



# SEMPO

Southeast Metropolitan Planning Organization

# SEMPO

Comprehensive Safety Action Plan

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# ACKNOWLEDGMENTS

This Plan was developed for the Southeast Metropolitan Planning Organization (SEMPO) with funding from the Safe Streets and Roads for All (SS4A) grant program.





# EXECUTIVE SUMMARY

# COMPREHENSIVE SAFETY ACTION PLAN

The Southeast Metropolitan Planning Organization (SEMPO) has developed its Safe Streets and Roads for All (SS4A) Comprehensive Safety Action Plan (CSAP) in response to the growing need for safer, more equitable transportation networks. From 2017 to 2022, there were approximately 40 crashes per year resulting in a fatal or serious injury. The SEMPO Board of Directors, in collaboration with regional elected officials, has set ambitious safety goals in alignment with the SS4A vision of zero roadway fatalities. The Plan serves as a regional commitment to eliminate traffic fatalities and serious injuries by implementing evidence-based safety countermeasures and fostering a culture of safety across all transportation modes.



SEMPO's commitment to safer streets is grounded in the understanding that traffic-related deaths and injuries are preventable. By adopting a proactive, data-driven approach, SEMPO aims to systematically address safety risks and prioritize interventions in areas with high safety concerns. The Plan places particular emphasis on equity, recognizing that disadvantaged communities often bear a disproportionate burden of traffic violence. SEMPO's SS4A Comprehensive Safety Action Plan ensures that these communities are prioritized for safety improvements in line with federal goals for transportation equity.

SEMPO's SS4A CSAP builds upon a series of foundational elements designed to create a safer, more inclusive transportation network. The Plan is structured around the principles of the "Safe System Approach" advocated by the US Department of Transportation (USDOT) and the Federal Highway Administration (FHWA). This approach shifts the focus from individual road user behavior to system-wide changes that enhance safety for all.

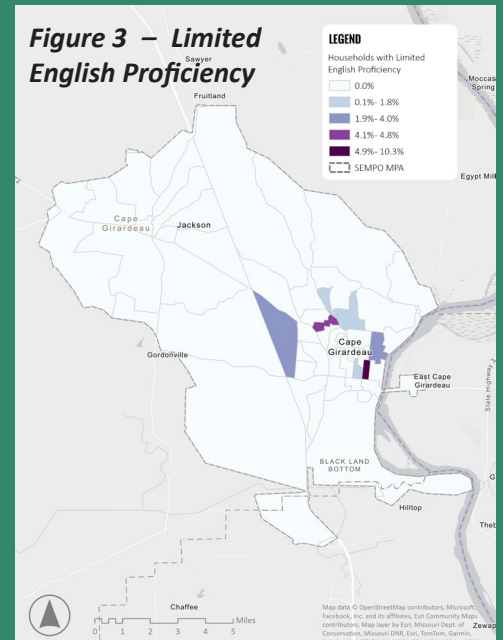
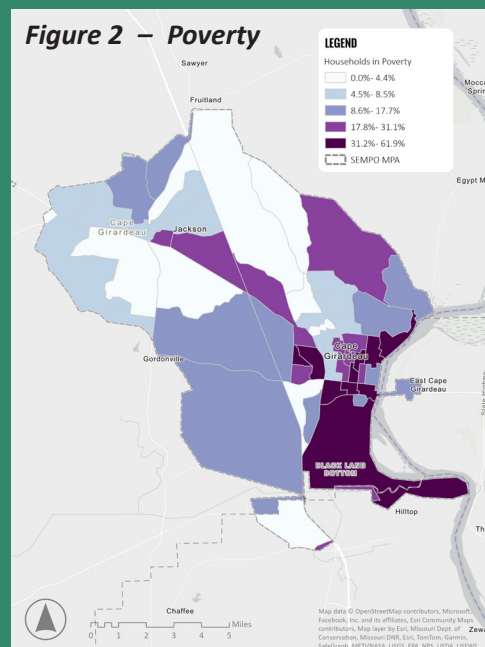
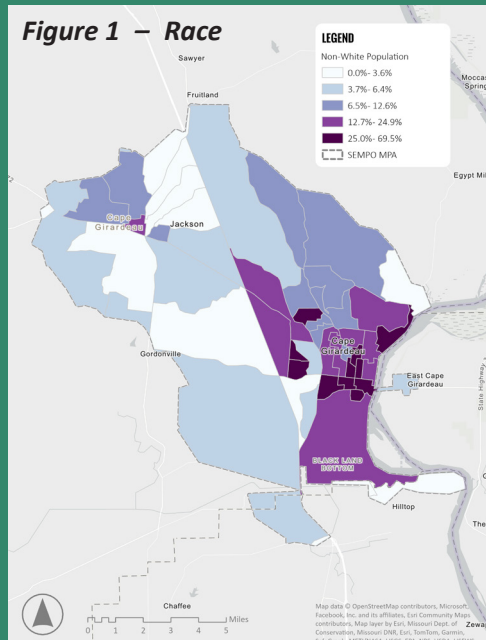
## PLAN ELEMENTS

The SEMPO SS4A CSAP is structured around key elements designed to address both the systemic and localized nature of traffic safety. These elements include:

- DATA-DRIVEN SAFETY ANALYSIS
- COMMUNITY AND STAKEHOLDER ENGAGEMENT
- EQUITY-FOCUSED PLANNING
- PROVEN SAFETY STRATEGIES
- MONITORING AND EVALUATION

# EQUITY-FOCUSED PLANNING

A safe and equitable transportation system expands access to opportunities for all residents and helps to reduce the disparate economic, environmental, and health burdens experienced by disadvantaged and underserved communities. Historically disadvantaged populations such as people of color, people living in poverty, and people with limited English proficiency not only rely on alternative modes of transportation such as walking, biking, and transit, but may live in areas with limited or poor transportation infrastructure that contributes to unsafe travel conditions. The SEMPO region is committed to an equitable distribution of safety improvements so that all residents of all abilities can feel safe when traveling.



# ACTION PLAN

The Action Plan for SEMPO's SS4A initiative is designed to guide the implementation of strategies and projects aimed at reducing and eliminating fatalities and serious injuries on the region's roadways. The Plan incorporates data-informed decision-making, equity-focused interventions, and proven safety countermeasures from national best practices, while leveraging input from local stakeholders and communities. This section outlines the selected strategies, recommended policy and process changes, and targeted actions for high-injury network (HIN) locations.

The strategies and projects selected for SEMPO's SS4A Comprehensive Safety Action Plan are based on the findings from the technical safety analysis and the policy and process review and align with federal and state priorities. The approach is centered on the Safe System Approach, a framework that emphasizes designing roadways that account for human error, reducing crash forces to prevent fatalities and serious injuries, and promoting shared responsibility among all road users, designers, and policy makers.



# REGIONAL STRATEGIES

Regional strategies are further broken down into engineering, education, and enforcement strategies. Regional strategies are efforts to improve safety for all roadway users apart from the project development process.

## ENGINEERING

- FHWA PROVEN SAFETY COUNTERMEASURES
- COMPLETE STREETS
- TRAIL SAFETY ENHANCEMENTS

## EDUCATION

- SAFE ROUTES TO SCHOOL PROGRAMS
- DRIVER AND PEDESTRIAN EDUCATION
- TRANSIT EDUCATION

## ENFORCEMENT

- AUTOMATED ENFORCEMENT
- ENHANCED LAW ENFORCEMENT

# POLICY AND PROCESS CHANGES

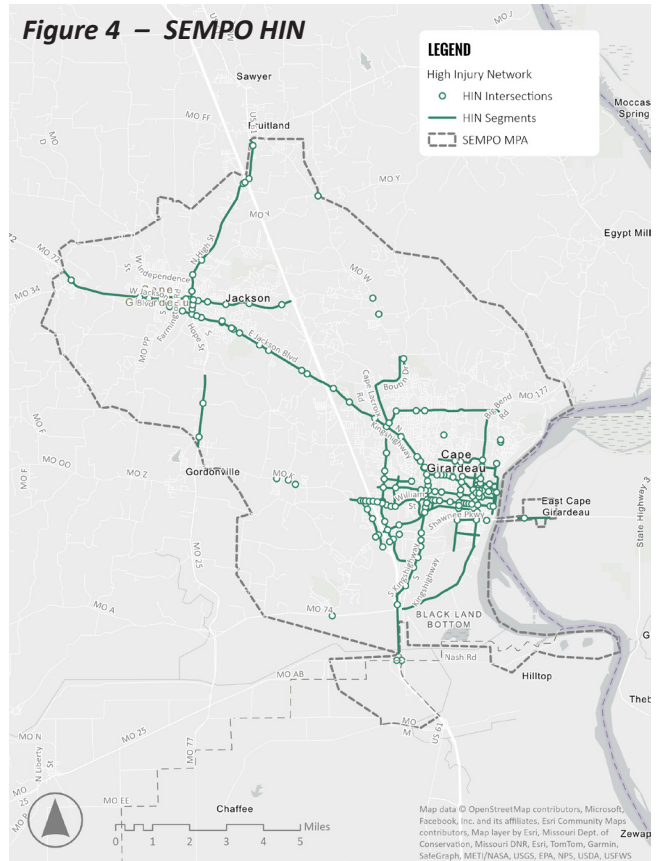
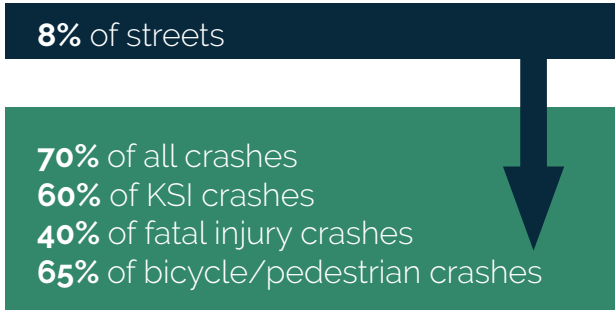
SEMPO and partner agencies will adopt policy and process changes to improve safety outcomes, focusing on systemic improvements across the transportation network.

- DESIGN STANDARDS
- EVALUATE AND UPDATE ORDINANCES
- PROGRAMMATIC CHANGES
- EQUITY-FOCUSED SAFETY INTERVENTIONS

# HIGH INJURY NETWORK INTERVENTIONS

The identification of the High Injury Network (HIN) is a crucial element in SEMPO’s safety strategy. The HIN represents the roadways and intersections with the highest concentrations of fatal and serious injury crashes. The HIN will help decision makers prioritize safety projects so that improvements have the largest potential reduction in fatal and serious injury crashes.

The SEMPO HIN identifies the majority of all fatal and serious injury crashes and more than a third of all fatal injury crashes on just 8% of the total roadway network.

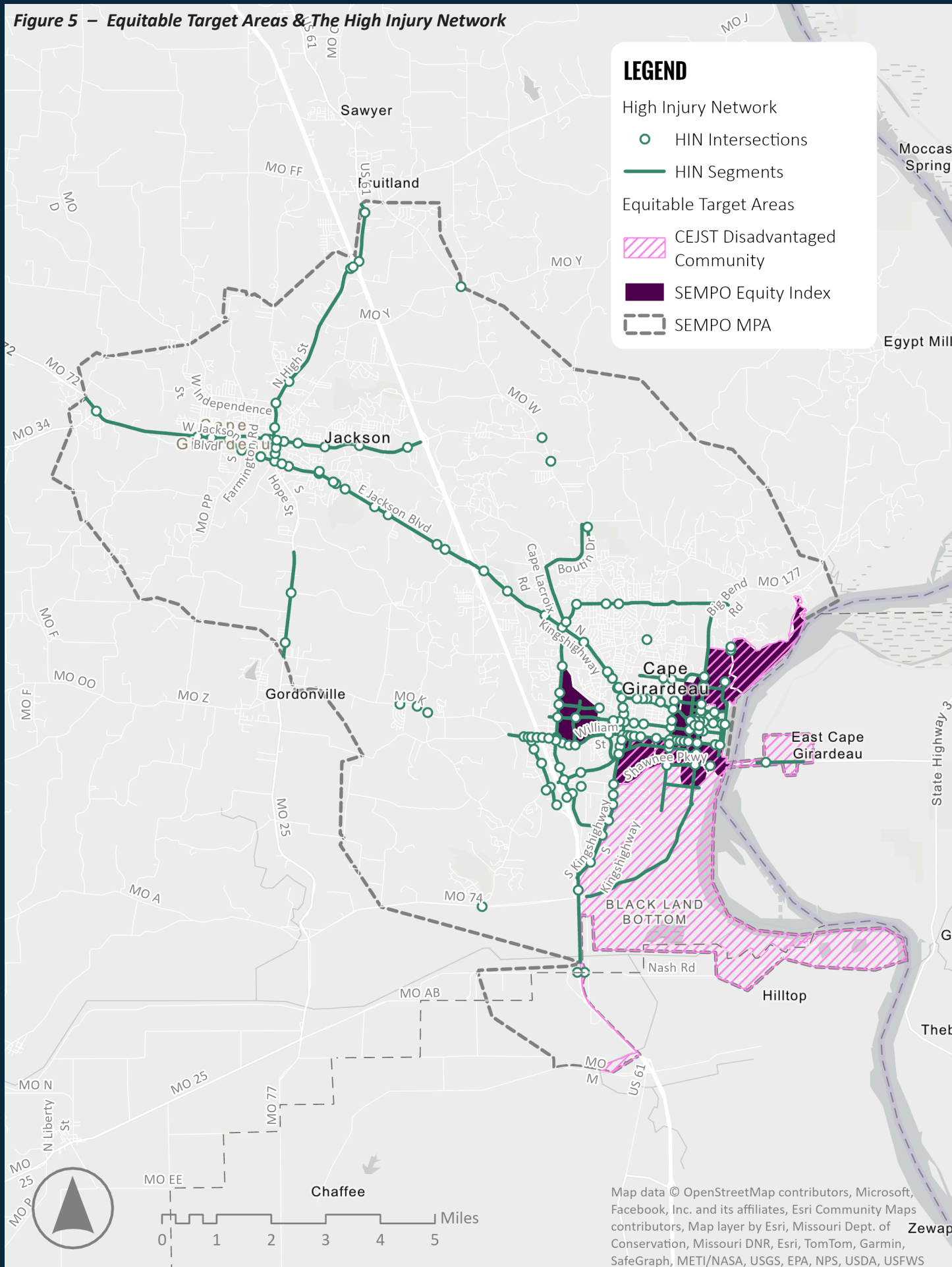


**Table 1 – List of HIN Interventions and Prioritization Criteria**

SS4A Project Number	Roadway	Owner	Jurisdiction	Safety Index	Equitable Target Area (yes/no)
1	Route K (William Street) from Siemers Drive to US-61	MoDOT	City of Cape Girardeau	S = 99.7 I = 85.5	Yes
2	MO-34 (Jackson Boulevard) from West Main Street to Hope Street	MoDOT	City of Jackson	S = 17.6 I = 23.1	No
3	Broadway Street from US-61 to NW End Boulevard	City of Cape Girardeau	City of Cape Girardeau	S = 31.6 I = 40.8	Yes
4	US-61 (Kingshighway Street) Lexington Avenue to Southern Expressway	MoDOT	City of Cape Girardeau	S = 68.1 I = 63.5	Yes
5	US-61 from Hope Street to Lexington Avenue	MoDOT	Jackson & Cape Girardeau	S = 28.3 I = 23.1	No
6	West Main Street from MO-34 to Marilyn Street	City of Jackson	City of Jackson	S = 2.9 I = 7.8	No
7	New Madrid Street from Clark Street to Sprigg Street	City of Cape Girardeau	City of Cape Girardeau	S = 12.7 I = 65.6	Yes
8	North Mt. Auburn Road from Route K to US-64	City of Cape Girardeau	City of Cape Girardeau	S = 11.9 I = 85.5	Yes
9	MO-25 from Jackson Boulevard to Highway K	MoDOT	Cape Girardeau County	S = 8.7 I = 58.2	No

S = Segment  
 I = Intersection

**Figure 5 – Equitable Target Areas & The High Injury Network**



# SYSTEMIC INTERVENTIONS

To mitigate the effects of high-risk features along roadways throughout the SEMPO region, a systemic application of safety countermeasures is recommended. The systemic risk analysis is a complimentary piece of SEMPO’s overall safety strategy. A systemic safety analysis is a data-driven, multi-step process that includes identifying and evaluating risk factors, identifying locations with the greatest risk, and selecting appropriate countermeasures to mitigate risk and improve safety outcomes.

## RISK FACTORS

Risk factors are ratios between the share of fatal and serious injury crashes and the percentage of roadway with a given roadway characteristic. Risk factors greater than one have a higher-than-average risk and are considered a high-risk roadway feature.

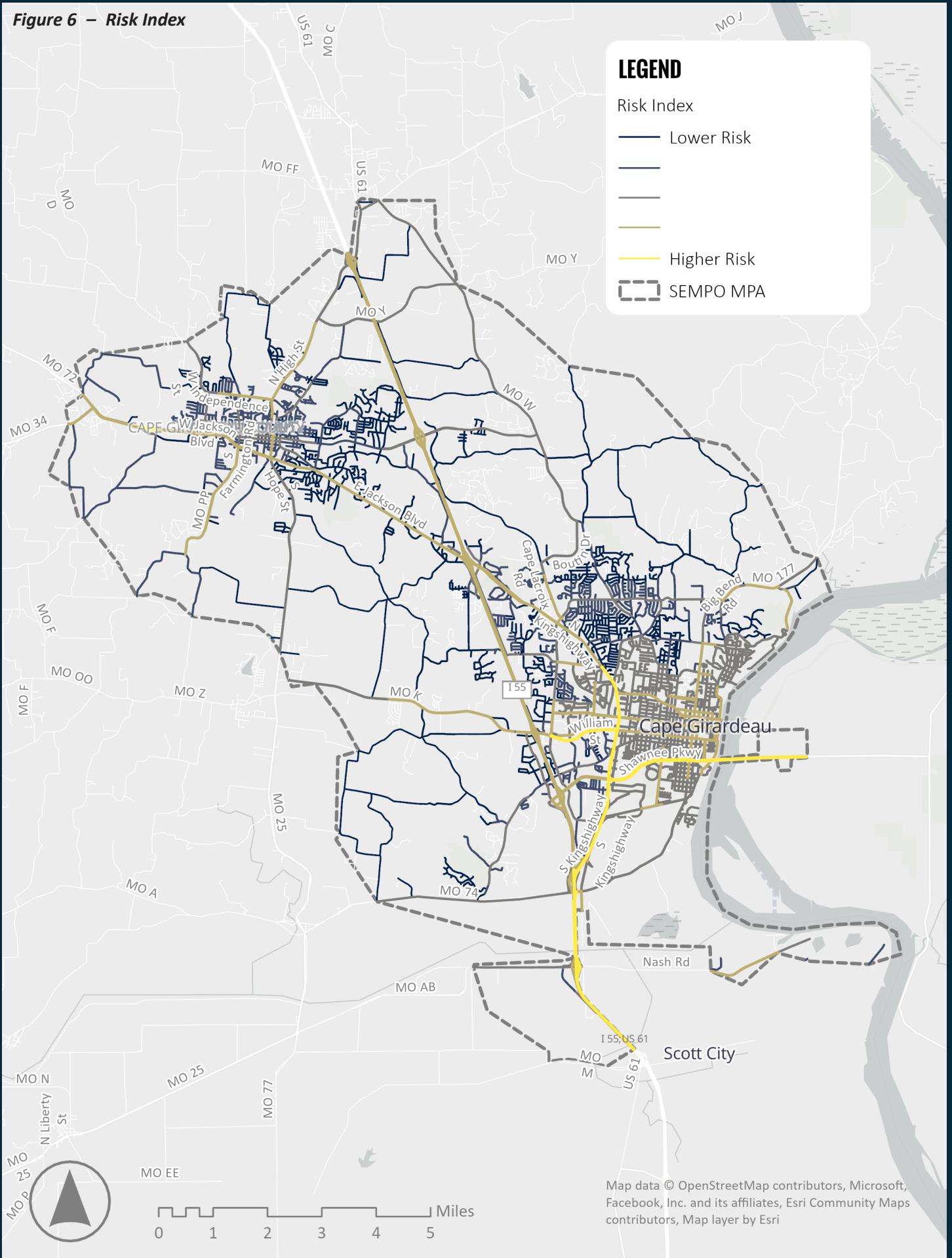
## RISK INDEX

Risk factors were aggregated to create a risk index which illustrates roadways with high-risk roadway features. A higher risk index means more high-risk features and/or more significant high-risk features.

