VISION ZERO
CENTRAL FLORIDA
Counting down to zero traffic deaths

Safety Action Plan

PENDING ADOPTION
SEPTEMBER 2024

metroplan orlando
A REGIONAL TRANSPORTATION PARTNERSHIP

Thank you to everyone who helped with this plan!

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Cover Photo: SR 436 in the City of Casselberry is representative of roads on the High Injury Network as it has high vehicle speeds, 6+ vehicular travel lanes, transit service, walking and bicycling trips, and direct access to land uses along the corridor.

Jurisdictions preparing plans concurrently

Orange County
Apopka
Belle Isle
Eatonville
Edgewood
Maitland
Oakland
Ocoee
Windermere
Winter Garden
Winter Park

Osceola County
Kissimmee
St. Cloud

Seminole County
Altamonte Springs
Casselberry
Lake Mary
Longwood
Oviedo
Sanford
Winter Springs

Notes: At the time this plan was prepared, the City of Orlando already had an adopted Vision Zero Action Plan. Bay Lake and Lake Buena Vista are incorporated into the Orange County Plan.

Statement of Protection of Data from Discovery and Admissions

SECTION 148 OF TITLE 23, UNITED STATES CODE: REPORTS DISCOVERY AND ADMISSION INTO EVIDENCE OF CERTAIN REPORTS, SURVEYS, AND INFORMATION.

Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section, shall not be subject to discovery or admitted into evidence in a federal or state court proceeding or considered for other purposes in any action for damages arising from any occurrence at the location identified or addressed in the reports, surveys, schedules, lists, or other data.

Key terms

Crash – An occurrence where a road user collides with another road user, such as a car or truck, motorcyclist, bicyclist, pedestrian, or other moving or stationary obstruction, such as an animal, tree, pole, road debris or building, that may result in injury or loss of life, trauma, and/or property damage. Crashes can involve a single-party or multiple parties.

High Injury Network – A collection of streets where a disproportionate number of crashes that result in someone being seriously injured or killed occur.

Kinetic Energy – In the safety context, Kinetic Energy refers to the combination of mass and speed of a vehicle or other road user, like a bicyclist, involved in a collision. Depending on the angle of the crash, the higher the combination of mass and speed, the more likely the crash is to result in a serious injury or death, with the impact severity increasing exponentially as the speed a vehicle is driven increases.

KSI crash – A crash that results in someone being killed or seriously injured (KSI).

Safe System Approach – A guiding safety approach that builds and reinforces multiple layers of protection to both prevent crashes from occurring and minimize the harm caused to those involved when a crash does occur.

Serious injury – May also be referred to as an incapacitating or severe injury. Serious injuries may include broken bones, severed limbs, etc. These injuries usually require hospitalization and transport to a medical facility.

Transportation Underserved Community – A US Department of Transportation designation for communities where people experience greater transportation inequities to access jobs, housing, food, health care, education, and other destinations due to overlapping factors, including demographics, features of the built environment, and in some instances a lack of prior investment in the transportation system. These communities are also referred to as Equitable Transportation Community (ETC). The Council of Environmental Quality also developed a Climate and Economic Justice Screening Tool (CEJST) that identifies the burdened communities.

Vision Zero – A road safety philosophy which states that no loss of life or incapacitating injury due to traffic crashes is acceptable.

Vulnerable road user – For the purposes of this Safety Action Plan, a person outside of a car or truck, which includes pedestrians, bicyclists, or motorcyclists. This also includes people in wheelchairs and on e-mobility devices, like scooters.

List of abbreviations

ADA – Americans with Disabilities Act
ATP – Active Transportation Plan
CAC – Community Advisory Committee
CBO – Community-based organization
CEJST – Climate and Economic Justice Screening Tool
CIP – Capital improvement plan
DUI – Driving under the influence
EMS – Emergency Medical Services
ETC – Equitable Transportation Community
FDOT – Florida Department of Transportation
FHP – Florida Highway Patrol
FHWA – Federal Highway Administration
HIN – High Injury Network
LPI – Leading pedestrian interval
MPO – Metropolitan planning organization
NHTSA – National Highway Traffic Safety Administration
PHB – Pedestrian hybrid beacon
RRFB – Rectangular rapid flashing beacon
SRTS – Safe Routes to School
SS4A - Safe Streets and Roads for All
TAC – Technical Advisory Committee
USDOT – United States Department of Transportation

Vision Zero Central Florida

Safety Action Plan

Table of Contents

DOWNTOWN ORLANDO

Safer streets for everyone

SILVER STAR ROAD AT HIAWASSEE ROAD

MetroPlan Orlando is committed to reaching zero traffic fatalities and serious injuries by 2050 in the region. This is how we will do it.

During a typical week, 5 people are killed and 35 people are seriously injured in traffic crashes in the MetroPlan Orlando region.

METROPLAN ORLANDO prepared this Safety Action Plan to address crashes that result in fatalities and serious injuries. With this Safety Action Plan as the first step, it identifies where deadly and serious injury crashes are most likely to occur, and presents ways to reduce crash severity and frequency. The plan is rooted in the core elements of Vision Zero and the Safe System Approach.

Vision Zero states that no loss of life or incapacitating injury due to traffic crashes is acceptable. We can reach zero in the region by acknowledging the vulnerability of the human body when designing and operating our transportation network to minimize serious consequences of crashes.

Creating a Safe System means shifting some responsibility from road users to those who plan and design the transportation system. More information about Vision Zero and the Safe System Approach is provided in Chapter 1.

*This project was made possible through a **SAFE STREETS AND ROADS FOR ALL** federal grant from the U.S. Department of Transportation:*

$3.79M

GRANT AWARD WAS USED TO PRODUCE:

1
REGIONAL SAFETY ACTION PLAN

3
COUNTY SAFETY ACTION PLANS

19
LOCAL SAFETY ACTION PLANS

Through the Safe Streets and Roads for All (SS4A) grant, action plans were prepared identifying roads and road characteristics in the region where a disproportionate number of crashes that result in death or serious injury occur. Through this process, each community in the region is reviewing their plans and policies to identify barriers to reaching zero deaths and serious injuries along with specific actions to take in collaboration with others in the region.

Community outreach was a core component of identifying transportation safety issues within the region and developing a consistent foundation for all local agencies. Chapter 3 describes the community outreach that was conducted as a part of this plan and how that feedback was incorporated.

Central Florida is committed to Vision Zero.

METROPLAN ORLANDO and our partners are taking a collaborative approach to safety. At the end of this process, all communities in the region will have an adopted Safety Action Plan to guide actions and projects at the local and regional level.

*Vision Zero **TARGET DATES:***

AGENCY	TARGET DATE	ACTION PLAN ADOPTION
MetroPlan Orlando	2050	September 2024
Orange County	2040	August 2024
Apopka	2050	August 2024
Belle Isle	2040	August 2024
Eatonville	2040	August 2024
Edgewood	2040	August 2024
Maitland	2050	August 2024
Oakland	2040	August 2024
Ocoee	2045	August 2024
Orlando	2040	2021
Windermere	2050	August 2024
Winter Garden	2040	August 2024
Winter Park	2050	August 2024
Osceola County	2050	September 2024
Kissimmee	2050	August 2024
St. Cloud	2050	August 2024
Seminole County	2050	August 2024
Altamonte Springs	2040	August 2024
Casselberry	2030	July 2024
Lake Mary	TBD	September 2024
Longwood	2035	August 2024
Oviedo	2045	August 2024
Sanford	TBD	September 2024
Winter Springs	2045	August 2024

41% of all traffic deaths happen on just **2%** of our road network—this is the High Injury Network.

A LARGE PROPORTION of crashes where someone is killed or seriously injured, referred to as KSI crashes, happen on a small percentage of our overall road network—this is the High Injury Network. While most crashes only involve people in motor vehicles, crashes that result in death or serious injury disproportionately involve someone walking, bicycling or riding a motorcycle.

41% of our traffic deaths occur on 2% of our region's roads. 74% of our most dangerous roads run through a Transportation Undeserved Community; 41% of our region's population is characterized as Transportation Underserved by MetroPlan Orlando [combination of US Department of Transportation (USDOT) and Climate and Economic Justice Screening Tool (CEJST) factors]. Additional details about crash trends in the region are provided in Chapter 2.

*High Injury Network **CRASH CONCENTRATION:***

41% **OF OUR TRAFFIC DEATHS OCCUR ON JUST...**

2% **OF OUR REGION'S ROADS**

*High Injury Network **AVERAGE SPEEDS:***

43 MPH
AVERAGE POSTED SPEED LIMIT

53 MPH
AVERAGE PREVAILING SPEED

*High Injury Network **IN UNDERSERVED COMMUNITIES:***

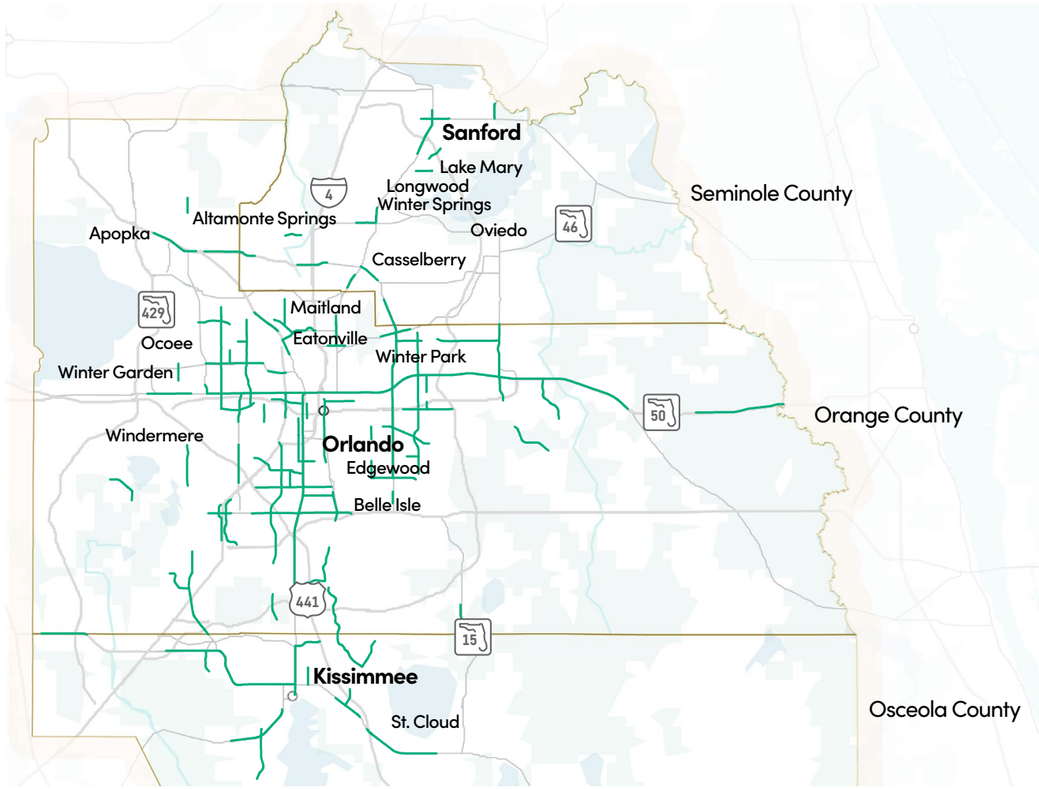
53% **IN USDOT EQUITABLE TRANSPORTATION COMMUNITIES**

74% **IN USDOT AND CEJST TRANSPORTATION UNDERSERVED COMMUNITIES**

*High Injury Network **JURISDICTIONS:***

60%	30%	10%
State roads	*County roads*	*Local roads*

*The regional **HIGH INJURY NETWORK:***



Note: The High Injury Network does not extend to southern Osceola County.

*Roads where KSI crashes **DISPROPORTIONATELY OCCUR** tend to have:*

More than 4 travel lanes

Wider roads can facilitate faster driving and are harder for people walking and biking to cross.

A posted speed of 40-50mph

Higher speeds contribute to more fatal and serious crashes.

Active land uses

Places like shopping centers and apartments generate lots of trips by people walking, riding bikes, and taking transit.

The actions in this plan are organized around the Vision Zero Core Elements and the Safe System Approach.

THIS PLAN RECOGNIZES that infrastructure alone cannot solve the transportation safety crisis and it will take a combination of actions that trigger road modifications, road user behavior change, improved post crash care, travel speed reductions, and safer vehicles.

Some actions in this plan can be completed within the first year after plan adoption, while others may depend on additional resources or some of the early actions to be completed.

There are many actions related to monitoring of progress, evaluating the effectiveness of specific actions, and adjusting strategies based on data and outcomes as detailed in Chapter 6.

THE TOP 30 High Injury Network corridors received additional review, engineering countermeasures were identified for each corridor, and the top 10 projects were prioritized.

Prioritized Projects include a variety of countermeasures, including signal timing modifications, lane narrowing, roadway lighting and crossing enhancements. Network wide strategies that can be implemented as standalone projects or in conjunction with other planned improvements on corridors or at intersections were also identified, including transit stop enhancements, intersection daylighting, leading pedestrian intervals, red light cameras and lighting. The toolkit of engineering and non-engineering strategies is described in Chapter 4, and the project development process is provided is Chapter 5.

*Each of the **ACTIONS** in this plan includes a:*

- **List of partnerships with other agencies**
- **Target year for completion**
- **List of performance measures for tracking progress**

*The **PRIORITIZED PROJECTS** are distributed across Central Florida:*

- **7** **Projects in Orange County**
- **2** **Projects in Osceola County**
- **1** **Project in Seminole County**

*MetroPlan Orlando **ACTION PLAN SUMMARY:***

Safer roads
- Develop a complete streets policy template
- Lead road safety audits on the High Injury Network
- Support incorporating safety into road design standards
- Test new safety strategies in the region
- Support incorporation of safety into the development review process
- Implement safety-focused performance measures
- Support safe routes to school projects

Safer speeds
- Explore incorporating speed reduction as a project evaluation criterion
- Formalize target speed setting
- Advance a 20-mph residential speed limit framework
- Pilot use of signal timing to regulate speeds

Safer people
- Continue targeted outreach
- Develop educational materials for local agencies
- Participate in the Florida Department of Transportation Traffic Safety Coalition
- Evaluate the effectiveness of existing MetroPlan Orlando-funded pedestrian safety educational programs
- Establish a local agency partner network

Safer vehicles
- Identify strategies to future-ready the region, such as connected vehicle infrastructure, in alignment with other plans like the Transportation Systems Management and Operations (TSM&O) Master Plan
- Promote safety related legislative changes that may include vehicle requirements

Post crash care
- Develop an emergency vehicle preemption plan
- Explore opportunities to provide Vision Zero and Safe System training to first responders
- Conduct assessments of crash response times
- Supplement crash data from Signal Four Analytics with hospital and other data sources

Monitoring programs
- Hold quarterly Vision Zero Task Force meetings
- Identify overlooked grant opportunities
- Conduct before and after studies
- Serve as a regional data clearinghouse
- Conduct annual monitoring (details are provided in Chapter 7)
- Host an annual safety summit for the region
- Update the Safety Action Plan every five years

Engagement was a core complement of the action plan development.

ENGAGEMENT included development of guidance resources for the county and local agency plans that were being developed at the same time as the regional plan, frequent updates to MetroPlan Orlando committees and the board, Vision Zero Task Force meetings, and general community engagement through the many local and county plans.

Feedback received throughout the project helped to inform topics for the Safey Speakers Series, actions to include in the action plan, and potential countermeasures to consider on the top 30 regional HIN segments. Additional details are provided in Chapter 3.

Connection to other MetroPlan Orlando Efforts

This Safety Action Plan is intended to complement other MetroPlan Orlando plans and processes. It will be incorporated into the 2050 Metropolitan Transportation Plan (MTP), funding lists, and other initiatives like the Active Transportation Plan (ATP) and the Transportation System Management & Operations (TSM&O) Master Plan.

VisionZeroCFL.gov

Key lessons emerged in preparing this plan that serve to focus safety efforts and set expectations:

1

Safety or lack thereof is not experienced by everyone equally. Improving safety for the most vulnerable populations improves safety for all.

2

Streets should be self-enforcing for the desired behavior 24-hours a day as traditional methods of enforcement are not sustainable and should be the last line of defense.

3

Focus on the data, including non-traditional sources, such as hospital records.

4

There is no silver bullet; changes should be made incrementally and universally, with a focus on locations with potential for high kinetic energy transfer.

5

Safety requires a multidisciplinary and collaborative approach because safety is everyone's job.

6

Upstream and downstream forces, like land use decisions and policies and the judicial system, are important factors that should not be ignored.

7

Political and community support and dedicated funding streams are critical for sustained progress.

8

Public education campaigns are enhanced and strengthened with complementary infrastructure changes.

9

Design and development standards need to be rooted in safety to support retrofits to existing communities and eliminate development patterns that contribute to safety issues.

10

Patience is a virtue; development patterns that contribute to our current crash outcomes evolved over generations, and it will take decades to retrofit communities.

MetroPlan Orlando is already working to advance the actions identified in this plan, and more is on the way.

Additional grant funding

MetroPlan Orlando is already working with Orange, Osceola, and Seminole counties to submit an application for additional Safe Streets for All federal funding to conduct a demonstration project in each county.

Coordinated action plans

Once all the Safety Action Plans in the region have been adopted, each plan's actions and strategies will be combined into a centralized database, and the regional actions will be aligned with local priorities.

Ongoing Vision Zero Task Force

The Vision Zero Task Force will live beyond this project, meeting at least quarterly to share ideas, provide feedback on local and regional safety projects, and oversee the annual monitoring process.

Translated engagement materials

The Path to Safety Vision Zero Activity Book for kids will be translated into Spanish and Haitian Creole and additional educational safety videos will be produced.

Road safety audits on key corridors

In depth road safety audits will be conducted for the top High Injury Network corridors, building on the countermeasures identified in this and other Safety Action Plans in the region.

An ongoing online presence

The VisionZeroCFL.gov hub site will be updated with the most recent crash data.

CHAPTER 1

Need for a transportation safety plan

WITH THE RATE of deadly crashes in Central Florida 15% higher than the national average, it's time to rethink safety on our roads. This plan takes a new direction using Vision Zero and the Safe System Approach.

JOHN YOUNG PARKWAY AT CONROY ROAD

MetroPlan Orlando seeks to eliminate deaths and serious injuries on our roads by 2050.

CRASH SCENE IN ORLANDO

The time to act is now.

On our roads between 2018 and 2022:

1,465
PEOPLE WERE KILLED

9,500
PEOPLE WERE SERIOUSLY INJURED

Saving lives. That's what it's all about. The only acceptable number for traffic deaths is zero, because everyone deserves to travel safely around Central Florida.

NO ONE ENTITY can fix road safety problems alone. This Vision Zero Central Florida Safety Action Plan results from a coordinated planning effort led by MetroPlan Orlando, in partnership with local governments and the Florida Department of Transportation.

