwest Missouri, this type of training would significantly improve outcomes for crash victims, particularly in McDonald and Barton counties, where long transport times increase the need for skilled trauma care at the scene.

Establish Regional Trauma Networks

In addition to training individual responders, establishing regional trauma networks that include partnerships between rural hospitals, larger trauma centers, and emergency services can enhance coordination in critical situations. These networks ensure that patients are transferred quickly to facilities that can provide the necessary level of care, whether it's a Level I Trauma Center in Joplin or a smaller rural hospital that can stabilize a patient before transfer.

Case Study: Maryland Trauma Network

The Maryland Institute for Emergency Medical Services Systems (MIEMSS) developed a regional trauma network that links smaller hospitals with major trauma centers, enabling faster transfer of critically injured patients. This approach has resulted in a 20% improvement in trauma survival rates across the state. In Southwest Missouri, creating similar networks, especially between smaller rural hospitals and the larger hospitals in Joplin, could drastically improve patient outcomes.

2. Invest in Technology and Equipment

The availability of modern technology and equipment for first responders is crucial in reducing response times and providing immediate care at crash scenes. Equipping emergency vehicles with advanced technology and ensuring rural hospitals have the necessary trauma infrastructure will vastly improve the region’s ability to respond to and manage traffic crashes.

Equip Emergency Vehicles with Real-Time Crash Location Systems

In rural areas, one of the biggest challenges for first responders is locating the crash site quickly, especially on remote roads or highways with limited signage. Real-time crash location systems and improved GPS tracking can significantly reduce the time it takes for emergency vehicles to arrive at the scene.

Crash Location Systems

Real-time crash location systems, such as Next Generation 9-1-1 (NG911), allow dispatchers to provide first responders with precise location data based on GPS coordinates from the crash scene. These systems can also integrate data from connected vehicles, which automatically alert emergency services in the event of a crash and provide real-time updates on the location and severity of the incident.

Case Study: NG911 Implementation in Iowa

In Iowa, the implementation of NG911 technology has reduced emergency response times in rural areas by 15-20%. By equipping first responders in Southwest Missouri with similar technology, emergency services can locate crash sites more efficiently, even in remote areas like Highway 59 near Lanagan in McDonald County, where crash locations are often difficult to access.

Improve GPS Tracking for Quicker Access to Crash Scenes

Ensuring that all emergency vehicles, including ambulances, fire trucks, and law enforcement vehicles, are equipped with advanced GPS systems is essential for improving response times. These systems allow dispatch centers to track the location of each unit in real time, enabling them to deploy the closest available resource to the crash scene.

Data-Driven Approach

A study conducted by the National Public Safety Telecommunications Council (NPSTC) found that GPS-equipped emergency vehicles were able to reduce their response times by an average of 18%. In Southwest Missouri, implementing this technology could significantly improve access to crash sites in rural areas, where delays are often caused by the time it takes to locate and reach the crash scene.

Ensure Hospitals in Rural Counties Have the Necessary Trauma Care Infrastructure

While equipping emergency vehicles and improving coordination can reduce response times, it is equally important that rural hospitals are equipped to handle severe trauma cases. In rural areas like Barton and Newton counties, hospitals often lack the necessary infrastructure to manage severe injuries from traffic crashes, forcing patients to be transferred to larger hospitals in Joplin or Springfield. This can lead to critical delays in receiving life-saving treatment.

Trauma Care Infrastructure

Ensuring that rural hospitals have the necessary trauma care infrastructure—such as dedicated trauma bays, advanced imaging equipment (CT/MRI), and blood transfusion services—is vital for stabilizing patients before they are transferred to larger trauma centers. Hospitals should also be equipped with telemedicine capabilities that allow them to consult with trauma specialists at larger hospitals for immediate decision-making in critical cases.

Case Study: Georgia Rural Trauma Initiative

In Georgia, a rural trauma initiative focused on upgrading trauma infrastructure in small, rural hospitals reduced the time to definitive care for trauma patients by 35%. The initiative provided grants to rural hospitals for equipment purchases, staff training, and telemedicine capabilities, which allowed them to stabilize patients more effectively before transferring

them to larger facilities. In Southwest Missouri, a similar initiative could improve outcomes for trauma patients in rural areas, reducing the need for long-distance transfers and increasing survival rates.

Investing in Air Ambulance Services

In remote rural areas where ground transport may take too long, air ambulances can play a critical role in reducing response times and providing rapid transport to trauma centers. Investing in air ambulance services and ensuring that dispatch systems can coordinate air and ground resources effectively is key to improving emergency response in areas like McDonald County.

Data-Driven Approach

The Journal of the American Medical Association (JAMA) found that the use of air ambulances in rural areas reduced trauma mortality rates by 24%. In Southwest Missouri, expanding air ambulance services and ensuring that they are fully integrated into emergency response systems could save lives by reducing transport times to trauma centers in critical cases.

Conclusion

Enhancing emergency response in Southwest Missouri requires a multi-faceted approach that includes improving coordination between local fire departments, EMS, and law enforcement, investing in advanced technology, and upgrading trauma care infrastructure at rural hospitals. By optimizing communication systems, equipping emergency vehicles with real-time location tracking, and ensuring that first responders are trained in advanced trauma care, the region can significantly reduce response times and improve outcomes for crash victims. Additionally, creating regional trauma networks and investing in air ambulance services will ensure that even the most remote areas of Southwest Missouri are covered by a robust and responsive emergency system.

Promoting Alternative Transportation

Promoting Alternative Transportation: A Strategic Move to Reduce Road Fatalities

As the number of vehicles on the road continues to grow, so too does the incidence of traffic-related fatalities. Every year, thousands of lives are lost due to vehicle crashes—lives that could be saved through strategic policy changes and a shift in how we approach transportation. One of the most effective ways to reduce road fatalities is by promoting alternative modes of transportation, such as public transit, cycling, and walking. This essay argues that encouraging the use of alternative transportation not only saves lives but also benefits public health, reduces environmental impact, and fosters more vibrant, connected communities.

Reducing Road Fatalities

The primary reason for promoting alternative transportation is its potential to significantly reduce road fatalities. Motor vehicle crashes are a leading cause of death, particularly among young people. The risk of fatal accidents is inherently higher when more vehicles are on the road, and the complexity of traffic interactions increases. By encouraging people to use alternative modes of transportation, such as public transit, biking, or walking, we can reduce the number of vehicles on the road and, consequently, the number of fatal crashes.

Public transportation is statistically much safer than driving. For example, buses and trains have lower crash rates per mile traveled compared to private vehicles. Cyclists and pedestrians, when provided with safe infrastructure, such as dedicated bike lanes and well-designed crosswalks, also experience fewer fatalities. By reducing the reliance on cars and increasing the use of these safer transportation modes, communities can dramatically lower the number of traffic deaths.

Improving Public Health

Beyond reducing fatalities, promoting alternative transportation has significant public health benefits. Regular physical activity is essential for maintaining good health, and active transportation modes like walking and cycling provide an easy and accessible way for people to integrate exercise into their daily routines. Increased physical activity helps prevent chronic diseases such as obesity, heart disease, and diabetes, which are major public health concerns.

Additionally, the reduction in air pollution that comes from fewer vehicles on the road leads to better respiratory health for the entire population. Traffic-related air pollution is a significant contributor to conditions such as asthma and other respiratory issues, especially in urban areas. By promoting alternative transportation, we can improve air quality and, in turn, reduce the incidence of respiratory diseases, leading to healthier communities overall.

Environmental Benefits

Promoting alternative transportation also contributes to environmental sustainability, which is increasingly important in the face of climate change. The transportation sector is a major source of greenhouse gas emissions, with private vehicles being the primary contributors. By shifting some of the transportation burden to public transit, cycling, and walking, we can reduce the overall carbon footprint of transportation.

Public transit systems, particularly when powered by renewable energy, are far more energy-efficient per passenger mile than private vehicles. Cycling and walking have virtually no environmental impact, making them the most sustainable modes of transportation. Encouraging these alternatives helps decrease the demand for fossil fuels, reduce emissions, and mitigate the effects of climate change. In doing so, we not only protect the planet but also create a cleaner, healthier environment for future generations.

Enhancing Community Connectivity and Equity

Promoting alternative transportation also enhances community connectivity and social equity. When communities invest in infrastructure that supports public transit, cycling, and walking, they create more accessible, inclusive environments. This is especially important for individuals who cannot afford a car, are unable to drive due to age or disability, or simply prefer not to rely on private vehicles.

Improved public transportation and safe, walkable neighborhoods enable people of all income levels and abilities to access jobs, education, healthcare, and social opportunities. This fosters a sense of community and reduces social isolation, particularly in urban areas. Additionally, the presence of pedestrians and cyclists on the streets encourages social interactions, strengthens neighborhood bonds, and contributes to a more vibrant public life.

Reducing Traffic Congestion and Costs

Traffic congestion is a major issue in many urban areas, leading to lost time, increased stress, and higher economic costs. By promoting alternative transportation, we can alleviate traffic congestion, making travel more efficient for everyone. Fewer cars on the road mean smoother traffic flow, shorter commute times, and less frustration for drivers and passengers alike.

Moreover, the costs associated with road maintenance and expansion can be significantly reduced when fewer vehicles use the roads. Public transit infrastructure, while requiring initial investment, is more cost-effective in the long run due to its ability to move large numbers of people efficiently. Cyclists and pedestrians cause far less wear and tear on roads, further reducing maintenance costs. The savings generated from reduced congestion and road maintenance can be reinvested into further improving alternative transportation options, creating a positive cycle of benefits.

Conclusion

Promoting alternative transportation is a strategic and effective approach to reducing road fatalities, improving public health, protecting the environment, and enhancing community connectivity. By encouraging the use of public transit, cycling, and walking, we can create safer, more sustainable, and more equitable communities. The evidence is clear: reducing our reliance on private vehicles not only saves lives but also contributes to the overall well-being of society. It is time for policymakers, urban planners, and communities to embrace and promote alternative transportation as a key solution to the many challenges we face today.

Investing in Public Transportation: Reduced Fatalities and Serious Injuries Through Congestion Reduction

Transportation is the backbone of any modern society, enabling people to connect with jobs, education, healthcare, and other vital services. However, with increased reliance on private vehicles, our roads have become increasingly dangerous, with alarming rates of traffic-related fatalities and serious injuries.

To address this growing concern, investing in public transportation is a strategic and necessary step. Public transportation not only provides a safer alternative to driving but also has the potential to significantly reduce road congestion, lower emissions, and improve overall public health.

Public Transportation as a Safer Alternative

The most compelling argument for investing in public transportation is its ability to provide a safer mode of travel compared to private vehicles. Research consistently shows that public transportation is far safer than driving. According to the National Safety Council, riding a bus is 10 times safer per mile traveled than traveling by car. Trains, light rail, and other forms of public transit offer similar safety advantages. The reasons are clear: public transportation vehicles are operated by professional drivers, who are trained to adhere to strict safety protocols, and the vehicles themselves are subject to rigorous safety standards and regular maintenance.

Reducing Road Congestion and Its Dangers

Investing in public transportation can also help alleviate road congestion, which is a major contributor to traffic accidents. Congested roads lead to aggressive driving behaviors, such as speeding, tailgating, and frequent lane changes, all of which increase the risk of crashes. Furthermore, stop-and-go traffic patterns associated with congestion can result in rear-end collisions and other types of accidents.

Public transportation, particularly high-capacity systems like buses, trains, and subways, can move large numbers of people efficiently, reducing the number of individual vehicles on the road. This decrease in traffic volume not only eases congestion but also reduces the chances of crashes, making roads safer for everyone. In cities where public transportation is well-developed, such as New York City and San Francisco, traffic-related fatalities are significantly lower compared to cities with less robust transit systems.

Environmental and Public Health Benefits

Beyond improving road safety, public transportation offers significant environmental and public health benefits that contribute to overall safety and well-being. Transportation is one of the largest sources of greenhouse gas emissions, contributing to air pollution that exacerbates respiratory illnesses, heart disease, and other health conditions. By investing in public transportation, we can reduce our reliance on private vehicles, thereby lowering emissions and improving air quality.

Cleaner air leads to better public health outcomes, reducing the incidence of respiratory and cardiovascular diseases that are often exacerbated by pollution. Healthier populations are less likely to suffer from conditions that can impair their ability to drive safely, further reducing the risk of traffic accidents. Additionally, public transportation systems that promote walking or cycling as part of the commute encourage physical activity, which has been shown to improve overall health and reduce the risk of chronic diseases.

Social Equity and Accessibility

Public transportation is also a critical component of social equity, ensuring that all individuals, regardless of income or physical ability, have access to safe and reliable transportation. For many low-income individuals and families, owning a car is financially out of reach, leaving them dependent on public transportation for their daily needs. By investing in and expanding public transportation networks, we can ensure that everyone has access to safe travel options, reducing the reliance on potentially unsafe alternative means of transportation, such as biking or walking along busy roads.

Furthermore, public transportation systems can be designed to accommodate individuals with disabilities, providing safe and accessible travel options for everyone. Ensuring that all members of society have access to safe transportation reduces disparities in traffic-related fatalities and injuries, making our communities safer and more inclusive.

Economic Efficiency and Long-Term Savings

Investing in public transportation is not only a safety measure but also an economically efficient one. While the initial costs of developing and expanding public transportation systems can be significant, the long-term savings in terms of reduced healthcare costs, fewer traffic accidents, and less infrastructure maintenance are substantial. Fewer accidents mean fewer emergency response calls, less strain on healthcare systems, and lower insurance premiums for everyone.

Moreover, public transportation systems tend to spur economic development by making urban areas more accessible and attractive to businesses. This increased economic activity can lead to job creation, higher property values, and a broader tax base, which can be reinvested into maintaining and expanding transportation infrastructure.

Addressing Criticisms

Critics of public transportation investment often argue that it is costly and that the funds could be better spent elsewhere. However, this perspective overlooks the broader societal benefits of public transportation. The cost of not investing in public transportation—continued traffic congestion, higher accident rates, increased pollution, and rising healthcare costs—far outweighs the initial investment in transit systems. Moreover, public transportation projects can be funded through a combination of federal, state, and local sources, as well as public-private partnerships, spreading the financial burden and making it more manageable.

Conclusion

In conclusion, investing in public transportation is a critical and strategic move to reduce traffic-related fatalities and serious injuries. Public transportation provides a safer alternative to driving, alleviates road congestion, and offers significant environmental and public health benefits. It also promotes social equity, ensures accessibility for all, and is economically efficient in the long term. By prioritizing investment in public transportation, we can create safer, healthier, and more sustainable communities, protecting the lives and well-being of all citizens. The time to invest in public transportation is now, before more lives are needlessly lost on our roads.

Community Involvement

the public, stakeholders, and local officials were informed, involved, and had opportunities to share their experiences and priorities regarding roadway safety. The community engagement process emphasized accessibility, inclusivity, and multiple avenues for input to ensure diverse perspectives were reflected in the final plan.

Steering Committee Formation and Role

The Harry S. Truman Coordinating Council's Technical Advisory Committee (TAC) served as the Steering Committee for the Vision Zero Action Plan. The TAC is a broad and representative body, including mayors, city clerks, public works directors, emergency services personnel, and other key stakeholders from the 67 communities across Jasper, Newton, Barton, and McDonald counties. Their local knowledge and expertise played a crucial role in guiding the plan's development and ensuring that it addressed the unique safety needs of each community.

- September 9, 2024: The Steering Committee convened as the draft plan began to take shape. Discussions focused on identifying high-priority safety issues and preliminary strategies for addressing them.
- November 15, 2024: The Steering Committee met to review and discuss the draft plan, offering feedback on proposed strategies and identifying areas that required further refinement.

These meetings ensured that the perspectives of local leaders were incorporated into each stage of the planning process, fostering a sense of ownership and alignment with community goals.

Public Engagement Strategies

To reach as many residents as possible, a combination of digital and in-person engagement tools was employed throughout the plan's development. The primary objective was to educate the community about the importance of roadway safety and to gather input on their experiences, interests, and concerns. The outreach strategies included the following:

Online Surveys:

A public survey was conducted over several months, allowing residents to share their thoughts on road safety, areas of concern, and priorities for infrastructure improvements. The survey results provided valuable data that helped shape the plan's focus areas.

The analysis of these survey responses provides critical insights into existing challenges, specific areas of concern, and recommended improvements to enhance road safety for all residents and visitors. This narrative synthesizes public input to inform a strategic plan aimed at addressing key safety issues, infrastructure gaps, and potential measures for implementation.

Publicly Perceived Traffic Safety Concerns

Survey responses indicate that residents have significant concerns about traffic safety, with recurring issues highlighted throughout the feedback. These include:

1. Distracted Driving: The most frequently mentioned issue across the region. Respondents expressed frustration over the prevalence of drivers using mobile devices or engaging in activities that divert their attention from the road.

2. Speeding: Excessive speeds were reported as a major safety hazard, particularly in residential areas, near schools, and on state highways such as HH and 171. Speeding contributes to reduced reaction times and the severity of collisions, amplifying the need for targeted enforcement and speed control measures.

3. Poor Road Conditions: The quality of road surfaces, including potholes and narrow lanes, poses challenges to safe travel. Respondents noted that these conditions often lead to vehicle damage and contribute to accidents, especially in areas like rural lettered roads and stretches of I-44.

4. Pedestrian and Cyclist Safety: The absence of sufficient sidewalks and bike lanes was highlighted as a significant concern. Areas such as Neosho Boulevard and intersections within Carthage were cited as particularly unsafe for non-motorized users due to a lack of infrastructure, poor visibility, and high-speed vehicle traffic.

5. Lack of Crosswalks: Respondents identified the need for improved pedestrian crossings in several locations. The lack of marked crosswalks increases the risk for pedestrians, especially in high-traffic areas near schools and community centers.

6. Drunk Driving: Survey participants mentioned drunk driving as a continuing risk, with some expressing concern over repeat offenders and the effectiveness of existing measures to prevent impaired driving incidents.

