VISION ZERO

SAFE STREETS IN NASHVILLE

Action Plan

2022-2026

DECEMBER 2021 | **DRAFT**

NDOT

Message from Mayor Cooper

For Nashville to work, and work for everyone, then every person must be safe as they navigate our city — no matter how they get around, where they live, or their age or background.

That's the core of Nashville's Vision Zero mission — the simple and paramount belief that traffic deaths are unacceptable and preventable.

The Nashville Vision Zero Action Plan is a five-year plan to set us on a clear path toward eliminating pedestrian and traffic deaths.

It's the result of significant collaboration among Metro employees, Metro Council, state partners, community stakeholders and Nashville residents.

We cannot achieve this ambitious goal alone. Just as people and partners across Davidson County, the region, and state-level transportation experts helped Nashville create this plan, their collaboration will be equally important to achieving it.

Sincerely,

Mayor Cooper

Thank you!

Special thanks to the many Metro staff members, the Nashville Vision Zero Task Force and all of the community members that helped to develop and shape this plan.

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alta

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Culture Shift Team

VISION ZERO NETWORK

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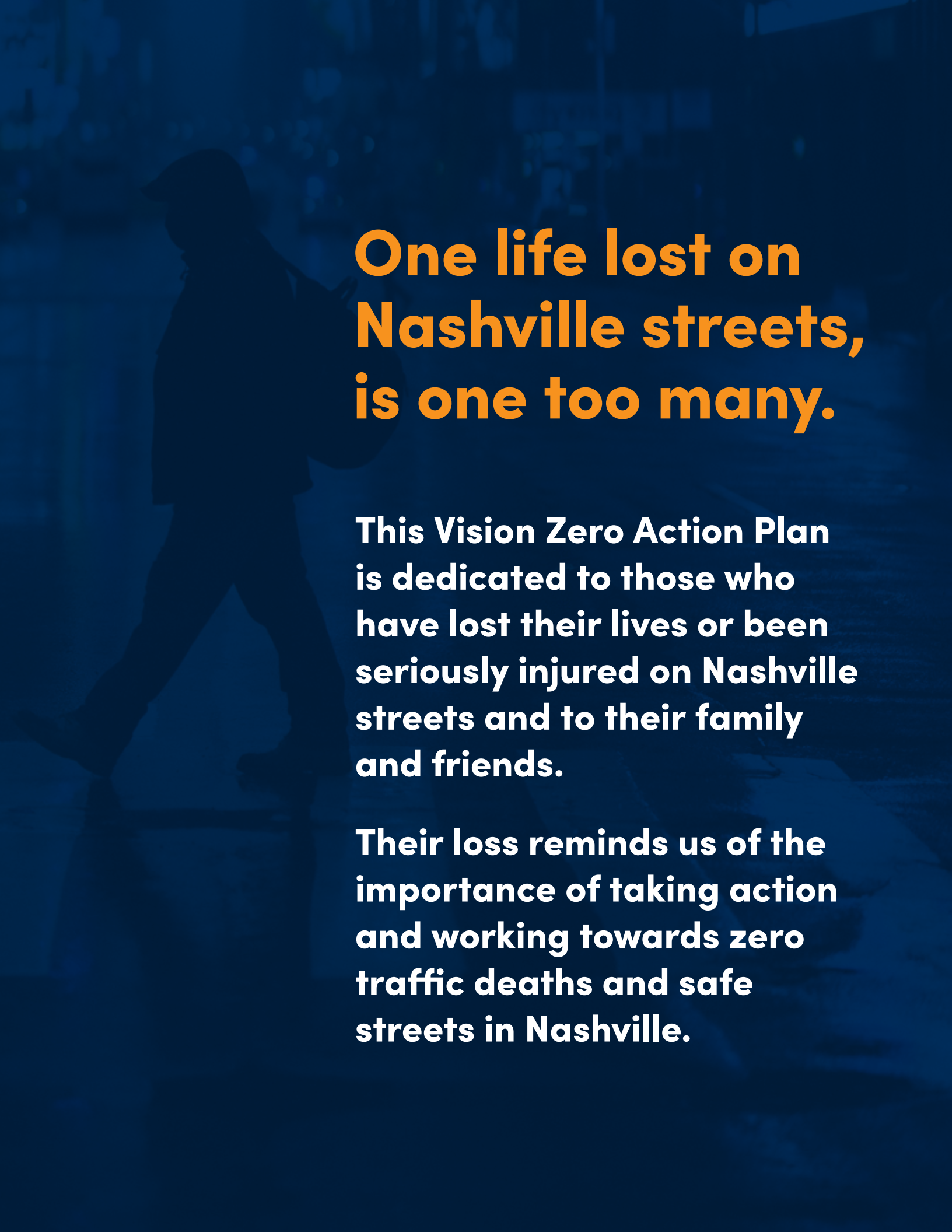
Why Vision Zero?

Because lives are at risk! Since 2014, 468 people have lost their lives to fatal traffic collisions on state and local roads in Nashville. Vision Zero is a new way of thinking about traffic safety. We intend to act before lives are lost, creating streets that result in safer driving and fewer collisions.

Our Guiding Principles

The Vision Zero movement is a worldwide strategy to eliminate all traffic-related deaths and severe injuries and at the same time, increasing safety, equity and mobility for all users. In Nashville, a new philosophy and approach to traffic safety is needed in order to achieve Vision Zero.

- **Traffic deaths are preventable and unacceptable.**
- **Human life and safety take priority over moving cars.**
- **Street design should account for human error and be predictable.**
- **Managing vehicle speed is fundamental to saving lives.**
- **Traffic safety improvements should reflect community needs.**
- **Quality data and transparent evaluation is needed at all levels of government.**
- **Effective prevention requires urgency and an integrated approach.**
- **Network connectivity is critical to ensure people can safely access key destinations.**



One life lost on Nashville streets, is one too many.

This Vision Zero Action Plan is dedicated to those who have lost their lives or been seriously injured on Nashville streets and to their family and friends.

Their loss reminds us of the importance of taking action and working towards zero traffic deaths and safe streets in Nashville.

Traffic Safety in Nashville Today

Since 2014, traffic deaths and severe injuries have increased annually in Nashville. Evaluating where collisions are occurring, why they are happening, and who is most impacted will help to proactively prevent a collision before it occurs.

IN AN AVERAGE YEAR, THE FOLLOWING PEOPLE ARE KILLED OR SEVERLY INJURED

360 PEOPLE DRIVING

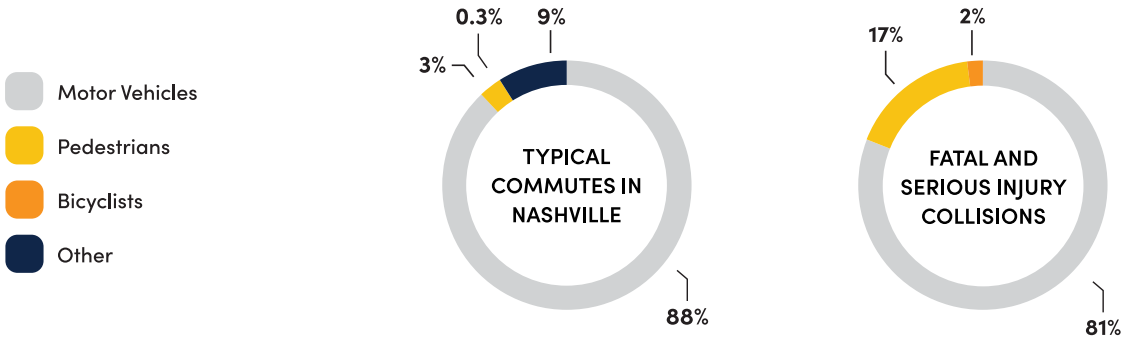
75 PEOPLE WALKING

8 PEOPLE BIKING

NATIONALLY, NASHVILLE RANKS 24TH IN TRAFFIC DEATHS PER 100,000 RESIDENTS

PEOPLE WALKING ON NASHVILLE STREETS ARE MOST AT RISK

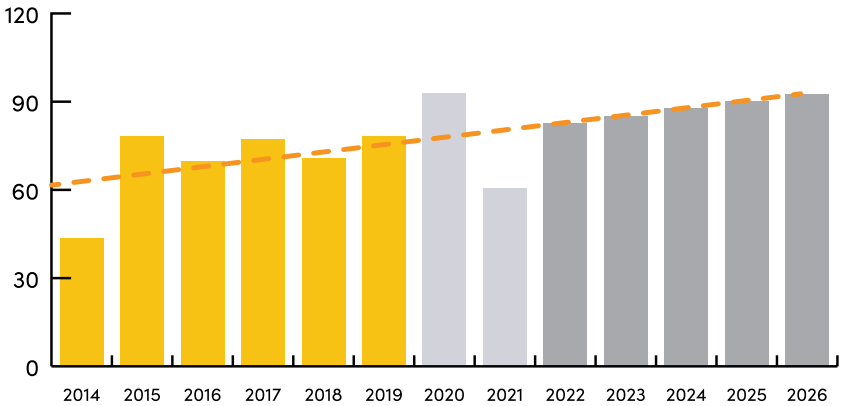
1 in 4 pedestrians are killed or seriously injured when involved in a traffic collision. While only 3% of people identify as walking as their main form of transportation, 17% of all traffic deaths or serious injuries are pedestrians.



2019 U.S. Census American Community Survey, 1-year estimates

PEDESTRIAN DEATHS AND SEVERE INJURIES ARE ON THE RISE

The number of people killed or severely injured while walking has generally increased since 2014. Based on current projections, that number will increase to an estimated 96 people per year by 2026.



PROJECTED KILLED AND SEVERELY INJURED PEDESTRIAN COLLISIONS

SPEED IS A RISK FOR EVERYONE

Speed is one of the most important factors in determining how severe a crash is, especially for people walking, biking or relying on transit. The faster a car is traveling, the less likely a person has of surviving the crash. If we control driving speeds on Nashville streets, we can prevent the likelihood of a traffic death or severe injury.

A pedestrian hit by a vehicle traveling at...

25 MPH

HAS AN **89%** CHANCE OF SURVIVAL

35 MPH

HAS AN **68%** CHANCE OF SURVIVAL

45 MPH

HAS AN **35%** CHANCE OF SURVIVAL

National Transportation Safety Board. 2017.

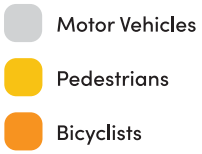
Nolensville Pike from Elysian Fields to Providence Heights is a high speed corridor where two people driving and seven people walking have lost their lives since 2014.

