

# FLORIDA PEDESTRIAN AND BICYCLE STRATEGIC SAFETY PLAN

September 2021











*Florida Department of Transportation*

RON DESANTIS  
GOVERNOR

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SECRETARY

September 30, 2021

On behalf of the Florida Department of Transportation and Florida's Pedestrian and Bicycle Safety Coalition, THANK YOU for prioritizing the safety of our most vulnerable road users, pedestrians, and bicyclists.

I am pleased to present the 2021 update of Florida's Pedestrian and Bicycle Strategic Safety Plan (PBSSP). This five-year plan serves as the implementation element of Florida's Strategic Highway Safety Plan and positively impacts the quality of life of each of our residents and visitors.

I applaud each federal, state, and local partner, stakeholder, safety champion, advocate and citizen that provided input and guidance throughout the update process. **YOU** make this "Florida's Plan." By working together, we are moving the needle towards ZERO traffic fatalities!

Everyone deserves to arrive at their destination safely, so please do your part by staying alert and walking, biking, and driving safely.

Again, thank you for your commitment! I look forward to continuing our work together to make Florida an exciting, **and safe** place to live, work, and visit!

Sincerely,

A handwritten signature in black ink, appearing to read "Courtney Drummond". The signature is fluid and cursive, with a large initial "C" and "D".

Courtney Drummond, P.E.  
Assistant Secretary for Engineering and Operations

# ACKNOWLEDGMENTS

The Florida Department of Transportation would like to thank the following partners for their ongoing commitment to improving the safety of people walking and biking in Florida:

## LEADERSHIP PARTNERS:

- Federal Highway Administration
- National Highway Traffic Safety Administration
- Florida Department of Transportation
- Florida Police Chiefs Association
- Florida Department of Highway Safety and Motor Vehicles
- Florida Highway Patrol
- Florida Law Enforcement Liaison Program
- National Coalition for Safer Roads
- University of North Florida, Institute of Police Technology and Management

## COALITION PARTNERS:

- AARP
- ASHA Planning Consultancy
- Bike Florida
- Broward County
- City of Orlando
- City of Tampa
- Creative Fuel Co. LLC
- Day Communications
- Emergency Medical Services Advisory Council
- Escambia County Sheriff's Office
- Federal Highway Administration
- Florida Bicycle Association
- Florida Department of Education
- Florida Department of Elder Affairs
- Florida Department of Health
- Florida Department of Highway Safety and Motor Vehicles
- Florida Department of Transportation
- Florida Highway Patrol
- Florida International University
- Florida Law Enforcement Liaison Program
- Florida Public Transportation Association
- Forward Pinellas
- Healthcare District of Palm Beach County
- Hillsborough County
- Hillsborough County Metropolitan Planning Organization
- Indian River Fire Rescue
- Jacksonville Jaguars
- Miami-Dade Transportation and Public Works
- Mothers Against Drunk Driving Florida
- National Coalition for Safer Roads
- Orange Park Medical Center
- Palm Beach Transportation Planning Agency
- Pinellas County
- Public Information, Education and Relations Committee
- Ryder Trauma Center
- Sarasota Police Department
- Space Coast Transportation Planning Organization
- St. Lucie Transportation Planning Organization
- Tampa Police Department
- University of Florida
- University of North Florida, Institute of Police Technology and Management



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# INTRODUCTION

Florida's safety vision is simple: to eliminate all transportation-related fatalities and serious injuries for all modes of travel. This Pedestrian and Bicycle Strategic Safety Plan (PBSSP) advances this safety vision by supporting the safety of people walking and biking and aligning with the principles set forth by the Pedestrian and Bicyclist Emphasis Area of the Strategic Highway Safety Plan (SHSP).

This plan is a call to action to public and private partners, stakeholders, and safety advocates to provide a safe transportation system for people who walk and bike—our most vulnerable road users.

Florida's Pedestrian and Bicycle Safety Coalition is a group of federal, state, and local safety partners, stakeholders, and safety advocates charged with implementing this plan. The Coalition meets formally each quarter and is organized into seven teams that correspond to the plan's emphasis areas. Each team develops a detailed implementation plan aligned with the overarching goal of eliminating fatal and serious injuries crashes for people walking and biking. In addition to participating in quarterly Coalition meetings, each emphasis area team also meets mid-quarter to collaborate, review data, share lessons learned, and monitor progress.

## FLORIDA'S PEDESTRIAN AND BICYCLE SAFETY COALITION

### EMPHASIS AREAS

(These icons are used throughout the PBSSP and refer to the Emphasis Areas)



DATA, ANALYSIS,  
AND EVALUATION



LAW  
ENFORCEMENT



DRIVER EDUCATION  
& LICENSING AND  
LEGISLATION,  
REGULATION, & POLICY



PLANNING, DESIGN,  
AND OPERATIONS  
(ENGINEERING)



COMMUNICATION,  
OUTREACH, AND  
EDUCATION



EMERGENCY  
MEDICAL SERVICES



VISION ZERO  
FLORIDA



Each emphasis area team has selected one or two goal leaders who will lead the implementation of key strategies to eliminate traffic related fatalities and serious injuries to people walking and biking. The goals and objectives outlined in the last section of this plan will be the basis for the specific tasks and strategies that each emphasis area team will identify to move toward zero transportation fatalities and serious injuries for people walking and biking.