High-Risk Locations

Certain areas within Southwest Missouri were repeatedly noted as particularly hazardous:

- Chapel and HH Intersection in Carthage: Multiple respondents pointed out this intersection near schools as highly dangerous due to speeding and poor line of sight. It was identified as needing a stoplight or other traffic control to manage congestion and improve safety.
- Highway 59 and FF Intersection: Cited for lacking adequate traffic management, making it difficult to navigate safely.
- Joplin City Limits: Areas within Joplin were mentioned for various safety issues, including the need for off-street bike paths and better pedestrian accommodations.
- Neosho Boulevard: Noted for its complete lack of sidewalks, posing significant danger to pedestrians.
- I-44 and I-49 Cloverleaf: Highlighted for high-speed merging and frequent traffic violations, contributing to accidents.

These locations exemplify areas where targeted interventions could substantially enhance

safety and reduce traffic incidents.

Recommendations for Traffic Safety Improvements

Survey participants provided a range of suggestions to improve traffic safety, which can be incorporated into a comprehensive plan:

1. Infrastructure Enhancements:

- Sidewalks and Pedestrian Crossings: Prioritizing the installation of sidewalks in areas such as Neosho Boulevard and near Carthage schools will promote safer walking conditions. Improved pedestrian crossings, particularly at school zones and busy intersections, were also strongly recommended.
- Bike Lanes and Trails: The creation of dedicated bike lanes and off-street paths would enhance safety for cyclists and reduce the risk of accidents involving motor vehicles. Connecting existing trails, such as the proposed link between the Frisco Greenway and Ruby Jack trails, would further support active transportation.
- Road Widening and Maintenance: Addressing Road conditions by widening narrow lanes, repairing potholes, and ensuring consistent maintenance can improve vehicle control and safety. This includes stretches like Highway 96 and various rural roads that were noted for poor conditions.

2. Traffic Control Measures:

- Traffic Calming: The use of speed bumps, roundabouts, and lower speed limits in residential areas and near schools was suggested to mitigate speeding issues.
- Stoplights and Signals: Adding traffic lights at critical intersections, such as Fir and Chapel Road and at points along Highway 59, was proposed to manage congestion and improve driver compliance.

3. Increased Enforcement and Education:

- Law Enforcement: Greater police presence and stricter enforcement of traffic laws, including penalties for speeding and distracted driving, were suggested as effective deterrents. This approach aims to reduce habitual offenses and enhance adherence to traffic regulations.
- Public Awareness Campaigns: Educating drivers on the dangers of distracted and impaired driving, as well as promoting a culture of respect for pedestrian and cyclist rights, could foster safer driving behaviors.

Effectiveness of Safety Measures

Survey respondents provided feedback on the perceived effectiveness of various safety interventions. Notably:

- Increased Police Enforcement: Rated as highly effective by many participants, this measure is seen as a critical step in curbing speeding and distracted driving.
- Improved Pedestrian Crossings: Valued for their potential to enhance safety, especially in school zones and high-foot traffic areas.
- Better Street Lighting: Acknowledged as somewhat to very effective for increasing visibility during night travel and reducing accidents.
- Dedicated Bike Lanes: While opinions varied, bike lanes were viewed as effective by those who cycle regularly, underscoring the need for targeted infrastructure for non-motorized users.

Conclusion

The feedback from residents across Southwest Missouri paints a clear picture of the traffic safety landscape. Addressing core issues such as distracted driving, inadequate infrastructure, speeding, and pedestrian safety is vital. By implementing the proposed recommendations—including infrastructure improvements, traffic control measures, enhanced law enforcement, and public education—the region can move toward safer, more connected, and more efficient transportation for all road users.

Social Media Campaigns:

The plan's development process was communicated through social media channels, providing regular updates and encouraging community feedback. Posts highlighted key safety issues, such as speeding, distracted driving, and pedestrian safety, while directing residents to online surveys and upcoming in-person events.

Public Meetings and Open Houses:

A series of public meetings and open houses were held in various locations across the four counties. These events provided opportunities for residents to review the draft plan, ask questions, and offer input in a face-to-face setting. Event locations were selected to ensure accessibility for residents in both urban and rural areas.

Key Engagement Activities and Outcomes

Engaging the community during the plan's development was essential for building long-lasting support for Vision Zero initiatives. The outreach process yielded the following outcomes:

- Broad Participation: Through the survey and public meetings, hundreds of residents shared their perspectives, with particular interest in issues like pedestrian safety, speed control, and safe routes for bicyclists. This input directly informed the plan's focus on high-risk intersections and vulnerable road users.

- Feedback on Draft Proposals: During the November 15, 2024, Steering Committee review and subsequent public meetings, community members provided feedback on proposed countermeasures, such as roundabouts, speed reduction measures, and enhanced pedestrian crossings. This input helped refine the plan's strategies to ensure they align with local needs and priorities.

- Enhanced Awareness of Road Safety: The outreach efforts emphasized the importance of roadway safety and the community's role in achieving Vision Zero. This was reflected in the high level of engagement seen during both online and in-person events, as residents expressed their support for a safer transportation environment in Southwest Missouri.

Accessibility and Inclusivity in Engagement

A core principle of the outreach strategy was ensuring that all community members had

opportunities to participate, regardless of their location or technological access. Efforts included:

- Advanced Notice for Events: Public meetings and online feedback opportunities were advertised well in advance through social media, local newspapers, and community bulletin boards to maximize participation.

- Digital Accessibility: Online survey tools were designed to be mobile-friendly and accessible to people with disabilities, ensuring that everyone could contribute their thoughts and opinions.

- Geographic Representation: In-person events were strategically scheduled across the four counties to provide accessibility for residents in urban centers as well as those in rural communities, ensuring that input came from a diverse cross-section of the population.

Conclusion

The Vision Zero Action Plan's community outreach process was designed to be thorough and inclusive, ensuring that the voices of Southwest Missouri's residents were heard throughout the planning stages. By utilizing a mix of digital tools, in-person events, and the guidance of the Steering Committee, the process gathered meaningful input that helped shape a plan truly reflective of the region's needs and priorities. This community-driven approach not only strengthened the plan but also laid the groundwork for continued collaboration and support as the region moves forward with its vision of zero traffic fatalities and serious injuries by 2040.

Goals and Objectives

Goal 1: Improve Roadway Safety

Action Item: Prioritize High-Crash Location Repairs and Install Rumble Strips on High-Speed Rural Roads

Tasks	Milestones (Years 1–5)	Challenges	Key Stakeholders	KPIs / Performance Measures
Year 1 – Conduct detailed crash analysis to identify 50 miles of high-risk corridors.	Complete mapping and priority list by Q3 Year 1.	Data quality across counties; aligning MoDOT & county methods.	MoDOT District 7, County Commissions, RPC staff.	Final corridor ranking adopted; annual updates in place.
Year 1–2 – Design Phase 1 improvements (25 miles).	Designs approved by Q1 Year 2.	ROW conflicts; utility coordination.	MoDOT, consulting engineers, county road departments.	100% of designs ready before construction.
Year 2 – Begin construction on 10 miles of Phase 1 corridors.	10 miles repaired with rumble strips installed by end of Year 2.	Seasonal delays; detours for farm equipment.	MoDOT, Ag Associations, contractors.	10 miles complete; 15% drop in lane-departure crashes.
Year 3 – Complete remaining 15 miles of Phase 1.	25 miles complete by Q4 Year 3.	Maintaining traffic flow during construction.	MoDOT, County Emergency Services.	≥20% reduction in KSI on treated corridors.
Year 4 – Begin Phase 2 construction (10 miles lower-priority).	10 miles complete by Year 4.	Balancing budget with needs; construction timing.	MoDOT, County Commissions.	10 miles complete; interim evaluation published.
Year 5 – Finish Phase 2 construction (15 miles).	25 miles complete by Q4 Year 5.	Coordinating with rural harvest traffic.	MoDOT, local business owners.	50 miles upgraded; ≥25% KSI reduction corridor-wide.

Goal 2: Enhance Safety for Vulnerable Road Users

Action Item: Develop Protected Bike Lanes

Tasks	Milestones (Years 1–8)	Challenges	Key Stakeholders	KPIs / Performance Measures
Year 1 – Identify urban corridors (5 miles) through surveys and traffic studies.	List finalized by Q3 Year 1.	Parking trade-offs; ROW constraints.	City Councils, Advocacy Groups.	5 corridors selected and mapped.
Year 1–2 – Conduct hearings with businesses, cyclists, and residents.	≥4 hearings by Q2 Year 2.	Business pushback; cost concerns.	City Councils, Chambers of Commerce.	≥100 participants; ≥70% positive input.
Year 2 – Begin construction of first 2 miles of protected lanes.	2 miles complete by Q4 Year 2.	Construction disruption in urban cores.	MoDOT, Public Works.	Speeds reduced ≥20% where lanes installed.
Year 3–4 – Build additional 3 miles urban lanes.	3 miles complete by Q4 Year 4 (total 5 miles).	Securing continuous funding.	MoDOT, City Depts.	5 miles in place; ≥30% reduction in bike/ped KSI.
Year 5 – Identify rural scenic/community cycling routes (5 miles).	Routes mapped by Q2 Year 5.	Terrain, maintenance.	MoDOT, Tourism Boards.	Priority rural corridors selected.
Year 6–8 – Build 5 miles rural lanes (2 miles Year 6; 3 miles Years 7–8).	5 miles complete by Year 8.	Weather impacts; ROW agreements.	MoDOT, County Depts., Tourism Boards.	Rural ped/bike KSI reduced ≥25% on treated corridors.

Goal 3: Promote Speed Management

Action Item: Implement Traffic Calming in Neighborhoods and Improve Nighttime Safety

Tasks	Milestones (Years 1–5)	Challenges	Key Stakeholders	KPIs / Performance Measures
Year 1 – Use crash and speed data to identify 8 neighborhoods.	Selection complete by Q2 Year 1.	Community acceptance, equity concerns.	MoDOT, RPC, Law Enforcement.	8 neighborhoods prioritized.
Year 1–2 – Hold community meetings and finalize calming designs.	≥3 meetings by Q2 Year 2.	School bus routing; EMS access.	Neighborhood Assns, Schools, EMS.	≥70% approval from community participants.
Year 2 – Install traffic calming in 3 pilot neighborhoods.	Measures installed by Q4 Year 2.	Community resistance to design.	Public Works, Fire/EMS.	Average speeds reduced ≥5 mph; crashes –20%.
Year 3–4 – Evaluate pilots; expand to 3 additional neighborhoods.	3 more neighborhoods complete by Year 4.	Coordinating construction schedules.	Public Works, School Districts.	6 neighborhoods treated; ≥25% KSI reduction.
Year 5 – Expand to final 2 neighborhoods (total 8).	All 8 neighborhoods treated by Year 5.	Budget constraints; scaling staff.	MoDOT, Local Leaders.	≥30% KSI reduction across all treated sites.
Year 3–5 – Install lighting, reflectors, and signage on HIN night-risk segments.	10 corridors complete by Q4 Year 5.	Utility coordination, high cost.	MoDOT, Power Utilities.	Night KSI reduced ≥25% on upgraded corridors.

Goal 4: Enhance Emergency Response for Post-Crash Care

Action Item: Equip Rural Fire and Rescue Teams

Tasks	Milestones (Years 1–5)	Challenges	Key Stakeholders	KPIs / Performance Measures
Year 1 – Conduct full inventory of rural rescue equipment.	100% complete by Q2 Year 1.	Inconsistent reporting across counties.	County Fire Chiefs, RPC.	Inventory database live.
Year 1–2 – Equip 50% of rural teams (defibrillators, trauma kits, comms).	25% teams by Year 1; 25% by Year 2.	Budget limits, supply chain.	MoDOT Safety, Fire Depts., EMS Coordinators.	≥50% of teams fully equipped.
Year 2–3 – Train responders in advanced trauma care and crash scene management.	≥75% responders trained by Q4 Year 3.	Volunteer time; certification costs.	Local Hospitals, EMS Trainers.	≥90% compliance with refresher courses.
Year 4 – Equip remaining 50% of rural teams.	100% equipped by Q4 Year 4.	Maintenance/replacement cycles.	State EMS, County Fire Boards.	100% coverage achieved.
Year 3–5 – Organize joint crash drills with hospitals and EMS.	1 regional drill in Year 3; 2nd by Year 5.	Scheduling across rural agencies.	Hospitals, Highway Patrol, Fire Chiefs.	Golden Hour survival ≥80%; preventable trauma deaths reduced 15%.

Summary and Expected Outcomes

This plan sets a clear, staged pathway to reduce deaths and serious injuries across Jasper, Newton, McDonald, and Barton counties. Actions are sequenced so agencies can implement quickly, learn from results, and scale what works. While the program is data-driven, it remains flexible—annual reviews will re-prioritize corridors and countermeasures as new 2020–2024 crash findings, community input, and funding conditions evolve.

By completing the roadway upgrades, speed-management projects, protected bike facilities, and post-crash readiness investments outlined in the goals, the region should expect to:

- **Cut killed or seriously injured (KSI) crashes on treated corridors by ≥25% within 3 years** of installation, and by ≥**35% within 5 years**.
- **Lower operating speeds** on neighborhood streets and school areas by **5–10 mph**, with measurable declines in speed variance.
- **Reduce night-time KSI crashes on upgraded segments by ≥25%** through lighting, delineation, and signing improvements.
- **Shorten rural EMS response and on-scene times by ≥20–25%**, improving survival in severe crashes.
- **Increase walking/bicycling volumes by ≥20%** where protected facilities are built, with corresponding ≥**30% reductions in ped/bike KSI** on those corridors.
- **Improve public confidence** in roadway safety, as reflected in annual community surveys and project feedback.

Measuring Effectiveness

Performance will be tracked with a balanced scorecard of quantitative and qualitative indicators. Each measure lists the **metric**, **method**, **review cadence**, and a **target** that can be tightened as early results are observed.

1) Reduce Traffic Deaths and Serious Injuries

- **Metric:** Fatalities, serious injuries, total crashes (regionwide and on treated sites).
- **Method:** MoDOT STARS data + local law enforcement; before/after studies with comparison sites.
- **Cadence:** Annual (with rolling 3-year averages to smooth volatility).
- **Target: 20% KSI reduction regionwide in 10 years**; ≥**25–35% KSI reduction** on treated HIN segments within 3–5 years.

2) Protect Vulnerable Road Users

- **Metric:** Pedestrian and bicyclist KSI counts and rates on corridors with new facilities.
- **Method:** Police reports geocoded to projects; conflict observations at key crossings.
- **Cadence:** Semi-annual, plus post-construction 12- and 24-month reviews.
- **Target:** ≥**30% reduction** in ped/bike KSI on improved corridors within 3 years; ≥**20% increase** in walking/bicycling volumes.

3) Manage Speed in Neighborhoods and Around Schools

- **Metric:** 85th-percentile speed and mean speed; proportion of drivers exceeding limit by 10+ mph.
- **Method:** Portable radar studies and automated speed devices (before/after).
- **Cadence:** Baseline, 3 months after installation, and annually.
- **Target: 5–10 mph average speed reduction**; **≥50% decrease** in high-end speeding violations.

4) Strengthen Post-Crash Care

- **Metric:** Rural EMS dispatch-to-arrival and scene-to-hospital times; equipment readiness; drill performance.
- **Method:** EMS CAD logs; training completion records; scored regional crash drills.
- **Cadence:** Quarterly dashboards; annual capability review.
- **Target:** **≥25% faster** response in priority zones; **90% of responders** trained in advanced trauma care by **Year 5**.

5) Community Satisfaction and Awareness

- **Metric:** Satisfaction with safety projects; awareness of new rules/facilities.
- **Method:** Annual surveys (online + intercept), open houses, and comment portals.
- **Cadence:** Annually and after major openings.
- **Target:** **≥75% positive** ratings in project areas; measurable growth in awareness of new designs (e.g., roundabouts, protected lanes).

6) Infrastructure Utilization

- **Metric:** Counts of pedestrians, bicyclists, and motorists using upgraded facilities.
- **Method:** Permanent/temporary counters; manual counts with seasonal adjustment.
- **Cadence:** Monthly automated; semi-annual manual validation.
- **Target:** **≥20% increase** in active-mode trips where facilities are added; **peak-hour motor delay** held constant or improved through design.

7) Return on Investment (ROI)

- **Metric:** Monetized crash cost savings vs. capital + O&M costs.
- **Method:** FHWA crash-modification factors, local unit costs, and benefit-cost modeling.
- **Cadence:** At project closeout and bi-annual portfolio updates.
- **Target:** **Positive ROI within 5 years** for each major project; program-level **B/C ≥ 1.5** over 10 years.

8) Compliance with New Limits and Laws

- **Metric:** Speeding and red-light/stop-sign violations in targeted zones.
- **Method:** Enforcement data and automated device logs.
- **Cadence:** Quarterly, with focused review in the first 12 months after changes.
- **Target:** **≥50% reduction** in violations within 1 year of implementation.

9) Responder Training and Readiness

- **Metric:** Share of personnel certified; performance on mock scenarios.
- **Method:** Training rosters; timed drill assessments with predefined scenarios.
- **Cadence:** Annual.
- **Target: 90% certification** by Year 5; **on-scene triage and transport within targets** in drills.

10) Quality of Life and Equity

- **Metric:** Perceived safety, access to essential services, and health indicators in high-injury areas (including disadvantaged tracts).
- **Method:** Disaggregated surveys; public-health data; accessibility mapping (schools, jobs, health care).
- **Cadence:** Every 2–3 years; comprehensive review in Year 10.
- **Target: Improved safety perception** and **equitable distribution** of benefits across communities.

Involving Community Stakeholders

Sustained, two-way engagement is essential for durable safety outcomes. The region will use a predictable, transparent process that meets people where they are.