We're the only place in the nation where a regional organization worked alongside every single county and city government in the area to coordinate safety planning on this scale. This plan, plus county and city Safety Action Plans, were funded through a $3.79 million Safe Streets and Roads for All grant from the Federal Highway Administration.

With this Safety Action Plan, our region has joined communities around the world that are working to stop traffic deaths through the Safe System Approach.

*This plan is a **NEW APPROACH** to traffic safety that:*

Identifies High Injury Networks

These are the roads with the highest concentration of fatal and serious injury crashes. We know that 41% of the region's deaths occur on just 2% of our roads.

Brings equity to the forefront

MetroPlan Orlando considers about 41% of the region's population as Transportation Underserved, but 74% of the High Injury Network is next to or in these communities.

Prioritizes high-impact, feasible projects

The plan elevates projects that will have the greatest safety impacts. MetroPlan Orlando will work with our regional partners to implement changes and monitor long-term progress on safety.

Source: ETC & CEJST, 2024.

Central Florida has the unfortunate distinction of having one of the highest pedestrian death rates in the country.

THE REGION'S FATAL CRASH RATE for all road users is 15% higher than the national average and 10% higher than the statewide average. To understand where and why crashes that result in fatalities and serious injuries are most likely to occur and how to reduce the severity and frequency of these crashes, MetroPlan Orlando prepared this Safety Action Plan, rooted in the core elements of Vision Zero and the Safe System Approach.

***VISION ZERO** is a road safety philosophy which states that no loss of life or incapacitating injury due to traffic crashes is acceptable.*

***THE SAFE SYSTEM APPROACH** aims to eliminate crashes that result in death and serious injuries by anticipating human mistakes and minimizing impacts on the human body when crashes do occur.*

Since partnership is critical, this Safety Action Plan is meant to work in tandem with other safety efforts being undertaken by Orange, Osceola, and Seminole counties as well as all incorporated cities in the region, as all the region's jurisdictions now have adopted Safety Action Plans.

Note that all jurisdictions in the region are expected to have an adopted action plan by September 2024, when the regional plan is expected to be adopted.

📷 WEST ORANGE TRAIL AT OAKLAND AVENUE

Vision Zero is DIFFERENT from traditional road safety because it:

1. *Reframes traffic deaths as preventable.*
2. *Integrates human failing into the approach.*
3. *Focuses on preventing fatal and serious crashes rather than eliminating all crashes.*
4. *Aims to establish safe systems rather than relying on individual responsibility.*
5. *Applies data driven decision making.*
6. *Establishes road safety as a social equity issue.*

By 2050, MetroPlan Orlando commits to eliminating deaths and serious injuries on roads in Orange, Osceola, and Seminole counties through a proactive, data-informed, and community-based approach to safety.

IMPLEMENTING the projects and strategies identified in this Safety Action Plan, companion county and local plans, and the Florida Department of Transportation District 5 Safety Strategic Plan, will help our region achieve the vision of safer, more accessible, and more convenient travel in the Central Florida region for everyone—especially the most vulnerable road users.

*The **METROPOLITAN TRANSPORTATION PLAN** calls for this Safety Action Plan:*

Goal #1: Safety & Security

PROVIDE A SAFE AND SECURE TRANSPORTATION SYSTEM FOR ALL USERS

MetroPlan Orlando and its planning partners are committed to improving public safety and security. In February 2019, the MetroPlan Orlando board unanimously supported the Florida Department of Transportation's Vision Zero statewide safety performance targets. This policy acknowledges human life and health is paramount and that no loss of life is acceptable. Safety and security are shared responsibilities between transportation users and the professionals that plan, design and operate the regional system.

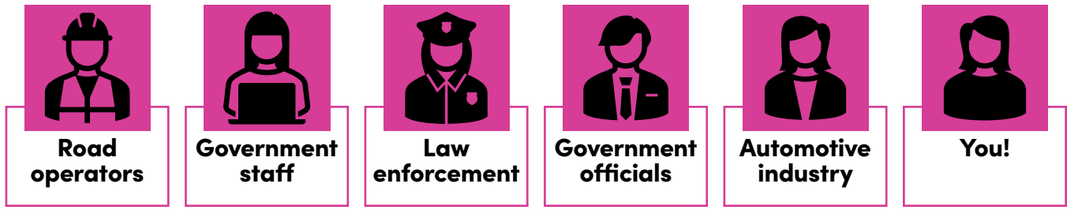
Source: MetroPlan Orlando 2045 Metropolitan Transportation Plan.

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

MAKING A COMMITMENT to zero deaths means addressing every aspect of crash risks across the entire road system. It differs from the traditional approach in the primary ways shown below.

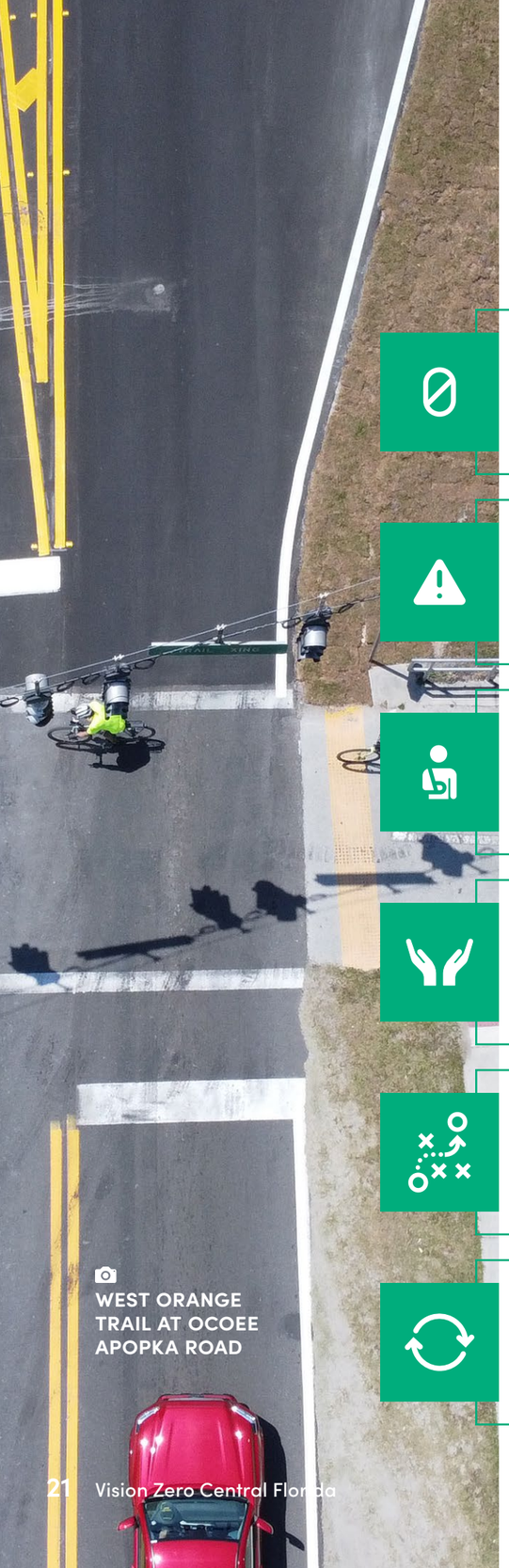
The Safe System Approach acknowledges the vulnerability of the human body should be considered when designing and operating a transportation network to minimize serious consequences of crashes. Creating a Safe System means shifting some responsibility from road users to those who plan and design the transportation system. While road users are responsible for their own behavior, there is a shared responsibility with those who design, operate, and maintain the transportation network, including the key partners shown below. In a Safe System, road system designers and operators take on the highest level of ethical responsibility to design and build our transportation system in a way that encourages safer behavior and provides redundancies. The Safe System Approach is built on the six principles and five elements described on the following pages.

***KEY PARTNERS** for a safe system include:*



*The Safe System Approach is **DIFFERENT** from traditional road safety:*

Traditional approach		Safe System Approach
Prevent crashes	→	Prevent deaths and serious injuries
Improve human behavior	→	Design for human mistakes and limitations
Control speeding	→	Reduce kinetic energy
Assign responsibility to individuals	→	Share responsibility
React based on crash history	→	Proactively identify and address risks



WEST ORANGE TRAIL AT OCOEE APOPKA ROAD

SAFE SYSTEM PRINCIPLES

*The Safe System is built on **SIX PRINCIPLES:***

Death and serious injury are unacceptable

This plan focuses on eliminating crashes resulting in death and serious injuries in the MetroPlan Orlando region by 2050.

Humans make mistakes

The goal of the Safe System Approach is to design and operate our transportation system to ensure these mistakes don't have life-altering impacts.

Humans are vulnerable

Human bodies can only withstand a limited amount of impact from a crash before death or serious injuries occur.

Responsibility is shared

Every person in the transportation system, from elected officials to everyday users, has a role to play in reaching zero deaths and serious injuries.

Safety is proactive

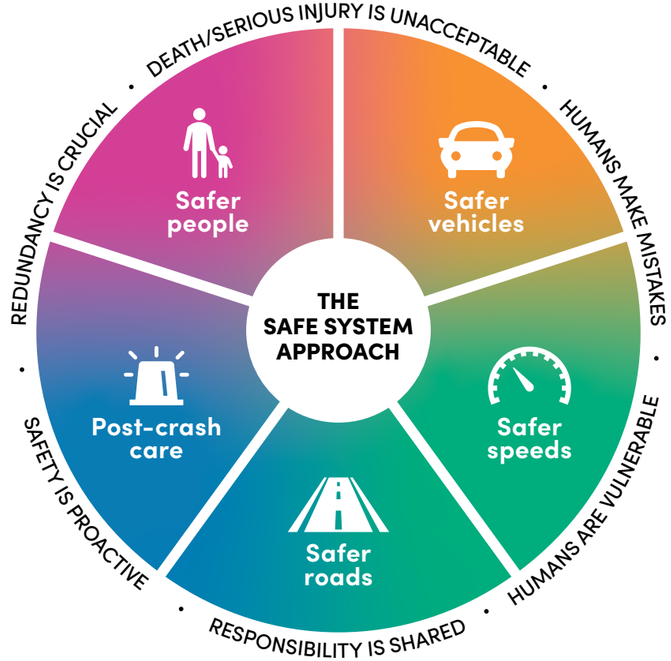
Rather than waiting for crashes to occur, transportation agencies should seek to proactively identify and address dangerous situations.

Redundancy is crucial

A transportation system needs multiple layers of protection working together, so that if one layer fails, people are still protected.

SAFE SYSTEM ELEMENTS

*The Safe System addresses **FIVE ELEMENTS:***



Source: Adapted from Federal Highway Administration, 2024.

Safer people

Encourage safe, responsible driving and behavior by people who use our roads, and create conditions that prioritize their ability to reach their destination unharmed.

Safer vehicles

Proactively plan for a connected and autonomous vehicle fleet, and encourage the purchase of vehicles that feature crash prevention technology.

Post-crash care

Partner with emergency responders to identify strategic investments in crash response, crash assessment, and crash reporting.

Safer roads

Prioritize roadway design changes throughout Central Florida that address the factors contributing to serious injury and fatal crashes.

Safer speeds

Combine strategies that induce drivers to travel at appropriate speeds to reduce injuries.

MetroPlan Orlando is the metropolitan planning organization for Central Florida, including Orange, Osceola, and Seminole counties.

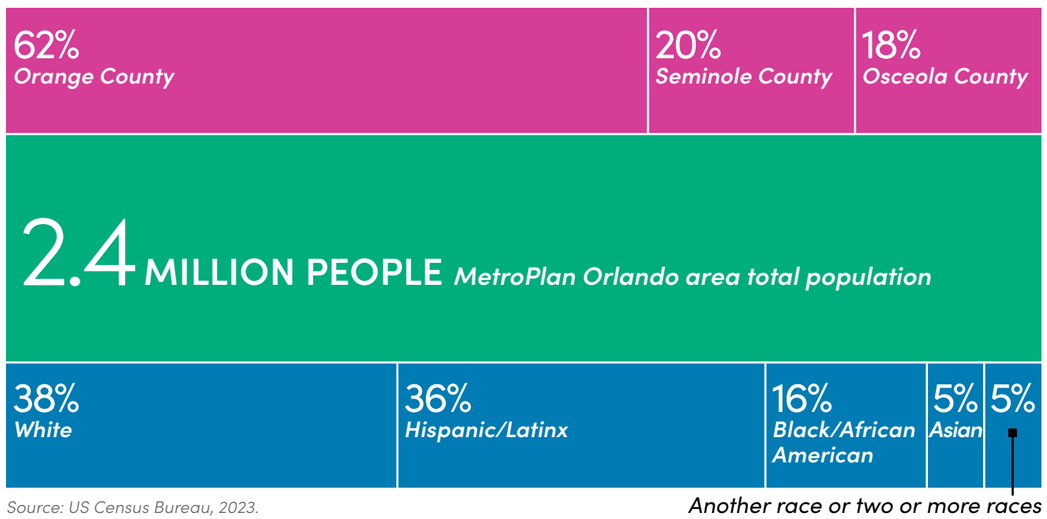
METROPLAN ORLANDO'S primary responsibility is to create a vision for transportation 25 years into the future, with an emphasis on safety for all Central Floridians. To help create that vision, MetroPlan Orlando led the preparation of this regional Safety Action Plan in collaboration with all the region's jurisdictions, each with their own unique transportation safety challenges.

With over 75 million visitors a year, Central Florida is the most visited destination in the United States and the theme park capital of the world. Most residents and visitors get around by driving. The region's suburban land use patterns have resulted in major roads that must serve a dual purpose of carrying regional traffic and local trips via a variety of modes.

The region's long range plan emphasizes providing transportation options. No matter how residents or visitors choose to get around, they should be able to do so safely and comfortably by any mode they choose.

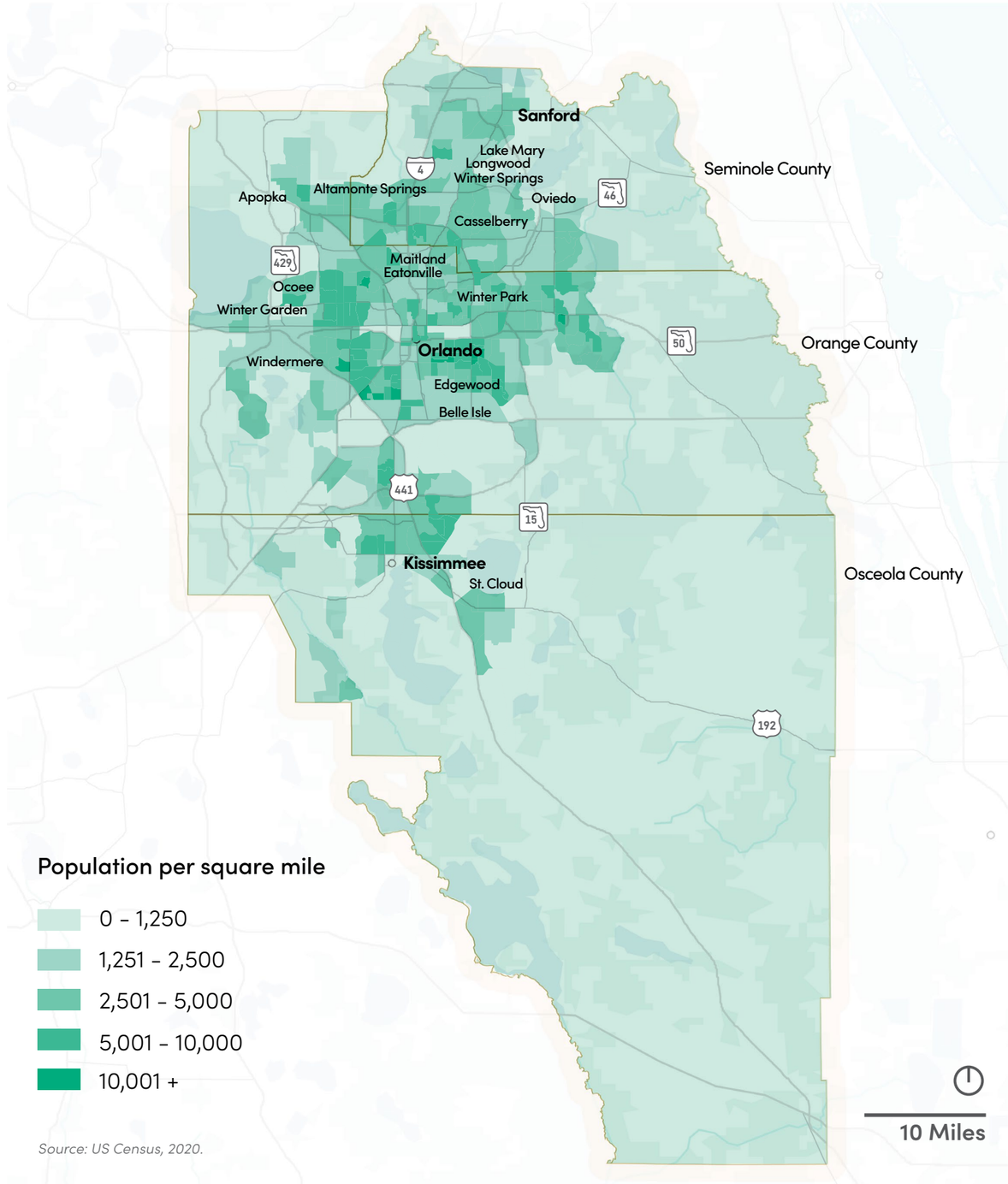
Today, the population of the region is approximately 2.4 million people (US Census Bureau, 2023). By 2050, the population is expected to range between 2.6 million and 4.1 million people (Bureau of Economic and Business Research, University of Florida). Existing population densities and the location of incorporated cities in the region are shown on the next page.

MetroPlan Orlando ***POPULATION AND DEMOGRAPHICS:***



Source: US Census Bureau, 2023.

EXISTING POPULATION DENSITY *by Census Tract:*



Source: US Census, 2020.