## PBSSP PURPOSE AND CONTENT

This plan guides the implementation of safety initiatives for people walking and biking over the next five years. All actions related to this plan and Florida's Pedestrian and Bicycle Safety Coalition have the same goal: ZERO transportation fatalities and serious injuries to people walking and biking. This PBSSP supports Target Zero, a Florida Department of Transportation (FDOT) initiative that plans infrastructure and behavior-related programs and projects to help eliminate traffic fatalities and serious injuries as part of the broader national and international Vision Zero traffic safety initiative.

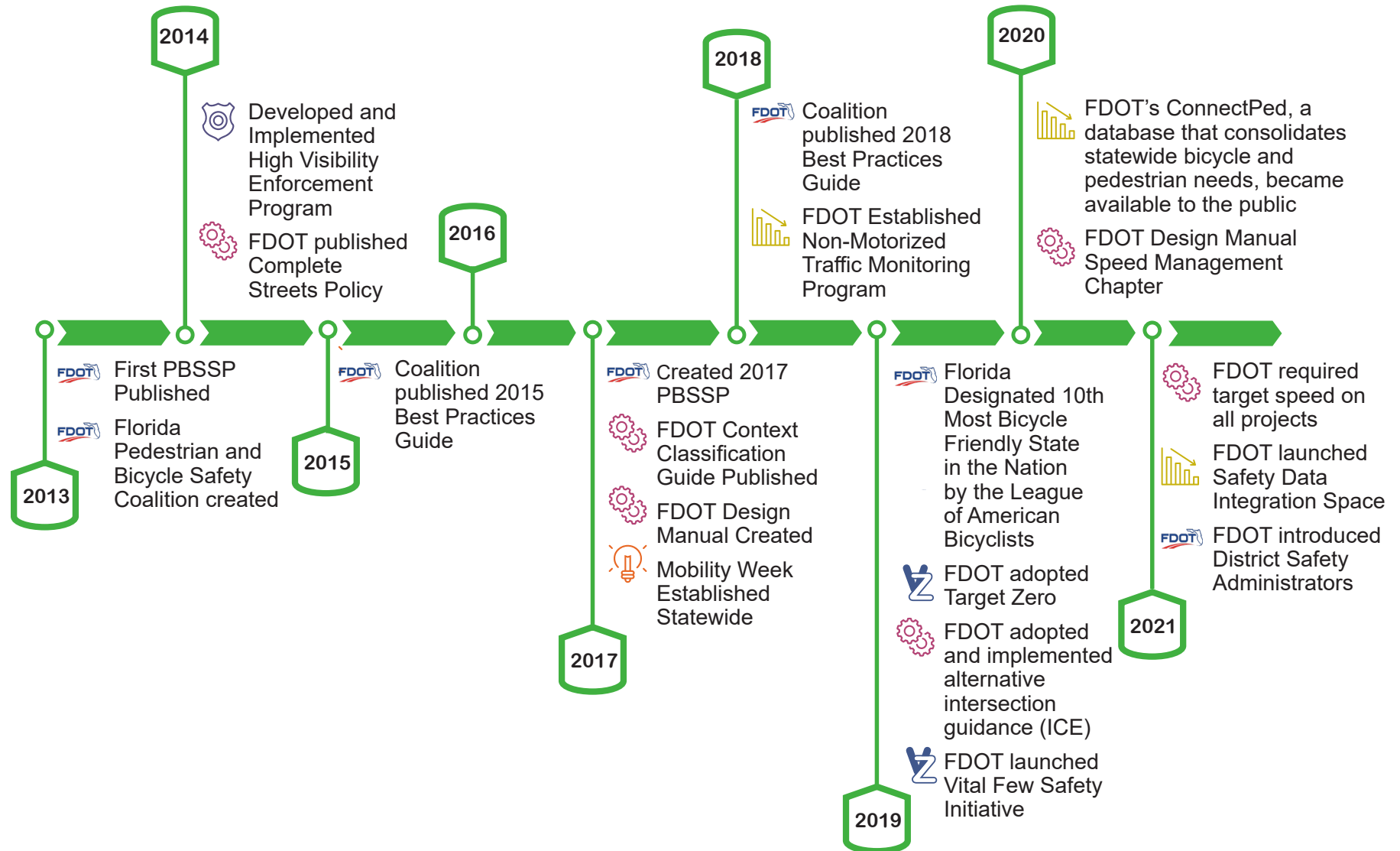
The goals and objectives within the PBSSP provide concrete examples of how prioritized funding within each emphasis area can increase the safety of people walking and biking.

The PBSSP outlines fundamentals of walking and biking, introduces emerging approaches in transportation safety, and discusses trends in safety for people walking and biking. Finally, the plan describes the strategic components for each emphasis area, including key lessons learned, goals, objectives, and key partnerships.





