MURFREESBORO
SAFE STREETS

MURFREESBORO SAFE STREETS

May 2026

Approval Letter from Leadership

Dear Residents of Murfreesboro,

Improving roadway safety has always been a priority of the City of Murfreesboro. In recent years we have undertaken numerous projects to accommodate the growing number of vehicles and vulnerable road users that travel in and through our city.

To continue the ongoing effort to promote traffic safety, the leaders of the City of Murfreesboro are proud to support this effort toward making our roadways safer for all who travel them. Between 2020 and 2024, our city experienced 26,023 reported roadway crashes, of which 369 crashes led to deaths or serious injuries. These events are tragedies for the victims, their families, and our communities. The impacts are profound and devastating.

Fatalities and serious injuries due to traffic crashes are preventable, and the City of Murfreesboro is committed to significantly reducing and ultimately eliminating these occurrences. This Comprehensive Safety Action Plan is a crucial first step toward making this commitment a reality. As a data-driven and actionable document, this Safety Action Plan lays the groundwork for projects and strategies that can make a tangible difference on our roadways.

Access to safer roadways should not be reserved only for a select few; rather, the entire population of the City of Murfreesboro should be able to travel safely, regardless of their income level, where they live, their race, or their age. The City of Murfreesboro cannot achieve its goals without the support and participation of the people in our communities and our partner agencies. Every person has a role to play and a responsibility to help make our roads safer. Together, we can accomplish a great deal.

Our intent is that this Safety Action Plan will provide a roadmap of the steps that the City of Murfreesboro will take toward improving safety on the roadways. Based on the analysis of traffic and accident data and the input of citizens during the research phase, this plan provides specific steps necessary and the progress markers allowing us the opportunity to take actions to improve traffic safety in our city. The work has only just begun, but having a solid plan is the foundation for achieving our goals and eliminating these preventable tragedies from our roadways.

Thank you for your commitment and support to improving roadway safety and the quality of life in the City of Murfreesboro, Tennessee.

Sincerely,

Shane McFarland

Mayor of the City of Murfreesboro

Special Thanks

We extend our sincere appreciation and gratitude to the residents of Murfreesboro, the City staff, advocacy groups, stakeholders, and the public who assisted in the public surveys, meetings, and the entire planning process. The critical input guided the development of the Safety Action Plan (SAP) and in turn will have a positive impact on the City.

City of Murfreesboro – City Council

Shane McFarland – Mayor of Murfreesboro

Bill Shacklett – Vice Mayor

Jami Averwater

Madelyn Scales Harris

Austin Maxwell

Kirk Wade

Shawn Wright

Consultant Team

Kimley–Horn

City of Murfreesboro – Steering Committee

Jim Kerr – Transportation Director

Lee Smith – Deputy Director Transportation/City Traffic Engineer

Lexi Stacy – Project Coordinator

Alan Bozeman – Communication Director

Greg McKnight – Executive Director, Development Services

Mathew Blomeley - Assistant Planning Director, AICP

Battalion Chief Joe Bell – Fire Rescue Department

Lt. Zachary Ferrell – Murfreesboro Police Department

Contents

Appendices

Abbreviations

SS4A – Safe Streets and Roads for All

SAP – Safety Action Plan

FHWA – Federal Highway Administration

USDOT – United States Department of Transportation

TDOT – Tennessee Department of Transportation

COM – City of Murfreesboro

SHSP – Strategic Highway Safety Plan

AADT – Annual Average Daily Traffic

TEV – Total Entering Vehicles

VRU – Vulnerable Road User

BIL – Bipartisan Infrastructure Law

HIN – High Injury Network

CMF – Crash Modification Factor

MTSU – Middle Tennessee State University

NHTSA – National Highway Traffic Safety Administration

HSM – Highway Safety Manual

PDO – Property Damage Only

ADA – Americans with Disabilities Act

DSDS – Dynamic Speed Display Signs

TIS – Traffic Impact Study

AICP – American Institute of Certified Planners

CDC - Centers for Disease Control and Prevention

DRC – Driver- Related Countermeasure

GIS – Geographic Information System

SR – State Route

SVI – Social Vulnerability Index

VMT – Vehicle Miles Traveled

TZD – Towards Zero Deaths

Introduction

Introduction

Alignment with SS4A

The Bipartisan Infrastructure Law (BIL) established the Safe Streets and Roads for All (SS4A) discretionary program to fund regional, local, and Tribal initiatives through grants to prevent roadway deaths and serious injuries involving motorists, pedestrians, and cyclists.

One of the initiatives funded by the SS4A program is the development of a Safety Action Plan, which includes all seven required SS4A components shown in Figure 1.

A Safety Action Plan (SAP) is a planning document that serves as a road map to identify and prioritize safety improvements. Having a formal plan will help the City of Murfreesboro communicate clearly with stakeholders and access funding opportunities under this program.

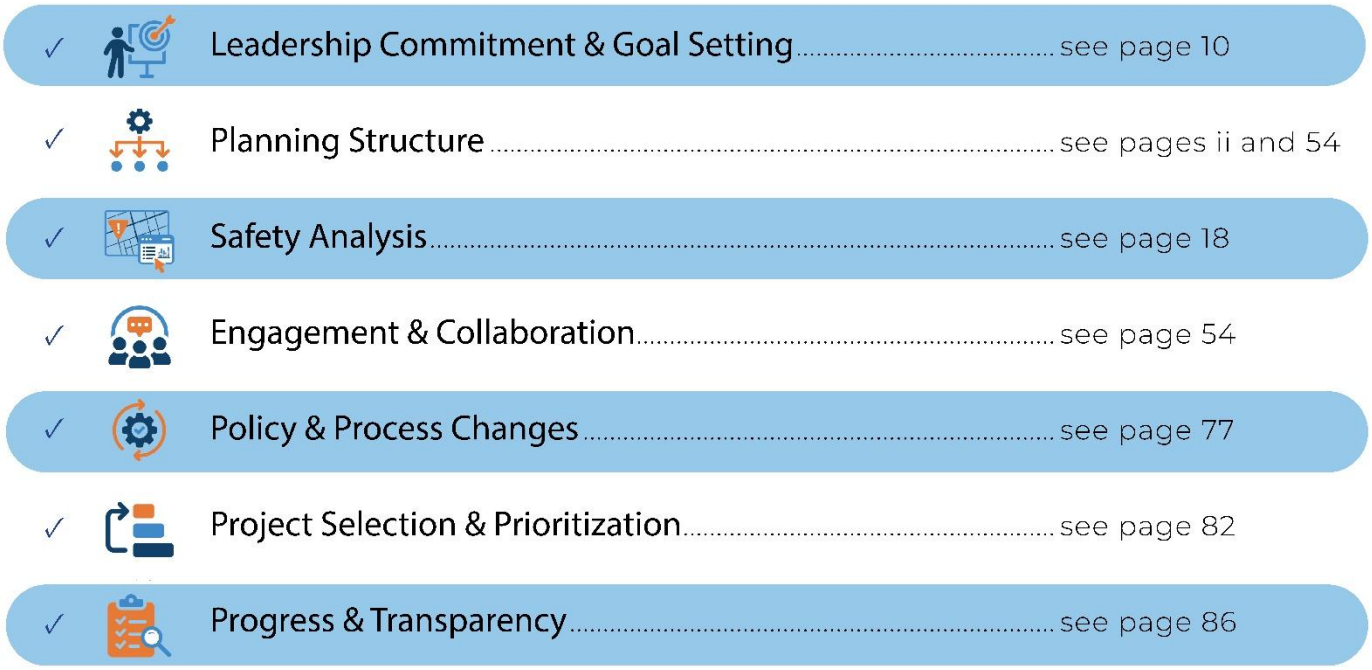


Figure 1: Alignment with SS4A

Document Organization

The Murfreesboro SAP is organized into the following chapters:

(Graphic Generated by AI)

Purpose of the SAP

The City of Murfreesboro Safety Action Plan (SAP) provides a framework for identifying and prioritizing safety improvements to benefit transportation safety for all roadway users. The SAP recommendations aim to reduce fatal and serious injury crashes, guided by the principles established in the 2025-2029 Tennessee Strategic Highway Safety Plan (TN SHSP) and the citywide systemic data analysis conducted as part of this plan.

This report aligns with the components required to apply for SS4A Implementation Grant funding. As such, the SAP involves a community-informed and data-driven approach to roadway safety, with commitment from City leadership to reducing roadway fatalities and suspected serious injury crashes.

Leadership Commitment & Goal Setting

The City of Murfreesboro's leadership commits to making progress toward a long-term goal of zero traffic deaths and serious injuries with an interim goal of 25% reduction in fatal and serious injury crash rates by 2045 from the projected trend. While the City of Murfreesboro exhibits a sharply declining historical crash rate for the previous five-year period, it is not feasible to assume this trend will continue such a drastic decline given the recent population growth. Remaining committed to making progress toward the long-term goal of zero traffic deaths and serious injuries, the City's interim goal of a 25% reduction allows for a more realistic measurement of future progress.

Appendix A includes a copy of the signed resolution from the Murfreesboro City Council. **Figure 2** illustrates the five-year rolling average of the fatal & serious injury crash rate for the years 2020 to 2024. Based on the current trend, the crash rate is projected to decrease by 90% by 2045, with an annual decrease of 3.5% per year. Additional details regarding crash trends and reductions are included in the Crash Data Analysis section of this document.

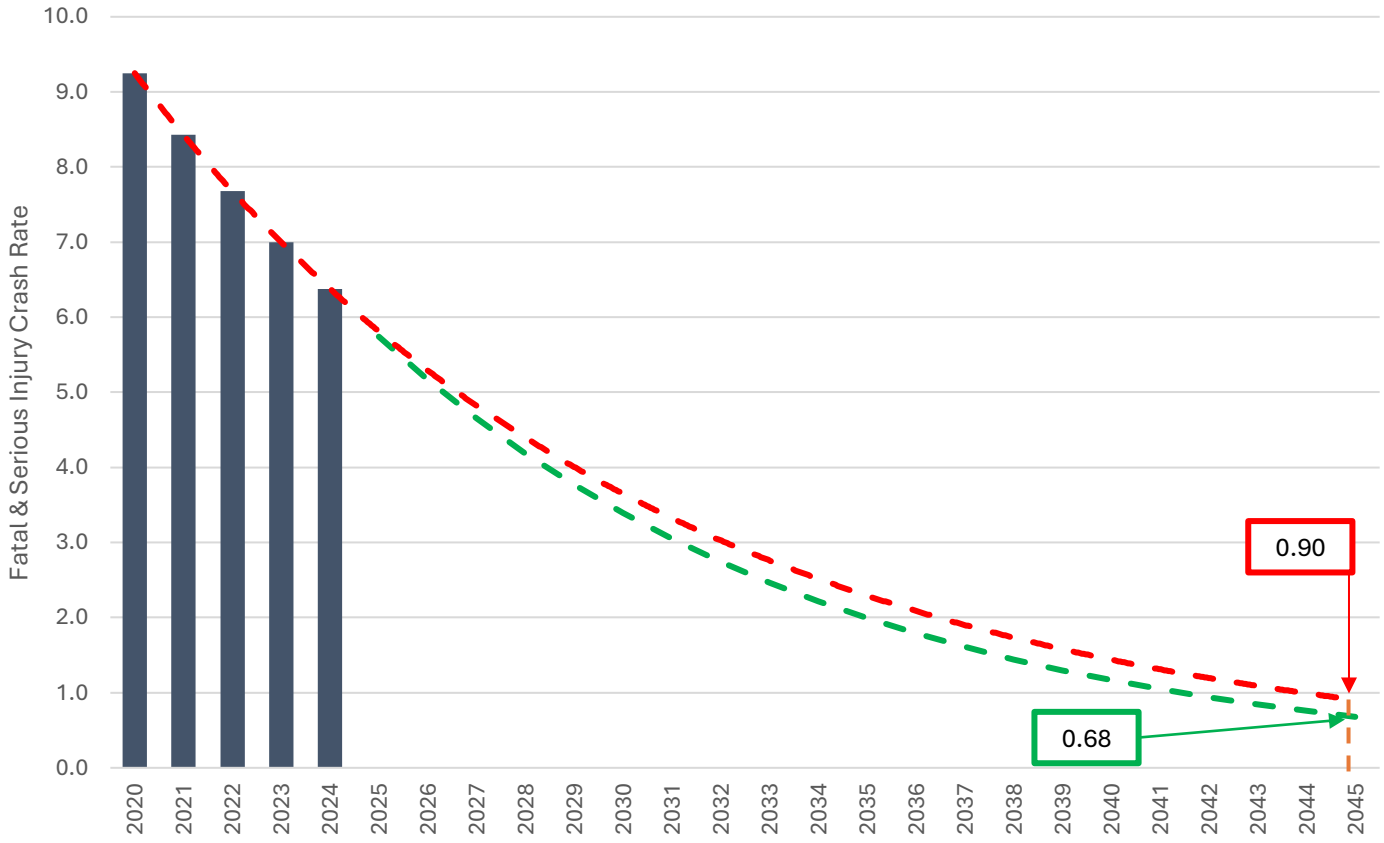


Figure 2: Murfreesboro Fatal & Serious Injury Crash Rate Trend

Safe System Approach

The activities conducted during this study build upon the Federal Highway Administration (FHWA) Safe System Approach, the TN SHSP, City-specific data analysis findings, and community feedback. The Safe System Approach is the guiding paradigm of the USDOT regarding roadway safety (see **Figure 3**). It prioritizes the elimination of crashes that result in death or serious injury. This approach is a shift from the conventional safety approach in that it focuses on both human mistakes and human vulnerability and seeks to design a system with multiple layers of protection. See **Figure 4** for a comparison between the traditional approach versus Safe System Approach. This Safety Action Plan will integrate the Safe System Approach by analyzing the transportation system holistically and proposing solutions and strategies across the spectrum of principles that make up the Safe System Approach. Those principles are as follows:

- Deaths & Serious Injuries are Unacceptable
- Humans Make Mistakes
- Humans are Vulnerable
- Responsibility is Shared
- Safety is Proactive
- Redundancy is Crucial

Figure 3: Elements of the Safe Systems Approach (Source: USDOT)

Traditional Approach	vs	Safe Systems Approach
Traffic Deaths and Serious Injuries are INEVITABLE		Traffic Deaths and Serious Injuries are PREVENTABLE
IMPROVE human behavior		INTEGRATE human error into approach
INDIVIDUAL responsibility		SHARED responsibility
Prevent COLLISIONS		Prevent FATAL AND SERIOUS INJURY CRASHES
REACT based on crash history		PROACTIVELY identify and address risks
Saving lives is EXPENSIVE		Saving lives is NOT EXPENSIVE

Figure 4: Traditional Approach vs Safe Systems Approach

Study Area

The City of Murfreesboro, Tennessee, is located in Rutherford County within the Nashville Metropolitan area. It encompasses approximately 64 square miles of land and is home to an estimated 168,000 residents as of 2025, making it one of the fastest-growing cities in Tennessee. Murfreesboro operates under a Council-Manager form of government, where an elected City Council—consisting of a Mayor and six council members—sets policies, and an appointed City Manager oversees daily operations and services. The City lies about 30 miles southeast of Nashville and serves as the county seat of Rutherford County. Murfreesboro shares its northwest border with the Town of Smyrna and is near other communities such as La Vergne, Shelbyville, and Woodbury.

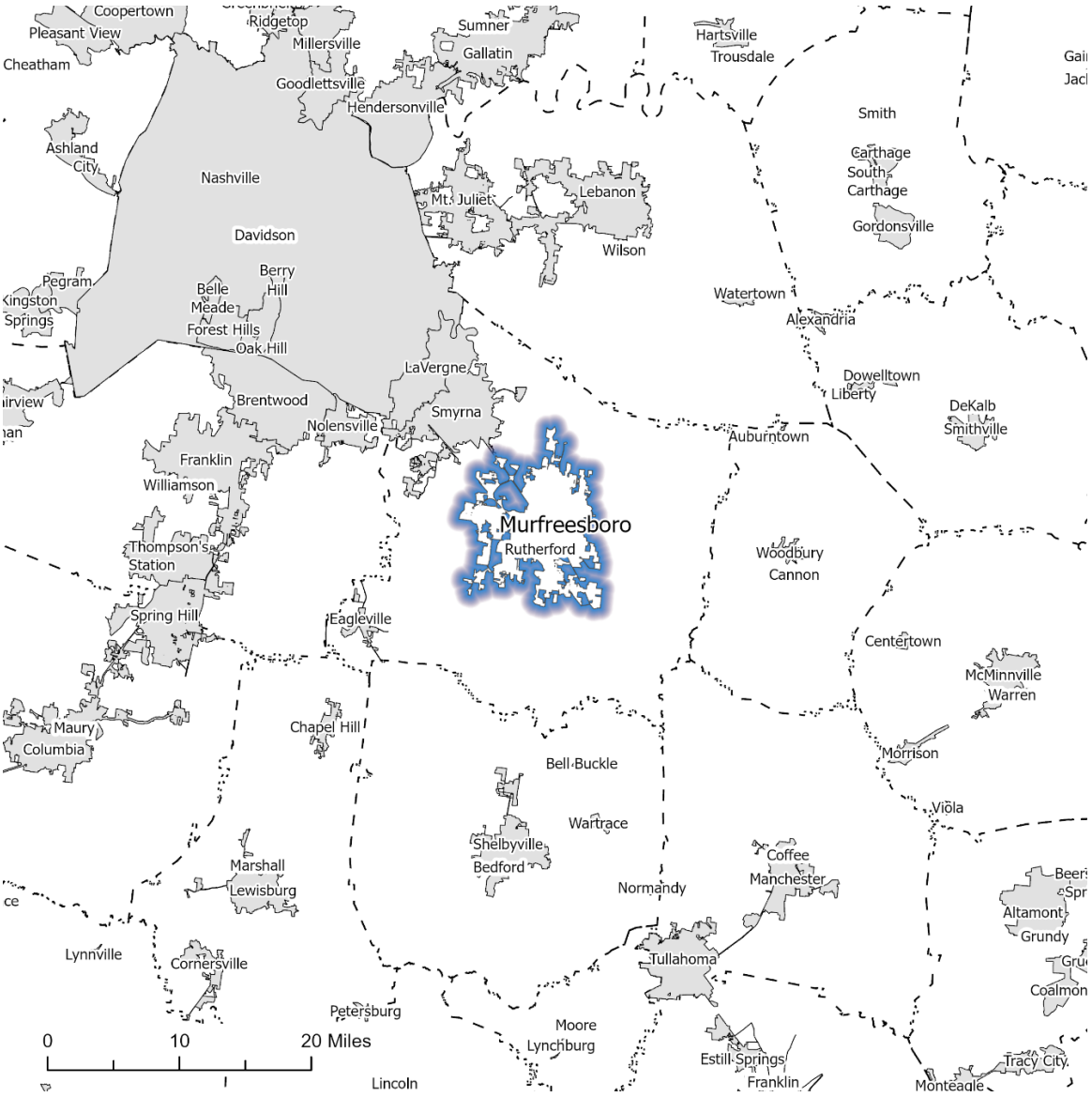


Figure 5: City of Murfreesboro Surrounding Area

History

The City of Murfreesboro was established in 1811 as the new county seat for Rutherford County and originally named Cannonsburgh in honor of Newton Cannon. Within weeks, the name was changed to Murfreesborough, later shortened to Murfreesboro, in tribute to Colonel Hardy Murfree, a Revolutionary War hero. The City was incorporated in 1817 and served as the capital of Tennessee from 1818 to 1826 because of its central location. During the Civil War, Murfreesboro was the site of the Battle of Stones River (December 31, 1862–January 2, 1863), among the war's bloodiest engagements. The outcome provided a crucial Union morale boost and is widely linked to momentum surrounding the Emancipation Proclamation. The battlefield is preserved today as the Stones River National Battlefield. In the early 1900s, the City strengthened its role in education with the founding of Middle Tennessee State Normal School (1911), now Middle Tennessee State University (MTSU)—recognized for having the largest undergraduate enrollment in Tennessee. After World War II, Murfreesboro experienced steady population increases for decades and is projected to continue growing through the planning horizon. The Murfreesboro 2035 Comprehensive Plan indicates a population growth estimate in the City of 228,090 by 2035. The City's transportation system has been shaped by sustained population growth, major employment centers, and expanding development corridors, with concentration along major corridors such as Old Fort Parkway, Memorial Boulevard, South Church Street, and Medical Center Parkway. Large employers in manufacturing, healthcare, education, logistics, and government generate substantial commuter travel and contribute to peak-hour congestion along these corridors. MTSU, the largest undergraduate university in Tennessee, plays a significant role in local travel patterns by generating daily commuter trips and higher concentrations of pedestrians, bicyclists, and transit users near the campus and connecting corridors. Transit is an important mobility strategy, with existing fixed-route bus service providing connections between residential areas, employment centers, and MTSU, and emphasizes future transit enhancements to better align with continued growth and multimodal travel demand.

Land Uses & Attractions

Murfreesboro's economy is driven by healthcare, education, and manufacturing, with major employers such as National HealthCare Corporation, Murfreesboro Medical Clinic, and Kasai North America. The City offers an extensive parks and recreation system covering more than 1,200 acres, including the Stones River Greenway, a 15-mile trail network ideal for walking, biking, and nature viewing. Popular destinations include Barfield Crescent Park, Richard Siegel Soccer Complex, and Murfree Springs Wetlands, known for its scenic boardwalks and wildlife observation. Murfreesboro also features numerous attractions that highlight its rich heritage and vibrant culture. Stones River National Battlefield preserves the site of

a pivotal Civil War battle, while Cannonsburgh Village and Oaklands Mansion showcase 19th-century life and architecture. Families enjoy interactive learning at the Discovery Center at Murfree Spring, and downtown Murfreesboro offers shopping, dining, breweries, and seasonal events.

Roadway Networks

Murfreesboro's roadway system is anchored by I-24, which runs southeast–northwest through the City and connects Nashville to Chattanooga. The City also benefits from access to I-840, forming a partial outer loop that links Murfreesboro to Franklin, Lebanon, and other Middle Tennessee communities. Major U.S. and state routes include US-231 (Memorial Boulevard), U.S. 41/70S (Broad Street), and State Route 96 (Old Fort Parkway), all serving as key commercial corridors. Traffic volumes reflect Murfreesboro's rapid growth. Old Fort Parkway (SR-96) is among the busiest corridors, carrying around 50,000 vehicles daily, while Memorial Boulevard and Broad Street also experience heavy congestion during peak hours. I-24 exceeds 100,000 AADT near major interchanges, making it one of the most heavily traveled segments in Middle Tennessee. Planned improvements include a Cherry Lane interchange at I-840 and widening projects along Old Fort Parkway, aimed at reducing congestion and improving connectivity. Other notable thoroughfares include Thompson Lane, New Salem Highway, and Joe B. Jackson Parkway, which provide access to growing residential and industrial areas.

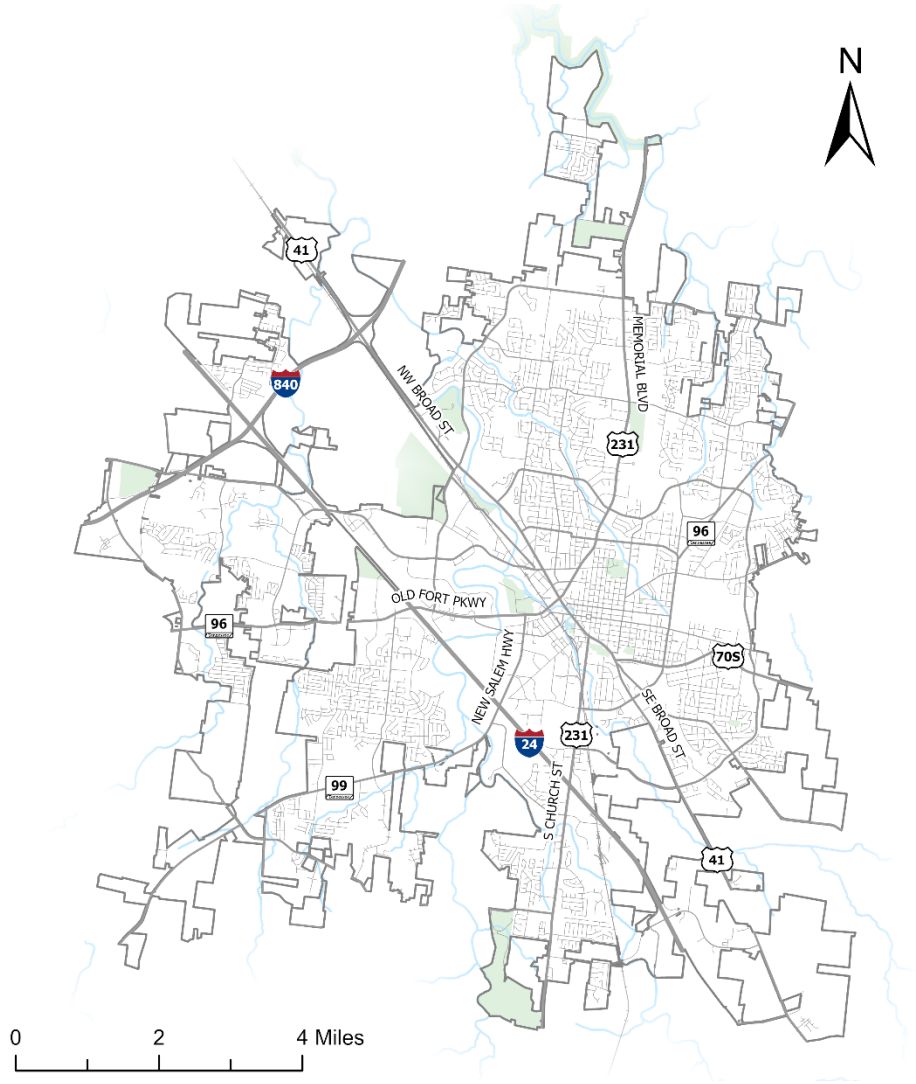


Figure 6: Murfreesboro Roadway Network

Schools

The Rutherford County School System operates the schools in the City of Murfreesboro. While it is not a comprehensive list, schools included in the City's GIS database that are located within Murfreesboro city limits are listed below and shown in **Figure 7**.

- A – Redeemer Classical Academy
- B – Providence Christian Academy
- C – Primrose School of Murfreesboro
- D – Montessori Weaver School
- E – Middle Tennessee Christian School
- F – Cedar Grove School
- G – Belle Aire Baptist Church
- H – Saint Rose of Lima Catholic Elementary
- I – Kinder Care Learning Center
- J – Middle Tennessee State University
- K – First Presbyterian Pre School

- L – Tennessee College of Applied Technology
- M – Genesis Teen Learning Center School
- N – Bellwood Christian Academy
- O – Rutherford Academy School
- P – Murfreesboro Adventist School
- Q – Rutherford County Community Learning Center
- R – Erma Siegel Elementary
- S – Discovery School
- T – Bradley Academy
- U – Hodgood Elementary
- V – Mitchell-Neilson Elementary
- W – John Pittard Elementary
- X – Northfield Elementary
- Y – Black Fox Elementary
- Z – Scales Elementary
- AA – Reeves-Rogers Elementary
- AB – Overall Creek Elementary
- AC – Salem Elementary
- AD – Carson Lane Academy
- AE – Barfield Elementary
- AF – Blackman High School
- AG – Blackman Elementary
- AH – Holloway High School
- AI – Homer Pittard Campus School
- AJ – McFadden School of Excellence
- AK – Oakland High School
- AL – Riverdale High School
- AM – Siegel Middle School
- AN – Blackman Middle School
- AO – Siegel High School
- AP – Central Magnet School
- AQ – Oakland Middle School
- AR – Whitworth-Buchanan Middle School

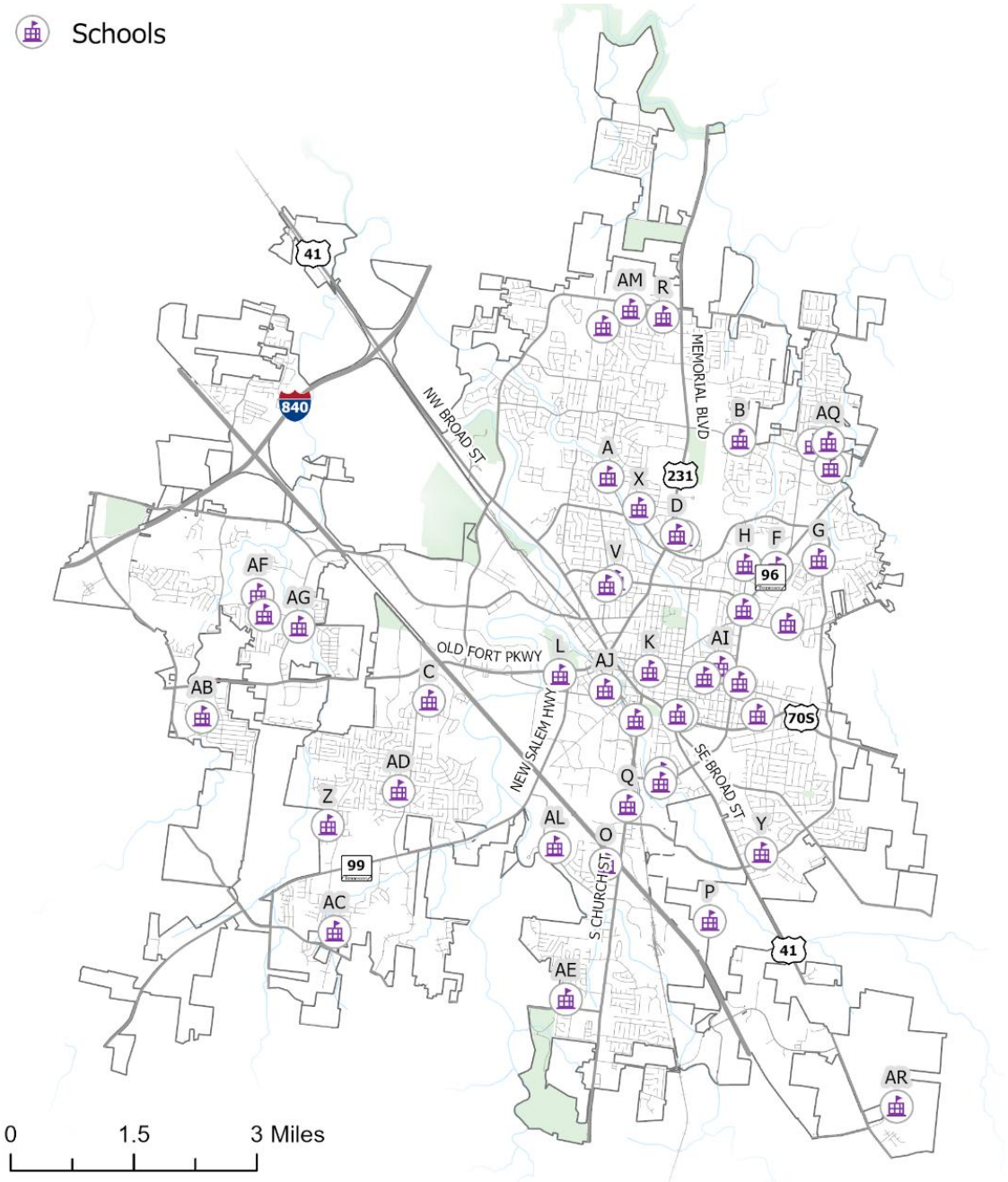


Figure 7: City of Murfreesboro Schools

MURFREESBORO SAFE STREETS

Safety Analysis

Safety Analysis

The safety analysis for the Murfreesboro Safety Action Plan explored city-wide historical trends to understand where crashes occurred, crash severities, and their contributing factors. This safety analysis section summarizes data sources, safety emphasis areas, city-wide crash trends, transportation demographics considerations, and the identification of a high-injury network. The findings from this safety analysis helped inform the development of engineering projects and strategies identified later in this plan.