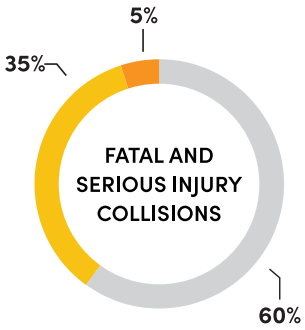
Murfreesboro Pike from Hamilton Church Road to Pin Hook Road is a high speed corridor where one person driving, one person walking, and one person biking have lost their lives since 2014.

PEDESTRIAN HIT-AND-RUNS ARE INCREASING AT AN ALARMING RATE

Nationally, hit-and-run collisions have increased at a rate of about 7% each year since 2009. A hit-and-run includes any collision where someone driving a vehicle hits a person, object, or another vehicle and then leaves the scene - knowingly or unknowingly. There can be several contributing factors such as poor visibility at night, driving under the influence and fear of police interactions.

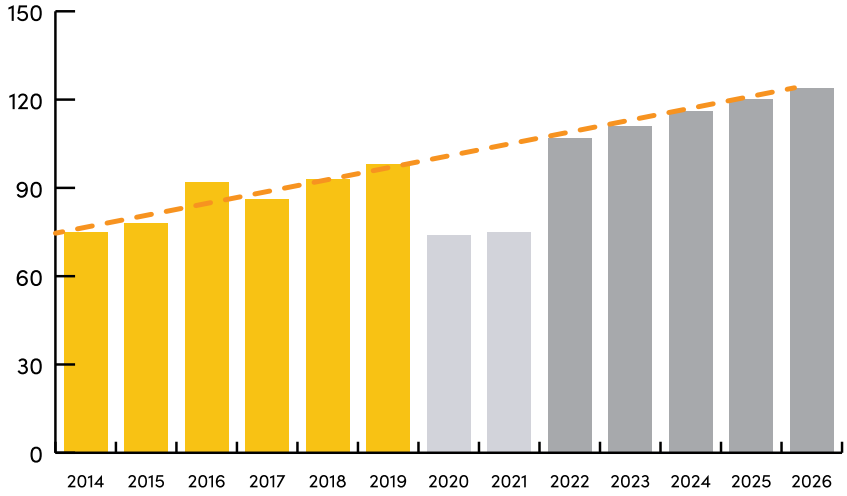
In Nashville, people walking, especially at night, are at greater risk for being involved in a serious hit-and-run collision. On average, there are 84 pedestrian-involved hit-and-runs each year in Nashville. As of August, there have been 75 pedestrian hit-and-runs in 2021.

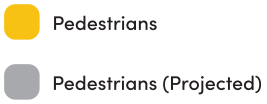




Pedestrians make up **35%** of hit-and-run collisions where somebody is killed or severely injured

3 out of 10 of all pedestrian collisions are hit-and-runs





2020 and 2021 data is not included in the trendline forecast due to travel impacts from stay-at-home orders.

PEDESTRIAN HIT-AND-RUN COLLISIONS

Vulnerable Areas in Nashville

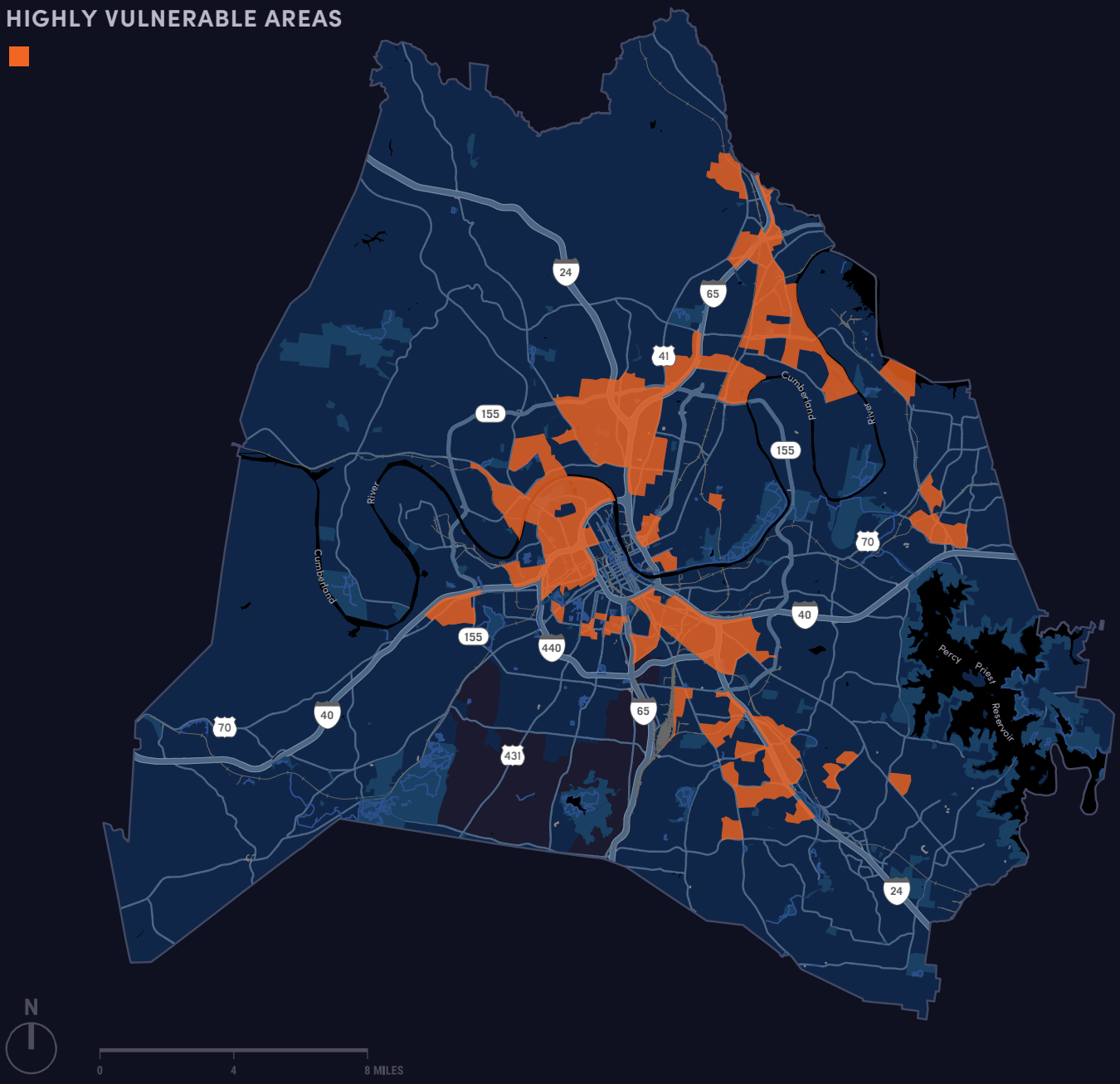
The data is clear - those who live in the most vulnerable areas are also over represented in traffic deaths and severe injuries. Vulnerable areas were identified through a degree of vulnerability analysis adapted from the Greater Nashville Regional Council's methodology. Thirteen demographic categories were assessed to identify areas that may be most vulnerable to transportation need and traffic risk (see the map on page 15).

More than **30% of collisions** for all modes occur in areas with the highest concentration of poverty, renters, and housing cost-burdened households, despite these areas making up **20% of the population**

Photo Credit: Rochelle Carpenter

A person walking near a bus stop in a highly vulnerable area is **8x more likely to be killed or severely injured.**

HIGHLY VULNERABLE AREAS



DEMOGRAPHIC CATEGORIES USED TO IDENTIFY VULNERABLE AREAS:

- Active Transportation Users (workers that use transit, walk, or bike to work)
- Carless Households (no vehicles available)
- Disabled Population
- Educational Level (less than High School)
- Women
- Households with High Housing Costs
- Limited English Proficient Households
- People of Color (non-white and/or Hispanic/ Latinx)
- Poverty
- Renters vs. Owners
- Seniors (65+)
- Unemployment Rate
- Youth (under 18)

2

What You Told Us

Community engagement helped us understand the current safety challenges that people who travel through Nashville experience, and what improvements they want to see in Nashville.

What We Did

Targeted Focus Groups

African American Focus
Latinx/Hispanic Focus
Kurdish Focus

Intercept Survey

Along Nolensville Pike
Among People Experiencing Homelessness

Stakeholder Meetings

Advocacy Groups
Hospitals and Universities

Online Public Survey

1,646 Surveys Completed

Additional Leveraged Engagement

WalknBike Update
Murfreesboro Pike Study
Metro Transportation Plan

Interactive Map

181 Public Comments

Key Themes from Public Engagement

Photo Credit: Rochelle Carpenter

A significant portion of Nashville's **residents do not feel comfortable walking or biking** in their neighborhoods, along pikes, and downtown.

Missing sidewalks, distracted driving, and people ignoring traffic laws while driving were the top three safety concerns reported.

Photo Credit: Rochelle Carpenter

More than **50% of survey respondents supported strategies to make walking and bicycling safer** and to implement complete streets.

84% of survey respondents were willing to add time to their commute to help achieve safer streets.

A concern that **additional police enforcement could unfairly penalize poor people** was raised during focus group conversations.


Photo Credit: Rochelle Carpenter


Photo Credit: Rochelle Carpenter

Many residents expressed a **desire for more public transportation and safe access.**

High vehicle speeds and poorly maintained roads were identified as a significant concern.


Photo Credit: Rochelle Carpenter


Photo Credit: Rochelle Carpenter

The **fear of being arrested or deported** may cause people to leave the scene of a crash.

What We Heard

"I'm nervous that pedestrian injuries and fatalities are a lot more common than they used to be. More street lighting would make me feel more comfortable walking at night."

- NASHVILLE RESIDENT

"It would be nice if my children could walk in our neighborhood in Antioch, but there's no sidewalks. On Blue Hole Road in particular, I think it would be amazing if they were able to do sidewalks. The area is so narrow that even with a sidewalk, I would want a barrier or guard rail or something to feel safe walking."

- NASHVILLE RESIDENTS

"Obviously if people are getting killed, there's a real problem. Where they should put the money is out on Nolensville Road. There's no sidewalks, no traffic lights, six-lane-wide streets and people rolling by at 40 or 50 miles an hour."

- NASHVILLE RESIDENTS

"For a cyclist, staying put at a red light can sometimes be more dangerous than going right through."

- NASHVILLE RESIDENT

"We live over in South Nashville in Berry Hill, close to where the stadium is going, and there are literally no sidewalks, people driving crazy, and lots of construction. Walking in downtown is fine, but biking downtown, not so much."

- NASHVILLE RESIDENTS

3

High Injury Network

By identifying streets with the highest concentration of traffic collisions that result in death or serious injuries, Nashville can work to improve their design and reduce the risk of future collisions.

Where are the Most Unsafe Streets?

Some streets are more dangerous than others. By figuring out which streets have the highest concentrations of traffic injuries and deaths today, Nashville can focus improvements where they will save the most lives. We found that streets with more and faster traffic are more likely to be "high injury" streets.