CHAPTER 2

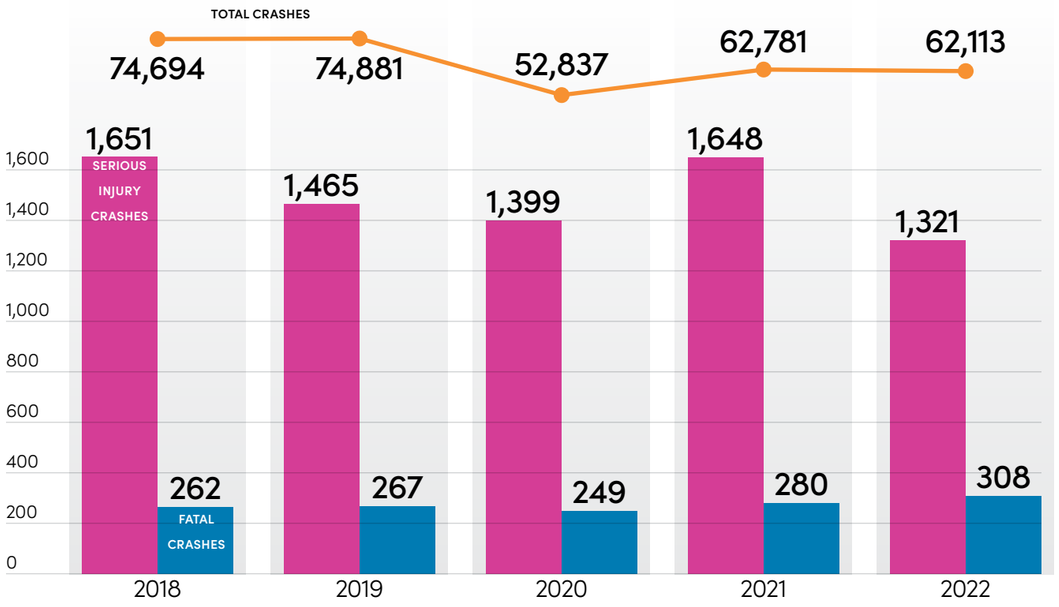
Understanding crash trends

THIS CHAPTER describes the *who*, *why*, and *how* behind the 300 deadly and 1,900 serious injury crashes that happen each year in Central Florida. The Technical Appendix contains additional information on crash trends.

CLARCONA OCOEE ROAD AT INGRAM ROAD

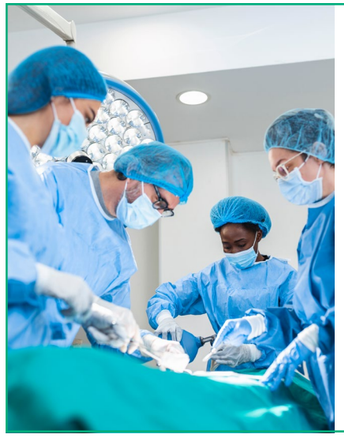
Deaths are going up even as serious injury crashes in Central Florida are slowly declining.

*Crashes **EACH YEAR** in Central Florida:*



Note: Includes limited-access roads. Source: Signal Four Analytics, 2018–2022.

EACH YEAR in Central Florida, an average of 1,900 people are seriously injured, and another 300 people are killed, while traveling on our roads. With more people dying on the road each year, crash trends are going in the wrong direction. There is a lot of work that needs to be done to reverse this pattern and improve transportation safety.

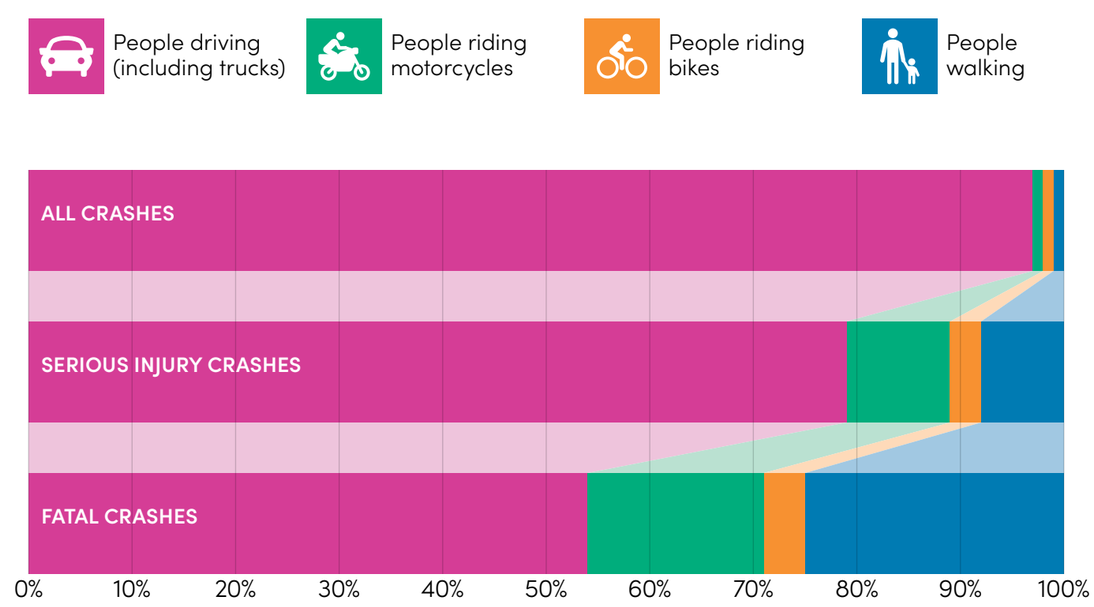


Serious injuries are life altering

A serious injury crash results in an incapacitating injury, such as burns, lacerations, spinal cord injuries or broken bones that require hospitalization. These are frequently life altering injuries that affect a person's quality of life and reduce their ability to complete tasks they were able to do before a crash.

People walking, biking, and motorcycling in Central Florida are much more likely to be involved in serious injury and deadly crashes.

*Central Florida crashes based on **WHO IS INVOLVED:***



Source: Signal Four Analytics, 2018–2022.

CRASHES THAT RESULT in death or serious injury disproportionately impact vulnerable road users—that is, people who are outside the protective cage of a vehicle like people walking, biking, and riding motorcycles. Vulnerable road users also include people using wheelchairs and other mobility assistance devices, as well as people using electric bikes and scooters.

Crashes resulting in a death or serious injury are also more likely to happen in or near an identified Transportation Underserved Community. The designation of Transportation Underserved Community considers many factors, including poverty rates, motor vehicle ownership, and access to destinations. See page 33 for more details.

Serious injury and deadly crashes are happening throughout Central Florida communities.

FATAL AND SERIOUS INJURY crashes are most likely to occur on roads that have been designed to accommodate vehicle travel at highway speeds, but are also expected to serve pedestrians, bicyclists, and transit, all while providing direct and convenient access to destinations. The map on the next page shows the density of fatal and serious injury crashes across Orange, Osceola, and Seminole counties.

*Roads that are **MORE LIKELY** to be the place of a fatal or serious injury crash tend to:*

Have multiple driving lanes

These roads tend to have four or more driving lanes.

Have lots of drivers

These roads serve 15,000+ vehicles a day.

Be classified as an arterial

Arterials are major roads carrying lots of traffic.

Be classified as Suburban Commercial

This is a Florida Department of Transportation Context Classification.

Have high speed limits

These roads typically have a posted speed limit of 40 – 55 miles per hour.

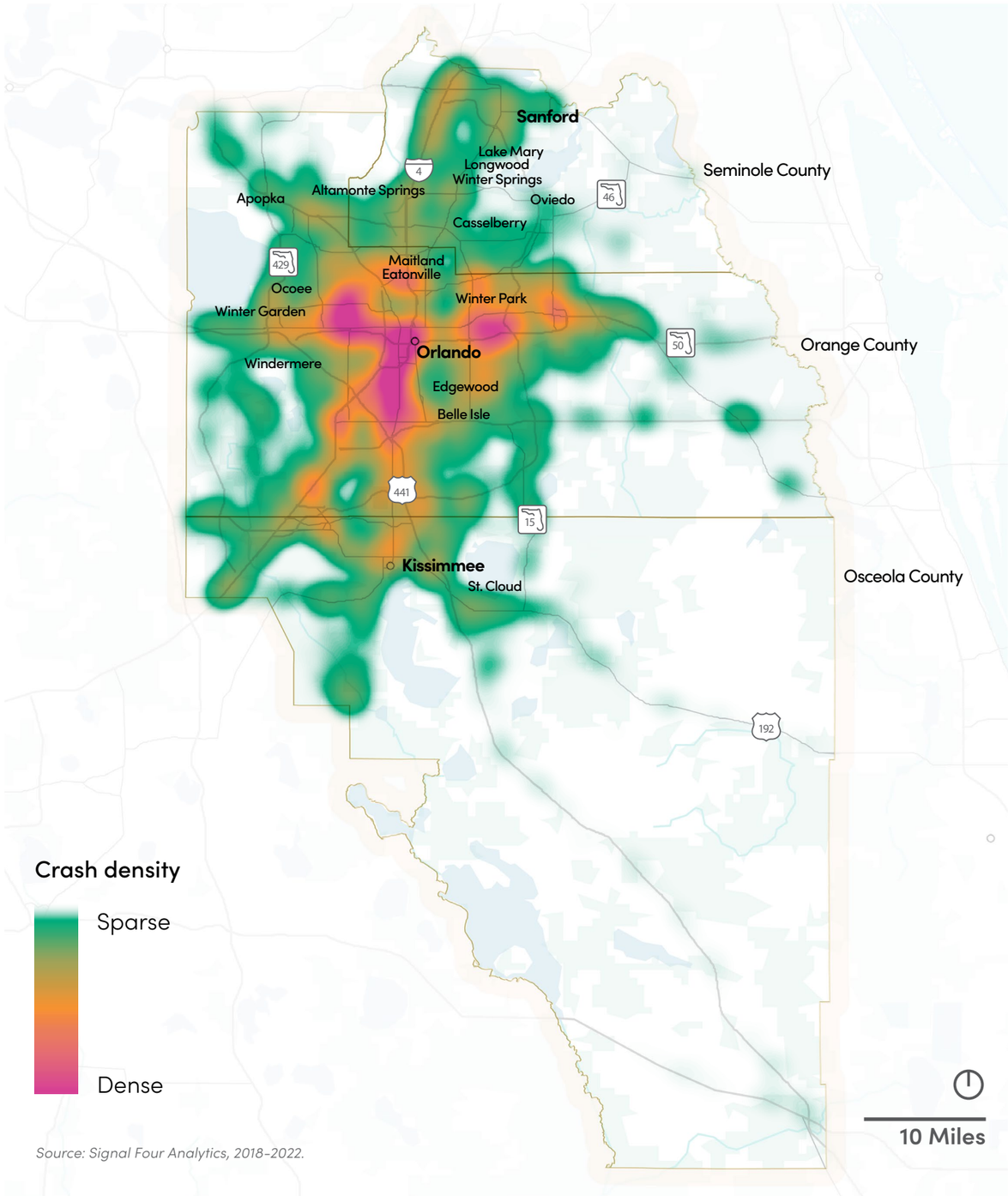
Provide transit service

People need to cross the street to reach bus stops.

Serve lots of destinations

These roads provide direct access to a multitude of different places, like grocery stores, gas stations, schools, apartments, and restaurants.

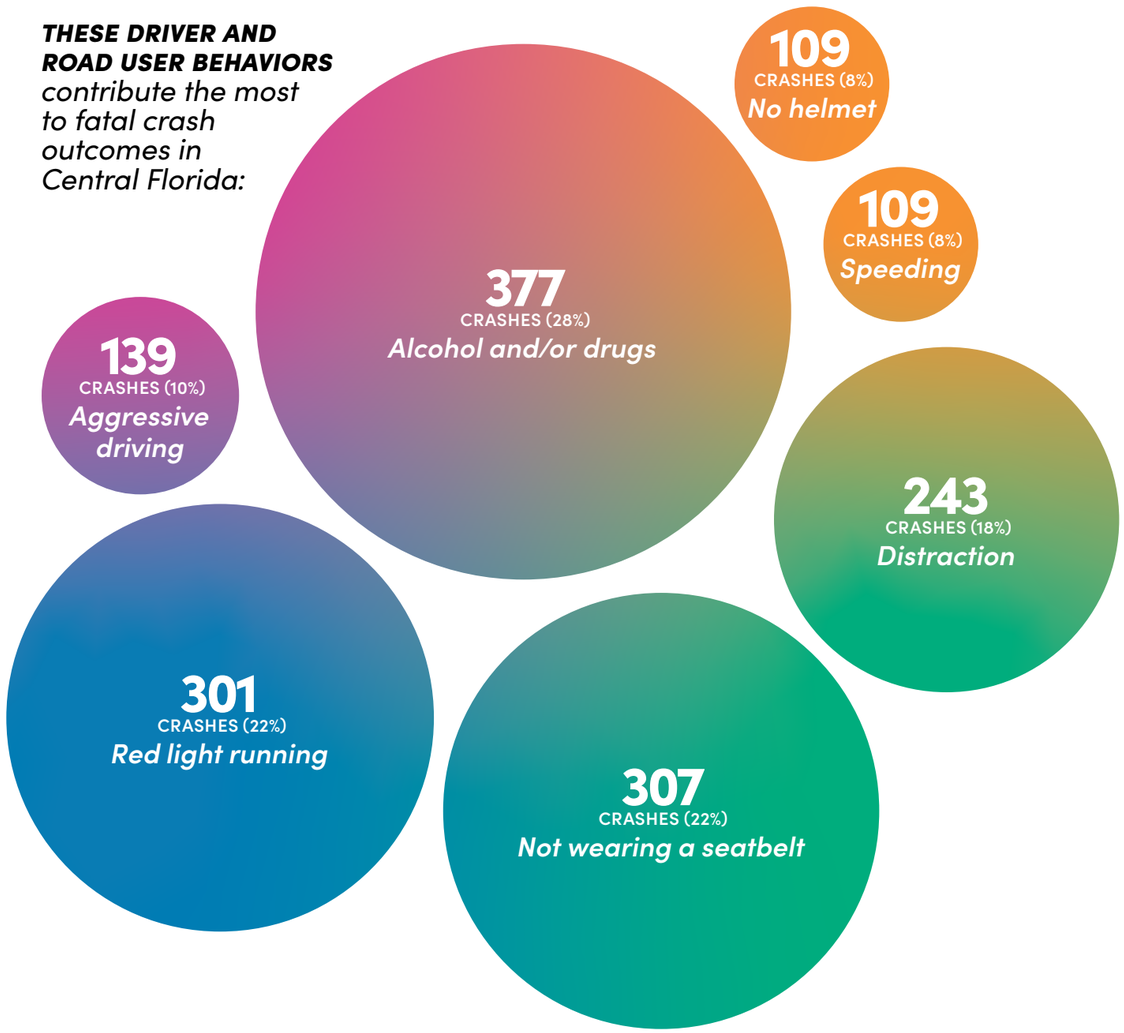
*Density of all crashes that result in **DEATH OR SERIOUS INJURY:***



Source: Signal Four Analytics, 2018-2022.

There is no single cause of deadly crashes in our communities. Instead, several factors combine to make crashes worse.

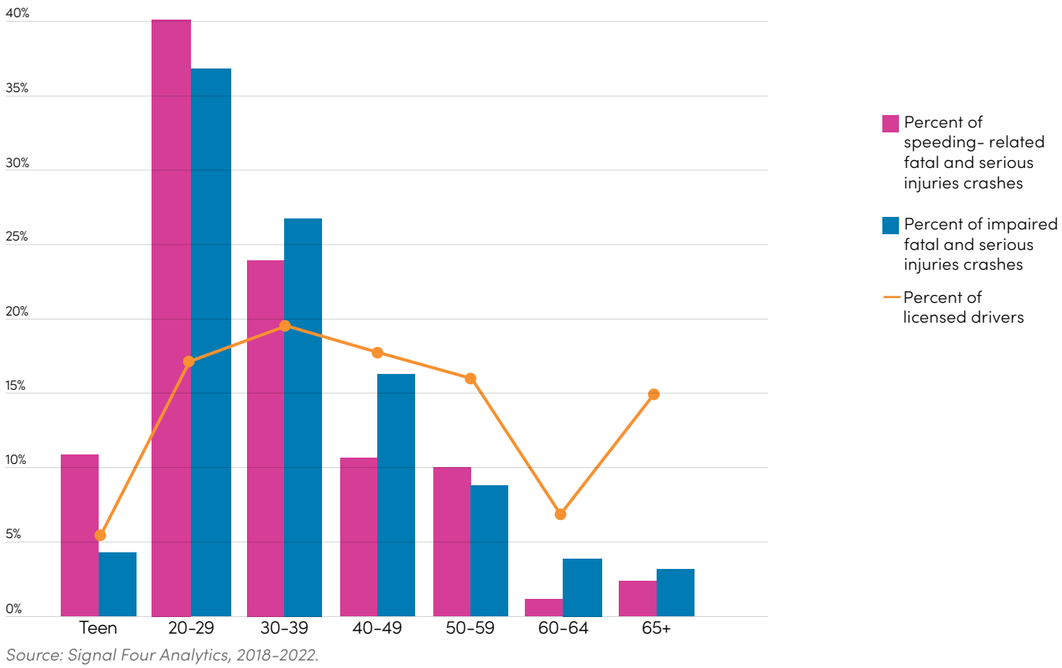
THESE DRIVER AND ROAD USER BEHAVIORS *contribute the most to fatal crash outcomes in Central Florida:*



Note: Crashes involving speeding are based on the reporting officer's assessment of travel speed and are likely an under-count of crashes with a direct correlation to speeding. Some crashes have multiple factors, so total fatal crashes may be different than shown in other tables and figures and may sum to more than 100%. Source: Signal Four Analytics, 2018-2022.

Consistent with state and national trends, younger drivers are more likely to be involved in speeding-related and impaired-driving crashes.

SPEED-RELATED *and* ***IMPAIRED*** *fatal and serious injury crashes by age in Central Florida:*



Source: Signal Four Analytics, 2018-2022.

A focus on Transportation Underserved Communities

EVERY COMMUNITY has its unique transportation advantages and disadvantages based on land use, characteristics of the road network (like whether there are sidewalks and streetlights), demographics, and other factors. The US Department of Transportation developed a metric called Transportation Underserved Communities, documented on their USDOT Equitable Transportation Community (ETC) Explorer webpage, to better understand transportation disadvantage—where people are unable to access the needs of their daily life regularly, reliably, and safely. For some analyses, this metric was combined with data from the Climate and Economic Justice Screening Tool (CEJST) to identify communities that are considered Transportation Underserved, as documented in the MetroPlan Orlando's Transportation for All: Overcoming Obstacles report. Considering the USDOT definitions of Transportation Underserved, approximately 25% of the regional population is considered Transportation Underserved. When areas that also meet the CEJST definition of disadvantage, approximately 41% of the total regional population is considered underserved. Fatal and serious injury crashes disproportionately occur in Transportation Underserved Communities. To offset the disproportionate impacts that people in these communities experience, safety improvements will be prioritized in Transportation Underserved Communities.

*USDOT uses **FIVE INDICATORS** to identify Transportation Underserved Communities:*

Environmental burden

This measures factors such as pollution, exposure to hazardous roads, and the built environment.

Social vulnerability

This measures socioeconomic indicators such as lack of employment, educational attainment, and poverty.

Health vulnerability

This assesses the increased frequency of health conditions that may result from exposure to air, noise, and water pollution, as well as lifestyle factors such as poor walkability, car dependency, and long commute times.

Climate and disaster risk burden

This reflects sea level rise, changes in precipitation, extreme weather, and heat, which all pose risks to the transportation system. These hazards may affect system performance, safety, and reliability.

Transportation insecurity

This occurs when people are unable to get where they need to go to meet the needs of their daily life regularly, reliably, and safely.

41% of all traffic deaths happen on just **2%** of our road network—this is the High Injury Network.