**Table 2 – High-Risk Features & Risk Factors**

Roadway Characteristic	High-Risk Feature	Risk Factor
Equity	Within Disadvantaged Community	1.7
Area Type	Urban	1.1
Multimodal Activity	Within ¼ mile of multimodal facility	1.1
Functional Class	Freeway	2.6
	Interstate	3.0
	Principal Arterial	3.3
	Minor Arterial	2.4
	Major Collector	1.3
State System	On State System	2.1
Roadway Type	Freeway	3.5
	Expressway	3.1
	Multi-Lane	7.8
	3-Lane Section	5.6
	5-Lane Section	3.0
	Super 2-Lane	2.2
	Ramp	1.2

**Figure 6 – Risk Index**





# BACKGROUND & CONTEXT

# REGIONAL COMMITMENT

SEMPO's leadership has made safety a central priority, reinforcing its commitment to reducing traffic deaths and serious injuries. The SEMPO Board of Directors, in collaboration with regional elected officials, has set ambitious safety goals in alignment with the SS4A vision of zero roadway fatalities. These goals focus on building a safer transportation system for all users, particularly the most vulnerable road users: pedestrians, cyclists, and transit riders.

SEMPO's leadership recognizes that achieving these goals requires sustained commitment across agencies and jurisdictions. Leadership has identified several measurable safety objectives, including reducing fatalities and serious injuries by a specific percentage over the next five years, increasing safe and equitable access to transportation, and prioritizing safety improvements in areas with high crash rates and disadvantaged populations. These objectives align with the federal government's National Roadway Safety Strategy, ensuring SEMPO's local efforts contribute to the broader vision of a safer transportation network nationwide.



# SAFE STREETS & ROADS FOR ALL

Transportation safety has emerged as a national priority in recent years, with increasing attention paid to reducing fatalities and injuries on roadways. The U.S. Department of Transportation (USDOT) has identified the need for comprehensive safety strategies that address the rising number of traffic-related deaths. The National Roadway Safety Strategy (NRSS), released by the USDOT in 2022, emphasizes the adoption of a “Safe System Approach” that promotes shared responsibility among all road users, policymakers, engineers, and planners.

SEMPO’s SS4A Comprehensive Safety Action Plan reflects the core principles of the NRSS while addressing the specific safety challenges of the Southeast Missouri region. The Plan focuses on improving safety for all road users, with a particular emphasis on vulnerable populations such as pedestrians, bicyclists, and transit riders. The approach aligns with national, state, and local safety goals to create a transportation network that is safe, equitable, and accessible.

The SS4A initiative is a national program aimed at supporting local governments and metropolitan planning organizations (MPOs) in developing comprehensive safety action plans. The program, part of the Bipartisan Infrastructure Law (BIL), allocates funding to local agencies to reduce traffic-related fatalities and serious injuries. Under this initiative, USDOT encourages regional organizations like SEMPO to adopt evidence-based safety strategies and implement them through targeted investments in infrastructure and policy changes.

SEMPO’s commitment to safer streets is grounded in the understanding that traffic-related deaths and injuries are preventable. By adopting a proactive, data-driven approach, SEMPO aims to systematically address safety risks and prioritize interventions in areas with high safety concerns. The Plan places particular emphasis on equity, recognizing that disadvantaged communities often bear a disproportionate burden of traffic violence. SEMPO’s SS4A Comprehensive Safety Action Plan ensures that these communities are prioritized for safety improvements in line with federal goals for transportation equity.



# PLAN ELEMENTS

The SEMPO SS4A Comprehensive Safety Action Plan is structured around key elements designed to address both the systemic and localized nature of traffic safety. These elements include:

## DATA-DRIVEN SAFETY ANALYSIS

The Plan incorporates data from local crash reports, traffic studies, and demographic analyses to identify high-risk locations and prioritize interventions. This data-driven approach ensures that resources are allocated efficiently to areas where they will have the greatest impact.

## COMMUNITY AND STAKEHOLDER ENGAGEMENT

Stakeholder input is critical to the development and implementation of the Comprehensive Safety Action Plan. The Plan includes extensive outreach to local governments, transportation agencies, advocacy groups, and the general public. This engagement ensures that the Plan reflects the needs and priorities of all community members, particularly those in historically underserved areas.

## EQUITY-FOCUSED PLANNING

Equity is a core principle of the SS4A initiative. SEMPO's Plan emphasizes the importance of addressing safety disparities in disadvantaged communities, where safety concerns are often higher, and transportation options are more limited. The Plan integrates an equity analysis that identifies communities most in need of safety improvements and prioritizes projects in these areas.

## PROVEN SAFETY STRATEGIES

The Plan incorporates a toolkit of proven safety interventions recommended by the Federal Highway Administration (FHWA). These include measures such as protected bike lanes, enhanced crosswalks, traffic calming devices, and better lighting at intersections. These strategies have been shown to reduce crashes and improve safety outcomes in various settings.

## MONITORING AND EVALUATION

To ensure the Plan's effectiveness, SEMPO has committed to ongoing monitoring and evaluation of implemented projects. This includes collecting data on crash reductions, public feedback, and other performance metrics to assess progress toward the stated safety goals.

Through these plan elements, SEMPO's Comprehensive Safety Action Plan provides a framework for achieving safer streets and roads for all users. This proactive approach to safety planning ensures that SEMPO is prepared to address current and future transportation challenges while aligning with federal and state safety initiatives.

By focusing on leadership, equity, and proven safety strategies, SEMPO's SS4A Comprehensive Safety Action Plan lays the foundation for a transportation network that is not only safer but more inclusive and resilient for the future.

# SAFE SYSTEM APPROACH

SEMPO's SS4A CSAP builds upon a series of foundational elements designed to create a safer, more inclusive transportation network. The Plan is structured around the principles of the "Safe System Approach" advocated by the USDOT and FHWA. This approach shifts the focus from individual road user behavior to system-wide changes that enhance safety for all.

The Plan also addresses the need for ongoing collaboration between local governments, transportation agencies, and community stakeholders to ensure the successful implementation of these strategies.

## SAFE ROADS AND INFRASTRUCTURE

SEMPO's Plan prioritizes investments in infrastructure that reduce traffic conflicts and protect vulnerable users. This includes designing safer intersections, reducing vehicle speeds, and improving road conditions in high-crash locations.

## SAFE SPEEDS

Speed management is a critical component of the safe system framework. The Plan includes strategies such as implementing road diets, installing traffic-calming devices, and using automated speed enforcement to ensure that vehicle speeds are safe for the surrounding environment.

## SAFE VEHICLES

While local governments have limited control over vehicle design, SEMPO supports national efforts to encourage the adoption of safer vehicles, particularly those equipped with advanced driver assistance systems (ADAS). These systems can reduce crash risks by providing real-time feedback to drivers and assisting with emergency braking or lane-keeping.

## SAFE PEOPLE

It is the responsibility of everyone who uses the transportation system to keep streets safe for all. SEMPO's Plan recognizes the role that education and outreach play in supporting safe behavior for all roadway users.



**THE**  
**SAFE SYSTEM**  
**APPROACH**

Zero is our goal. A Safe System is how we get there.

# PLANS REVIEW

The SEMPO SS4A CSAP builds on and integrates several existing plans and policies, ensuring consistency with federal, state, and regional safety objectives. Key documents that informed the development of this Plan include the following:

## NATIONAL ROADWAY SAFETY STRATEGY (NRSS)

The USDOT's NRSS outlines the vision for eliminating traffic fatalities and serious injuries across the United States. The NRSS emphasizes the importance of the safe system approach and serves as a key guiding document for SEMPO's Plan.

## MISSOURI STRATEGIC HIGHWAY SAFETY PLAN (SHSP)

Missouri's SHSP provides a statewide framework for reducing traffic deaths and serious injuries. It identifies specific emphasis areas, such as speeding, impaired driving, and unprotected road users, which are also addressed in SEMPO's SS4A CSAP.

## REGIONAL TRANSPORTATION PLANS

SEMPO's Plan is consistent with other regional and local comprehensive and transportation plans that prioritize multimodal transportation options, active transportation, and road safety improvements. These plans have informed the project selection and policy recommendations in the SS4A CSAP. Local and regional plans that were reviewed include:

- City of Jackson Comprehensive Plan
- City of Cape Girardeau Comprehensive Plan
- SEMPO Metropolitan Transportation Plan (MTP)
- SEMPO Regional Bicycle and Pedestrian Plan

# EMPHASIS AREAS

The SEMPO SS4A CSAP identifies several key emphasis areas based on a comprehensive analysis of local crash data, public input received throughout the planning process, and regional transportation needs. These areas align with both the NRSS and Missouri's SHSP, ensuring that SEMPO's efforts contribute to statewide and national safety objectives. Key emphasis areas include the following:

## VULNERABLE ROAD USERS

Pedestrians, bicyclists, and motorcyclists represent a disproportionate share of traffic fatalities and serious injuries. SEMPO's Plan prioritizes safety improvements for these users, including enhanced crosswalks, protected bike lanes, and improved signage.

## SPEED MANAGEMENT

Excessive speeding is a leading cause of traffic fatalities. SEMPO's Plan includes strategies to reduce speeds in high-risk areas, such as school zones and residential neighborhoods, where vulnerable users are most at risk.

## INTERSECTION SAFETY

Intersections are common sites of serious crashes. The Plan prioritizes the redesign of dangerous intersections, with a focus on implementing roundabouts, protected left-turn lanes, and enhanced traffic signal timing.

## EQUITY

SEMPO's Plan ensures that safety improvements are distributed equitably across the region, with a particular focus on disadvantaged communities that have historically lacked investment in transportation infrastructure.



# ENGAGEMENT & COLLABORATION

# ENGAGEMENT OVERVIEW

Robust engagement with the public and relevant stakeholders is key to a successful planning process. A well-executed process provides transparency, inclusion, consensus, and credibility. An engagement process including the private sector and community groups that allowed for both community representation and feedback was implemented, and the information received in this process was analyzed and incorporated into the CSAP.



# PLANNING STRUCTURE

The Safety Oversight Committee (SOC) was established to provide oversight of the CSAP development, implementation, and monitoring after plan adoption. The SOC was composed of representation from various groups and agencies (shown in Table 3).

Responsibilities of the committee included aiding in developing the CSAP through discussions, review of materials, and providing feedback. On an ongoing basis the committee was charged with holding responsible parties accountable for the implementation of the Plan, and will continue in an advisory capacity by assisting in monitoring the Plan to achieve the Plan vision. The SOC members were challenged to be leaders and advocates for transportation safety.

The SOC met regularly during the development of the CSAP and will meet on a quarterly basis in the future to ensure plan implementation and oversight.

**Table 3 – Safety Oversight Committee Members**

Group/Agency	Name
Bicycle/Pedestrian Community	Bruce Loy
	John Dodd
Cape Girardeau County	Charlie Herbst
City of Cape Girardeau	Jake Garrard
City of Jackson	Alex Broch
Illinois Department of Transportation (IDOT)	Thomas Caldwell
Missouri Department of Transportation (MoDOT)	Chris Crocker
Southeast Metropolitan Planning Organization	Alex McElroy
Special Road District	Mark Phillips

# STAKEHOLDER OUTREACH

Four (4) group discussions with key transportation safety stakeholders were facilitated via Zoom early in the process to brief stakeholders the planning process and obtain specific input from these diverse community representatives. Minutes of these discussions can be found in the Appendix. Stakeholder groups included:

- **Bicycle/Pedestrian** – There were six (6) participants representing the bicycle, running, hiking, and walking communities as well as parks/municipalities.
- **Human Services** – There were nine (9) participants representing social service agencies, Southeast Missouri University Accessibility Services, senior agencies, county health, and city council.
- **Public Safety** – There were nine (9) participants representing local and regional safety coalitions and city police, fire, and emergency services.
- **School Districts** – There were seven (7) participants representing area public and private elementary and high schools.



# PUBLIC OUTREACH

Efforts in public outreach included the hosting of open houses and an online survey. Outreach started early in the process so input could be incorporated into the Plan. The goal was to give the general public an opportunity to identify general and specific transportation safety concerns, to use the input, along with other data, in the development of the Plan, and to inform the public about the Plan and its purpose. More information related to public outreach efforts can be found in the Appendix.

## OPEN HOUSES

SEMPO hosted three (3) community open house events during the planning process. Two (2) of the events were held early in the process to allow community members the opportunity to provide input. The first was held on January 24, 2024, at the Jackson Civic Center with 9 participants and 5 consultants in attendance. The second was held on January 25, 2024, at the Shawnee Community Center in Cape Girardeau with 9 participants and 5 consultants in attendance. Preliminary mapped crash data and charts were displayed, and input pertaining issues and challenges by mode and geography, ideas for improving safety, and problematic locations/policies was collected.

The third open house was held October 23, 2024, at the Osage Community Center in Cape Girardeau to present the draft Plan to the public and solicit additional feedback concerning the Plan goals and performance measures.

## PUBLIC SURVEY

An online survey was made available to the public throughout January and February of 2024. This survey was widely promoted on social media, through the SOC and SEMPO partner agency networks, available on the SEMPO website and in their newsletter, shared with stakeholder participants, and promoted in local news outlets. Survey responses provided valuable and relevant information. A summary of survey responses can be found in the Appendix.

## INTERACTIVE MAPPING TOOL

An interactive mapping tool was made available that allowed the public to identify specific problematic locations and other safety problems as well as opportunities. This tool was shared as a link in the survey, hosted on SEMPO's website, and was made available to open house participants. Results from the mapping tool were incorporated into the Plan development.

### SEMPO Comprehensive Safety Action Plan

Share your thoughts!

Local leaders are studying existing roadway safety needs throughout the SEMPO area. Your input is valuable in developing strategies to improve safety.

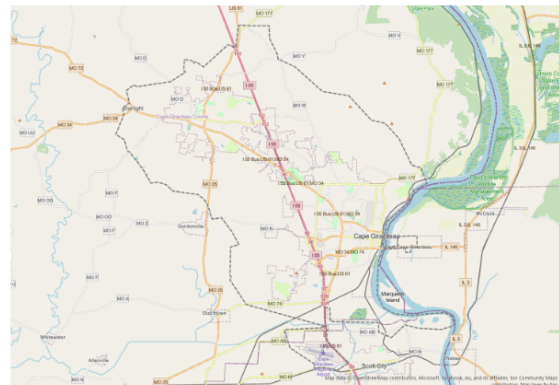
With your help, we can identify behaviors and attitudes that impact roadway safety, identify barriers to traveling throughout the community, and develop community supported improvements to increase roadway safety for all users. The survey should take less than 10 minutes to complete.

In addition to the survey, click the following link to access the SEMPO Comprehensive Safety Action Plan Public Input Mapping Tool to identify problem and opportunity areas in your community!

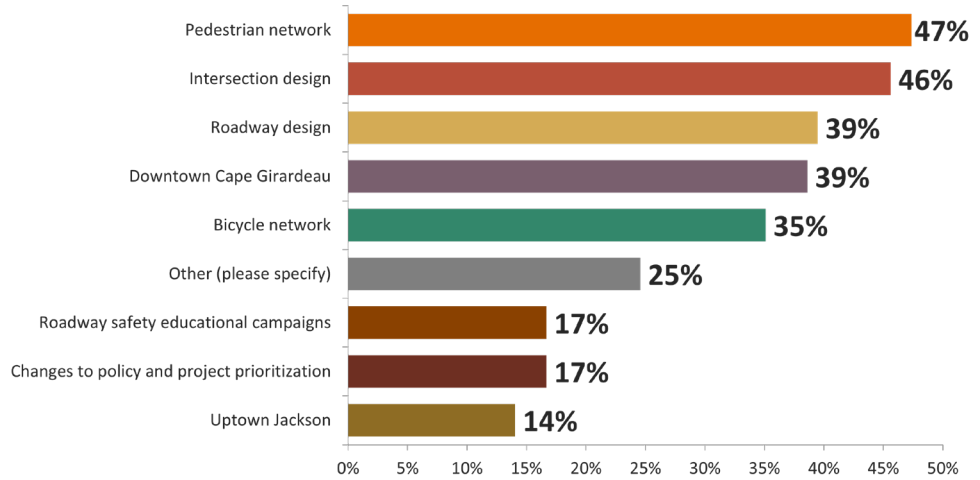
[SEMPO Comprehensive Safety Action Plan Public Input Mapping Tool](#)

Thank you for participating!