# ACCOMPLISHMENTS SINCE THE FIRST PBSSP



# RELATIONSHIP OF PBSSP TO OTHER PLANS AND INITIATIVES

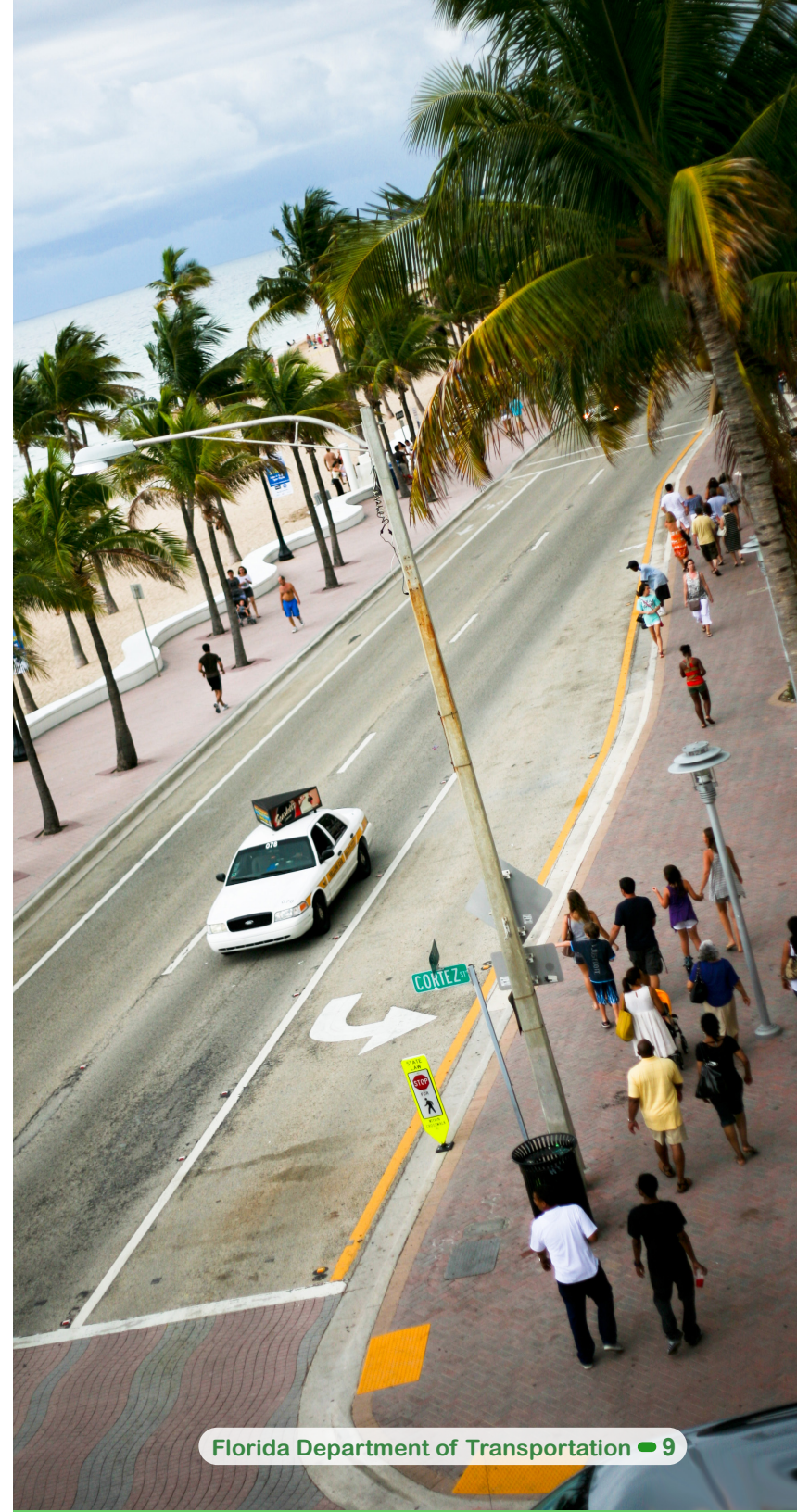
The PBSSP is a five-year comprehensive plan to reduce traffic-related pedestrian and bicyclist fatalities through goal-oriented decision-making, data-driven investments, and strategic resource allocation. The PBSSP was developed to address the Pedestrians and Bicyclists emphasis area of Florida's Strategic Highway Safety Plan (SHSP), which supports the Florida Transportation Plan (FTP) Vision and Policy elements via 13 emphasis areas. The PBSSP supports strategic plans targeting other SHSP emphasis areas by promoting practices that minimize conflicts with

other road users, developing cross-cutting safety objectives, and planning for the most vulnerable road users. This includes the Impaired Driving Strategic Plan, Motorcycle Safety Strategic Plan, the Aging Road User Strategic Plan, and the Teen Driver Strategic Plan.

In addition to aligning with these plans, the PBSSP also supports the goals and targets set by the FDOT Vital Few Safety Initiative, the Highway Safety Improvement Plan (HSIP), and the Highway Safety Plan (HSP). Additionally, the PBSSP supports other agency plans such as the Florida Department

of Health's State Health Improvement Plan (SHIP), Emergency Medical Services (EMS) State Plan, Department of Elder Affairs State Plan on Aging, local vision zero plans, and state and local enforcement plans.

The goals of the PBSSP dovetail with many of Florida's statewide initiatives, including Florida's 360° approach to Complete Streets, context-based design, Safe Strides 2 Zero, Safe Routes to School, and Healthiest Weight Florida, among others.





# FUNDAMENTAL PRINCIPLES FOR PEOPLE WALKING AND BIKING

Every road user has the expectation and right to arrive at their destination safely regardless of their mode of travel. This basic need is often met for people driving, but those who travel by bicycle, on foot, or using a mobility device often experience conditions that make them feel uneasy or uncomfortable. These conditions for even a small portion of a trip can cause a traveler to avoid these active transportation modes.