A HIGH INJURY NETWORK (HIN) is a collection of streets and intersections where a disproportionate number of fatal and serious injury crashes occur. MetroPlan Orlando developed the regional High Injury Network by identifying the streets and intersections where the most fatal and serious injury crashes occurred.

We emphasized crashes involving people walking, bicycling, and motorcycling as they are more likely to be seriously injured or killed if a crash does occur.

The resulting network provides a comprehensive set of locations for MetroPlan Orlando and partner jurisdictions to prioritize for safety improvements that yield the largest benefit. There are approximately 11,000 miles of roads in the region, including limited-access roads such as Interstate 4. 41% of all deaths happen on just 2% of this road network. When excluding limited-access roads, 47% of all fatal and serious injury crashes occur on just 2% of roads. The overall High Injury Network is shown on the following pages with detailed statistics and a list of the top 30 streets and intersections.

Details of how the High Injury Network was calculated are provided in the Technical Appendix.

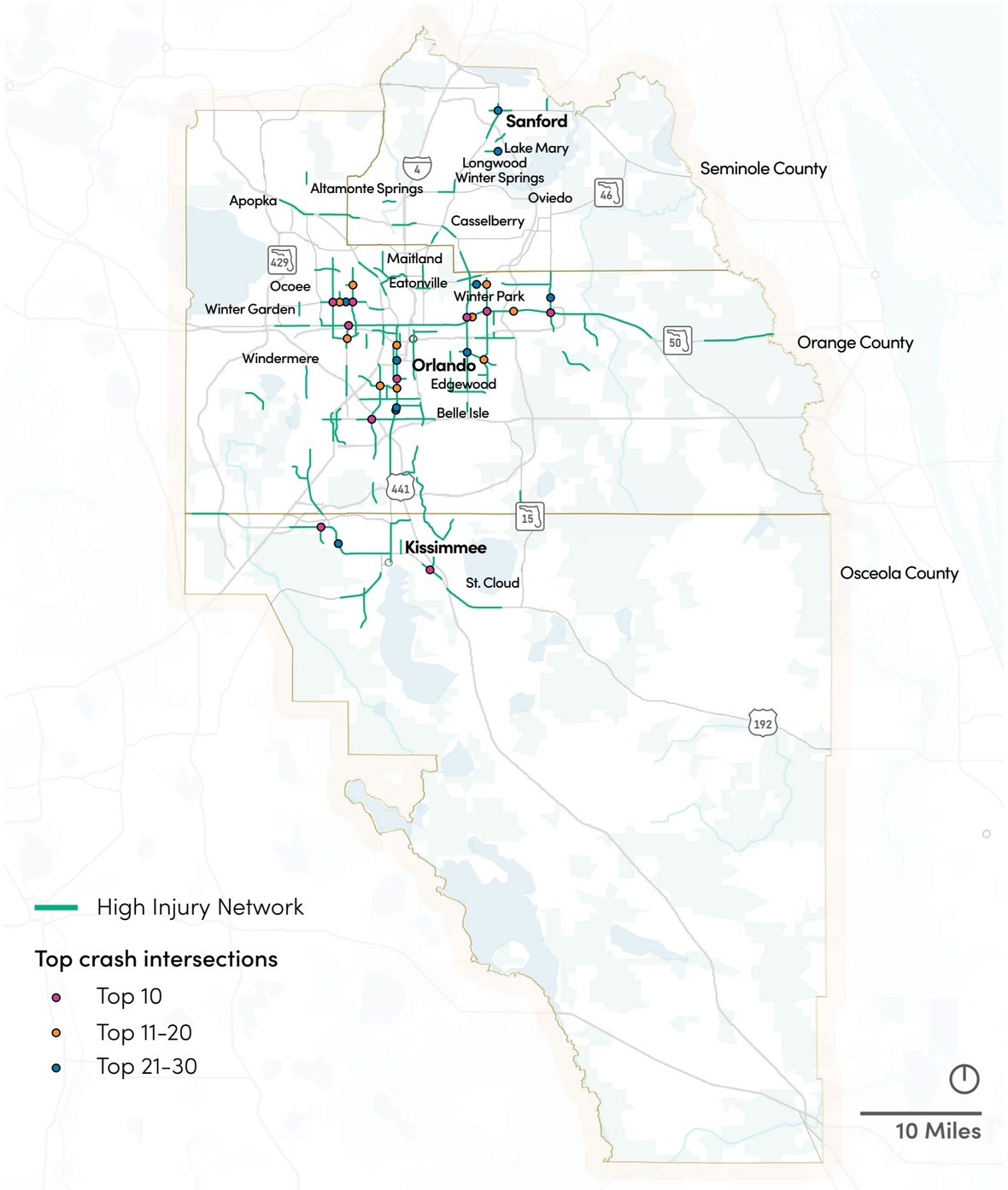
Relationship to County and City High Injury Networks

Two High Injury Networks were developed for each jurisdiction in the region: one showing the roads within the jurisdictional limits with the highest concentration of severe crashes, regardless of ownership, and the other showing the higher injury roads maintained by the jurisdiction itself.

This approach allows each jurisdiction to identify **roads where the most fatal and serious injury crashes occur overall**, which are likely to be Florida Department of Transportation and County roads that are not maintained by the local jurisdiction. Highlighting roads that the jurisdiction maintains itself **helps identify locations where the jurisdiction can implement safety improvements.**

Information about the regional High Injury Networks is shown on the following pages. A High Injury Network fact sheet with specific details for each jurisdiction is included in the Technical Appendix.

High Injury Network ***MAP AND TOP CRASH INTERSECTIONS:***



High Injury Network ***AVERAGE SPEEDS:***

43 MPH
AVERAGE POSTED SPEED LIMIT

53 MPH
AVERAGE PREVAILING SPEED

High Injury Network ***IN UNDERSERVED COMMUNITIES:***

53% **IN USDOT EQUITABLE TRANSPORTATION COMMUNITIES**

74% **IN USDOT AND CEJST TRANSPORTATION UNDERSERVED COMMUNITIES**

High Injury Network ***JURISDICTIONS:***

60% *State roads*	30% *County roads*	10% *Local roads*

High Injury Network ***OVERALL STATISTICS:***

	ALL ROADS	HIN	% HIN	FEDERAL AID (FA) NETWORK	% HIN OF FA
Centerline miles	10,728	258	2%	1,965	13%
All crashes	272,523	98,975	36%	229,278	43%
Deaths	1,143	638	56%	1,071	60%
KSI	7,146	3,378	47%	6,398	53%
Pedestrian KSI	949	576	61%	854	67%
Bicyclist KSI	327	164	50%	285	58%
Motorcyclist KSI	956	416	44%	864	48%

Notes: "All roads" excludes interstates, toll roads, parking lots, and other limited access roads. All roads on the High Injury Network are on the Federal Aid network. Federal Aid roads are on the National Highway System (NHS) or functionally classified as Urban Collector, Rural Major Collector, or higher. They are eligible for federal aid from the Federal Highway Administration for disaster recovery and other purposes as well as funding through MetroPlan Orlando.

*Top 30 High Injury Network **INTERSECTION LOCATIONS:***

#	INTERSECTION	MAINTAINING AGENCY	SAFETY SCORE
1.	John Young Parkway at Sand Lake Road	FDOT	10,140
2.	Alafaya Trail at Colonial Drive	FDOT	10,103
3.	Orange Blossom Trail at Holden Avenue	FDOT	10,055
4.	Hiawassee Road at Silver Star Road	FDOT	9,630
5.	N Poinciana Boulevard at Irlo Bronson Memorial Highway	FDOT	9,399
6.	Pine Hills Road at Silver Star Road	FDOT	8,673
7.	Semoran Boulevard at Old Cheney Hwy	FDOT	8,509
8.	W Colonial Drive at N Kirkman Road	FDOT	7,097
9.	Goldenrod Road at Colonial Drive	FDOT	7,040
10.	Simpson Road at Irlo Bronson Memorial Highway	FDOT	6,946
11.	Orange Blossom Trail at Gore Street	FDOT	6,769
12.	N Kirkman Road at Old Winter Garden Road	FDOT	6,724
13.	Goldenrod Road at Curry Ford Road	FDOT	6,715
14.	John Young Parkway at Conroy Road	FDOT	6,699
15.	Pine Hills Road at North Lane	FDOT	6,651
16.	Colonial Drive at Econlockhatchee Trail	FDOT	6,480
17.	Powers Drive at Silver Star Road	FDOT	6,415
18.	Orange Blossom Trail at Conroy Road/Americana Boulevard	FDOT	6,401
19.	Old Cheney Highway/Tucker Avenue at Colonial Drive	FDOT	6,386
20.	Goldenrod Road at University Boulevard	FDOT	6,224
21.	Alafaya Trail at Lokanotosa Trail	FDOT	5,905
22.	Semoran Boulevard at Curry Ford Road	FDOT	5,504
23.	S French Street at W 25th Street	FDOT	5,459
24.	Hastings Street at Silver Star Road	FDOT	5,368
25.	Orange Blossom Trail at Orlando Central Parkway	FDOT	5,160
26.	Orange Blossom Trail at Michigan Street	FDOT	4,924
27.	Irlo Bronson Memorial Highway at Club Sevilla	FDOT	4,812
28.	Forsyth Road at University Boulevard	Orange County	4,722
29.	N French Avenue at W 1st Street (US 17/92)	FDOT	4,294
30.	Orange Blossom Trail at Premier Row	FDOT	3,919

Note: The Safety Score is calculated based on the total number of crashes, the highest level of injury sustained in each crash, and the travel mode of victims. Crashes that result in death or serious injury, or include a person outside a vehicle have different factors applied. With the Safety Score, a higher score indicates the location experiences a high crash rate and a lower score indicates as lower crash rate. A Safety Score of zero indicates no history of crashes at the location.

*Top 30 High Injury Network **CORRIDORS:***

#	ROAD NAME	FROM	TO	MAINTAINING AGENCY	SAFETY SCORE
1.	John Young Parkway (SR 423)	SR 50	Orange Center Blvd.	FDOT	17,478
2.	Sand Lake Road/McCoy Road (SR 482)	Turkey Lake Rd.	Universal Blvd.	FDOT	17,104
3.	Chickasaw Trail	Frontage Rd.	Lake Underhill Rd.	Orange County	14,589
4.	Hiawassee Road (CR 435)	SR 438/Silver Star Rd.	SR 50	Orange County	14,547
5.	Oak Ridge Road (CR 528A)	Millenia Blvd.	S. Orange Blossom Trl.	Orange County	14,296
6.	Kirkman Road (SR 435)	SR 50	Raleigh St.	FDOT	14,130
7.	Goldenrod Road (SR 551)	SR 50	Lake Underhill Rd.	FDOT	14,129
8.	Semoran Boulevard (SR 436)	Lee Vista Rd.	TG Lee Blvd.	FDOT	14,088
9.	Pine Hills Road (CR 431)	SR 50	Old Winter Garden Rd.	Orange County	13,941
10.	Alafaya Trail (SR 434)	SR 50	Lake Underhill Rd.	FDOT	13,564
11.	Kirkman Road (SR 435)	LB Mcleod Rd.	Major Blvd.	FDOT	13,466
12.	Colonial Drive (SR 50)	Orange Blossom Trl. N.	N Bumby Ave.	FDOT	13,415
13.	North Lane	Westgate Rd.	N Pine Hills Rd.	Orange County	12,946
14.	Hiawassee Road (CR 435)	SR 50	Old Winter Garden Rd.	Orange County	12,344
15.	Alafaya Trail (SR 434)	McCulloch Rd.	SR 50	FDOT	12,284
16.	Oak Ridge Road (CR 506)	S. Orange Blossom Trl.	Orange Ave S.	Orange County	12,054
17.	Lee Road (SR 423)	N. Orange Blossom Trl.	N. Wymore Rd.	FDOT	11,972
18.	University Boulevard	Semoran Blvd. (SR 436)	Lake Mirage Blvd.	Orange County	11,938
19.	Rosalind Avenue (SR 527)	E. Livingston St.	S. Lucerne Cir.	FDOT	11,526
20.	Semoran Boulevard (SR 436)	Lake Underhill Rd.	Lake Margaret Dr.	FDOT	11,419
21.	US 192/Vine St.	Celebration Ave.	Four Winds Blvd.	FDOT	11,347
22.	Goldenrod Road (SR 551)	Lake Underhill Rd.	Beatty Dr.	FDOT	11,182
23.	N Ronald Reagan Blvd.	Elder Springs Cir.	Jones Ave.	Seminole County	10,951
24.	W First Street (US 17/92)	N. Persimmon Ave.	N French Ave.	FDOT	10,856
25.	Edgewater Dr./Highland Ave.	Clarcona Ocoee Rd.	Lee Rd.	Orange County/ FDOT	10,652
26.	Conway Road (SR 15)	Curry Ford Rd.	E. Michigan St.	FDOT	10,570
27.	Pershing Avenue	Woodgate Blvd.	Goldenrod Rd.	Orange County	10,554
28.	John Young Parkway (SR 423)	SR 528 Ramps	Lazio Ln.	FDOT	10,510
29.	East Lake Mary Boulevard	North of Celery Ave.	SR 46	FDOT	10,477
30.	Poinciana Boulevard	US 192	Siesta Lago Dr.	Osceola County	10,431

Note: The Safety Score is calculated based on the total number of crashes, the highest level of injury sustained in each crash, and the travel mode of victims. Crashes that result in death or serious injury, or include a person outside a vehicle have different factors applied. With the Safety Score, a higher score indicates the location experiences a high crash rate and a lower score indicates as lower crash rate. A Safety Score of zero indicates no history of crashes at the location.

CHAPTER 3

Listening to the community

THE ENGAGEMENT for this regional Safety Action Plan complemented county and local jurisdiction engagement for their own Safety Action Plans, so that together, there was a much broader reach and impact than any one agency could achieve.

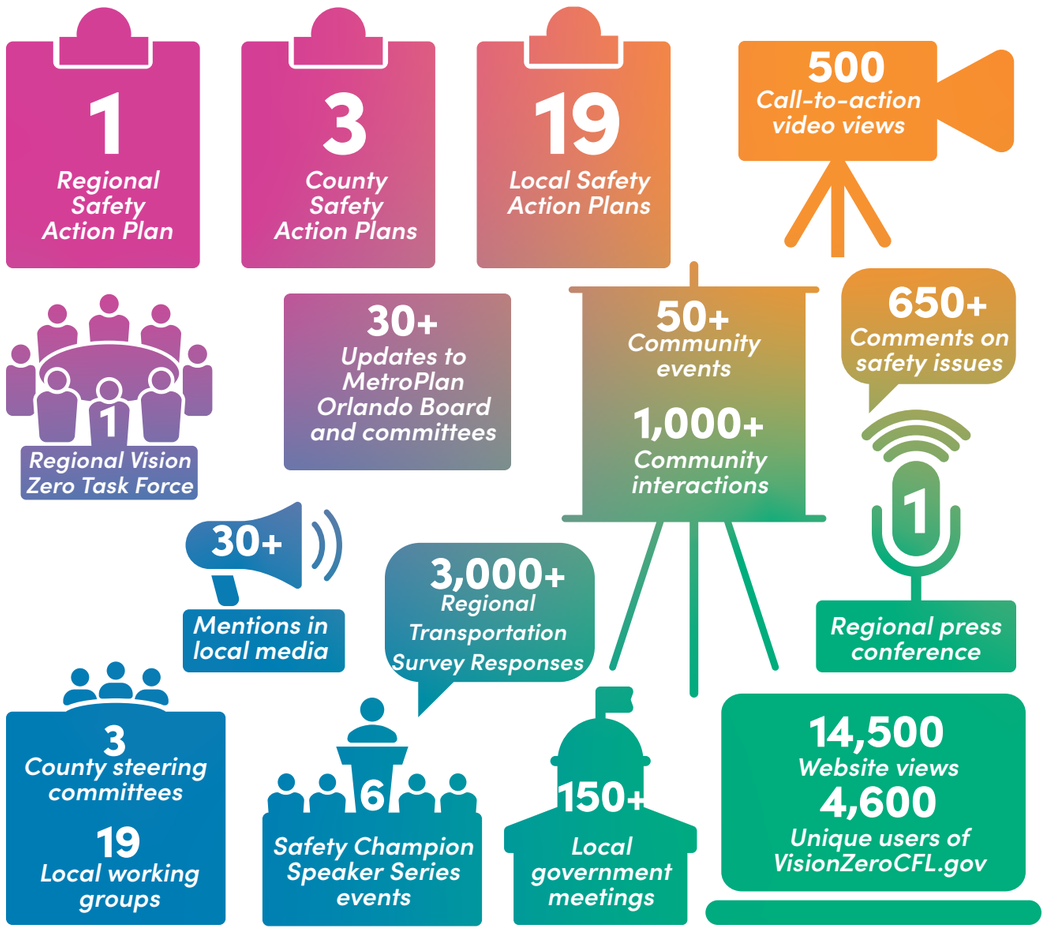
IRLO BRONSON MEMORIAL HIGHWAY

Engagement strategies target two main audiences: Stakeholders and the public.

STAKEHOLDER ENGAGEMENT is designed to bring government officials and staff from local agencies, the Florida Department of Transportation, law enforcement, and emergency response into the conversation about transportation safety. These strategies build capacity, provide materials to streamline local efforts, and develop materials for social media engagement.

PUBLIC ENGAGEMENT is aimed at collecting feedback from Central Florida residents and visitors—the "everyday people" who make up the majority of travelers on our roads, but who may not think regularly about traffic safety. These strategies include a range of in-person and online approaches to help community members shape the planning process.

Vision Zero Central Florida engagement ***BY THE NUMBERS:***



A regional Vision Zero Task Force provided feedback and strategic guidance over the plan's preparation.

THE TASK FORCE included local agency representatives, Florida Department of Transportation staff, public health officials, medical professionals, walking and biking advocates, and members of the public.

Each of the five task force meetings was recorded, and summaries are available on the Hub Site (see page 43 for additional details). For each county and local plan, separate steering committee and working group meetings were held, and MetroPlan Orlando staff attended each. Feedback from various local and county discussions was incorporated into the regional plan.

The Task Force provided key feedback on the technical analysis, public engagement strategies, policy benchmarking, action plan elements, and project prioritization criteria. Several smaller focused discussions were conducted with key stakeholders to review the policy benchmarking and prioritization criteria, and feedback from the Task Force was incorporated into the final set of actions and prioritization criteria.

The regional ***VISION ZERO TASK FORCE*** *met five times during plan preparation:*

August

- Introduction to Vision Zero and the Safe System Approach
- Project overview
- High-level crash trends

September

- High Injury Network
- Crash trends
- Public engagement
- Hub Site overview

November

- Public engagement update
- Counter-measures
- Policy benchmarking
- Reduction goals

February

- Public engagement update
- Policy benchmarking outcomes
- Preliminary prioritization process
- Project development process

April

- Public engagement update
- Project prioritization
- Project development
- Action plan development

A safety Hub Site was developed to provide one centralized location for sharing information.