Core Engagement Tactics

1. **Regular Community Meetings & Open Houses**
    - **What:** Project briefings with clear visuals, timelines, and expected benefits/impacts.
    - **How Often:** At project kickoff, 30% design, pre-construction, and post-opening.
    - **Outcome:** Documented comments; response memos showing how input shaped designs.
2. **Stakeholder Advisory Committee**
    - **Who:** Business owners, school leaders, law enforcement/EMS, health providers, disability advocates, cycling/ped groups, freight/farm reps.
    - **How Often:** Quarterly.
    - **Outcome:** Consensus recommendations on corridor priorities and design trade-offs.
3. **Surveys and Focus Groups**
    - **Use:** Prioritize problem locations; validate design alternatives; test education messages.
    - **Equity:** Offer paper, phone, and multilingual options; compensate focus-group participants as needed.
4. **Schools & PTAs (Safe Routes to School)**
    - **Activities:** Walk audits, crossing upgrades, arrival/dismissal circulation plans, safety assemblies.
    - **Outcome:** Safer school zones and higher active-transport rates.
5. **Business & Chamber Partnerships**

    - **Focus:** Construction phasing, access management, freight delivery windows; co-marketing “safe to shop” districts.
    - **Outcome:** Minimize disruption; leverage private champions.
6. **Nonprofits and Advocacy Groups**
    - **Roles:** Co-design bike/ped facilities; senior-friendly treatments; outreach in underserved areas.
    - **Outcome:** Designs that fit local users and contexts.
7. **Community Ambassador Program**
    - **Who:** Trusted neighborhood leaders, faith-based partners, and youth ambassadors.
    - **Tools:** Briefing kits, social-media assets, pop-up demonstrations.
    - **Outcome:** Wider reach, better myth-busting, faster adoption of new designs.
8. **Digital Engagement**
    - **Channels:** Project webpages, interactive maps, polls, and live Q&As.
    - **Outcome:** Real-time updates; broader participation beyond in-person events.
9. **Demonstration Projects (“Quick-Build”)**
    - **Examples:** Temporary curb extensions, pop-up protected lanes, painted medians.
    - **Outcome:** Test before investing; measure speeds, yielding, and user comfort.
10. **Standing Feedback Channels**

- **Tools:** Online comment portal, 311 integration, physical drop boxes at libraries/city halls.
- **Outcome:** Continuous input loop; faster issue spotting.

11. **Transparent Progress Reporting**

- **Cadence:** Quarterly dashboards and an annual “State of Safety” report.
- **Content:** Project status, KPIs, before/after snapshots, and next-year priorities.

Benefits of Deep Engagement

- **Trust & Legitimacy:** People see how their input changes outcomes.
- **Better Designs:** Solutions reflect local operations (farm equipment, freight, school flows).
- **Sustained Behavior Change:** Community partners amplify education and compliance messages.
- **Equity:** Resources and benefits reach high-injury, historically underserved neighborhoods.

Funding

Funding for transportation safety projects can come from various federal, state, local, and private sources. Each source often has its own requirements and focus areas, making it essential to align project goals with the appropriate funding opportunities. Here is an overview of potential funding sources for the proposed transportation and safety projects in Southwest Missouri:

1. Federal Grants and Programs

- **Infrastructure Investment and Jobs Act (IIJA)**
  - Description: The IIJA provides substantial funding for infrastructure improvements across the U.S., including transportation safety, road maintenance, and public transit projects.
  - Eligible Projects: Roadway safety improvements, bridge repairs, public transit enhancements, and pedestrian/cycling infrastructure.
  - Application Process: Applications are typically submitted through state Departments of Transportation (DOTs) and must align with federal infrastructure priorities.
  - Example: Use IIJA funds to install roundabouts at high-risk intersections or to build protected bike lanes.

- **Safe Streets and Roads for All (SS4A)**
  - Description: This program is specifically designed to help local governments achieve Vision Zero goals—eliminating traffic fatalities and serious injuries.
  - Eligible Projects: Road safety plans, speed management projects, pedestrian safety improvements, and community engagement efforts.
  - Application Process: Applications should include detailed safety plans and community engagement strategies.
  - Example: Apply SS4A grants to develop protected pedestrian crossings and traffic calming measures.

- **Transportation Alternatives Program (TAP)**
  - Description: TAP provides funding for smaller-scale transportation projects that enhance safety and connectivity for pedestrians, cyclists, and other non-motorized users.
  - Eligible Projects: Bike lanes, pedestrian walkways, and Safe Routes to School initiatives.
  - Application Process: Local governments apply through state DOTs, and projects must be part of a regional transportation plan.
  - Example: Use TAP funds to create safe walking routes to schools and improve crosswalks.

- **Highway Safety Improvement Program (HSIP)**
  - Description: HSIP is a core federal-aid program that funds projects specifically aimed at reducing fatalities and serious injuries on all public roads.
  - Eligible Projects: Intersection improvements, lighting enhancements, and safety barriers.
  - Application Process: Applications are submitted to the state DOT, often requiring data-driven evidence of crash reductions.
  - Example: Use HSIP funds to install median barriers on rural roads and improve roadway

lighting.

- **Congestion Mitigation and Air Quality Improvement Program (CMAQ)**
  - Description: This program funds projects that reduce traffic congestion and improve air quality.
  - Eligible Projects: Projects that promote alternative transportation modes, such as public transit, bike paths, and carpool programs.
  - Application Process: Applications are coordinated through regional planning agencies and state DOTs.
  - Example: Fund new bike lanes and pedestrian paths to reduce vehicle emissions in urban centers.

2. State Grants and Programs

- **Missouri Department of Transportation (MoDOT) Safety Funds**
  - Description: MoDOT offers a variety of funding opportunities for safety improvements, including specific grants for rural safety projects.
  - Eligible Projects: Roadway safety measures, traffic control devices, and infrastructure improvements in rural areas.
  - Application Process: Submit applications directly to MoDOT, often as part of larger transportation safety plans.
  - Example: Use MoDOT safety funds to install advanced warning signs and rumble strips in rural areas.

- **State Transportation Block Grants**
  - Description: These grants provide flexible funding for a wide range of transportation projects, including road maintenance and improvements.
  - Eligible Projects: Road resurfacing, bridge repairs, and traffic management systems.
  - Application Process: Applications are typically submitted through regional transportation planning agencies.
  - Example: Use block grant funds to repair road surfaces in areas with high accident rates.

- **Missouri Foundation for Health Grants**
  - Description: Although primarily focused on health outcomes, this foundation can fund projects that improve access to services and promote healthy communities.
  - Eligible Projects: Infrastructure that promotes walking and biking, community health initiatives tied to safety improvements.
  - Application Process: Nonprofits and local governments can apply directly through the foundation's grant programs.
  - Example: Partner with health organizations to fund bike lanes and pedestrian walkways that promote active living.

3. Local Funding Sources

- **Local Option Sales Taxes and Transportation Development Districts (TDDs)**
  - Description: Local governments can establish sales taxes dedicated to funding transportation projects.

- Eligible Projects: Road and bridge maintenance, public transit improvements, and pedestrian safety infrastructure.
- Example: Use local sales tax revenue to support the installation of new streetlights or traffic calming measures.

- **General Fund Allocations from City and County Budgets**
- Description: Municipalities and counties can allocate portions of their budgets directly to transportation and safety projects.
- Eligible Projects: Smaller-scale improvements like crosswalks, traffic signs, and sidewalk repairs.
- Example: Allocate city funds to improve pedestrian crossings in downtown areas.

- **Public-Private Partnerships (PPPs)**
- Description: Collaborate with private sector companies to fund infrastructure projects, sharing both the costs and benefits.
- Eligible Projects: Large-scale projects like highway expansions or public transit systems.
- Example: Partner with local businesses to co-fund roundabouts that improve access to commercial areas.

4. Regional and Community-Based Funding

- **Regional Planning Commissions and Councils of Governments (COGs)**
- Description: These organizations can help secure funding for projects that align with regional transportation priorities.
- Eligible Projects: Projects that improve regional connectivity or align with broader safety goals.
- Example: Work with the Harry S Truman Coordinating Council or the Southwest Missouri Council of Governments (SMCOG) to secure funding for rural road improvements.

- **Community Development Block Grants (CDBG)**
- Description: These federal funds, administered by states, support projects that benefit low- and moderate-income communities.
- Eligible Projects: Infrastructure improvements that enhance community safety and access.
- Example: Use CDBG funds to improve sidewalks and crosswalks in lower-income neighborhoods.

- **Local Foundations and Philanthropic Organizations**
- Description: Local foundations may be interested in funding projects that align with their goals of improving community well-being.
- Eligible Projects: Pedestrian safety, beautification projects, and community engagement initiatives.
- Example: Seek grants from local community foundations to install benches and lighting along new pedestrian pathways.

5. Private Sector Contributions

- Corporate Sponsorships
  - Description: Businesses can sponsor projects as part of their corporate social responsibility (CSR) efforts.
  - Eligible Projects: Beautification projects, bike-sharing programs, and public transit enhancements.
  - Example: A local bank might sponsor the construction of a new park-and-ride lot or contribute to building a bike-share station.

- In-Kind Contributions from Construction and Engineering Firms
  - Description: Some companies may offer reduced-cost services or donate materials as part of their community engagement efforts.
  - Eligible Projects: Road construction, signage installation, and maintenance.
  - Example: Partner with a local construction company to reduce costs on building new roundabouts or bike lanes.

6. Federal Loan Programs

- Transportation Infrastructure Finance and Innovation Act (TIFIA) Loans
  - Description: TIFIA provides federal credit assistance for large infrastructure projects that might be too costly to fund through grants alone.
  - Eligible Projects: Larger-scale projects like bridge replacements, highway expansions, or transit system upgrades.
  - Application Process: Requires a detailed financial plan demonstrating the project's economic viability.
  - Example: Use TIFIA loans for extensive roadway improvements, repaying the loan through future federal or state allocations.

- State Infrastructure Banks (SIBs)
  - Description: SIBs provide loans for transportation projects that can be repaid through user fees or other project-generated revenue.
  - Eligible Projects: Toll roads, public-private partnership projects, and revenue-generating transportation improvements.
  - Example: Use SIB loans to build toll bridges or fund new public transit routes.

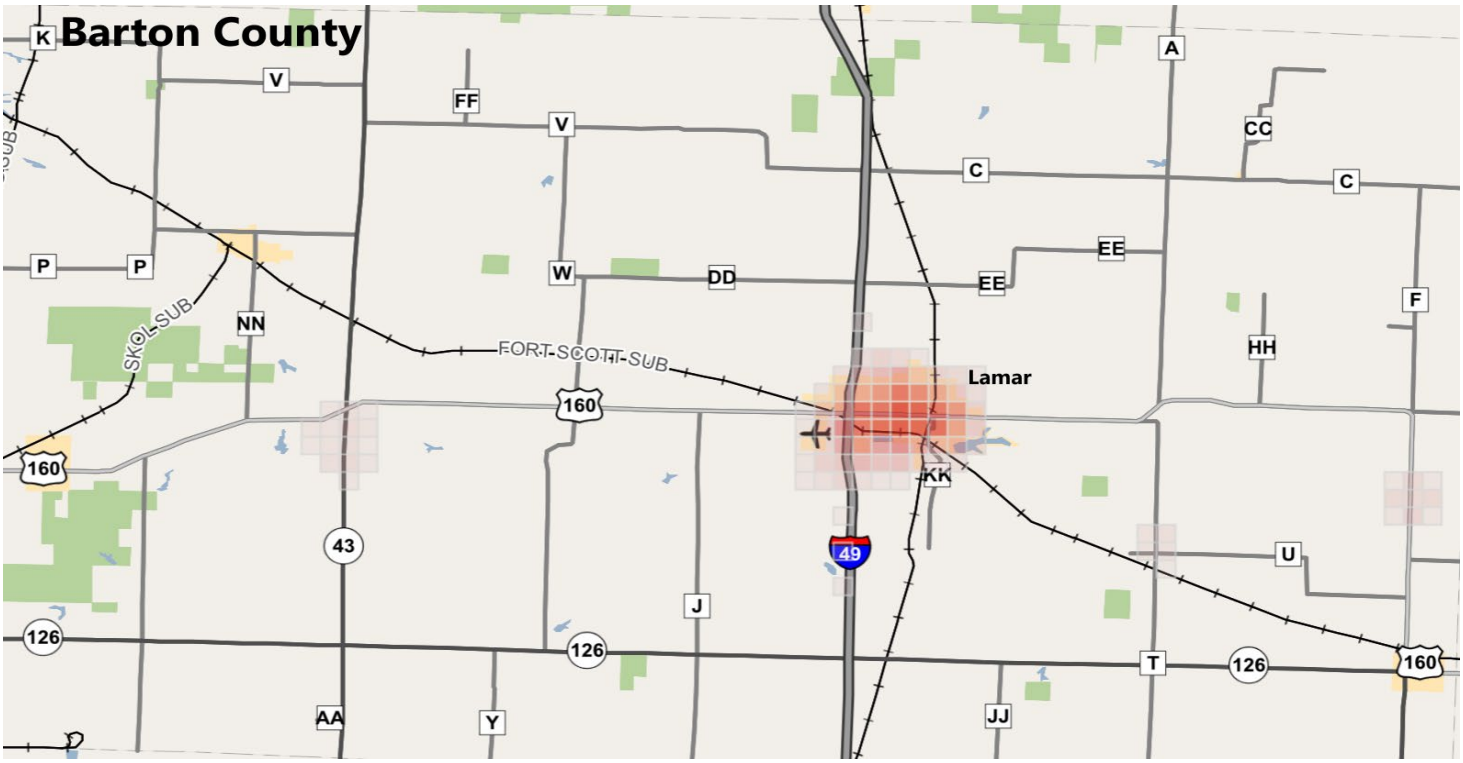
How to Approach Funding Applications

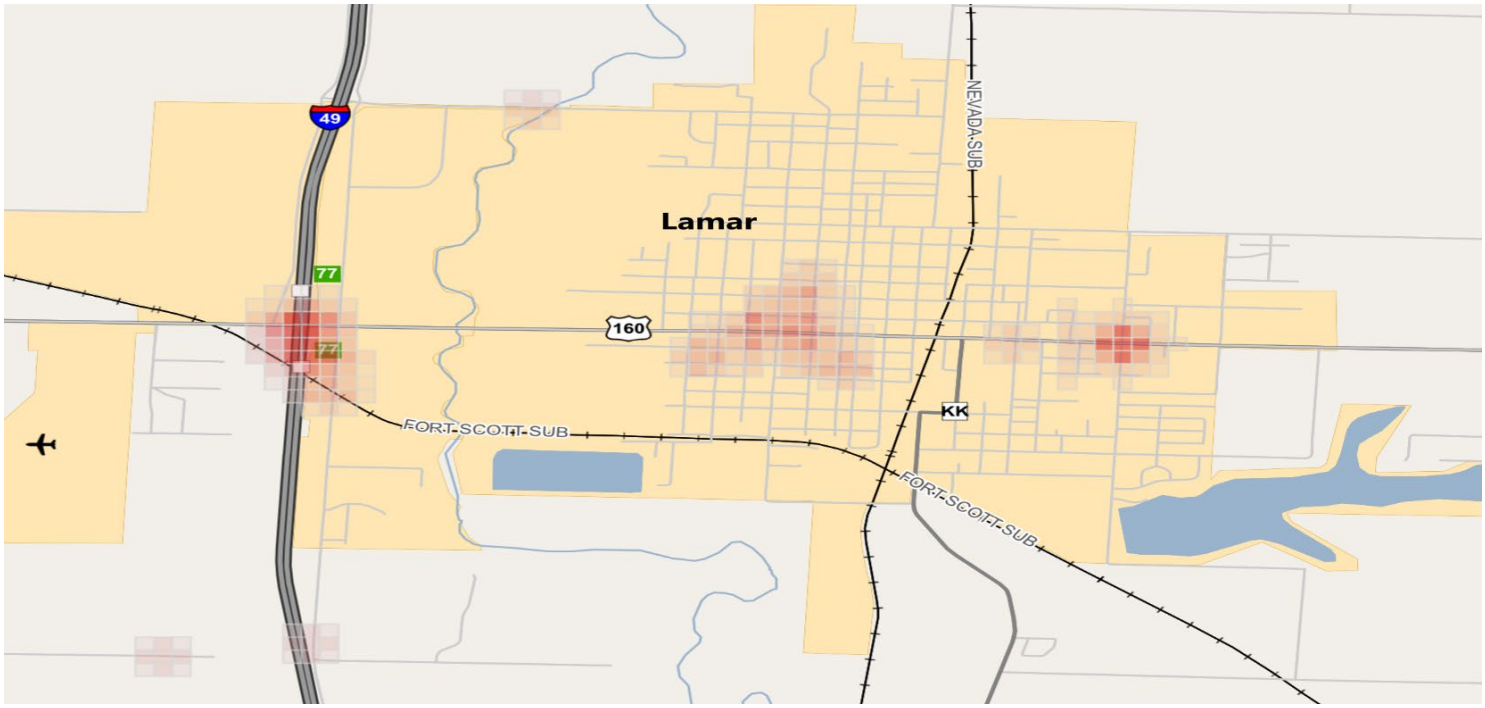
- Align Projects with Funding Priorities: Focus on aligning project goals with the specific priorities of each funding source, such as reducing fatalities for safety-focused grants or promoting active transportation for health-oriented grants.
- Prepare Data-Driven Proposals: Use crash data, traffic studies, and community input to build strong applications that clearly demonstrate the need for each project.
- Engage in Regional Partnerships: Partnering with regional planning commissions and neighboring communities can strengthen applications by showing broader support and regional benefits.
- Diversify Funding Sources: Combining multiple sources, such as federal grants with local matching funds, can make applications more competitive and help cover a larger portion of