This work focuses on crashes that report fatal or serious injuries to non-motorists.

The term non-motorist may include people categorized as pedestrians and bicyclists on crash reports, as well as people in wheelchairs, operating scooters, and those on a skateboard, roller skates, or in-line skates. The crash data within this report is representative only of pedestrians and bicyclists within the larger non-motorist category. For simplicity, we refer to all such travelers as “people walking and biking.” Walking is an inclusive term that includes both ambulatory and non-ambulatory modes

and encompasses all forms of mobility devices that allow users to travel at human speeds.

The following section outlines five fundamentals of walking and biking that must be considered to further Florida’s mission to ensure the safety, mobility, and accessibility of all road users regardless of the mode of transportation, age, ability, or socioeconomic status. Everyone is a pedestrian at some point in their day, and these fundamentals are important to the safety of all road users.

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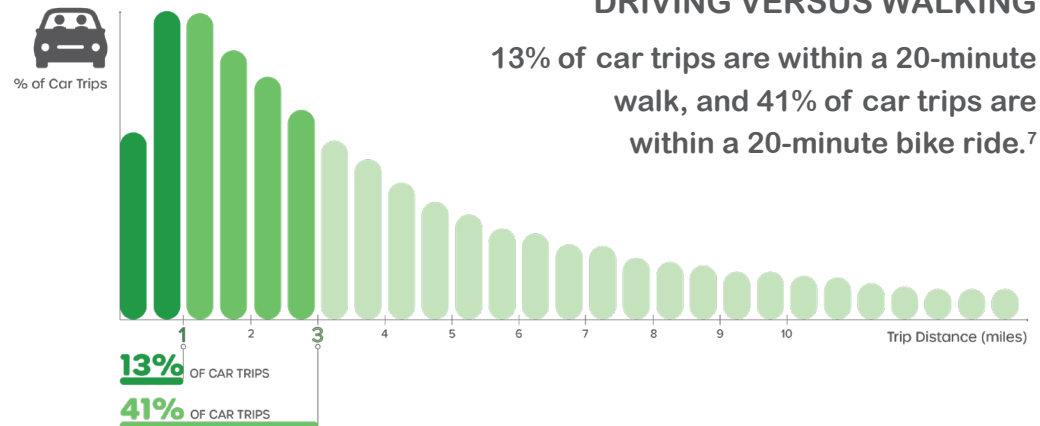
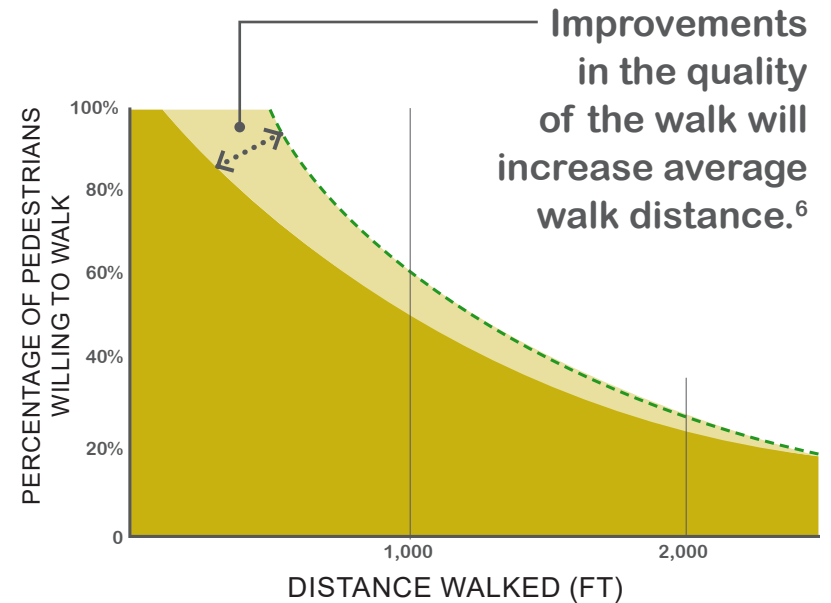
Everyone is a pedestrian at some point in their day, and these fundamentals are important to the safety of all road users.



# TRIP DISTANCE

Nationally, 13% of car trips are within a 20-minute walk, and 41% of car trips are within a 20-minute bike ride.<sup>1</sup> However, there is no universal definition of a “walkable” or “bikeable” distance. The distance that people are willing to travel by bicycle or on foot depends on several factors:

Available routes	Multiple route options make a trip more attractive to people walking or biking.
Elevation gain	People are more willing to walk or bike a longer, flat route than a shorter, steep route.
Age and ability	The distance students are willing to walk to school varies and typically increases with age. <sup>2</sup> What may appear to be small obstacles can be un navigable for those who require mobility assistance.
Gender and demographics	Women and people of color tend to be more concerned about personal safety while biking. <sup>3</sup> Women are more likely than men to avoid walking because of fear for their safety. <sup>4</sup>
Cultural and community norms	In areas with greater access to parking and a strong driving culture, people tend to overestimate the time it would take to walk or bike to destinations. <sup>5</sup>
Aesthetics and comfort	Walking or biking trips can feel shorter or more accessible when the route is aesthetically pleasing, engaging, and comfortable to walk or bike.