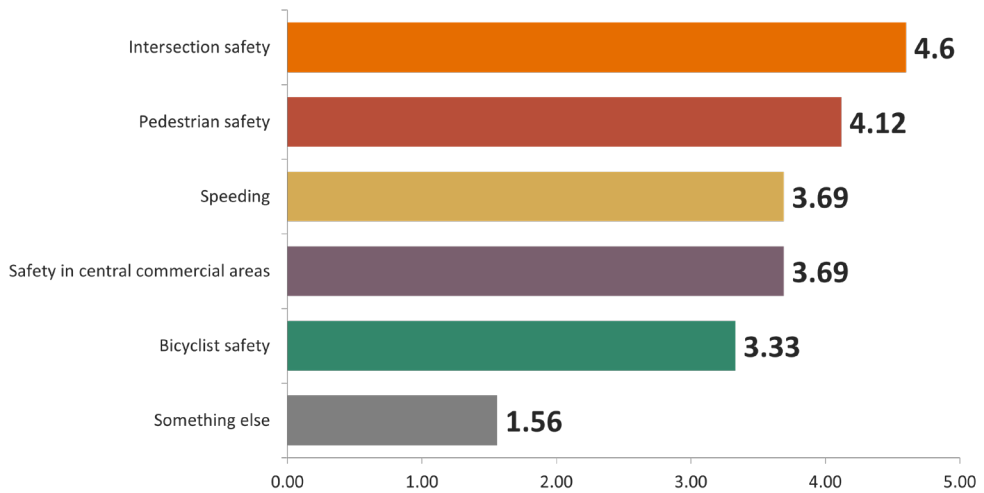
SEMPO Study Area



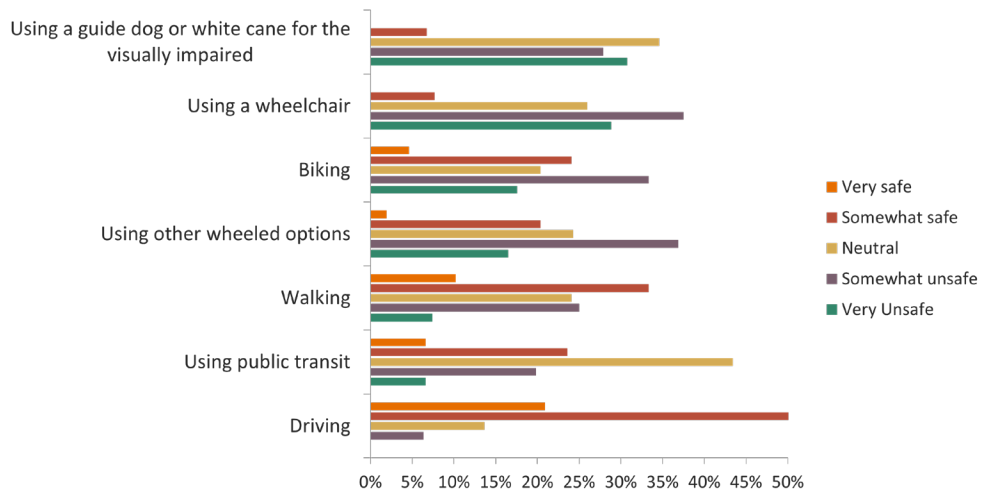
**Figure 7 – What topics would you like to see addressed in the SEMPO Comprehensive Safety Action Plan? (Select all that apply)**



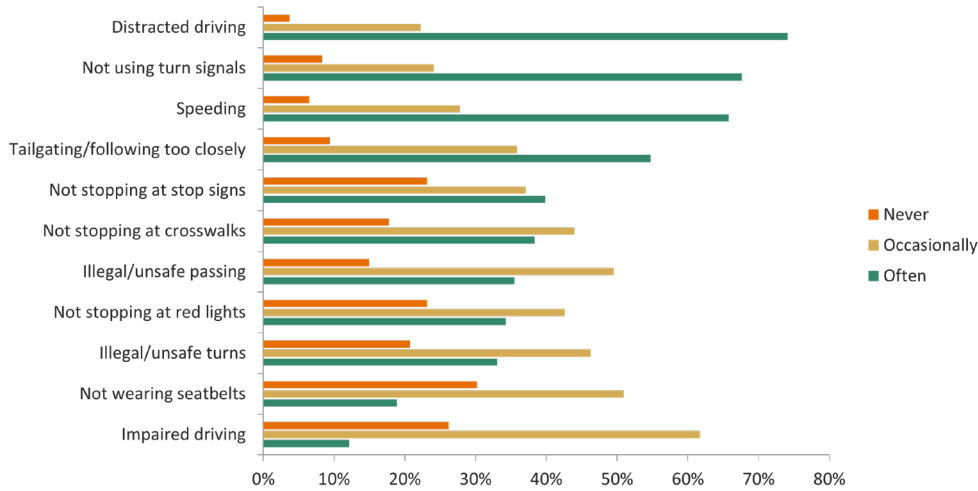
**Figure 8 – Please rank the following safety issues in order of what's most important to you. (1 is lowest, 5 is highest)**



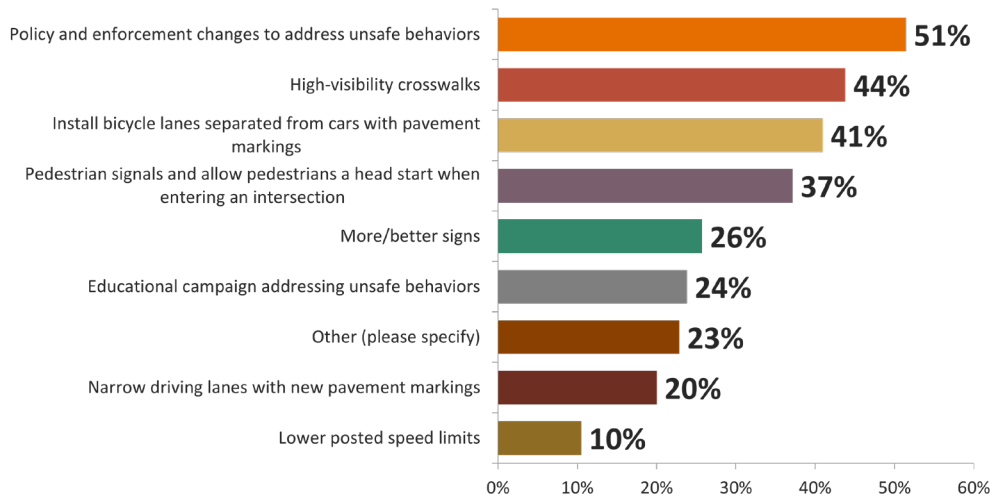
**Figure 9 – From the perspective of traffic and bicycle/pedestrian safety, how safe would you feel using the following modes?**



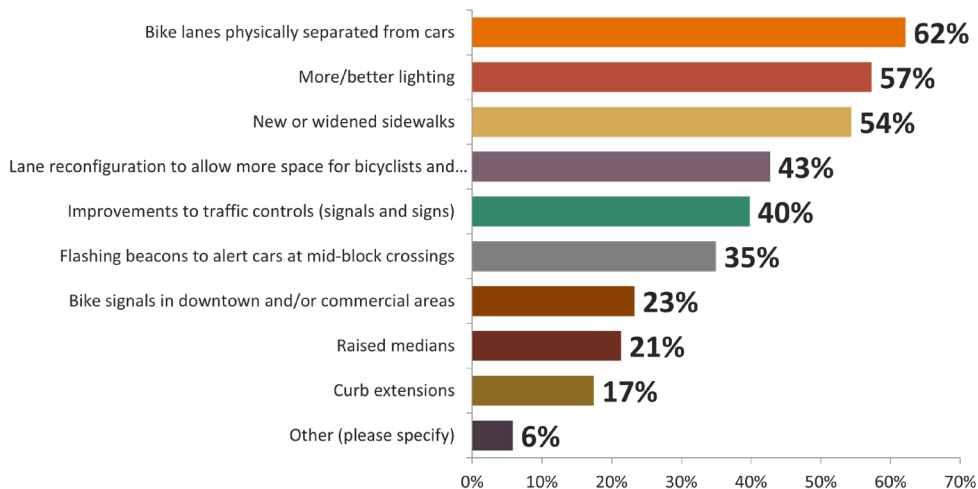
**Figure 10 – How frequently do you observe the following (behaviors)?**



**Figure 11 – With limited funding from taxpayers, what low-cost transportation safety solutions are most important to you?**



**Figure 12 – Which of the following safety improvements targeting bicyclists and pedestrians would you support?**





# WHAT WE HEARD

“Bike lanes are needed throughout the area. I would be more likely to ride my bicycle around town and to and from work but it is unsafe.”

“More bike paths: connecting Jackson and Cape (Girardeau).”

“Making Cape (Girardeau) more walkable and more bike friendly, and maybe more security along the trail and other walkable areas. It’d be nice to have more options than having to drive everywhere in Cape (Girardeau).”

## COMPLETE STREETS



“Our transportation isn’t built for people its built for vehicles and that hurts everyone.”

“Sidewalk repairs are needed along with curb cuts for individuals with disabilities. Crosswalks with lighted signs and sound.”

“People in this town do NOT observe crosswalks! This is particularly dangerous for the visually impaired or those with mobility devises such as wheelchairs, strollers, etc.”

## ENFORCEMENT

“...Certain important traffic laws are under-enforced, such as those regarding distracted driving (mainly involving cell phones) and signaling when turning.”



“Failure to use turn signals and distracted driving (especially while on cell phones) are issues in this area that seem to be ignored by law enforcement.”

## MAINTENANCE



“I would like to see fewer potholes and better maintenance of the streets.”

“Road lane markings need to be brighter and more reflective. They disappear when it’s dark and in poor weather, when they are needed most.”



# ANALYSIS

# NATIONAL TRENDS

Traffic crashes are a leading cause of preventable death in the United States. According to the National Highway Traffic Administration (NHTSA), 2021 saw nearly 43,000 traffic deaths across the nation, a 16-year high and a 10.5% increase from the previous year. Almost 43,000 people were again killed in traffic crashes in 2022. Vulnerable road users, pedestrians and cyclists, have seen a disproportionate rise in fatalities. Since 2020, notable trends include:

- **Fatalities on urban roads up 16%**
- **Pedestrian fatalities up 13%**
- **Bicycle fatalities up 5%**
- **Speeding related fatalities up 5%**

The rise in fatal and serious injury crashes across the nation have not only prompted federal initiatives, such as the SS4A program, but also highlighted important themes related to roadway safety.

## VULNERABLE ROAD USERS

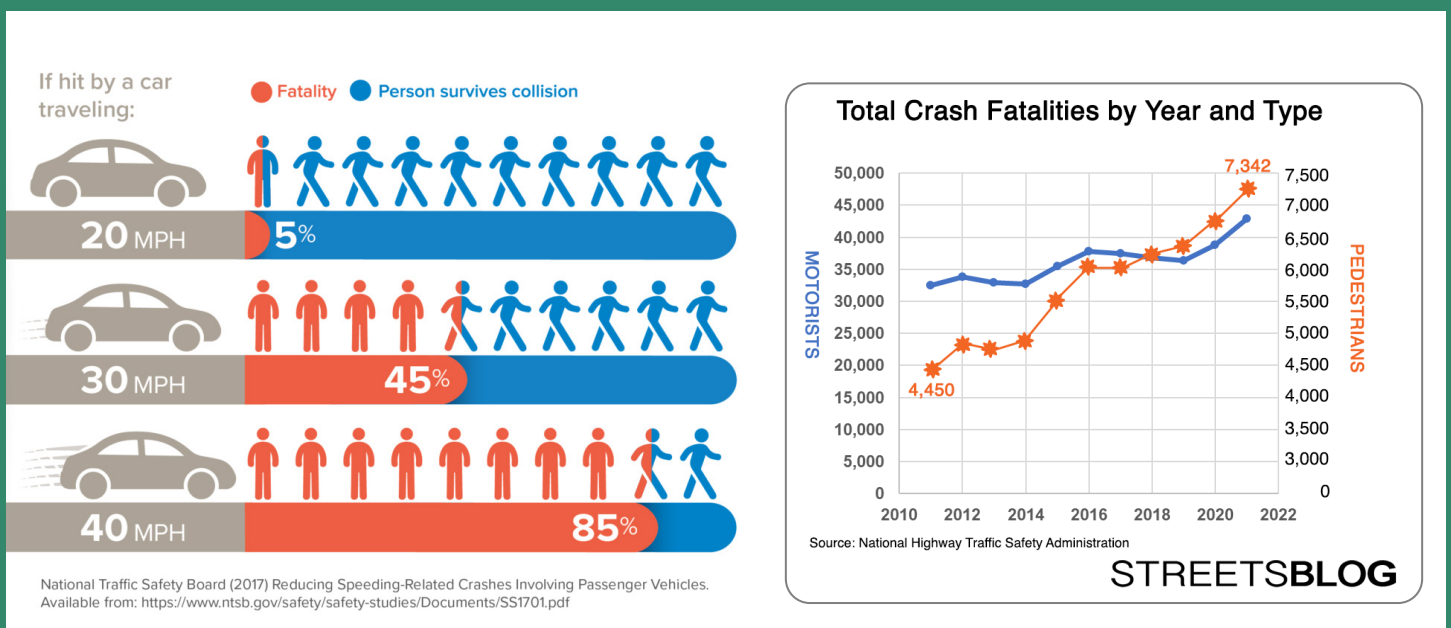
Pedestrians, cyclists, and motorcyclists represent a disproportionate share of traffic fatalities and serious injuries. Communities across the country are targeting and prioritizing vulnerable road users to improve roadway safety outcomes.

## SPEEDING

Speed remains a major contributor to fatal crashes. National efforts focus on implementing speed management strategies and road designs to reduce speeding.

## EQUITY

Disadvantaged communities experience higher rates of traffic-related injuries and deaths, prompting federal initiatives such as Justice40 to address these disparities by directing funding to underserved areas.



# CRASH ANALYSIS

The SEMPO CSAP involves a detailed safety analysis, examining crash data across the SEMPO metropolitan planning area (MPA), including Cape Girardeau County, Scott County (Missouri), and Alexander County (Illinois). The analysis uses crash data from 2017 to 2022 provided by MoDOT and IDOT.

Between 2017 and 2022, there were an average of over 2,000 crashes per year throughout the SEMPO MPA. Table 4 shows crashes per year, by severity. By analyzing local crash trends, SEMPO can identify patterns related to crash severity, road user, crash type, and geography. This information allowed SEMPO to effectively target high risk roadway features and offer solutions to achieve the largest reduction in fatal and serious injury crashes.

In the SEMPO region, local trends in traffic fatalities and serious injuries show a complex pattern. While overall crashes decreased by **16%** between 2017 and 2022, **the number of killed or serious injury (KSI) crashes rose by 26% during the same period.**

Local crash data highlights specific trends that guide SEMPO’s approach to roadway safety planning.

## CRASH SEVERITY

From 2017 to 2022, there were approximately 40 KSI crashes per year, with a total of 245 KSI crashes. These represent only 1.8% of all crashes, but they have been increasing since 2019.

## CRASH LOCATION

A notable majority of crashes occur in urban areas (90%). Although rural crashes represent only 5% of all crashes, they are twice as likely to result in a fatal or serious injury.

## TYPES OF CRASHES

Out-of-control crashes (accounting for 31% of KSI crashes), right-angle crashes, and pedestrian crashes are among the most common types of crashes, accounting for nearly 70% of KSI crashes.

## DRIVER BEHAVIOR

Non-use of safety devices, such as seat belts or helmets, is strongly associated with the severity of injuries. KSI crashes tend to involve a higher proportion of unbelted drivers and passengers.

Killed or Serious Injury (KSI)

Crashes that result in death or broken bones, crush injuries, burns, etc.

Minor Injury

Crashes that result in any injury that is not fatal or serious.

Property Damage Only

Crashes that do not result in any injury.

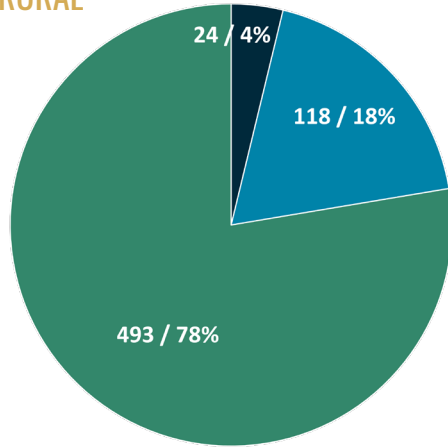
**Table 4 – Crashes per Year, by Severity (2017-2022)**

Crash Severity	2017	2018	2019	2020	2021	2022	Total
KSI	42	40	31	36	43	53	245
Minor Injury	411	348	405	354	375	329	2,222
Property Damage Only	1,995	1,889	2,015	1,618	1,882	1,684	11,083
<b>Total</b>	<b>2,448</b>	<b>2,277</b>	<b>2,451</b>	<b>2,008</b>	<b>2,300</b>	<b>2,066</b>	<b>13,550</b>

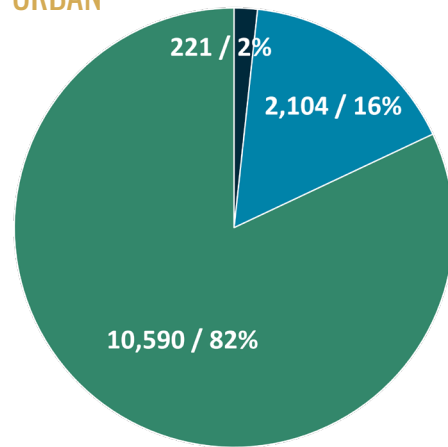
**Figure 14 – Crashes by Severity (Rural & Urban)**

Although most crashes happen in urban areas, rural crashes are more likely to result in a fatal or serious injury. A rural crash is twice (2x) as likely to be fatal or serious injury compared to an urban crash. *How can we make rural roads more forgiving?*

**RURAL**



**URBAN**

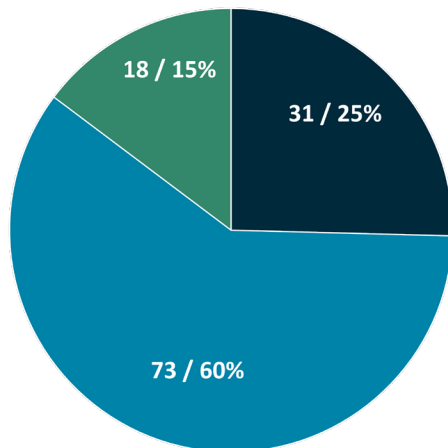


KSI
  Minor Injury
  Property Damage Only

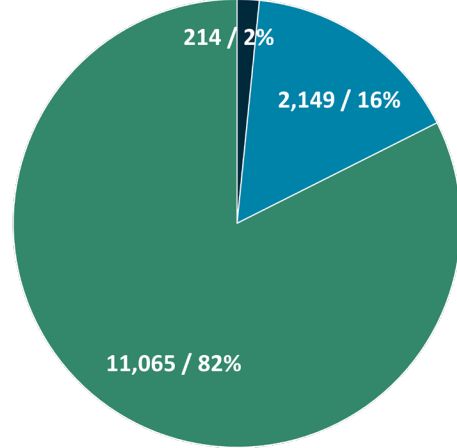
**Figure 15 – Crashes by Severity (Bike/Ped & All Crashes)**

Most crashes involve only vehicles. However, a bicyclist or pedestrian involved in a crash is over ten times (10x) as likely to be killed or seriously injured compared to a person in a vehicle only crash. *How can we ensure the safety of all road users?*