We also found that more than half of Nashville's high injury network is in parts of town where vulnerable populations live.

NOLENSVILLE PIKE

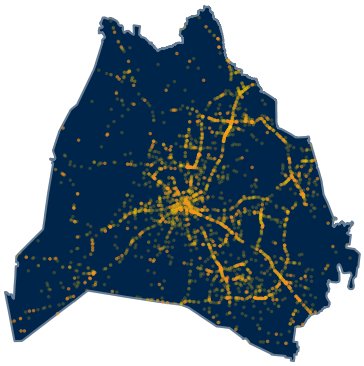
CHARLOTTE AVENUE

MURFREESBORO PIKE

WEST TRINITY LANE

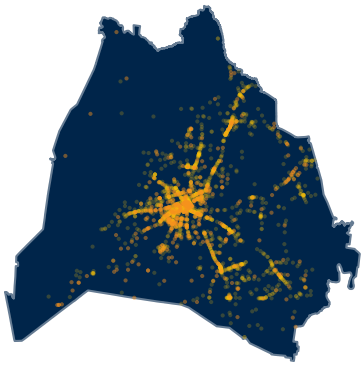
What is the High Injury Network?

The High-Injury Network (HIN) identifies the most dangerous roads to guide Nashville's investments in infrastructure and programs, and ensures that Vision Zero projects support those most in need. The graphic below highlights how all collisions were weighted in order to identify the most dangerous roads.



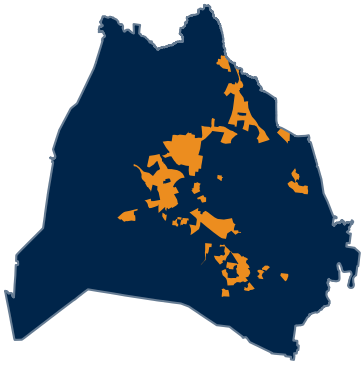
All Traffic Related Deaths + Severe Injuries

468	DEATHS
2,899	SEVERE INJURIES
45,750	MINOR INJURIES (NOT REPRESENTED)



Vulnerable Users

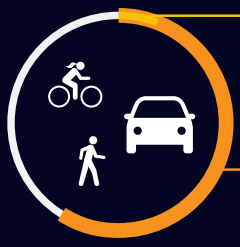
2,274	PEDESTRIANS INVOLVED
483	BICYCLISTS INVOLVED



Vulnerable Areas

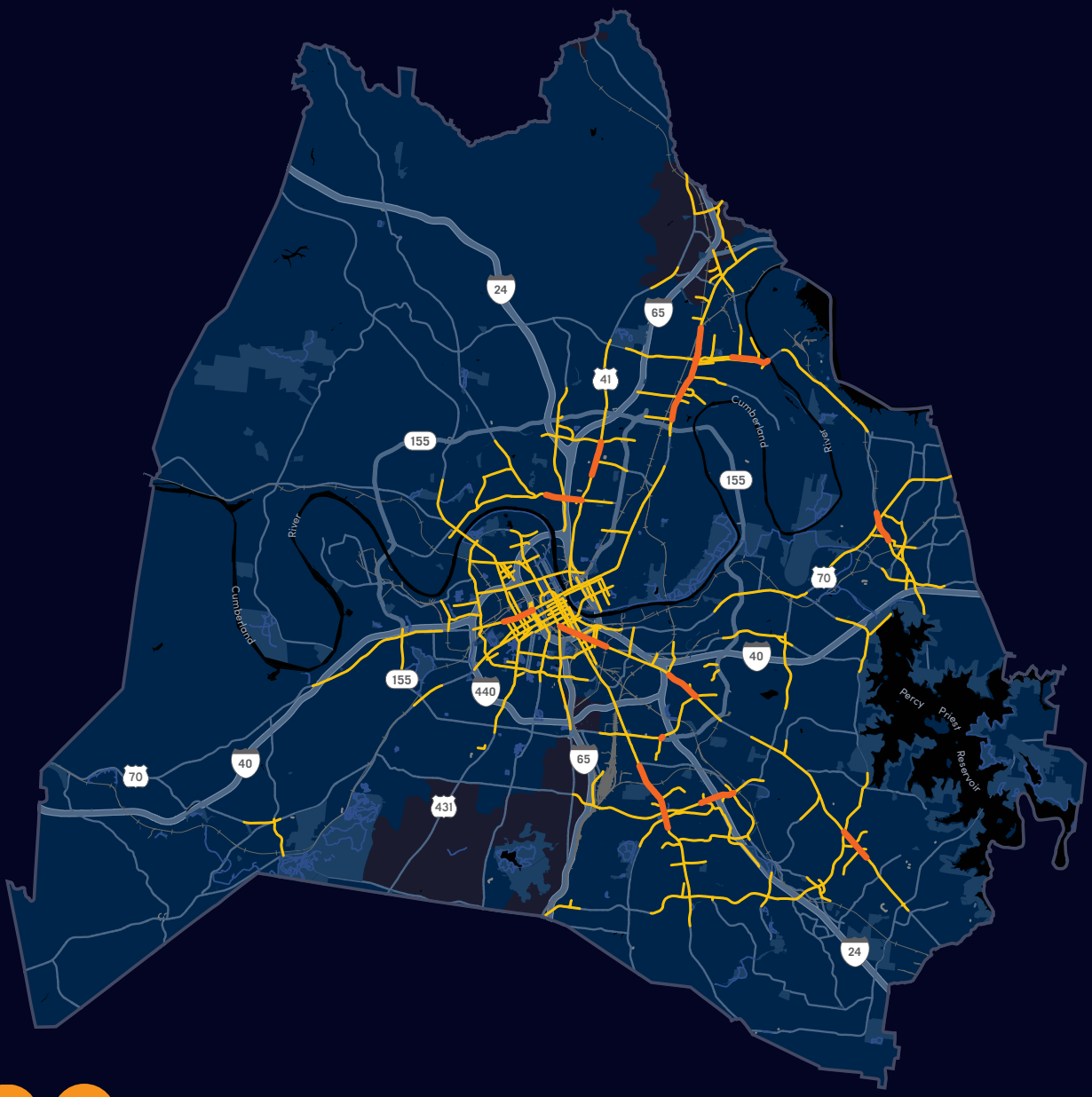
1 IN 5	PEOPLE IN NASHVILLE LIVE IN HIGHLY VULNERABLE AREAS

A numerical score is created by adding together all traffic related deaths and severe injuries, vulnerable users, and vulnerable areas. This score is assigned to each roadway to determine its overall severity (See map on page 25).



6%
OF STREETS
account for

59% of all
FATAL AND SERIOUS INURIES
for all modes



HIGH INJURY NETWORK - ALL MODES

- PRIORITY HIGH INJURY STREETS
- HIGH INJURY STREETS

N

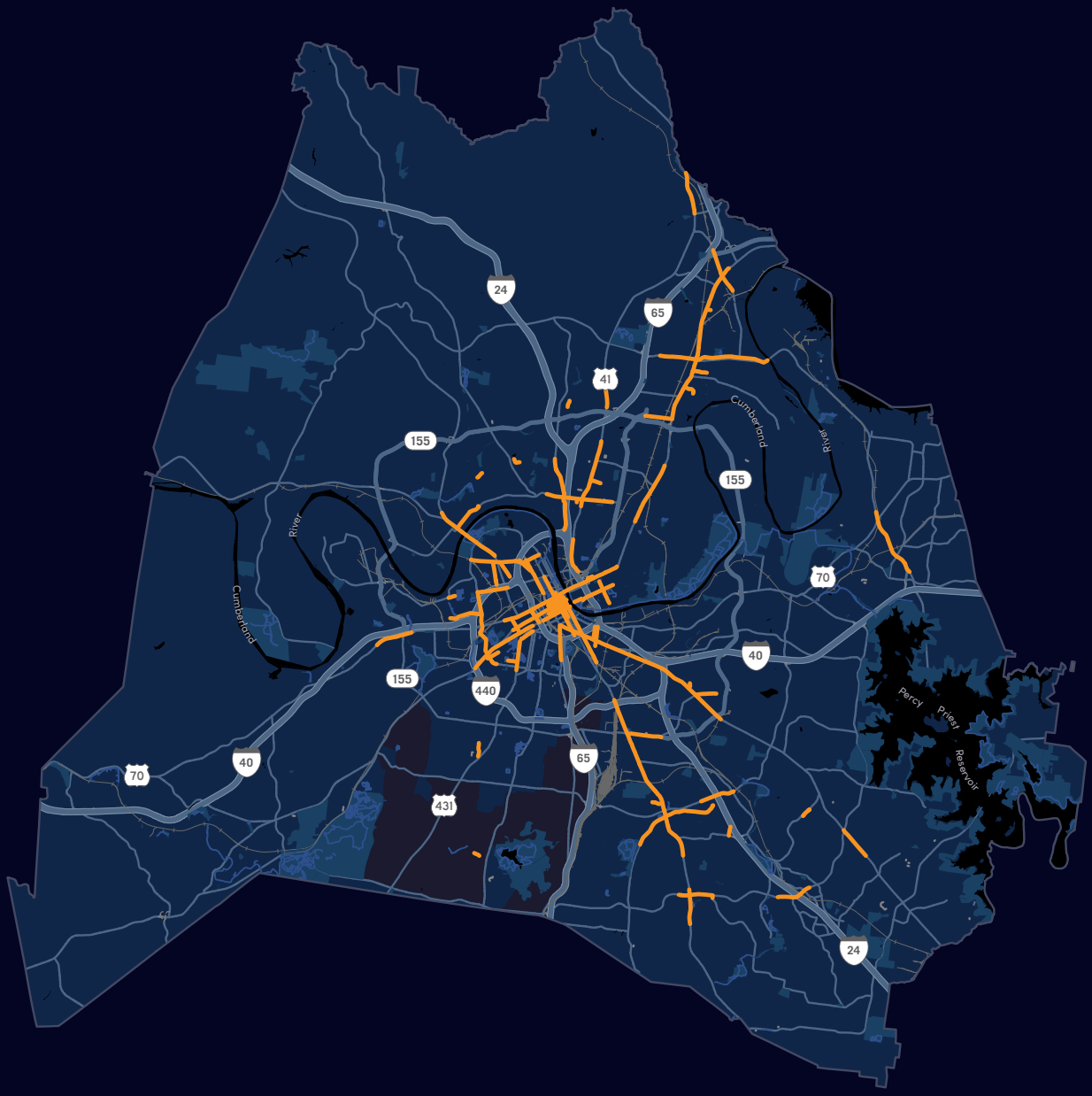
0 4 8 MILES

STREETS IN THE HIGH INJURY NETWORK INCLUDE:

- West Trinity Lane
- Gallatin Pike
- Murfreesboro Pike
- Nolensville Pike
- Harding Place
- Lafayette Street
- Charlotte Ave
- Old Hickory Blvd
- Dickerson Pike

2%
OF STREETS
account for

60% of all
FATAL AND SERIOUS INURIES for people walking



PEDESTRIAN HIN

N

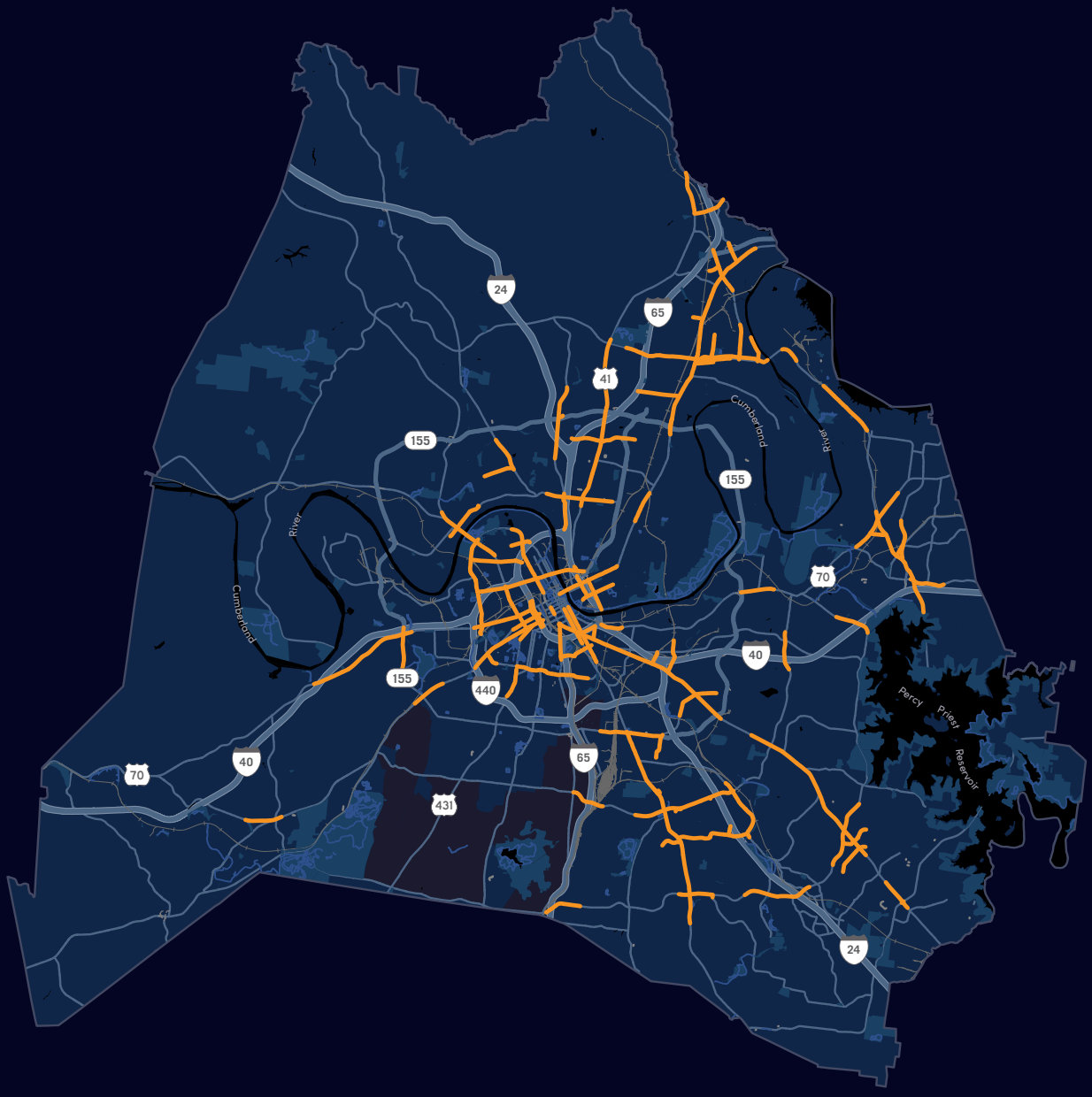
0 4 8 MILES

STREETS IN THE PEDESTRIAN HIGH INJURY NETWORK INCLUDE:

- West Trinity Lane
- Murfreesboro Pike
- Lafayette Street
- Nolensville Pike
- Gallatin Pike
- Dickerson Pike
- Harding Place
- Rosa L Parks Blvd
- Main Street
- Old Hickory Blvd

3.5%
OF STREETS
account for

40% of all
FATAL AND SERIOUS INURIES for people driving



MOTORIST HIN

N

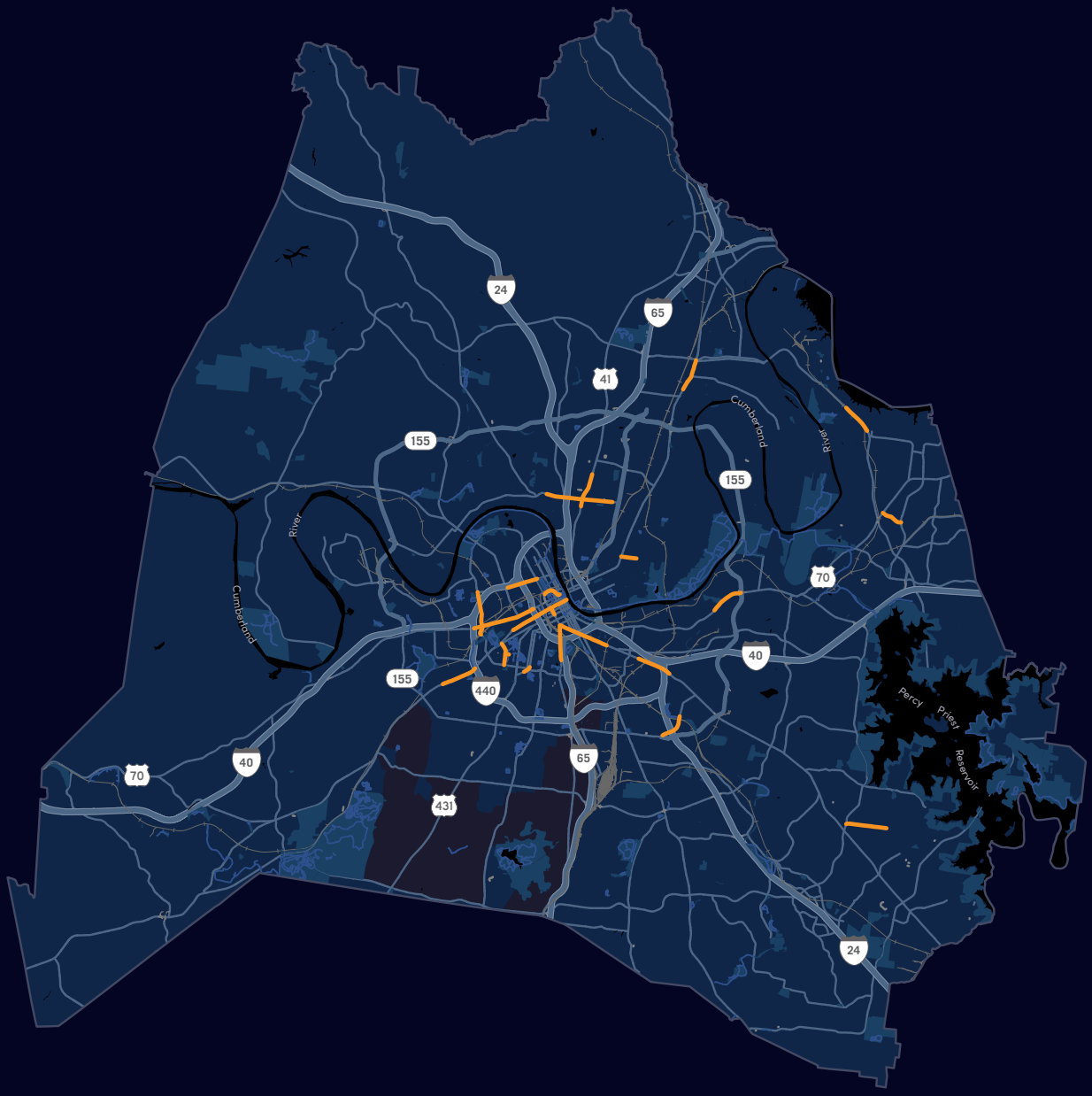
0 4 8 MILES

STREETS IN THE MOTORIST HIGH INJURY NETWORK INCLUDE:

- Murfreesboro Pike
- Gallatin Pike
- West Trinity Lane
- Old Hickory Blvd
- Harding Place
- Charlotte Ave
- Conference Drive
- Nolensville Pike
- Hobson Pike
- Rosa L Parks Blvd

<1%
OF STREETS
account for

50% of all
FATAL AND SERIOUS INURIES for
people bicycling



BICYCLIST HIN

N

0 4 8 MILES

STREETS IN THE BICYCLIST HIGH INJURY NETWORK INCLUDE:

- Church Street
- Charlotte Ave
- Gallatin Pike
- Lafayette Street
- 8th Ave South
- 28th Ave North
- West Trinity Lane
- East Trinity Lane
- 25th Ave South
- Murfreesboro Pike

It is more challenging to draw conclusions from bicyclist data due to small sample sizes.

Pedestrians at intersections have a long distance to cross, and drivers turning both left and right often fail to yield."

— VISION ZERO SURVEY PARTICIPANT

Where are the High Injury Intersections?

High injury intersections identify junctions in the network that have the largest concentrations of collisions where victims are killed or injured. They are summarized separately to the High Injury Network because they are specific to where streets meet and have different prevention strategies.