KABCO Crash Severity

The KABCO scale measures the injury severity for any person involved in the crash and is defined as K for fatal injury, A for suspected serious injury, B for suspected minor injury, C for possible injury, and O for property damage only (PDO). As shown in **Figure 8**, there were 26,023 reported crashes on roadways in the City of Murfreesboro from 2020 to 2024, of which 369 resulted in fatalities or serious injuries.

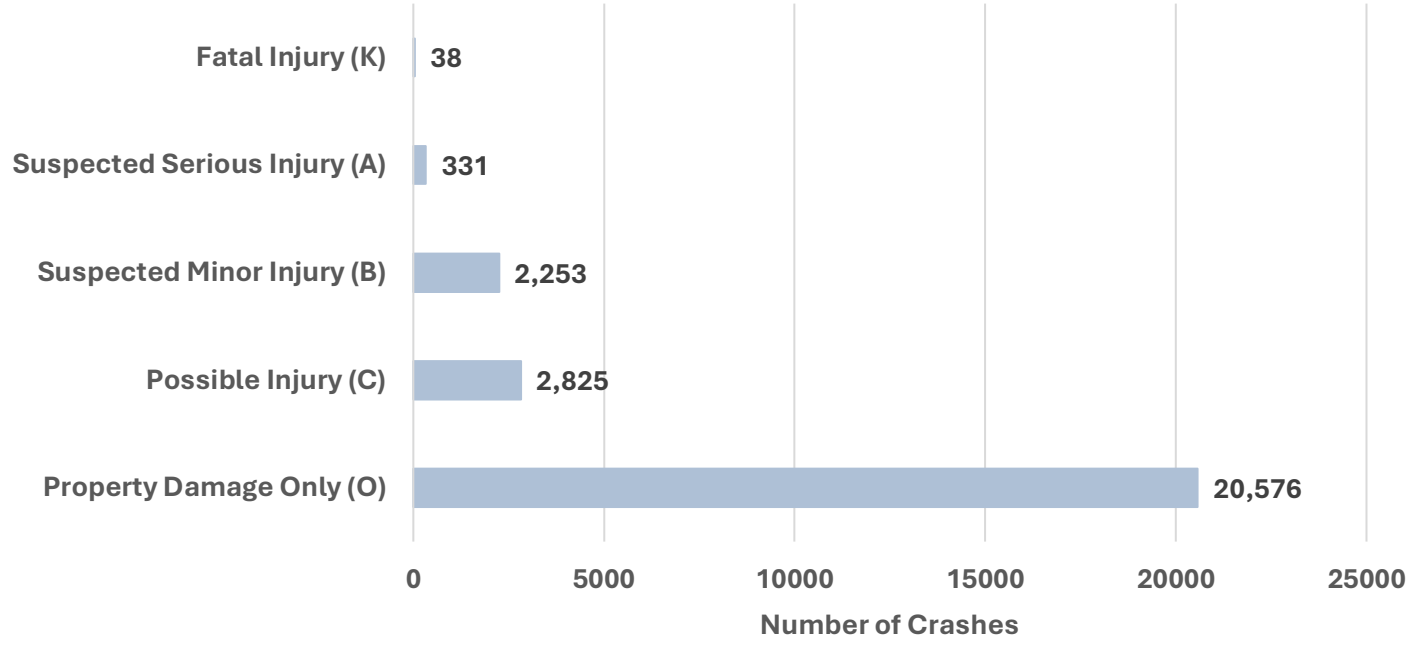


Figure 8: Crashes in Murfreesboro by KABCO Scale

Data Gathering

Historical crashes were obtained from the TDOT's AASHTOWare Safety online crash database for crashes reported from 2020 to 2024. The data was combined and cleaned at a high level to provide a more complete record of crashes within the City. This cleaning included filtering out interstate crashes, duplicate crashes, erroneous crash information, and geographically inaccurate crash data. The analysis also incorporated roadway ownership information and additional roadway characteristics (such as road type and signal locations) provided by TDOT.

Emphasis Areas

State DOTs develop Strategic Highway Safety Plans under the Federal Highway Administration's direction to identify safety emphasis areas based on historical crash trends and severities. Crashes resulting in fatalities and suspected serious injuries were evaluated in the 2020-2024 Tennessee Strategic Highway Safety Plan to identify the top statewide safety emphasis areas. These analysis results help inform how transportation safety funding should be directed to reduce statewide fatal and serious injury crashes for all road users.

Table 1 shows a comparison of the City of Murfreesboro's fatal and serious injury crashes to statewide totals, while **Table 2** compares the data to the urbanized areas of Tennessee. The tables are formatted to emulate the emphasis areas documented in the TN SHSP and intend to highlight how the emphasis areas in Murfreesboro compare to statewide trends.

Note that individual crash events may be associated with more than one emphasis area. For example, a roadway departure crash could have involved an impaired young driver. As such, the values in the columns may not add to equal the exact totals. In Table 1 and Table 2, orange-shaded cells show which contributing factors were more prevalent in the City of Murfreesboro than the statewide data over the five-year study period while the blue-shaded cells show which contributing factors were less prevalent in the City of Murfreesboro. As shown in these tables, the City of Murfreesboro experienced higher percentages for several emphasis areas, including intersections, roadway departures, aggressive drivers/speeding, teen drivers, motorcycles, and bicycles. It is important to note that when comparing the aggressive drivers and teen drivers in the urban areas, these values are less prevalent than the statewide data.

Table 1: Crashes in Murfreesboro by Contributing Factors – Statewide Comparison

Category	Emphasis Areas	City of Murfreesboro				State of Tennessee
		# of Fatal Crashes	# of Serious Injury Crashes	Total	% Fatal & Serious Injury Crashes	% Fatal & Serious Injury Crashes
All Severe Crashes		38	331	369	100.0%	100.0%
Roadway	Intersections	12	133	145	39.3%	26.7%
	Roadway Departures	12	186	198	53.7%	25.6%
Drivers	Aggressive Drivers / Speeding	3	46	49	13.3%	12.0%
	Senior Drivers (65+)	9	52	61	16.5%	18.0%
	Teen Drivers (13-19)	8	47	55	14.9%	13.6%
	Unrestrained Occupants	12	68	80	21.7%	25.7%
	Impaired Drivers	1	9	10	2.7%	12.3%
	Inattentive, Distracted, & Drowsy Drivers	1	6	7	1.9%	4.6%
Vehicles	Motorcycles	6	56	62	16.8%	14.9%
	Large Trucks (Truck/Bus)	3	18	21	5.7%	5.8%
Special Users	Pedestrians	6	23	29	7.9%	9.2%
	Bicycles	3	10	13	3.5%	1.3%

Table 2: Crashes in Murfreesboro by Contributing Factors – Statewide Urban Area Comparison

Category	Emphasis Areas	City of Murfreesboro				Urban Areas – State of Tennessee
		# of Fatal Crashes	# of Serious Injury Crashes	Total	% Fatal & Serious Injury Crashes	% Fatal & Serious Injury Crashes
All Severe Crashes		38	331	369	100.0%	100.0%
Roadway	Intersections	12	133	145	39.3%	30.9%
	Roadway Departures	12	186	198	53.7%	15.9%
Drivers	Aggressive Drivers / Speeding	3	46	49	13.3%	14.4%
	Senior Drivers (65+)	9	52	61	16.5%	17.0%
	Teen Drivers (13-19)	8	47	55	14.9%	16.5%
	Unrestrained Occupants	12	68	80	21.7%	22.5%
	Impaired Drivers	1	9	10	2.7%	10.3%
	Inattentive, Distracted, & Drowsy Drivers	1	6	7	1.9%	5.7%
Vehicles	Motorcycles	6	56	62	19.2%	13.4%
	Large Trucks (Truck/Bus)	3	18	21	5.7%	7.4%
Special Users	Pedestrians	6	23	29	7.9%	12.8%
	Bicycles	3	10	13	3.5%	1.6%

Crash Data Analysis

Table 3 summarizes crashes by KABCO Scale severity and year occurring on all roadways within the City of Murfreesboro, which shows a gradual increase in total crashes over a 5-year period.

Table 3: Crashes in Murfreesboro by Severity

Year	Fatal Injury (K)	Serious Injury (A)	Minor Injury (B)	Possible Injury (C)	PDO (O)	Total
2020	8	54	566	394	3,592	4,614
2021	4	65	396	677	4,167	5,309
2022	7	80	407	622	4,368	5,484
2023	9	60	441	643	4,230	5,383
2024	10	72	443	489	4,219	5,233
Total	38	331	2,253	2,825	20,576	26,023
Percentage of All Crashes	0.1%	1.3%	8.7%	10.8%	79.1%	100.0%

For the purposes of this study, the data includes the total number of fatalities and serious injuries resulting from crashes within the analysis period. It's important to note that a single fatal crash can result in multiple fatalities, and similarly, a serious injury crash can lead to multiple serious injuries. For the purposes of this study, only the total number of vehicle crashes, regardless of injury type, was used in the analysis.

Vehicle Miles Travelled (VMT)

Vehicle Mile Traveled data was gathered through the TDOT's Highway Performance Monitoring, which is available at the county level. From 2015 to 2024, Rutherford County experienced a growth rate in VMT of approximately 2% per year as shown in **Figure 9** below.

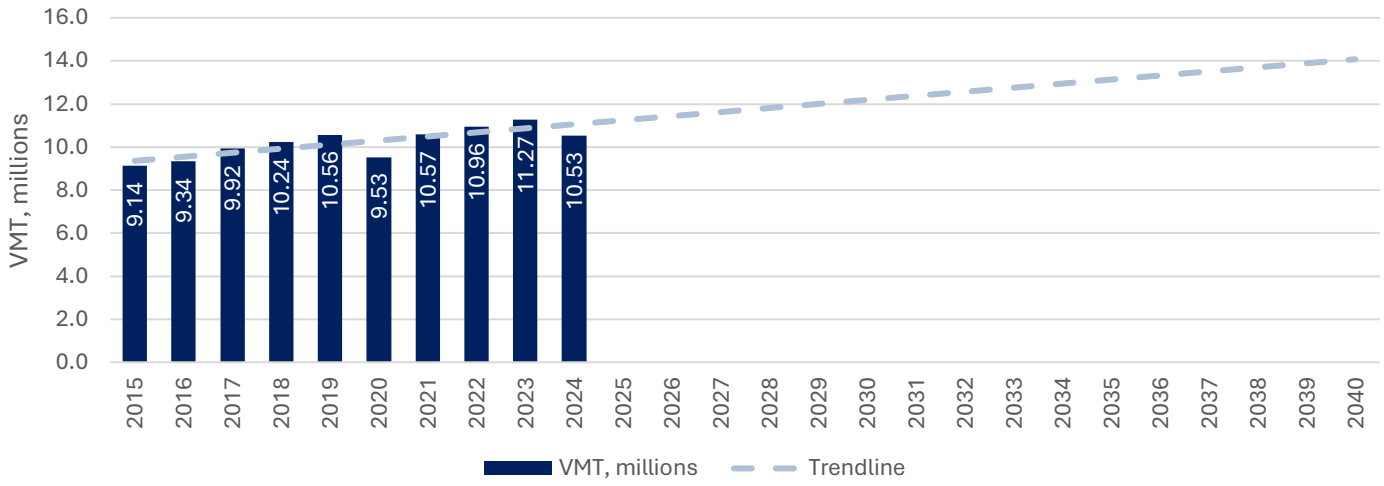


Figure 9: VMT Trends, Rutherford County

Crash Rate Analysis

Normalizing crash trends using VMT or population tells a more comprehensive story. Especially in a community with as much growth as Murfreesboro. See **Figure 10** for a comparison between Murfreesboro fatal and serious injury crash trends and Rutherford County VMT data from 2015 to 2024. As shown in the figure, from 2015 to 2019 the KA crashes tend to decrease as VMT increases. During the time period between 2020 and 2022, the KA crashes tend to increase and decrease at a similat rate to the VMT with a rapid dip in KA crashes occuring in 2023.

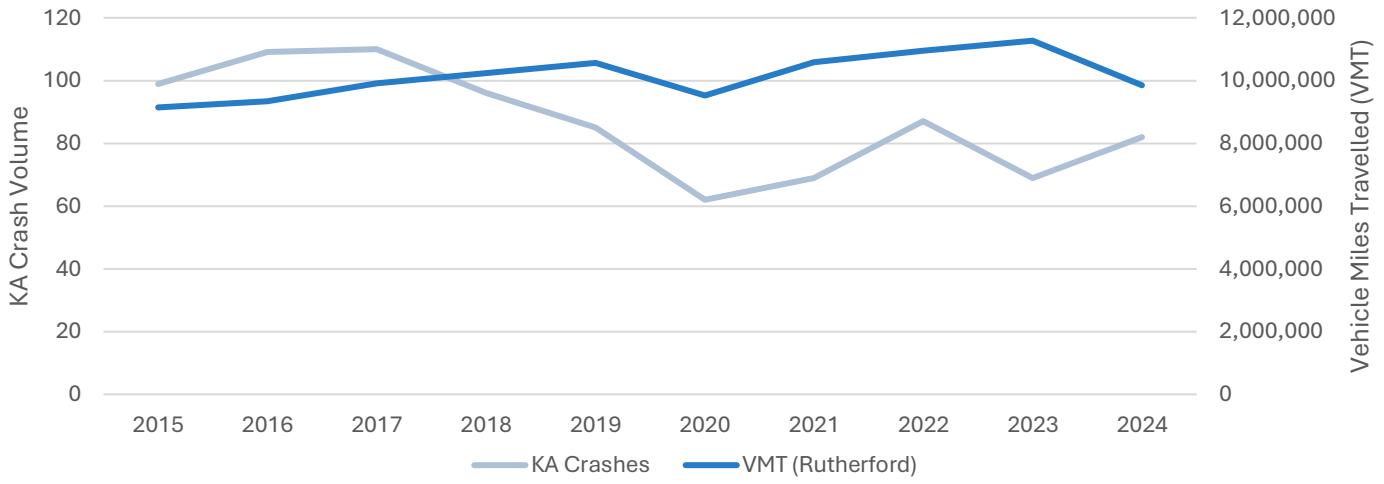


Figure 10: Murfreesboro KA Crash Trend vs Rutherford County VMT

See **Figure 11** for a comparison between Murfreesboro fatal and serious injury crash trends and Murfreesboro population growth data from 2015 to 2024. As shown, the population of Murfreesboro tends to be increasing at a constant rate while the number of KA crashes have a slight increase from 2015 to 2017 and then a rapid decrease from 2017 to 2020. Since 2020, the KA crashes have shown a slight increase.

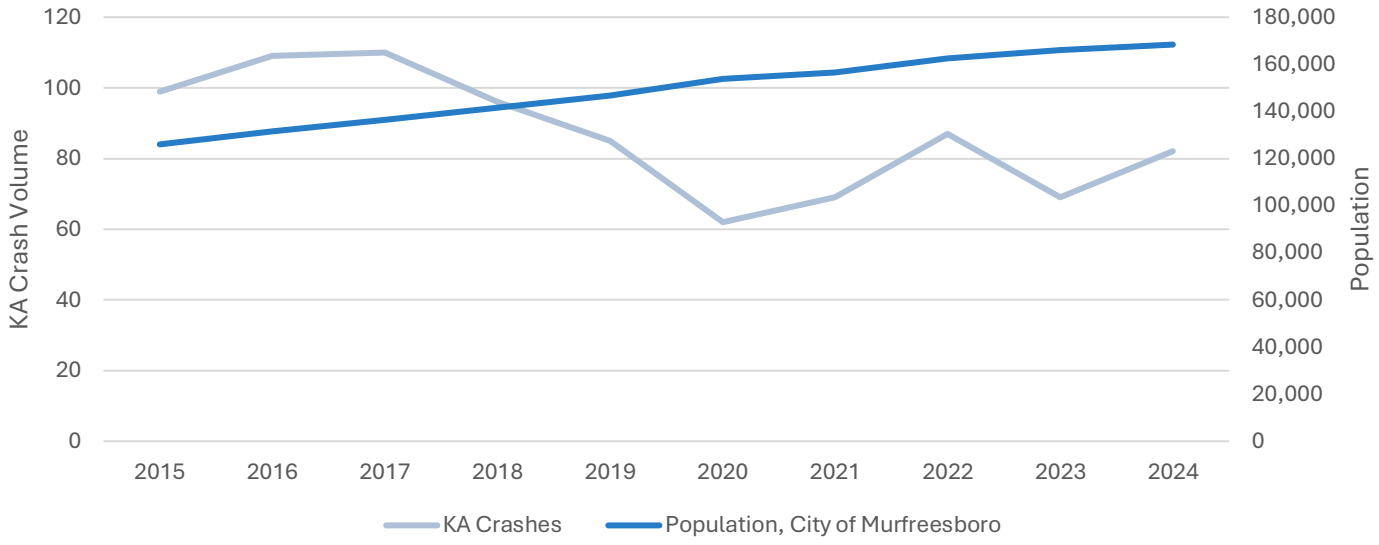


Figure 11: Murfreesboro KA Crash Trend vs City Population

Fatal Crash Rates

Figure 12 illustrates the five-year rolling average of the total fatal crashes expressed in terms of fatal crashes per million vehicle miles traveled per year. As shown, the rate is rapidly decreasing, and annual crash rates are shown. By 2040, the growth rate is projected to decrease by 93%.

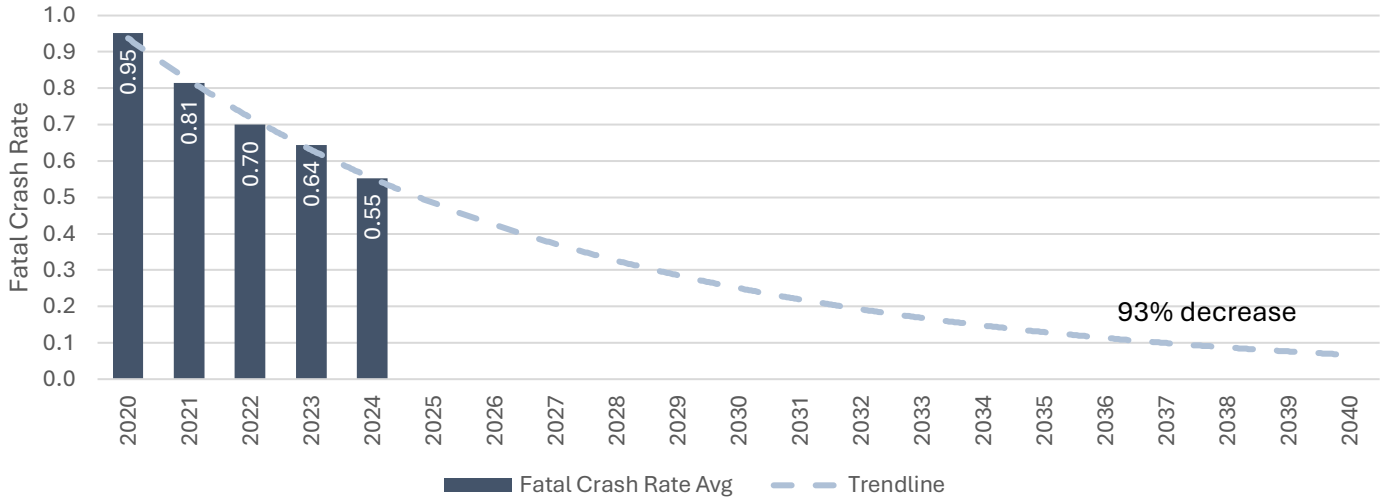


Figure 12: Fatal Crash Rates in Murfreesboro

Serious Injury Crash Rates

Figure 13 illustrates the five-year rolling average of the total serious injury crashes. The rates are decreasing at a smaller rate over these five years. The overall decrease rate by 2040 is 79%.

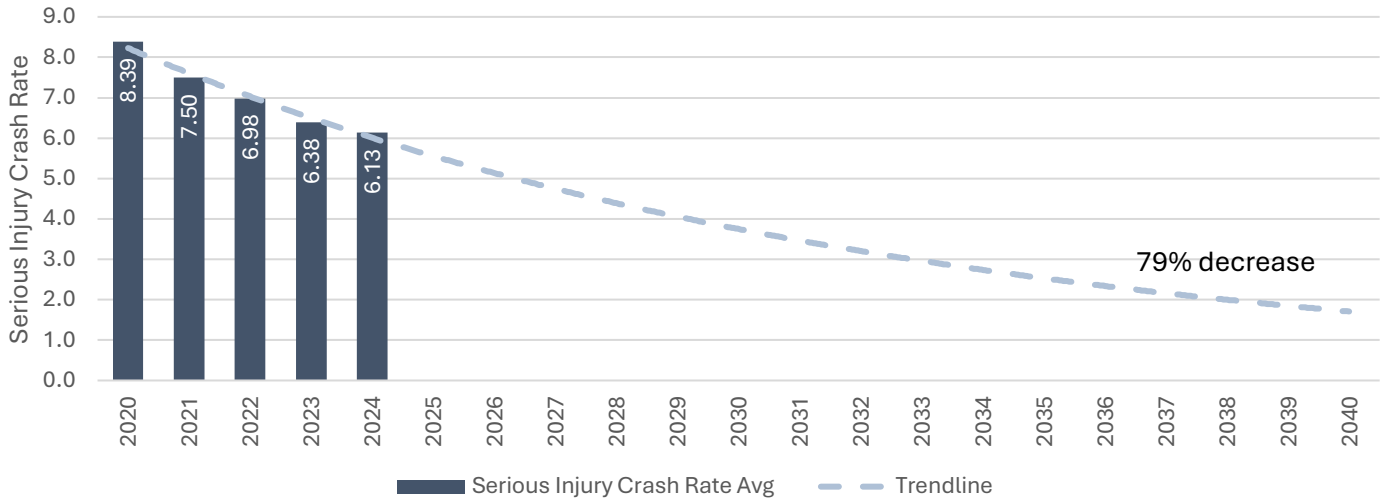


Figure 13: Serious Injury Crash Rates in Murfreesboro

VRU Crash Rates

Figure 14 illustrates the five-year rolling average of the total vulnerable road users (VRU) crashes. VRU can refer to pedestrians, cyclists, mobility device users, and shared micromobility riders who are more at-risk in the event of a motorist crash. The overall crash rate for these users has a projected decreasing rate of 73% by 2040. The annual rate is 3.65% decrease.

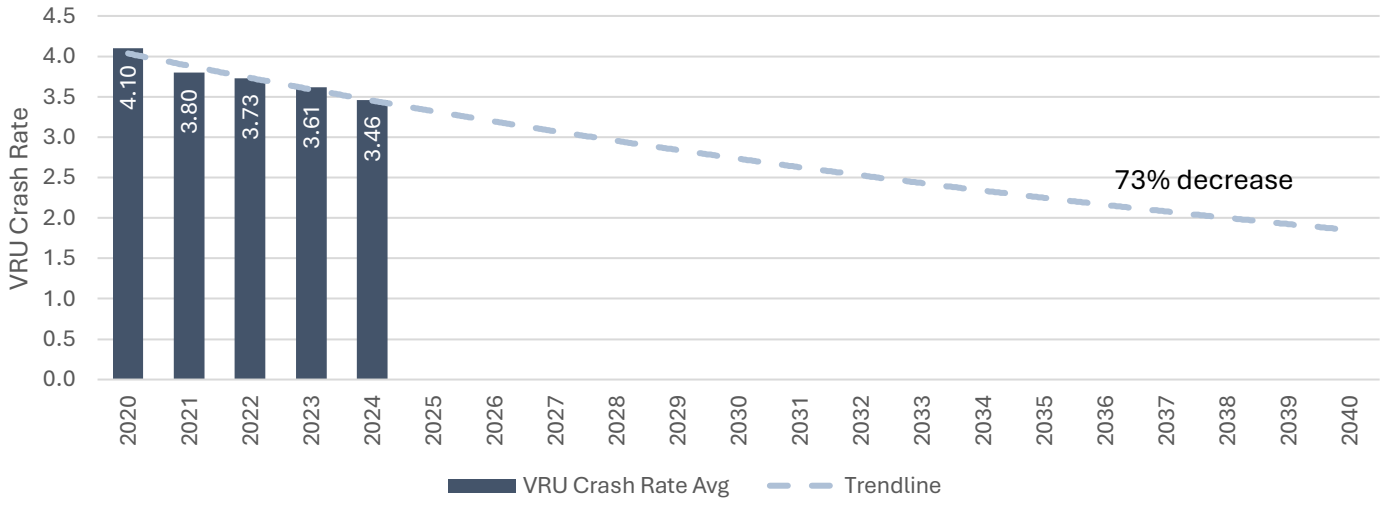


Figure 14: VRU Crash Rates in Murfreesboro

Crash Density

Crash density is defined as the total number of crashes per unit, commonly measured as crashes per unit area. **Figure 15** displays a total crash density map, highlighting locations where fatal, serious injury, and vulnerable road user crashes occurred along the roadway network. The highest crash densities are typically observed at locations with higher traffic volumes, as this translates to more exposure and potential risk for all road users. As shown in the figure, the highest crash densities can be found along Broad Street, Old Fort Parkway and S Church Steet. Some of these largely dense areas also include the interchanges off I-24.

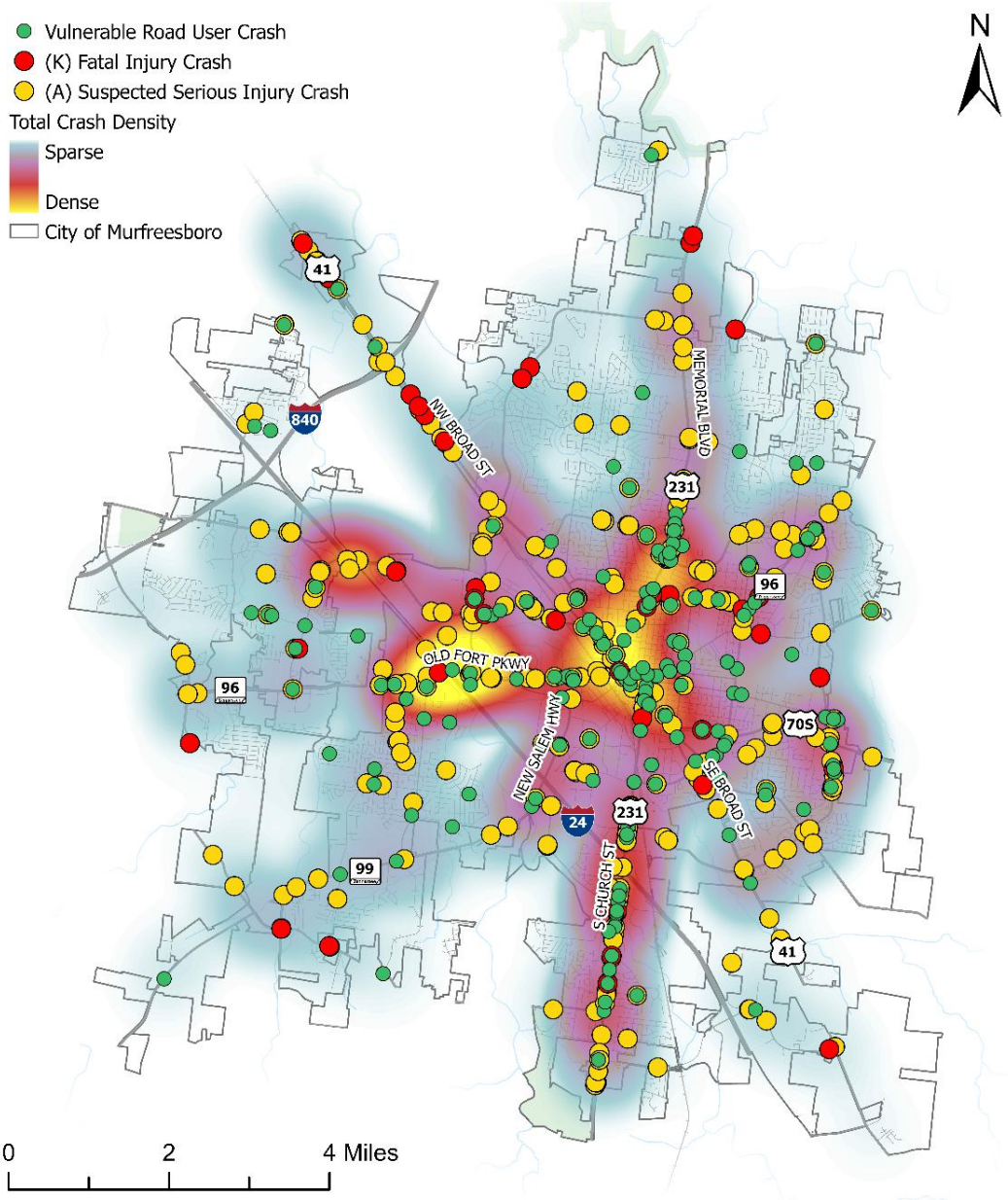


Figure 15: Fatal & Serious Injury Crashes with Overall Crash Density

Crashes by Type

Crash type is indicated on crash reports submitted by law enforcement agencies. As shown in **Table 4**, *Rear end* crashes were the most common type of crash occurring over the study period, commonly occurring at intersections or near traffic signals due to the frequent slows and stops of vehicles making turning movements. *Angle* crashes were the second most common crash type, also occurring at intersections where drivers may misjudge the adequate gaps necessary to complete safe turning movements. Various levels of traffic calming measures can be found throughout the City, including traffic circles, multi-modal accommodations, and landscaped medians along Cason Lane, which work to reduce crashes and crash types linked to high severities.