1 National Household Travel Survey (2017), downloaded from <http://nhts.ornl.gov/> on March 23, 2018

2 Chillón, P. et al. (2015). A longitudinal study of the distance that young people walk to school. *Health & Place*, 31, 133-137. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4315806/>

3 Corona Insights, PeopleforBikes. (2018). *U.S. Bicycling Participation Study: Report of findings from the 2018 survey*. <https://www.peopleforbikes.org/reports/us-bicycling-participation-report>

4 Sethi, S., Velez-Duque, J. (2021). *Walk with women: Gendered perceptions of safety in urban spaces*. Leading Cities, Boston. <https://static-media.fluxio.cloud/leadingcities/CjGjwG7p.pdf>

5 Sims, D. et al. (2018). Predicting discordance between perceived and estimated walk and bike times among university faculty, staff, and students. *Transportmetrica A: Transport Science*, 14(8), 691-705. <https://doi.org/10.1080/23249935.2018.1427814>

6 Untermann, R. K. (1984). *Accommodating the Pedestrian: Adapting Towns and Neighbourhoods for Walking and Bicycling*. <https://trid.trb.org/view/273263>



# TRIP PURPOSE

Biking and walking are popular recreational activities in Florida, but they are also important modes of transportation for other trips. In a survey of schools across the state, 18.9% of children reported that they walk or bike to school.<sup>8</sup> Workers, on the other hand, are more likely to commute by other modes as only 2.2% walk or bike to work.<sup>9</sup> However, while 2.2% may seem small compared to the almost 80% who drive alone, this amounts to over 200,000 people walking or biking for their work commute every day.

**While travel to work may be influenced by personal preference it is important to remember that for those who lack access to a personal vehicle (approximately 6% of Florida's population), essential trips - such as trips to the grocery store, pharmacy, or doctor - must be completed in part or completely on foot or by bike.**

In addition, people walking and biking must consider elements that people driving may take for granted, such as the ability to carry items, the potential for inclement weather, bicycle parking at the destination, or a desire to look presentable upon reaching their destination. Whatever the purpose, walking and biking trips are integral to serving the mobility needs of all who live, work, and visit Florida.

Throughout this plan, action items are identified by the relevant emphasis area icons and objectives. An example is shown below:

See  Objective #

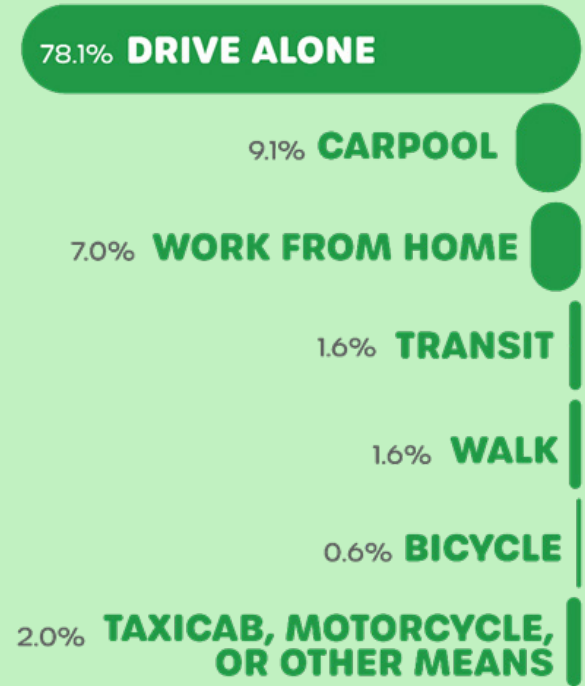
7 National Household Travel Survey (2017), downloaded from <http://nhts.ornl.gov/> on March 23, 2018 Nationwide trips on private vehicles (car, SUV, van, and pickup truck). No consideration of trip chaining effects. Trip length binned at half-mile intervals. Histogram frequencies weighted by the sample weights. Walk speed assumed to be approximately 3.1 mph. Easy bike ride speed assumed to be approximately 9.0 mph.

8 Steiner, R. (2020). *Implementing Safe Routes to School Programs in Rural Florida Communities*. Center for Health and the Built Environment, University of Florida.


9 Means of Transportation to Work (2019) via Florida Department of Transportation. (2021). *Florida Strategic Highway Safety Plan*. [https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/safety/shsp-2021/shsp\\_mar21.pdf?sfvrsn=5452dad\\_0](https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/safety/shsp-2021/shsp_mar21.pdf?sfvrsn=5452dad_0)

10 Ibid.

# MEANS OF TRANSPORTATION TO WORK IN FLORIDA<sup>10</sup>



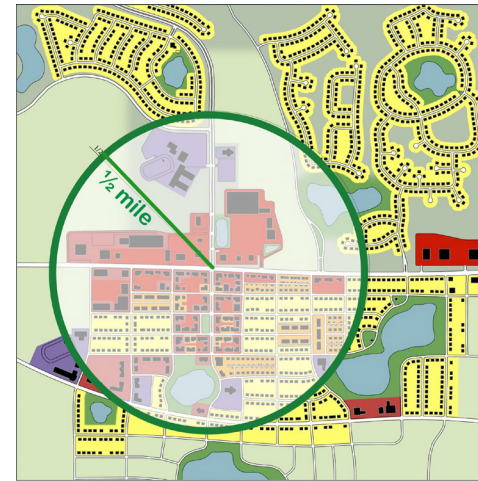
OVER  
**200,000**  
people walk or  
bike for their  
work commute  
every day





# NETWORK CONNECTIVITY AND LAND USE

While roadway networks are connected by default, walking and biking facilities are often disconnected or sparse, especially in rural contexts. Even when sidewalks or bicycle facilities are available, their presence does not always guarantee safety and comfort. A truly connected network provides equitable access to safe and comfortable routes comprised of varying facilities that appeal to people of all ages and abilities.<sup>11</sup>

The network for people walking and biking is inextricably linked to land use. For example, compact and connected blocks provide more route options than land uses that are dispersed and located on busier arterials.