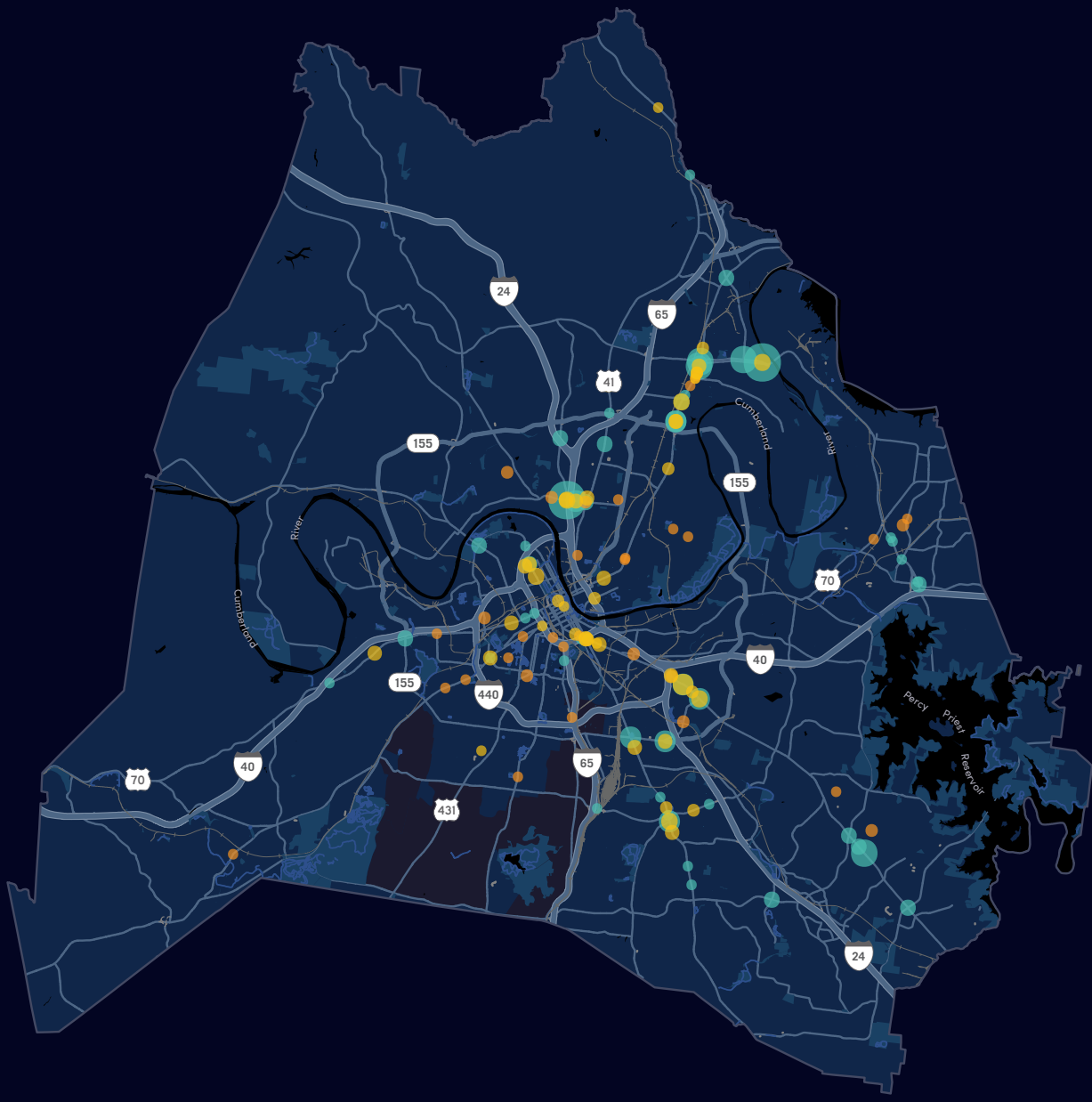
Most Dangerous Intersections for Pedestrians

- Lafayette Street & Charles E. Davis Boulevard
- Gallatin Pike & Neelys Bend Road
- Gallatin Pike & Berkley Drive
- Dr. Martin Luther King Jr. Boulevard & 5th Ave N
- Gallatin Pike & Madison Street
- Nolensville Pike & Welshwood Drive
- Murfreesboro Pike & Millwood Drive
- Murfreesboro Pike & E Thompson Lane
- Gallatin Pike S & Maple Street
- 14th Avenue North & Broadway Street
- Lafayette Street & Rep. John Lewis Way

Most Dangerous Intersections for All Modes

- Harding Place & Sidco Drive
- Murfreesboro Pike & Hamilton Church Road
- W. Trinity Lane & Brick Church Pike
- Nolensville Pike & Harding Place
- Murfreesboro Pike & Hobson Pike
- Old Hickory Boulevard & Gallatin Pike
- Nolensville Pike & W Thompson Lane
- Old Hickory Boulevard & Rio Vista
- Murfreesboro Pike & Bell Road
- Dickerson Pike & Ewing Drive
- Charlotte Pike & Old Charlotte Pike
- Thompson Lane & Briley Parkway
- Bell Road & Blue Hole Road
- Dickerson Pike & East Trinity Lane

90% of
HIGH INJURY INTERSECTIONS
occur in highly vulnerable areas



INTERSECTIONS BY MODE HIN

- PEDESTRIAN
- BICYCLIST
- MOTORIST

HIGHER WEIGHTED SCORE

N

0 4 8 MILES

4 Action Plan

We are committed to reducing deaths and serious injuries on our streets. The strategies outlined in this action plan were developed with input from the Vision Zero Task Force to address findings from the safety analysis and concerns from the public.

Our Framework

This action plan features strategies that will help guide Metro and its partners' implementation efforts to improve safety in Nashville. We identified immediate actions to take as well as additional strategies and actions towards making streets safer in Nashville for users of all ages, abilities, genders, races/ethnicities, and income levels.

Strategies were organized into five distinct themes

CREATE SAFE STREETS FOR EVERYONE

Focus on roadway design strategies, project implementation, and infrastructure needs to create safer streets for people that walk, bike, take transit and drive.

PROMOTE A CULTURE OF SAFETY

Develop policies and programs that use education, encouragement and enforcement strategies to influence safe traffic behaviors.

PRIORITIZE EQUITY

Ensure that streets are safe, connected, and comfortable for users of all ages, abilities, and identities.

IMPROVE DATA QUALITY

Collect, share, maintain, and improve data collection, availability, and use during action plan implementation.

INCREASE COLLABORATION + TRANSPARENCY

Improve internal and external Metro communication to ensure a coordinated and transparent implementation approach.

Immediate Action Steps for 2022

The following immediate action items are intended to be the priority steps Metro will take towards implementing the Vision Zero Action Plan in 2022. While this is an aggressive approach, we're committed to making Nashville safer for all users and we will update these action steps annually based on performance and progress.

Staff Capacity

Designate a Vision Zero coordinator and assess the need for additional supporting staff to implement the action plan.

Performance Measure: Announce a Vision Zero coordinator position.

Vision Zero Task Force

Formalize the Vision Zero Task Force to evaluate progress towards implementation of the Vision Zero Action Plan, ensure transparency, and increase collaboration among key stakeholders.

Performance Measure: Formalize the Vision Zero Task Force and facilitate bi-monthly meetings.

Education Campaign

Develop a Vision Zero communication/ education campaign to target specific behaviors, increase traffic safety awareness, and educate all roadway users. Leverage partnerships with TDOT, the Tennessee Highway Safety office and other local partners.

Performance Measure: Develop a campaign brand and communication strategy.

Quick Build Policy

Adopt a Vision Zero Quick Build Policy and design toolbox to identify opportunities for rapid implementation.

Performance Measure: Adopt policy and pilot at least one quick build test project.

Pedestrian Crossing Policy

Adopt a Pedestrian Crossing Policy that provides a framework with procedures for installation, enhancement, removal and relocation of crosswalks and enhanced pedestrian crossing treatments. Specific guidance on pedestrian crossings near bus stops should be included.

Performance Measure: Adopt policy and provide staff training.

Fatal Crash Investigative Team

Expand the Fatal Crash Investigative Team in order to consistently document and evaluate the equity/vulnerability, engineering, environmental, vehicle, and behavioral factors for all deadly crashes. Recommend solutions to reduce and prevent crashes at these locations and places with similar infrastructure and behavior patterns.

Performance Measure: Facilitate monthly meetings and develop a template to document findings.

High Injury Network

Evaluate the HIN to identify quick build opportunities for safety treatments in highly vulnerable areas. Improvements should respond to the collision data and could include improved illumination, pedestrian crossing enhancements, signal timing adjustments, or streetscape elements such as curb extensions, medians, bikeways, etc.

Performance Measure: Audit 25 locations along the HIN to determine appropriate safety countermeasures and develop concept level design approaches for each location.

High Injury Intersections

Identify safety improvements at High Injury Intersections. Improvements should respond to collision data and could include curb bulbouts, extended medians and pedestrian refuge areas, intersection geometry realignment, bicycle detection, signal timing adjustments, restricting free-flow turning movements, etc.

Performance Measure: Evaluate and design improvements to the top 25 most dangerous intersections.

Safe Access to Transit

Improve access to transit by conducting a safety audit of bus stops with the highest ridership and the highest pedestrian collision rates, and identify opportunities for quick build improvements and securing grant funding.

Performance Measure: Conduct safety audit of 25 bus stops and identify safety improvements.

Equitable Engagement

Develop an equitable engagement strategy specific to traffic safety related matters and utilize the vulnerable area analysis.

Performance Measure: Adopt an equitable engagement policy with performance measures.

Design Standards

Comprehensively review and update design standards such as lighting specifications, curb ramp details, and curb radius guidelines to ensure consistency and to meet current national best practices.

Performance Measure: Release updated design standards and evaluate inconsistencies with other partners.

Report Card

Release a Vision Zero Report Card in late 2022 that evaluates progress towards implementation of the Action Plan.

Performance Measure: Release the Vision Zero Report Card by end of year.

STRATEGIES TO

Create Safe Streets for Everyone

Street design and functionality influence users' behavior and can cause driver mistakes. The following actions address engineering and policy changes that aim to create safer streets for everyone.