Table 4: Crashes in Murfreesboro by Type

Type of Crash	2020	2021	2022	2023	2024	Total
Angle	1,472	1,740	1,776	1,592	1,479	8,059
Rear End	1,727	1,793	1,788	1,618	1,612	8,538
No Collision with Vehicle	516	562	522	539	451	2,590
Sideswipe - Same Direction	394	527	576	582	569	2,648
Head-On	82	92	110	123	103	510
Sideswipe - Opposite Direction	71	63	94	90	104	422
Rear to Side	29	27	26	33	32	147
Rear to Rear	11	15	6	12	9	53
Other	312	490	586	794	874	3,056
Total	4,614	5,309	5,484	5,383	5,233	26,023

Compared to the statewide data, the City of Murfreesboro experienced a higher percentage of *rear end* and crashes. This is likely due to frequent slows or stops at intersections and commercial driveways. The City experienced a lower percentage of *no collision with vehicle* crashes than statewide, which can be attributed to the more urbanized characteristics of the area.

Compared to other urban areas within the State of Tennessee, the City of Murfreesboro experienced a higher percentage of *rear end* crashes and a lower percentage of *angle* crashes.

Crashes by Lighting Condition

Street lighting often serves as a safety countermeasure against nighttime crashes, and it can be a streetscaping asset if it fits the context of the community and built environment. Lighting is a valuable asset to both drivers and non-motorists, allowing all parts of the travelled roadway to be visible, especially during adverse conditions. Inadequate lighting conditions can be improved through various treatments such as installing lighting structures and retroreflective striping and signage. Additionally, improvements aimed at mitigating sun glare can enhance driver awareness during sunrise and sunset, when the sun often shines directly into the driver's view at an uncomfortable angle.

The entire range of crashes by lighting condition is listed below in **Table 5**.

Table 5: Crashes in Murfreesboro by Lighting Condition

Lighting Condition	2020	2021	2022	2023	2024	Total
Daylight	3,091	3,504	3,689	3,437	3,155	16,876
Dark - Lighted	901	972	942	869	874	4,558
Dark - Not Lighted	125	156	162	161	147	751
Dusk	162	148	104	101	128	643
Dawn	40	35	38	38	72	223
Other	295	494	549	777	857	2,972
Total	4,614	5,309	5,484	5,383	5,233	26,023

Table 6 refers to the crashes by lighting for fatal and serious injury crashes. As shown, approximately 45% of fatal and serious injury crashes occurred during non-daylight conditions (e.g., dark, dusk, and dawn)

Table 6: KA Crashes in Murfreesboro by Lighting Condition

Lighting Condition	2020	2021	2022	2023	2024	Total
Daylight	30	38	51	37	46	202
Dark – Lighted	22	23	30	22	24	121
Dark – Not Lighted	6	3	4	5	5	23
Dusk	3	5	1	2	2	13
Dawn	-	-	1	-	3	4
Dawn	1	-	-	3	2	6
Total	62	69	87	69	82	369

As seen in **Figure 16**, non-daylight crashes are frequent throughout a majority of the City, with a dense hotspot near the I-24 at Old Fort Parkway interchange.

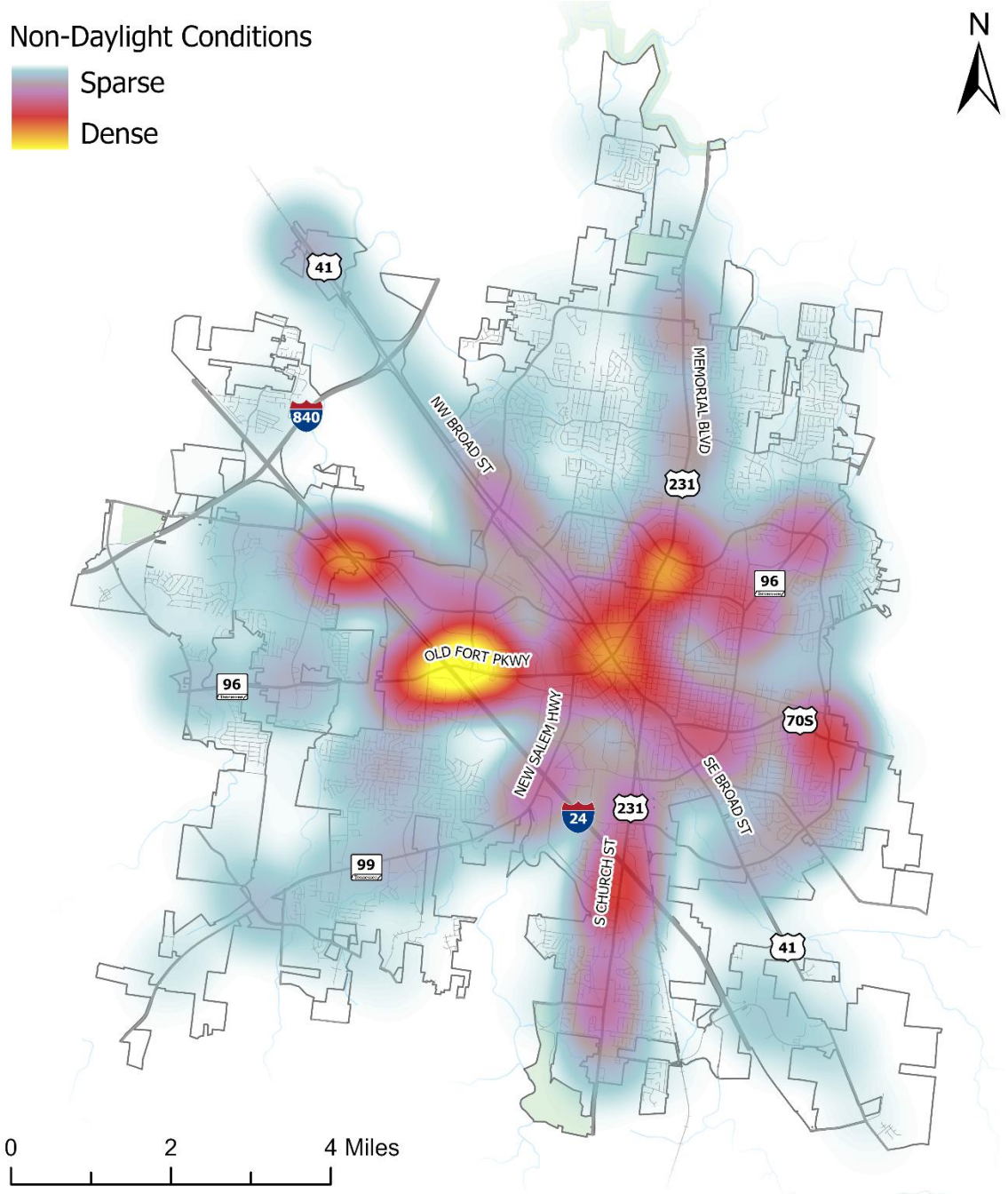


Figure 16: Murfreesboro Non-Daylight Crash Density

Crashes by Road Surface Condition

The condition of the road surface affects how vehicles interact with the roadway and directly influences the frequency of crashes. Wet pavement can reduce tire traction and exacerbate the frequency and severity of vehicle crashes. Inadequate roadway surface conditions can be improved through various pavement friction applications and treatments, as well as upgrading striping and signage to be more visible during adverse conditions.

The entire range of crashes by roadway surface condition is listed below in **Table 7**.

Table 7: Crashes in Murfreesboro by Road Surface Condition

Surface Condition	2020	2021	2022	2023	2024	Total
Dry	3,248	3,845	4,073	3,723	3,622	18,511
Wet	1,080	940	839	900	753	4,512
Snow	4	34	33	1	26	98
Ice	-	39	15	-	13	67
Unknown	282	451	524	759	819	2,835
Total	4,614	5,309	5,484	5,383	5,233	26,023

Table 8 shows a breakdown of fatal and serious injury crashes by roadway conditions. Approximately 16% of these occurred during wet or icy conditions.

Table 8: KA Crashes in Murfreesboro by Road Surface Condition

Surface Condition	2020	2021	2022	2023	2024	Total
Dry	47	58	71	60	72	308
Wet	15	10	14	9	9	57
Ice	-	1	2	-	-	3
Unknown	-	-	-	-	1	1
Total	62	69	87	69	82	369

As seen in **Figure 17**, non-dry surface condition crashes are frequent at several interchanges with I-24, along with dense hotspots along Memorial Boulevard and Broad Street.

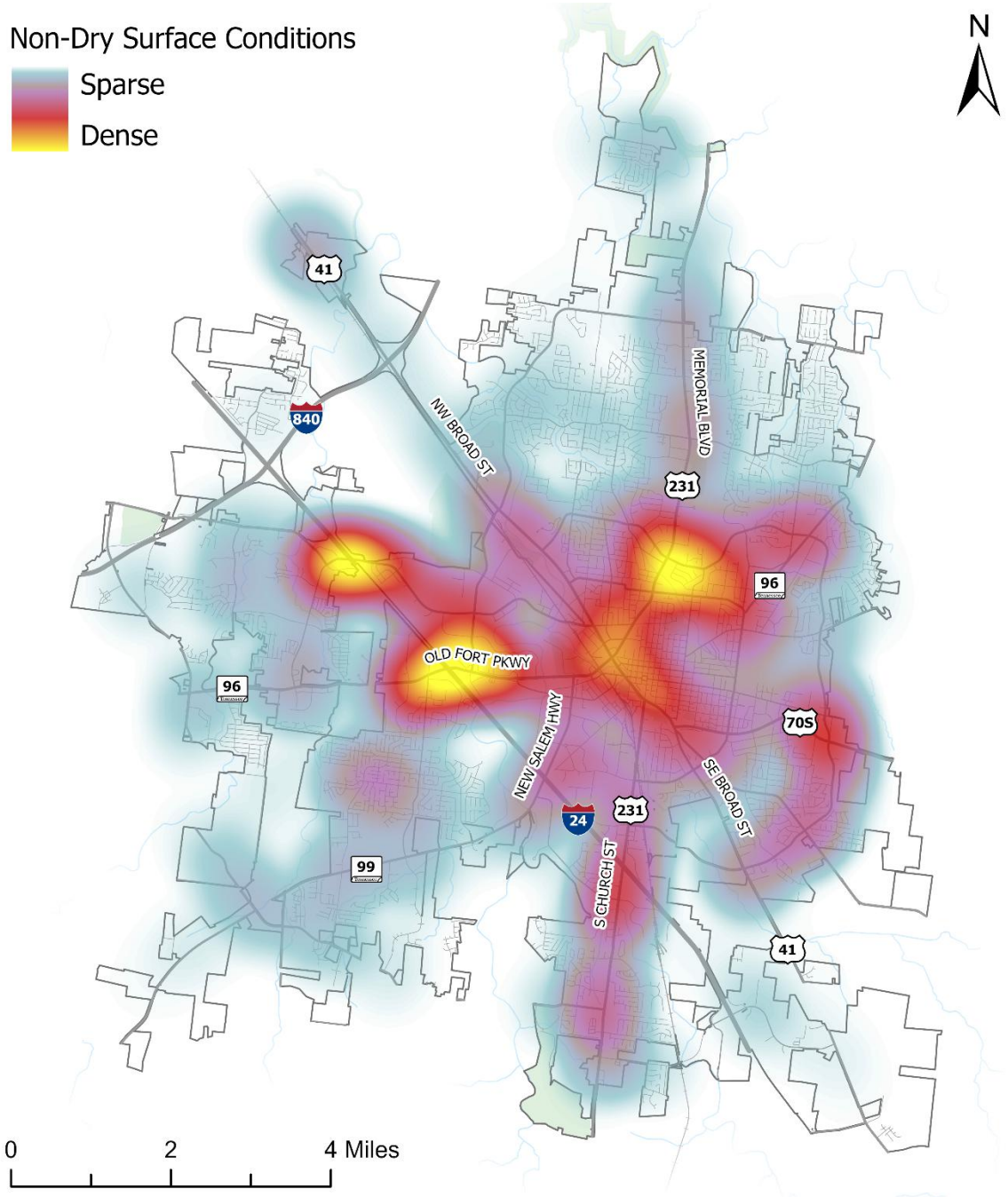


Figure 17: Murfreesboro Non-Dry Roadway Conditions Crash Density

High Crash Locations

The total number of crashes at a location does not tell the whole story, as areas with higher traffic volume are more likely to experience a greater frequency of crashes. Crash rate calculations account for traffic volumes to provide a more effective comparison among study corridors. The crash rates shown in **Table 9** below are expressed as crashes per 1 million total entering vehicles (TEV) and were calculated using the FHWA Roadway Departure Safety manual methodology. **Table 9** and **Table 10** summarizes the top 10 city roadway intersections, total crashes, and fatal and serious injury crashes, respectively. While these metrics were not the only criteria for inclusion in the HIN, this analysis was an important first step in HIN development.

Table 9: High Crash Intersections

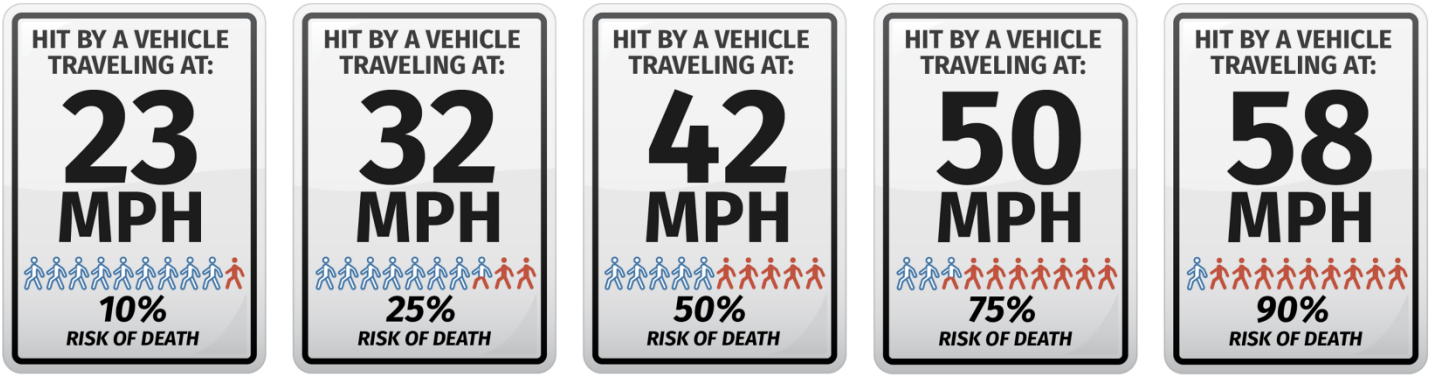
Intersection	Control Type	Total Crashes	Rank by Total Crashes	TEV	Crash Rate	Rank by Crash Rate
Old Fort Pkwy at Cason Ln / John R Rice Blvd	Signalized	262	2	45,000	3.19	1
Old Fort Pkwy at Chaffin Pl / Thompson Ln	Signalized	327	1	60,000	2.99	2
Rutherford Blvd at Dr. Martin Luther King Jr. Blvd	Signalized	194	4	45,000	2.36	3
N Rutherford Blvd at Lascassas Pk	Signalized	143	10	35,000	2.24	4
Old Fort Pkwy at Agripark Dr / Saint Andrews Dr	Signalized	149	9	37,500	2.18	5
Memorial Blvd at Dejarnette Ln/Haynes Dr	Signalized	171	7	45,000	2.08	6
Memorial Blvd at Northfield Blvd	Signalized	228	3	60,000	2.08	7
Broad St at Medical Center Pkwy	Signalized	184	5	50,000	2.02	8
Memorial Blvd at Clark Blvd	Signalized	181	6	62,500	1.59	9
Church St at Butler Dr / Warrior Dr	Signalized	170	8	65,000	1.43	10

Table 10: High KA Crash Intersection

Intersection	Control Type	KA Crashes	TEV	Crash Rate	Rank by Crash Rate
Broad St at Medical Center Pkwy	Signalized	6	50,000	0.07	5
S Rutherford Blvd. at S.E. Broad St.	Signalized	3	32,000	0.05	7
Armstrong Valley Rd.at Veterans Pkwy.	Signalized	3	20,000	0.08	1
New Salem Hwy. at Warrior Dr.	Signalized	5	35,000	0.08	4
MLK Blvd at Middle Tennessee Blvd.	Signalized	3	45,000	0.04	8
Saint Andrews Dr. at Veterans Pkwy.	Signalized	3	20,000	0.08	1
Mi-Tech Dr. at S. Church St.	TWSC	3	30,000	0.05	6
Perimeter Place Dr.at S. Church St.	TWSC	4	61,000	0.04	9
Joe B. Jackson Pkwy/Lynnford Dr. at S. Church St.	Signalized	3	55,000	0.03	10
Middle Tennessee Blvd. at Samsonite Blvd.	TWSC	3	20,000	0.08	1

Crashes Involving Vulnerable Road Users

Vulnerable road users (VRUs) include pedestrians, cyclists, mobility device users (e.g., wheelchairs), and shared micromobility riders (e.g., e-scooters). VRUs are more exposed and at higher risk in the event of a crash with motorists. Understanding the characteristics of roadways and their surrounding areas such as retail density, number of travel lanes, and roadway speed limits can help identify locations with potentially higher risk for VRUs. As mentioned in the **Emphasis Areas** section, motorcycle and bicyclist crashes are over-represented in the City of Murfreesboro compared to the statewide and other urban area trends. Although this can be attributed to the higher volume of VRU traffic in the area, the safety issue remains unacceptable. **Figure 18**, shown below, displays the locations where VRU crashes occurred along the Murfreesboro roadway network. The most dense areas of these crashes occur along Broad Steet near the intersections at Old Fort Parkway and W Main Street. There are also a large number of crashes along the north leg of Memorial Boulevard, east of Broad Street.



(Source: USDOT)

Crash severity for vulnerable road users increases dramatically as vehicle speeds rise, with FHWA data showing a much higher likelihood of fatal or serious injury for pedestrians and cyclists struck at higher speeds compared to those struck at lower speeds. Vehicle speed is one of the most critical factors influencing crash severity for vulnerable road users. FHWA data illustrates that even modest increases in speed substantially raise the risk of fatal and serious injuries for pedestrians and cyclists, underscoring the importance of speed management on City streets.

Upgrading pedestrian crossings with pedestrian signal equipment, or other improvements such as RRFBs (Rectangular Rapid Flashing Beacons) and PHBs (Pedestrian Hybrid Beacons) can help to reduce conflicts between vehicles and pedestrians, while also forcing vehicles into more restrictive measures when yielding to non-motorists.

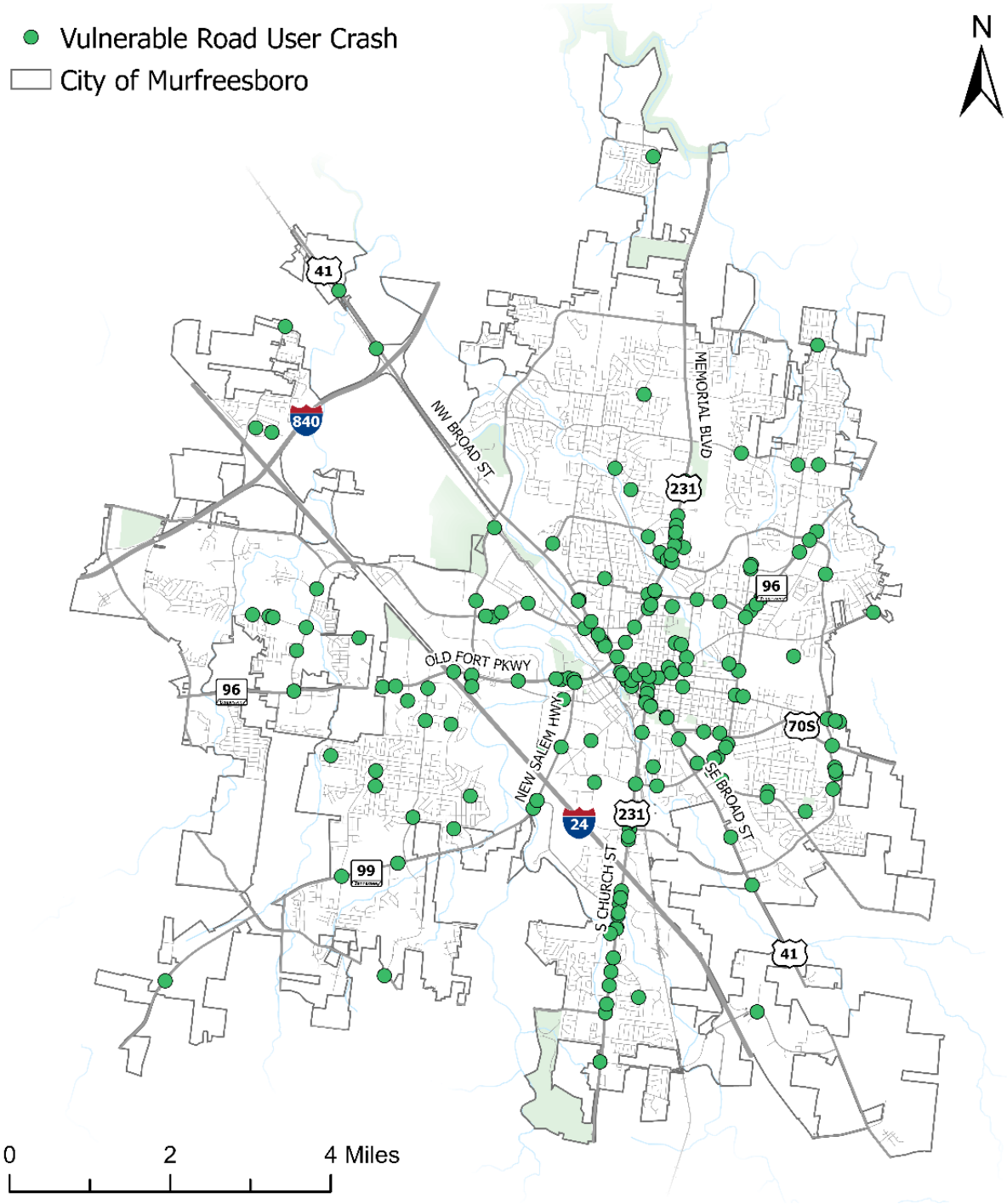


Figure 18: Crashes Involving Vulnerable Road Users (2019-2023)

Vulnerable Road User Path Connectivity

As seen in **Figure 19**, there are several areas in Murfreesboro that experience large gaps between sidewalks and multi-use paths. This disconnection can force VRUs into vehicle lanes with little to no shoulder, greatly increasing the risk of vehicular conflicts. Despite the presence of an extensive network of VRU paths in neighborhoods and parks, there is a notable lack of connectivity between neighborhoods and along higher-speed arterial and collector roads. Moreover, while many roads in the area have sidewalks, frequent switches from one side of the road to the other create numerous crossing points. These unnecessary crossings heighten the risk of conflicts between motorists and non-motorists. Implementing continuous sidewalks or shared-use paths on one or both sides of the roadway would help mitigate these conflicts and enhance overall safety. Figure 19 illustrates the locations where sidewalks are present within Murfreesboro overlayed with the total VRU crashes.

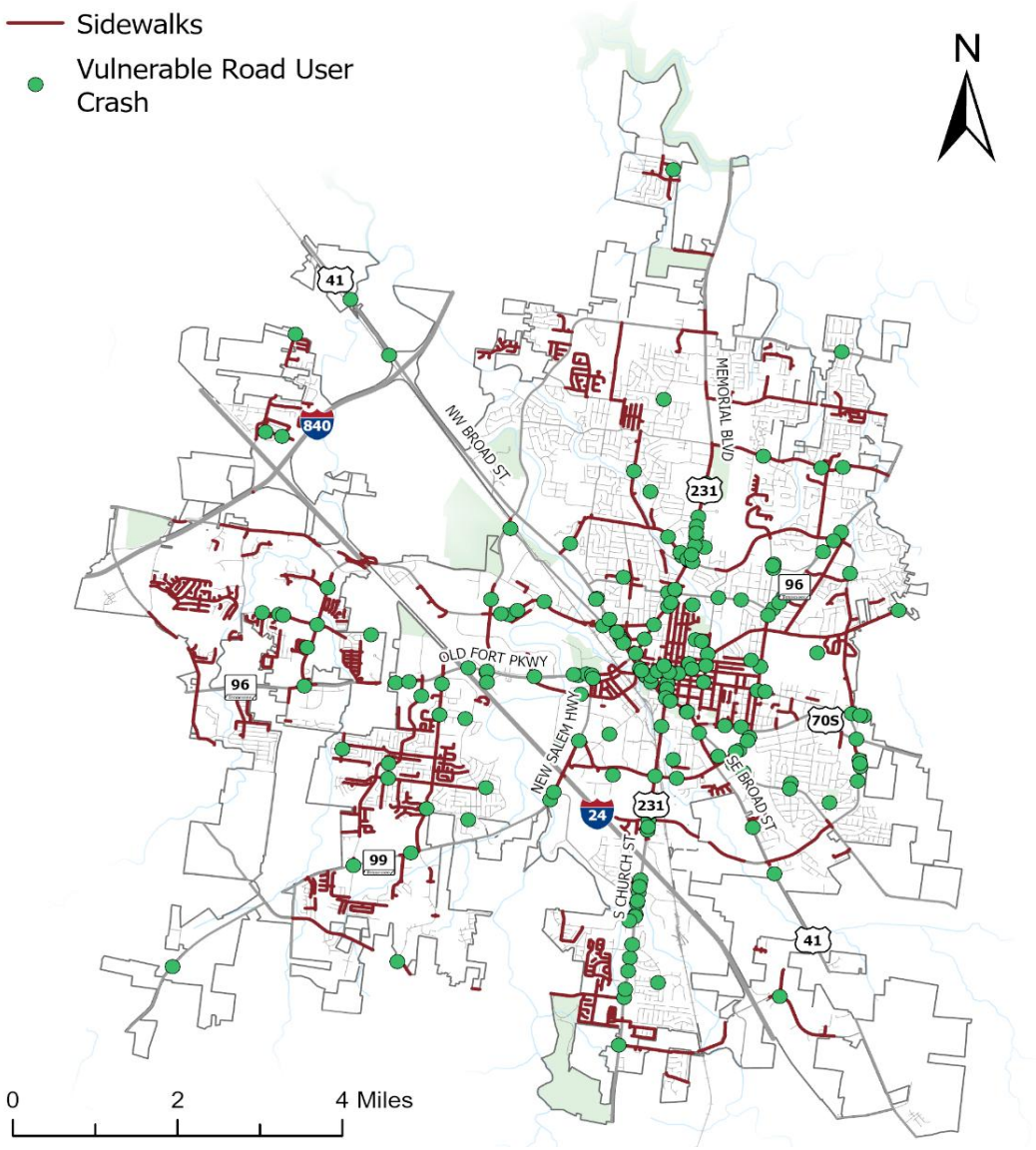


Figure 19: City of Murfreesboro Sidewalks and Multi-Use Paths

Transit Routes

Figure 20 illustrates where VRU crashes occurred relative to Murfreesboro Transit bus stops and routes. Routes primarily radiate from the city center, forming a hub pattern that connects key neighborhoods and commercial zones. Bus stops are densely clustered along these routes, especially downtown and along major corridors like Old Fort Parkway and South Church Street. This alignment indicates that public transit coverage is strongest in central and high-demand areas, providing accessibility while intersecting with several crash-prone zones. The following map overlays the 16 VRU crashes that occurred within 300 ft of a bus stop. The following bus stops experienced the greatest number of VRU crashes (i.e. within 300ft):

1. Stop ID: 14 S Church Street & NW Broad experienced five VRU crashes
2. Stop ID: 18 Farrer Bros experienced two VRU crashes
3. Stop ID: 12 Memorial & Northfield experienced two VRU crashes
4. Stop ID: 3 NW Broad & S Church experienced two VRU crashes
5. Stop ID: 5 S Church & Rutherford experienced two VRU crashes
6. Stop ID: 12 S Church & Rutherford experienced two VRU crashes

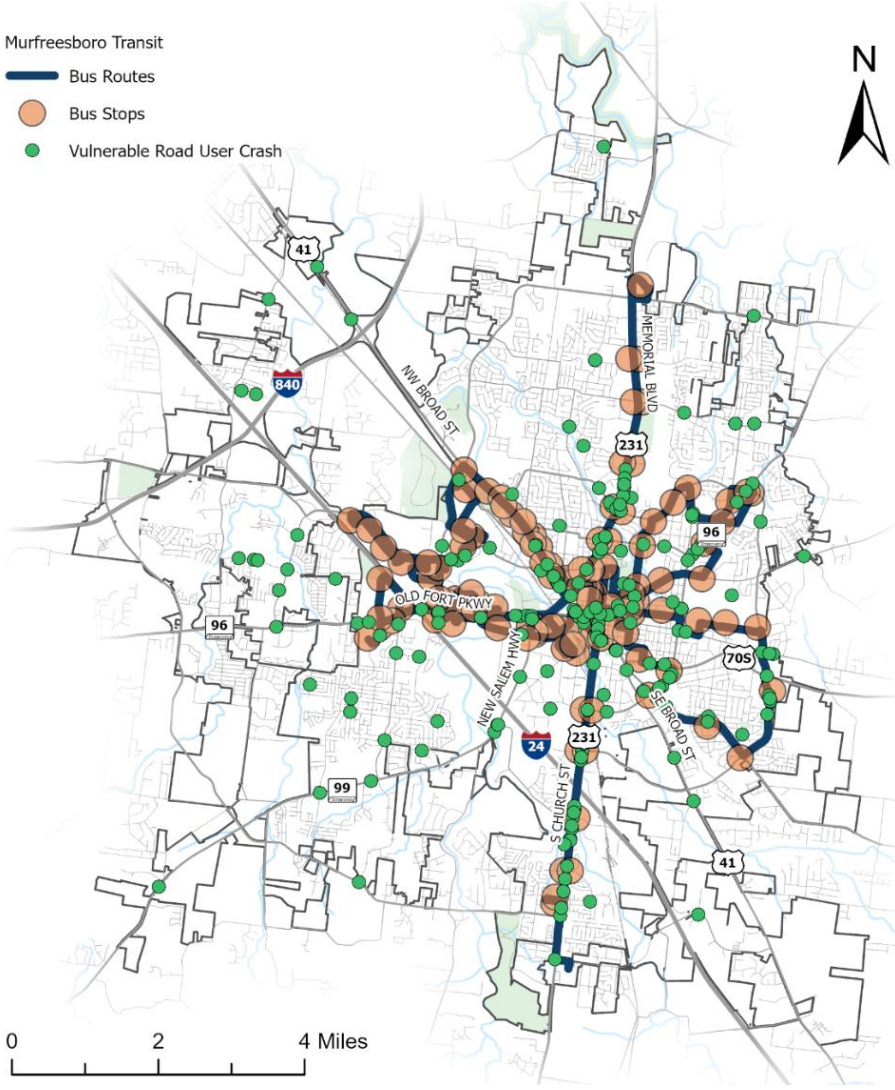


Figure 20: Murfreesboro Transit and VRU Crashes

Freight Routes

The City of Murfreesboro experiences a high presence of freight transportation due to its large industrial uses and advantageous location for connecting major hubs like Nashville and Chattanooga. **Figure 21** displays the existing freight network with an overlay of freight-related crashes as well as fatal and serious crashes that involved a truck. Over the study period, 967 truck-related crashes occurred in Murfreesboro, of which 21 resulted in a fatal or suspected serious injury. Crashes most commonly occurred along the corridors of NW Broad Street, Old Fort Parkway, and S Church Street.