A dense block network with diverse land uses offers shorter, lower speed, and more direct connections between destinations (lower half), while a more dispersed network results in circuitous and long connections (upper half).

See  Objective 3    See  Objectives 2 and 3

# RELATIONSHIP TO OTHER TRANSPORTATION MODES

All road users are pedestrians at some point in their trip, even if it is just a short walk from the parking lot or bus stop to the office entrance. In 2018, Floridians made 231 million transit passenger trips. Many of those trips served as connections to short walks or bike rides.<sup>12</sup> Transit trips are also commonly paired with micromobility trips on shared bikes or e-scooters, which have increased 31% from 2015 to 2019 across the state.<sup>13</sup>

See  Objective 8



From 2015 to 2019  
the number of  
bikeshare stations and  
e-scooter operations  
in Florida increased **31%**.<sup>14</sup>

<sup>11</sup> U.S. Department of Transportation: Federal Highway Administration. (December 2016). *Small town and Rural Multimodal Networks*. [https://www.fhwa.dot.gov/environment/bicycle\\_pedestrian/publications/small\\_towns/](https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/small_towns/)

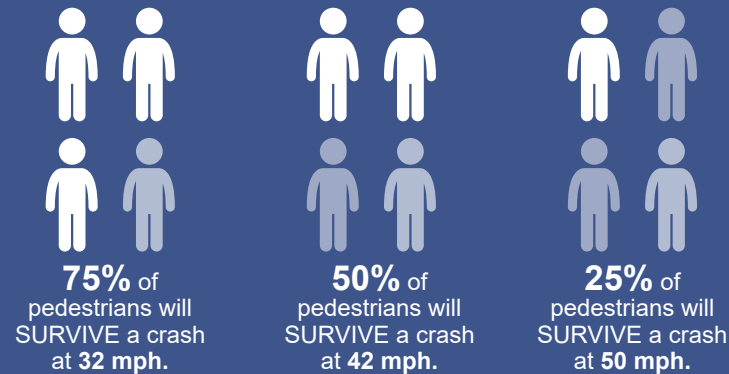
<sup>12</sup> Florida Department of Transportation Forecasting and Trends Office. (2019). *The FDOT Source Book*. [https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/planning/fto/mobility/2020sourcebook.pdf?sfvrsn=4f9734a5\\_4](https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/planning/fto/mobility/2020sourcebook.pdf?sfvrsn=4f9734a5_4)

<sup>13</sup> Ibid.

<sup>14</sup> Ibid.



Higher speeds decrease the chance that a pedestrian will survive a crash.<sup>15</sup>



Higher speeds also affect a driver's ability to perceive, focus on, and react to things in their line of vision.



## RELATIONSHIP TO SAFETY

Vehicle speeds and mode separation are two important factors that affect the safety of people walking and biking. **Only 50% of pedestrians are expected to survive a crash with a vehicle traveling at 42 mph.**<sup>16</sup> This is especially important in Florida, where 91% of state roadways are posted at speeds of 40 mph or above. When people walking and biking are lucky enough to survive high-speed crashes, they are typically severely injured in some way. In 2019, 27% of pedestrian fatalities and 40% of bicyclist fatalities were related to traumatic brain

injuries.<sup>17</sup> The most common injuries among pedestrians and bicyclists involved in motor vehicle crashes in Florida include injuries to the upper and lower extremities, head, face, neck, and traumatic brain injuries.

Higher speeds also affect a driver's ability to perceive, focus on, and react to things in their line of vision. This, combined with longer stopping sight distances and increased difficulty judging approaching vehicle speeds, can make wide crossings that much more challenging for people walking and biking.<sup>18</sup>

Many people prefer walking and biking facilities that provide physical separation from motor vehicles. **In a national survey, 43% of respondents said they would be more likely to ride bikes if that separation existed.**<sup>19</sup> Separated facilities are more comfortable, help minimize conflicts among road users, and reduce crash severity and frequency. Because of these benefits, the FHWA and the FDOT Design Manual recommend separation for bicycle facilities on roadways with posted speeds above 35 mph and design speeds above 30 mph,

respectively.<sup>20,21</sup> People also tend to feel safer when other people walk and bike with them, also known as “safety in numbers.” The presence of more people walking and biking can also help people driving become accustomed to safely interacting with them and to slow down in their presence.

- See  Objectives 1 and 9
- See  Objective 7
- See  Objectives 3 and 4

<sup>15</sup> AAA Foundation for Traffic Safety. (2011). Impact Speed and a Pedestrian's Risk of Severe Injury or Death. <https://aaafoundation.org/wp-content/uploads/2018/02/2011PedestrianRiskVsSpeedReport.pdf>

<sup>16</sup> Ibid.