**NON-MOTORIST CRASHES**

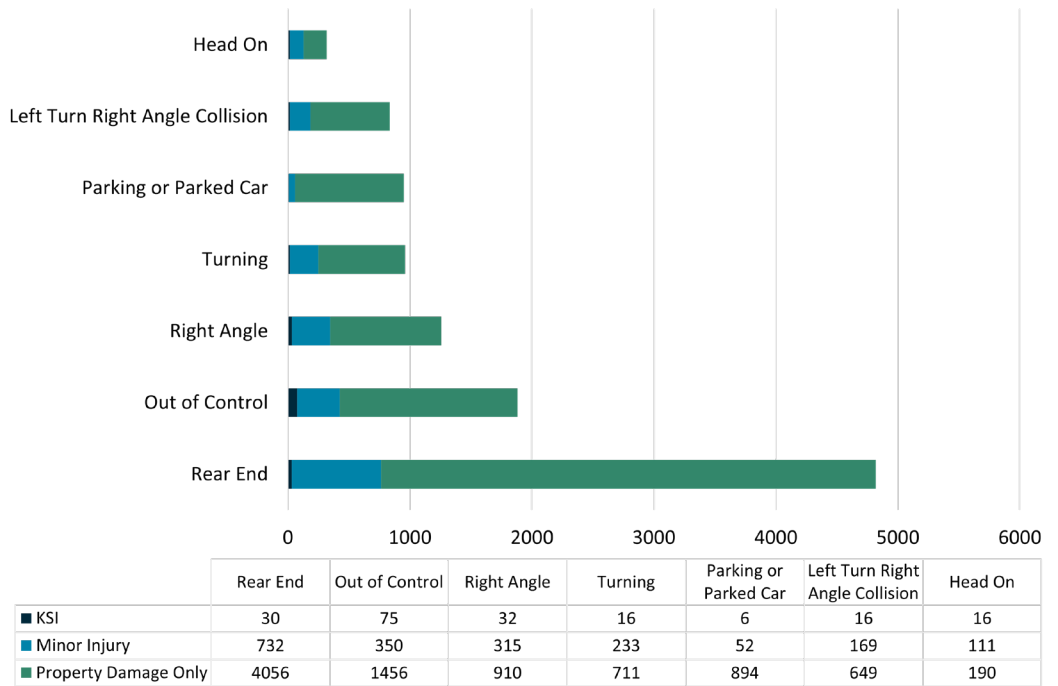


**ALL OTHER CRASHES**

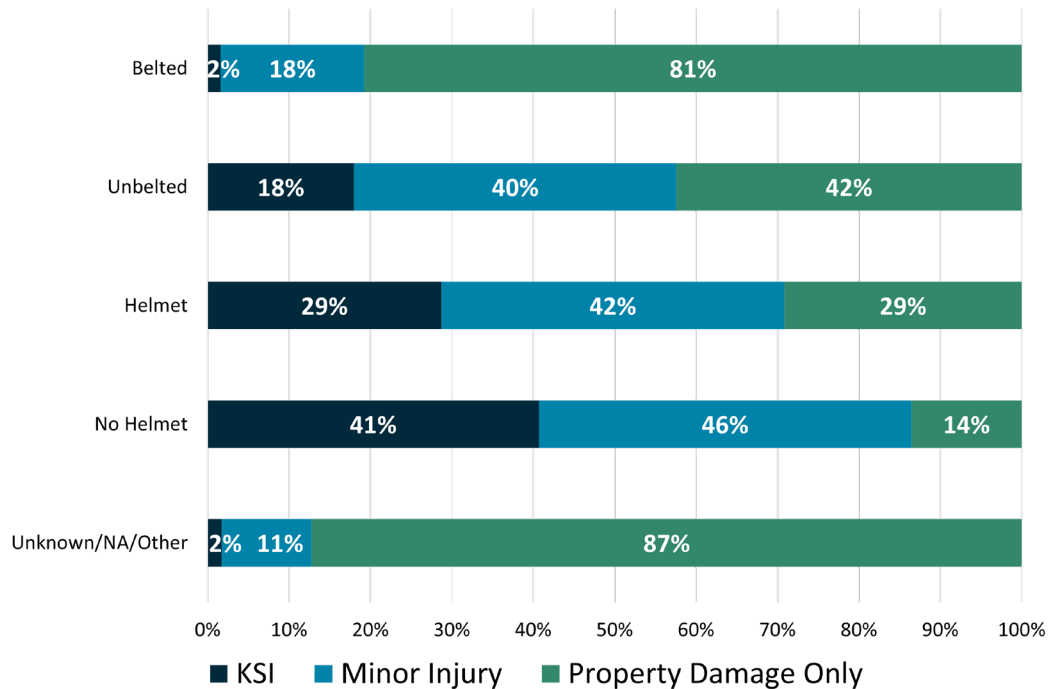


The most common crash type is a rear end crash. However, out of control crashes are more likely to be fatal or serious injury. Analyzing the different crash types along corridors or at intersections can help us determine the most effective safety improvements.

**Figure 16 – Top Crash Types by Severity**

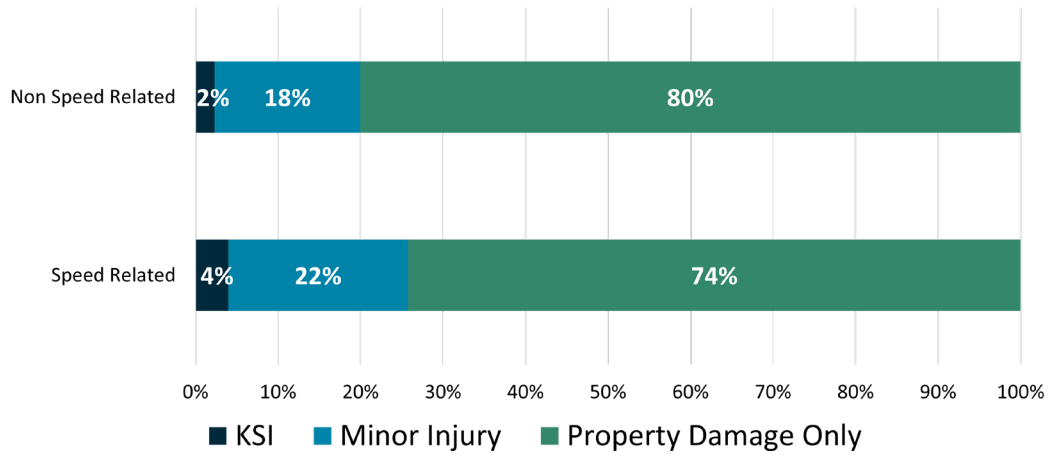


**Figure 17 – Crashes by Severity (Safety Device)**



The presence of a safety device can save lives in a crash. People are much more likely to be seriously injured without a seatbelt or without a helmet. *How can we ensure everyone uses a safety device?*

**Figure 18 – Crashes by Severity (Speed Related)**



Speed plays an important role in crash severity. The faster a vehicle is traveling, the most likely a crash will be serious or fatal. Speeding related crashes are twice (2x) as likely to be fatal or serious injury compared to crashes where speed was not a factor. *How can we get drivers to slow down?*



# HIGH INJURY NETWORK

The identification of the High Injury Network (HIN) is a crucial element in SEMPO's safety strategy. The HIN represents the roadways and intersections with the highest concentrations of fatal and serious injury crashes. The HIN will help decision-makers prioritize safety projects so that improvements have the largest potential reduction in fatal and serious injury crashes.

The SEMPO High Injury Network identifies the majority of all fatal and serious injury crashes and more than a third of all fatal injury crashes on just 8% of the total roadway network.

Notable streets on the HIN include:

- US-61
- E Main Street (Jackson)
- Broadway Street
- N Mount Auburn Road
- William Street
- Independence Street
- N Spring Street

## SAFETY INDEX

The HIN is based on a safety index score that was calculated for each roadway segment and intersection throughout the region. The safety index score evaluated segments and intersections by the observed crash history (2017-2022). Two metrics are included in the safety index score:

- Crash Frequency: the number of crashes per year (and per mile for roadway segments) that occurred along segments or at intersections.
- Weighted Crash Frequency: Crash Frequency weighted by the equivalent property damage only (EPDO) crash cost.

Higher safety index scores mean more fatal and serious injury crashes at a particular location. Roadway segments and intersections with the highest safety index scores were made into the High Injury Network. More information about the HIN can be found in the Appendix.

**8%** of streets

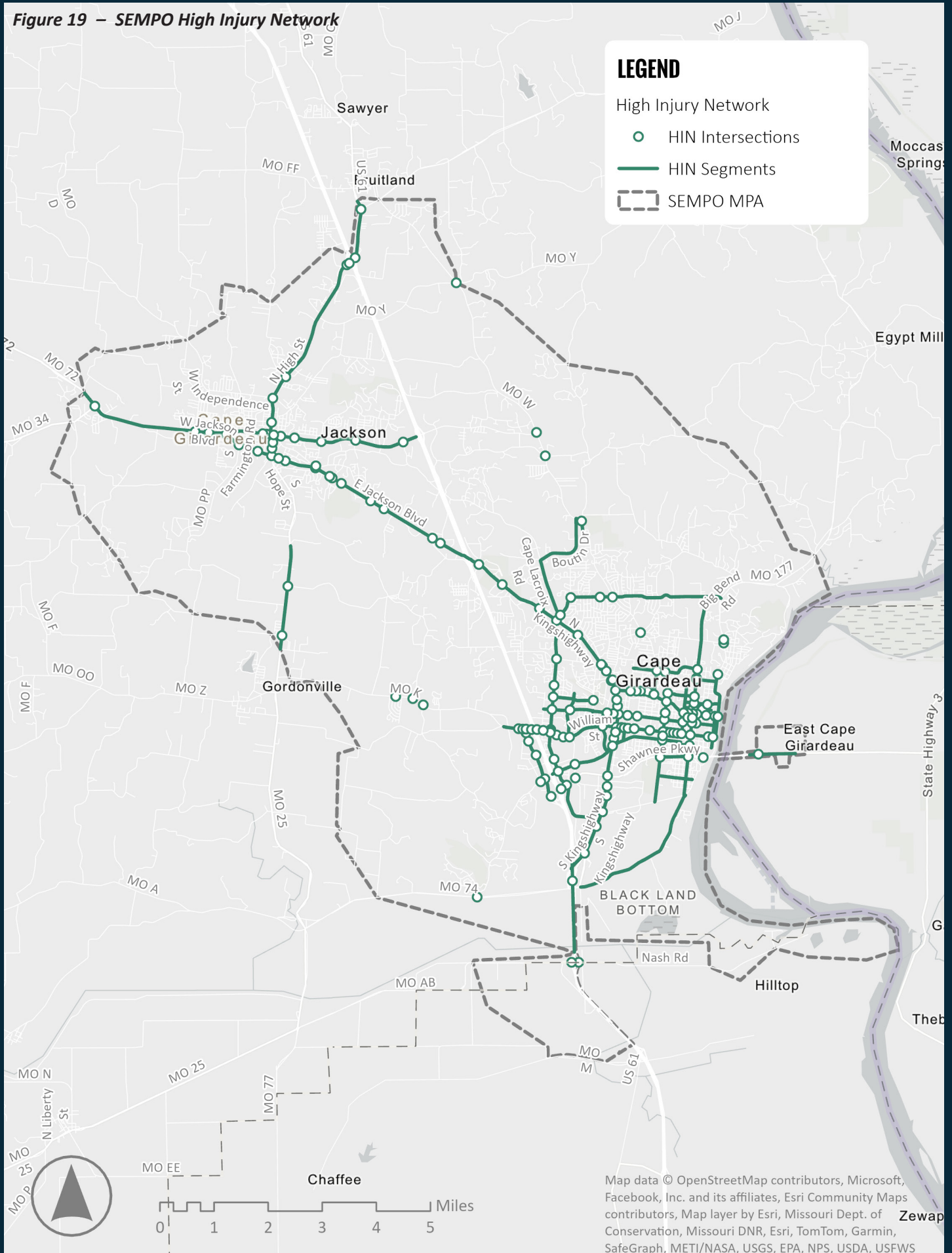
**70%** of all crashes

**60%** of KSI crashes

**40%** of fatal injury crashes

**65%** of bicycle/pedestrian crashes

**Figure 19 – SEMPO High Injury Network**



Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri, Missouri Dept. of Conservation, Missouri DNR, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

# EQUITY ANALYSIS

A safe and equitable transportation system expands access to opportunities for all residents and helps to reduce the disparate economic, environmental, and health burdens experienced by disadvantaged and underserved communities. Historically disadvantaged populations such as people of color, people living in poverty, and people with limited English proficiency not only rely on alternative modes of transportation such as walking, biking, and transit, but may live in areas with limited or poor transportation infrastructure that contributes to unsafe travel conditions. The SEMPO region is committed to an equitable distribution of safety improvements so that all residents of all abilities can feel safe when traveling.

## EQUITY INDEX

Based on demographic indicators to identify disadvantaged populations, the local equity index is a composite index of demographic indicators where higher index values indicate higher concentrations of key equity demographics. The demographic indicators used in the equity index are:

- **Race:** Percent of the total population reported as non-white.
- **Poverty:** Percent of households with income in the past 12 months below the federal poverty level.
- **Limited English Proficiency (LEP):** Percent of households reported an limited English speaking.

While the demographic indicators capture the geographic distribution and concentration of individual groups, the equity index represents the general extent to which an area is comprised of disadvantaged groups of people. More information on the equity index can be found in the Appendix.

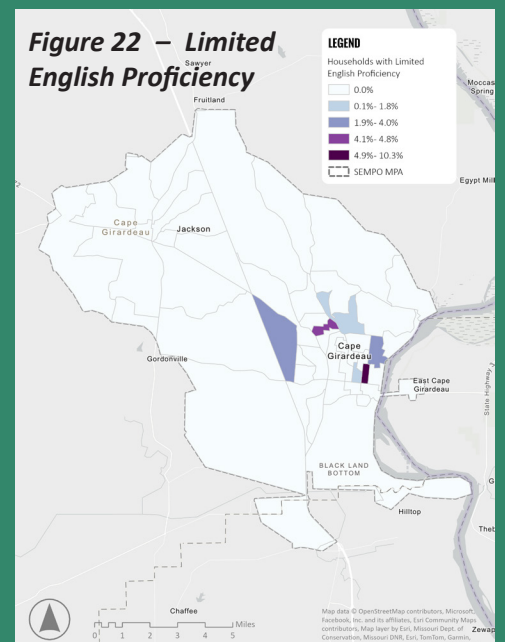
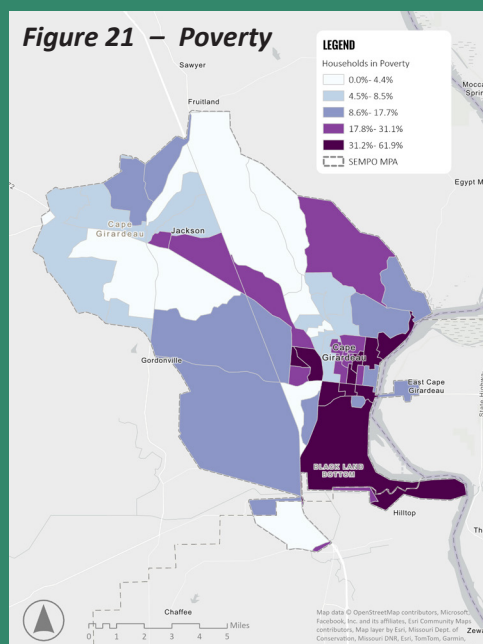
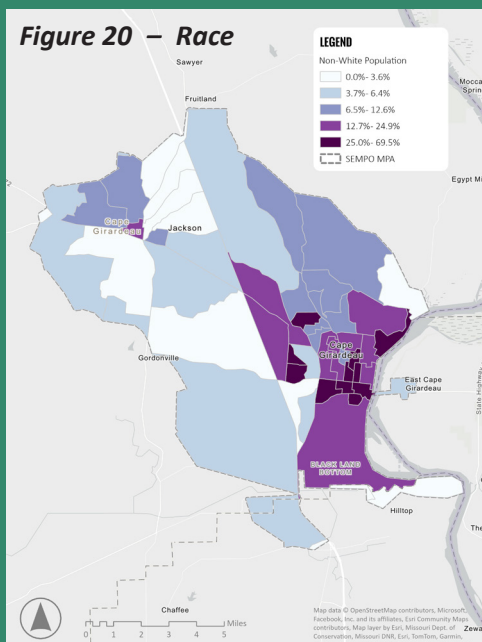
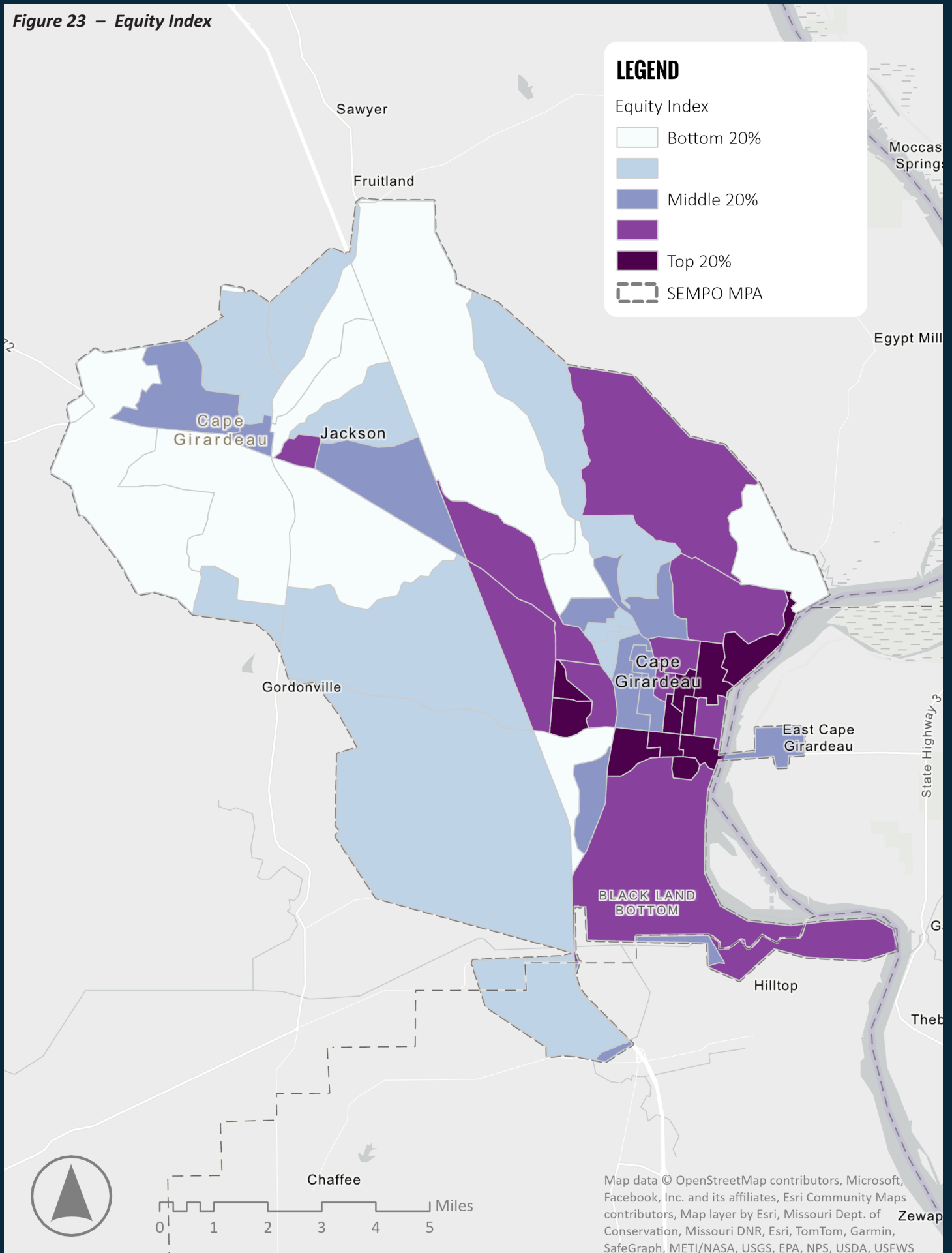