THE HUB SITE provides an overview of the Safety Action Plan purpose and process. It supplements information provided on the MetroPlan Orlando website, creating a central repository of safety information that helped counties and local agencies develop their own Safety Action Plans.

The Hub Site also includes an interactive safety data dashboard, where users can view the High Injury Network and crash data by jurisdiction. The dashboard will be updated on an annual basis as part of progress monitoring.

MetroPlan Orlando publicized the Hub Site through its newsletter and at public engagement events across the region. Members of the community were encouraged to visit the site to learn more about traffic safety and provide feedback on the Safety Action Plan process. The feedback portion of the site allowed viewers to provide comments and testimony; they could also identify specific locations in the region where they experience safety challenges.

An access-controlled portion of the site was developed where crash data and other project materials can be downloaded for use in county and local Safety Action Plans. The site is intended to live on beyond the preparation of this plan and serve as a clearinghouse for information and Vision Zero updates.

*Visit the **HUB SITE:***

VisionZeroCFL.gov

***VISION ZERO** in the community:*

Hear from your neighbors

Central Floridians know firsthand why we need Vision Zero. Hear what they said by watching a short video and share the need for safer roads: bit.ly/VZCFvideo

350 people provided over 650 comments as part of this project.

A KEY COMPONENT of the Hub Site was a public feedback portal where people could share general and location-specific feedback with options to provide feedback in Spanish and Haitian Creole. Each of the teams preparing county and local plans received access to the feedback, which they used to inform their plans and identify potential engineering and non-engineering crash countermeasures.

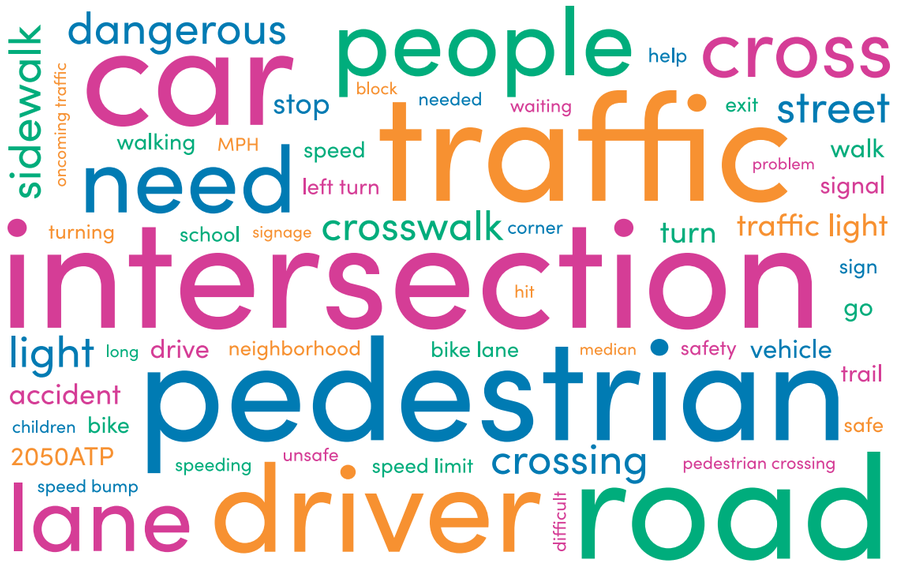
Infrastructure improvements—especially for people walking, biking, and riding transit—were a common theme heard in the feedback. We also heard requests for more education on safe walking, biking, and driving, plus stepped up enforcement of unsafe behaviors that are common throughout the region, like excessive speeding, people driving golf carts on sidewalks, and people using their phones while driving.

Approximately 30% of the comments were made about transportation facilities within Transportation Underserved Communities, slightly higher than the regional percentage of people who live in USDOT ETC Transportation Underserved Communities (25%).

Orange County has 62% of the region's population but contributed 84% of the comments we received, meaning that Osceola and Seminole counties were underrepresented in providing comments.

MetroPlan Orlando's 2024 regional transportation survey of more than 3,000 Central Floridians found that most respondents (80%) understand that speed and safety are closely related, meaning lower speed leads to greater safety for everyone on the road. However, 37% of respondents will habitually drive 10 mph over the speed limit and some (8%) even faster.

***FEEDBACK THEMES** we heard:*



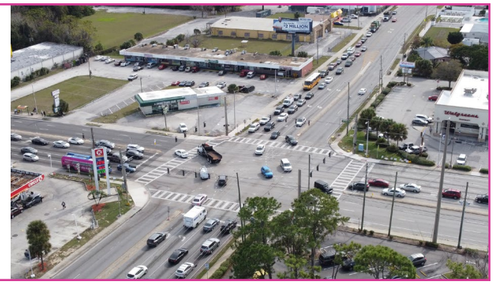
What do people have to say about traffic safety?

NEAR-MISSES and close calls are common themes, as are safety concerns affecting people's ability to get around, the routes they take, and the times of day they feel safe to travel.

> *If I wanted to take the SunRail from my home without using my car, I'd have to cross a major highway with no sidewalks. And I'd have to travel on the side of a highway on a bridge. It is the most inhospitable way to travel, and it lacks any dignity."*
>
> – Sanford resident

> *We can't travel anywhere on bike because the networks do not connect, or the bike paths are on roads that are dangerous. Separate modes of transportation - people will not take anything other than a car if there are no other safe options."*
>
> – Osceola County resident

> *There is a lack of road courtesy that contributes to the issue. With the wide center section, traffic from multiple directions frequently perform maneuvers to jump in front of vehicles or around vehicles that are having difficulty navigating the intersection."*
>
> – Orange County resident



> *I notice a lot of people when they want to cross the road...they just go anywhere besides designated crosswalks. I believe we need to offer safety courses in our schools to help kids learn how to safely cross the streets. We can begin with the students."*
>
> – Orlando resident

MetroPlan Orlando facilitated a Safety Champion Speaker Series with regional and national safety experts.

*Six **SPEAKER SERIES EVENTS** have occurred or been scheduled:*

November 15, 2023
World Day of Remembrance for Road Traffic Victims
MetroPlan Orlando Vision Zero project managers

April 4, 2024
Moving the Needle of Pedestrian and Bicyclist Safety
Rebecca Sanders, PhD, Safe Streets Research & Consulting

May 23, 2024
Centering Safety and Equity
Charles Brown, Equitable Cities

June 4, 2024
From the Perspective of Those Left Behind
Melissa Wandall, National Coalition for Safer Roads

June 13, 2024
A Plan for Action for Walking & Cycling
Dan Burden, Blue Zones

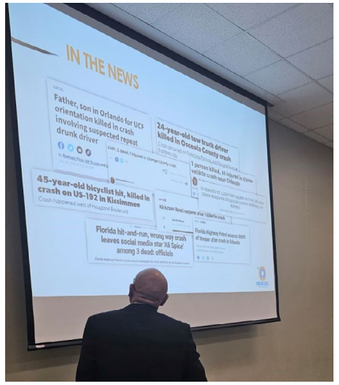
TBD
Stories of Speed Management
Event planning in progress

Note: Events are completed or scheduled as of April 2024.

THIS SERIES, conducted as webinars and in-person events, highlighted speakers with expertise in the Safe System Approach. Recordings of the sessions are available on the MetroPlan Orlando YouTube channel.

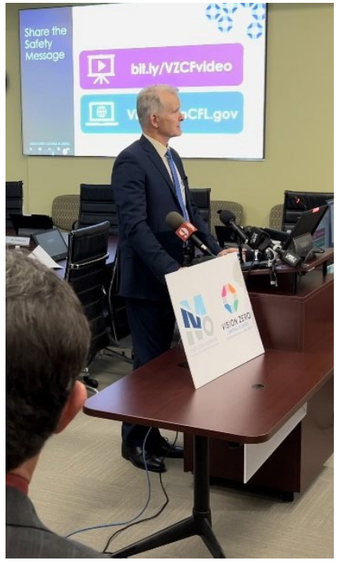
The series is intended to continue beyond the plan's adoption with a quarterly speaker event and an annual Safety Summit. The summit will create a forum for all jurisdictions in the region to share their progress, successes, and failures on the road to zero traffic deaths and serious injuries so that we can all learn together.

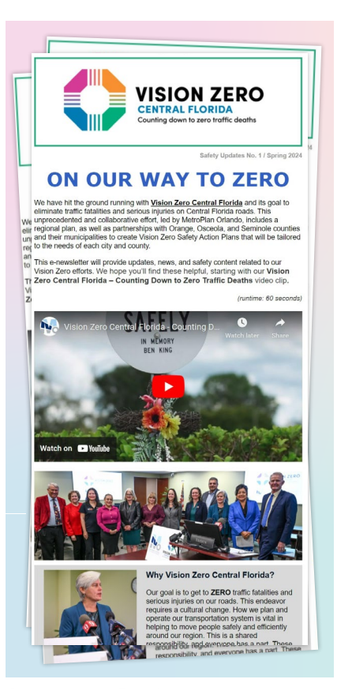
Over 50 community workshops and pop-up events were held for county and local plans.



THESE EVENTS let people in the community know about the Safety Action Plan process and asked for feedback about transportation safety concerns. Each county and local plan provides a summary of the key engagement events that were conducted and the feedback that was received. At least 50 community events were held through June 2024 for the county and local planning efforts.

MetroPlan Orlando held a media briefing to build interest in the Safety Action Plan across the region.





Source: Vision Zero Newsletter.

IN DECEMBER 2023, MetroPlan Orlando hosted a media briefing to introduce the plan to the local media and get the word out about Vision Zero. The MetroPlan Orlando Board and staff, as well as Florida Department of Transportation staff were present at the event. Since the media briefing, there continued to be new inquiries from print and broadcast journalists, with at least 30 additional segments in local media about the Vision Zero efforts occurring throughout the region, including announcements of local community workshops.

*The Safety Action Plan **MEDIA BRIEFING** included:*

5 English and 1 Spanish language broadcast outlets

25+ minutes of on-air coverage following the event

Factsheets in English, Spanish, and Haitian Creole

At the outset of the regional effort, MetroPlan Orlando developed guidance materials to support the preparation of county and local agency plans.

VISION ZERO
CENTRAL FLORIDA
Counting down to zero traffic deaths

HIGHLIGHTS of the materials are shown on the following pages. The effort also included developing a brand identity, logo, tagline, and umbrella name for traffic safety in the region: Vision Zero Central Florida. Guidance documents are provided in the Guidance Appendix.

Vision Zero fact sheets

VISION ZERO fact sheets were developed for each county and city in the region to help facilitate public engagement. Fact sheets include local and regional crash statistics, with an overview of Vision Zero and the planning process as well.

*Vision Zero **FACT SHEETS:***

Elected officials guide

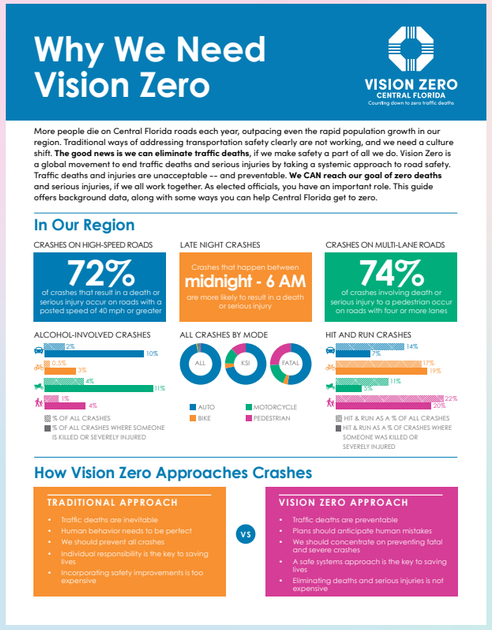
ELECTED OFFICIALS have a critical role to play in how our communities evolve and implement safety strategies. Through their role in approving community budgets, land uses, and a host of other activities, they have a unique opportunity to implement transportation safety improvements.

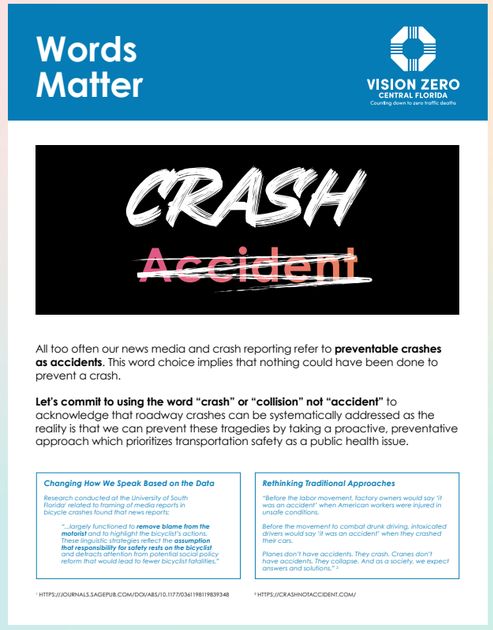
The elected officials guide includes information on why we need Vision Zero and tools to support safety, an elected official's role in supporting Vision Zero, and a glossary of safety terms and concepts.

Vision Zero resolutions

TO ASSIST county and local agencies in developing their own Vision Zero resolutions, resolutions from across the county were curated and key themes summarized. Reviewing Vision Zero and safety resolutions across the nation revealed several key components and themes that could be considered for local Vision Zero resolutions. A sample resolution was then provided along with options for customization of various elements. More information is provided in the Guidance Appendix.

*Vision Zero **ELECTED OFFICIALS GUIDE:***





Social media templates

SOCIAL MEDIA MESSAGING that can be used by local agencies was developed, pivoting from messages prepared by the National Highway Traffic Safety Administration. The messages were tailored with statistics relevant to our local crash patterns, and they apply the Vision Zero Central Florida branding.

*The social media posts **HIGHLIGHT:***

- Central Florida's high fatal crash rate
- The dangers of driving under the influence of drugs and alcohol
- The dangers of distracted driving
- The prevalence of hit-and-run crashes
- The importance of following traffic rules
- How wearing a seatbelt saves lives
- How wearing helmets saves lives
- The importance of educating teen drivers
- How to be aware of people walking, biking, and motorcycling

CHAPTER 4

Toolkit of strategies

THIS TOOLKIT contains strategies to prevent crashes or reduce their severity when they do happen. These strategies, known as countermeasures, are broken into *engineering* and *non-engineering strategies, as well as policy guidance.*

WEST ORANGE TRAIL AT INGRAM ROAD

When we plan, design, and operate roads in Central Florida, we need to anticipate human error and vulnerabilities.

ROSALIND AVENUE AT WALL STREET

ANTICIPATING HUMAN ERROR is consistent with the Safe System Approach Framework outlined by the Federal Highway Administration. The Institute of Transportation Engineers (ITE) and the Road to Zero Coalition have developed a Safe Systems Explanation and Framework that explains four steps for how to anticipate human mistakes as shown to the right.

Anticipating human mistakes through these strategies provides a system with built-in redundancies to reduce the likelihood of death or serious injury when a crash occurs.

However, the strategies have varying levels of effectiveness, feasibility, and implementation time frames. The Federal Highway Administration has therefore developed a solutions hierarchy (January 2024) within the Safe System element of Safe Roads, as shown on the next page. The most effective strategies remove conflicts and minimize hazards, and when that is not feasible, better manage the conflict.

*A Safe System **ANTICIPATES HUMAN MISTAKES** by:*

Separating users in a physical space

Providing dedicated space to road users moving at different speeds or different directions, such as turning vehicles, helps minimize conflicts.

Separating users in time

When different users need to occupy the same space on the roadway, separating users in time helps minimize conflicts, such as an exclusive pedestrian crossing phase.

Alerting users to potential hazards

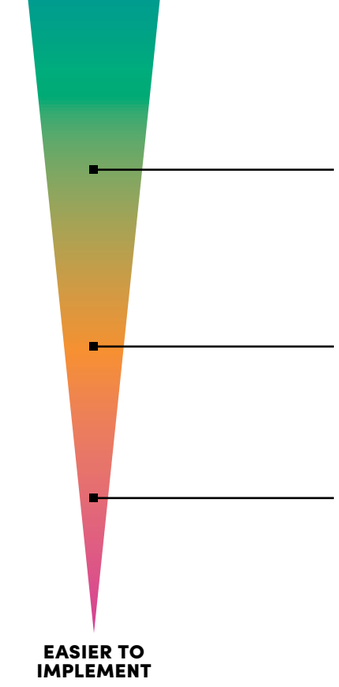
These strategies increase visibility, increase attentiveness, and reduce impairment.

Accommodating human injury tolerance

These strategies reduce speed or impact force on the human body, like physical design treatments and occupant protection.

Source: Institute of Transportation Engineers and Road to Zero Coalition, 2024.

*The Safe System **SOLUTIONS HIERARCHY** seeks to:*



Remove severe conflicts

Eliminate the most severe conflicts between road users, such as relocating a utility pole, constructing a roundabout, or adding a median barrier.

Manage vehicle speeds

Reduce the speed of vehicles to align with the context of the road, hazards, and conflicts between road users. This includes horizontal and vertical deflection elements.

Manage conflicts in time

Where conflicts cannot be removed, consider if they can be separated temporally through signal timing or by providing dedicated space for other road users.

Increase attentiveness and awareness

Where conflicts cannot be removed, work to improve the visibility of the conflicts.

Implement enforcing features to slow traffic

Features like speed feedback signs can help enforce the desired speed.

Source: Federal Highway Administration, 2024.

Non-engineering countermeasures aim to change the social environment to encourage or enforce safer behavior.

NON-ENGINEERING COUNTERMEASURES can be employed at scale to influence large segments of the community via marketing campaigns, high-visibility enforcement, and publicized sobriety checkpoints—which affect the social environment by increasing the perceived risk of being caught. These strategies can also be focused on specific road user groups like teen drivers or motorcyclists.

Non-engineering countermeasures fall under the Vision Zero Core Elements of:

- Authentic engagement
- Strategic planning
- Project delivery
- Equity-focused analysis and programs
- Proactive, systemic planning

The toolkit organizes non-engineering countermeasures into the five elements of the Safe System Approach:

- Safer people
- Safer speeds
- Safer roads
- Safer vehicles
- Post-crash care

The non-engineering countermeasures in the toolkit are not intended to be an exhaustive list of strategies. Instead, they offer a menu for local agencies to choose from as they develop their own Safety Action Plans. As agencies implement non-engineering countermeasures, they should consider how they will reach the most vulnerable populations.

The toolkit provides references to source documents, and readers are encouraged to review applicable source documents related to their specific safety issues and goals. Non-engineering countermeasures should be paired with behaviors that lead to fatal and serious injuries, such as not wearing a seat belt, driving while impaired, and aggressive driving.

Non-engineering countermeasure toolkit organization

Safer people
- Public information, social marketing, and educational campaigns
- Enforcement

Safer speeds
- Speed limit setting
- High-visibility enforcement
- Automated enforcement

Safer vehicles
- Emergency technology
- Vehicle maintenance

Safer roads
- Improved data sharing
- Pilot and demonstration projects
- Road maintenance and maintenance of traffic
- Policies and standards
- Grant opportunities

Post-crash care
- Emergency medical services
- Trauma care
- Fatal crash response team
- Traffic incident management
- Post-crash strategies

Engineering countermeasures promote street designs that protect people when mistakes happen, instead of making mistakes worse.