<sup>17</sup> Florida Department of Health, Division of Community Health Promotion, Public Health Research Unit. (2020). *Statewide Economic Impact*.

<sup>18</sup> Papić, Z. et al. (2020). Underestimation tendencies of vehicle speed by pedestrians when crossing unmarked roadway. *Accident Analysis & Prevention*, 143. <https://doi.org/10.1016/j.aap.2020.105586>

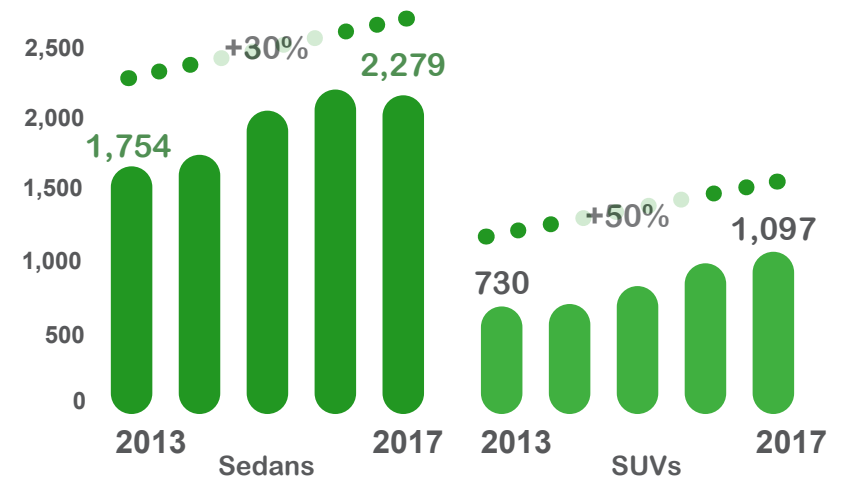
<sup>19</sup> Corona Insights, PeopleforBikes. (2018). *U.S. Bicycling Participation Study: Report of findings from the 2018 survey*. <https://www.peopleforbikes.org/reports/us-bicycling-participation-report>

<sup>20</sup> U.S. Department of Transportation, Federal Highway Administration. (2019). *Bikeway Selection Guide*. [https://safety.fhwa.dot.gov/ped\\_bike/tools\\_solve/docs/fhwas18077.pdf](https://safety.fhwa.dot.gov/ped_bike/tools_solve/docs/fhwas18077.pdf)

<sup>21</sup> Florida Department of Transportation. (2021). *FDOT Design Manual*, Section 223 Bicycle Facilities. <https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/roadway/fdm/2021/2021fdm223bikes.pdf?>

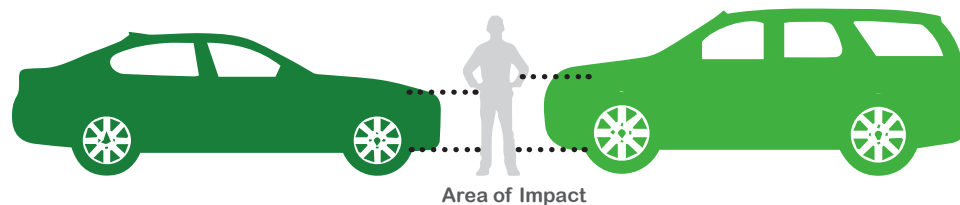
The growing size of passenger vehicles on our roadways has also contributed to the increasing severity of crashes over the past decade. In 2010, three-quarters of cars sold were sedans. Today, several auto manufacturers have phased out many of their sedan models. Instead, almost three-quarters of cars sold are SUVs or pickups.<sup>22</sup> Today's vehicles are heavier and have a higher center of gravity, two factors that can significantly affect the outcomes of an impact with a person walking or biking. In a collision, a sedan is more likely to impact a pedestrian in the legs, often leading to injury, while an SUV or pickup will hit a pedestrian in the torso, which is more likely to lead to death.

## PEDESTRIAN FATALITIES IN SINGLE-VEHICLE CRASHES, 2013 TO 2017<sup>19</sup>



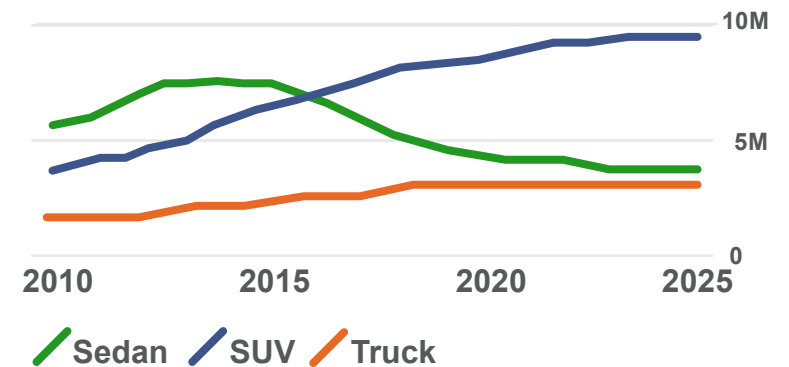
### HIGHER IMPACTS

Taller than cars, SUVs strike pedestrians higher on the body, increasing the likelihood of severe injury or even death.<sup>20</sup>