Figure 23 – Equity Index



# DISADVANTAGED COMMUNITIES

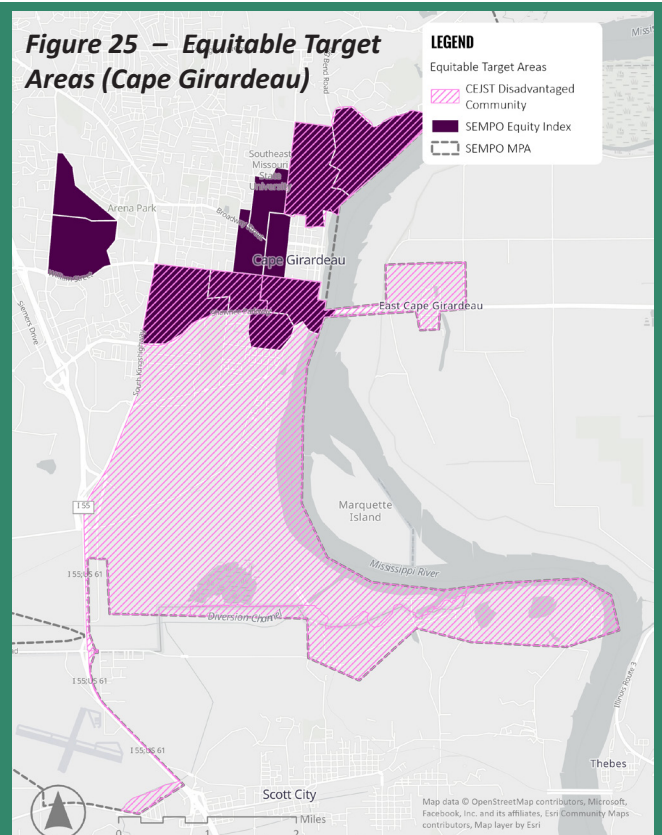
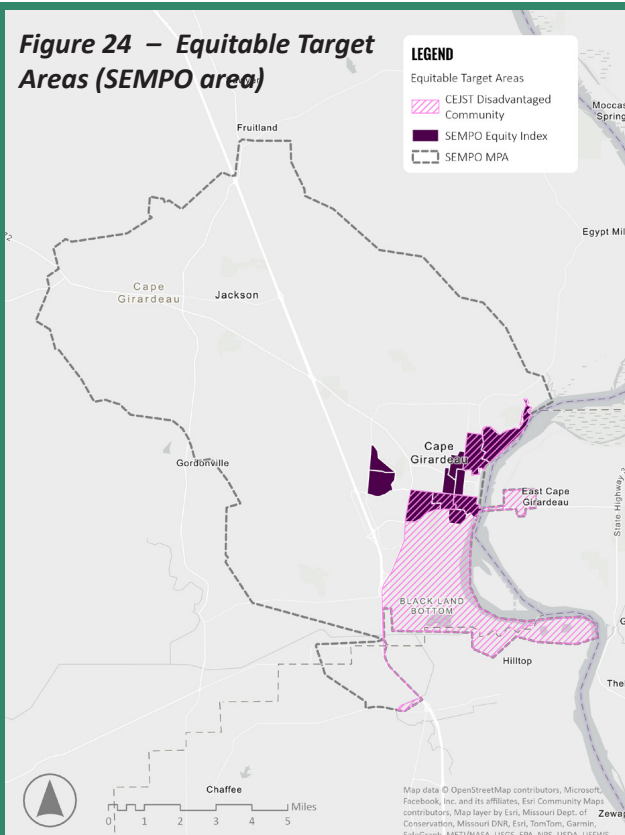
To confront and address decades of underinvestment, the Justice40 Initiative, established by the Biden-Harris Administration, made it a goal that 40% of benefits of certain Federal investments flow to disadvantaged communities. The USDOT’s SS4A program is covered by the Justice40 Initiative, and eligible safety action plans are required to consider the equity of projects and strategies.

The Climate and Economic Justice Screening Tool (CEJST) is an interactive mapping tool that is used to identify disadvantaged communities. Disadvantaged communities are those that meet or exceed the threshold for one or more environmental, climate, or other burdens. There are parts of five census tracts that are identified as disadvantaged within the SEMPO area. Investments in these disadvantaged communities will be prioritized to meet federal equity goals.

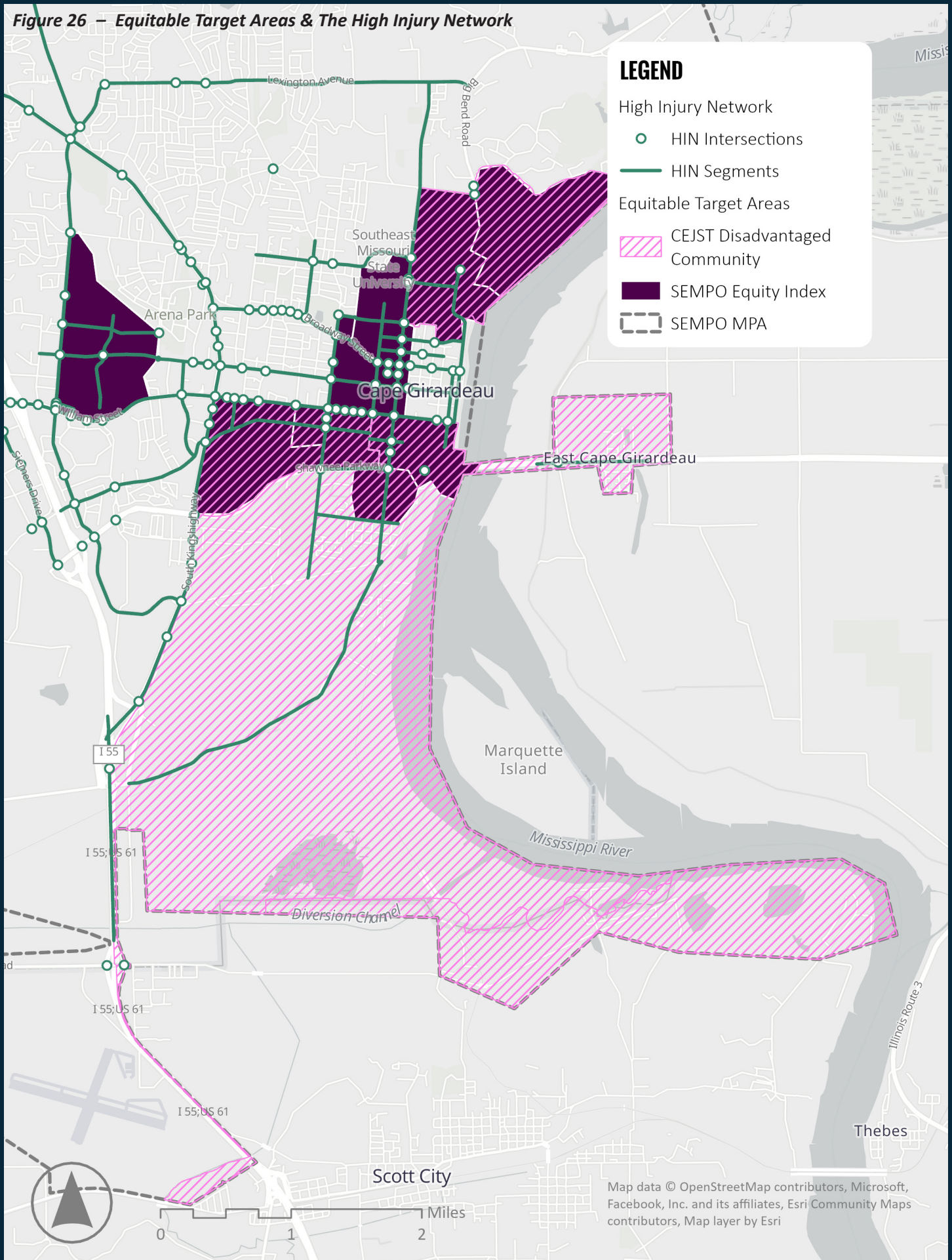
# EQUITABLE TARGET AREAS

Equitable target areas are CEJST disadvantaged communities combined with communities with the highest local equity index scores. Equitable target areas identify communities to target and prioritize safety improvements to improve equitable outcomes throughout the SEMPO region.

Figure 24 and Figure 25 show the equitable target areas. Shown in Figure 26, equitable target areas are overlaid with the high injury network illustrate priorities when incorporating both safety and equity considerations.



**Figure 26 – Equitable Target Areas & The High Injury Network**



# SYSTEMIC RISK ANALYSIS

The systemic risk analysis is a complimentary piece of SEMPO’s overall safety strategy. A systemic safety analysis is a data-driven, multi-step process that includes identifying and evaluating risk factors, identifying locations with the greatest risk, and selecting appropriate countermeasures to mitigate risk and improve safety outcomes. Different from the development of a high injury network, a systemic safety analysis identifies high-risk roadway features throughout the network to identify locations with the greatest risk.

## RISK FACTORS

The systemic risk analysis is aimed at identifying and evaluating roadway characteristics with the greatest risk of fatal and serious injuries, therefore only KSI crashes were used to determine risk factors. Six roadway characteristics were selected and included in the development of risk factors. Risk factors are ratios between the share of KSI crashes and the percentage of roadway with a given roadway characteristic. Risk factors greater than one have a higher-than-average risk and are considered a high-risk roadway feature. Overall, the analysis identified 16 high-risk roadway features, shown in Table 5 with each associated risk factor. More information on the development of risk factors and the systemic risk analysis can be found in the Appendix.

**Table 5 – High-Risk Features & Risk Factors**

Roadway Characteristic	High-Risk Feature	Risk Factor
Equity	Within Disadvantaged Community	1.7
Area Type	Urban	1.1
Multimodal Activity	Within ¼ mile of multimodal facility	1.1
Functional Class	Freeway	2.6
	Interstate	3.0
	Principal Arterial	3.3
	Minor Arterial	2.4
	Major Collector	1.3
State System	On State System	2.1
Roadway Type	Freeway	3.5
	Expressway	3.1
	Multi-Lane	7.8
	3-Lane Section	5.6
	5-Lane Section	3.0
	Super 2-Lane	2.2
	Ramp	1.2





# SAFETY TOOLKIT

# SAFETY TOOLKIT

The Safety Toolkit in SEMPO's SS4A Comprehensive Safety Action Plan provides a collection of proven safety strategies aimed at reducing traffic fatalities and serious injuries. These strategies are based on the Safe System Approach, emphasizing that while human errors are inevitable, transportation infrastructure should minimize the risk and severity of crashes. The toolkit draws from national best practices endorsed by agencies like the Federal Highway Administration (FHWA) and the National Highway Traffic Safety Administration (NHTSA).

The Safety Toolkit provides safety countermeasures intended for location-specific implementations as well as systemic applications. The Safety Toolkit includes key information for each proven safety countermeasure such as expected safety benefits, applicable locations, important design considerations, and cost estimates.

A key emphasis is on protecting vulnerable road users, including pedestrians, cyclists, and

motorcyclists, through enhanced infrastructure and traffic management strategies. Additionally, the toolkit integrates equity considerations, prioritizing safety improvements in underserved and disadvantaged communities. These equity-focused interventions aim to address disparities in crash risks and access to safe transportation options.

Crash conditions and contextual circumstances drive the suitability of each safety countermeasure for a specific situation or location. The Safety Toolkit offers decision makers the ability to select from multiple appropriate countermeasures and identify those that best align with available resources and public preferences in order to address a specific safety problem.

By offering a set of adaptable, data-driven solutions, the Safety Toolkit serves as a foundational resource for SEMPO's efforts to reduce serious injuries and fatalities, supporting planners, engineers, and public administrators in creating a safer, more equitable transportation system.





**Table 6 – List of Safety Toolkit Countermeasures**

Safety Countermeasure	Safety Benefits	Cost
Automated Enforcement	20%-54% reduction in total and fatal and injury crashes	\$
Bicycle Lanes (On Road)	30%-49% reduction in total crashes	\$\$-\$\$\$
Corridor Access Management	25%-31% reduction in fatal and injury crashes along urban/suburban arterials	\$\$\$
Crosswalk Enhancements	25%-42% reduction in pedestrian crashes	\$
Curb Extensions	Increase pedestrian visibility; reduce pedestrian crossing distance	\$\$
Curve Improvements	30%-50% reduction in total crashes	\$\$-\$\$\$\$
Dedicated Turn Lanes	28%-48% reduction in total crashes (left turn lanes) 14%-26% reduction in total crashes (right turn lanes)	\$\$\$
Dilemma Zone Detection	Effective at reducing red-light running and rear end crashes	\$
Dynamic Speed Monitoring Systems	Effective at reducing vehicle speeds, improving driver awareness, and promoting safer driving behaviors.	\$
Enhanced Delineation	Effective at alerting drivers to oncoming curves and reducing out of control crashes	\$
High Friction Surface Treatments	20% reduction in total crashes at intersections 48% reduction in injury crashes at curves	\$
Improved Right Turn Angle	50% reduction in right turn crashes at intersections	\$\$
Intersection Conflict Warning Systems	30% reduction in intersection crashes	\$\$
Leading Pedestrian Intervals	13% reduction in pedestrian crashes	\$
Medians	46%-56% reduction in pedestrian crashes	\$\$\$\$
Pedestrian Hybrid Beacon (PHB)	29% reduction in total crashes 55% reduction in pedestrian crashes	\$\$
Pedestrian Refuge Island	56% reduction in pedestrian crashes	\$

Safety Countermeasure	Safety Benefits	Cost
Permissive Protected Left Turns	50% reduction in left turn crashes at intersections	\$
Rectangular Rapid Flashing Beacon (RRFB)	47% reduction in pedestrian crashes	\$
Reduced Left-Turn Conflict Intersections	22%-63% reduction in fatal and injury crashes	\$\$\$\$
Retroreflective Backplates	15% reduction in total crashes	\$
Reverse Angle Parking	Improved sight lines for bicyclists and motorists; vehicle passengers channeled to curb	\$
Road Diets	19%-47% reduction in total crashes	\$\$\$
Road Safety Audits	Effective at identifying and mitigating roadway hazards	\$
Roadway Lighting	30%-50% reduction in total crashes at night	\$\$
Roundabouts	78%-82% reduction in fatal and injury crashes	\$\$\$\$
Rumble Strips	29%-51% reduction in out of control crashes (shoulder) 45-64% reduction in sideswipe crashes (centerline)	\$
Shared Use Paths	60% reduction in non-motorist crashes	\$\$\$
Signage	Effective at alerting drivers to oncoming hazards and reducing crashes.	\$
Systemic Application at Stop Intersections	10% reduction in fatal and injury crashes	\$
Vertical Deflections	30%-50% reduction in total crashes	\$
Walkways	65%-89% reduction in pedestrian crashes	\$\$
Yellow Change Intervals	12% reduction in injury crashes	\$

### COST ESTIMATES PER UNIT

\$\$\$\$ Less than \$100k

\$\$\$\$ \$100k - \$500k

\$\$\$\$ \$500k - \$1M

\$\$\$\$ \$1M+





# ACTION PLAN

# IMPLEMENTATION

The Action Plan for SEMPO’s SS4A initiative is designed to guide the implementation of strategies and projects aimed at reducing and eliminating fatalities and serious injuries on the region’s roadways. The Plan incorporates data-informed decision-making, equity-focused interventions, and proven safety countermeasures from national best practices, while leveraging input from local stakeholders and communities. This section outlines the selected strategies, recommended policy and process changes, and targeted actions for high-injury network (HIN) locations.

The strategies and projects selected for SEMPO’s SS4A Comprehensive Safety Action Plan are based on the findings from the technical safety analysis and the policy and process review and align with federal and state priorities. The approach is centered on the Safe System Approach, a framework that emphasizes designing roadways that account for human error, reducing crash forces to prevent fatalities and serious injuries, and promoting shared responsibility among all road users, designers, and policy makers. The comprehensive list of projects and strategies is broken down into the following categories:

- Regional Strategies
- Policy and Process Changes
- HIN Interventions
- Systemic Interventions

# REGIONAL STRATEGIES

Regional strategies are further broken down into engineering, education, and enforcement strategies. Regional strategies are efforts to improve safety for all roadway users apart from the project development process.

## ENGINEERING

### FHWA PROVEN SAFETY COUNTERMEASURES

SEMPO will prioritize safety interventions identified by the Federal Highway Administration (FHWA) as “Proven Safety Countermeasures,” which have demonstrated success in reducing crashes and fatalities.

### COMPLETE STREETS

SEMPO will develop and house a Complete Streets policy that encourages designing roads for all users, including pedestrians, cyclists, and transit riders. Priority will be given to addressing infrastructure gaps, particularly in areas with little bike/pedestrian infrastructure.

### TRAIL SAFETY ENHANCEMENTS

SEMPO will pursue projects to enhance the safety and usability of local trails, such as adding passing lanes, lighting, and cameras for user security, particularly along busy corridors. Improved crosswalks and better connectivity for sidewalks leading to transit locations will also be a focus.



## EDUCATION

### SAFE ROUTES TO SCHOOL PROGRAMS

SEMPO will support the expansion of Safe Routes to School programs, which promote safe walking and biking to school, leveraging potential funding opportunities such as Transportation Alternatives Program (TAP) grants.

### DRIVER AND PEDESTRIAN EDUCATION

Outreach campaigns will focus on educating the public about safe driving, walking, and cycling behaviors. Key initiatives include:

- Young driver education: Emphasizing the importance of yielding to pedestrians, stopping at crosswalks, and understanding cyclist rights.
- Move Over campaigns: Informing the public about the importance of moving over for emergency vehicles and using emergency lights only when necessary.
- Safe walking tips: Targeting pedestrians, especially in areas with high foot traffic, to avoid distractions such as earbuds and mobile phones.
- Bicycle route maps and apps: Developing tools for cyclists to navigate safely through the SEMPO region.