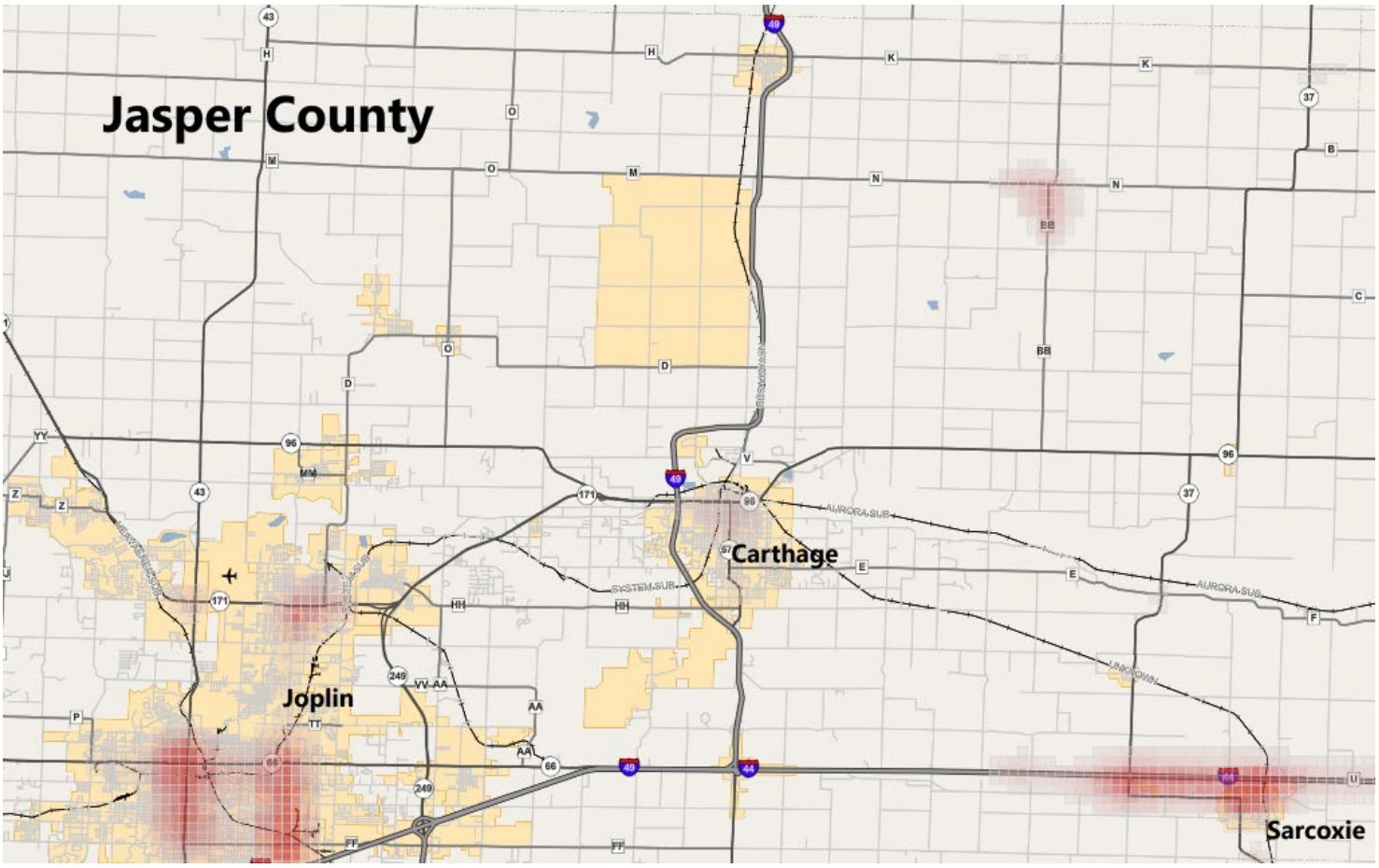
project costs.

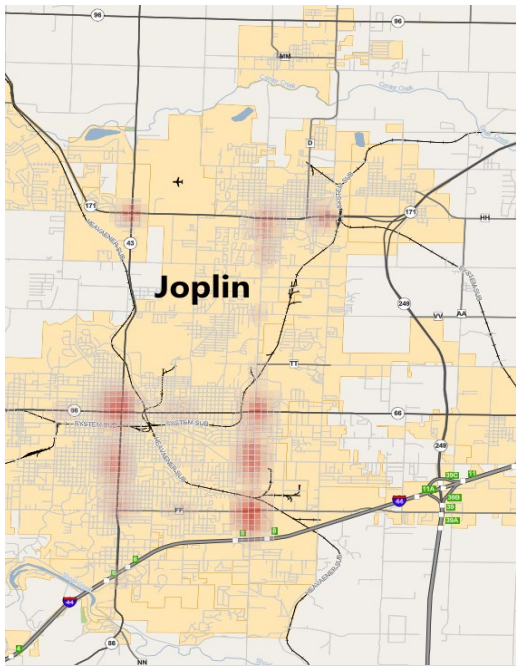
These funding sources provide a range of opportunities to finance transportation and safety projects, allowing for both large-scale initiatives and smaller, targeted improvements. By carefully selecting and pursuing these funding opportunities, communities in Southwest Missouri can make significant strides in improving road safety and connectivity.

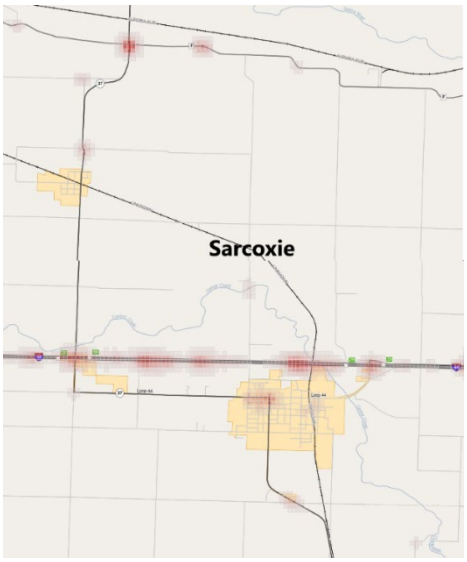
Appendix A: Heat Maps and High-Injury Network Visualizations