ACTION ITEMS	TIMELINE	WHO IS INVOLVED?	PERFORMANCE TARGET	IMPLEMENTATION NEEDS			
				FUNDING	STAFF CAPACITY	PARTNERSHIP BUILDING	LEGISLATION
Strategy 1: Prioritize safety improvements on high injury streets and intersections							
A-1a. Prioritize and implement safety treatments along the High Injury Network (HIN). Improvements should respond to the collision data and could include improved illumination, pedestrian crossing enhancements, intersection treatments, signal timing adjustments, or streetscape elements such as bulbouts, medians, bikeways, etc., to slow traffic.	▶▷▷ Short	NDOT, TDOT, WeGo, NES	**SHORT-TERM:** Implement safety treatments on the HIN as part of ongoing programmed projects **MEDIUM-TERM:** Identify funding + implement HIN safety treatments	$			
A-1b. Implement safety improvements at High Injury Intersections. Improvements should respond to collision data and could include curb bulbouts, extended medians and pedestrian refuge areas, intersection geometry realignment, bicycle detection, etc. In addition, evaluate and integrate bike and pedestrian operational improvements such as Leading Pedestrian Intervals, longer pedestrian phases, dedicated pedestrian phases if needed (downtown), No Right Turn On Red, and protected left turn phases	▶▷▷ Short	NDOT, TDOT	**SHORT-TERM:** Implement safety treatments at High Injury Intersections as part of ongoing programmed projects **MEDIUM-TERM:** Identify funding + implement safety improvements at High Injury Intersections	$			

ACTION ITEMS	TIMELINE	WHO IS INVOLVED?	PERFORMANCE TARGET	IMPLEMENTATION NEEDS			
				FUNDING	STAFF CAPACITY	PARTNERSHIP BUILDING	LEGISLATION
A-1c. Improve safe access to transit by auditing bus stops along high frequency transit routes and high pedestrian collisions rates to identify both quick-build strategies and long-term improvements needed.	▶▷▷ Short	NDOT, WeGo, TDOT	**SHORT-TERM:** Identify the top 25 bus stops with the highest ridership and pedestrian collision rates Evaluate the top 25 bus stop locations to identify challenges and safety trends **MEDIUM-TERM:** Implement improvements at the top 25 bus stops including bus stop relocations, enhanced pedestrian crossings, improved lighting, etc.				
A-1d. Diversify funding sources for long-term funding availability	▶▷▷ Short	NDOT, TDOT, WeGo	**SHORT-TERM:** Identify existing funding sources where safety improvements can be carved out **MEDIUM-TERM:** Dedicate new funding streams to fund Vision Zero projects				
A-1e. Prioritize implementation of sidewalk and bikeway improvements identified in the WalknBike plan along the HIN	▶▶▷ Mid	NDOT, TDOT	**SHORT-TERM:** Ensure the HIN is accounted for in WalknBike prioritization (underway) **MEDIUM-TERM:** Implement bikeway and sidewalk improvements along the HIN				
A-1f. Dedicate maintenance funding to prioritize the HIN for improvements such as sidewalk repair and increased street sweeping	▶▶▷ Mid	NDOT, TDOT, Wego	**SHORT-TERM:** Identify ways to implement safety improvements in conjunction with maintenance projects **MEDIUM-TERM:** Implement maintenance improvements along the HIN, prioritizing sidewalk repair and bikeway sweeping				

ACTION ITEMS	TIMELINE	WHO IS INVOLVED?	PERFORMANCE TARGET	IMPLEMENTATION NEEDS			
				FUNDING	STAFF CAPACITY	PARTNERSHIP BUILDING	LEGISLATION
Strategy 2: Update roadway design standards and expedite implementation to prioritize safety							
A-2a. Adopt a Vision Zero Quick Build Policy in order to streamline and expedite project delivery	▶▷▷ Short	NDOT, TDOT, WeGo	**SHORT-TERM:** Examine State Law and Metro Code changes needed and adopt policy legislation **MEDIUM-TERM:** Implement demonstration and pilot projects at HIN locations and gather public feedback				
A-2b. Adopt a pedestrian crossing policy with standard operating procedures for safer pedestrian crossings	▶▷▷ Short	NDOT, TDOT, WeGo, Dept. of Safety	**SHORT-TERM:** Review current policies and standards on pedestrian crossing warrants and treatments and adopt new policy				
A-2c. Update design standards and traffic operations procedures to create flexibility and encourage innovation	▶▶▷ Mid	NDOT, TDOT, WeGo	**SHORT-TERM:** Test short-term strategies and action items for incorporation into the flexible design standards **MEDIUM-TERM:** Develop context-sensitive design guidance and standards **LONG-TERM:** Update & adopt design standards				
A-2d. Develop a policy that connects safety to roadway design standards	▶▶▶ Long	NDOT, TDOT, WeGo	**SHORT-TERM:** Establish a coalition that examines current standards and comes to consensus on modifying standards to prioritize multimodal safety **MEDIUM-TERM:** Make recommendations to specific standards that need updating **LONG-TERM:** Adopt policy tying safety impacts to design standards				

ACTION ITEMS	TIMELINE	WHO IS INVOLVED?	PERFORMANCE TARGET	IMPLEMENTATION NEEDS			
				FUNDING	STAFF CAPACITY	PARTNERSHIP BUILDING	LEGISLATION
A-2e. Evaluate tradeoffs of lane eliminations and removal of on-street parking	▶▶▶ Long	NDOT, TDOT	**SHORT-TERM:** Evaluate different lane elimination scenarios through demonstration & pilot projects **MEDIUM-TERM:** Develop context-sensitive policy for implementation of road diets based on collision data and updated design guidelines **LONG-TERM:** Implement road diets based on adopted policy and updated design standards				
A-2f. Develop a policy for access management to reduce driveway conflicts	▶▶▶ Long	NDOT, TDOT, WeGo	**LONG-TERM:** Adopt a context-sensitive access management policy, specifically targeting the HIN				
Strategy 3: Reduce speed through design							
A-3a. Update the traffic calming program and design toolkit for local roadways and neighborhood streets to prioritize the HIN and include safety countermeasures	▶▶▷ Mid	NDOT, Planning, Neighborhood Associations	**SHORT-TERM:** Identify and evaluate national best practices for traffic calming programs with a focus on peer Vision Zero cities **MEDIUM-TERM:** Update the traffic calming program and policy				
A-3b. Identify and implement car-free zones and/or pedestrian priority zones in downtown	▶▶▶ Long	NDOT, TDOT, WeGo	**SHORT-TERM:** Examine opportunities and challenges associated with implementation, including transportainment vehicle conflicts and curb management techniques (drop off zones) **MEDIUM-TERM:** Explore a temporary car-free zone and pedestrian priority zones along a HIN street **LONG-TERM:** Establish an approach/ policy to identify car-free zones in downtown				

ACTION ITEMS	TIMELINE	WHO IS INVOLVED?	PERFORMANCE TARGET	IMPLEMENTATION NEEDS			
				FUNDING	STAFF CAPACITY	PARTNERSHIP BUILDING	LEGISLATION
A-3c. Lower speed limits along major arterials (the pikes) by moving away from the 85th percentile rule	▶▶▶ Long	NDOT, TDOT	**SHORT-TERM:** "Identify HIN locations where speeding was a contributing cause and lower speed limits by implementing quick treatments such as temporary message signs with lower posted speed limits. Identify national best practices of successful approaches to non-85th percentile posted speed limits" **MEDIUM-TERM:** Solidify system-wide approach to adopting a non-85th percentile posted speed limit policy by context **LONG-TERM:** Implement non-85th percentile posted speed limits				
Strategy 4: Continue implementing street and pedestrian scale lighting							
A-4a. Coordinate with NES on street lighting and maintenance along the HIN	▶▷▷ Short	NES, NDOT, TDOT, WeGo	**SHORT-TERM:** Identify street lighting on the HIN that needs maintenance and repair				
A-4b. Develop a strategy to update light fixtures with high quality light sources (i.e., LEDs)	▶▶▷ Mid-Long	NDOT, NES, TDOT	**SHORT-TERM:** Evaluate enhanced/ more sustainable lighting options for system-wide application **MIDDLE-TERM:** "Develop strategy for implementing enhanced lighting for new lighting installations Establish a maintenance schedule to implement enhanced lighting at locations in need of repair, prioritizing HIN locations"				

ACTION ITEMS	TIMELINE	WHO IS INVOLVED?	PERFORMANCE TARGET	IMPLEMENTATION NEEDS			
				FUNDING	STAFF CAPACITY	PARTNERSHIP BUILDING	LEGISLATION
A-4c. Integrate pedestrian-scale lighting that provides visibility for bicyclists and pedestrians. Consider innovative treatments, such as solar panel crossing enhancements.	▶▶▶ Long	NDOT, NES, TDOT	**MEDIUM-TERM:** "As part of the evaluation of street lighting standards, integrate pedestrian-scale lighting, especially at HIN locations and land use generators of high bike/ped activity Utilize pilot strategies to implement pedestrian-scale lighting at key HIN locations" **LONG-TERM:** Implement pedestrian scale lighting at a system-wide level	$	🧍		
Strategy 5: Evaluate current bridge design to accomodate all users							
A-5a. Evaluate safety and explore Crime Prevention through Environmental Design (CPTED) principles at overpasses and underpasses	▶▶▶ Long	NDOT, TDOT	**MEDIUM-TERM:** "Evaluate processes and standards to building overpasses and underpasses to integrate multimodal safety improvements Implement short-term/ quick build enhancements to improve multimodal conditions" **LONG-TERM:** Integrate safety and CPTED improvements into the design and construction of overpasses and underpasses		🧍		
A-5b. Integrate bridge retrofit options to accommodate bicyclist and pedestrian facilities	▶▶▷ Mid	NDOT, TDOT	**SHORT-TERM:** Coordinate and integrate bike/ped safety enhancements with programmed bridge upgrade and replacement projects, prioritizing HIN locations **MEDIUM-TERM:** Integrate multimodal enhancements and maintenance into regular bridge repair and rehabilitation programs and plans	$	🧍		

SAMPLE COUNTERMEASURES TO

Improve Safety along High-Speed Streets

GALLATIN PIKE BETWEEN OLD HICKORY BOULEVARD AND DUPONT AVENUE IN MADISON:

- Between 2014 and 2021
  - » 160 motorist collisions (149 minor injuries, 9 serious injuries, and 2 fatalities)
  - » 6 pedestrian collisions (1 serious injury and 5 minor injuries)
- Located entirely within identified highly vulnerable area
- Speed limit 40 miles per hour
- 30,000 drivers/vehicles on average every day

PROGRAM AND POLICY STRATEGIES:

- Implement a Road Safety Audit to better understand crash history and contributing factors
- Reduce the speed limit (posted speed and target/desired speed)
- Conduct a safety communication campaign for all users, targeting the specific behaviors and collision types identified in the Road Safety Audit
- Evaluate and improve access management along the corridor

DESIGN STRATEGIES:

SAMPLE COUNTERMEASURES FOR

Safety Near High-Frequency Transit

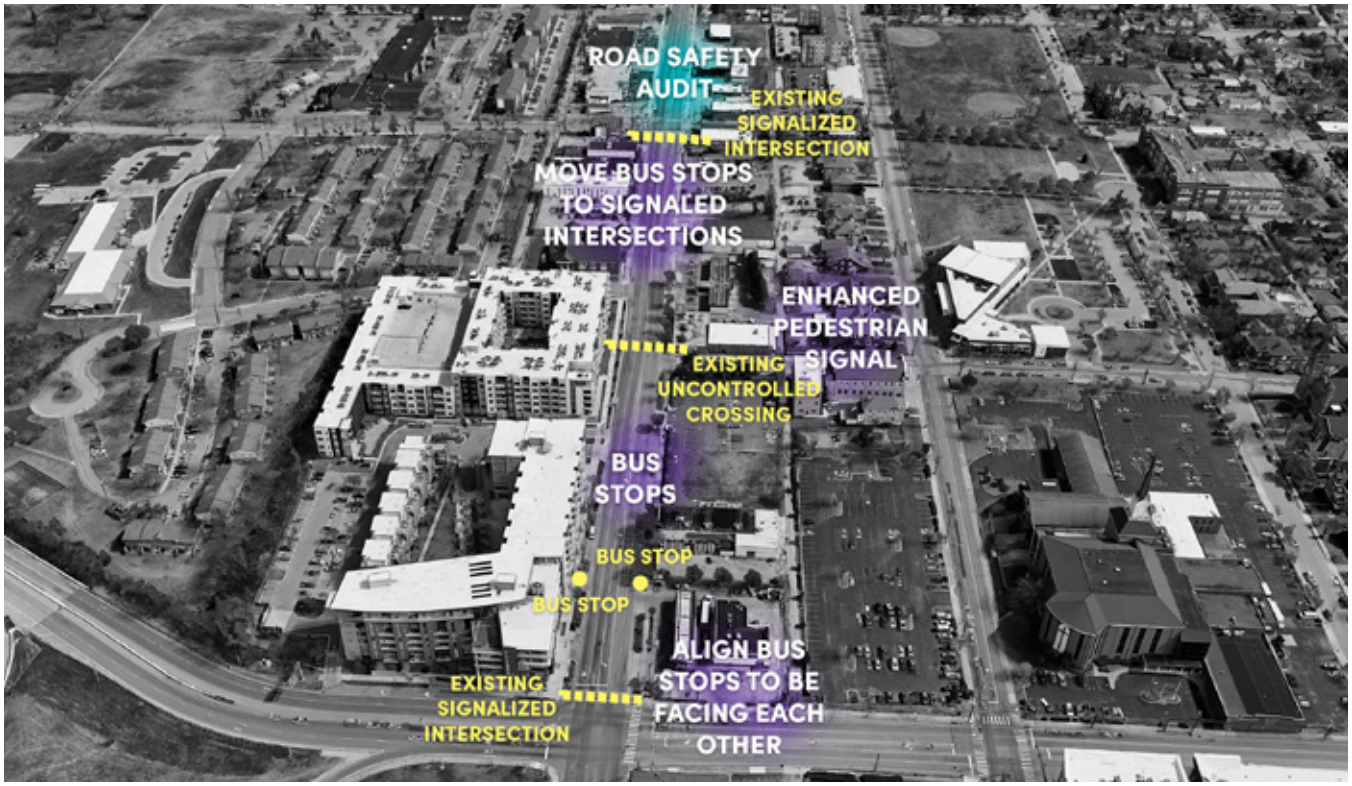
MAIN STREET BETWEEN SPRING STREET AND SOUTH 7TH STREET:

- High frequency transit stops on each side of the street.
- Between 2014 and 2021
  - » 1 bicyclist collision
  - » 8 pedestrian collisions
  - » 35 motorist collisions
- Speed limit 35 miles per hour
- An average of 26,000 motorists drive here every day

PROGRAM AND POLICY STRATEGIES:

- Implement enhanced bus driver training and education
- Increase enforcement of drivers illegally passing buses
- Reduce the speed limit (posted speed and target/desired speed)

DESIGN STRATEGIES:



STRATEGIES TO

Prioritize Equity

Nashville is committed to protecting our most vulnerable community members. Knowing that people living in highly vulnerable areas are at higher risk of death and injury on our roadways, we will prioritize the following actions that will improve safety for these users.

ACTION ITEMS	TIMELINE	WHO IS INVOLVED?	PERFORMANCE TARGET	IMPLEMENTATION NEEDS			
				FUNDING	STAFF CAPACITY	PARTNERSHIP BUILDING	LEGISLATION
Strategy 1: Prioritize vulnerable areas and people who have less mobility choices							
B-1a. Incorporate the Greater Nashville Regional Council degree of vulnerability analysis and results into Metro funding decisions, prioritization processes and other key transportation planning processes	▶▷▷ Short	NDOT, Planning, GNRC	Utilize the degree of vulnerability analysis as an input to prioritize the funding, design, and maintenance of transportation projects, including WalknBike project priorities				
B-1b. Adopt and implement the Equity in Design tool for all transportation projects to understand the potential impacts to Nashville's most vulnerable users	▶▷▷ Short	NDOT, Planning, GNRC	Implement a system-wide process and tool to evaluate impacts of transportation projects, particularly safety improvements, in vulnerable areas				
Strategy 2: Engage people living in vulnerable areas in transportation planning							
B-2a. Develop an equitable engagement strategy specific to traffic safety related matters	▶▷▷ Short	NDOT, TDOT, WeGo, Community champions	Identify national examples of equitable engagement strategies with a focus on Vision Zero peer cities. Develop a communications plan to outline how equitable engagement should be implemented.				
B-2b. Develop engagement metrics to monitor performance	▶▷▷ Short	NDOT, GNRC, TDOT, WeGo, Community champions	Identify engagement metrics in conjunction with equitable engagement strategies to establish goals and thresholds for evaluations				

ACTION ITEMS	TIMELINE	WHO IS INVOLVED?	PERFORMANCE TARGET	IMPLEMENTATION NEEDS			
				FUNDING	STAFF CAPACITY	PARTNERSHIP BUILDING	LEGISLATION
B-2c. Establish a Vision Zero Community Committee to help oversee decision-making for safety projects, develop relationships, and build trust with community leaders in highly vulnerable areas	▶▶▷ Mid	NDOT, Community Champions	Establish a line of communication with community leaders by formalizing a Vision Zero Community Committee. The committee should meet quarterly, be paid for their time, and evaluate progress towards implementation of the Vision Zero Action Plan, leverage their communication channels, and discuss safety concerns				
Strategy 3: Expand the Safe Routes to School Program							
B-3a. Hire a Nashville Safe Routes to School (SRTS) coordinator	▶▷▷ Short	NDOT, TDOT, Metro Public Schools	Identify and expand SRTS policies and coordination and hire dedicated Nashville SRTS coordinator	$			
B-3b. Conduct an audit of the schools that have the highest collision rates within their school zone and develop safety recommendations, including both quick build opportunities and long-term improvements	▶▷▷ Short	NDOT, Planning, TDOT, Metro Public Schools	Identify the schools located within vulnerable areas that have the highest collision rates and the highest number of existing students who walk or bike to school. Conduct a road safety audit of each school zone to identify and implement improvements	$			
B-3c. Develop safe walking and biking curriculum for elementary and middle school students	▶▶▷ Mid-Long	NDOT, Metro Public Schools, Department of Safety + Homeland Security, TDOT	Identify SRTS curriculum best practices and work with partners to integrate SRTS principles into curriculum				
B-3d. Advocate for a change in state law to require driver education in Tennessee and integrate traffic safety into the curriculum	▶▶▶ Long	NDOT, Department of Safety + Homeland Security, TDOT	Working with partners and stakeholders, develop safety curriculum and draft proposed legislation				

STRATEGIES TO

Increase Collaboration + Transparency

It will take many agencies working together to reduce collisions, injuries, and fatalities. The following strategies will help Metro work with public and private partners throughout the region to make roadway improvements, update policies, coordinate on programs, and communicate consistently—while holding ourselves accountable to our community safety goals.

ACTION ITEMS	TIMELINE	WHO IS INVOLVED?	PERFORMANCE TARGET	IMPLEMENTATION NEEDS			
				FUNDING	STAFF CAPACITY	PARTNERSHIP BUILDING	LEGISLATION
Strategy 1: Increase collaboration between agencies responsible for traffic safety							
C-1a. Designate a Vision Zero coordinator and assess the need for additional supporting staff to implement the action plan	▶▷▷ Short	NDOT, Mayor's Office	Announce a Vision Zero coordinator position	$			
C-1b. Coordinate an annual forum for staff and stakeholders on traffic safety initiatives and opportunities	▶▶▷ Mid	NDOT, TDOT, WeGo, DSHS, MNPD, and other safety partners including advocates and private partners	NDOT to facilitate, plan and host annual forum. Forum should celebrate accomplishments, identify barriers, and result in actionable safety strategies for the upcoming year.	$			
C-1c. Prioritize coordination between NDOT and TDOT	▶▷▷ Short	NDOT, Mayor's Office, TDOT	Maintain consistent collaboration on safety enhancements with actionable outcomes				
C-1d. Establish and formalize a Vision Zero Task Force	▶▷▷ Short	NDOT, MNPD, TDOT, Dept of Safety	Establish the Vision Zero Task Force and regular meetings with NDOT and partners for the purpose of collaboration and progress monitoring and reporting				

ACTION ITEMS	TIMELINE	WHO IS INVOLVED?	PERFORMANCE TARGET	IMPLEMENTATION NEEDS			
				FUNDING	STAFF CAPACITY	PARTNERSHIP BUILDING	LEGISLATION
C-1e. Establish a multi-disciplinary working group led by NDOT who will work in concert with the fatal crash investigative team of MNPD to consistently document and evaluate the equity/ vulnerability, engineering, environmental, vehicle, and behavioral factors for all deadly crashes	▶▷▷ Short	NDOT, Metro PD, TDOT, DSHS, WeGo, Planning, other Metro departments as needed	Formalize a multi-disciplinary team, facilitate monthly meetings and develop a template to document findings from each evaluation				
Strategy 2: Foster collaboration within Metro and the newly formed NDOT							
C-2a. Ensure all Metro departments are aware of initiatives and new traffic safety policies and procedures	▶▷▷ Short	Mayor's Office, Metro Departments	Establish a communications system for awareness and sharing of traffic safety initiatives				
C-2b. Coordinate safety improvements into new construction and resurfacing efforts	▶▷▷ Short	NDOT, Metro Departments	Identify ongoing and programmed infrastructure projects on the HIN to integrate safety improvements. Integrate safety enhancements as part of infrastructure improvement projects, including capital projects, stormwater and sewer projects, planning/ development projects, and resurfacing projects				
C-2c. Coordinate large-scale events and street closures to ensure safety for all users	▶▶▷ Mid	NDOT, Mayor's Office, Planning, TDOT	Establish a process for integrating safe bike and pedestrian access policies and procedures into the road closure process for special events "				
Strategy 3: Engage with businesses to promote safety benefits							
C-3a. Craft a targeted outreach plan to business owners that focuses on Vision Zero education	▶▷▷ Short-Mid	NDOT	Develop targeted outreach plan for businesses and establish a process for continuous education and outreach with businesses on safety				
C-3b. Engage business owners early in infrastructure projects impacting their business to gain buy-in	▶▷▷ Short-Mid	NDOT	Identify programmed projects slated for construction to coordinate with impacted business owners				

STRATEGIES TO

Promote a Culture of Safety

Infrastructure improvements work best when they are supported by the community culture. The following actions will communicate strong social norms around Vision Zero, and thus improve user behavior.