## TRANSIT EDUCATION

Enhanced outreach will inform underserved populations about transit routes, costs, and how to access transit vehicles, particularly for individuals with mobility challenges. SEMPO will work with transit agencies to improve vehicle accessibility, especially with better-equipped lifts and safety features for securing mobility devices.

## ENFORCEMENT

### AUTOMATED ENFORCEMENT

SEMPO will explore the use of red-light cameras and speed cameras at high-risk intersections and corridors. Automated enforcement has been shown to reduce speed-related crashes and improve compliance with traffic laws.

### ENHANCED LAW ENFORCEMENT

Local law enforcement agencies will be encouraged to focus on enforcing existing traffic laws, particularly those related to speeding, seat belt use, and distracted driving. Targeted enforcement campaigns will focus on areas identified in the High Injury Network (HIN).



# POLICY AND PROCESS CHANGES

SEMPO and partner agencies will adopt policy and process changes to improve safety outcomes, focusing on systemic improvements across the transportation network.

## DESIGN STANDARDS

SEMPO will review existing design standards and potentially create new ones that promote safety for all road users. This includes:

- Assessing the effectiveness of cameras versus emergency boxes for trail safety.
- Reviewing standards for lighting, sidewalk design, and transit stop accessibility, with particular focus on improving conditions for people with disabilities (e.g., addressing uneven sidewalks, lack of curb cuts, and audible pedestrian crosswalks).
- Adopting the Bicycles May Use Full Lane (BMUFL) policy and related signs to improve cyclist safety in shared road environments.

## EVALUATE AND UPDATE ORDINANCES

Local municipalities and institutions, such as universities, are encouraged to update ordinances and policies to address emerging modes of transportation, including electric scooters, Segways, and skateboards. These policies should promote safe interactions between vehicles, pedestrians, and micromobility devices particularly in urban and campus settings.

## PROGRAMMATIC CHANGES

SEMPO will prioritize transportation safety and equity when programming projects in the Capital Improvement Program (CIP), Transportation Improvement Program (TIP), and Statewide Transportation Improvement Program (STIP). When projects are submitted for SEMPO support, they will be evaluated to ensure they align with safety priorities.

## EQUITY-FOCUSED SAFETY INTERVENTIONS

The Justice40 initiative, which ensures that 40% of federal investments benefit disadvantaged communities, will guide SEMPO's project prioritization process. Equity considerations, including the use of the Climate and Economic Justice Screening Tool (CEJST) and the local equity index, will identify areas in need of targeted safety investments.



# HIN INTERVENTIONS

The High Injury Network serves as the foundation for SEMPO’s SS4A safety projects. The HIN identifies the corridors and intersections with the highest concentrations of KSI crashes, allowing SEMPO to focus on the areas that will have the greatest impact on reducing fatalities and serious injuries. SS4A safety projects were identified and prioritized based on the following criteria:

- Safety Index score
- Equity
- Projects from a mix of municipalities and roadway ownership

For each of the selected SS4A safety projects, roadway characteristics and crashes were analyzed to determine the safety problems along each corridor. Both short-term (0-5 years) and long-term (5+ years) strategies are provided as potential safety improvements. More information on specific safety improvements can be found in the Safety Toolkit.

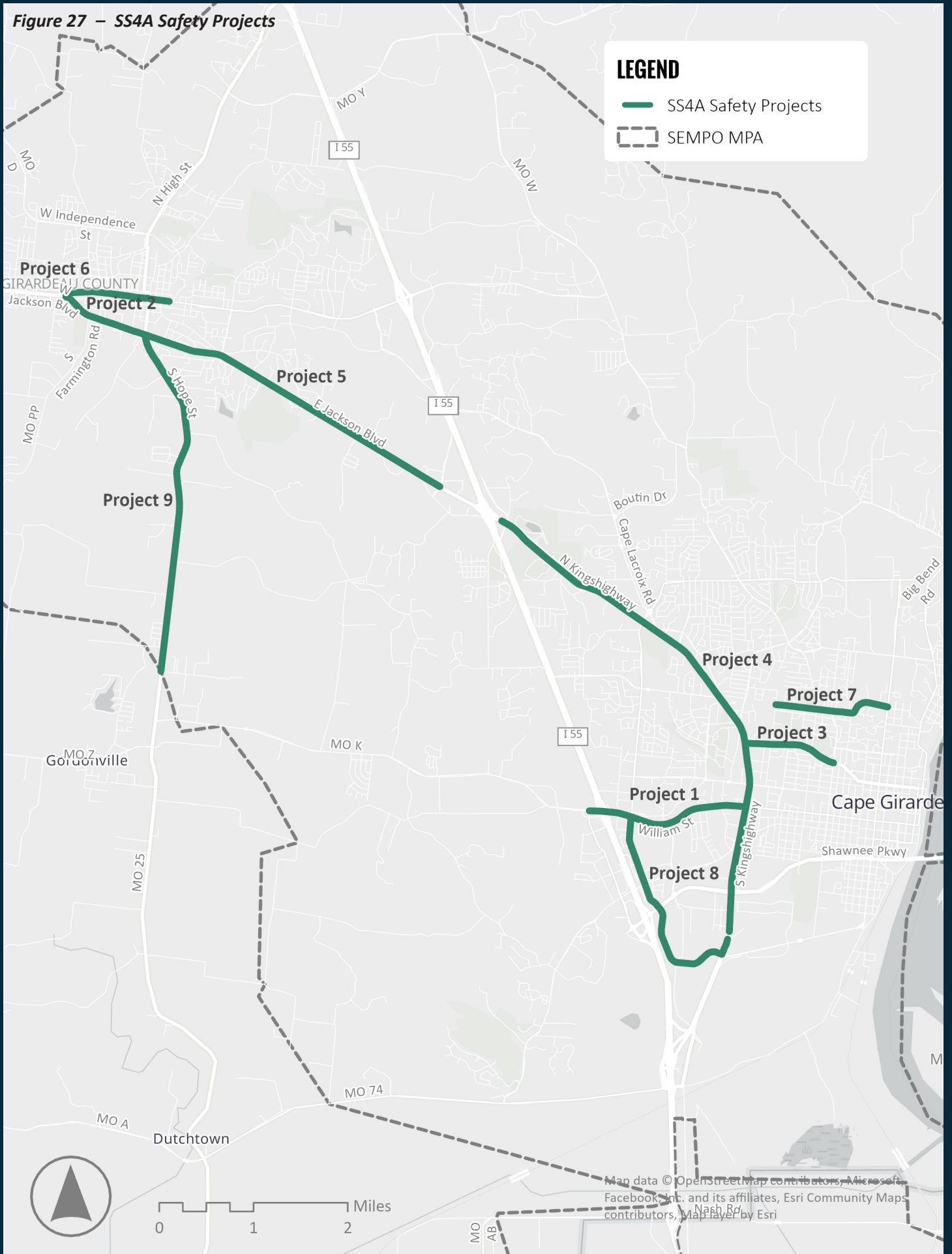


**Table 7 – List of HIN Interventions and Prioritization Criteria**

SS4A Project Number	Roadway	Owner	Jurisdiction	Safety Index	Equitable Target Area (yes/no)
1	Route K (William Street) from Siemers Drive to US-61	MoDOT	City of Cape Girardeau	S = 99.7 I = 85.5	Yes
2	MO-34 (Jackson Boulevard) from West Main Street to Hope Street	MoDOT	City of Jackson	S = 17.6 I = 23.1	No
3	Broadway Street from US-61 to NW End Boulevard	City of Cape Girardeau	City of Cape Girardeau	S = 31.6 I = 40.8	Yes
4	US-61 (Kingshighway Street) Lexington Avenue to Southern Expressway	MoDOT	City of Cape Girardeau	S = 68.1 I = 63.5	Yes
5	US-61 from Hope Street to Lexington Avenue	MoDOT	Jackson & Cape Girardeau	S = 28.3 I = 23.1	No
6	West Main Street from MO-34 to Marilyn Street	City of Jackson	City of Jackson	S = 2.9 I = 7.8	No
7	New Madrid Street from Clark Street to Sprigg Street	City of Cape Girardeau	City of Cape Girardeau	S = 12.7 I = 65.6	Yes
8	North Mt. Auburn Road from Route K to US-64	City of Cape Girardeau	City of Cape Girardeau	S = 11.9 I = 85.5	Yes
9	MO-25 from Route K to US-61	MoDOT	Cape Girardeau County	S = 8.7 I = 58.2	No

S = Segment  
I = Intersection

Figure 27 – SS4A Safety Projects



## 1 ROUTE K (WILLIAM STREET) CHARACTERISTICS

Route K (William Street) from Siemers Drive to US-61 (Kingshighway Street) is a 1.7-mile principal arterial located in the City of Cape Girardeau. With two through lanes in each direction, this corridor serves adjacent commercial uses including retail shopping, restaurants, hotels, and the Saint Francis Medical Center. There is a disconnected sidewalk on the north side of the corridor connecting to the Cape LaCroix Recreation Trail. There are no on-street multimodal facilities.

### CRASH HISTORY

- Number of KSI crashes: 11
- Number of non-motorized crashes: 0
- Safety Index, Segment: 99.7 (I-55 to Farrar Drive)
- Safety Index, Intersection: 85.5 (at North Mount Auburn Road)

Figure 28 – Route K (William St) Map

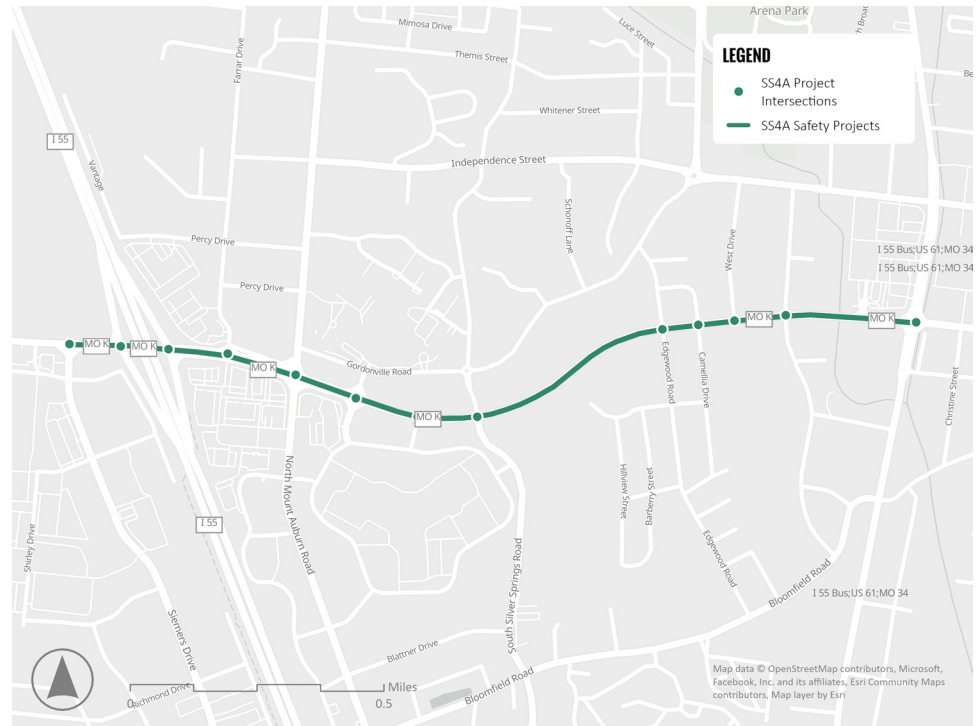


Table 8 – Route K (William St) KSI Crashes

Crash Type	KSI Crashes	Percent
HEAD ON	4	36.4%
TURNING	2	18.2%
OUT OF CONTROL	2	18.2%
PASSING	1	9.1%
LEFT TURN RIGHT ANGLE COLLISION	1	9.1%
RIGHT ANGLE	1	9.1%
<b>TOTAL</b>	<b>11</b>	<b>100%</b>

Table 9 – Route K (William St) Improvements

Short-Term/Low-Cost	Long-Term
Dilemma Zone Detection	Corridor Access Management
Yellow Change Intervals	Shared Use Path
Retroreflective Backplates	Median Barriers
Crosswalk Enhancements	
Improved Right-Turn Angle	

## 2 MO-34 (JACKSON BOULEVARD) CHARACTERISTICS

MO-34 (Jackson Boulevard) from West Main Street to Hope Street is a 1-mile principal arterial located in the City of Jackson. There are two through lanes in each direction with a raised curb median. The corridor serves a mix of suburban residential, retail shopping, industrial as well as Jackson High School. There is a sidewalk on the north side of the corridor and a mid-block crossing near Missouri Street. There are no on-street multimodal facilities

### CRASH HISTORY

- Number of KSI crashes: 2
- Number of non-motorized crashes: 1
- Safety Index, Segment: 17.6 (South Missouri Street to Hope Street)
- Safety Index, Intersection: 23.1 (at Hope Street)

Figure 29 – MO-34 (Jackson Blvd) Map



Table 10 – MO-34 (Jackson Blvd) KSI Crashes

Crash Type	KSI Crashes	Percent
FIXED OBJECT	1	50.0%
PEDESTRIAN	1	50.0%
<b>TOTAL</b>	<b>2</b>	<b>100%</b>

Table 11 – MO-34 (Jackson Blvd) Improvements

Short-Term/Low-Cost	Long-Term
Crosswalk Enhancements	Corridor Access Management
Pedestrian Refuge Islands	Shared Use Path
Leading Pedestrian Intervals	Roundabouts
Pedestrian Hybrid Beacons	
Rectangular Rapid Flashing Beacons	

### 3 BROADWAY STREET CHARACTERISTICS

Broadway Street from US-61 to NW End Boulevard is a 1-mile minor arterial located in the City of Cape Girardeau.

There are two through lanes in each direction and the corridor serves a mix of uses including retail shopping, restaurants, medical as well as Capaha Park. There are sidewalks on both sides of the corridor but no on-street multimodal facilities.

#### CRASH HISTORY

- Number of KSI crashes: 3
- Number of non-motorized crashes: 6 (1 KSI)
- Safety Index, Segment: 31.6 (US-61 to Penny Avenue)
- Safety Index, Intersection: 40.8 (at US-61)

Figure 30 – Broadway Street Map

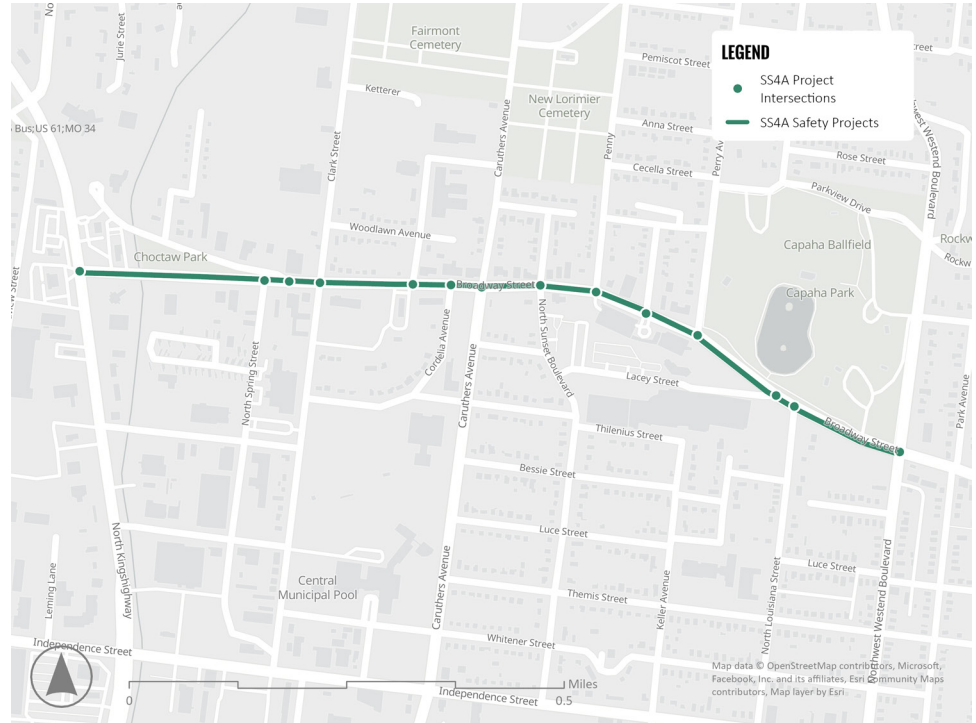


Table 12 – Broadway Street KSI Crashes

Crash Type	KSI Crashes	Percent
OUT OF CONTROL	1	33.3%
PEDESTRIAN	1	33.3%
REAR END	1	33.3%
<b>TOTAL</b>	<b>3</b>	<b>100%</b>

Table 13 – Broadway Street Improvements

Short-Term/Low-Cost	Long-Term
Crosswalk Enhancements	Road Diet
Pedestrian Hybrid Beacons	Shared Use Path
Rectangular Rapid Flashing Beacons	Roundabouts
Yellow Change Intervals	Corridor Access Management
Retroreflective Backplates	

## 4 US-61 (KINGSHIGHWAY STREET) CHARACTERISTICS

US-61 (Kingshighway Street) from Veterans Memorial Drive to Southern Expressway is a 6-mile principal arterial located in Cape Girardeau. It serves as a primary north-south connection for the region. In most locations, there are two through lanes in each direction with a center left turn lane. The corridor mainly serves retail shopping uses. There are paved shoulders on both sides of the corridor but no sidewalks nor on-street multimodal facilities.