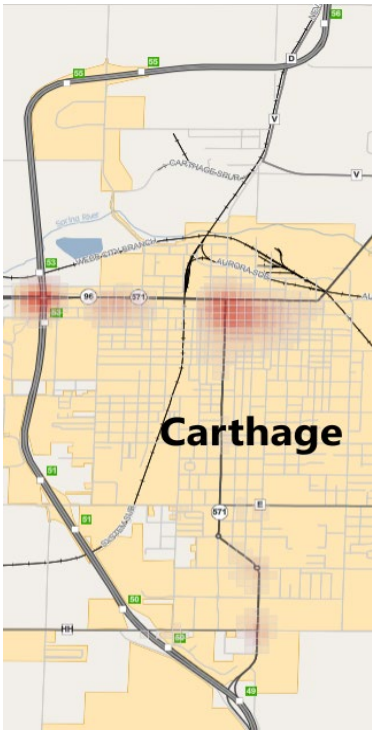


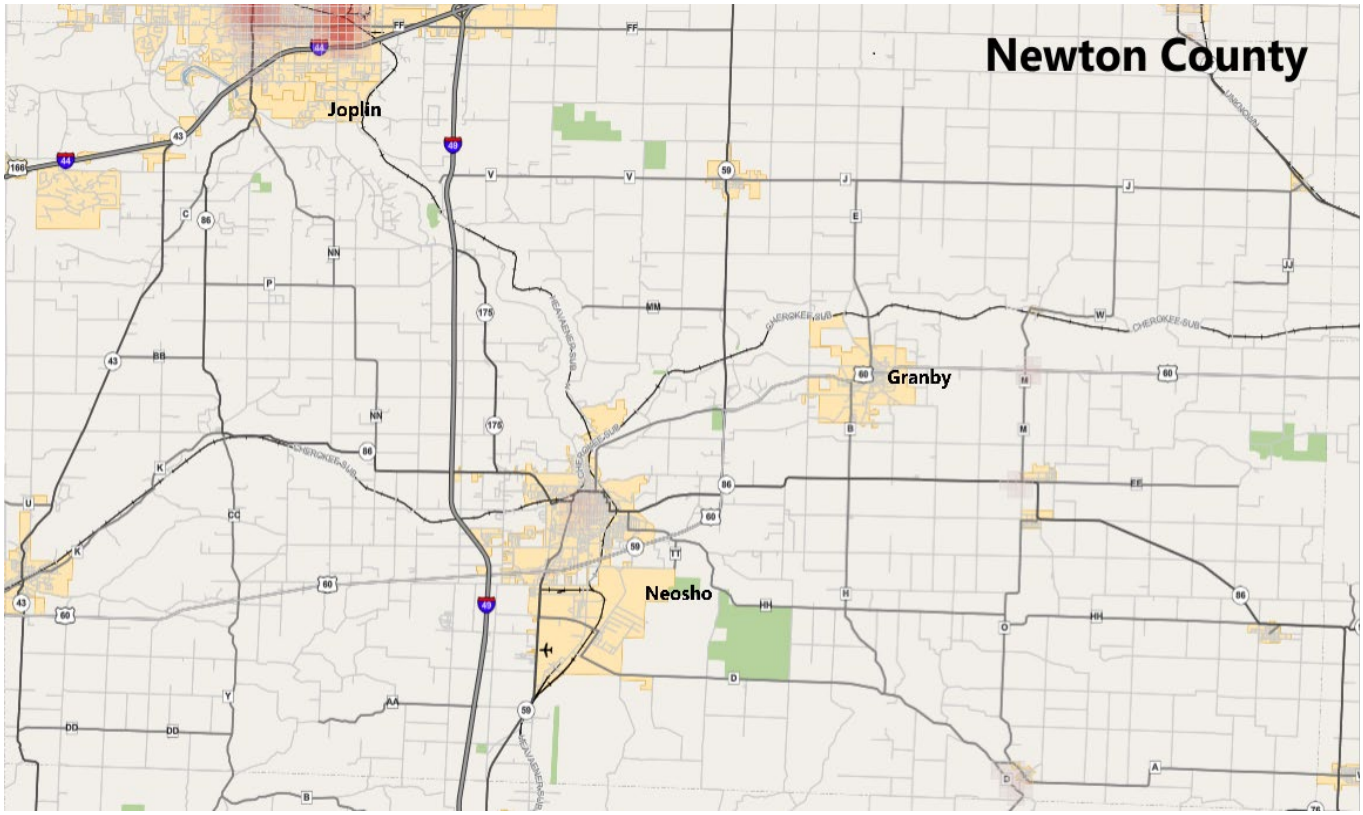


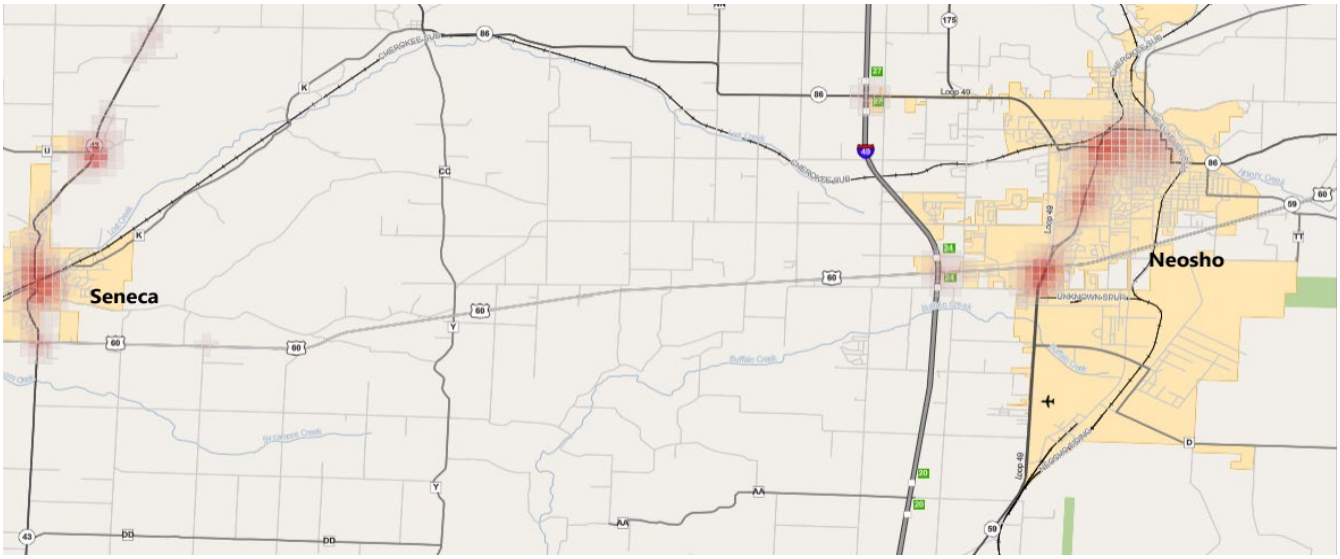

Jasper County
Carthage
Joplin
Sarcoxie


Joplin

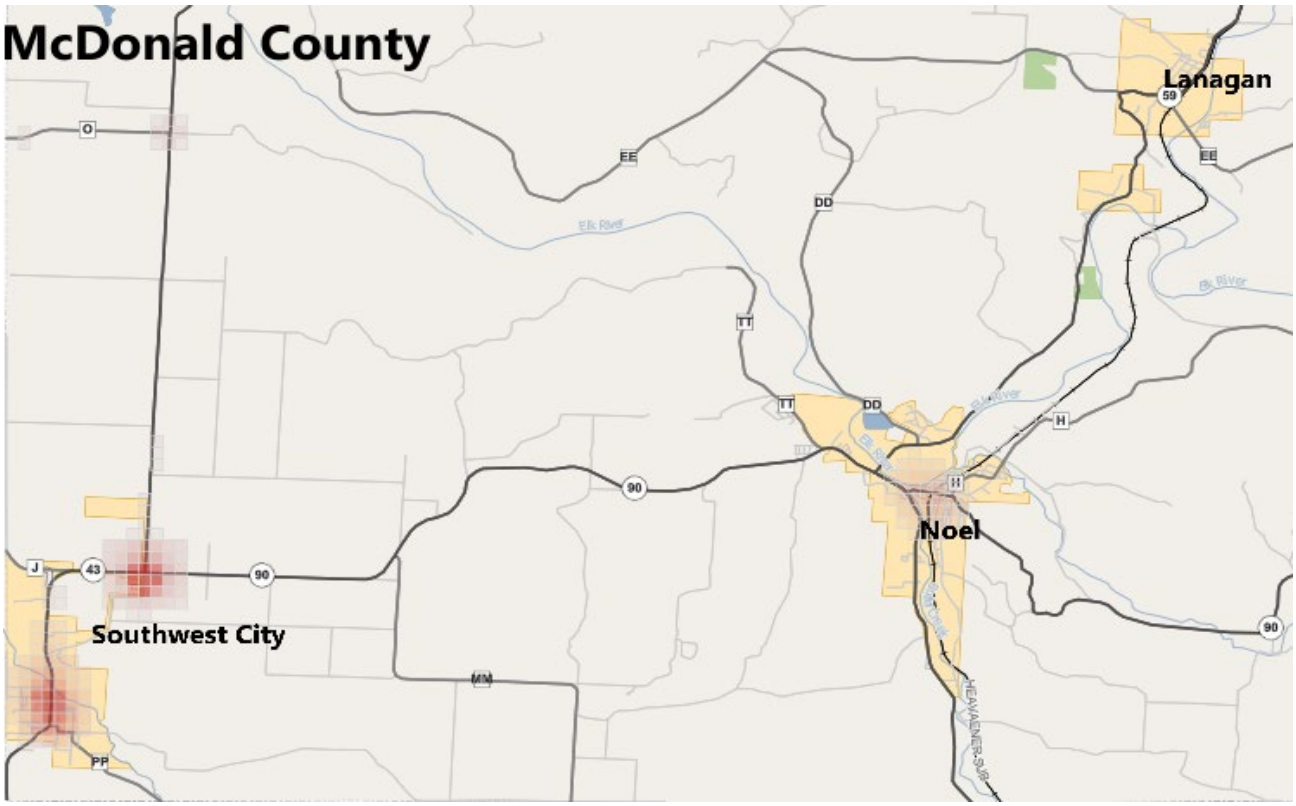

Sarcoxie

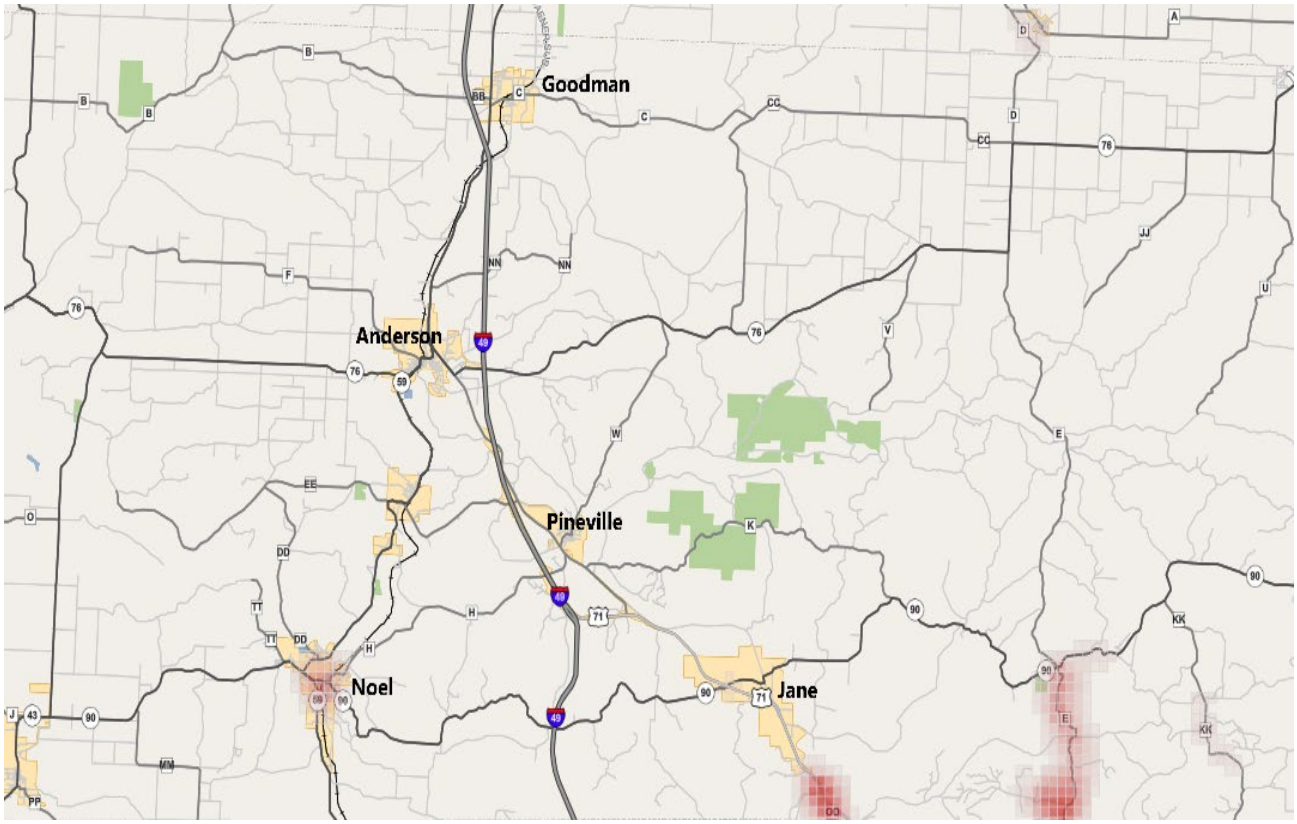

Carthage


Newton County
Joplin
Granby
Neosho

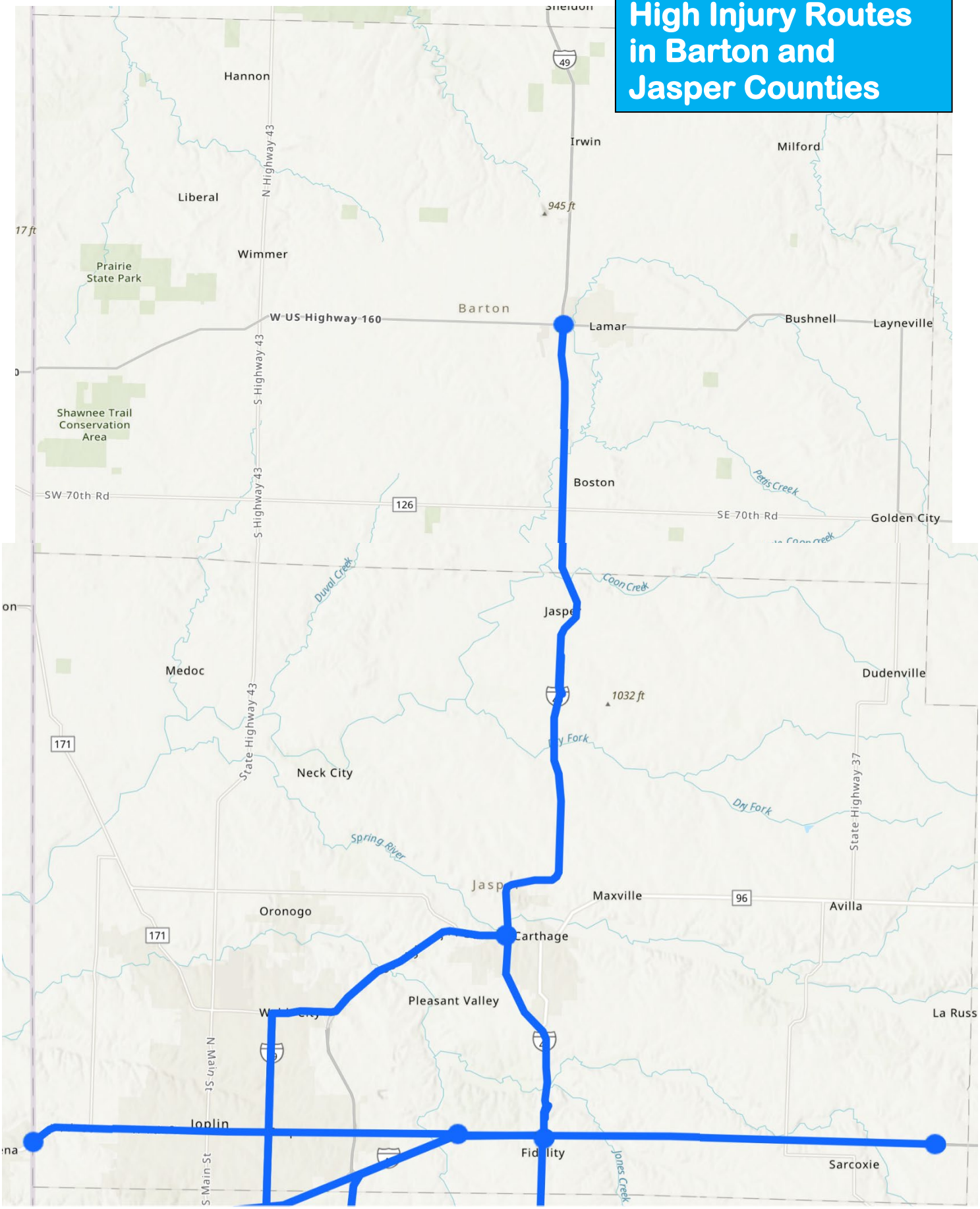

Seneca
Neosho


S. Joplin
Newton County

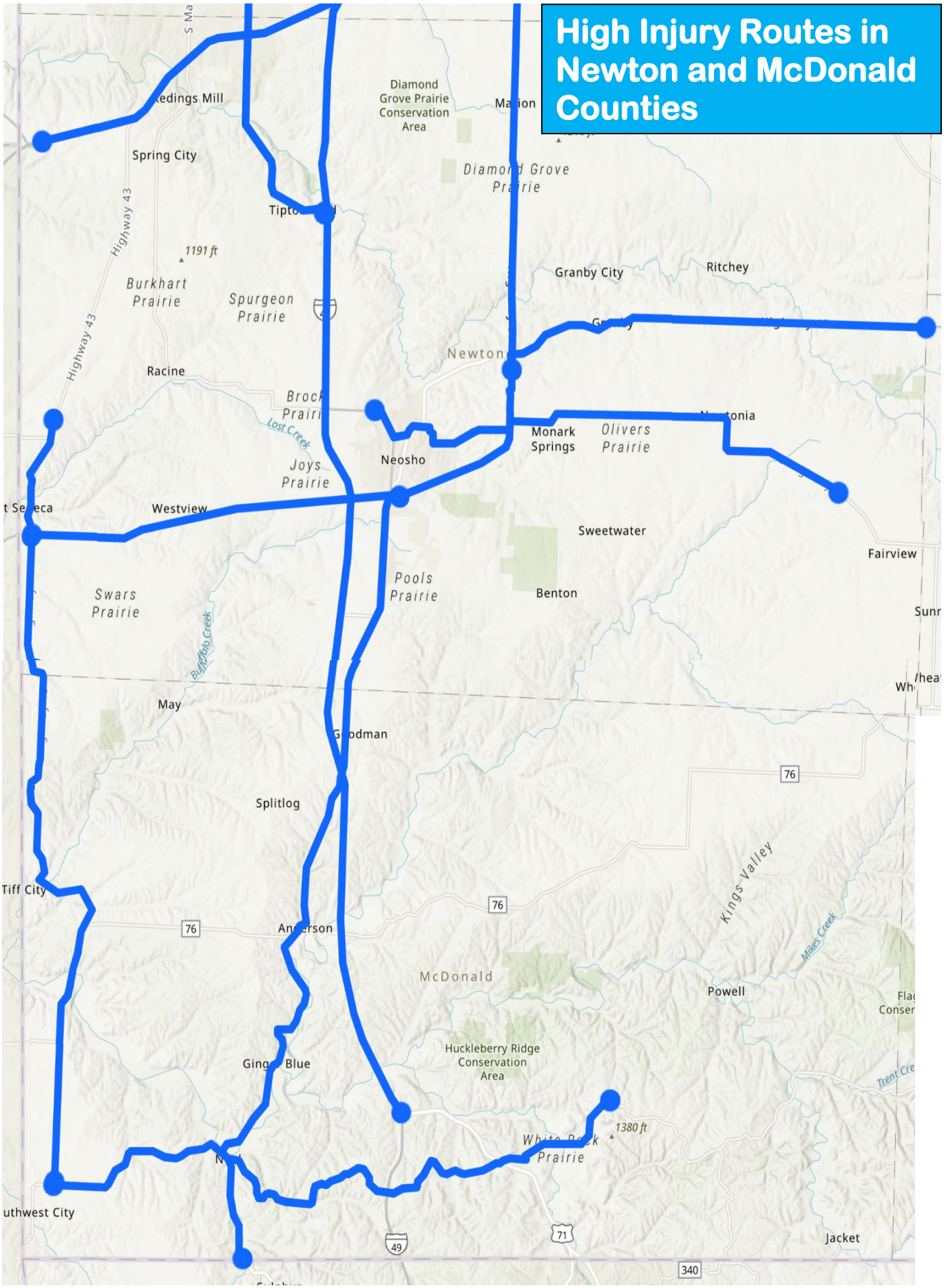

McDonald County
Lanagan
Noel
Southwest City


Goodman
Anderson
Pineville
Noel
Jane

High Injury Routes in Barton and Jasper Counties



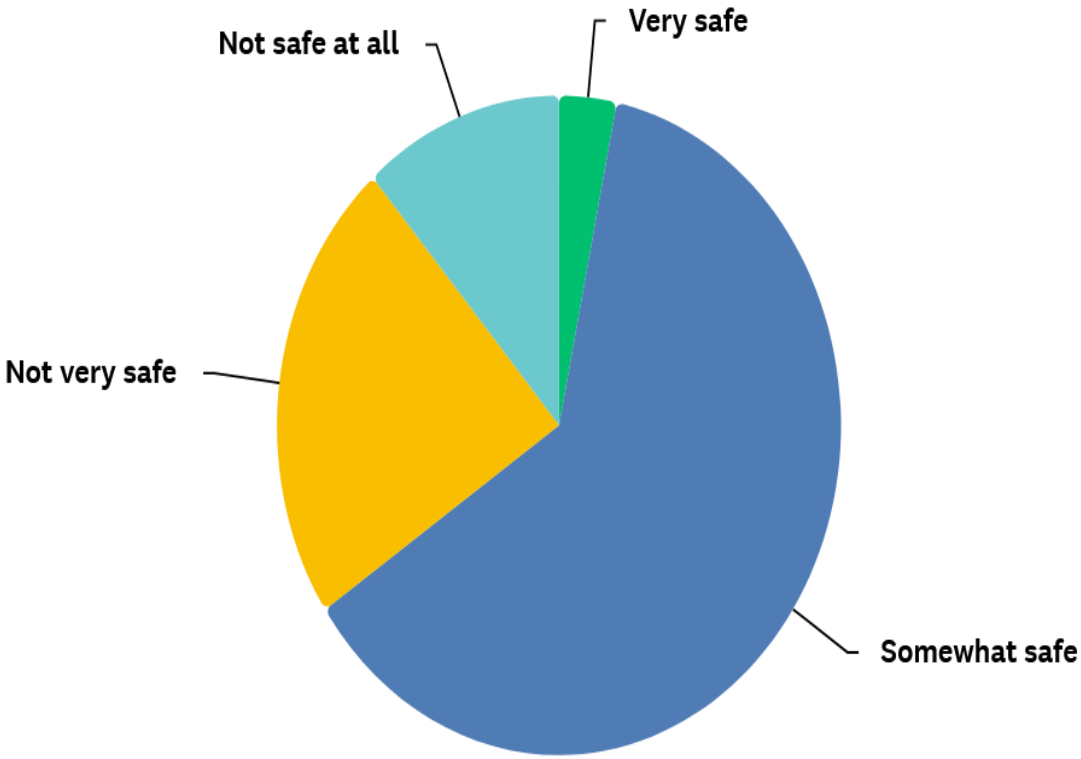
High Injury Routes in Newton and McDonald Counties



Appendix B: Traffic Safety Survey Data

How safe do you feel on the roads in Southwest Missouri?

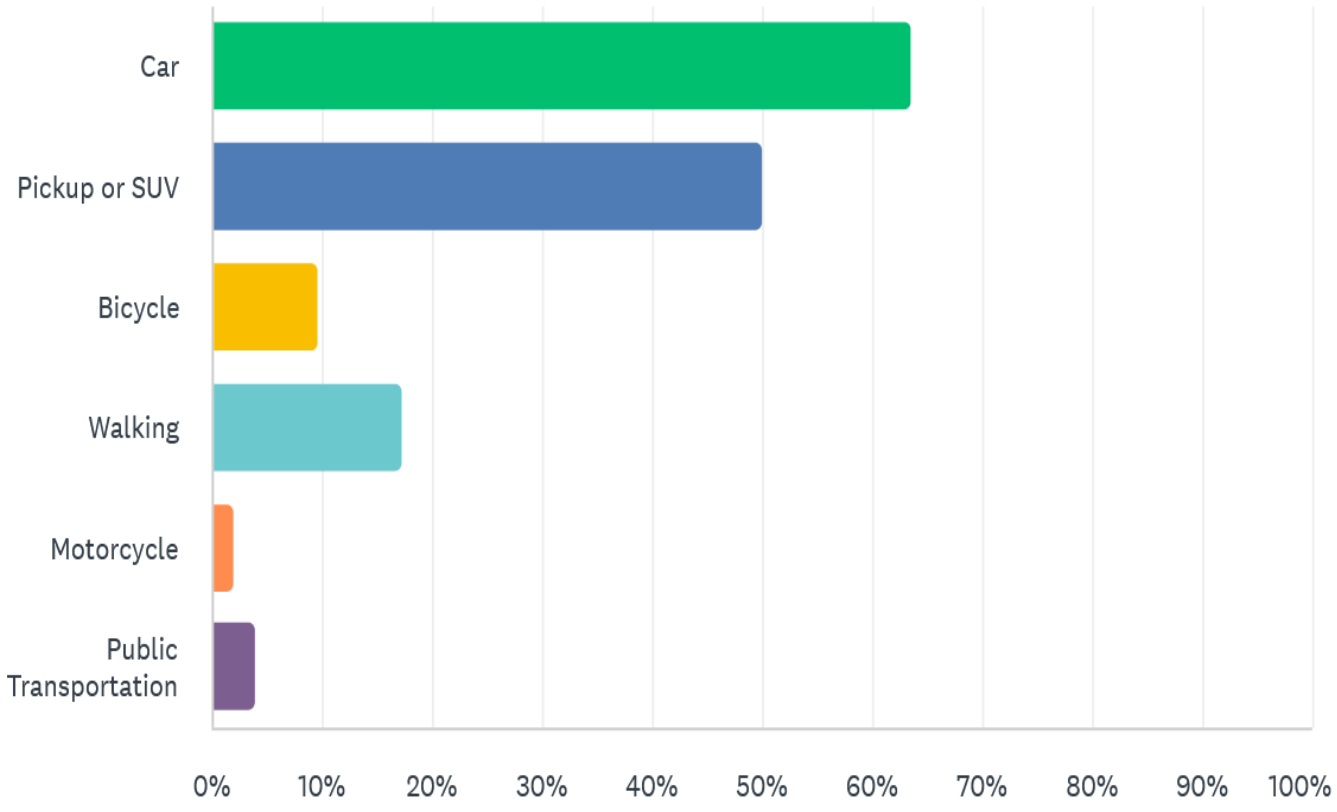
Answered: 61 Skipped: 0



Southwest Missouri Traffic Safety Survey (0)

How do you most frequently travel around the Southwest Missou...

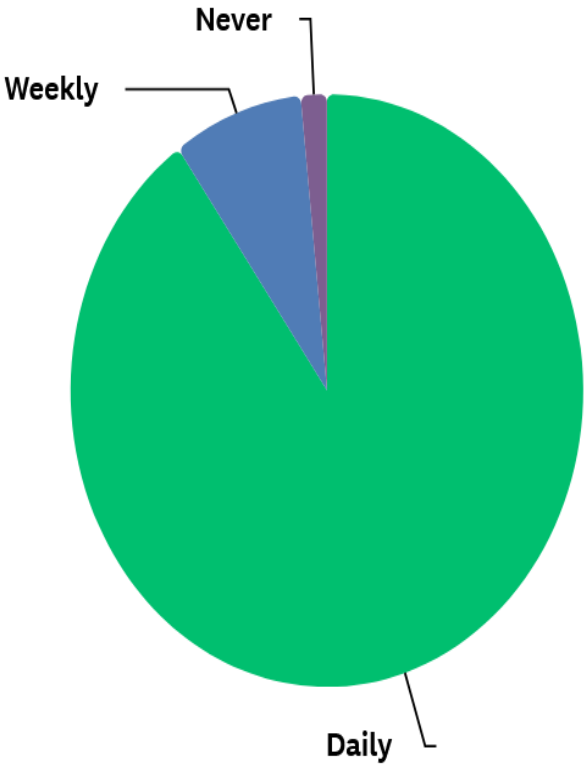
Answered: 52 Skipped: 9



Southwest Missouri Traffic Safety Survey (0)

How often do you use an automobile or truck for transportation?