ENGINEERING COUNTERMEASURES address road safety issues in our communities using the Safe System Approach. Measures identified in the toolkit are designed to:

- Inform partner jurisdictions about safety treatment options and their appropriate uses and contexts
- Communicate safety tools using easy-to-understand language and graphics
- Facilitate coordination between staff, contractors, developers, and the community when discussing transportation safety improvements
- Create a shared understanding and realistic expectations around safety treatments

The toolkit describes a range of engineering countermeasures, how they can be applied to address safety, and their expected effectiveness at reducing crashes when that information is available. The expected crash reduction is based on Crash Modification Factors from the Federal Highway Administration's Crash Modification Clearinghouse or other published studies.

The toolkit also includes general information about each tool's application, typical placement, estimated cost, and delivery timeline.

The engineering countermeasure toolkit is not intended to be a menu from which community members can request safety tools for their street. Before a specific countermeasure is selected, analysis must be conducted to understand the existing safety issue.

Both the engineering and non-engineering countermeasure toolkits can be found in the Guidance Appendix.

Engineering countermeasure toolkit organization

- **Signals**
- **Intersections and roadways**
- **Signing and striping**
- **Speed management**
- **Bikeways**
- **Other engineering strategies**
- **Pedestrian facilities**

A policy benchmarking guide was used in each jurisdiction to help inform action plan strategies.

POLICY AND PROCEDURAL barriers can stand in the way of achieving Vision Zero. An example is vehicle delay-based requirements that encourage streets to be designed and operated to accommodate high-speed vehicle traffic. Policies and plans were reviewed for their alignment with the Safe System to identify such barriers. The full benchmarking guide is provided in the Guidance Appendix. The results of the benchmarking exercise for MetroPlan Orlando are provided in the Technical Appendix. The exercise helped inform the various strategies outlined in Chapter 6.

*Benchmarking typically includes **SIX STEPS:***

1. Identify and review relevant documents and procedures.
2. Review and refine benchmarks.
3. Conduct initial benchmarking.
4. Facilitate benchmarking discussion with stakeholders knowledgeable of planning, engagement, and project delivery.
5. Identify opportunities for policy enhancements and barriers to change.
6. Incorporate findings into Safety Action Plan.

WEST ORANGE TRAIL AT OCOEE APOPKA ROAD

*Using the **POLICY BENCHMARKING GUIDANCE,** the following MetroPlan Orlando documents were reviewed to help inform this Safety Action Plan:*

1. Bicycle Safety Action Plan (2019)
2. Central Florida Regional Freight Mobility Study (2013)
3. Complete Streets Policy
4. LYNX Transit Development Plan (TDP) 2022 Annual Update
5. Metropolitan Transportation Plan (MTP)
6. Pedestrian Safety Action Plan (2019)
7. Prioritized Project List (PPL)
8. Public Participation Plan (2019)
9. Speed Management Network Screening
10. Title VI Program: Nondiscrimination & Language Plan
11. Transportation Improvement Program (TIP)
12. Transportation Systems Management and Operations (TSM&O) Master Plan
13. Unified Planning Work Program (UPWP)

A focus on technology

TECHNOLOGY plays an important role in improving transportation safety, preventing crashes from happening, contributing to faster emergency response times, and providing more detailed analytics about why crashes are happening. This all helps in the identification and application of the most appropriate crash countermeasures. The MetroPlan Orlando Transportation Systems Management & Operations (TSM&O) Master Plan identifies specific technologies that are being planned for in the region, with that plan periodically updated to evaluate and incorporate new technologies with a safety focus.

As more autonomous and connected vehicles join the region's vehicle fleet, there are opportunities for additional safety technologies to be implemented. These technologies can alert drivers when people are walking or biking nearby, recommend optimal speeds to drivers when approaching congested areas, and predict where and when crashes are likely to happen, allowing first responders to respond more rapidly. These technologies help improve safety and convenience for all road users.

*Some examples of **SAFETY TECHNOLOGY** in the region include:*

Automated school bus enforcement

Cameras observe drivers who illegally pass school buses.

Automated speed enforcement

Cameras observe drivers who are exceeding the sped limit.

IP targeted safety messaging

Online messaging can be focused to reach people in specific locations.

Ignition interlock devices

These breathalyzers prevent drivers convicted of drunk driving from being able to start their vehicle after drinking alcohol.

Traffic incident management programs

Signals can be retimed in real time to divert traffic around crashes or special events.

Emergency vehicle preemption

Emergency vehicles receive a green light so they can travel safely and quickly through intersections.

Near-miss analysis

Technology is used to identify patterns that lead to close calls between road users.

Red light cameras

Cameras observe drivers who run red lights.

Wrong-way detection

Cameras observe vehicles that are proceeding the wrong way down a road.

***NEW SAFETY TECHNOLOGIES** possible with autonomous/connected vehicles:*

PedSafe

This pedestrian and bicycle crash avoidance system is designed to operate via connected vehicle technologies. Drivers are alerted when a pedestrian or cyclist is in the area. Also, traffic signals are designed to become aware of pedestrians crossing the road or intersection.

FDOT has deployed this system in the Pine Hills and UCF areas, with plans for further deployments.

Speed harmonization

Mobile traffic sensors send real-time conditions at a congested location to a traffic management center. A computer uses this information to calculate optimal speeds for vehicles approaching congestion and sends the speeds to connected vehicles. The drivers receive the recommended speeds and can adjust accordingly, or, in an automated vehicle, the vehicle could adjust to the recommended speed automatically.

Crash prediction and response deployment

Mobile traffic sensors send real-time conditions to a traffic management center where conditions are evaluated to determine if a crash is likely based on past crash patterns in the region. Law enforcement or emergency response can be deployed before a crash occurs, which can prevent a crash from happening, or place a first responder in closer proximity to improve response times.

CHAPTER 5

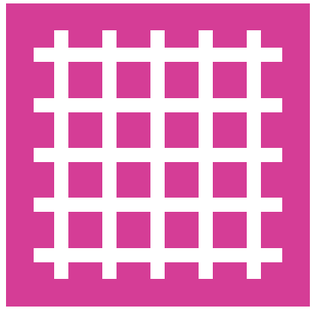
Project development

FOR THE top 30 corridors on the regional High Injury Network, a more in-depth review of crash patterns helped to identify potential countermeasures that could be implemented to improve safety along each corridor.

PRIMROSE DRIVE AT AMELIA STREET

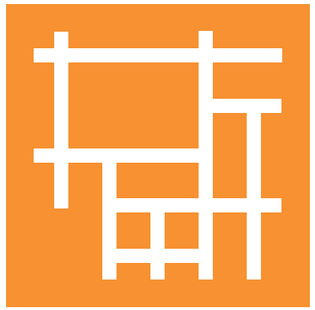
A focus on the countermeasure pairing process

*The following process was used to identify specific **CRASH REDUCTION COUNTERMEASURES:***



1. Identify global countermeasures

A high-level screening helped identify countermeasures that can potentially be implemented across the entire transportation network. For example, bus stops with many nearby pedestrian crashes and no marked pedestrian crossings could be candidates for enhanced crossing treatments like pedestrian hybrid beacons. Intersections with many crashes related to red-light running may be candidates for a red-light camera or signal timing modifications. Crash trends and crash types in each jurisdiction helped inform this analysis.



2. Analyze High Injury Network

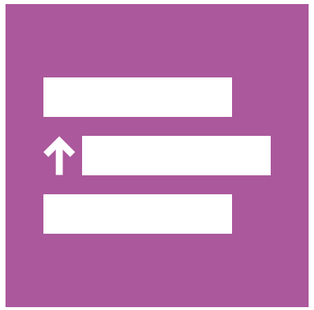
A more detailed analysis of select High Injury Network intersections and street segments was conducted, including crash summaries and other readily available contextual information, such as the number of travel lanes, location of signalized intersections, locations of bus stops, transit ridership, posted speed limits, and the context classification or functional classification of the road. This information helped filter out crash countermeasures that might not be applicable to a particular location.

3. Identify planned improvements

For each road segment or intersection included in the countermeasure selection process, any planned projects along the segment were identified. For example, there may be a planned maintenance or capacity project that could be leveraged to incorporate safety improvements. The schedule of planned improvements was noted so that projects where final design is completed and construction is imminent could be removed from consideration.

4. Identify potential countermeasures

For the top 30 High Injury Network segments, potential countermeasures were identified using the Engineering Countermeasures Toolkit, Florida Department of Transportation and Federal Highway Administration guidelines, as well as professional judgment to identify preliminary countermeasures. Before projects are implemented, additional analysis and community outreach would be conducted.



5. Prioritize projects

Based on the prioritization criteria, projects were prioritized for implementation and other purposes, such as grant applications.

Systemic safety countermeasures should be installed on the High Injury Network and on other roads with similar characteristics.

THESE COUNTERMEASURES could be implemented proactively or established as a standard part of other projects, as funding allows. The safety countermeasures shown on this page are ideal for proactive, systemic implementation in the region based on the crash data. The Technical Appendix provides additional details for each countermeasure.

Leading pedestrian intervals

At signalized intersections, add leading pedestrian intervals, where the pedestrian walk signal turns on before the green light, giving people walking a head start to cross the street.

Lighting

Install lighting, especially along corridors and at intersections with a disproportionate number of crashes that occur at night, including Oak Ridge Road, Kirkman Road, Colonial Drive and Hiawassee Road.

Transit stops

Enhance transit stops that have a high number of people getting on and off, are at least 400 feet from a marked and controlled crossing, and have a pedestrian crash history. Potential improvements include relocating the stop to a marked and controlled crossing if it would not degrade access for transit riders or providing crossing treatments.

Intersection "daylighting"

Remove obstacles at intersections that impair sight lines in high-volume pedestrian areas.

Signal timing

Adjust signal timing and phasing along High Injury Network corridors to provide speed management.

Right turn prohibition

Implement no right turns on red on the High Injury Network and on high-volume pedestrian routes.

Red light cameras

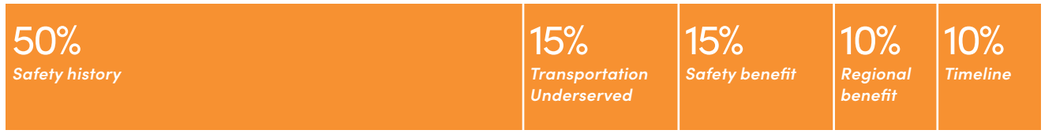
Evaluate intersections with a history of red-light running crashes for red light cameras or other engineering countermeasures.

Prioritization criteria helped identify the highest benefit projects for funding and construction.

PROJECT PRIORITIZATION CRITERIA were developed based on the priorities identified by the MetroPlan Orlando Board in various MetroPlan Orlando policy documents, the goals of the Safety Action Plan, and the criteria used in other recent projects. The primary purpose of the criteria is to identify projects that could be included in a regional Safe Streets for All grant application or other safety-focused grant program. Once projects throughout the region are identified, they will be ranked for prioritization.

High-priority safety improvements identified through this process may also be added to the 2050 Metropolitan Transportation Plan or incorporated into an already planned project in the Prioritized Project List or Transportation Improvement Program. Local jurisdictions can also use these criteria or a modified version for their own project prioritization process. Details related to the development of the prioritization criteria are provided in the Technical Appendix.

*Key project **PRIORITIZATION CRITERIA** include:*



Safety history

This is based on the safety score calculated for each corridor and intersection. It prioritizes projects where the most fatal and serious injury crashes occur.

Transportation Underserved Community

This considers where people might be disproportionately affected by traffic crashes and benefit the most from transportation safety improvements.

Safety benefit

This considers the potential benefit of identified improvements.

Regional benefit

If a project is on multiple High Injury Networks, it is likely to have a regional benefit.

Timeline

Projects start saving lives when they are implemented, so projects that can be implemented quickly are prioritized.

The top 30 High Injury Network corridors received additional review, countermeasure projects were identified for each corridor, and these projects were prioritized.

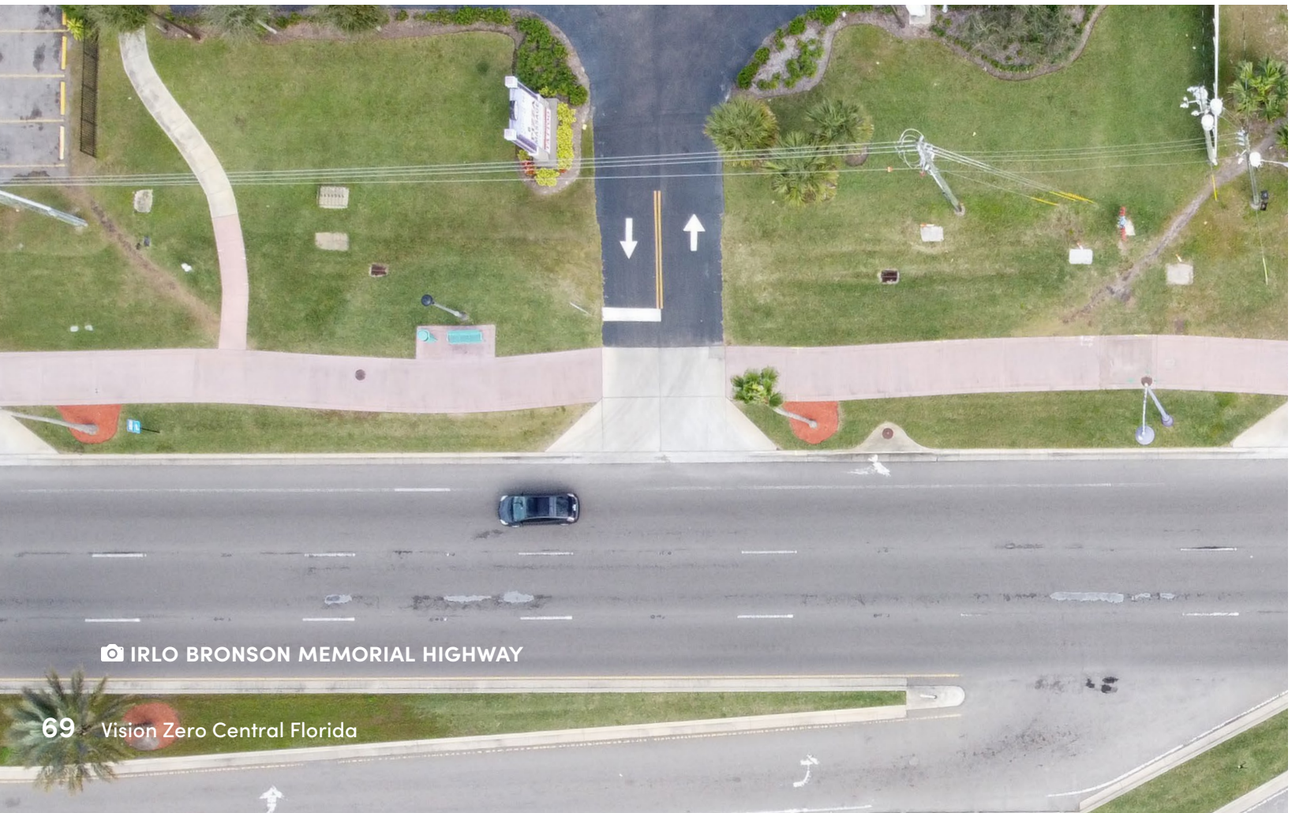
FOR THE TOP 30 High Injury Network corridors, a more detailed crash review was conducted to identify prevailing crash trends. A one-page crash analysis was produced for each corridor that included:

- Crash summary
- Crash types
- Contributing actions
- Road jurisdiction
- Context classification
- Speeds
- Transit service
- Corridor map with crash locations
- Identification of planned projects
- Identification of potential countermeasures
- Planning level cost estimate
- Prioritization score

The Technical Appendix includes all 30 of the crash cutsheets.

These detailed crash reviews helped to identify countermeasures, and each corridor also received a one-page cutsheet identifying a package of countermeasures that together form a "priority project." Like the crash cutsheets, these 30 priority project cutsheets are included in the Technical Appendix.

The 30 priority projects were then grouped into three tiers as listed to the right and shown on the map on the next page.



IRLO BRONSON MEMORIAL HIGHWAY

*Prioritized Projects include the following general types of **COUNTERMEASURES:***

Traffic signals and signal timing

- Leading pedestrian intervals
- Left-turn phases
- No turns on red
- Reduced signal cycle lengths
- Signal retiming to encourage travel speeds within the posted speed limit
- Intersection signalization and conversion of box span signals to mast arms
- Retroreflective backplates on traffic signals

Walking and biking enhancements

- High-visibility crosswalks
- Pedestrian hybrid beacons
- Rectangular rapid flashing beacons (RRFB)
- Pedestrian refuges
- Relocation of transit stops to marked and controlled crossings
- Buffered bike lanes
- Sidewalk widening and closing of sidewalk gaps

Signage and pavement markings

- Oversized warning signs
- Additional warning signs
- Speed feedback signs
- Enhanced pavement markings
- Replacement of faded pavement markings
- Advanced stop bars at intersections
- Red light running cameras

Roadway design modifications

- Reduced corner radii at intersections
- Narrowed travel lanes
- Lane repurposing
- Access management
- Traffic calming
- Hardened centerlines
- High friction surface treatments
- Evaluation of superelevation
- Evaluation of lighting conditions

0

Tier Zero projects

Tier Zero corresponds to a location the region recently enhanced or has secured funding to improve, prior to the development of this plan.MetroPlan Orlando and the respective jurisdiction will monitor these locations to identify if the improvements were successful in meeting the region's safety goals.

1

Tier One projects

Tier One corresponds to the top 10 project corridors identified for safety improvements through this Safety Action Plan process.