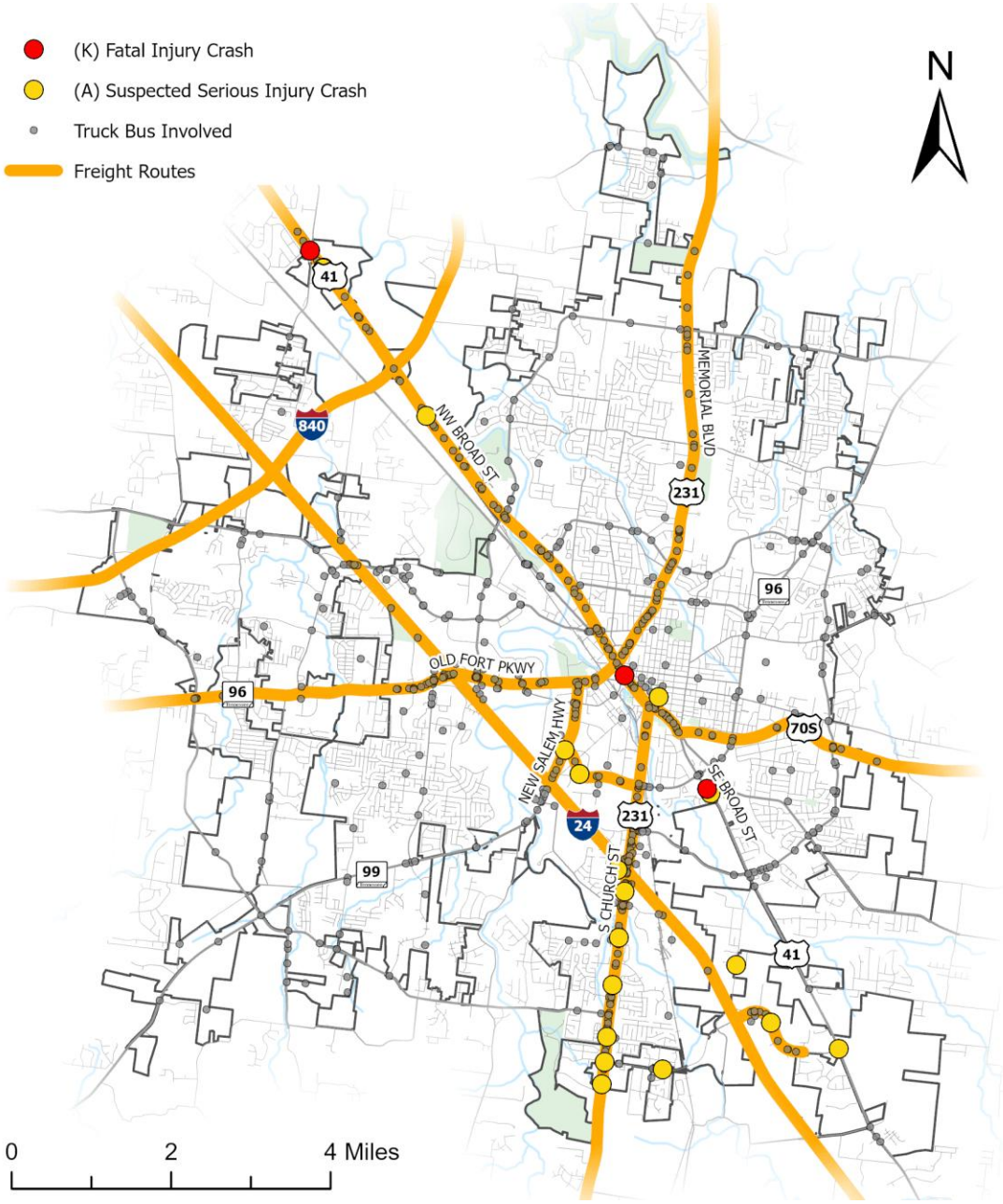


Figure 21: Freight Routes

Distracted Drivers

Distracted driving can be characterized by any activity that takes a driver's attention away from driving, such as cell phone use, eating, in-vehicle technology, or interference from a passenger. While all drivers are susceptible to distracted driving, younger drivers (15-24) and older drivers (65+) are commonly the most represented in distracted driving crashes. **Figure 22** illustrates the heat map for distracted driving related crashes across the City of Murfreesboro. As shown, the most dense areas occur along Old Fort Parkway and near the intersection at Broad Street. Other distracted driving crashes also occur at the interchange of I-24 and S Church Street.

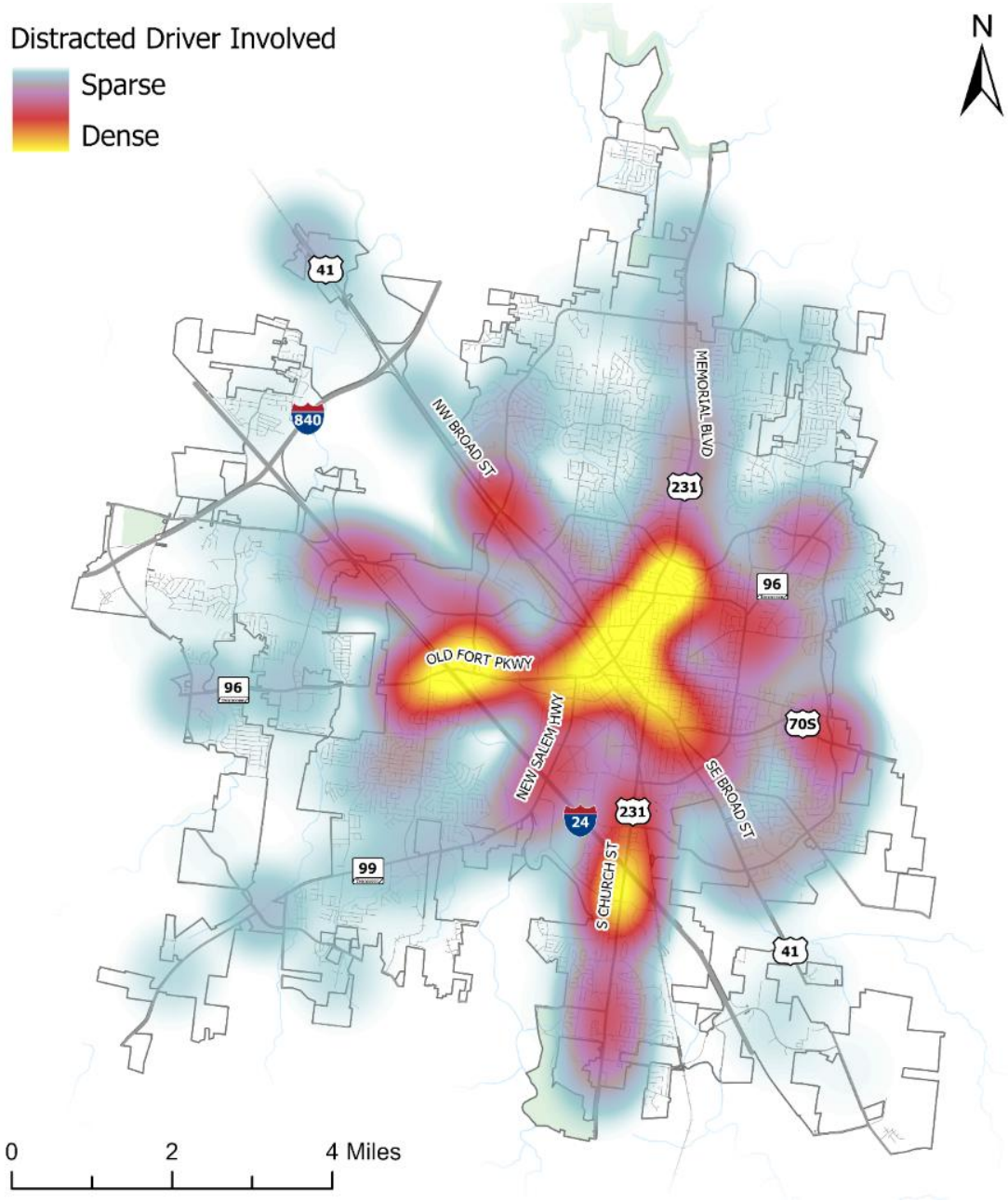


Figure 22: Murfreesboro Crashes Involving Distracted Drivers

Older Drivers

This age group (65+) is often given special consideration due to age-related changes in vision, physical fitness, and cognitive abilities, which can affect driving performance and increased crash risk. While older drivers tend to have the highest levels of experience among roadway users, they also may experience a decline in cognitive abilities. As a result, many in this age group drive less frequently, leading to a decrease in the number of drivers in this demographic. This crash type has experienced a gradual growth over the previous five years, similar to the growth trends of total crashes over the same period. A shown in **Figure 23**, the downtown area of the City as well as major intersections along Old Fort Parkway tend to be the most dense areas of crashes involving senior drivers.

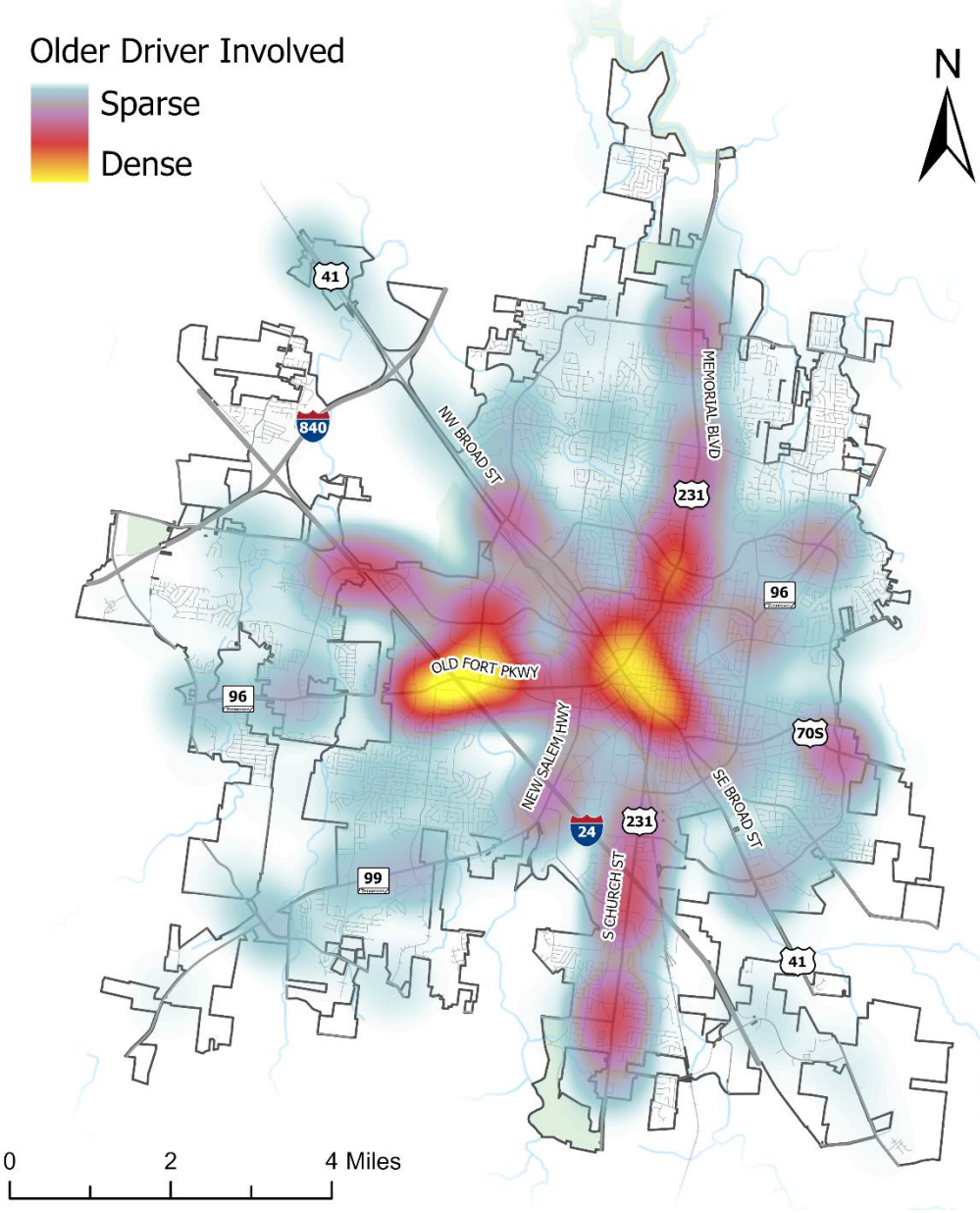


Figure 23: Murfreesboro Crashes Involving Older Drivers

Teen Drivers

This specific age group is commonly associated with higher levels of dangerous driving behaviors, which can be attributed to a combination of inexperience, risk-taking habits, and susceptibility to in-vehicle distractions (phones, passengers, etc.). This type of crash has experienced a gradual growth over the previous five years, similar to the growth trends of total crashes over the same period. **Figure 24** illustrates the heat map for the crashes with teen drivers involved. As shown in **Figure 24**, a highly dense area of this type of crash is near the interchange of I-24 and Old Fort Parkway.

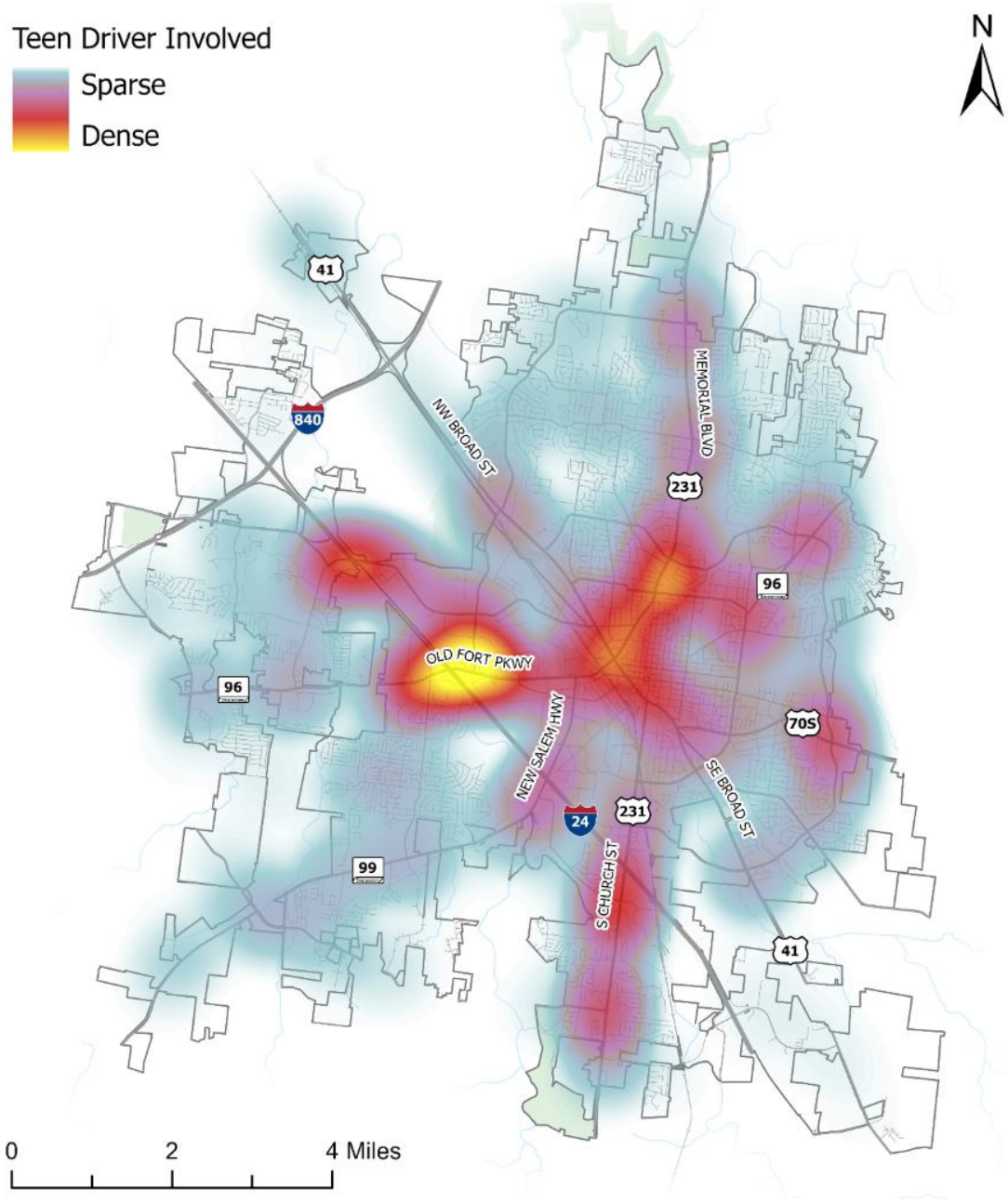


Figure 24: Murfreesboro Crashes Involving Teen Drivers

Impaired Drivers

In both total crashes and high-severity crashes, drivers between 25-34 were most commonly involved in impaired driving crashes. The totals and percentages will not sum to 100% due to the crashes involving drivers in multiple age groups. As shown in **Figure 25,** the highest crash densities occurred near and along the intersection of Broad Street and Memorial Boulevard/Old Fort Parkway.

Table 11: Impaired Drivers Crash Breakdown

Driver Age Group	Percentage of Total Crashes Involving Impaired Drivers	Percentage of Fatal & Serious Injury Crashes Involving Impaired Drivers
15-24	34%	28%
25-34	48%	38%
35-44	31%	23%
45-54	22%	11%
55-64	14%	7%
65 and Over	4%	0%

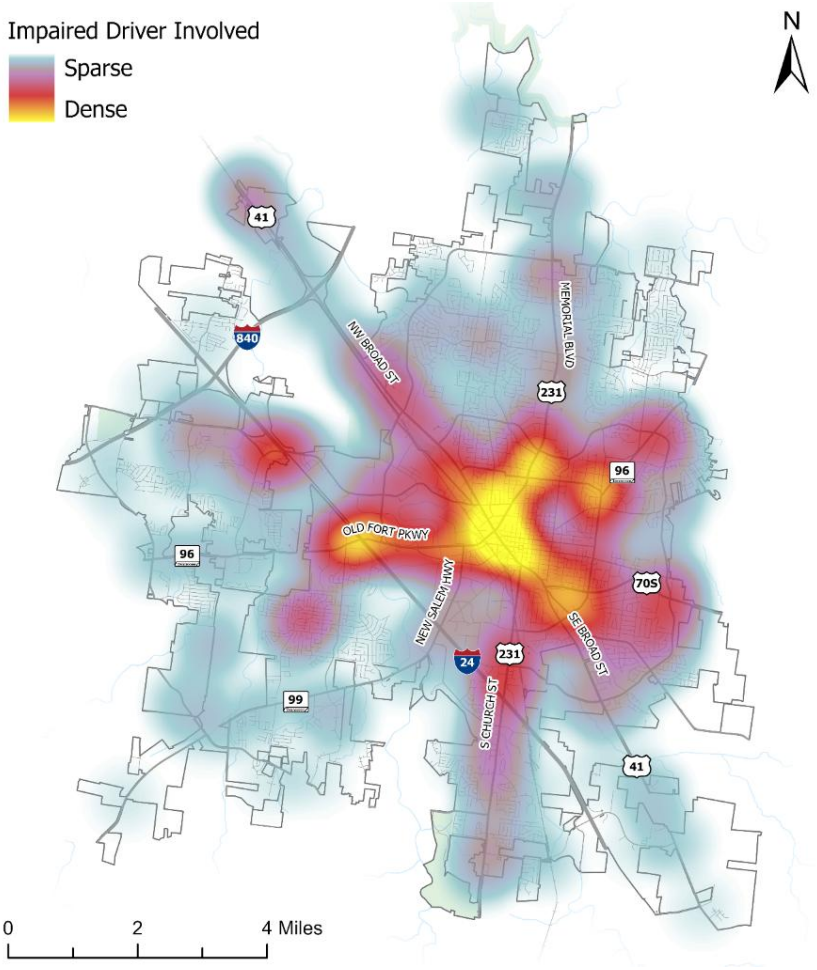


Figure 25: Murfreesboro Crashes Involving Impaired Drivers

Motorcycle Involved

While only 1% of total crashes within the study period involved a motorcycle, crashes involving a motorcycle resulted in roughly 62 fatal and serious injury crashes within the City. In terms of total crashes and fatal and serious injury crashes, drivers aged 15-24 were the most commonly involved age range. As shown in **Figure 26** the highest densities of motorcycle related crashes occur along Broad Street near Memorial Boulevard and Thompson Lane.

Table 12: Motorcycle Involved Crash Breakdown

Driver Age Group	Percentage of Total Crashes Involving Impaired Drivers	Percentage of Fatal & Serious Injury Crashes Involving Impaired Drivers
15-24	49%	39%
25-34	48%	24%
35-44	31%	12%
45-54	23%	11%
55-64	17%	21%
65 and Over	13%	9%

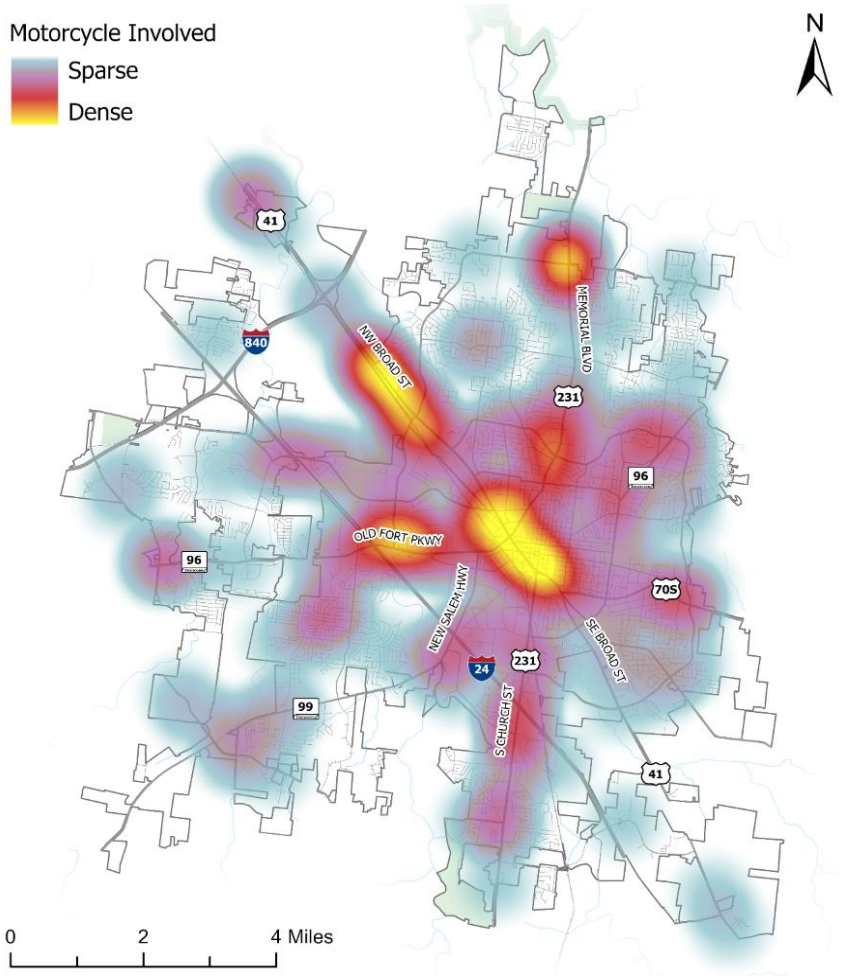


Figure 26: Murfreesboro Crashes Involving Motorcycles

Wild Animal Related Crash

Over the study period, 345 total crashes involved a wild animal, of which 77 occurred during non-daylight conditions, and fortunately none of these crashes resulted in fatal or serious injuries. While crashes are spread relatively throughout the city limits, the main dense areas are along New Salem Highway and around the central area between NW Broad Street and Old Fort Parkway. Without designated wildlife crossing areas, animals are forced to cross in uncontrolled areas where drivers are not readily expecting conflicts in their visual field.

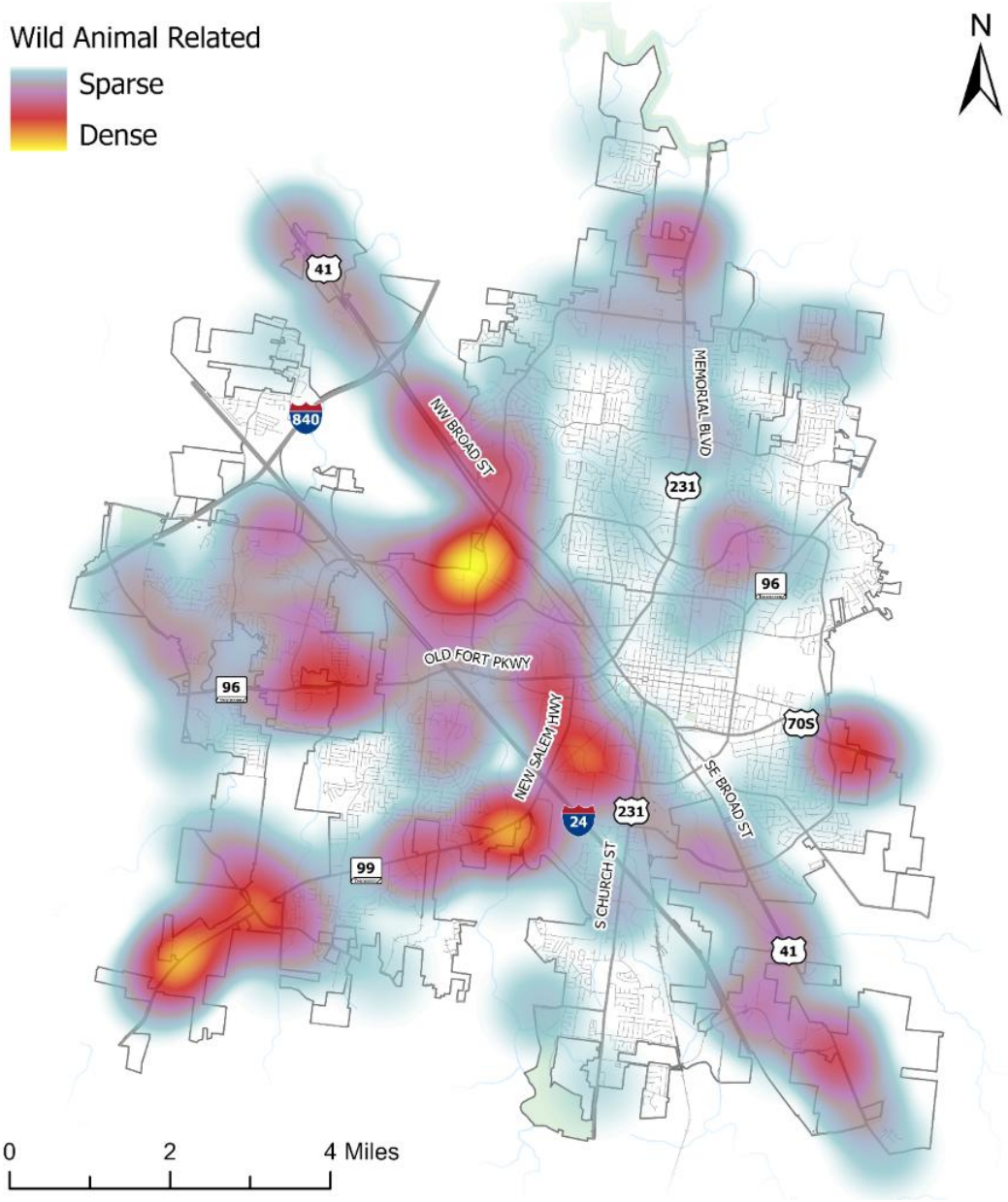


Figure 27: Murfreesboro Crashes Involving Wild Animals

Unrestrained Occupants

Out of all total crashes, the drivers between age 25-34 were most commonly involved in crashes involving an unrestrained occupant. In terms of fatal and serious injury crashes, drivers in the range of 15-24 were most commonly involved in crashes involving unrestrained occupants. As Shown in **Figure 28** the highest densities of crashes with unrestrained occupants occurred along Broad Street near Memorial Boulevard and along Old Fort Parkway, west of Broad Street.