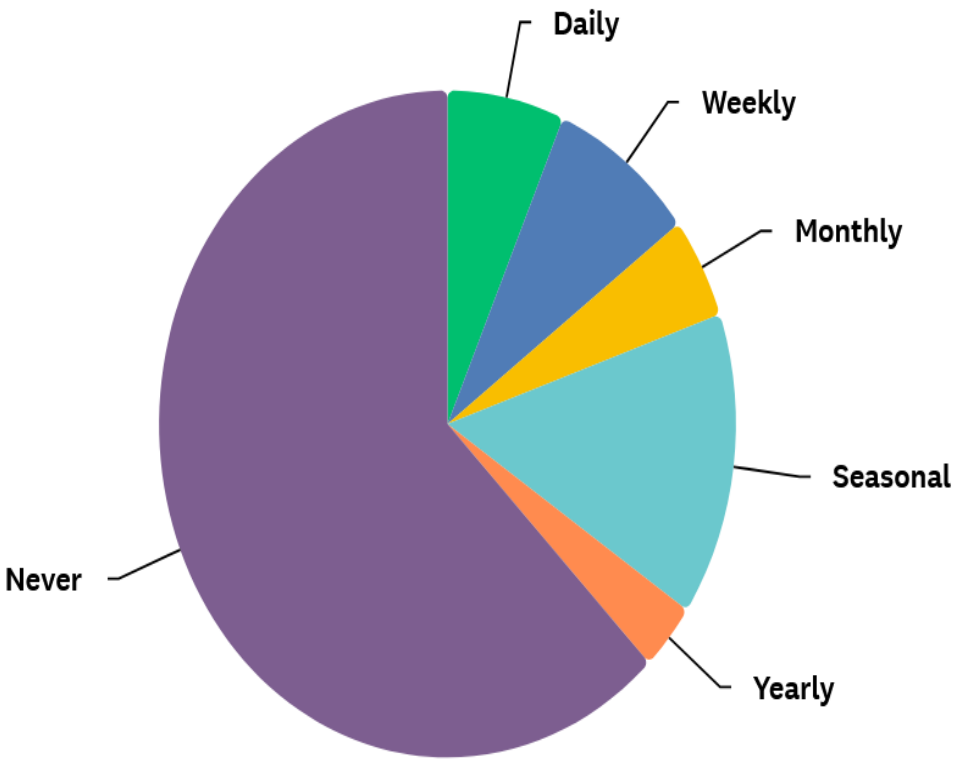
Answered: 61 Skipped: 0



Southwest Missouri Traffic Safety Survey (0)

How often do you Bike or Walk for transportation?

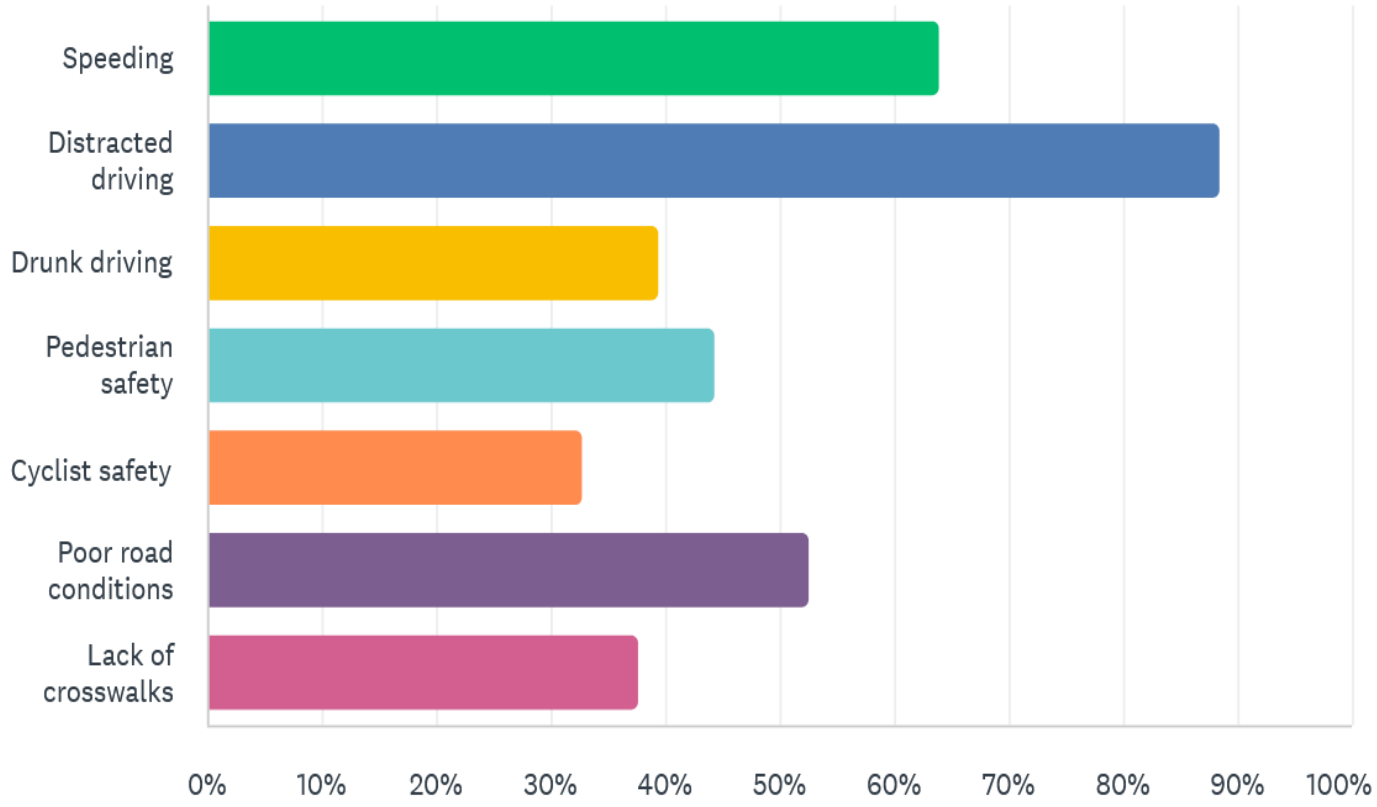
Answered: 61 Skipped: 0



Southwest Missouri Traffic Safety Survey (0)

What traffic safety issues are you most concerned about? Select ...

Answered: 61 Skipped: 0



Southwest Missouri Traffic Safety Survey (0)

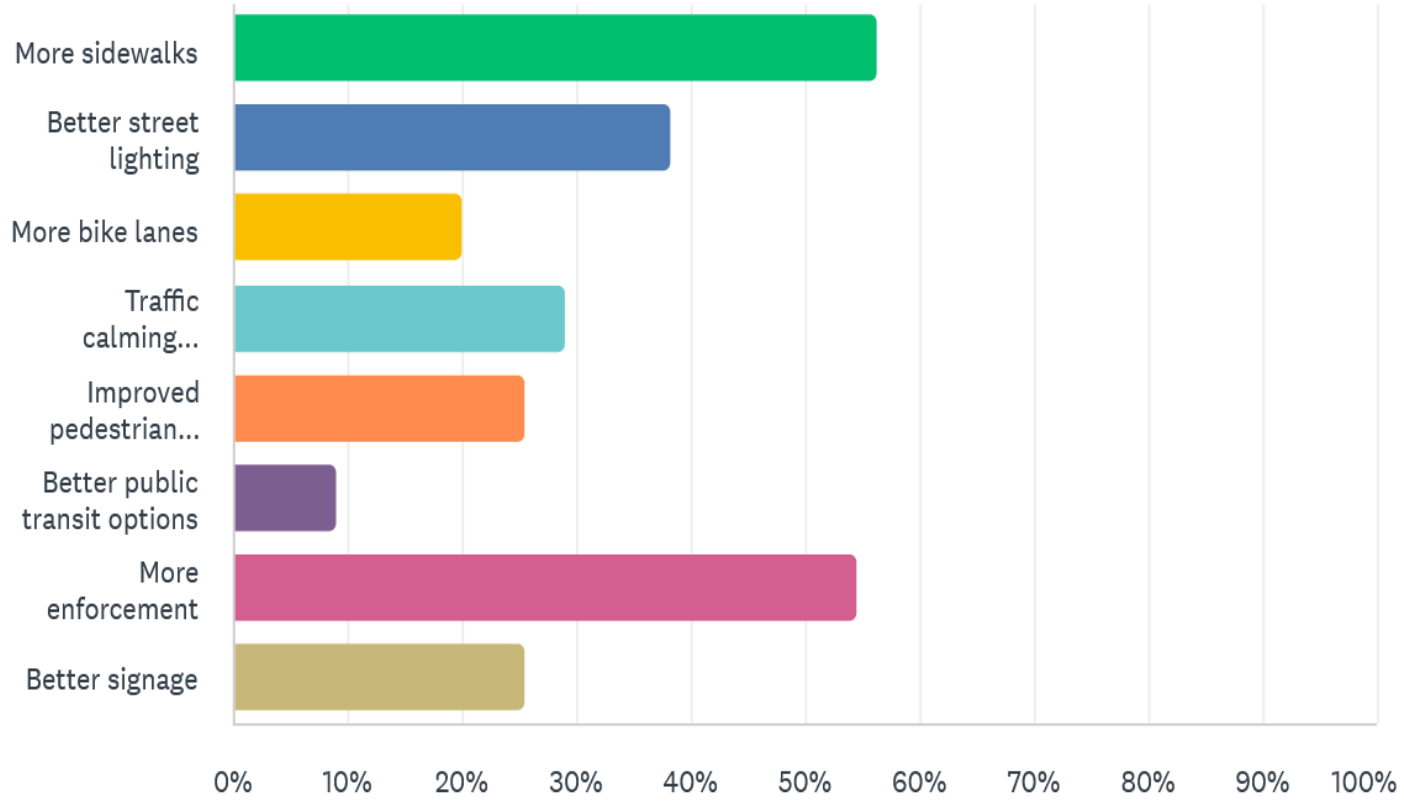
What specific locations in our community do you feel are the most dangerous for traffic safety?

Lamar city streets, including park
160 Highway needs sidewalks from stoplight to stoplight in Lamar
E 7th and Irwin St
all, its the skill level of the drivers and attention span issues.
I think most of them are descent.
Baker
Hwy 160/12th street where there is no sidewalk
Hwy 160
Range Line, 32nd St, N Main St Road (Joplin)
New roundabout on HH

The school zones in Carthage mo. especially by Steadley, Carthage intermediate center, high school, Fairview, junior high
Fir Road and Chapel Road
Fir Road and Chapel Road in Carthage
Intersections of two roads greater than three lanes.
Rangeline
Chapel & HH, Grand & George E Phelps, pedestrian walking along Airport Fairview and Baker
Chapel road and fir road (by Carthage intermediate center), county road 170 and fir road. Honestly most spots in fir road that do not have turn lanes.
The intersection of Chapel Road and Fir Road
Rural roads
Fir Road and Chapel intersection
Hwy 59 Diamond to Carthage Mo
Chapel road and fir road in Carthage; River Street and surrounding roads of Carthage High School
Highways with no sidewalks
Around schools
Fir & Chapel, Zora with the gravel trucks & pot holes,
49 highway
Chapel and HH intersection is dangerous.
The intersection by Carthage Intermediate Center.
Intersection at the CIC
Inside Carthage: stated above. Gum, harmony and cr118 are raceways.
i44; 96 from Carthage to Springfield (consider adding alternating passing lanes), Chapel and Fir Road intersection in Carthage
HH Highway and Chapel Road near schools. Overpass at HH over I49. All of I44 highway.
The clover leaf at I-49 & I-44. The high speeds allowed on I-44 are ridiculous. The area on HH/Fir Rd in front of Steadley Elementary, Carthage Intermediate Center, and now the new roundabout at the Highway/hospital/industrial park. The new roundabout will make things worse for parent pick up and drop off at the schools. And once the industrial park is built out, it will be worse.
HH and Chapel Road and 4th and Garrison
The intersection at our Carthage Intermediate Center on HH hwy.
Carthage…HH hwy & Chapel Road at the Intermediate school
Everywhere but quite often on HH HWY
Poor Road Conditions in Carterville Missouri. Poor road Conditions on a few of the overpasses on 249 at the Webb City Exchange
Joplin city limits
County highways
lettered roads
Right by the school. So many people speeding in that specific area.
32nd street & Rangeline. Intersections are higher risk.
Highway 59 and FF Hwy intersection
Highway 171, east and west of Highway 43
Everywhere. There are lots of people who walk through all the roads in McDonald County because there is a lack of sidewalks for people to walk safely from place to place, especially when trying to get from town to town.
small state roads such as H/K, M/N, D and even 171
Intersection of Highway FF and Highway 59
NO sidewalks on the Neosho Blvd

What improvements do you think would most improve traffic saf...

Answered: 55 Skipped: 6

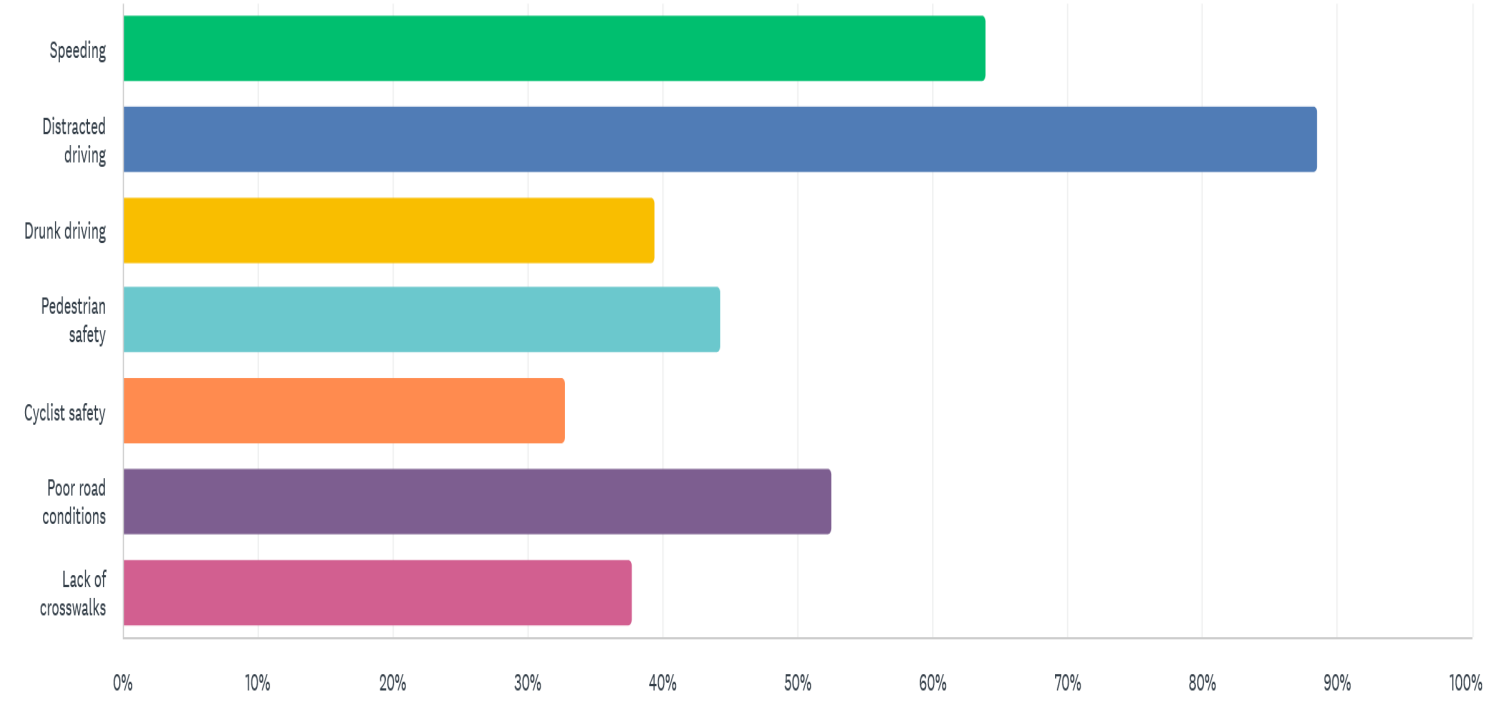


Additional Comments:

- Lack of good lighting on off on Ramps on interstates.
- People running red lights
- Illegal immigrant drivers without licenses that do not understand how our road ways are designed
- No shoulders on most rural roads
- Releasing DWI Offenders after multiple offenses
- In town: red light and stop sign runners Fairview west to east. They don't even slow down. All ages. River and 13th south to north -same. In both cases they don't even know I'm sitting at the clothes stop sign or at a green light on my side. It's not necessarily high school age either.
- Shoulder less roads
- Passing illegally
- poor line of sight intersections, narrow lanes, no shoulders, dangerous freeway exits
- We need off-street bike paths

What traffic safety issues are you most concerned about? Select all that apply

Answered: 61 Skipped: 0



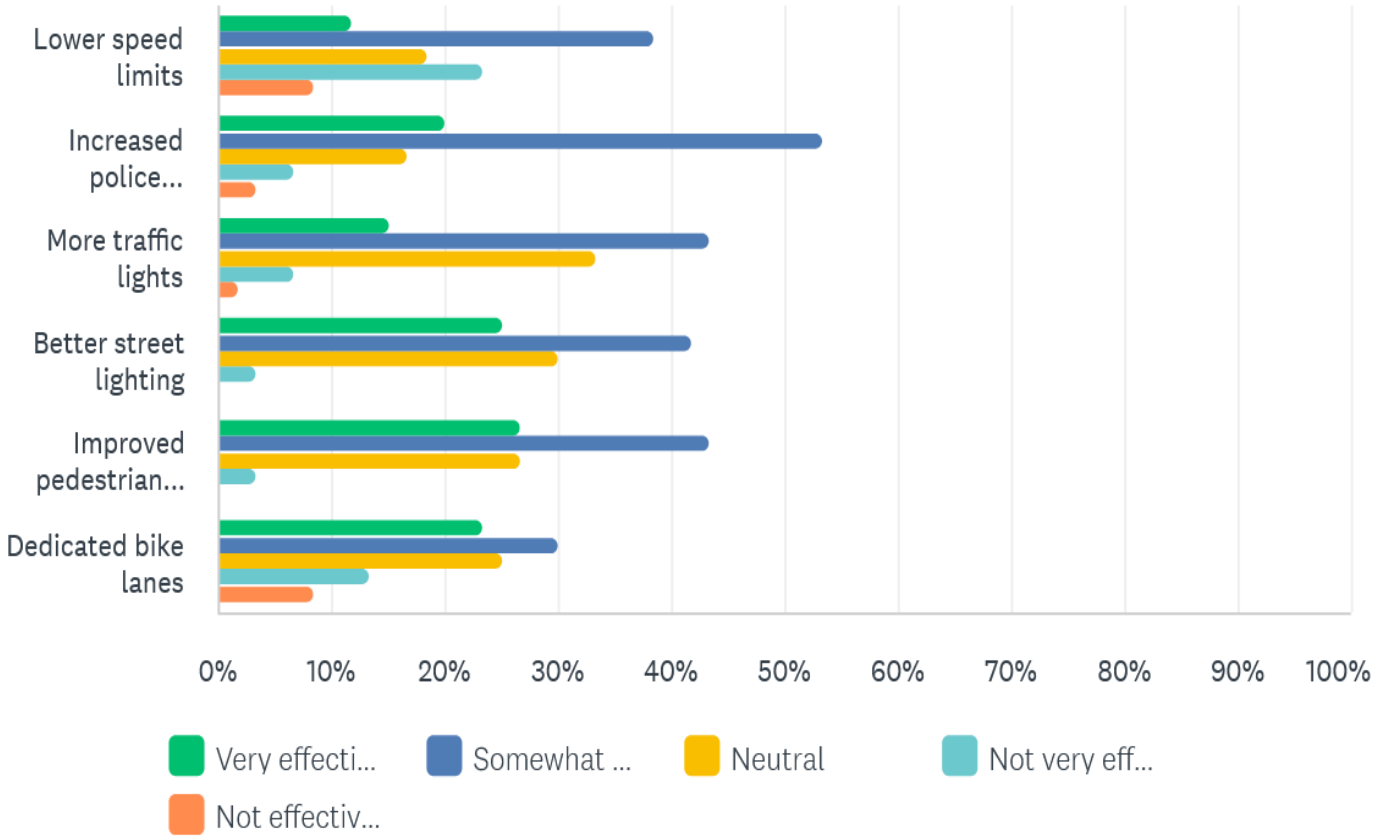
(0)