### CRASH HISTORY

- Number of KSI crashes: 31
- Number of non-motorized crashes: 7 (2 KSI)
- Safety Index, Segment: 68.1 (near MO34/74)
- Safety Index, Intersection: 63.5 (at Bessie Street)

Figure 31 – US-61 (Kingshighway St) Map

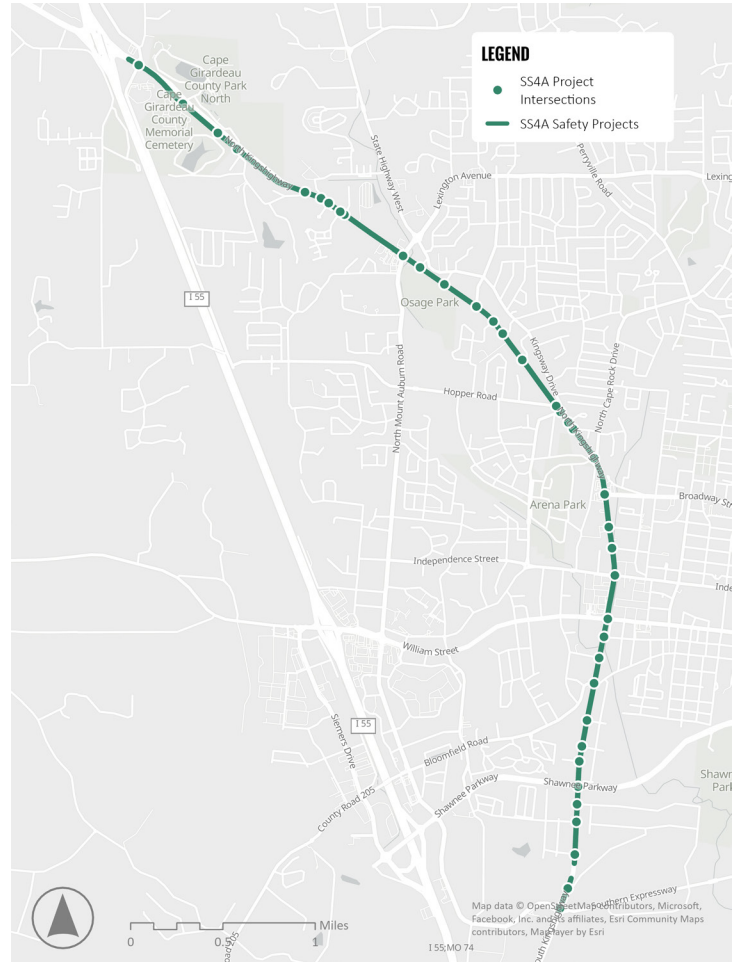


Table 14 – US-61 (Kingshighway St) KSI Crashes

Crash Type	KSI Crashes	Percent
TURNING	7	22.6%
RIGHT ANGLE	7	22.6%
OUT OF CONTROL	6	19.4%
REAR END	4	12.9%
LEFT TURN RIGHT ANGLE COLLISION	2	6.5%
PEDESTRIAN	2	6.5%
PASSING	2	6.5%
HEAD ON	1	3.2%
<b>TOTAL</b>	<b>31</b>	<b>100%</b>

Table 15 – US-61 (Kingshighway St) Improvements

Short-Term/Low-Cost	Long-Term
Road Safety Audit	Corridor Access Management
Crosswalk Enhancements	Median Barriers
Pedestrian Refuge Islands	Reduced Left-Turn Conflict Intersections
Yellow Change Intervals	Sidewalks
Wider Edge Lines	Roundabouts

## 5 US-61

### CHARACTERISTICS

US-61 from Hope Street to South Old Orchard Road is a 3.5-mile principal arterial located in Jackson. There are two through lanes in each direction and a center left turn lane. US-61 interchanges at I-55 with a diverging diamond interchange (opened in late 2021). The US-61 corridor is the primary connection between the cities of Jackson and Cape Girardeau.

### CRASH HISTORY

- Number of KSI crashes: 14
- Number of non-motorized crashes: 2 (0 KSI)
- Safety Index, Segment: 28.3 (near South Old Orchard Road)
- Safety Index, Intersection: 23.1 (at Hope Street)

Figure 32 – US-61 Map

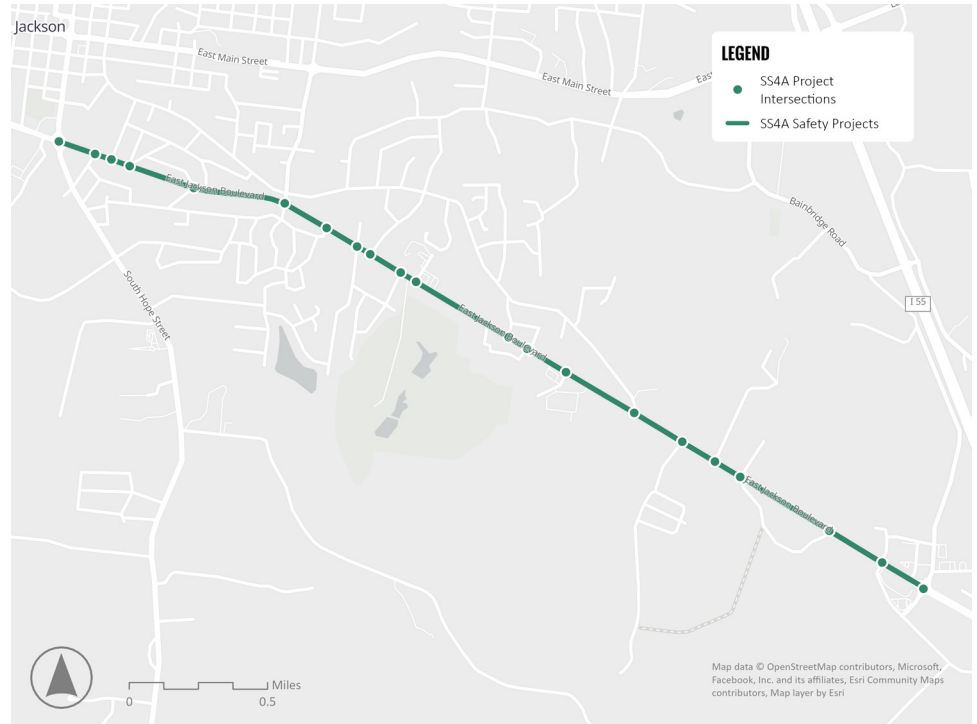


Table 16 – US-61 KSI Crashes

Crash Type	KSI Crashes	Percent
LEFT TURN RIGHT ANGLE COLLISION	5	35.7%
REAR END	3	21.4%
OUT OF CONTROL	3	21.4%
HEAD ON	1	7.1%
TURNING	1	7.1%
RIGHT ANGLE	1	7.1%
<b>TOTAL</b>	<b>14</b>	<b>100%</b>

Table 17 – US-61 Improvements

Short-Term/Low-Cost	Long-Term
Road Safety Audit	Corridor Access Management
Crosswalk Enhancements	Median Barriers
Pedestrian Refuge Islands	Reduced Left-Turn Conflict Intersections
Yellow Change Intervals	Improved Right-Turn Angle
Wider Edge Lines	

## 6 WEST MAIN STREET CHARACTERISTICS

West Main Street from MO-34 to east of Georgia Street is a 1-mile minor arterial located in the City of Jackson. The corridor is one lane in each direction with parking provided on both sides. The corridor serves retail shopping and residential used in and near uptown Jackson. Sidewalks are on both sides and crosswalks at most intersections. There is a roundabout intersection at US-61. There are no on-street multimodal facilities.

### CRASH HISTORY

- Number of KSI crashes: 3
- Number of non-motorized crashes: 1
- Safety Index, Segment: 2.9 (Hope Street to Georgia Street)
- Safety Index, Intersection: 7.8 (at Hope Street)

Figure 33 – West Main Street Map

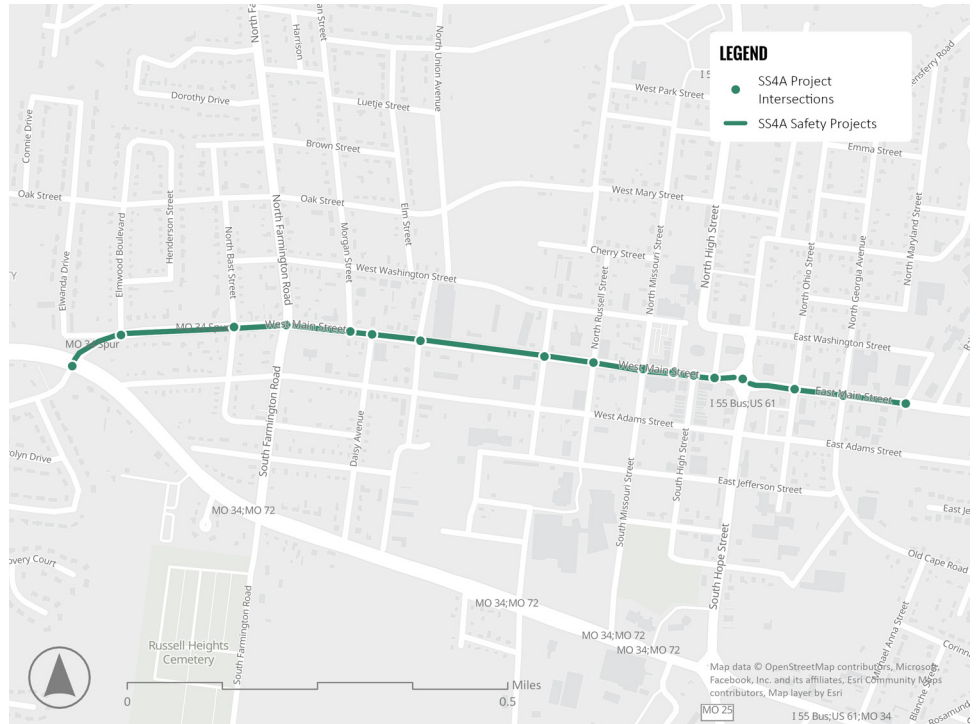


Table 18 – West Main Street KSI Crashes

Crash Type	KSI Crashes	Percent
FIXED OBJECT	1	33.3%
PEDESTRIAN	1	33.3%
REAR END	1	33.3%
<b>TOTAL</b>	<b>3</b>	<b>100%</b>

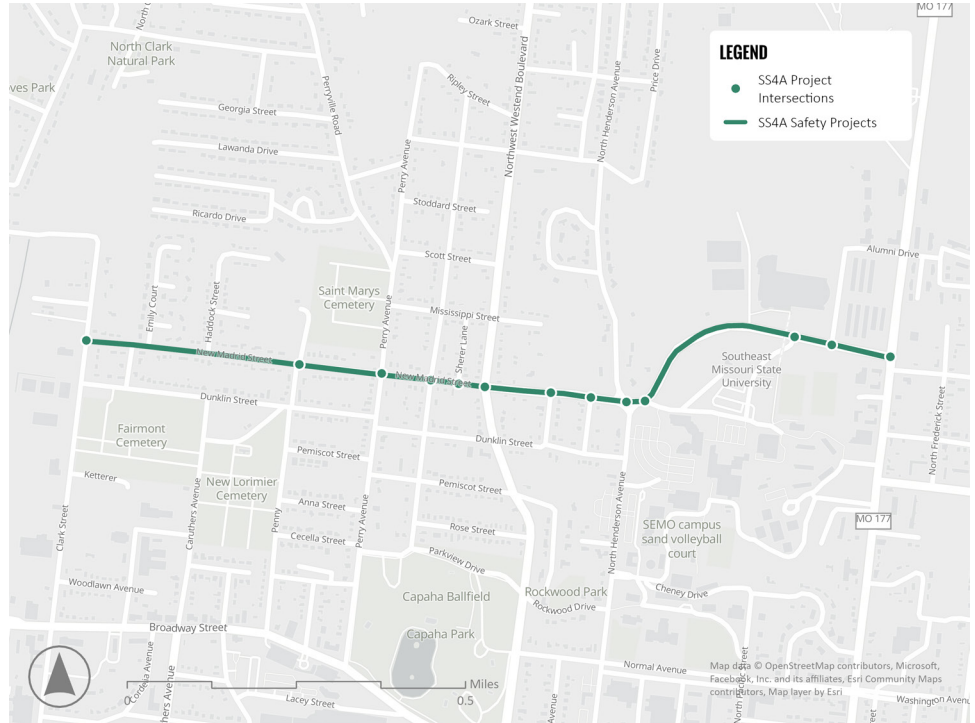
Table 19 – West Main Street Improvements

Short-Term/Low-Cost	Long-Term
Crosswalk Enhancements	Median Barriers
Pedestrian Refuge Islands	Raised Intersections
Curb Extensions	Corridor Access Management
Dynamic Speed Displays	
Vertical Deflections	

## 7 NEW MADRID STREET CHARACTERISTICS

New Madrid Street from Clark Street to Sprigg Street is a 1.25-mile local street in the City of Cape Girardeau. The street has one through lane in each direction with room for a center turn lane in the eastern portion and street parking in the western portion. The street serves residential neighborhoods as well as Southeast Missouri State University. There are sidewalks on both sides near the university and on the south side in the neighborhood portion. There are no on-street multimodal facilities.

Figure 34 – New Madrid Street Map



### CRASH HISTORY

- Number of KSI crashes: 3
- Number of non-motorized crashes: 1 (0 KSI)
- Safety Index, Segment: 12.7
- Safety Index, Intersection: 65.6 (at Perry Avenue)

Table 20 – New Madrid Street KSI Crashes

Crash Type	KSI Crashes	Percent
HEAD ON	1	33.3%
RIGHT ANGLE	1	33.3%
RIGHT TURN RIGHT ANGLE COLLISION	1	33.3%
<b>TOTAL</b>	<b>3</b>	<b>100%</b>

Table 21 – New Madrid Street Improvements

Short-Term/Low-Cost	Long-Term
Crosswalk Enhancements	Road Diet
Pedestrian Refuge Islands	Shared Use Path
Curb Extensions	Raised Intersections
Dynamic Speed Displays	
Pedestrian Hybrid Beacons	
Rectangular Rapid Flashing Beacons	
Vertical Deflections	

## 8 NORTH MT. AUBURN ROAD CHARACTERISTICS

North Mt. Auburn Road from Route K (William Street) to US-61 is a 2.2-mile corridor in Cape Girardeau. The corridor is a minor arterial from Route K to Bloomfield Road and a local street from Bloomfield Road to US-61. There are two through lanes in each direction with a center turn lane in the northern portion. The corridor serves various retail shopping including the West Park Mall, hotels, medical, as well as Central High School. There are disconnected sidewalks and no on-street multimodal facilities.

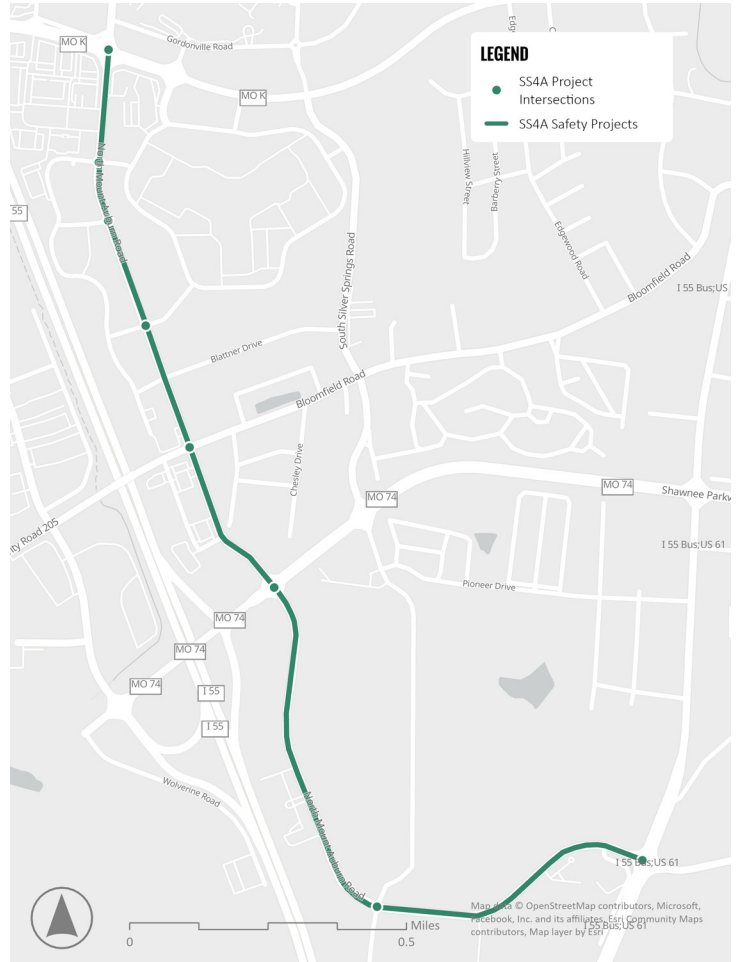
### CRASH HISTORY

- Number of KSI crashes: 6
- Number of non-motorized crashes: 0
- Safety Index, Segment: 11.9 (William Street to Bloomfield Road)
- Safety Index, Intersection: 85.5 (at William Street)

**Table 22 – North Mt. Auburn Road KSI Crashes**

Crash Type	KSI Crashes	Percent
TURNING	2	33.3%
RIGHT ANGLE	2	33.3%
HEAD ON	1	16.7%
OUT OF CONTROL	1	16.7%
<b>TOTAL</b>	<b>6</b>	<b>100%</b>

**Figure 35 – North Mt. Auburn Road Map**



**Table 23 – North Mt. Auburn Road Improvements**

Short-Term/Low-Cost	Long-Term
Crosswalk Enhancements	Sidewalks
Dilemma Zone Detection	Road Diet
Yellow Change Intervals	Shared Use Path
Retroreflective Backplates	Corridor Access Management
Pedestrian Hybrid Beacons	Roundabouts
Rectangular Rapid Flashing Beacons	Improved Right-Turn Angle
Permissive to Protected Left-Turn	

## 9 MO-25

### CHARACTERISTICS

MO-25 from MO-34 to Highway K is a 4-mile corridor connecting Jackson and Gordonville in Cape Girardeau County. The corridor is a minor arterial north of County Road 318 and a major collector to the south. There is one lane in each direction and narrow or no paved shoulders. Land uses served include rural residential and some agricultural uses. There are no sidewalks nor on-street multimodal facilities.