Table 13: Unrestrained Occupants Crash Breakdown

Driver Age Group	Percentage of Total Crashes Involving Unrestrained Occupants	Percentage of Fatal & Serious Injury Crashes Involving Unrestrained Occupants
15-24	44%	33%
25-34	46%	28%
35-44	28%	12%
45-54	24%	11%
55-64	15%	21%
65 and Over	8%	9%

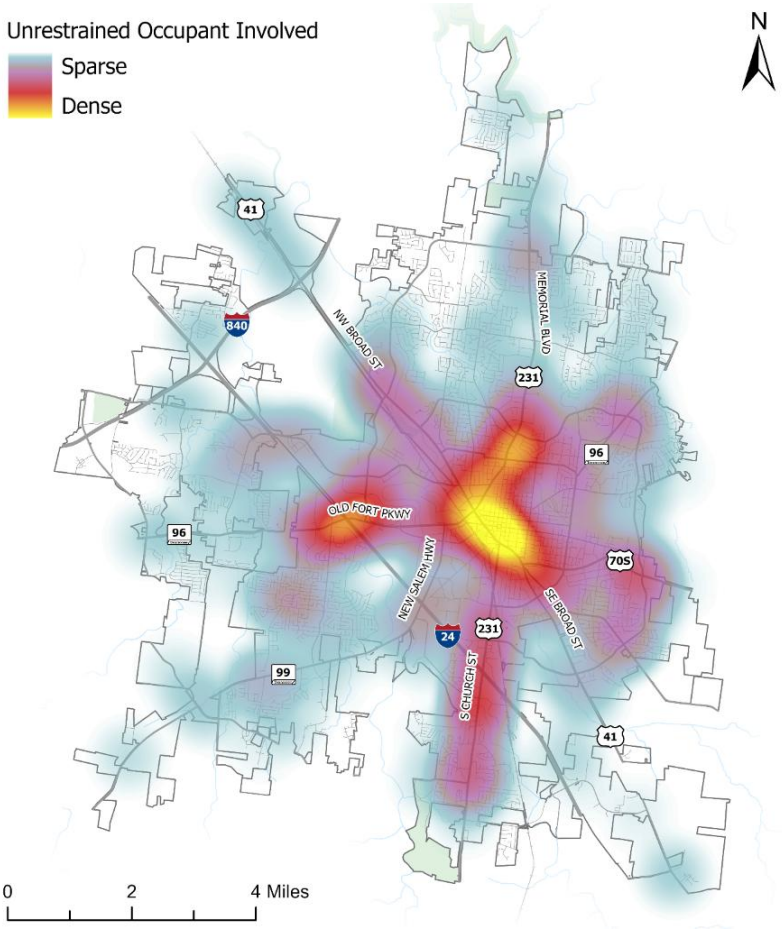


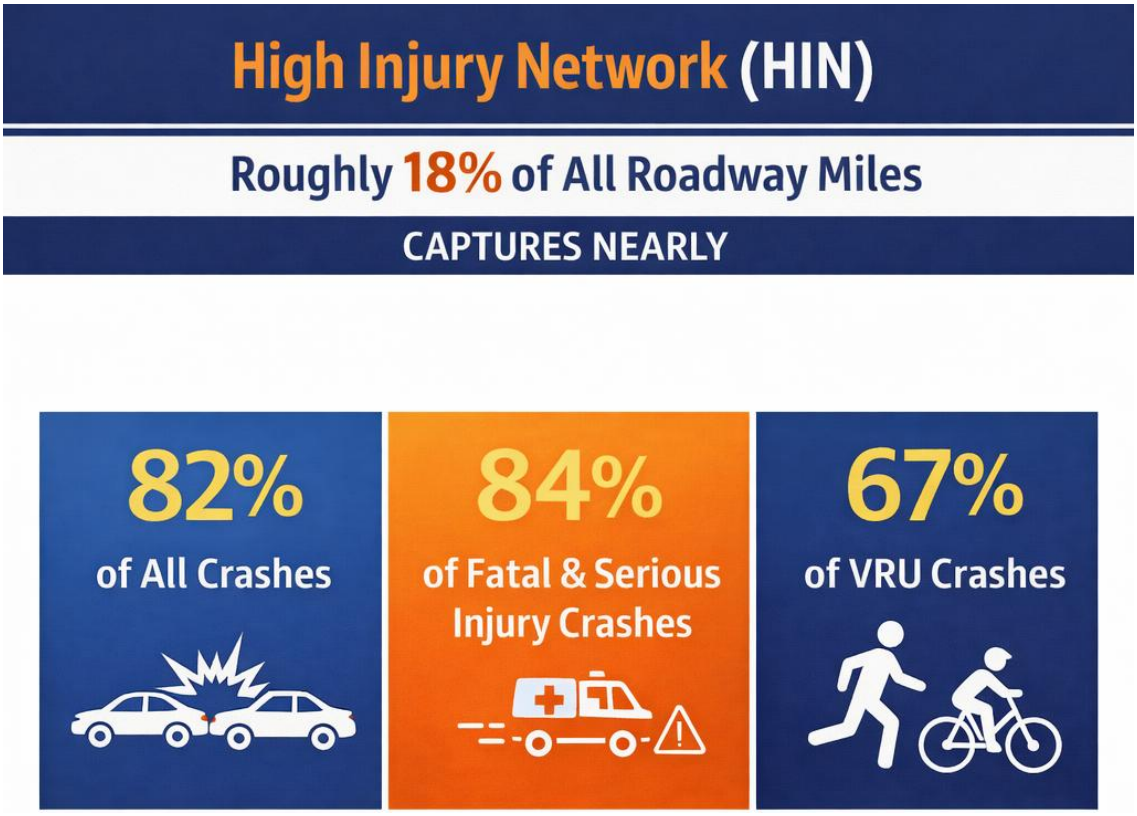
Figure 28: Murfreesboro Crashes Involving Unrestrained Occupants

Identifying a High Injury Network

A High Injury Network (HIN) was developed to identify the routes with the most fatal and serious injury crashes in the City of Murfreesboro. A HIN is a collection of corridors where a disproportionate number of these crashes occur, as well as corridors that may pose higher risks for road users. Developing a HIN allows for the proper allocation of effort and funds towards specific areas of the City that need it most. While the HIN typically includes the major thoroughfares of a study area, the methodology used also allows for minor streets and local roads to be considered and included. As detailed later in the SAP, these segments were selected using a variety of characteristics in an effort to accurately gauge the proper network. Creating the HIN is a key step toward focusing resources in the right direction to develop projects that will help reduce fatal and serious injury crashes for all road users in the City of Murfreesboro.

Methodology

The HIN was identified by first evaluating segments throughout the City of Murfreesboro's roadway network with the highest reported crash volumes and rates during the study period (2020-2024) using TDOT's AASHTOWare Safety platform and ArcGIS analysis software. Sixteen (16) high crash-rate segments were identified at logical termini (i.e., municipal boundary, road name changes, or roadway characteristic changes such as number of lanes). In an attempt to avoid selecting the highest volume roadways for the HIN, several alternate variables including crash rates, crash potential, and public comments were also considered.



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High Injury Network

The City of Murfreesboro High Injury Network (HIN), as shown in **Figure 29**, entails a collection of roadways within the City that disproportionately exhibit events and behaviors that this SAP effort means to mitigate.

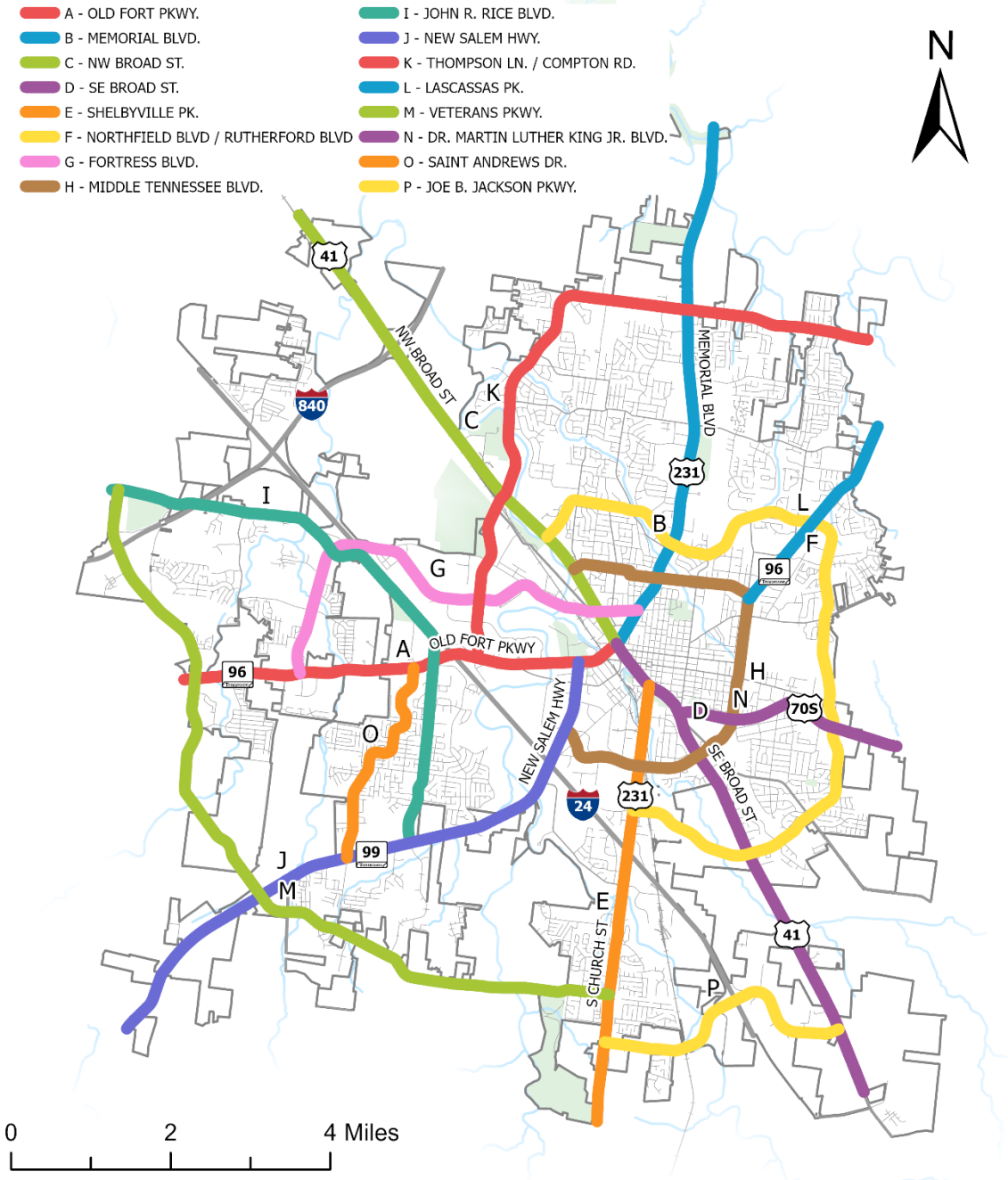


Figure 29: City of Murfreesboro High Injury Network

HIN Crash Coverage

As shown in **Figure 30**, HIN captures a high percentage of VRU crashes and fatal and serious injury crashes, which is a prominent component of the SAP process to identify and prevent in the future. Once identified as an HIN segment, countermeasures can be developed and applied to the relevant roadways in an effort to mitigate the potential for crashes to occur.

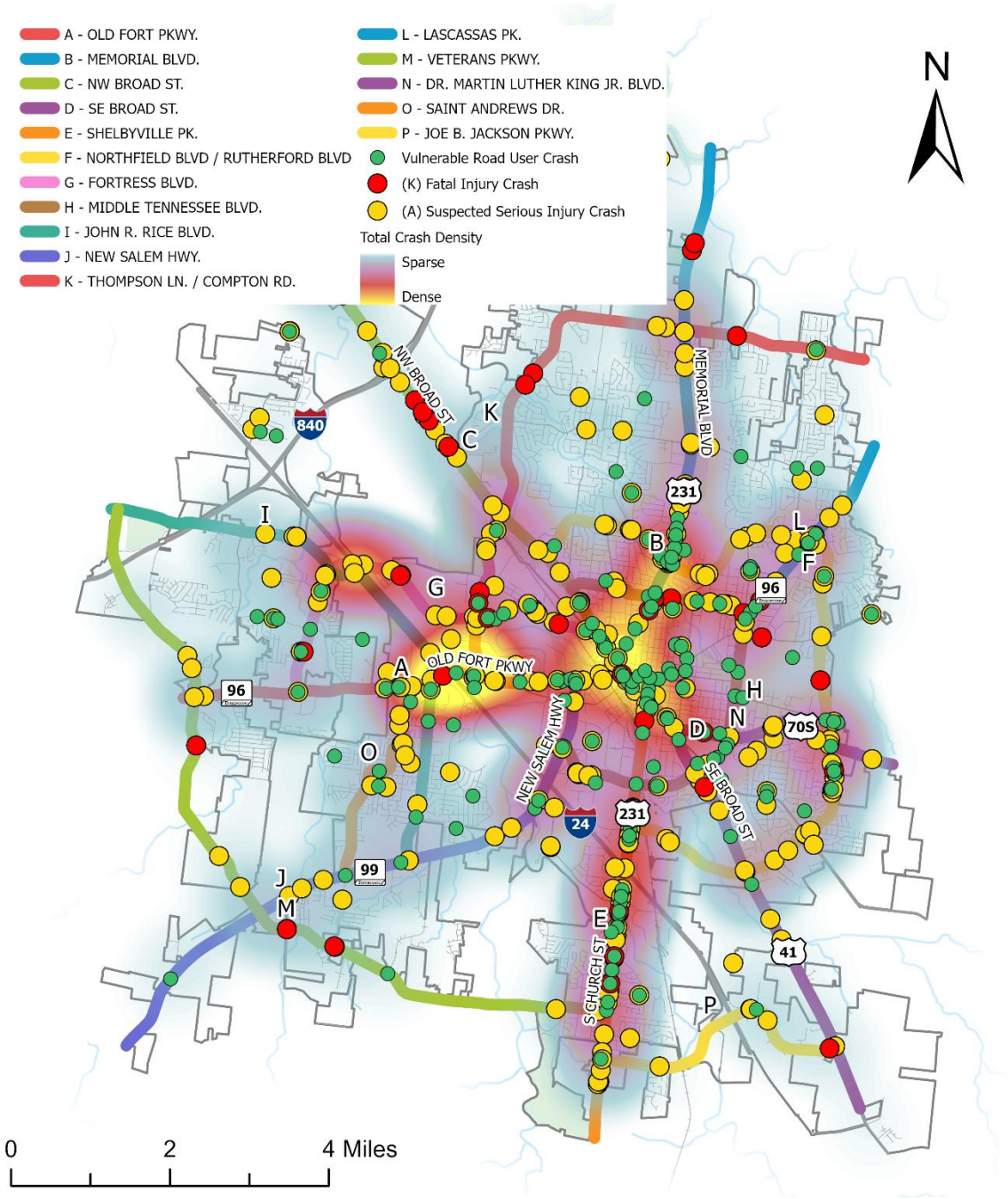


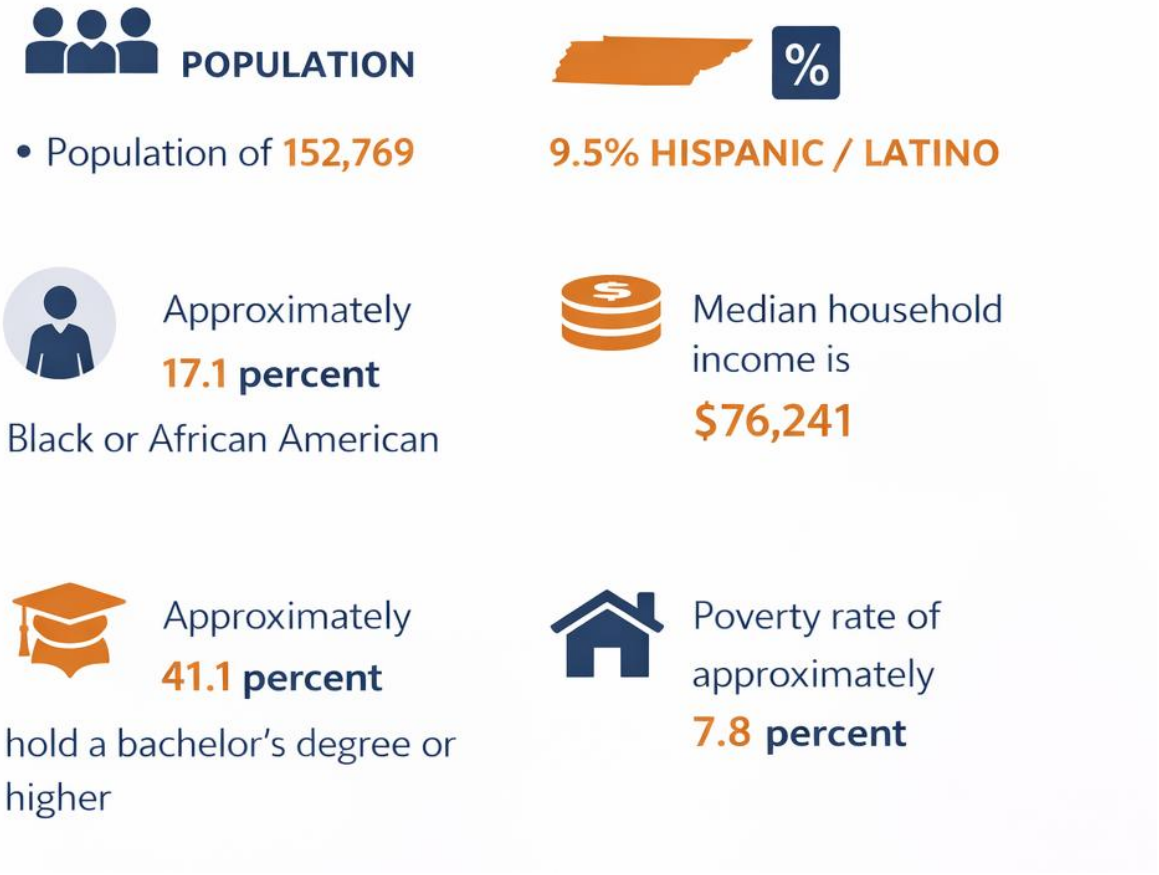
Figure 30: High Injury Network Crash Coverage

MURFREESBORO SAFE STREETS

Community Characteristics & Demographics

Community Characteristics & Demographics

This Section provides a summary of local demographics and community characteristics developed using various national datasets to better understand the City's characteristics. These findings helped form the HIN recommendations and prioritization. This was done through the lenses of both the national disadvantaged communities database and a locally developed index based on the specific attributes of the population of Murfreesboro. The following is a summary of demographic characteristics for the City of Murfreesboro.



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Historically Disadvantaged Communities

The Climate and Economic Justice Screening Tool highlights disadvantaged census tracts nationwide. A community is considered disadvantaged if it is located within a census tract that meets the threshold for one or more environmental, climate, or other burdens, and at least two associated socioeconomic burdens.

As shown below in **Figure 31**, of the 369 fatal and serious injury crashes that took place in Murfreesboro during the study period, 105 (or 28%) occurred in areas determined by the USDOT to be labeled as a Historically Disadvantaged Community.

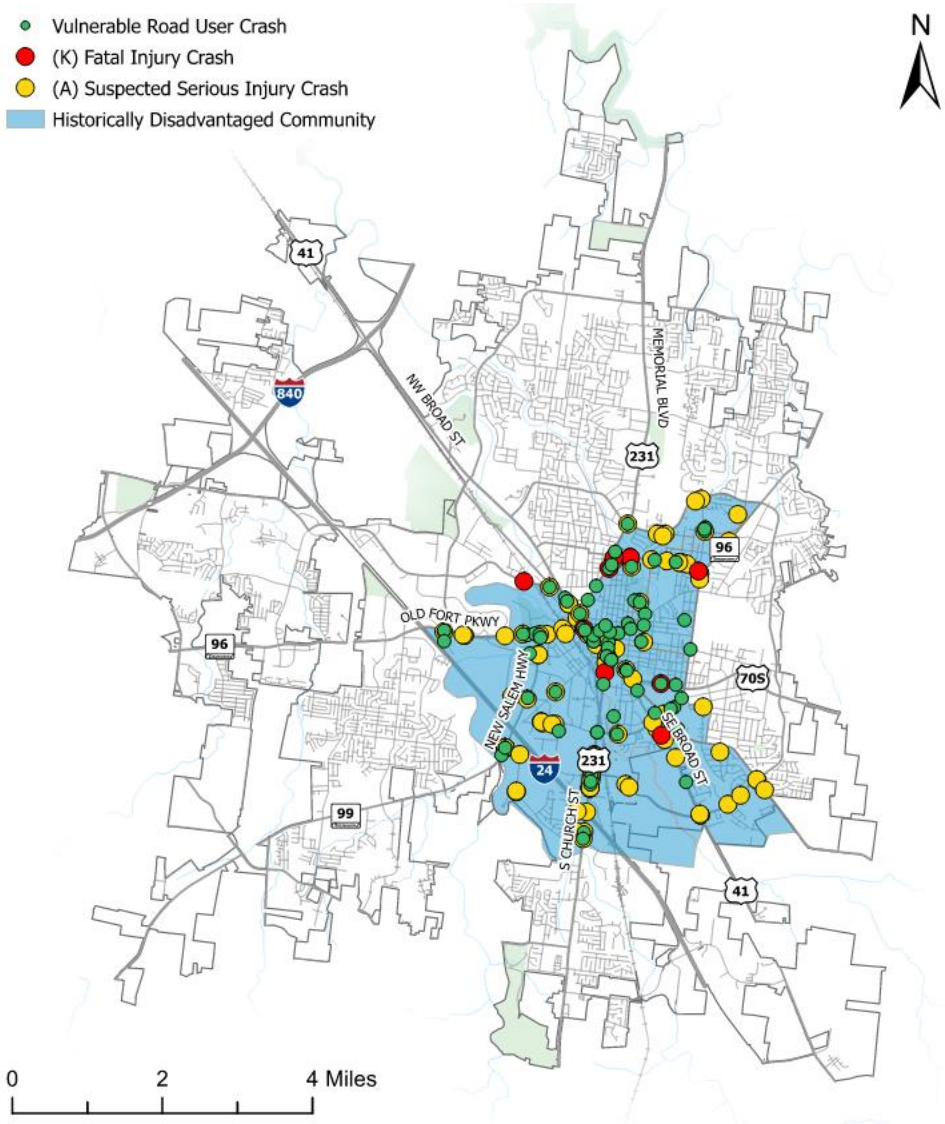


Figure 31: Historically Disadvantaged Communities

Areas of Persistent Poverty

An "Area of Persistent Poverty" is defined by the Bipartisan Infrastructure Law. A project is in an Area of Persistent Poverty if it meets one or more of the following criteria:

- The county in which the project is located consistently had greater than or equal to 20% of the population living in poverty in all three of the following datasets: (a) the 1990 decennial census; (b) the 2000 decennial census; and (c) the most recent (2021) Small Area Income Poverty Estimates; OR
- The Census Tract in which the project is located has a poverty rate of at least 20% as measured by the 2014-2018 5-year data series available from the American Community Survey of the Bureau of the Census; OR
- The project is in any territory or possession of the United States.

As shown below in **Figure 32**, of the 369 fatal and serious injury crashes occurring in Murfreesboro, 120 (33%) occurred in areas of persistent poverty.

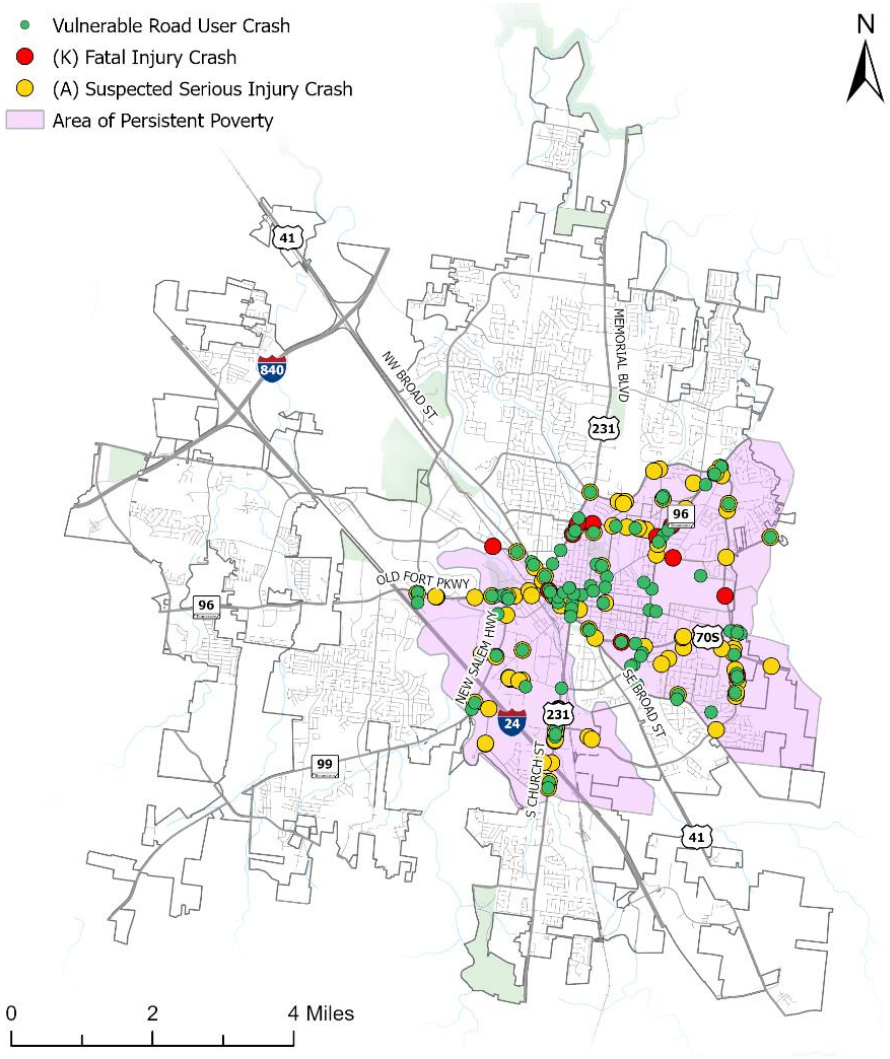


Figure 32: City of Murfreesboro Areas of Persistent Poverty

Social Vulnerability Index

The Centers for Disease Control and Prevention (CDC) developed the Social Vulnerability Index (SVI) tool that considers four overall categories of vulnerability: Socioeconomic Status, Household Characteristics, Racial & Ethnic Minority Status, and Housing Type & Transportation. Between these four categories, 16 individual variables are scaled and calculated to form an overall index score, ranging from 0 to 1 (where an index value of 1 is defined as the most socially vulnerable). Of the 369 fatal or suspected serious injury crashes occurring in Murfreesboro, 83 occurred within areas of high social vulnerability and 109 occurred within areas of medium-high social vulnerability.

The SVI results, along with an overlay of the fatal, suspected serious injury, and vulnerable road user crashes, are shown below in **Figure 33**.

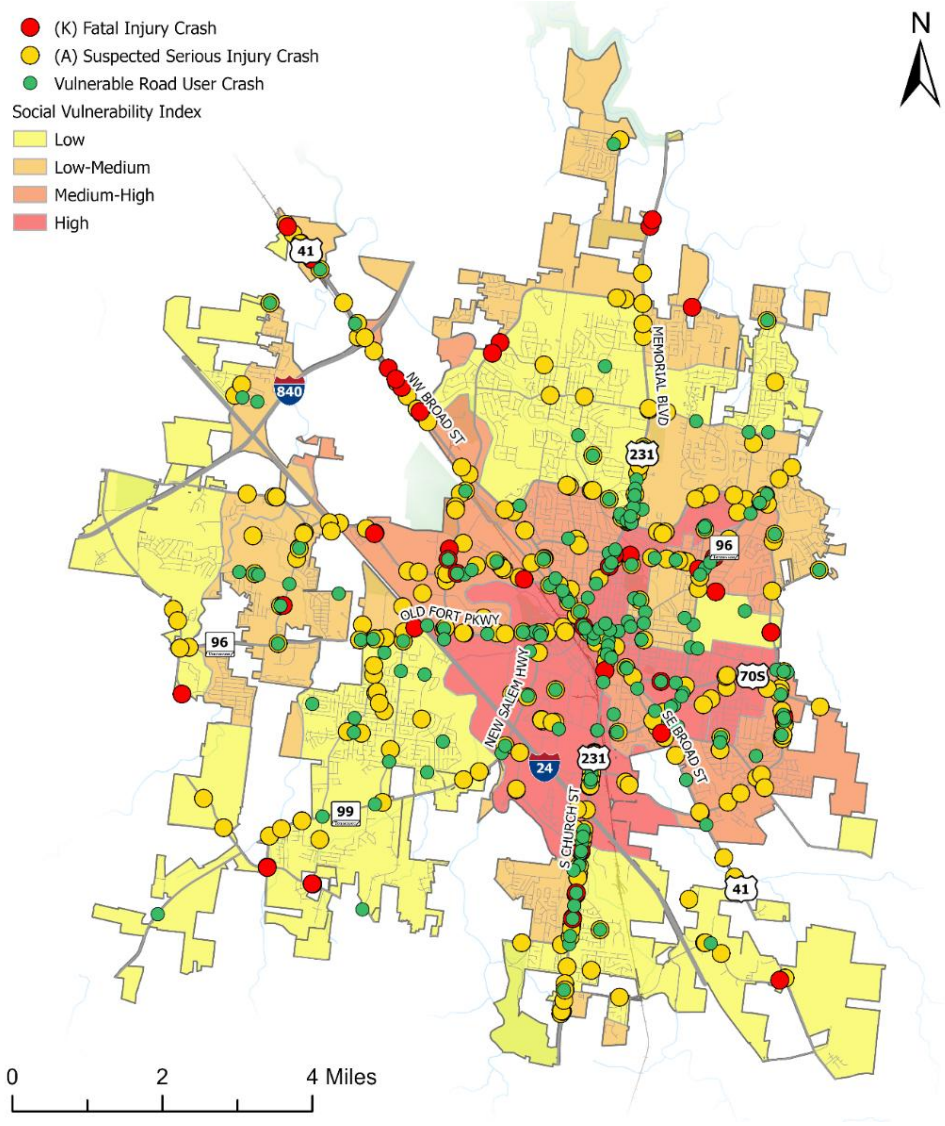


Figure 33: Social Vulnerability Index

Households with No Vehicle Access

Households without access to a personal vehicle face significant transportation challenges, which can increase vulnerability and limit mobility for work, healthcare, and essential services. Areas with higher concentrations of such households often experience reduced access to economic opportunities and emergency resources. Of the 369 fatal or serious injury crashes occurring in Murfreesboro, 137 (37%) occurred within census tracts where a substantial percentage of households reported no vehicle access (high or medium-high).