2

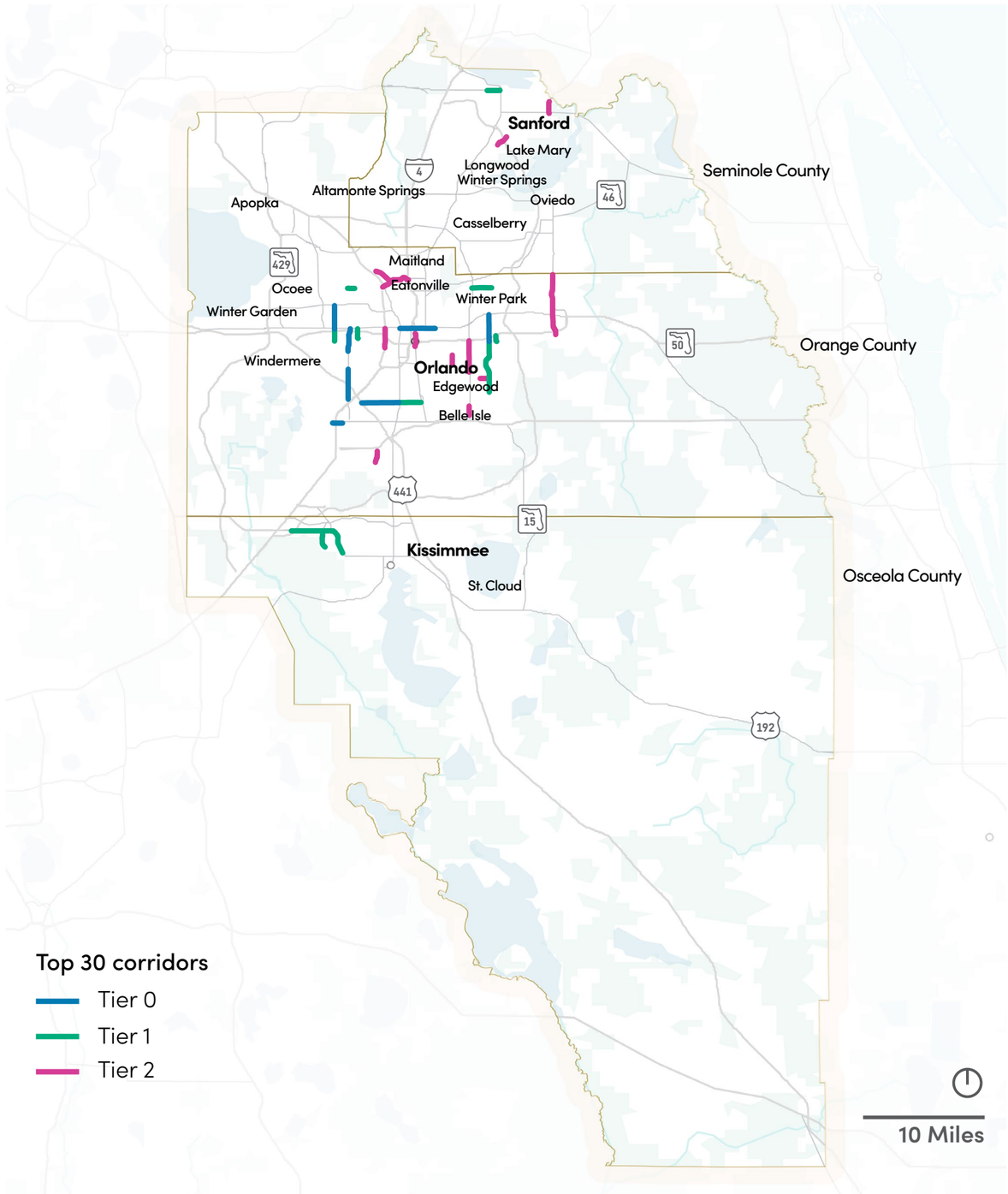
Tier Two projects

Tier Two corresponds to the project locations not identified as Tier Zero or Tier One but that are identified as important locations. These projects will be revisited following the implementation of Tier One projects or with future prioritization efforts and opportunistic funding measures.

*Top 30 projects **BY TIER:***

TIER	ROAD NAME	FROM	TO
0	Hiawassee Road	Silver Star Road	Colonial Drive
0	Sand Lake Road/McCoy Road	Turkey Lake Road	Universal Boulevard
0	Oak Ridge Road	Millenia Boulevard	S. Orange Blossom Trail
0	Colonial Drive	Orange Blossom Trail	Bumby Avenue
0	Kirkman Road	Colonial Drive	Raleigh Street
0	Goldenrod Road	Colonial Drive	Lake Underhill Road
0	Kirkman Road	LB Mcleod Road	Major Boulevard
1	Hiawassee Road	Colonial Drive	Old Winter Garden Road
1	W. First Street (US 17/92)	N. Persimmon Avenue	N. French Avenue
1	Pine Hills Road	Colonial Drive	Old Winter Garden Road
1	Oak Ridge Road	S. Orange Blossom Trail	Orange Ave S.
1	Chickasaw Trail	Frontage Road	Lake Underhill Road
1	North Lane	Westgate Road	N Pine Hills Road
1	W Irlo Bronson Memorial Highway	Celebration Avenue	Four Winds Boulevard
1	University Boulevard	Semoran Boulevard	Lake Mirage Boulevard
1	Goldenrod Road	Lake Underhill Road	Beatty Drive
1	Poinciana Boulevard	US 192	Siesta Lago Drive
2	Rosalind Avenue	E. Livingston Street	S. Lucerne Circle
2	Semoran Boulevard	Lee Vista Road	TG Lee Boulevard
2	N. Ronald Reagan Boulevard	Eldersprings Circle	Jones Avenue
2	Conway Road	Curry Ford Road	E. Michigan Street
2	Pershing Avenue	Woodgate Boulevard	Goldenrod Road
2	East Lake Mary Boulevard	North of Celery Avenue	SR 46
2	Lee Road	N. Orange Blossom Trail	N. Wymore Road
2	Semoran Boulevard	Lake Underhill Road	Lake Margaret Drive
2	Edgewater Drive/Highland Avenue	Clarcona Ocoee Road	Lee Road
2	John Young Parkway	SR 528 Ramps	Lazio Lane
2	John Young Parkway	Colonial Drive	Orange Center Boulevard
2	Alafaya Trail	Colonial Drive	Lake Underhill Road
2	Alafaya Trail	McCulloch Road	SR 50

*Top 30 regional **HIGH INJURY NETWORK** corridors:*



CHAPTER 6

Plan of action

THIS CHAPTER outlines the actions that MetroPlan Orlando and our partners will take to reach zero deaths and serious injuries on our roads. Each action includes a timeline, partners, and performance measures to track our progress.

ROSALIND AVENUE AT WALL STREET

These actions will help us achieve zero deaths and serious injuries on our roads.

TO BE SUCCESSFUL, the Safety Action Plan requires partnerships and collaboration with jurisdictions, local organizations, the Florida Department of Transportation, and the community.

For each action, the MetroPlan Orlando partners that will help support the action are identified along with a timeline for implementation and measures for tracking progress. These actions will be periodically revisited, and actions that are successful may be expanded. Actions that are less successful will be revised or eliminated and replaced with other strategies. As conditions and strategies evolve, the actions and supporting elements will evolve as well.

Actions are grouped by the core elements of Vision Zero—leadership and commitment; safe roads and safe speeds; and data, transparency, and accountability—and relevant Safe System elements are noted. The actions are largely based on the outcomes of the policy benchmarking assessment and discussions with the Vision Zero Task Force.

*Actions are grouped by the **CORE ELEMENTS** of Vision Zero:*

Leadership and commitment

- **Public, high-level commitment**
- **Authentic engagement**
- **Strategic planning**
- **Project delivery**

Safe roads and safe speeds

- **Complete streets for all**
- **Context-appropriate speeds**

Data, transparency, and accountability

- **Equity-focused analysis and programs**
- **Proactive, systemic planning**
- **Responsive, hot spot planning**
- **Evaluation and adjustments**

SAFE SYSTEM ELEMENTS SHOWN IN ACTION ITEMS

Safer people | Safer vehicles | Safer speeds | Safer roads | Post-crash care

LEGEND FOR ACTION ITEMS

Partners involved | Timeline | Performance measures

Note: Grayed out items are not applicable.

Leadership and commitment

Public, high-level commitment

1. Adopt a Vision Zero resolution

Adopt a Vision Zero Resolution that specifies 2050 as the date to reach zero as a region with interim goals that are aligned with goals of other jurisdictions in the region.

MetroPlan Orlando Board

Upon plan adoption

Adoption of resolution

2. Establish an ongoing Vision Zero Task Force

Establish purpose, goals, and vision for a Vision Zero Task Force, including schedule of meetings beyond plan adoption. Some responsibilities could include:

- Regularly assembling transportation and safety agencies to discuss safety priorities and progress
- Identifying opportunities to host or participate in multiagency safety events and campaigns
- Standardizing safety performance measures across agencies and sharing information annually
- Designating a champion at each agency to stay current on safety initiatives, report back, and sustain momentum
- Hosting an annual safety summit for the region or co-hosting with adjacent MPOs
- Continuing the Safety Champion Speaker Series
- Sharing best practices on how to incorporate safety into all departments within an agency, including planning, engineering, construction, maintenance, and operations

Local jurisdictions, Florida Department of Transportation, non-profit organizations and community-based organizations, Department of Public Health, and law enforcement

Ongoing

Number of meetings held on an annual basis, progress on priority actions and safety goals

Leadership and commitment (continued)

Public, high-level commitment (continued)

3. Explore opportunities to provide Vision Zero and Safe System training to first responders

Coordinate with regional traffic incident management staff to identify potential training and resources for local first responders (Emergency Medical Services, fire, and police) related to Vision Zero and Safe System, to incorporate their concerns into strategies that both maintain adequate response times and reduce their calls for service to traffic crashes.

Florida Department of Transportation Community Traffic Safety Teams, Orange County, Osceola County, and Seminole County traffic incident management staff, and first responders

Within four years of plan adoption

Conduct assessment of crash response times, establish baseline and goals for each county based on available resources and identify opportunities for improvements in reporting, response times, and potential to incorporate technology, such as the Desktop Troopers program being piloted by Florida Highway Patrol. Average emergency response time by incident occurrence and notification time improves as compared to baseline and average crash/incident clearance time (return to baseline operating capacity) improves as compared to baseline

Leadership and commitment (continued)

Public, high-level commitment (continued)

4. Promote safety-related legislative changes

Collaborate with other metropolitan planning organizations and the legislature to promote potential legislative changes that have a safety benefit, such as greater funding for driver's education in high schools, stricter licensing standards, removal of barriers to automated speed enforcement, and motorcycle helmet laws. This action will require collaboration with the board to identify legislative priorities.

MetroPlan Orlando Board and Metropolitan Planning Organization Advisory Council

Within three years of plan adoption

Number of legislative priorities identified in collaboration with the MetroPlan Orlando Board

Leadership and commitment (continued)

Authentic engagement

1. Establish a local partner agency network

As a part of the MetroPlan Orlando Transportation for All Plan, establish a local partner agency network to help streamline the efforts of identifying various community-based organizations that are aligned with Vision Zero. Evaluate opportunities and barriers to provide support to community-based organizations, and continue to support Best Foot Forward.

Community Advisory Committee and Vision Zero Task Force

Upon adoption of MetroPlan Orlando Transportation for All Plan

Number of community-based organizations identified in the region and percentage that meaningfully contribute to MetroPlan Orlando activities. Level of funding provided to these organizations

2. Continue targeted outreach

Continue to lead and support targeted public outreach and education of key safety topics of interest to local jurisdictions and the public that address crash trends in the region.

Vision Zero Task Force

Within one year of plan adoption

Continuation of targeted public outreach and education of key safety topics of interest to local jurisdictions and the public that address crash trends in the region

Leadership and commitment (continued)

Strategic planning

1. Join the Vision Zero Network

Join the Vision Zero Network, and support local jurisdictions in the application process.

Member jurisdictions

Upon plan adoption

Join the Vision Zero network at the regional level, number of local jurisdictions that join the Vision Zero Network

2. Regularly update the regional Safety Action Plan

Update the regional Safety Action Plan at least every 5 years.

Vision Zero Task Force and member jurisdictions

Within five years of plan adoption

Add to Unified Planning Work Program

Leadership and commitment (continued)

Strategic planning (continued)

3. Support incorporation of safety into the development review process

Develop transportation impact study best practices for local agencies that include guidelines for how to address safety and multimodal travel as part of the development review process.

Vision Zero Task Force and member jurisdictions

Within three years of plan adoption

Development of best practices for transportation impact studies in the region that incorporate safety and multimodal travel

4. Implement safety-focused performance measures

Implement transportation system performance measures that better align with goals of Vision Zero, including quality of service, accessibility, transit accessibility, vehicle-miles of travel per person, emergency response time, and other potential measures.

Vision Zero Task Force

Within three years of plan adoption

Additional transportation safety performance metrics added to the Metropolitan Transportation Plan

Leadership and commitment (continued)

Strategic planning (continued)

5. Provide guidance on updating construction-related traffic requirements

In collaboration with the Florida Department of Transportation and Orange, Osceola, and Seminole counties, review maintenance of traffic templates used throughout the region and support applicable updates to align with the 2023 Manual on Uniform Traffic Control Devices, which includes additional requirements and guidance to accommodate bicycle and pedestrian flows during construction projects.

Vision Zero Task Force, Florida Department of Transportation, Orange County, Osceola County, and Seminole County

Within three years of plan adoption

Compile construction management plans currently used in the region, conduct best practices review, and identify opportunities to better accommodate bicycle and pedestrian flows during construction projects

6. Support Safe Routes to School projects

The program will fund assessments for schools with a High Injury Network segment within their enrollment boundaries to identify potential countermeasures that help reduce and eliminate barriers to walking or biking to school.

Vision Zero Task Force, Orange, Osceola, and Seminole county school districts, and member jurisdictions

Within four years of plan adoption

Conduct pilot project that could include prioritizing schools with the greatest need and identifying engineering and non-engineering countermeasures around top schools. Leverage dedicated transportation management area (TMA) funding to implement Safe Routes to School and sidewalk gap closure projects

Leadership and commitment (continued)

Project delivery

1. Align the regional Safety Action Plan and 2050 Metropolitan Transportation Plan

Ensure that Vision Zero, the Safe System Approach, and the goals and objectives of this Safety Action Plan are integrated into the 2050 Metropolitan Transportation Plan.

2050 Metropolitan Transportation Plan Steering Committee

Upon adoption of the Metropolitan Transportation Plan

Refinement of Metropolitan Transportation Plan objectives to establish 2050 as the target date to eliminate fatal and serious injury crashes in the MetroPlan Orlando Region, and incorporation of other goals and actions as appropriate

2. Provide more details on safety in projects

Projects in the 2050 Metropolitan Transportation Plan will provide more detailed descriptions related to safety components.

2050 Metropolitan Transportation Plan Steering Committee

Upon adoption of the Metropolitan Transportation Plan

Metropolitan Transportation Plan provides a more detailed description of project safety components that allows for more refined project prioritization based on safety benefit

Leadership and commitment (continued)

Project delivery (continued)

3. Identify overlooked grant opportunities

Inventory currently used grant programs and interview other metropolitan planning organizations to see if there are grant opportunities that are being missed. Maintain a list with project requirements, application deadlines, and application information.

Vision Zero Task Force, Florida Department of Transportation, and member jurisdictions

Within one year of plan adoption

Develop list of grant programs that could be used to implement safety improvements in the region that can be updated on a biannual basis

4. Build crash modification factors into project prioritization

Research incorporating crash modification factors into the project prioritization process.

Vision Zero Task Force

Within four years of plan adoption

Conduct peer review of other metropolitan planning organizations and agencies that incorporate crash modification factors into project prioritization processes to assess potential level of effort and potential benefits to prioritization

Safe roads and safe speeds

Complete streets for all

1. Develop a complete streets policy template

Develop sample complete streets policy language to support jurisdictions in the region that do not yet have an adopted policy or are considering an update to their existing policy.

Vision Zero Task Force and member jurisdictions

Within two years of plan adoption

Conduct outreach to member jurisdictions that do not yet have a complete streets policy to identify barriers to policy implementation and survey jurisdictions that do have a complete streets policy to identify potential modifications, like a roundabout first policy. Based on the response, develop sample policy language pivoting from the MetroPlan Orlando Complete Streets Policy that can be used by local jurisdictions to adopt or update their policy

2. Lead road safety audits on the High Injury Network

Work with member jurisdictions and the Florida Department of Transportation to conduct road safety audits on sections of the High Injury Network with a focus on Tier 1 and Tier 2 corridors.

Applicable member jurisdictions and Florida Department of Transportation

Within two years of plan adoption

Number of road safety audits completed each year

Safe roads and safe speeds (continued)

Complete streets for all (continued)

3. Support incorporating safety into road design standards

Support Orange, Osceola, and Seminole counties in updating design standards that incorporate safety and speed management features, including the potential to identify best practice standards and participate in technical review committees.

Vision Zero Task Force, Orange County, Osceola County, and Seminole County

Within three years of plan adoption

Implementation of new design standards and monitoring of design use

Safe roads and safe speeds (continued)

Context-appropriate speeds

1. Explore using speed reduction as an evaluation criterion

Evaluate the potential to include target speed reductions as an evaluation or prioritization criterion in the 2050 Metropolitan Transportation Plan.

Vision Zero Task Force and 2050 Metropolitan Transportation Plan Steering Committee

Within one year of plan adoption

Speed reduction potential evaluated as a potential prioritization criteria for the 2050 Metropolitan Transportation Plan

2. Formalize target speed setting

Work with the Florida Department of Transportation and other jurisdictions to formalize the process of target speed setting on all segments of the Federal Aid System of roads. For Federal Aid roads on the High Injury Network, the target speed shall be set at the lowest allowable speed based on the context classification with detailed justification provided if that target speed cannot be met.

Vision Zero Task Force, Florida Department of Transportation, and applicable member jurisdictions

Within one year of plan adoption

Formalization of process to set target speed on the Federal Aid System

Safe roads and safe speeds (continued)

Context-appropriate speeds (continued)

3. Develop education materials for local agencies

Develop educational materials that can be provided to local agencies and their elected officials.

Vision Zero Task Force, member jurisdictions, and their public information officers

Within two years of plan adoption

Identification of educational needs and maintenance of a repository of educational materials that reflects Central Florida crash trends; incorporation of safety training for all new members of MetroPlan Orlando committees and Board

4. Advance a regional 20 mile per hour residential speed limit

Develop a draft policy and strategy roadmap for local agencies to adopt a 20 mile per hour speed limit ("20 is Plenty") on all residential streets in their jurisdiction, pivoting from the Florida Statute 316.183 that allows a maximum speed limit of 20 or 25 miles per hour to be set on local streets and highways after an investigation determines that such a speed limit is reasonable.

Vision Zero Task Force and applicable member jurisdictions

Within three years of plan adoption

Number of local jurisdictions that have implemented a 20 mile per hour speed limit on all residential streets in their jurisdiction

Safe roads and safe speeds (continued)

Context-appropriate speeds (continued)

5. Pilot use of signal timing to regulate speeds

Identify corridors where traffic signal timing strategies could be used to control speeds and conduct a pilot project in partnership with the Florida Department of Transportation and local agencies.

Vision Zero Task Force, Florida Department of Transportation, and member jurisdictions

Within three years of plan adoption

Identification of a pilot corridor, and implementation and evaluation of a pilot project. Based on outcomes of pilot project, development of process to replicate.

Data, transparency, and accountability

Equity-focused analysis and programs

1. Study the involvement of unhoused people in crashes

Analyze the extent to which unhoused people are involved in pedestrian and bicyclist crashes, and explore outreach and infrastructure strategies to address their crash risk.

Homeless services agencies

Within five years of plan adoption

Quantify extent of the problem and track outreach and infrastructure efforts

Data, transparency, and accountability (continued)

Equity-focused analysis and programs (continued)

2. Identify locations with underreported crashes

Work with community health partners and others to identify where in the region bicyclist, pedestrian, and hit-and-run crashes are likely underreported.