ACTION ITEMS	TIMELINE	WHO IS INVOLVED?	PERFORMANCE TARGET	IMPLEMENTATION NEEDS			
				FUNDING	STAFF CAPACITY	PARTNERSHIP BUILDING	LEGISLATION
Strategy 1: Educate all roadway users							
D-1a. Develop a Vision Zero education campaign communication plan and strategy	▶▷▷ Short-Mid	Mayor's Office, NDOT, TDOT, WeGo, TDOSHS, Vision Zero Task Force	"Work with partners to identify targeted education needs and develop a communication strategy to roll out a targeted campaign to educate all roadway users "	$			
D-1b. Conduct traffic safety communication/ education campaigns targeting specific behaviors identified in the collision analysis along the HIN	▶▷▷ Short-Mid	NDOT, TDOT, WeGo, TDOSHS	Develop targeted campaign messaging and target the HIN for specific media promotion	$			
D-1c. Ensure education materials are multilingual and consider cultural differences	▶▷▷ Short	NDOT, TDOT, WeGo, Vision Zero Community Committee, TDOSHS	Consistently develop culturally sensitive multilingual education material				
D-1d. Collaborate with TDOT on combined safety campaigns to demonstrate consistent strong message of Vision Zero goal	▶▷▷ Short	NDOT, TDOT, TDOSHS	Identify existing education campaigns that align with Vision Zero findings and develop consistent messaging				

ACTION ITEMS	TIMELINE	WHO IS INVOLVED?	PERFORMANCE TARGET	IMPLEMENTATION NEEDS			
				FUNDING	STAFF CAPACITY	PARTNERSHIP BUILDING	LEGISLATION
Strategy 2: Launch an "All Hands on Deck" targeted campaign for pedestrian hit-and-runs							
D-2a. Develop a campaign strategy for a targeted hit-and-run communication/ education campaign	▶▷▷ Short	NDOT, TDOT, WeGo, TDOSHS, Vision Zero Task Force	Create target messaging that resonates with community members	$			
D-2b. Consider notification alerts, similar to Amber Alerts, to cellphones and media to alert of a hit-and-run incident	▶▷▷ Short	NDOT, TDOT, WeGo, Dept of Safety, media	Investigate potential deployment method of launching an Amber Alert type notification system	$			
D-2c. Partner with WeGo and carshare companies to offer incentives for weekend trips as an alternative to driving late at night and potentially under the influence of alcohol	▶▶▷ Mid	NDOT, TDOT, WeGo, Dept of Safety, carshare companies, businesses	Craft incentive strategy + establish coordination and partnerships with agencies (for education) and business + carshare providers (for offering incentives)	$			
Strategy 3: Revisit approach to traffic enforcement							
D-3a. Identify strategies for enforcement that respect the concerns of the community	▶▷▷ Short	MNPD, NDOT, TDOT	Work with the community to understand key concerns and develop a more context-appropriate approach to enforcement, such as automated enforcement	$			
D-3b. Reconsider the existing Metro policy that restricts automated enforcement strategies	▶▶▷ Mid	MNPD, NDOT	Lift automated enforcement restrictions to allow for targeted deployment, especially at HIN locations				

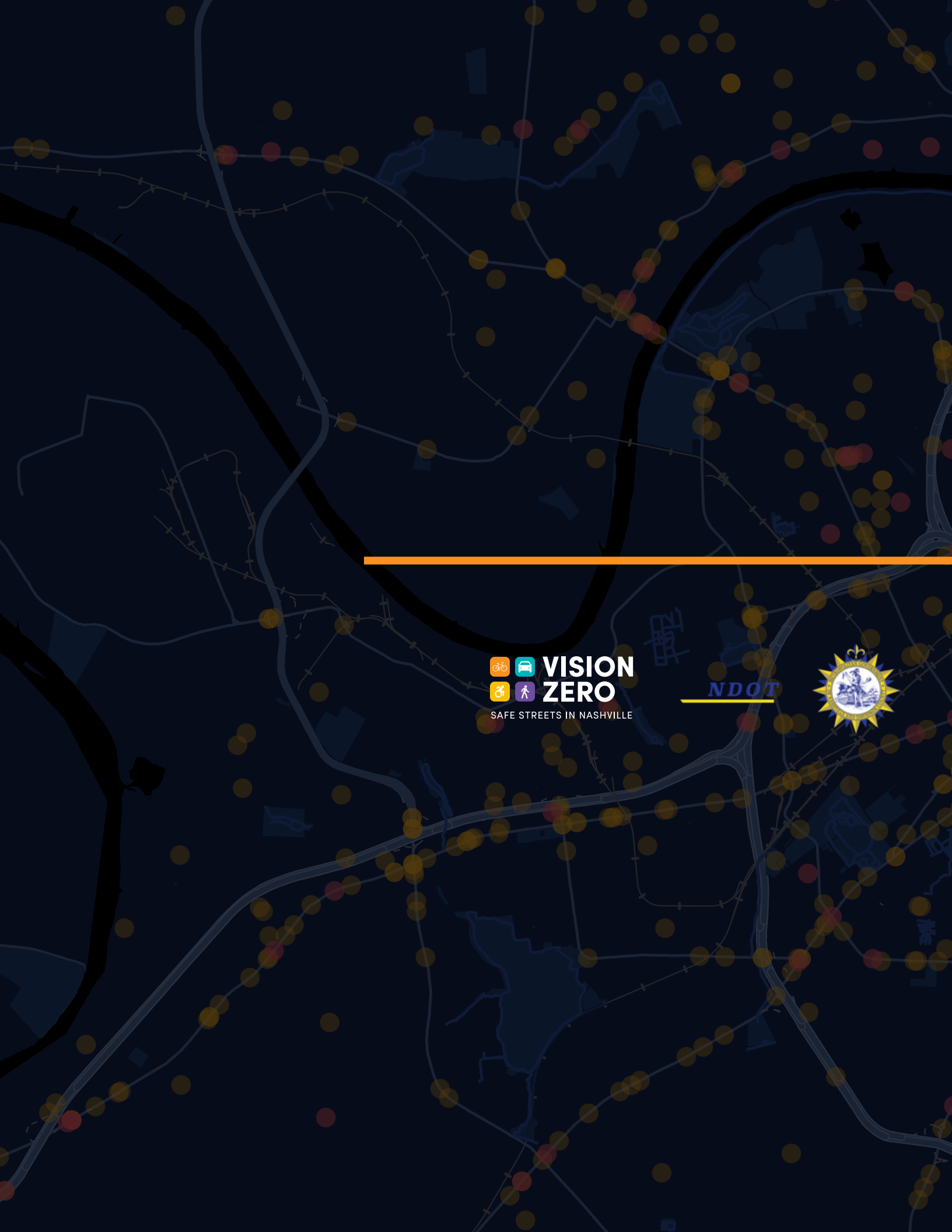
STRATEGIES TO

Improve Data Quality

Vision Zero must be data driven. In order to prevent future traffic deaths and severe injuries, we must improve the quality of collision data to understand who is impacted, what is happening and where improvements are needed. The strategies below outline ways to improve data quality and measure our progress towards achieving zero traffic deaths in Nashville.

ACTION ITEMS	TIMELINE	WHO IS INVOLVED?	PERFORMANCE TARGET	IMPLEMENTATION NEEDS			
				FUNDING	STAFF CAPACITY	PARTNERSHIP BUILDING	LEGISLATION
Strategy 1: Explore opportunities for enhanced data collection, organization, and use							
E-1a. Coordinate with Metro PD, TDOT and TDOSHS to improve collision data and transparency	▶▷▷ Short	NDOT, MNPD, TDOT, TDOSHS	Form regular meetings between agencies to discuss data consistency and establish goals				
E-1b. Update protocol for crash data reporting and documentation consistency	▶▷▷ Short	MNPD, NDOT, TDOT, TDOSHS, GNRC	Examine ways to update the police report for traffic collisions and conduct police officer training to ensure consistency				
E-1c. Explore ways to collect data on near misses and unreported traffic related injuries	▶▷▷ Short	NDOT, TDOT, GNRC, Vision Zero Task Force, Community partners	Collaborate with Open Data vendors to obtain near miss data. Identify methods to coordinate collision data with near miss data.	$			
E-1d. Maintain the Vision Zero Data Dashboard for increased transparency of collision data and findings	▶▷▷ Short	NDOT, ITS, MNPD	Identify who is responsible for maintaining the data dashboard and conduct frequent updates and improvements				
E-1e. Improve the way collision data is used in project decision-making for the priority HIN segments	▶▶▷ Mid-Long	NDOT, MNPD, Planning, TDOT, WeGo	Identify all Metro programs that utilize collision data and integrate collision data into prioritization efforts				
E-1f. Leverage emerging big data sources and data collection innovation	▶▶▷ Mid	NDOT, TDOT, WeGo, GNRC	Identify the value added of utilizing/partnering with big data sources on a consistent-long-term basis, including tracking safety-related data such as near misses and for multimodal analysis purposes	$			

ACTION ITEMS	TIMELINE	WHO IS INVOLVED?	PERFORMANCE TARGET	IMPLEMENTATION NEEDS			
				FUNDING	STAFF CAPACITY	PARTNERSHIP BUILDING	LEGISLATION
E-1g. Update and expand the systemic safety analysis annually and as additional data metrics are available	▶▶▷ Mid	NDOT, TDOT, MNPD, TDOT, TDOSHS	Update systemic safety analysis and identify additional metrics to include as data collection is improved				
E-1h. Explore ways to incorporate and expand proxy data sources such as hospital records	▶▶▶ Long	NDOT, Local hospitals, Dept. of Health, TDOT, GNRC	Work with local hospitals, the Department of Health, and universities to identify crash-related patient records that can be shared on a regular basis	$			
Strategy 2: Implement a robust active transportation user count program							
E-2a. Explore innovative strategies and funding opportunities for user counts	▶▷▷ Short	NDOT, TDOT, WeGo, Planning, GNRC	Identify federal, state, and local funding opportunities for bike ped counts/ counter technology and establish a library of available funding sources				
E-2b. Conduct user counts along the HIN	▶▷▷ Short	NDOT, TDOT, WeGo	Identify specific locations along HIN where user counts are appropriate and needed and perform counts along the HIN	$			
Strategy 3: Expand performance measures to include roadway safety							
E-3a. Develop safety performance measures and targets. Prioritize safety of pedestrians as the most vulnerable road user.	▶▷▷ Short	NDOT, TDOT, WeGo, TDOSHS	Identify performance measures targets and thresholds that incorporate vulnerable road user safety goals. Performance targets should draw from HIN and prevalent safety issues, aligning with federal and state policies as applicable to maximize safety improvement funding potential.				
E-3b. Be transparent on safety progress and Vision Zero implementation through an annual "report card"	▶▷▷ Short	NDOT	Develop a "report card" structure (document layout and/or storymap product) to use as a way to continuously evaluate progress towards Vision Zero Action Plan implementation and performance measures				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