The summary of households with no vehicle access, along with an overlay of the fatal, suspected serious injury, and vulnerable road user crashes, are shown below in **Figure 34**.

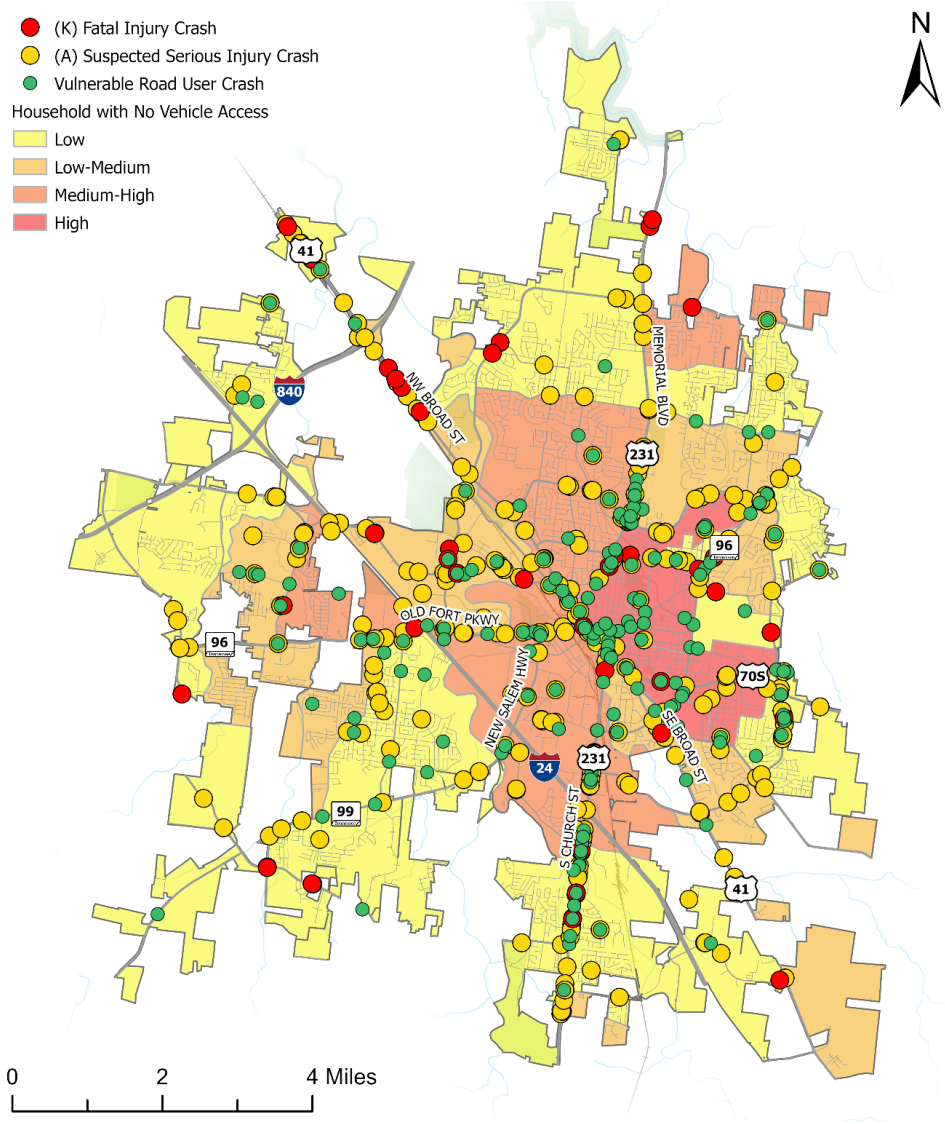


Figure 34: Households with No Vehicle Access

Opportunity Zones

Opportunity Zones are economically distressed communities, defined by individual census tract, nominated by America's Governors, and certified by the U.S. Secretary of the Treasury via their delegation of authority to the Internal Revenue Service. Their purpose is to serve as an incentive to spur private and public investment in underinvested communities. Of the 369 fatal or suspected serious injury crashes occurring in Murfreesboro, 75 occurred within opportunity zones. Additionally, 29-percent of VRU crashes occurred within opportunity zones.

The opportunity zones, along with an overlay of the fatal, suspected serious injury, and vulnerable road user crashes, are shown below in **Figure 35**.

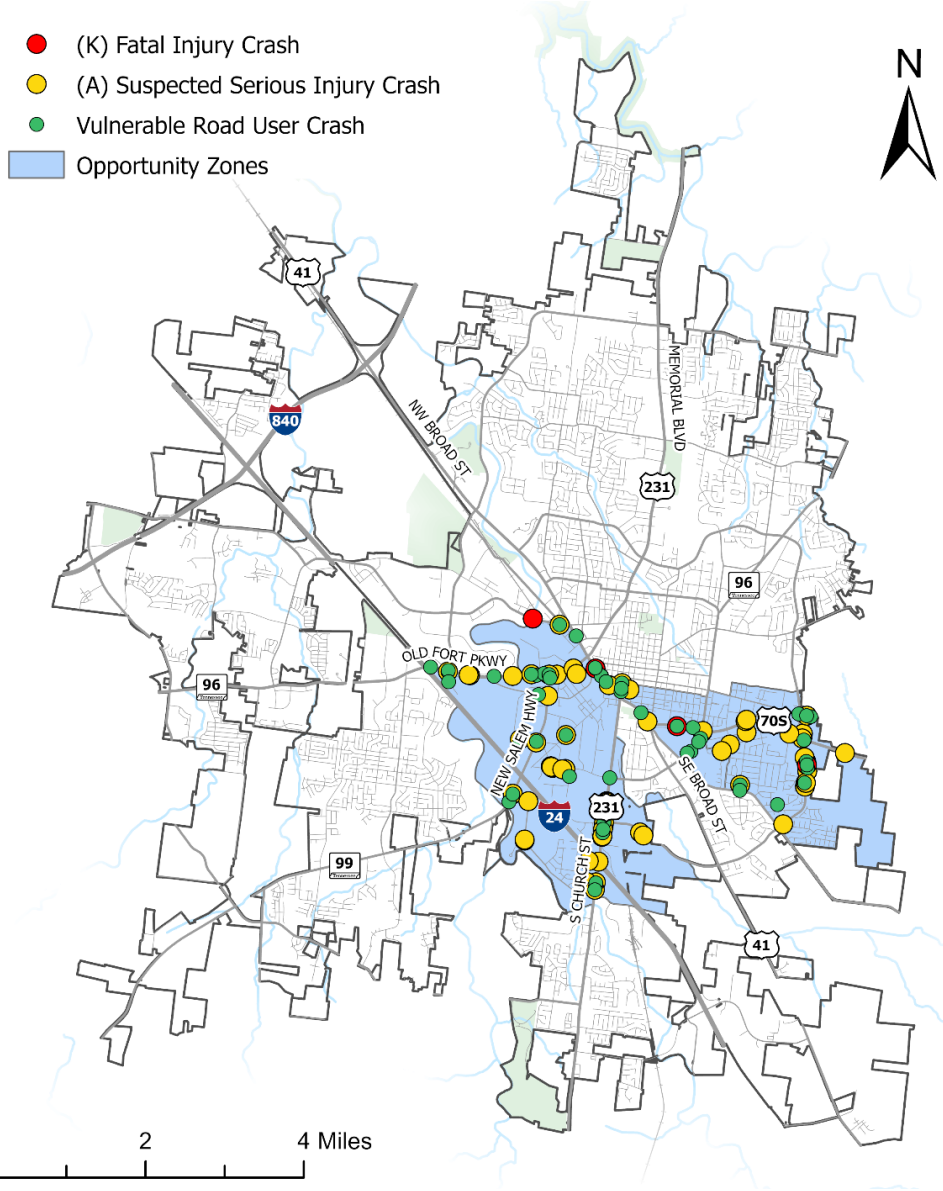


Figure 35: Opportunity Zones

MURFREESBORO SAFE STREETS

Engagement & Collaboration

Engagement & Collaboration

Introduction

Public outreach and engagement played a crucial role in collecting valuable insight into what Murfreesboro residents encounter daily while traveling routes in the study area, whether it is by car, bike, foot or bus. During the study, multiple opportunities for participation and input were offered to the general public and to community stakeholders. This included in-person events, targeted e-mail outreach, news media reports, social media posts, and a dedicated multi-lingual project website to gather and record input and disseminate information regarding the SAP and the SS4A Grant Program. By using a range of input methods, feedback was collected from a broad cross-section of the transportation network users, including individuals from traditionally underserved communities. **Figure 36** illustrates the overall project schedule, highlighting some of these community input opportunities.

Figure 36: Engagement and Collaboration Schedule (Graphic Generated by AI)

Formation of Steering Committee

To help guide the study, a Steering Committee made up of City engineering and planning staff, law enforcement representatives, and communications team members was established. Firstly, the steering committee was crucial in providing local, informed input regarding current conditions and opportunities for improvement in Murfreesboro. Secondly, the members of the Steering Committee acted as outreach conduits to the community. Multiple times during the data collection phase, the City and members of the Steering committee engaged the community through direct e-mail communications, social media blasts or direct communication to groups in the community and encouraged

them to get involved and provide input. The work of this committee is in large part responsible for the success of the Public Outreach portion of this study.

Public Outreach and Engagement Summary

Throughout the course of the study, a significant number of community members were reached across a variety of events and platforms. This resulted in a robust response with 313 page views being logged on the project website. Additional engagement metrics are shown in the figure below.

Figure 37: Engagement and Collaboration Summary

A "website pageview" refers to a single instance of a user loading the Murfreesboro SAP website, whereas a "website session" refers to a user loading and remaining on the website.

The online survey was designed to gather feedback from people in Murfreesboro about their travel patterns and the safety issues or concerns they may have. The survey asked a series of questions to understand trends, concerns, and improvements that the public would like to see. The survey questions prompted the respondents for various useful data points, including relationship to Murfreesboro, travel mode preference, and opinion of current safety measures. Additionally, there were optional questions about the respondents' demographics to help ensure that survey respondents generally reflect the demographics of the City as a whole. The goal of the survey was to gather a wide range of perspectives, suggestions, and input to help improve safety in Murfreesboro. Viewers were also able to give comments on an interactive map to better ensure location specific issues are being recognized. The following section will provide a more detailed description of each of the ways the

public was able to participate in in the process.

Project Website

To display current crash data and analysis findings as well as provide a portal for public input and feedback, a project-specific website was created: https://murfreesborosafestreets.com. An image of the website landing page is shown in *Figure 38*. Within the website, users could also find information on what a Safety Action Plan is, how it can be benefit the community, and how they can participate by providing input.

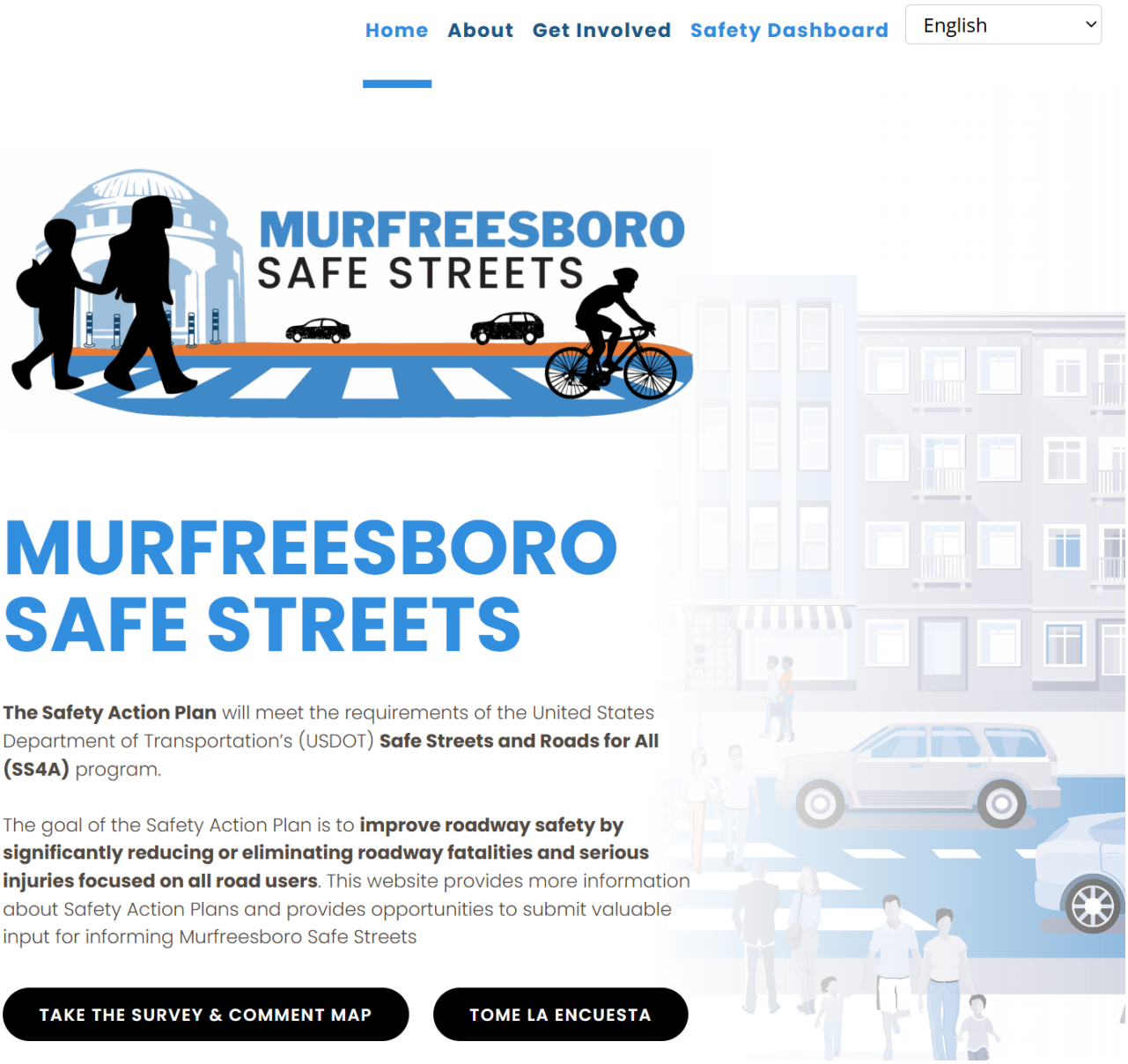


Figure 38: City of Murfreesboro SAP Website

Public Outreach

Major Outreach Activities

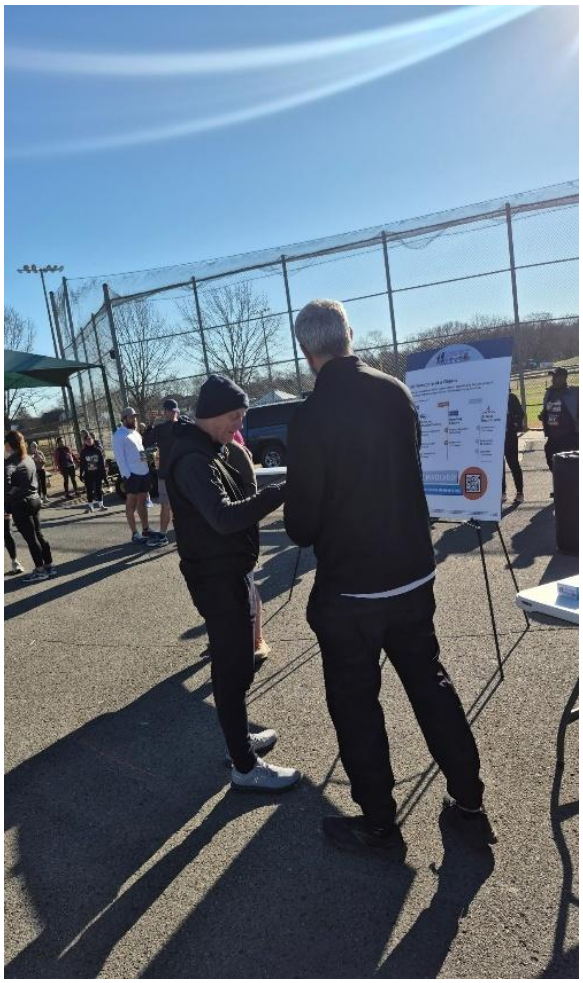
Starting in November 2025, a series of public outreach events were organized to inform the community about the SAP and collect feedback from various audiences. At these events, our team provided detailed information on the plan's objectives and implementation strategies. QR codes were made available, allowing attendees to easily access the plan's website and complete an online survey to share their feedback and suggestions. To ensure inclusive community engagement, written comment cards were also provided for those who preferred to give their input through this method.

Photos with Santa at the airport

In December 2025, a project information booth was set up at the City of Murfreesboro Municipal Airport – Photos with Santa event. The team was able to educate residents about the Safety Action Plan, designed to improve community safety. The booth provided details about the plan's goals and how it will be implemented. To encourage active participation from all community members, QR codes were distributed, enabling attendees to visit the project's website and fill out an online survey to offer their own insights and recommendations for the SAP.

New Year Day 5k

On January 1st, 2026, a booth was set up at the New Years Day 5k, hosted by the City. Participates of the race included runners from a wide range of age groups. The team got to speak with the runners of the race as well as visitors and supporters about the City's Safety Action Plan. The booth provided details about the plan's goals and QR codes were accessible to the community at the event.



Online Engagement Results

Dispersion of the online survey and interactive map were achieved through a combination of tools as outlined in this section, each intended to drive traffic to and through the project website for ease of data collection and dissemination of project information.

Online Survey

In addition to providing a broad range of safety information, the website hosted two key participation avenues. The first was an online survey that focused on user demographics and roadway safety concerns. A total of 160 participants completed the online survey, providing input and background data, ranging from travel-related characteristics and demographic information to specific safety concerns. The last question in the survey was an open-ended question that served to allow respondents the ability to give any more input that they see fit which resulted in a broad range of inputs as shown in **Figure 39** and **40**.

Figure 39: Online Survey Input Category

Figure 40: General Public Reponses

Interactive Map Results

The interactive mapping application on the project website allowed users to drop 'pins' at specific locations where they had safety concerns or had experienced safety-related incidents. A total of 297 location-specific comments were inputted into the interactive map, which is shown in **Figure 41.**

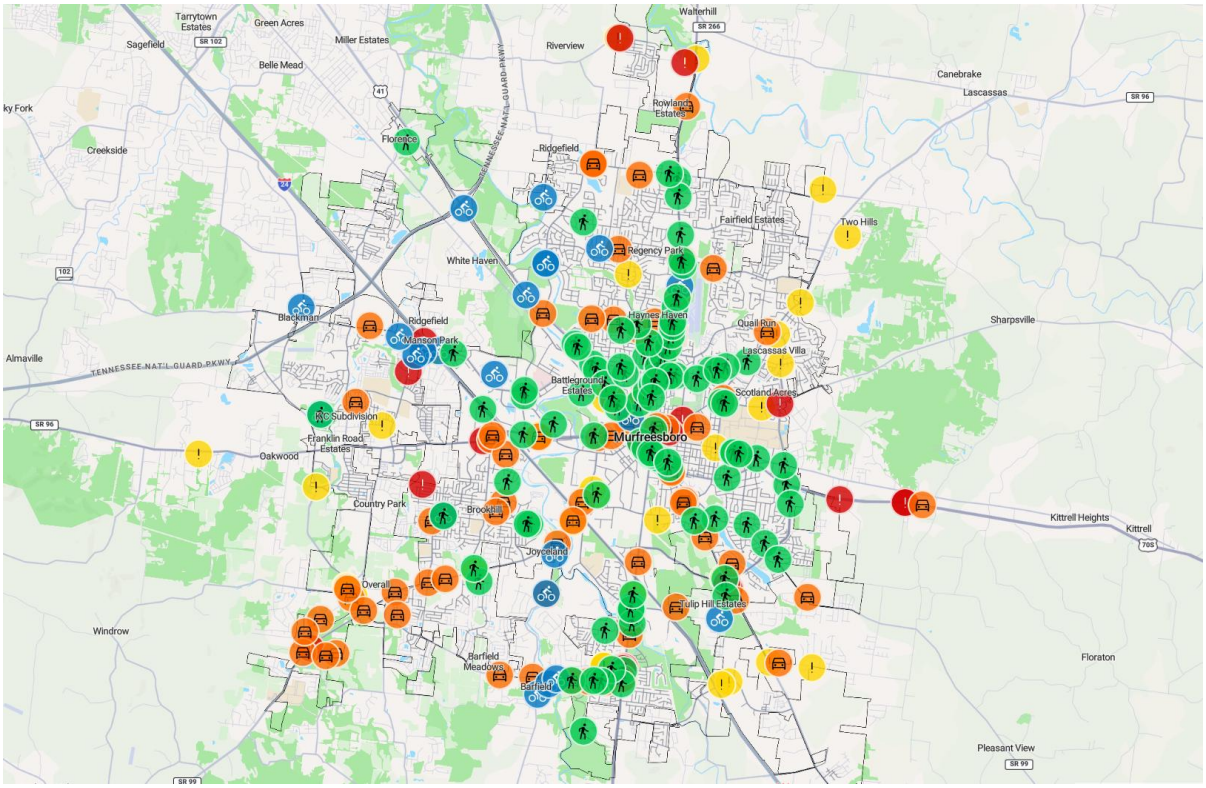


Figure 41: Results from Interactive Map

The map application provided six individual comment types for respondents to choose from: 1) pedestrian, 2) crash, 3) near crash, 4) mobility, 5) driver, and 6) bicyclist. Respondents were able to select their category and enter their related comment. There was no limit to the number of comments an individual could leave. Comments were analyzed and distilled for use in the project prioritization process, which will be discussed in a later section.

Public Input Heat Map

Based on the interactive map, respondents reported 297 individual comments for locations within the City of Murfreesboro. Mapping these responses highlights areas of public concern that may not appear in crash data analysis. Based on the heat map shown in **Figure 42**, the areas near and in downtown Murfreesboro received many public comments, with many complaints and comments being based around safety for pedestrians and bicyclists. Another location that seems to have received many comments is the area of town near the intersection of S Church Street at Veterans Parkway as shown in the south most portion of the heatmap.

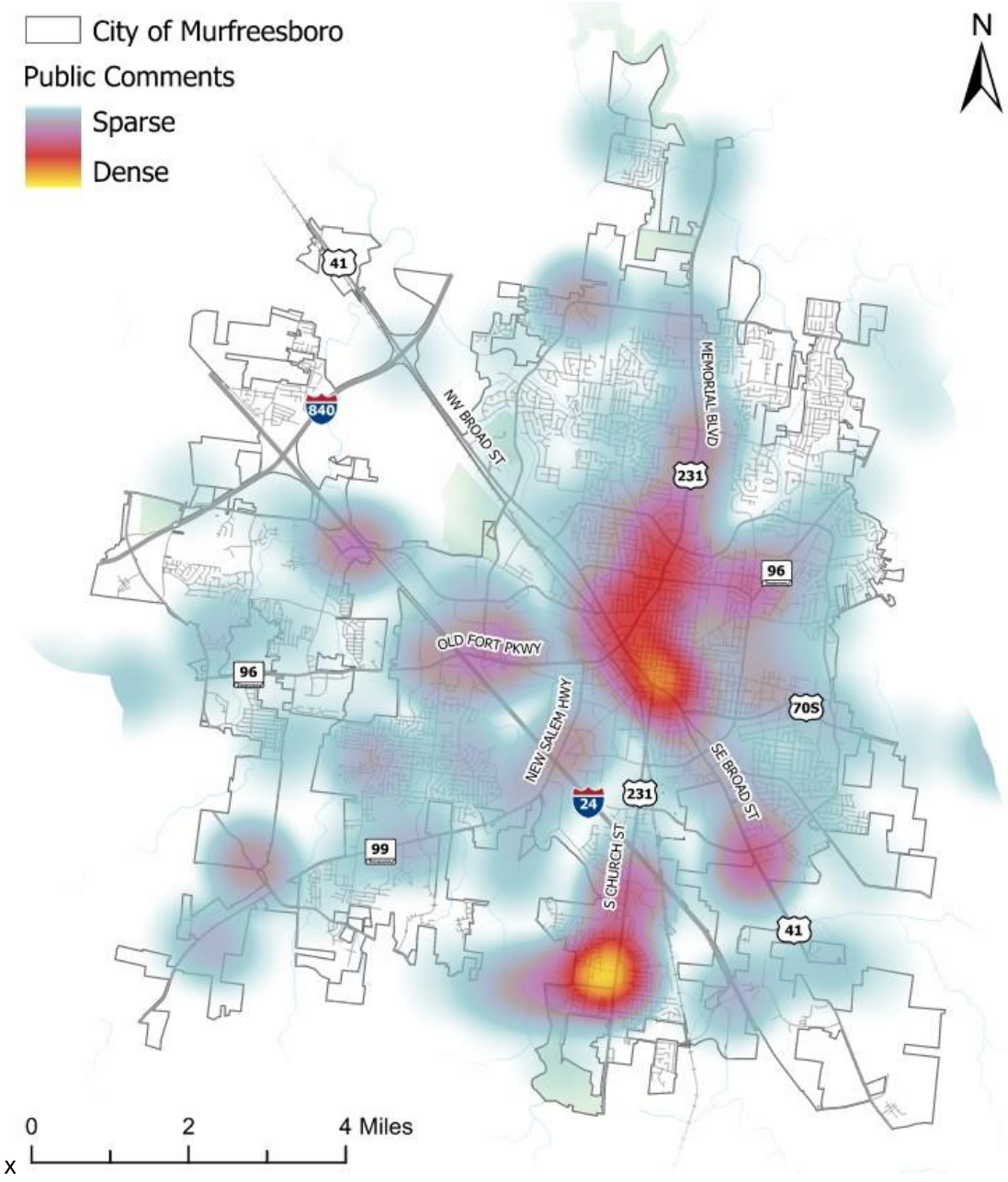


Figure 42: Concentration of Location-Specific Public Comments

Crash Data vs Public Comments

Comparing crash data with locations of public comments provides insight into areas where concerns align with existing data, as well as identifying potential safety issues that may not be evident from crash data alone. This comparison ultimately leads to a more comprehensive and effective approach toward improving safety. As shown in **Figure 43 and 44,** the emphasis areas of the dense locations based on crash data tend to align overall with dense public comment locations. The most evident trend is the most dense area of each heat map being the down town area of the City of Murfreesboro.

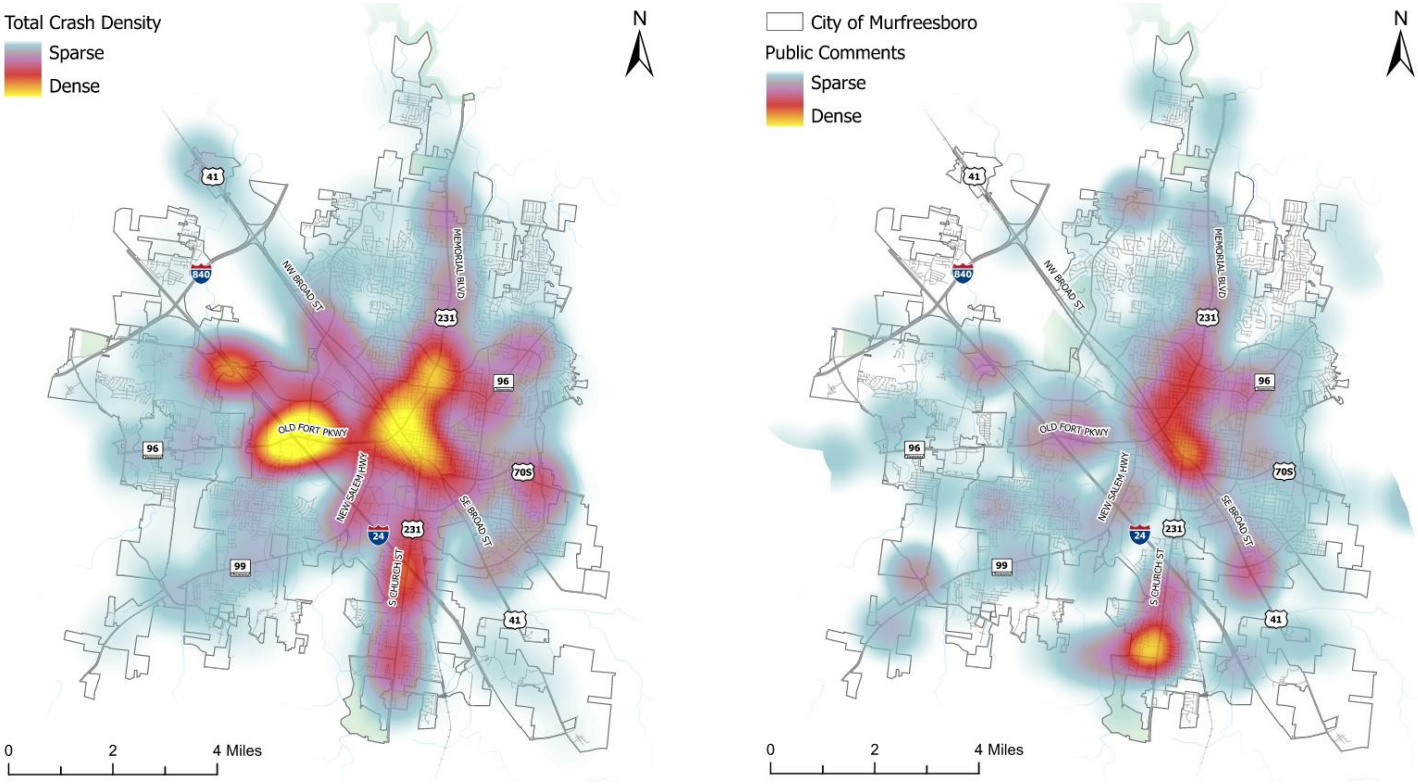


Figure 43 and Figure 44: Crash Density vs Public Comments

Summary of Survey Results

The survey and interactive map results reveal a variety of responses from individuals connected to the City of Murfreesboro. Most respondents primarily travel in/to the City by car, reflecting a strong reliance on personal vehicles. When asked about street safety, responses varied greatly, indicating different concerns about safety for transportation among the City. The most common improvements that are recommended to be made by the community include, street lighting, pedestrian sidewalk/crossing improvements, traffic enforcement, and improved signage.