### CRASH HISTORY

- Number of KSI crashes: 6
- Number of non-motorized crashes: 1 (0 KSI)
- Safety Index, Segment: 8.7 (Titanium Lane to County Road 320)
- Safety Index, Intersection: 58.2 (at County Road 316)

Figure 36 – MO-25 Map

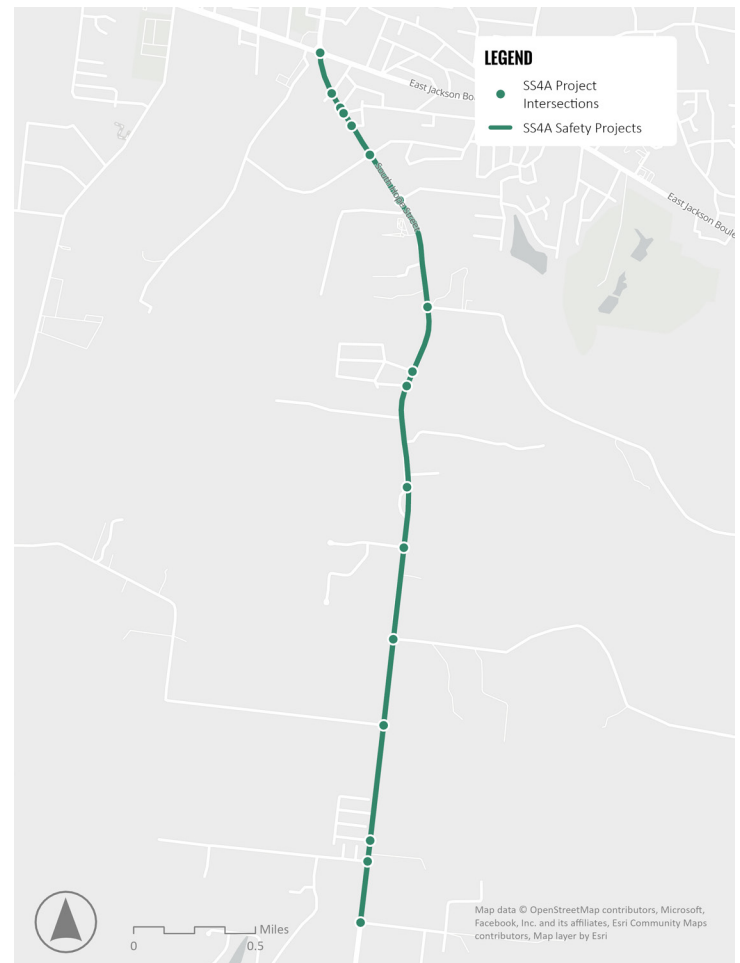


Table 24 – MO-25 KSI Crashes

Crash Type	KSI Crashes	Percent
REAR END	2	33.3%
HEAD ON	2	33.3%
OUT OF CONTROL	1	16.7%
LEFT TURN RIGHT ANGLE COLLISION	1	16.7%
<b>TOTAL</b>	<b>6</b>	<b>100%</b>

Table 25 – MO-25 Improvements

Short-Term/Low-Cost	Long-Term
Rumble Strips	Intersection Conflict Warning Systems
Enhanced Delineation	Curve Improvements
High Friction Surface Treatments	Dedicated Turn Lanes
	Roadway Lighting
	Roundabouts



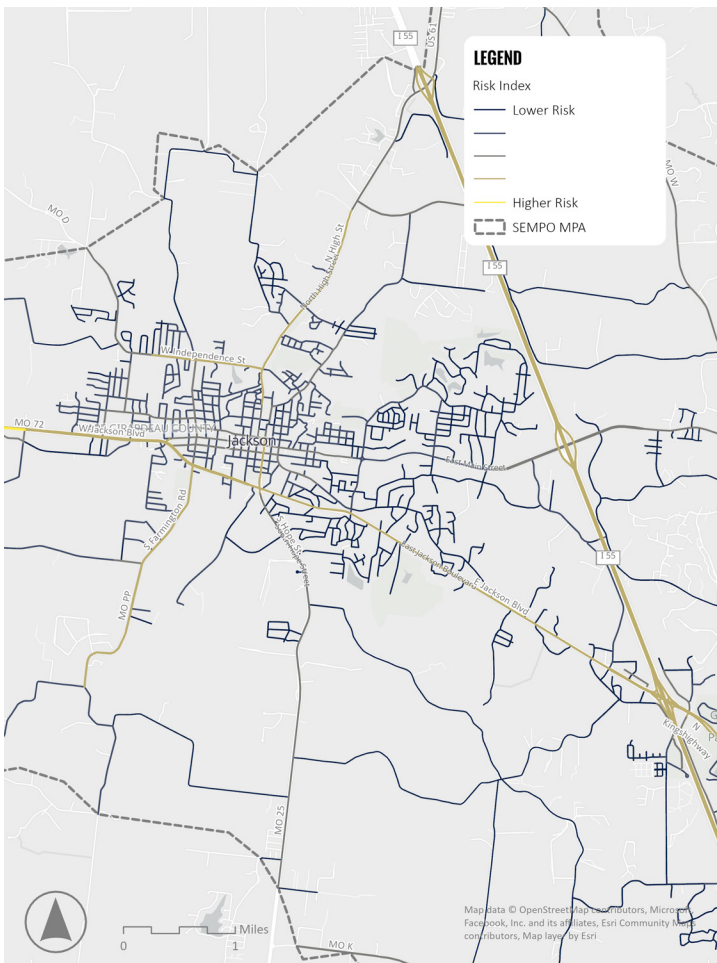
# SYSTEMIC INTERVENTIONS

To mitigate the effects of high-risk features along roadways throughout the SEMPO region, a systemic application of safety countermeasures is recommended. Systemic interventions are based on the identified risk factors and the associated KSI crash types.

## RISK INDEX

Risk factors were aggregated to create a risk index which illustrates roadways with high-risk roadway features based on the risk profile of roadway that experience with KSI crashes. A higher risk index means more high-risk features and/or more significant high-risk features.

**Figure 37 – Risk Index - Jackson**



**Figure 38 – Risk Index - Cape Girardeau**

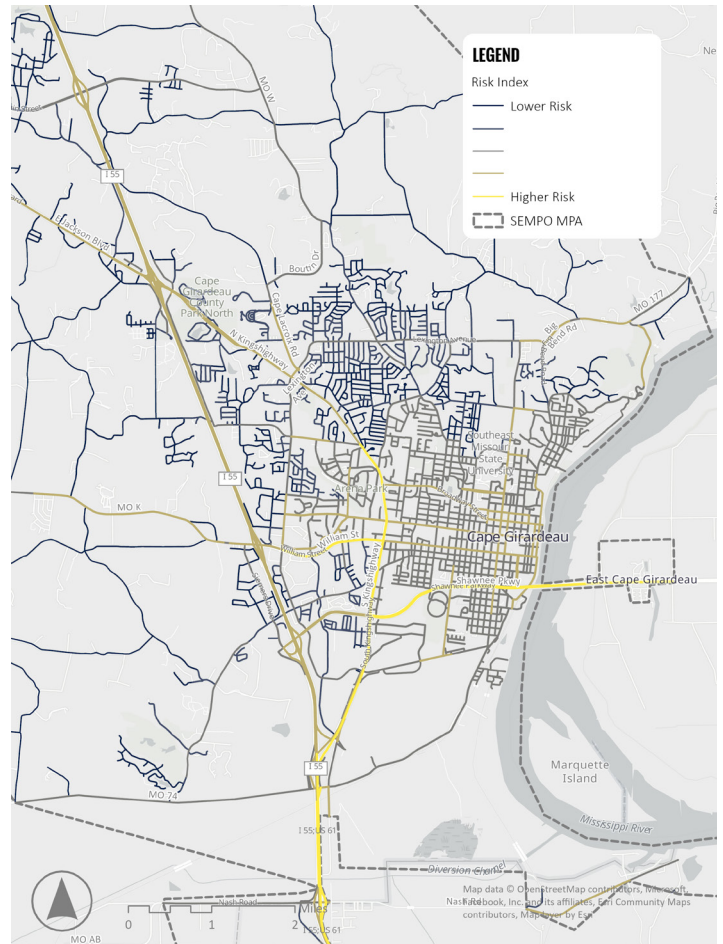
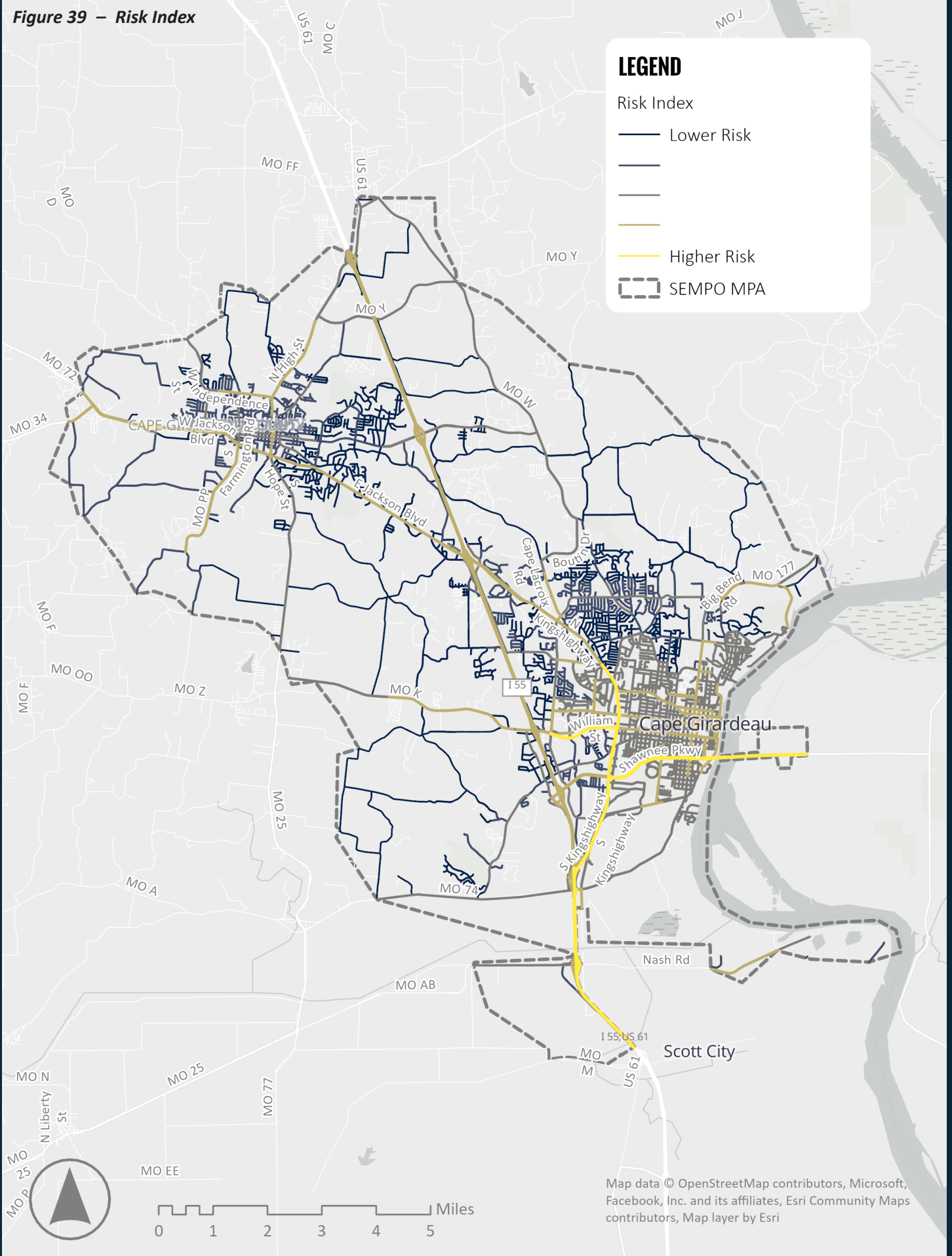


Figure 39 – Risk Index



**Table 26 – List of Systemic Interventions**

High-Risk Feature	KSI Crashes	Systemic Interventions
Within Disadvantaged Community	Out of Control: 24% Right Angle: 20% Pedestrian: 15% Rear End: 8% Turning: 8%	<ul style="list-style-type: none"> <li>• Road Diets</li> <li>• Corridor Access Management</li> <li>• Sidewalks</li> <li>• Shared Use Paths</li> <li>• Pedestrian Refuge Islands</li> <li>• Permissive to Protected Left Turn</li> <li>• Pedestrian Hybrid Beacons (PHBs)</li> <li>• Rectangular Rapid Flashing Beacons (RRFBs)</li> <li>• Roadway Lighting</li> </ul>
Urban	Out of Control: 28% Right Angle: 14% Rear End: 13% Pedestrian: 11%	<ul style="list-style-type: none"> <li>• Road Diets</li> <li>• Corridor Access Management</li> <li>• Sidewalks</li> <li>• Shared Use Paths</li> <li>• Pedestrian Refuge Islands</li> <li>• Permissive to Protected Left Turn</li> <li>• Pedestrian Hybrid Beacons (PHBs)</li> <li>• Rectangular Rapid Flashing Beacons (RRFBs)</li> <li>• Roadway Lighting</li> </ul>
Within ¼ mile of multimodal facility	Right Angle: 20% Out of Control: 19% Pedestrian: 16% Turning: 10%	<ul style="list-style-type: none"> <li>• Road Diets</li> <li>• Corridor Access Management</li> <li>• Dynamic Speed Displays</li> <li>• Intersection Conflict Warning</li> <li>• Shared Use Paths</li> <li>• Pedestrian Refuge Islands</li> <li>• Sidewalks</li> <li>• Yellow Change Intervals</li> <li>• Leading Pedestrian Intervals</li> <li>• Crosswalk Enhancements</li> <li>• Pedestrian Hybrid Beacons (PHBs)</li> <li>• Rectangular Rapid Flashing Beacons (RRFBs)</li> <li>• Roadway Lighting</li> </ul>
Freeway	Out of Control: 20% Right Angle: 20% Turning: 15% Pedestrian: 10% Rear End: 10%	<ul style="list-style-type: none"> <li>• Dilemma Zone Protection</li> <li>• Median Barriers</li> <li>• Sidewalks</li> <li>• Pedestrian Refuge Islands</li> <li>• Rectangular Rapid Flashing Beacons (RRFBs)</li> <li>• Roadway Lighting</li> </ul>
Principal Arterial	Out of Control: 20% Right Angle: 17% Turning: 17% Left Turn Right Angle Collision: 15% Head On: 11%	<ul style="list-style-type: none"> <li>• Road Diets</li> <li>• Corridor Access Management</li> <li>• Dilemma Zone Protection</li> <li>• Median Barriers</li> <li>• Sidewalks</li> <li>• Shared Use Paths</li> <li>• Pedestrian Refuge Islands</li> <li>• Permissive to Protected Left Turn</li> <li>• Rectangular Rapid Flashing Beacons (RRFBs)</li> </ul>
Minor Arterial	Pedestrian: 23% Out of Control: 21% Right Angle: 16% Rear End: 10%	<ul style="list-style-type: none"> <li>• Road Diets</li> <li>• Corridor Access Management</li> <li>• Dilemma Zone Protection</li> <li>• Median Barriers</li> <li>• Sidewalks</li> <li>• Pedestrian Refuge Islands</li> <li>• Rectangular Rapid Flashing Beacons (RRFBs)</li> </ul>

High-Risk Feature	KSI Crashes	Systemic Interventions
Major Collector	Out of Control: 33% Head On: 13% Pedestrian: 13% Rear End: 13% Right Angle: 13%	<ul style="list-style-type: none"> <li>• Road Diets</li> <li>• Corridor Access Management</li> <li>• Dilemma Zone Protection</li> <li>• Median Barriers</li> <li>• Sidewalks</li> <li>• Pedestrian Refuge Islands</li> <li>• Rectangular Rapid Flashing Beacons (RRFBs)</li> </ul>
On State System	Out of Control: 28% Rear End: 18% Right Angle: 10% Head On: 10%	<ul style="list-style-type: none"> <li>• Road Diets</li> <li>• Corridor Access Management</li> <li>• Dilemma Zone Protection</li> <li>• Median Barriers</li> <li>• Sidewalks</li> <li>• Pedestrian Refuge Islands</li> <li>• Rectangular Rapid Flashing Beacons (RRFBs)</li> </ul>
Expressway	Out of control: 25% Right Angle: 19% Pedestrian: 16% Turning: 9% Rear End: 9%	<ul style="list-style-type: none"> <li>• Wider Edge Lines</li> <li>• Dynamic Speed Displays</li> <li>• Intersection Conflict Warning</li> <li>• Roadway Lighting</li> <li>• Median Barriers</li> <li>• High Friction Surface Treatment</li> </ul>
Multi-Lane	Pedestrian: 24% Right Angle: 21% Out of Control: 21%	<ul style="list-style-type: none"> <li>• Road Diets</li> <li>• Corridor Access Management</li> <li>• Dilemma Zone Protection</li> <li>• Median Barriers</li> <li>• Sidewalks</li> <li>• Pedestrian Refuge Islands</li> <li>• Rectangular Rapid Flashing Beacons (RRFBs)</li> </ul>
3-Lane Section	Right Angle: 38% Left Turn Right Angle Collision: 25% Out of Control: 25% Head On: 13%	<ul style="list-style-type: none"> <li>• Dilemma Zone Protection</li> <li>• Median Barriers</li> <li>• Sidewalks</li> <li>• Shared Use Paths</li> <li>• Pedestrian Refuge Islands</li> <li>• Permissive to Protected Left Turn</li> <li>• Pedestrian Hybrid Beacons (PHBs)</li> </ul>
5-Lane Section	Turning: 23% Left Turn Right Angle Collision: 20% Right Angle: 18% Out of Control: 15% Rear End: 13%	<ul style="list-style-type: none"> <li>• Road Diets</li> <li>• Corridor Access Management</li> <li>• Dilemma Zone Protection</li> <li>• Median Barriers</li> <li>• Sidewalks</li> <li>• Shared Use Paths</li> <li>• Pedestrian Refuge Islands</li> <li>• Permissive to Protected Left Turn</li> <li>• Rectangular Rapid Flashing Beacons (RRFBs)</li> </ul>
Super 2-Lane	Head On: 33% Out of Control: 17% Pedestrian: 17% Rear End: 17% Right Turn Right Angle Collision: 17%	<ul style="list-style-type: none"> <li>• Dilemma Zone Protection</li> <li>• Median Barriers</li> <li>• Sidewalks</li> <li>• Pedestrian Refuge Islands</li> <li>• Rectangular Rapid Flashing Beacons (RRFBs)</li> </ul>

# PROGRESS AND TRANSPARENCY

In 2021, SEMPO agreed to begin establishing local targets or supporting Illinois and Missouri Departments of Transportation performance targets. SEMPO further agreed to report yearly progress made towards achieving performance targets. Since that time, these measures and reports have been developed and posted annually on the MPO's website. The five individual targets that comprise the safety targets include:

1. Number of fatalities
2. Rate of fatalities per 100 million vehicle miles traveled
3. Number of serious injuries
4. Rate of serious injuries per 100 million vehicle miles traveled
5. Number of non-motorized fatalities and non-motorized serious Injuries

To continue to deliver on progress and transparency, SEMPO is committed to continuing to either establishing or supporting the states performance measures and is committed to annual public reporting on the progress made toward reducing roadway fatalities and serious injuries. The MPO will collect and track regional traffic safety data and trends using the most current data-collection methodologies.

SEMPO will create an annual safety report card that will include data collected, data analyzed, and performance measures. In addition, the report card will capture the activities and progress made in relation to the recommendations, priority projects, and

strategies provided in this Action Plan. The Safety Oversight Committee will meet annually to discuss the report card and monitor the progress of this Plan.

The crash data will be used to evaluate the effectiveness of the comprehensive set of strategies to improve safety. In addition, the committee will review the circumstances for every fatal crash and take appropriate steps to address unsafe conditions. Other crash data that may be monitored include:

- Crashes by road system: state road, county road, city road
- Crashes by road type: signalized intersection, unsignalized intersection, between intersections, railroad crossing
- Crashes by collision type: rear end, head on, left turn
- Crashes by type of day/weather: day, dusk, night, dawn, wet, dry

Transparency ensures that citizens and stakeholders can access the Plan's details, including all regular updates. This Action Plan will be made available to the public by posting it online. As action plans are encouraged to utilize five years of crash data in the safety analysis, this Plan should be updated every five to seven years to reflect current data and trends. This update cycle may be coordinated with the MPO's metropolitan transportation plan (MTP). All plan updates and reports should utilize the latest data and best practices for data collection, data analysis methodology, and equity considerations, and should continue to utilize community engagement practices including surveys, focus groups, and interviews. Maintaining an open line of communication with the community and stakeholders fosters transparency, accountability, and trust.