Additional Comments:

- Lights or roundabouts at dangerous intersections
- Stoplight at Carthage CIC corner
- Stoplight A light, a four way stop or roundabout is needed at HH and Chapel
- I am all for public transit. Not too many used the bike lanes.
- Lower speed limit. Stoplight at chapel and HH. More lanes on 44. Designated truck lane in 44.
- reduced speed limits
- Better roads
- Correct poor/no line of sight intersections

Please rate the following traffic safety measures:

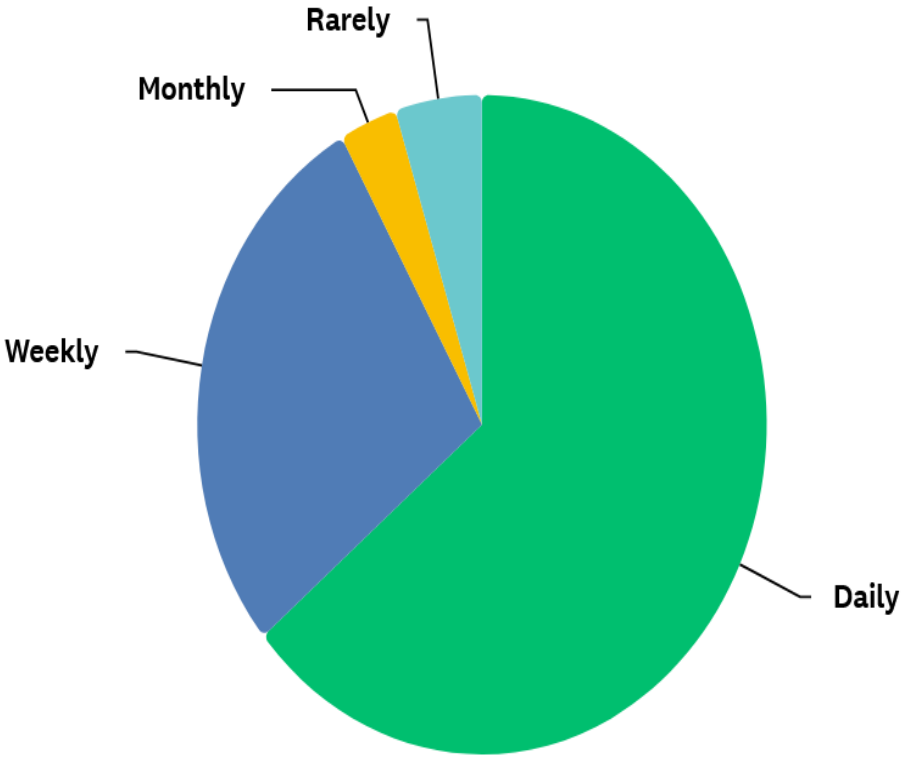
Answered: 60 Skipped: 1



Southwest Missouri Traffic Safety Survey (0)

How often do you see traffic violations in your area?

Answered: 61 Skipped: 0



Southwest Missouri Traffic Safety Survey (0)

Do you have any additional suggestions or comments on how to i...

Answered: 16 Skipped: 45

Please make an effort to have more public transit connections across the region, and link up trails to Arkansas' trails network.
Street pavement improvements
Make walking safer! Lamar has terrible walk ability!
REMOVE ILLEGAL IMMIGRANTS FROM THE COUNTY, STATE, AND NATION
Need to start charging a pro-rated fee for every month a license plate has expired.
Cut back tree limbs/shrubs that interferes with drivers viewpoint.
No
At the very essence of the issue, not allowing new roads constructed in city limits to exceed 35 mph and have greater than 10-foot lane widths.
More police needed
Slow down
Street lighting: out of city limits but it won't stop the speeding on Gum. Stagger Steadley and CIC dismissals. That is a death waiting to happen. The new Roundabout won't solve the traffic issue.
Enforcement of speeding on the interstates.
Better road surfaces, reevaluation of kinda of traffic lights, brighter lights at pedestrian crossings.
Limit driving distractions. improve driver attitude
no
A traffic signal at intersection of 59 and J highway in Diamond

Appendix C: Resolutions and Support Documents

Resolution No. 0008-2025

A Resolution of the Transportation Advisory Committee (TAC) in Support of the Southwest Missouri Traffic Safety Action Plan

WHEREAS, the Transportation Advisory Committee (TAC) serves as a regional advisory body that identifies, prioritizes, and supports transportation needs within Barton, Jasper, Newton, and McDonald counties in Southwest Missouri; and

WHEREAS, the Truman Council, in partnership with local governments, agencies, and stakeholders, has developed the *Southwest Missouri Traffic Safety Action Plan* to address critical safety concerns and reduce traffic-related fatalities and serious injuries across the region; and

WHEREAS, the Action Plan reflects extensive analysis of local crash data, public input, and best practices in safety planning, and identifies key focus areas including pedestrian and bicycle safety, high-risk corridors, equitable infrastructure access, and community education; and

WHEREAS, the Plan supports the objectives of the Safe Streets and Roads for All (SS4A) program and aligns with the Vision Zero framework, advancing a goal of zero traffic fatalities and serious injuries in Southwest Missouri; and

WHEREAS, this Plan will serve as a foundational document for applying for future state and federal funding, implementing local safety improvements, and supporting regional coordination on transportation safety efforts;

NOW, THEREFORE, BE IT RESOLVED by the Transportation Advisory Committee:

1. **The TAC hereby endorses and supports the *Southwest Missouri Traffic Safety Action Plan* as the official regional strategy to reduce roadway fatalities and serious injuries.**
2. **The TAC encourages member jurisdictions and agencies to use the Action Plan to guide project development, policy-making, and grant applications.**
3. **The TAC recommends ongoing collaboration between jurisdictions and stakeholders to implement the Action Plan and update it as necessary to reflect new data and priorities.**
4. **A certified copy of this resolution shall be transmitted to the Truman Council Board of Directors and relevant local, state, and federal partners.**

PASSED AND ADOPTED this 11th day of December, 2025.

Janna Schramm

Chairperson, Transportation Advisory Committee

Jana Schramm

Carrie Campbell

Executive Director, Harry S Truman Coordinating Council

Carrie campbell

Will Cline

Transportation Planner, Harry S Truman Coordinating Council

William L Cline Jr Digitally signed by William L Cline Jr Date: 2025.12.11 10:15:09 -06'00'

Signature: carrie mott (Dec 11, 2025 10:31:32 CST)
Email: ccampbell@hstcc.org

Signature: Jana Schramm (Dec 11, 2025 10:50:08 CST)
Email: j.schramm@carthagemo.gov

Appendix D: Project List (2024-2026)

Current and Planned Infrastructure Projects

Missouri Route 66 Traffic & Safety Improvements

This is a project to make pavement, sidewalk, traffic and safety improvements along Missouri Route 66 (7th Street) in Joplin between Jasper County Route P (Schifferdecker Avenue) and Loop 49 (Range Line Road).

DISTRICTS IMPACTED: SOUTHWEST

COUNTIES IMPACTED: JASPER

ROUTE IMPACTED: 66

PLANNING PHASE

PURPOSE AND NEED

This is a project to make pavement, sidewalk, traffic and safety improvements along Missouri Route 66 (7th Street) in Joplin between Jasper County Route P (Schifferdecker Avenue) and Loop 49 (Range Line Road).

Pavement along the Missouri Route 66 (7th Street) corridor between Jasper County Route P (Schifferdecker Avenue) and Loop 49 (Range Line Road) is in poor condition and needs to be replaced

Contractor will rebuild the pavement, bring sidewalks up to Americans with Disabilities Act (ADA) standards and upgrade and replace several traffic signals along the corridor.

PROJECT MILESTONES

COMPLETE
Virtual (Online) Public Meeting
June 12-26, 2022

NOT STARTED
In-Person Public Hearing
November 7, 2024
4:30-6 p.m., Joplin City Council Chamber
602 S. Main St., Joplin MO 64801

NOT STARTED
Project Awarded to Contractor
June 2025

NOT STARTED
Project Completion
Late 2027

NOT STARTED
Virtual (Online) Public Hearing
October 31-November 14, 2024

NOT STARTED
Project Out for Bid
May 2025

NOT STARTED
Construction Begins
July 2025

Missouri Route 43 Bridge Replacement over Elk River in McDonald

DISTRICTS IMPACTED: SOUTHWEST

COUNTIES IMPACTED: MCDONALD

ROUTE IMPACTED: 43

PLANNING PHASE

PROJECT MILESTONES

COMPLETE
Virtual (Online) Public Meeting
May 26-June 9, 2024

NOT STARTED
Project Awarded to Contractor
May 7, 2025

NOT STARTED
Construction Complete
December 1, 2025

NOT STARTED
Project Out for Bid
March 6, 2025

NOT STARTED
Construction Begins
Spring 2025

U.S. Route 60 Intersection Improvements in Barry and Newton

Contractor will make intersection improvements at six (6) locations along U.S. Route 60 in Newton and Barry counties.

DISTRICTS IMPACTED: SOUTHWEST

COUNTIES IMPACTED: BARRY, NEWTON

ROUTE IMPACTED: 60, 97, CC, HAMMER ROAD, HH, +4 MORE

PLANNING PHASE

PROJECT MILESTONES

COMPLETE
Monett Public Meeting
June 25, 2024
4:30-6 p.m., Monett City Park Casino
101 S. Lincoln Ave., Monett, MO 65708

NOT STARTED
Project Out for Bid
November 15, 2024

NOT STARTED
Construction Begins
Spring 2025
Missouri Route 97 roundabout construction begins Spring 2026

COMPLETE
Neosho Public Meeting
July 9, 2024
4:30-6 p.m., Lampo Center
500 E. Spring St., Neosho, MO 64850

NOT STARTED
Project Awarded to Contractor
December 4, 2024

Route HH Roundabout Construction at Dr. Russell Smith Way in Jasper

DISTRICTS IMPACTED: SOUTHWEST

COUNTIES IMPACTED: JASPER

ROUTE IMPACTED: HH

IN PROGRESS

PROJECT MILESTONES

COMPLETE
Accepting Bids
November 30, 2023

IN PROGRESS
Construction Begins
May 2024

COMPLETE
Project Awarded to Contractor
January 2024

NOT STARTED
Project Completion
February 22, 2025

Interstate 44 Bridge Rehabilitation in Newton

DISTRICTS IMPACTED: SOUTHWEST

COUNTIES IMPACTED: NEWTON

ROUTE IMPACTED: 44

PLANNING PHASE

PROJECT MILESTONES

Project Letting
March 15, 2024

Construction Begins
Spring 2024

Project Awarded to Contractor
April 3, 2024

Project Completion
November 22, 2024

Davis Boulevard Road Relocation at Route FF in Jasper County

DISTRICTS IMPACTED: SOUTHWEST

COUNTIES IMPACTED: JASPER

ROUTE IMPACTED: DAVIS BOULEVARD

PLANNING PHASE

PROJECT MILESTONES

Public Meeting
In-Person Public Meeting: December 12, 2023, Joplin Public Library

Online Public Meeting: December 12-26, 2023

Project Out for Bid
December 13, 2024

Project Awarded to Contractor
January 2025

Construction Begins
Spring 2025

Project Completed
Fall 2025

Missouri Route 96 Bridge Replacement in Jasper

This project will replace the Missouri Route 96 (Inca Road) bridge in Jasper County over Missouri Route 171 west of Carthage.

DISTRICTS IMPACTED: SOUTHWEST

COUNTIES IMPACTED: JASPER

ROUTE IMPACTED: 96

PLANNING PHASE

PROJECT MILESTONES

Virtual Public Meeting
October 2-16, 2023

Virtual (Online) Public Meeting held on the Missouri Route 96 Bridge Replacement Project

Project Awarded to a Contractor
April 2024

Projected Start of Construction
2024

I-49 Pavement Replacement Project

Remove and replace 1.4 miles of concrete pavement on I-49 between I-44 and a point south of Jasper County Route FF.

DISTRICTS IMPACTED
SOUTHWEST

COUNTIES IMPACTED
JASPER NEWTON

IN PROGRESS

Project Facts:

- Remove and replace 1.4 miles of concrete pavement on I-49 between I-44 and a point south of Jasper County Route FF (32nd Street) in Joplin
- Concrete is part of original pavement built as part of I-49 construction in 1994
- Concrete deteriorating and being replaced due to high traffic volumes

Construction: Week of April 5 until early August

Total Project Cost: $6.2 million

Traffic Impacts:

Phase 1:

- All lanes of southbound I-49 CLOSED 'round the clock for up to 16 days for pavement
- replacement
- All lanes of northbound I-49 open
- Route FF (32nd Street) southbound ramps will be CLOSED in the direction of the work being done
- Expect increased travel times
- Drivers will be directed to signed detour using Business Loop 49, I-44 and Missouri Route 59

Phase 2:

- All lanes of northbound I-49 CLOSED 'round the clock for up to 16 days for pavement
- replacement
- All lanes of southbound I-49 open
- Route FF (32nd Street) northbound ramps will be CLOSED in the direction of the work being done
- Expect increased travel times
- Drivers will be directed to signed detour using Business Loop 49, I-44 and Missouri Route 59

Jasper County Route U/Spring River Bridge Rehabilitation

This project would replace existing bridge deck/driving surface and install new barrier walls and replace expansion joints and repair other bridge components. Bridge built in 1966 and deck/driving surface experiencing severe deterioration.

DISTRICTS IMPACTED
SOUTHWEST

COUNTIES IMPACTED
JASPER

PLANNING PHASE

Project Facts:

- Replace existing bridge deck/driving surface and install new barrier walls
- Replace expansion joints and repair other bridge components
- Bridge built in 1966
- Bridge deck/driving surface experiencing severe deterioration
- Bridge carries 442 vehicles per day

Construction: Fall 2019 to Fall 2020 (Once bridge is closed, contractor crews have four (4) months to complete work and reopen bridge.)

Estimated Total Project Cost: $1.1 million

Traffic Impacts:

- Route U CLOSED at the bridge during construction
- County roads/driveways remain open on either side of bridge
- Signed detour using Route F, Route 37 and Route 96

ROAD AND BRIDGE PROJECTS

Project #	County:	Location:	Project Description:
HT001	Newton	MO 171, MO 249	Interchange and ramp improvements for potential interstate designation from I-49 in Carthage to I-44 in Joplin
HT002	jasper	HH and Chapel Rd	Intersection improvements
HT003	Jasper	M Hwy (Baseline)	Roadway needs to be widened, shoulders, and rumble strips
HT004	Newton	The bridge on old E highway	Bridge replacement
HT005	Newton	NN Hwy at Iris road	Road repair on section of NN
HT006	McDonald	MO. highway 76 west of Anderson	Road needs widened to accommodate truck traffic increase
HT007	Newton	I44 westbound at Exit 4	Passing lane added, or dedicated exit lane.
HT008	Jasper	St. Hwy 96 and O Hwy. to the north	Road needs raised to prevent flooding
HT009	Barton	highway 160 and SE 30th Lane	Bridge is too narrow for its close proximity to highway 160.
HT010	Jasper	Rte 96 from 43 to east of O.	Road widening and/or shoulder install
HT011	Jasper	Exit 18 on I-44.	Extend on-ramp heading East from North I-49. Extend Southbound off-ramp to Hwy 59 at Burr Oak Road
HT012	Newton	Hwy 59 at Cullum St	Introduce traffic calming measures, lights, speed signs
HT013	Jasper	Hwy 59 at RT FF	Intersection improvements
HT014	Jasper	I49 northbound ramp to MO 571	Traffic control measures
HT015	Jasper	HH Hwy and MO 571	Improvements to intersection

BIKE AND PEDESTRIAN PROJECTS

Project #	County:	Location	Project Description
HT001	Jasper	37 Hwy and 17th (Sarcoxie)	Crosswalk on Hwy 37/High
HT002	Newton	Hwy 60 at Cole and Pennsylvania streets (Granby)	Improve and add crosswalks
HT003	Newton	A Hwy to Fountain (Stella)	Sidewalk connecting school to Fountain
HT004	Jasper	37 Hwy and 14th (Sarcoxie)	Crosswalk on Hwy 37/High
HT005	McDonald	MO 59 at MO 90 (Noel)	Crosswalk
HT006	Newton	Rte. A and Ozark St (Stella)	Flashing light Hwy A and Ozark St
HT007	Newton	Redings Mill Bridge	Redings Mill Bridge is a landmark and in need of repair

Appendix E: Terms, Acronyms, and Definitions

Acronym	Full Term	Definition
AARP	American Association of Retired Persons	A non-profit organization focused on issues affecting those over 50 years old, including healthcare, employment, and retirement planning.
ACS	American College of Surgeons	A professional organization that sets standards for surgical education and practice, aiming to improve the quality of care for surgical patients.
ATLS	Advanced Trauma Life Support	A training program developed by the American College of Surgeons that provides systematic, concise training for the early care of trauma patients.
CDC	Centers for Disease Control and Prevention	The national public health institute in the United States that conducts research and provides information on health and safety to protect the well-being of citizens.
CDBG	Community Development Block Grant	A federal program that provides grants to local governments to support community development projects that improve economic development, housing, and infrastructure.
FHWA	Federal Highway Administration	A division of the U.S. Department of Transportation that administers federal funding to support the design, construction, and maintenance of the nation's highways.
FTA	Federal Transit Administration	An agency that provides financial and technical assistance to local public transit systems, promoting the use and development of public transportation across the U.S.
HIN	High-Injury Network	A network of roads and streets identified as having a higher-than-average number of traffic-related injuries and fatalities, often targeted for safety improvements.
HSTCC	Harry S. Truman Coordinating Council	A regional council dedicated to planning and coordinating development initiatives such as transportation, housing, and public services within the southwest Missouri region.
IIHS	Insurance Institute for Highway Safety	An independent, non-profit scientific and educational organization dedicated to

		reducing the losses from motor vehicle crashes through research and evaluation of vehicle safety standards.
IIJA	Infrastructure Investment and Jobs Act	A comprehensive federal law enacted to provide significant investments in the nation's infrastructure, including roads, bridges, transit systems, and broadband expansion.
JATSO	Joplin Area Transportation Study Organization	An organization that develops and oversees transportation plans and strategies to address regional mobility needs and safety concerns within the Joplin metropolitan area.
MCHD	McDonald County Health Department	A local public health department responsible for promoting and protecting the health of residents in McDonald County through education, healthcare programs, and public health services.
MIEMSS	Maryland Institute for Emergency Medical Services Systems	A state agency responsible for coordinating and overseeing Maryland's emergency medical services, including trauma and specialty care facilities.
MoDOT	Missouri Department of Transportation	The state department responsible for the construction, maintenance, and operation of transportation infrastructure, including highways, bridges, and public transit in Missouri.
NHTSA	National Highway Traffic Safety Administration	A federal agency under the U.S. Department of Transportation focused on achieving the highest standards of road safety through enforcing vehicle performance standards and conducting traffic safety campaigns.
RSCP	Road Safety Comprehensive Plan	A strategic framework designed to guide efforts to improve road safety by addressing key factors such as driver behavior, infrastructure, and enforcement practices.
SS4A	Safe Streets for All	A nationwide initiative aimed at reducing traffic fatalities and serious injuries on roadways through comprehensive safety measures, data analysis, and community engagement.
SVI	Social Vulnerability Index	A tool developed by the CDC that helps identify communities that may require additional support in times of disaster or public health emergencies, based on social and economic factors.