Please see **Appendix D** for results of the online survey engagement results.

MURFREESBORO SAFE STREETS

Countermeasures & Strategies

Countermeasures & Strategies

The SAP identifies countermeasures and strategies addressing the City's key emphasis areas related to fatal and serious injury crashes as mentioned in the Safety Analysis section. The recommendations are classified into two categories: (1) engineering countermeasures (project recommendations) and (2) driver-related strategies (related to education, enforcement, and emergency medical services).

Engineering Countermeasures

Engineering Countermeasures in a Safety Action Plan refer to specific physical changes or improvements made to the roadway environment to enhance safety and reduce the likelihood of crashes. Examples of these include:

- Traffic signal upgrades: Installing or improving traffic signals to better manage traffic flow and reduce collisions.
- Roadway design changes: Modifying road layouts, such as adding roundabouts, medians, or bike lanes, to improve safety for all users.
- Pedestrian and cyclist infrastructure: Enhancing crosswalks, sidewalks, and bike paths to protect non-motorized road users.
- Speed management: Implementing measures like road diets, bulb-outs, chicanes, or road narrowing to control vehicle speeds.
- Visibility improvements: Increasing street lighting, adding reflective signs, and improving road markings to enhance visibility for drivers.

These countermeasures are designed and selected based on data analysis and safety studies to address specific risks and improve overall road safety.

Crash Modification Factors (CMF)

Because funding for infrastructure improvements is limited, the City of Murfreesboro can benefit from quantifying and comparing the potential benefit of safety countermeasures and treatments. Crash Modification Factors (CMF) can be used to assess the potential safety impact of improvements. A CMF is a numerical value that indicates the proportion of crashes that would be expected at a location after implementing a safety countermeasure. A CMF with a value of less than 1.0 indicates an expected decrease in crashes. Conversely, a CMF with a value greater than 1.0 indicates an expected increase in crashes. The FHWA maintains the CMF Clearinghouse, an online repository of CMFs documented in the Highway Safety Manual (HSM) and other industry resources. The following provides guidance to be considered when selecting and applying CMFs:

- Use a minimum of three years of crash data for urban and suburban sites and five years of crash data for rural sites.
- CMFs should be selected from Part D of the HSM or FHWA's CMF Clearinghouse website (https://www.cmfclearinghouse.org/).
- If possible, use CMFs with star ratings of four or five. The star rating indicates the quality or confidence in the results of the study producing the CMF.

CMFs are multiplicative, not additive, meaning that the application of two individual countermeasures with a 0.50 CMF will provide a 0.25 reduction (0.50 x 0.50 = 0.25) instead of a 1.00 reduction (0.50 + 0.50 = 1.00). However, the application of multiple CMFs can overestimate the expected crash reduction. It is recommended to use no more than three independent CMFs at a particular site.

Engineering Countermeasures Toolkit

A toolkit of engineering countermeasures was compiled for this SAP based on general applicability in the Murfreesboro study area, the level of evidence for crash reduction, and stakeholder and public feedback obtained during engagement (see the **Engagement & Collaboration** section). **Table 14** provides a summary of a representative group of countermeasures used in project recommendations for this SAP, a general level of cost/effort, their crash modification factor range (where available), and a proposed timeframe for implementation. See **Appendix E** for a complete description of each countermeasure listed below.

Table 14: City of Murfreesboro Toolkit

SOURCE	COUNTERMEASURE	CMF	CONTEXT (URBAN/ RURAL)	TIMEFRAME	COST
	APPROPRIATE SPEED LIMITS	0.86	BOTH	SHORT	$
	CONDUCT INTERSECTION CONTROL & ALIGNMENT EVALUATION	N/A	BOTH	SHORT	$
	ENHANCED DELINEATION FOR HORIZONTAL CURVES	0.82	RURAL	SHORT	$
	EVALUATE PROPER APPROACH LANEAGE	0.40-0.52	BOTH	SHORT	$
	IMPROVE SIGNAGE	0.65-.84	BOTH	SHORT	$
	LEADING PEDESTRIAN INTERVAL	0.90	URBAN	SHORT	$
	LONGITUDINAL RUMBLE STRIPS AND STRIPES ON TWO-LANE ROADS	0.74	RURAL	SHORT	$
	RETROREFLECTIVE BACKPLATES	0.85	BOTH	SHORT	$
	RETROREFLECTIVE PAVEMENT MARKERS	0.54-0.89	BOTH	SHORT	$
	SIGHT DISTANCE EVALUATION	N/A	BOTH	SHORT	$
	SYSTEMIC APPLICATION OF MULTIPLE LOW-COST COUNTERMEASURES AT STOP-CONTROLLED INTERSECTIONS	0.73	BOTH	SHORT	$
	WIDER EDGE LINES	0.97	BOTH	SHORT	$
	YELLOW CHANGE INTERVALS	0.99	BOTH	SHORT	$
	BIKE LANES	0.43	BOTH	SHORT	$$
	CROSSWALK VISIBILITY ENHANCEMENTS	0.60	BOTH	SHORT	$$
	IMPROVE SIGNAL EQUIPMENT ALIGNMENT	N/A	BOTH	SHORT	$$
	UPDATE SPECIAL EVENT TRANSPORTATION MANAGEMENT	N/A	URBAN	SHORT	$$
	FLASHING YELLOW ARROWS (FYA)	0.52-0.82	BOTH	MID	$$
	MEDIAN AND PEDESTRIAN REFUGE ISLAND	0.29	URBAN	MID	$$
	MEDIAN BARRIERS	0.29	BOTH	MID	$$

● ● ●	RECTANGULAR RAPID FLASHING BEACONS (RRFB)	0.31	BOTH	MID	$$
● ● ●	SIDEWALKS AND MULTI-USE PATHS	0.60	BOTH	MID	$$
● ● ●	TARGETED LIGHTING	0.68	BOTH	MID	$$
● ●	TRAFFIC CALMING (CORRIDOR-WIDE SPEED MANAGEMENT)	0.60	BOTH	MID	$$
	TRANSIT STOP ADDITION/ENHANCEMENT	N/A	BOTH	MID	$$
	COMPLETE MULTI-MODAL CORRIDOR EVALUATION	N/A	URBAN	MID	$$$
● ●	DEDICATED LEFT AND RIGHT-TURN LANES AT INTERSECTIONS	0.52-0.86	BOTH	MID	$$$
● ●	ELIMINATE NEGATIVE OFF-SETS AT INTERSECTIONS	0.60	BOTH	MID	$$$
	FLATTEN MINOR STREET APPROACH	N/A	BOTH	MID	$$$
● ● ●	PEDESTRIAN HYBRID BEACONS	0.88	URBAN	MID	$$$
	RAILROAD CROSSING ENHANCEMENTS	N/A	BOTH	MID	$$$
●	REDUCED LEFT-TURN CONFLICT INTERSECTIONS	0.71	BOTH	MID	$$$
	WIDEN SHOULDERS	N/A	BOTH	MID	$$$
●	SMART CHANNEL RIGHT-TURN LANE	0.40	BOTH	LONG	$$$
● ● ●	CORRIDOR ACCESS MANAGEMENT	0.93	BOTH	LONG	$$$$
● ● ●	ROADWAY RECONFIGURATION	0.53	URBAN	LONG	$$$$
● ● ●	ROUNDABOUTS	0.59	BOTH	LONG	$$$$

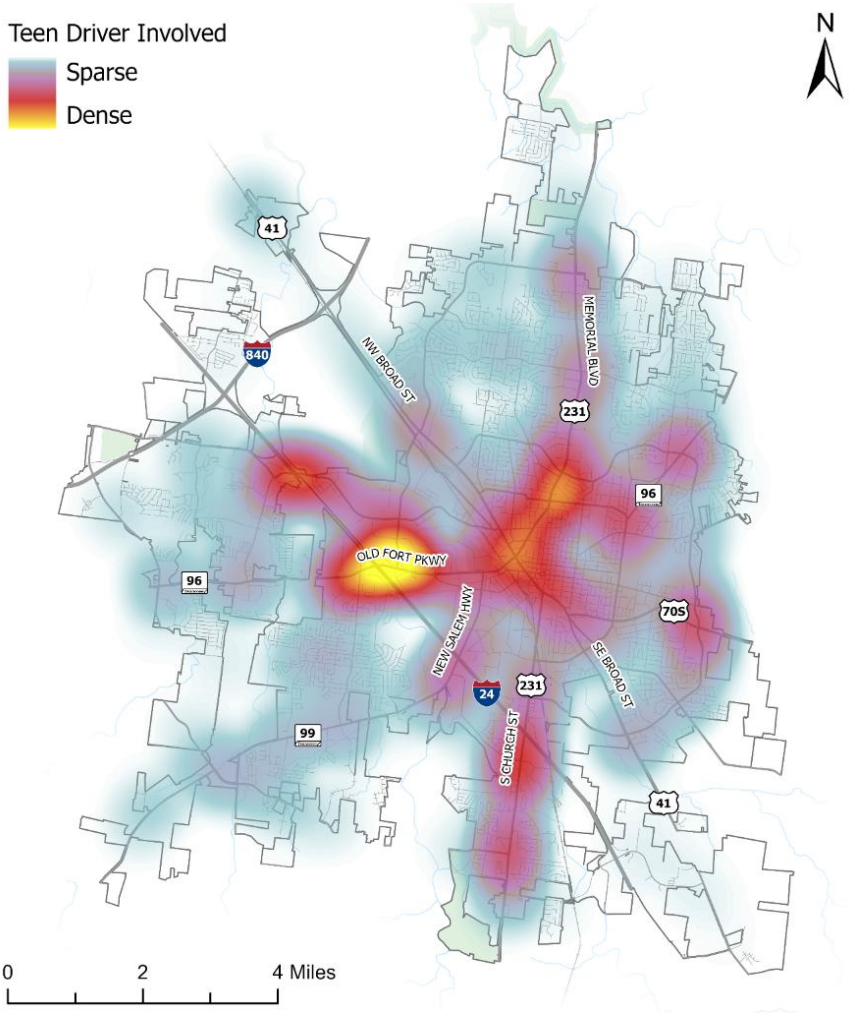
Driver-Related Strategies

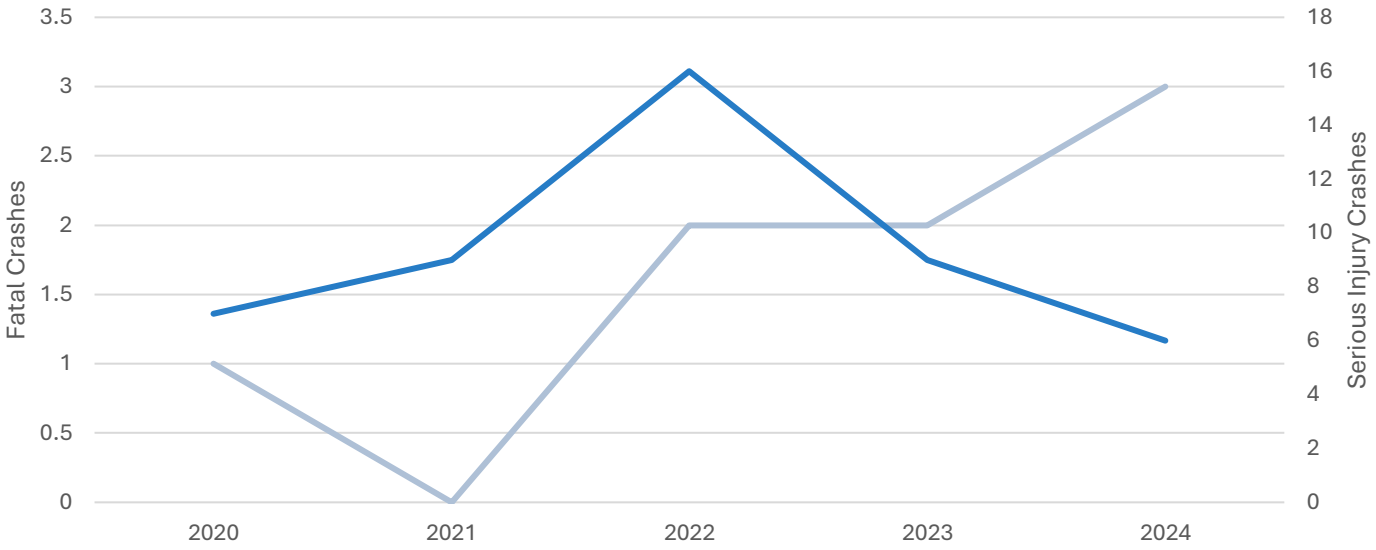
As described and presented in the **Safety Analysis** section, the data shows the City of Murfreesboro experienced higher percentages of high-severity crashes involving Teen Drivers, Bicycles, Aggressive Drivers/Speeding, and Motorcycles than the Tennessee state average. The following tables include specific strategies to reduce crashes in these emphasis areas. The strategies referenced in this section can be implemented in the short term; however, they should remain in place in the long term to fully achieve the ideal benefits. These strategies incorporate the remaining three Es of traffic safety: Education, Enforcement, and Emergency Medical Services.

Teen Drivers

Emphasis Area	Teen Drivers
Safe Systems Element	Safe Road Users
How are fatal and serious injury crashes involving teen drivers defined?	A crash that involves any driver or pedestrian who is between the ages of 15-19 years old.
Statewide Emphasis Area	Emphasis area in the 2025 – 2029 Tennessee SHSP

Teen Drivers (ages 15-19) are often considered high-risk due to limited driving experience, potential distractions, and a higher likelihood of engaging in risky behaviors such as speeding or not using seat belts. In Murfreesboro, the data shows that 55 (14.9%) of all fatal and serious injury crashes between 2020 and 2024 involved teen drivers. This is 1.3% higher than the TN state average of 13.6% and highlights the need for targeted education and enforcement strategies.





The following are recommended strategies that should be implemented to reduce fatal and serious injury crashes involving teen drivers:

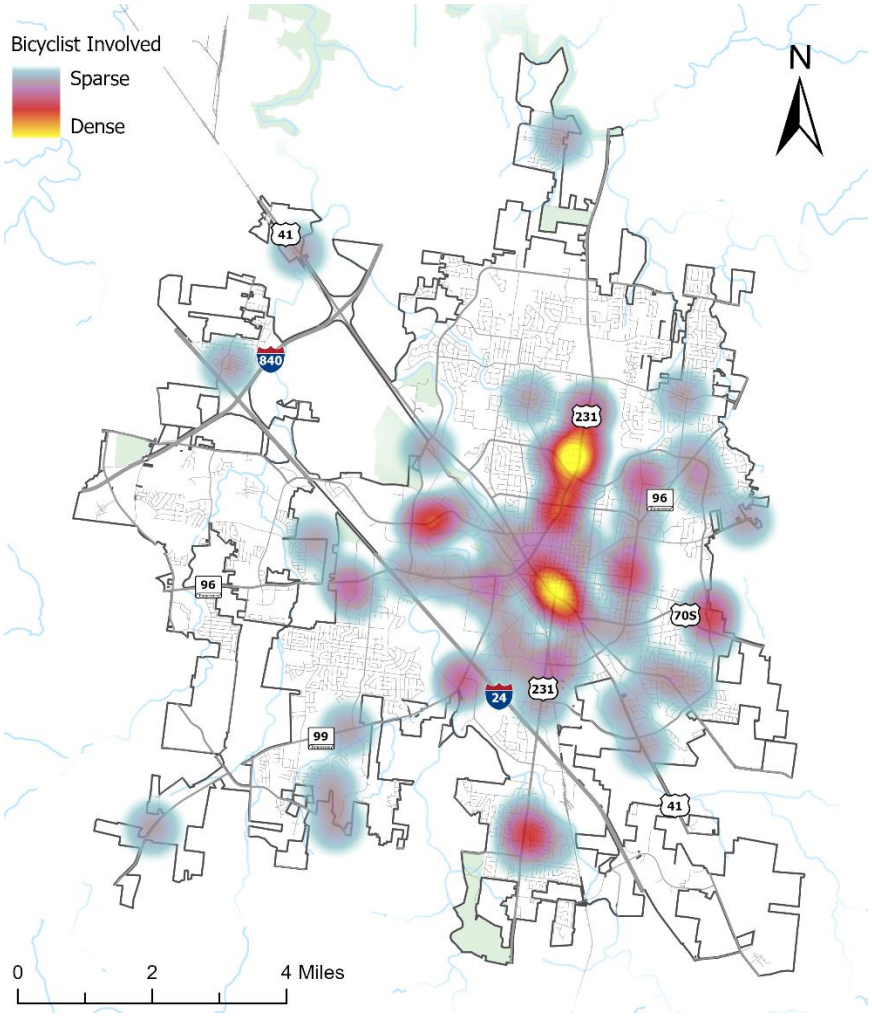
Table 15: Teen Driver Strategies

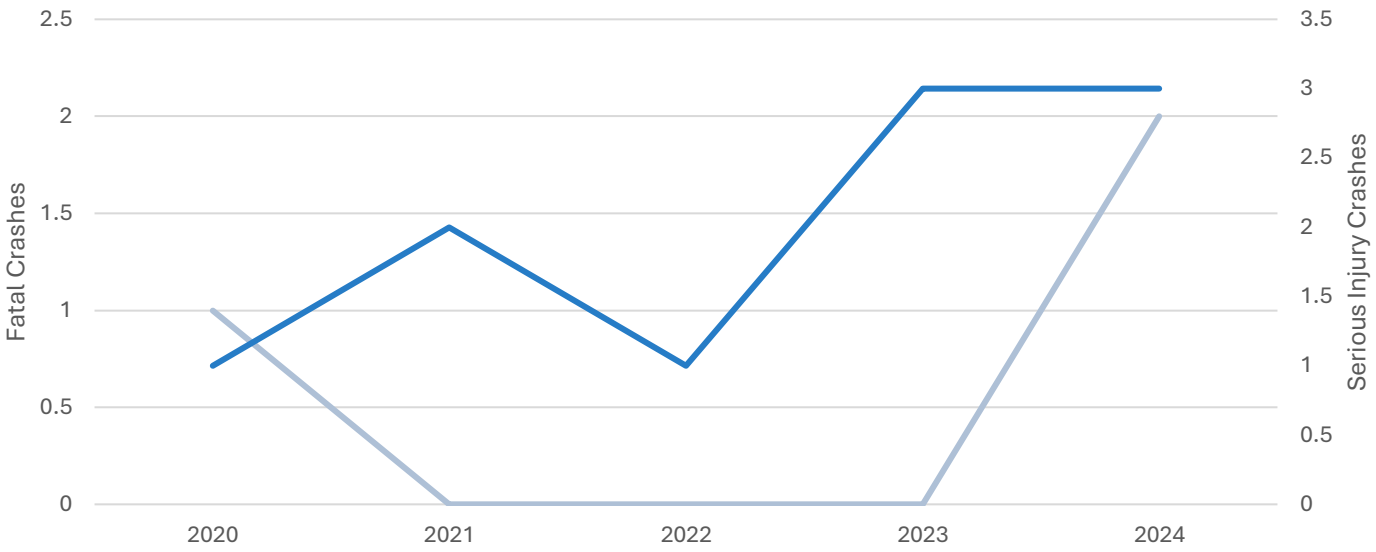
Emphasis Area	Driver-Related Strategy
Teen Drivers	Provide high-risk driver education programs targeting drivers aged 15-19 with a focus on impaired, distracted, and reckless driving.
	Support Graduated Driver Licensing (GDL) Programs (Learner's Permit, Intermediate License Nighttime Restrictions, Intermediate License Passenger Restrictions)
	Support the Enforcement of GDL

Bicycles

Emphasis Area	Bicycles
Safe Systems Element	Safe Road Users
The operation of a bicycle on shard network with vehicles contributes to increased risks	While only accounting for 0.2% of total crashes in the State of Tennessee, bicyclist-involved crashes accounted for 1.3% of fatal and serious injury crashes in 2024.
Statewide Emphasis Area	Emphasis area in the 2025 – 2029 Tennessee SHSP

Bicyclists represent a vulnerable group of road users due to their limited physical protection and exposure to motor vehicle traffic. Although bicycling accounts for a small share of overall travel, crashes involving bicyclists often result in serious injuries or fatalities. Nationwide, bicyclists account for approximately 2% of all traffic fatalities. In Murfreesboro, the data indicates that 13 (3.5%) of all fatal and serious injury crashes between 2020 and 2024 involved bicyclists. This is 2.2% higher than the TN state average of 1.3%.





The following are recommended strategies to improve bicyclist safety and reduce fatal and serious injury crashes involving bicyclists.

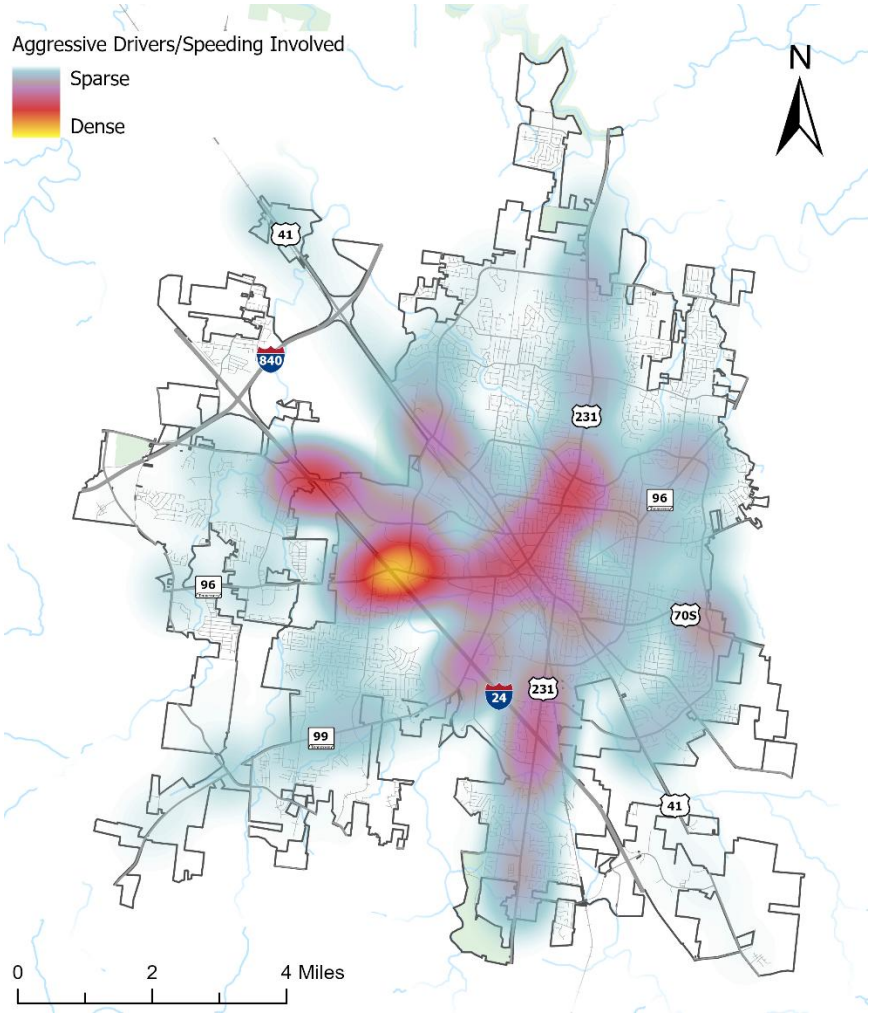
Table 16: Bicycle Strategies

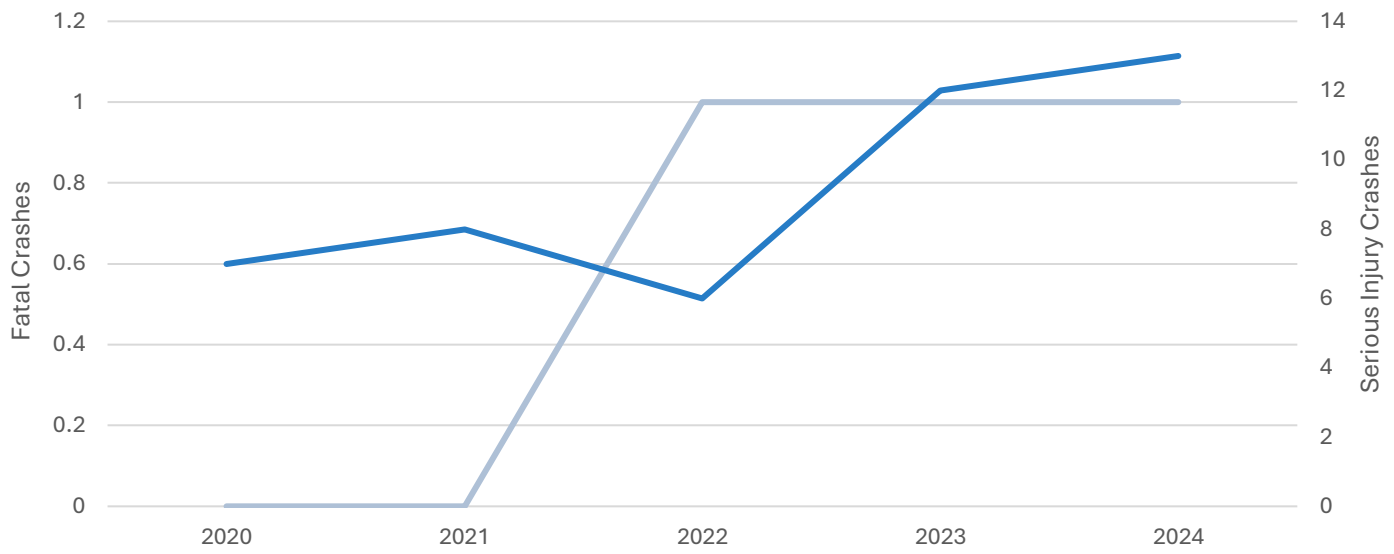
Emphasis Area	Driver-Related Strategy
Bicyclist	Maintain, Improve, and Install bicycle and pedestrian facilities through bicycle and pedestrian specific projects and in conjunction with other roadway and safety improvements projects.
	Enhance driver awareness of bicyclists on the roads through communication efforts on social media and websites.
	Create a quick-build pilot program to implement safety countermeasures at high-crash locations for pedestrians, bicyclists and other low-speed users
	Support and Enforcement of the Bicycle Helmet Laws for Children, and Universal Bicycle Helmet Laws

Aggressive Drivers/Speeding

Emphasis Area	Aggressive Drivers/Speeding
Safe Systems Element	Safe Road Users and Safe Speeds
How are fatal and serious injury crashes involving aggressive driving and speeding defined?	A crash in which any vehicle involved drives too fast for conditions or exceeds the posted speed limit.
Statewide Emphasis Area	Emphasis area in the 2025-2029 Tennessee SHSP

Aggressive Drivers refer to individuals who engage in unsafe driving behaviors with deliberate disregard for safety. These behaviors can include speeding, tailgating, weaving in and out of traffic, running red lights, and other actions that endanger other road users. The data shows that 13.3% (49 crashes) of all fatal and serious injury crashes between 2020 and 2024 in the City of Murfreesboro involved aggressive drivers and/or speeding. This is 1.3% higher than the TN State average of 12%.