Community heath partners, Emergency Medical Services, and local law enforcement

Within five years of plan adoption

Research what other jurisdictions do to address underreporting, such as reviewing hospital records to compare with crash data or installing incident management cameras in areas with frequent hit-and-run crashes. Develop process for evaluating hit-and-run crashes in the region and conduct assessment

Data, transparency, and accountability (continued)

Proactive, systemic planning

1. Participate in Florida Department of Transportation Traffic Safety Coalition

MetroPlan Orlando staff will attend Florida Department of Transportation Traffic Safety Coalition meetings that align with the most pressing safety issues in the region. This will provide insight into resources and materials prepared at the statewide level that could benefit the region.

Florida Department of Transportation Traffic Safety Coalition

Upon plan adoption

Number of Traffic Safety Coalition meetings attended by MetroPlan Orlando staff and outreach to local jurisdictions to share relevant information

2. Serve as a regional data clearinghouse

Serve as a clearinghouse for regional location-based data, such as connected vehicle speed, roadway, demographic, and other data that could inform crash patterns and project prioritization.

Florida Department of Transportation and member jurisdictions

Within three years of plan adoption

Identification of applicable data and sources, development of funding strategies if data is not freely available, and maintenance of portal where available data can be accessed by partners, such as VisionZeroCFL.gov

Data, transparency, and accountability (continued)

Proactive, systemic planning (continued)

3. Develop emergency vehicle preemption plan

Work with the Florida Department of Transportation and local agencies to develop a plan for installing emergency vehicle preemption on all routes to Level 1 Trauma Centers in the region.

Florida Department of Transportation and applicable member jurisdictions

Within three years of plan adoption

Identification of routes to Level 1 Trauma Centers and location of all signals equipped with emergency vehicle preemption within one year and development of plan with funding strategies identified in subsequent years

Data, transparency, and accountability (continued)

Responsive, hot spot planning

1. Report on annual crash data

With the annual update of the crash dashboard, report on progress, how it aligns with regional goals, and if new focus areas or crash trends are emerging.

Vision Zero Task Force

Annually

Update of crash dashboard and applicable statistics. Review of actions included in this plan against their applicable performance measures and identification of priority actions for the subsequent year

Data, transparency, and accountability (continued)

Evaluation and adjustments

1. Test new safety strategies in the region

Research and develop a policy related to supporting pilot projects to test new safety strategies in the region.

Vision Zero Task Force

Within two years of plan adoption

Preparation of policy and guidance related to pilot projects

2. Conduct before and after studies of projects

Develop a process to conduct before and after studies for projects that meet certain criteria to document safety benefits of different treatments in the regional context, for both engineering and non-engineering countermeasures.

Vision Zero Task Force, Florida Department of Transportation, and member jurisdictions

Within two years of plan adoption

Identify types of projects that would be candidates for before/after studies, and identify funding mechanism to complete studies. Within three years, conduct at least two before studies. Within five years, conduct at least two after studies and share the results. As countermeasures are identified, there should be documentation of the behavior or outcome that is being targeted, how effectiveness will be measured, and a reporting of the outcome. Tier 0 Corridors should be evaluated after the implementation of funded safety improvements to document their benefit and additional safety improvements programed if necessary

Data, transparency, and accountability (continued)

Evaluation and adjustments (continued)

3. Evaluate enforcement outcomes

Document enforcement activities in the region to understand correlation between levels of enforcement and crash outcomes.

Florida Department of Transportation Community Traffic Safety Teams, Florida Highway Patrol, local law enforcement, and Best Foot Forward

Within two years of plan adoption

Documentation of law enforcement activities related to key behaviors in the region that disproportionately result in fatal and serious injury crash outcomes, such as seat belts, driving under the influence, distracted driving, speeding and failure to yield to pedestrians

4. Evaluate effectiveness of existing MPO-funded pedestrian safety educational programs

Document and evaluate the effectiveness of existing pedestrian safety educational programs funded by MetroPlan Orlando and partner jurisdictions, and explore whether alternative approaches would offer a greater benefit to the region.

Vision Zero Task Force and member jurisdictions

Within three years of plan adoption

Documentation of MPO and partner agency funded pedestrian safety programs in the region, accounting of funding provided, and review of program outputs and outcomes. Assess value proposition of existing program delivery mechanisms and explore alternative approaches for program financial solvency

CHAPTER 7

Monitoring and implementation

METROPLAN ORLANDO and our partners will use performance measures to monitor our progress toward zero deaths and serious injuries on our roads so we can understand what is working and change what is not.

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Monitoring progress keeps us on track toward the goal of Vision Zero.

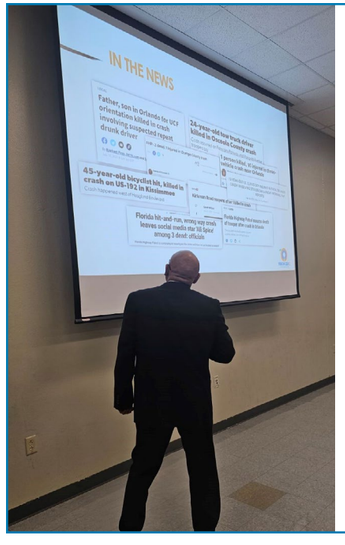
MONITORING the progress made toward reaching zero traffic fatalities and serious injuries by 2050 will help MetroPlan Orlando evaluate the success of current action items and adopt new strategies as needed. Performance metrics will be used to evaluate the effectiveness of the Safety Action Plan.

Crash data is primarily obtained from Signal Four Analytics, with Signal Four data based on data from Florida's statutory custodian of records, the Florida Department of Highway Safety and Motor Vehicles (FLHSMV). Crash records are typically added to the system within two months of a reported crash, but all data is considered preliminary until the year is reconciled and closed out by the FLHSMV, and thus certain adjustments may be made to verify the data where clerical errors are noted.

Additional verification is also conducted for fatal crashes, and data summaries for the prior year can be in flux for at least the first six months of the year, if not longer.

Additional data should also be incorporated into the progress monitoring, including data from the Florida Injury Surveillance System (FISS) and the Florida Department of Transportation (FDOT) Modal Development Office. Emergency room and other hospital visit data could also be obtained from local hospitals. Data from FISS and FDOT may have an even greater time lag than from Signal Four. For example, from FISS, 2022 is the most current year for which data is available as of May 2024.

In July of each year, the annual monitoring process should begin with Signal Four data for the most recent full year, and the most current data obtained from other sources. Using the data, a variety of metrics should be calculated, as presented in the table on the next page. In addition to the crash data, a list of safety improvements implemented in the prior year should be developed.



Vision Zero Task Force

Before this Safety Action Plan was developed, MetroPlan Orlando facilitated a Vulnerable Users Safety Working Group. The group focused on decreasing fatal and serious injuries for people walking and biking, especially by reducing driving speeds. This group met approximately eight times a year with agendas focused on trend analysis, data sharing, and project review. In 2023, this group pivoted to become the Vision Zero Task Force. After plan adoption, the Vision Zero Task Force will continue their work. They will help implement the various action items of the plan, by providing feedback, identifying resources, and holding other jurisdictions accountable for their role in reaching zero. The Vision Zero Task Force will be involved in overseeing the annual safety progress report.

Annual progress ***MONITORING MEASURES:***

PERFORMANCE MEASURE	DATA SOURCE
Total fatalities by jurisdiction with regional total	Signal Four
Fatality rate by jurisdiction	Signal Four, US Census Bureau
Total serious injuries by jurisdiction with regional total	Signal Four
Serious injury rate by jurisdiction	Signal Four, US Census Bureau
Non-motorized fatalities and serious injuries by jurisdiction with regional total	Signal Four
Number of KSI crashes within Transportation Underserved areas	Signal Four, US Census Bureau
Percentage change in KSI crash types	Signal Four
KSI crashes by context classification or functional classification	Signal Four, road network datasets
Occupant protection assessment (percent of people killed not wearing a helmet or seatbelt as compared to prior year)	Signal Four
Impaired driving assessment (percent of people killed or seriously injured in a DUI crash as compared to prior year)	Signal Four
Non-auto involved rail incidents	Florida Department of Transportation Modal Development Office
Non-auto involved walking and bicycling crashes (including micromobility devices)	Florida Injury Surveillance System, local hospitals
Citations for key behaviors	Signal Four, Florida Highway Patrol, local law enforcement
Implemented safety improvements in prior calendar year	All jurisdictions in region
Progress made on specific actions	Safety Action Committee, MetroPlan Orlando, all jurisdictions in region
Update safety dashboard	Signal Four
Before/after study completion	Various studies
Number and outcome of non-engineering countermeasures	Florida Department of Transportation, Best Foot Forward, and local jurisdictions

Source: MetroPlan Orlando, 2024.

We will review and adapt our strategy toward zero deaths based on what is and isn't working.

IN CONJUNCTION with the data analysis, an assessment of progress on the actions identified in the plan will be conducted. Performance measures were identified for each action item; therefore, progress should be evaluated against those measures for each action that was in-progress or completed in the prior year.

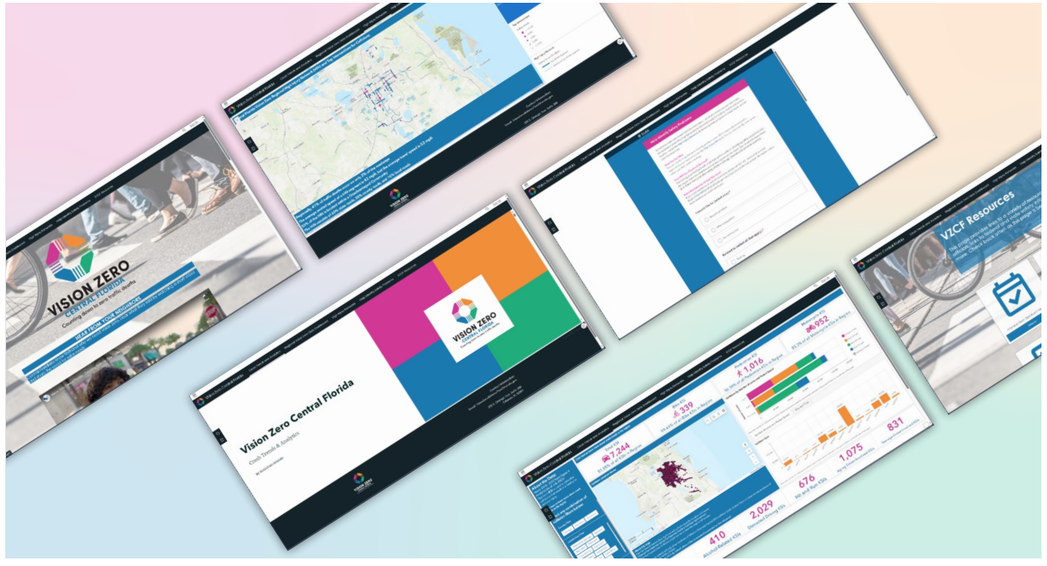
The evaluation process provides an opportunity to determine if actions underway should be continued, augmented, modified, or discontinued, and if completed actions should be repeated, and which actions identified for future years should be brought forward during the next year.

The results of the annual progress monitoring and action plan status shall be shared with the Vision Zero Task Force for review prior to sharing with the remaining MetroPlan Orlando committees and the board.

The safety dashboard hosted at VisionZeroCFL.gov will be updated on an annual basis to reflect new data as well as highlight key findings from the crash analysis. A data management plan that details the process to obtain, review and upload data to the crash dashboard is provided in the Technical Appendix.

As safety projects are implemented and before and after studies are completed, these results shall also be shared as part of the annual progress reporting.

From plan adoption, the regional Safety Action Plan will be refreshed or fully updated every five years, ideally in advance of the Metropolitan Transportation Plan cycle such that the findings from the Safety Action Plan can be incorporated into the Metropolitan Transportation Plan. A five-year cycle will provide the most up-to-date crash data and incorporate new safety best practices and guidelines.



Implementing Vision Zero Central Florida will require broad collaboration across many partners and disciplines.

IN ADDITION to completing the actions in Chapter 6, transportation safety projects will get implemented in many ways, including through the traditional MetroPlan Orlando funding process, other MetroPlan Orlando plans, and grant programs.

As projects move forward from the Metropolitan Transportation Plan to construction, there are opportunities to prioritize funding projects that can improve transportation safety outcomes along high injury corridors.

Connection to other MetroPlan Orlando plans

The **2050 Metropolitan Transportation Plan (MTP)** establishes the vision of Central Florida's entire transportation system. This plan for the year 2050 identifies current and future transportation needs. Projects must be included in the plan to receive federal and state funding. Projects identified in the Safety Action Plan will be evaluated for incorporation into the 2050 MTP, which will be adopted in 2025.

The annually updated **Prioritized Project List (PPL)** is a project funding "waiting list." It contains a list of unfunded highway, transit, bicycle, and pedestrian projects that have been ranked for funding. The PPL serves as a bridge between MetroPlan Orlando's MTP and the five-year Transportation Improvement Program (TIP). Once long-term needs are determined by the MTP, projects are prioritized and ranked on the PPL. When funding becomes available, the project moves into the five-year funding program (TIP). Several portions of the High Injury Network have projects on the PPL, and based on the potential to improve safety outcomes, those projects may progress to the TIP more quickly.

The annually updated **Transportation Improvement Program (TIP)** sets the schedule for improvements to the region's transportation system over the next five years. This short-term plan assigns available funding to specific projects and covers all modes of transportation. As improvements are added to the TIP, there could be opportunities to add or refine transportation safety features.

The **Active Transportation Plan (ATP)** summarizes the bicycle, pedestrian, and other active transportation infrastructure needed throughout the region as well as policy recommendations to keep active transportation top of mind for future efforts. The plan identifies active transportation projects based on transportation safety in the region with a prioritized project list to incorporate into the MTP.

The **Transportation Systems Management & Operations (TSM&O) Master Plan** identifies solutions that can improve the safety and reliability of our transportation system through technologies and communications in infrastructure and vehicles.

The **Public Participation Plan** includes objectives, strategies, and measurement tools for MetroPlan Orlando's public involvement program. It helps guide engagement as Vision Zero is implemented.

MetroPlan Orlando is developing a **Transportation for All: Overcoming Obstacles Plan** to set a roadmap for equitable transportation. This plan is expected to be finalized in Fall 2024, and it will help guide project prioritization.

It takes a variety of funding sources to pay for safety improvements.

NO SINGLE funding source will be able to pay for all the safety improvements identified in this plan as well as the local Safety Action Plans. In addition to the traditional Highway Safety Improvement Program (HSIP), the MetroPlan Orlando funding process, and other local funding sources, such as developer fees and sales taxes, the following table summarizes potential federal funding sources related to transportation safety.

MetroPlan Orlando will also continue to look for opportunities to layer safety-related projects onto other capital improvement projects, as well as maintenance projects and through review and approval of projects in the Prioritized Project List and Transportation Improvement Program.

POTENTIAL FEDERAL FUNDING SOURCES:

FUNDING SOURCE	DESCRIPTION
Safe Streets and Roads for All (SS4A)	The SS4A program funds regional, local, and Tribal initiatives through grants to prevent road deaths and serious injuries. The Fiscal Year (FY) 2024 Notice of Funding Opportunity (NOFO) for the SS4A grants offers funding for two distinct types of grants: 1. Planning and Demonstration Grants: These grants allocate federal funds to develop, complete, or enhance an Action Plan. Demonstration activities are temporary safety improvements that inform comprehensive safety action plans (referred to as "Action Plans") by testing proposed project and strategy approaches to determine future benefits and future scope. 2. Implementation Grants: These grants provide federal funds to execute projects and strategies outlined in an Action Plan, specifically aimed at addressing road safety issues. Eligible projects and strategies may encompass infrastructure, behavioral, and operational activities.
Rebuilding American Infrastructure with Sustainability & Equity (RAISE) Discretionary Grant Program	The program funds multimodal, multi-jurisdiction projects that have significant local or regional impact but are more difficult to support through traditional DOT programs.
Transportation Alternatives Program (TAP)	The TAP provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roads largely in the right-of-way of former Interstate System routes or other divided highways.

***POTENTIAL FEDERAL FUNDING SOURCES** (continued):*

FUNDING SOURCE	DESCRIPTION
Carbon Reduction Program (CRP)	Provides funds for projects designed to reduce transportation emissions, defined as carbon dioxide (CO_2) emissions from on-road highway sources.
Infrastructure for Rebuilding America Discretionary Grant Program (INFRA)	Funds available for multimodal freight and highway projects of national or regional significance to improve the safety, efficiency, and reliability of the movement of freight and people in and across rural and urban areas.
Reconnecting Communities Pilot Program (RCP)	Planning grants and capital construction grants, as well as technical assistance, to restore community connectivity through the removal, retrofit, mitigation, or replacement of eligible transportation infrastructure facilities.
Federal Transit Administration Capital Funds (FTA)	Funds transit capital investments, including heavy rail, commuter rail, light rail, streetcars, and bus rapid transit.
Areas of Persistent Poverty Program (AoPP)	Funds projects that provide access to transit in Transportation Underserved Communities, including safety improvements.
Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Provides funds to States for transportation projects designed to reduce traffic congestion and improve air quality, particularly in areas of the country that do not attain national air quality standards.
Highway Safety Improvement Program (HSIP)	HSIP is a core Federal-aid program with the purpose to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned roads and roads on tribal land. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads with a focus on performance.
Railway-Highway Crossings (Section 130) Program (RHCP)	The Railway-Highway Crossings (Section 130) Program provides funds for the elimination of hazards at railway-highway crossings.
National Highway Performance Program (NHPP)	Provides support for the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHS, and to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in a state's asset management plan for the NHS.
Promoting Resilient Operations for Transformative, Efficient, and Cost Saving Transportation (PROTECT)	Used to help make surface transportation more resilient to natural hazards, including climate change, sea level rise, flooding, extreme weather events, and other natural disasters through support of planning activities, resilience improvements, community resilience and evacuation routes, and at-risk coastal infrastructure.
Surface Transportation Block Grant Program (STBG)	Provides flexible funding that may be used by States and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals.
Safe Routes to School (SRTS)	Projects that improve safety for students going to school.

Source: MetroPlan Orlando, 2024.

Appendices

Under separate cover

APPENDIX SECTIONS

Technical appendix

- HIN Development
- Jurisdictional HIN Fact Sheets
- Crash Analysis
- Policy Benchmarking
- HIN Corridor Fact Sheets and Countermeasures
- Prioritization Criteria
- Data Management Plan
- SS4A Action Plan Component Checklist
- Regional Vision Zero Resolution

Guidance appendix

- Public Engagement
- Stakeholder Group
- Vision Zero Resolution
- Policy Benchmarking
- Social Media Post
- Elected Officials Guide
- How to Avoid a Crash
- Engineering Countermeasure Toolkit
- Non-Engineering Countermeasure Toolkit
- Quick Build Guide

OLD WINTER GARDEN ROAD AT KIRKMAN ROAD