TAC	Technical Advisory Committee	A committee composed of experts that provides technical oversight, recommendations, and advice on the planning and execution of specific projects or policy initiatives.
TEAP	Traffic Engineering Assistance Program	A program designed to help local governments with traffic engineering and analysis, offering support for studies that aim to enhance traffic flow and safety.
USDOT	United States Department of Transportation	The federal executive department responsible for establishing and overseeing national transportation policies, including highway, rail, and air travel.
Vision Zero	Vision Zero	A global strategy that seeks to eliminate all traffic fatalities and severe injuries while ensuring safe, healthy, and equitable mobility for all road users.
WHO	World Health Organization	A specialized agency of the United Nations that focuses on international public health, leading efforts to combat diseases and improve global health standards.
Vision Zero (Expanded Definition)	Vision Zero	Vision Zero is more than just a strategy—it is a commitment to fundamentally change the way road safety is approached. Originating in Sweden in 1997, Vision Zero acknowledges that human error is inevitable and that the transportation system must be designed to minimize the consequences of these errors. The strategy focuses on proactive measures, shared responsibility, a safe system approach, and an equity focus to protect vulnerable road users like pedestrians, cyclists, and lower-income communities.
Safe System Approach (Expanded Definition)	Safe System Approach	The Safe System Approach complements Vision Zero by fostering resilience in the transportation network. It emphasizes safe road users, safe vehicles, safe speeds, safe roads, and post-crash care, ensuring that transportation systems are

		built to tolerate human error without severe consequences.
Pedestrian and Bicycle Safety	Pedestrian and Bicycle Safety	A focus within Vision Zero that emphasizes protected bike lanes, pedestrian crossings, and traffic calming measures to safeguard non-motorized road users.
Traffic Calming Measures	Traffic Calming Measures	Engineering strategies used to slow down traffic and enhance road safety, including speed humps, roundabouts, and narrowed lanes.
High-Injury Network (HIN)	High-Injury Network	A framework for prioritizing streets with a high concentration of severe traffic incidents, guiding targeted safety improvements.

Appendix F: Emergency Response and Medical Resources

G.1 Traffic Crash Trauma Network

In the context of traffic crash trauma, regional trauma networks in Southwest Missouri coordinate healthcare and emergency response services to ensure that crash victims receive timely, specialized care. By linking hospitals, EMS providers, public health agencies, and air transport, these networks ensure that patients are triaged, treated, and transferred efficiently to minimize time from crash to critical intervention.

Levels of Trauma Care for Traffic Injuries

Level I Trauma Centers provide comprehensive care for all forms of trauma, including the severe injuries associated with high impact traffic crashes. Although Southwest Missouri does not have a Level I center, networks with nearby urban centers, such as Kansas City, facilitate transfers for the most critical cases.
Level II Trauma Centers in Southwest Missouri, including Freeman Health System and Mercy Hospital Joplin in Jasper County, can manage many traffic related injuries requiring advanced surgical and critical care services.
Level III and IV Trauma Centers focus on stabilizing patients from crashes and coordinating transfers as needed to higher level centers.

Traffic Crash Specific Protocols for EMS and Hospitals

EMS providers use trauma protocols designed to assess the severity of traffic injuries, such as head trauma, fractures, or internal injuries, which helps them determine the level of trauma care needed. Clear transfer protocols allow EMS to transport patients directly to Level II trauma centers or arrange for air transport if more rapid, specialized intervention is required.

EMS Collaboration and Rapid Response

EMS units in Jasper, Newton, Barton, and McDonald counties respond first at crash sites, often performing initial stabilization and coordinating directly with trauma centers. They play a vital role in traffic crash trauma care, particularly in rural areas where transport times to trauma centers may be longer.

Air Transport Services for Severe Cases

Air transport services are crucial for crash victims in rural Southwest Missouri, where road transport to trauma centers may take longer. Helicopters transport patients to Freeman and Mercy hospitals in Jasper County or to Level I facilities in Kansas City, Springfield, or other nearby regions, ensuring critical care is reached within the "golden hour."

Telemedicine Support for Immediate Trauma Assessment

Telemedicine allows Level II and III centers in Southwest Missouri to consult with trauma specialists in higher level centers, enabling real-time evaluation and advice on stabilization, which is particularly valuable in traffic crash cases involving complex injuries.

Data Collection and Quality Improvement

Trauma networks collect data on traffic crash injuries, response times, and patient outcomes to refine protocols and response times, specifically targeting improvement in crash trauma care. This data driven approach ensures resources are appropriately allocated, especially during high traffic times or in high-risk areas.

Public Health and Prevention Initiatives

Southwest Missouri trauma networks partner with public health agencies to promote road safety initiatives aimed at reducing traffic crashes. Campaigns on seat belt use, distracted driving, and impaired driving awareness help lower the number of serious injuries. Additionally, Vision Zero and other local safety initiatives target roadway improvements to mitigate crash trauma risks.

Benefits of Traffic Crash Trauma Networks for Southwest Missouri

Quick Access to Appropriate Care: These networks enhance response times, ensuring crash victims receive immediate onsite care and rapid transport to trauma facilities as needed.
Effective Coordination: Trauma network protocols streamline communication between EMS, hospitals, and trauma centers to manage traffic related injuries efficiently.
Continuous Improvement and Data Driven Insights: Through data collection on crash types, severity, and outcomes, the network can refine response strategies, making the region safer and more responsive to traffic crash traumas.

Existing Participation in Regional Traffic Crash Trauma Networks

In Southwest Missouri, Freeman Health System and Mercy Hospital Joplin work within trauma networks that span into Kansas City and Springfield. EMS agencies in Jasper, Newton, Barton, and McDonald counties coordinate closely with these facilities, ensuring efficient triage and transport. This collaboration is essential for managing the high risk and frequency of traffic crashes in both urban and rural areas, creating a cohesive approach to minimizing traffic crash related trauma and fatalities across county and state lines.

G.2 Directory of Emergency Resources for Southwest Missouri

This appendix provides a comprehensive list of trauma centers, hospitals, EMS facilities, and emergency medical responders in Jasper, Newton, Barton, and McDonald counties. Each entry includes contact details, types of services available, and any additional relevant

information for coordinating emergency responses.

1. Jasper County Emergency Resources

1.1 Freeman Health System - West Campus
- Address: 1102 W 32nd St, Joplin, MO 64804
- Phone: (417) 347-1111
- Emergency Services: Level II Trauma Center, 24/7 Emergency Department, stroke and cardiac care, orthopedic emergency services
- Specialized Services: Comprehensive diagnostic imaging, surgical services, specialized care for trauma, pediatrics, and geriatrics
- Overview: Freeman Health System is a critical resource for Jasper County and surrounding areas, providing comprehensive trauma care and specialized medical services.

1.2 Mercy Hospital Joplin
- Address: 100 Mercy Way, Joplin, MO 64804
- Phone: (417) 556-2000
- Emergency Services: Level II Trauma Center, emergency and critical care, cardiac care unit, stroke care
- Additional Services: Helicopter transport available for critical cases, state-of-the-art burn treatment facilities
- Overview: Mercy Hospital Joplin offers extensive emergency services with immediate trauma care, particularly for severe and complex cases, making it an essential trauma center in the region.

1.3 Jasper County EMS
- Contact for Emergencies: (417) 358-4095 (dispatch via Carthage Fire Department)
- Service Area: Jasper County and surrounding communities
- Services Provided: Basic and Advanced Life Support (BLS/ALS), coordination with local hospitals for direct transport, on-site emergency response
- Overview: Jasper County EMS is a 24/7 service providing both immediate on-site medical intervention and transport to trauma centers.

2. Newton County Emergency Resources

2.1 Freeman Neosho Hospital
- Address: 113 W Hickory St, Neosho, MO 64850
- Phone: (417) 451-1234
- Emergency Services: 24/7 Emergency Department, minor trauma services, pediatric care
- Other Services: Routine surgical services, diagnostic imaging, outpatient services
- Overview: Freeman Neosho serves as the primary emergency and minor trauma facility in Newton County, offering critical services and diagnostics for acute care.

2.2 Newton County Ambulance District (NCAD)
- Address: 301 S Wood St, Neosho, MO 64850
- Phone: (417) 451-5419
- Emergency Services: EMS transport, paramedic services, ALS/BLS support, dispatch center for the county

- Overview: NCAD coordinates with local emergency departments to provide transport and first-response medical services throughout Newton County.

3. Barton County Emergency Resources

3.1 Barton County Memorial Hospital
- Address: 29 NW 1st Ln, Lamar, MO 64759
- Phone: (417) 681-5100
- Emergency Services: 24/7 Emergency Department, minor trauma and acute care services
- Specialized Care: Wound care, diagnostic services, limited inpatient services
- Overview: Barton County Memorial Hospital provides critical emergency response, minor trauma care, and supportive services for the Lamar community and nearby regions.

3.2 Barton County Ambulance Service
- Address: 103 W 10th St, Lamar, MO 64759
- Phone: (417) 682-3529
- Emergency Services: EMS response, BLS and ALS, transportation to area hospitals
- Overview: This service supports Barton County residents by providing emergency transport and pre-hospital medical intervention in coordination with Barton County Memorial and other regional facilities.

4. McDonald County Emergency Resources

4.1 Mercy McDonald County Hospital
- Address: 800 W Harmony St, Pineville, MO 64856
- Phone: (417) 223-8400
- Emergency Services: 24/7 Emergency Department, primary trauma and acute care
- Specialized Services: On-call surgical support, diagnostic and imaging capabilities, geriatric and pediatric care
- Overview: As the primary hospital in McDonald County, Mercy McDonald County Hospital offers emergency care and acts as a central resource for urgent medical needs in the area.

4.2 McDonald County EMS
- Address: 400 N Cliffside Dr, Pineville, MO 64856
- Phone: (417) 223-2154
- Emergency Services: Comprehensive EMS response, pre-hospital care, transport services
- Overview: McDonald County EMS offers critical response capabilities, often coordinating with Mercy McDonald County Hospital to ensure seamless emergency care and timely patient transport.

5. Additional Emergency Support Resources

Southwest Missouri Emergency Management Agency (SWMO EMA)
- Location: Various offices, contact through local county offices
- Phone: Varies by county (e.g., Jasper County EMA: (417) 623-5858)
- Services Provided: Emergency response coordination, disaster planning, community

education

Missouri State Highway Patrol (Troop D) - For Emergency Assistance
- Phone: 1-800-525-5555 (road emergencies only)
- Services Provided: Road safety support, emergency response for vehicle crashes, hazardous materials incidents

Summary Table of Emergency Resources

Facility	Location	Contact Phone	Services Available
Freeman Health - West	Joplin, MO	(417) 347-1111	Level II Trauma, ER, stroke/cardiac care
Mercy Hospital Joplin	Joplin, MO	(417) 556-2000	Level II Trauma, critical care, burn unit
Freeman Neosho Hospital	Neosho, MO	(417) 451-1234	ER, minor trauma, pediatric care
Barton Memorial Hospital	Lamar, MO	(417) 681-5100	ER, minor trauma, wound care
Mercy McDonald Hospital	Pineville, MO	(417) 223-8400	ER, primary trauma, imaging
Jasper County EMS	Carthage, MO	(417) 358-4095	ALS/BLS, transport
Newton County Ambulance	Neosho, MO	(417) 451-5419	EMS transport, ALS/BLS
Barton County Ambulance	Lamar, MO	(417) 682-3529	EMS, transport services
McDonald County EMS	Pineville, MO	(417) 223-2154	EMS response, pre-hospital care

This directory should be used as a quick reference tool for coordinating emergency responses across Jasper, Newton, Barton, and McDonald counties. Each facility offers essential services critical to maintaining public health and safety, ensuring readiness in times of medical and trauma-related emergencies.

Appendix G: Statistical Sources

The development of this plan drew on a wide range of reputable sources, providing a foundation for evidence-based strategies tailored to Southwest Missouri's unique traffic safety needs. These sources offered critical data, research insights, and proven methodologies, ensuring that the plan aligns with national standards and incorporates effective practices for local implementation. The following resources were instrumental in shaping the plan:

Harry S. Truman Coordinating Council (HSTCC) resources, such as annual reports and regional traffic safety plans, provided foundational insights into local traffic patterns and strategic objectives.

The Federal Highway Administration (FHWA) contributed through studies like Intersection Safety and Roundabout Implementation Studies, detailing effective strategies for reducing crash risks and improving road safety.

National Highway Traffic Safety Administration (NHTSA) publications, including Traffic Safety Facts 2022, provided comprehensive crash data that informed our analysis of accident trends and the formulation of effective safety countermeasures.

Data from the Centers for Disease Control and Prevention (CDC), such as Vital Signs: Motor Vehicle Crash Deaths, highlighted the need for targeted safety initiatives to mitigate traffic fatalities both regionally and nationally.

Missouri Department of Transportation (MoDOT) resources, including MoDOT Crash Maps and the Missouri Statewide Traffic Crash Statistics 2019-2023, were invaluable for understanding crash hotspots and regional safety challenges. These tools provided visual and statistical context to support targeted interventions in high-risk areas.

Insurance Institute for Highway Safety (IIHS) research, notably the Bicyclist and Pedestrian Safety Report 2022, underscored the importance of measures to protect non-motorized road users and reduce crash severity.

The American Automobile Association (AAA) Foundation for Traffic Safety provided critical insights through reports like Impact of Speeding and Distracted Driving on Crash Risk, which shaped policy recommendations and public outreach programs.

The National Safety Council (NSC)'s Alive at 25 Program Guide informed the development of youth-focused safety education programs to reduce risky driving behaviors among young drivers.

Virginia Tech Transportation Institute (VTTI) studies, including Distracted Driving Research: Visual and Cognitive Distractions, emphasized the impact of driver inattention and helped craft strategies to combat distracted driving.

The Rural Emergency Medical Services and Trauma Technical Assistance Center (REMSTTAC) publication Improving Rural Emergency Response Coordination guided the

development of strategies to enhance emergency response and reduce delays in rural settings.

National Institute on Alcohol Abuse and Alcoholism (NIAAA) publications provided evidence-based research on the impact of alcohol on driving performance, supporting initiatives aimed at reducing impaired driving.

Pedestrian and Bicycle Information Center (PBIC) resources, such as Designing Safe Crosswalks and Protected Bike Lanes, reinforced the need for targeted infrastructure improvements to safeguard vulnerable road users.

The Commercial Vehicle Safety Alliance (CVSA)'s Operation Safe Driver Week Reports informed strategies to address high-risk behaviors among commercial drivers, contributing to safer roadways.

Missouri State Highway Patrol (MSHP) Traffic Safety Reports offered additional data on enforcement efforts and accident reports, supporting the identification of high-risk behaviors and areas requiring increased law enforcement.

Local Law Enforcement Traffic Data, including records from county sheriff departments and city police, provided ground-level perspectives on recurrent issues and community-specific challenges.

Traffic Volume and Speed Data from MoDOT and Regional Transportation Planning Partners, including speed studies and vehicle counts, informed the evaluation of traffic flow and speed management needs in key areas.

Local Health Department Reports contributed valuable insights on the public health impacts of traffic incidents, including injury trends and hospital data.

Public Feedback and Community Surveys conducted through various safety initiatives and community meetings helped tailor recommendations to local needs and preferences.

These combined resources supported the comprehensive and data-driven approach of this plan, enabling the identification of high-priority interventions and promoting a collaborative strategy for traffic safety improvements in Southwest Missouri.