The following are recommended strategies that should be implemented to reduce fatal and serious injury crashes involving aggressive drivers and or speeding:

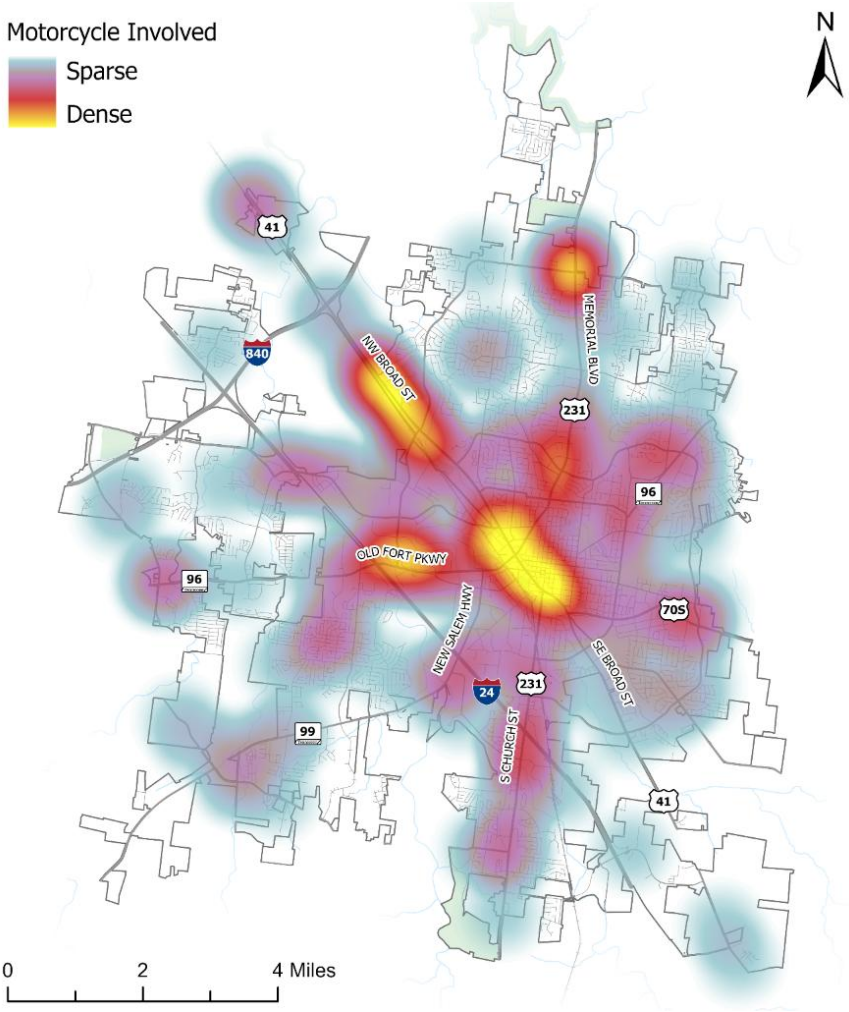
Table 17: Aggressive Driver/Speeding Strategies

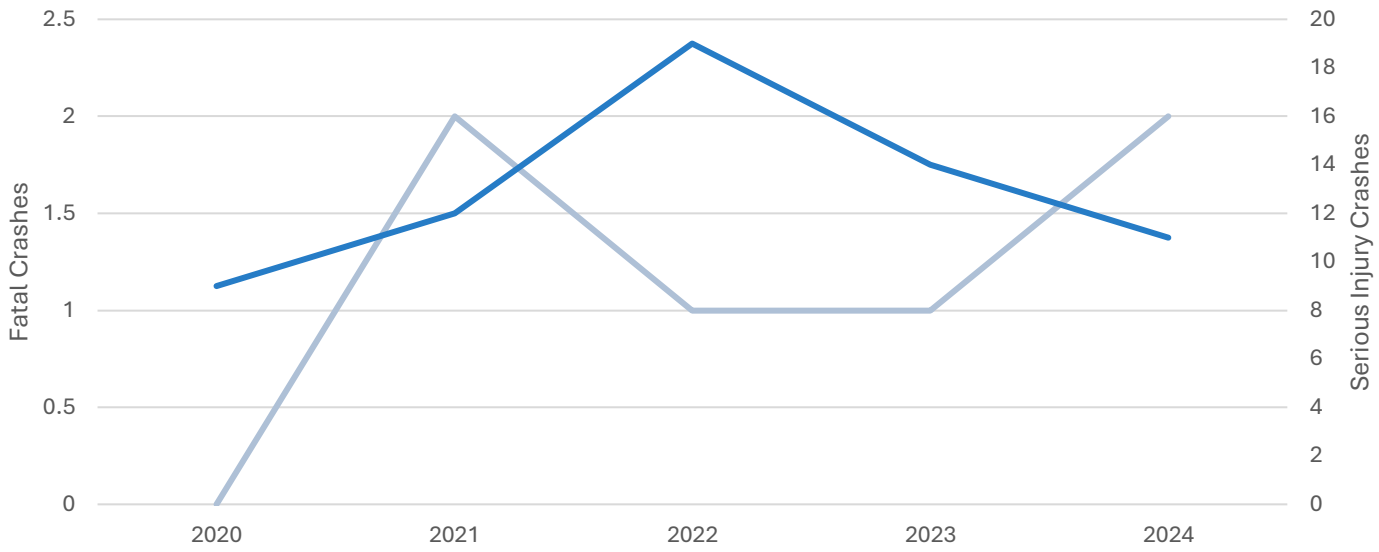
Emphasis Area	Driver-Related Strategy
Aggressive Drivers/Speeding	Develop and implement enforcement programs aimed at aggressive driving in high frequency areas.
	Update Murfreesboro's local traffic calming policy to include additional effective devices and processes. This includes traffic calming equipment that implements vertical deflection (e.g., speed, tables) horizontal deflection (e.g., chicanes), and roadside features (e.g., Dynamic Speed Display Signs [DSDS])
	Conduct a city-wide campaign highlighting the local consequences of aggressive drivers or speeding, using testimonials, local crash statistics, or interactive digital media.
	Explore implementing Automated Speed Enforcement (ASE) cameras in high-risk or repeated speeding zones, emphasizing their role in reducing aggressive driving or speed-related incidents.

Motorcycles

Emphasis Area	Motorcycles
Safe Systems Element	Safe Road Users
The operation of a motorcycle contributes to increased risks	According to the National Highway Traffic Safety Administration (NHTSA), motorcyclists accounted for 15 percent of all traffic fatalities nationwide, despite only accounting for an estimated 0.7 percent of VMT (NHTSA, Traffic Facts 2015)
Statewide Emphasis Area	Emphasis area in the 2025 – 2029 Tennessee SHSP

Motorcyclists make up a disproportionate percentage of fatal and serious injury crashes. Though accounting for an estimated 0.7% of vehicle miles traveled, motorcyclists nationwide account for 15% of all traffic fatalities nationwide. In Murfreesboro, the data shows that 16.8% (62 crashes) of all fatal and serious injury crashes between 2020 and 2024 involved motorcyclists. This is 1.9% higher than the TN state average of 14.9 percent.





The following are recommended strategies to reduce fatal and serious injury crashes involving motorcycles.

Table 18: Motorcycle Strategies

Emphasis Area	Driver-Related Strategy
Motorcyclist	Support and Enforcement of the Universal Motorcycle Helmet Use Laws
	Partner with TDOT in the statewide Tennessee Motorcycle Safety Strategic Plan update, anticipated in 2027

Relevant Documents

Tennessee SHSP

The Tennessee SHSP identifies strategies that target the state's most critical roadway safety challenges. The data in this document identifies key safety needs, decisions, and countermeasure framework.

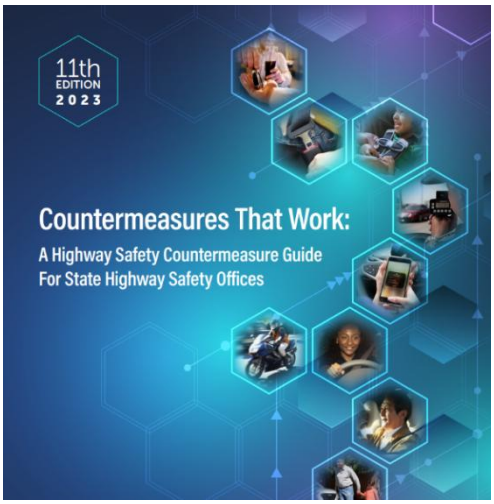
Towards Zero Deaths (TZD)

The Towards Zero Deaths (TZD): A National Strategy on Highway Safety identifies strategies that target the nation's most critical roadway safety challenges.

FHWA Proven Safety Countermeasures

The Federal Highway Administration's (FHWA) Proven Safety Countermeasures (PSCs) provide 28 countermeasures and strategies that can offer significant and measurable improvements to safety affecting all road users. Each countermeasure addresses at least one of the USDOT's safety focus areas, which include speed management, intersections, roadway departures, and pedestrians/bicyclists. Some of the PSCs are considered crosscutting, which identifies countermeasures that address more than one safety focus area at a time.

NHTSA Countermeasures that Work



The National Highway Traffic Safety Administration's (NHTSA) Countermeasures That Work is a technical report that provides a reference guide of safety strategies and countermeasures, particularly focused on human behaviors related to transportation safety. This document presents strategies and countermeasures related to the following safety areas: alcohol-impaired driving, drug-impaired driving, seat belts and child restraints, speeding and speed management, distracted driving, motorcycle safety, young drivers, older drivers, pedestrian safety, bicycle safety, and drowsy driving. Countermeasures That Work also provides data driven information such as effectiveness, costs, implementation time, and research references to support relevant countermeasures and strategies.

MURFREESBORO SAFE STREETS

Policy & Process Changes

Policy & Process Changes

Documents Reviewed

Existing City of Murfreesboro plans and policies were reviewed as part of the SAP process to gain perspective on current efforts related to transportation safety goals, policies, and actions. Key findings within these plans and policies were identified to inform the SAP. This section also includes summarized recommendations for plan and policy changes aimed at enhancing transportation safety. **Table 19**, summarizes the key findings within the existing documents.

Table 19: Existing Plans Summary

Document Name	Summary/Goals Related to Safety
Transit Route and Shelter Study	• The document includes quotes from Murfreesboro Transit front line employees. A few of these quotes mention the importance of implementing safety. • Many employees have plans for new transit facilities to be built at certain locations. • Operators and supervisors provided input on off-street bus stops/shelter locations with high priority for safety enhancement.
2040 Major Transportation Plan	• One of the main goals of the document is to reduce the number and severity of traffic incidents and promote network security. • Implement safety measures for elderly pedestrians and drivers. • Utilize access controls. • Improve signalization of intersections for both pedestrians and vehicles. • Support regular maintenance of roads and facilities. • Continue to provide adequate funding for road maintenance and improvement. • Implement bicycle safety training program for residents. • Ensure timely and reliable access for emergency response vehicles.
City of Murfreesboro Greenways, Blueways, and Bikeways Master Plan	• The plan outlines a multi-phase approach for prioritizing, funding, and implementing projects that address connectivity, accessibility, safety, and cost, ensuring that these most critical needs are met first. • Public comments expressed need for safer crossings, protected bike lanes, and improved pedestrian infrastructure. • The plan provides section drawings to reference when evaluating project recommendations for safe bikeways, greenways, and multi-use paths. • The plan emphasizes the importance of integrating greenways, blueways, and bikeways with public transit and other modes of transportation to create a seamless, multimodal network.

Murfreesboro 2035 Comprehensive Plan	• The updated (2023) land use plan outlines the relationship between land use intensity and roadway function. • The plan highlights the need to align development density and access points in order to reduce conflicts between vehicles. • The document also emphasis multimodal safety primarily focusing on vulnerable road users • The plan list transit and connectivity as major safety elements in the city.

Plan Checklist

To ensure the safety and well-being of all roadway users, it is imperative for agencies to have a set of plans and policies in place that guide and mandate roadway safety. A list of recommended plans and policies has been compiled to serve as a roadmap for addressing safety concerns and implementing appropriate measures. These plans provide strategies for designing and managing streets that prioritize safety, address accessibility needs, promote various transportation modes, assess traffic impacts of new developments, and outline a long-term vision for land use, transportation, and community development with a focus on safety considerations. **Table 20** contains the list of recommended plans and the corresponding plan(s), if applicable, in the City of Murfreesboro.

Table 20: Alignment of Safety Roadmap with Existing Plans

Checklist	Plan	Corresponding City of Murfreesboro Plan
●	Complete Streets Policy Guidelines	2040 Major Transportation Plan Murfreesboro 2035 Comprehensive Plan City of Murfreesboro Greenways, Blueways, and Bikeways Master Plan
●	ADA Transition Plan	City of Murfreesboro ADA Transition Plan July 2019
●	Multi-Modal Plan	City of Murfreesboro Greenways, Blueways, and Bikeways Master Plan 2040 Major Transportation Plan
●	Traffic Impact Study Guidelines (w/ Safety)	City of Murfreesboro Subdivision Regulations
●	Comprehensive Plan	Murfreesboro 2035 Comprehensive Plan
●	Pavement Management Plan	
●	Subdivision Regulations	City of Murfreesboro Subdivision Regulations
●	Standard Street and Sidewalk Design Specifications	City of Murfreesboro Subdivision Regulations City of Murfreesboro Greenways, Blueways, and Bikeways Master Plan City of Murfreesboro Design Guidelines
● = Has Plan	● = Mentioned In Other Plan(s)	● = Does Not Have Plan

Recommendations

The following recommendations are made to help the City better address and incorporate transportation safety through their existing plans, policies, and processes. The recommendations are provided alongside the related documents to which they apply, as well as the applicable element(s) of the "Four Es" of transportation safety (Engineering, Enforcement, Education, and Emergency Response).

Table 21: Recommended Policy and Process Changes

No.	Recommended Action	Timeframe	Lead
1	Integrate safety policy into all existing documents	Short-Term	Public Infrastructure Division, Planning Department, and Engineering Department
2	Update roadway and intersection design standards to promote safety for all roadway users and address deficiencies	Short-Term	Engineering Department
3	Establish a targeted enforcement program (for aggressive driving and high speeds) and coordinate with local law enforcement	Short-Term	Murfreesboro Police Department
4	PIO to organize educational campaigns/ provide information through community outreach. • Topics include: driving behavior, speed awareness, seatbelt usage, safe practices, for bicyclists and pedestrians • Celebrate projects that improve safety and positive movements toward the City's Safety Action Plan's goal annually. Create increased awareness within agency departments	Short-Term	Communications Department
5	Create a Safe Routes to School Partnership Program, coordinating with School Districts to organize Bike or Ride School Days	Short-Term	City/County Schools. Engineering Department, Planning Department, and Polie Department
6	Create a quick-build pilot program to implement safety	Short-Term	Engineering Department and Planning Department
7	Partner with TDOT in the statewide Tennessee Motorcycle Safety Strategic Plan	Short-Term	Planning Department and Police Department
8	Conduct public outreach campaigns and efforts to promote goals established by this SAP effort	Short-Term	Communications Department and Planning Department
9	Reprioritize future projects that achieve safety goals for future funding allocations	Mid-Term	Public Infrastructure Division

10	Increase safety education at schools and events to increase traffic safety culture of young drivers and adolescents, including increasing the awareness of the dangers of unbelted drivers and occupants, speed, impaired driving, and distracted driving	Mid-Term	City/County Schools
11	Improve highway safety through rider education, training, and a public awareness effort. The aim of this initiative is to promote motorcyclist safety and ensure that quality and consistency of training across all training sites	Long-Term	Public Infrastructure Division, Planning Department, and Police Department
12	Evaluate the adoption of a statutory traffic law through the legislative process to clearly define aggressive driving for enhanced enforcement efforts	Long-Term	Transportation Department and Police Department
13	Continue providing off-road alternatives/greenway bypasses near HIN segments. Crossings may require improvements in order to increase pedestrian and cyclist safety and comfort	Long-Term	Public Infrastructure Division
14	Improve existing traffic signal infrastructure along the High Injury network (HIN) including, but not limited to, the following recommendations: • Realignment of traffic signal heads • Installation of Backplates with Retroreflective Borders • Lighting Upgrades • Detection Upgrades • Pedestrian Equipment Upgrades • Conversion to Flashing Yellow Arrows (FYAs)	Long-Term	Public Infrastructure Division, Planning Department, and Engineering Department
15	Develop a citywide Pavement Management Plan	Long-Term	Public Infrastructure Division
16	Conduct near-miss demonstration projects along HIN segments within general proximity to Middle Tennessee State University campus and surrounding areas	Long-Term	Public Infrastructure Division and Engineering Department
17	Develop a post-crash care blood supply system to be used by Murfreesboro Fire Department and Emergency Services	Long-Term	Police Department and Fire Department

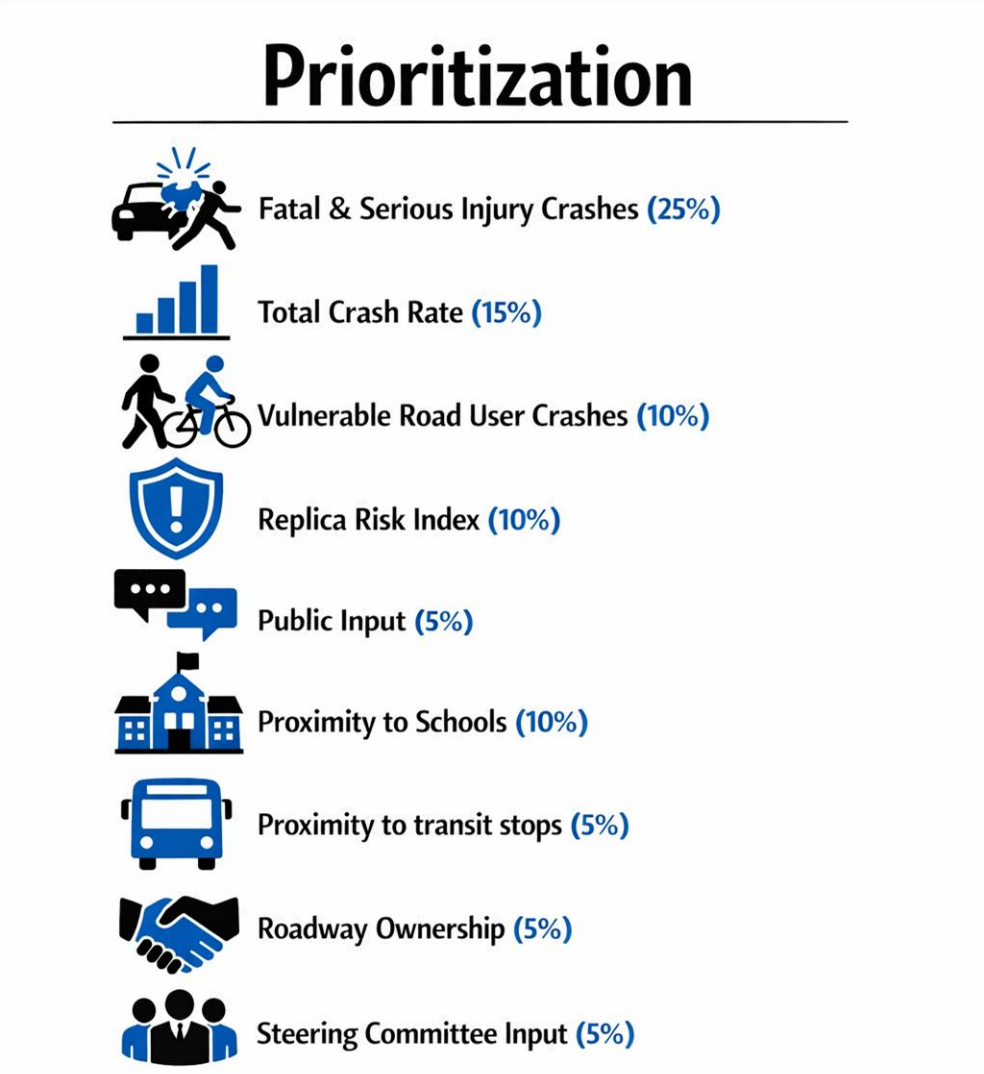
MURFREESBORO SAFE STREETS

Project Selection & Prioritization

Project Selection & Prioritization

Prioritization

After the review and validation of the HIN by the Steering Committee, nine transportation safety factors were assigned individual weights to be used in the corridor prioritization process. The weightings were determined using input from members of the steering committee and City staff. This exercise resulted in a methodology that is uniquely aligned with the priorities of the City. The nine factors are described below.



(Graphic Generated by AI)

These weightings were applied to the criteria for all the HIN segments to rank the corridors in order of priority. The results of this ranking are shown in **Table 22**.

Table 22: High Injury Network Prioritization

ID	Street Name	From	To	Score	Prioritization Rank
E	SHELBYVILLE PK.	SE Broad St	City Limits	77.4	1
A	OLD FORT PKWY.	Veterans Pkwy	Broad St	75.6	2
F	NORTHFIELD BLVD. / RUTHERFORD BLVD.	NW Broad St	S Church St	73.8	3
B	MEMORIAL BLVD.	Broad St	Dejarnette Ln	68.7	4
G	FORTRESS BLVD.	Old Fort Pkwy	NW Broad St	66.2	5
D	SE BROAD ST.	Old Fort Pkwy	Elam Rd	61.1	6
H	MIDDLE TENNESSEE BLVD.	NW Broad St	New Salem Hwy	60.8	7
C	NW BROAD ST.	Florence Rd	Old Fort Pkwy	53.0	8
I	JOHN R. RICE BLVD.	Veterans Pkwy	New Salem Hwy	47.4	9
M	VETERANS PKWY.	Burnt Knob Rd	S Church St	40.7	10
K	THOMPSON LN. / COMPTON RD.	Old Fort Pkwy	City Limits	37.2	11
O	SAINT ANDREWS DR.	Old Fort Pkwy	New Salem Hwy	35.1	12
J	NEW SALEM HWY	City Limits	Old Fort Pkwy	33.7	13
L	LASCASSAS PK.	E Clark Blvd	City Limits	33.6	14
P	JOE B. JACKSON PKWY.	S Church St	SE Broad St	32.8	15
N	DR. MARTIN LUTHER KING JR. BLVD	NE Broad St	City Limits	30.3	16

Prioritization Results

City staff worked together to select segments from the HIN for engineering countermeasure recommendations, considering current City projects and prioritization. The 15 segments for which the project team developed countermeasure recommendations are shown in **Figure 45**. Factsheets illustrating the recommendations are included in **Appendix C**. Safety improvement recommendations were developed using the Engineering Countermeasures Toolkit presented in **Appendix E**.

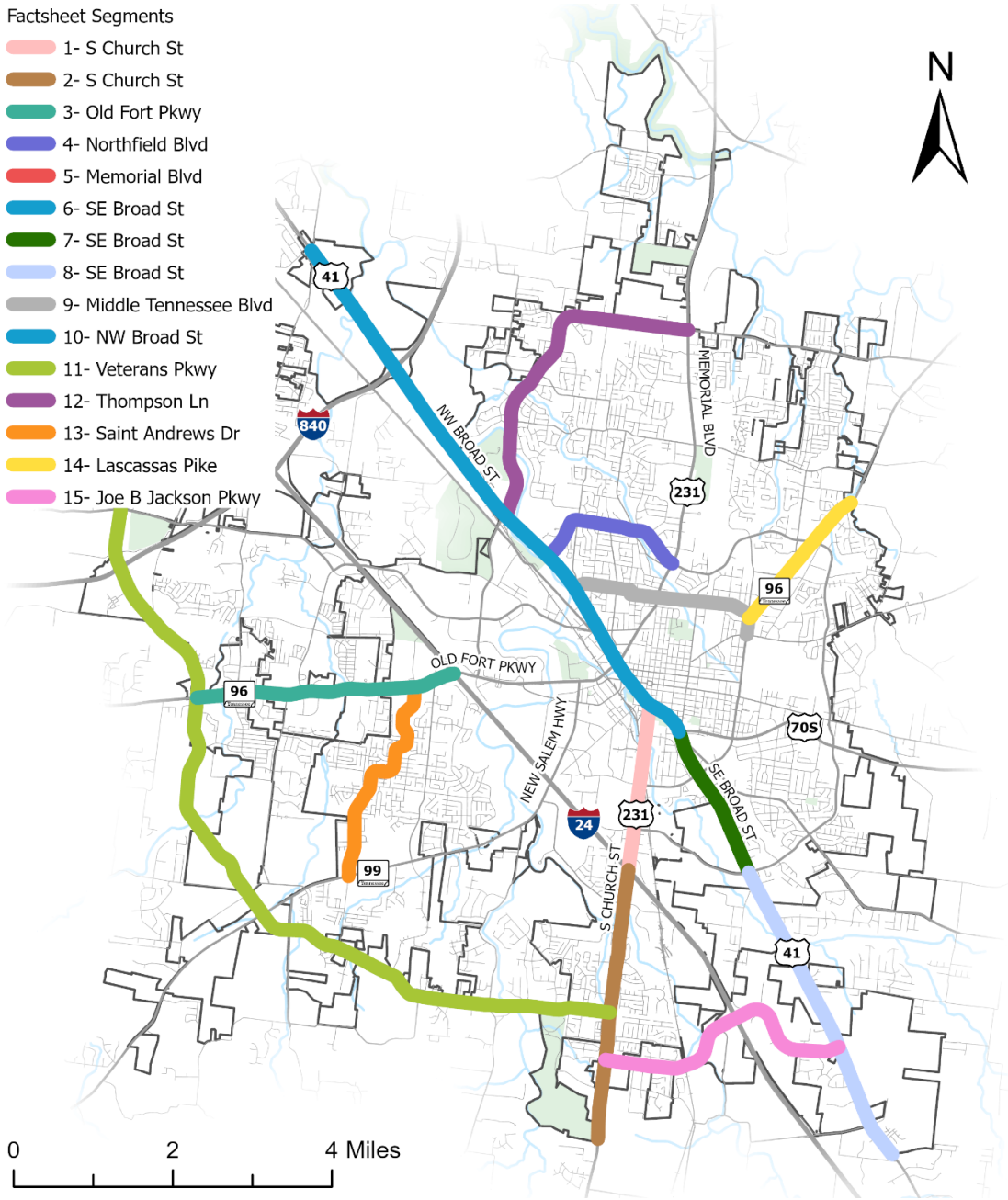


Figure 45: HIN Segment Prioritization Scores

MURFREESBORO SAFE STREETS

Progress & Transparency

Progress & Transparency

The City of Murfreesboro SAP recommends a set of actions that will support the successful implementation and monitoring of the recommended projects and strategies. The City of Murfreesboro must work alongside related departments and agencies to implement the projects and policy changes described in this SAP and assume joint responsibility for the complete fulfillment of the Plan. The City and the task force described in the following section will continue to update the public on the progress of project, policy, and process implementation. A progress and transparency toolkit has been provided to the City to keep the public informed and aware of ongoing projects and the benefits of the proposed improvements after implementation.

Implementation Process

To successfully implement an SS4A grant-funded project, the City must undertake several key steps. The first step is the preparation and adoption of a comprehensive safety action plan, which is accomplished by the City of Murfreesboro through this document. Once the plan has been approved, the City must engage in project-level planning, design, and development activities directly connected to the completion of the identified projects. This includes infrastructure improvements as well as behavioral and operational activities. The City must also ensure proper coordination among various stakeholders, including local government agencies, community organizations, and the public, to gather input and support for the projects. Additionally, the City must adhere to the timelines and funding requirements specified in the grant agreement, ensuring that all activities are completed within the stipulated period. Regular monitoring and evaluation of progress are essential to ensure that the safety goals are being met and that any necessary adjustments are made.

Task Force Implementation and Monitoring

It is recommended that a subset of the Steering Committee reconvenes in the future as a Murfreesboro Safety Task Force to direct the SAP implementation, monitoring, and future progress. The Task Force can consist of Public Works staff, other City of Murfreesboro departments, Murfreesboro Police Department, other local emergency service providers, key Rutherford County staff, key TDOT staff, other adjacent communities, and other stakeholders as needed. It is recommended that this group convene annually after the adoption of the Murfreesboro SAP to review the latest available crash data trends, discuss the progress of project implementation, and assess progress toward crash reduction goals. The Task Force will discuss opportunities to build upon the plan to address any changing crash trends alongside community needs, new technologies, and additional resources available to assist in implementation.

Public Posting of the Murfreesboro SAP

Upon completion and adoption, this plan will be made public on the dedicated project website and the City's website. It is recommended the project website be maintained to update the public with new crash data trends, project implementation status, and progress toward safety goals.

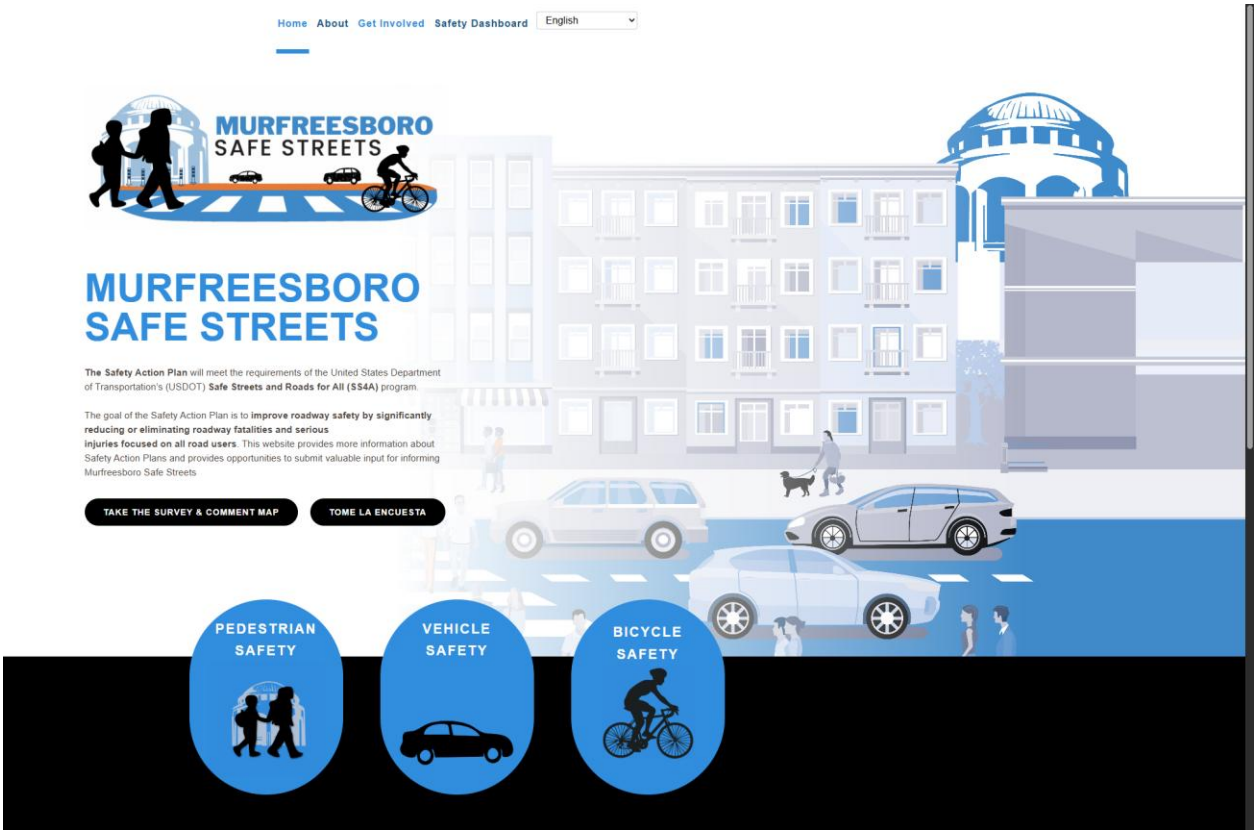


Figure 46: Murfreesboro SAP Website

Safety Dashboard Maintenance

The Murfreesboro Safety Task Force should periodically update the safety dashboard using TDOT's AASHTOWare Safety online crash database in order to inform the public of the progress toward the City's interim reduction goal and the long-term goal of zero traffic deaths and serious injuries.

Supplemental Visual Progress Indicators

These indicators can take various forms, such as maps and infographics, which visually represent the progress and impact of safety initiatives. Interactive maps can show the locations of ongoing and completed projects, allowing residents to see how their neighborhoods are being affected. Infographics can summarize key statistics and achievements in a visually appealing manner, helping to communicate the benefits of the projects effectively. By using these visual tools, the City of Murfreesboro can foster a sense of transparency and accountability, ensuring that the public remains informed and engaged throughout the implementation process. Additionally, these tools can be configured to serve as valuable feedback mechanisms, allowing residents to provide input and express concerns, which can be addressed in future project phases.