### THE RISE OF SUVs

Sales of larger vehicles surpassed sedans over the last decade.<sup>21</sup>



<sup>22</sup> Schmitt, Angie. Interview with Meghna Chakrabarti. (2021). *On Point*. <https://www.wbur.org/onpoint/2021/08/03/in-right-of-way-angie-schmitt-explains-the-rise-of-us-pedestrian-deaths>  
<sup>23</sup> Governors Highway Safety Association; Gelles, Karl. 2019. *Pedestrian deaths hit 28-year high, suggesting SUV boom raises safety risks*. USA Today. <https://www.usatoday.com/story/money/cars/2019/02/28/pedestrian-safety-crisis-deaths-ghsa/2993321002/>  
<sup>24</sup> Lawrence, Eric D. et al. (2018). *Death on foot: America's love of SUVs is killing pedestrians*. <https://www.freep.com/story/money/cars/2018/06/28/suvs-killing-americas-pedestrians/646139002/>  
<sup>25</sup> LMC Automotive via Naughton, Keith et al. (2019). *The Next American Car Recession Has Already Started*. <https://www.bloomberg.com/news/articles/2019-01-13/the-next-american-car-recession-has-already-started>



# EMERGING SAFETY APPROACHES

## SAFE SYSTEM

The Safe System approach aims to eliminate fatal and serious injuries for all road users. Through a holistic view of the road system, it first anticipates human mistakes and second keeps impact energy on the human body at tolerable levels. Therefore, a safe system approach emphasizes that people walking and biking are at a naturally higher risk of serious injury and death than a person traveling in a motor vehicle.<sup>26</sup>

FHWA and NHTSA have updated the Speed Management Program Plan and Automated Speed Enforcement to reflect current and promising new strategies that address speed-related motor vehicle crashes and injuries.<sup>27</sup>

26 Goughnour et al. (2021). Primer on Safe System Approach for Pedestrians and Bicyclists. [https://safety.fhwa.dot.gov/ped\\_bike/tools/solve/docs/fhwasa21065.pdf](https://safety.fhwa.dot.gov/ped_bike/tools/solve/docs/fhwasa21065.pdf)

27 US Department of Transportation. (2020). *USDOT Pedestrian Safety Action Plan*. [https://highways.dot.gov/sites/fhwa.dot.gov/files/2020-11/FHWA\\_PedSafety\\_ActionPlan\\_Nov2020.pdf](https://highways.dot.gov/sites/fhwa.dot.gov/files/2020-11/FHWA_PedSafety_ActionPlan_Nov2020.pdf)

### HOW THE SAFE SYSTEM APPROACH IMPROVES SAFETY FOR PEOPLE WALKING AND BIKING



#### SAFE ROAD USERS

The Safe System approach recognizes safety for all road users and specifically considers those most vulnerable to fatal and serious injury crashes, such as people walking and biking.



#### SAFE VEHICLES

Motor vehicle innovation and technology have made collisions more survivable for those traveling inside of a motor vehicle. However, the same technological progress has not yet advanced safety for those involved in crashes with the outside of a vehicle.



#### SAFE SPEEDS

Reducing speeds decreases severe injuries and deaths for people walking and biking.




#### SAFE ROADS

Since people walking and biking are more vulnerable to serious injuries and fatalities, it is imperative to separate them from motor vehicles, which travel at higher speeds and have a heavier mass.




#### POST-CRASH CARE

Post-crash care is vital to the survival of a person walking or biking since they are more likely to be injured or killed in a crash relative to the motorist.

See  Objective 1

See  Objective 3

See  Objective 1

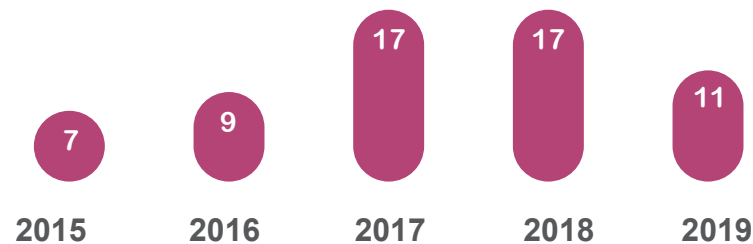
# INNOVATIONS IN TRANSPORTATION AND SAFETY

Modern vehicles are increasingly equipped with technology to improve occupant safety and communicate with devices in the surrounding built environment. In addition to vehicle-to-vehicle (V2V) communication systems, vehicle-to-pedestrian (V2P) systems are being tested between vehicles and individuals with personal mobile devices.<sup>28</sup> Communications for V2P are equipped to sense the surrounding environment and communicate that information to other infrastructure, vehicles, and to personal mobile devices.

Additionally, NHTSA is currently conducting pedestrian automatic emergency braking (P-AEB) test procedures to analyze daytime and nighttime P-AEB performance. A P-AEB system combines information from the vehicle's forward sensors to detect a pedestrian in the vehicle's path and automatically brake to avoid a crash.<sup>29</sup>

See  Objective 11    See  Objective 2

## FLORIDA CITIES WITH MICROMOBILITY PROGRAMS<sup>29</sup>



<sup>28</sup> US Department of Transportation. (2020). USDOT Pedestrian Safety Action Plan. [https://highways.dot.gov/sites/fwa.dot.gov/files/2020-11/FHWA\\_PedSafety\\_ActionPlan\\_Nov2020.pdf](https://highways.dot.gov/sites/fwa.dot.gov/files/2020-11/FHWA_PedSafety_ActionPlan_Nov2020.pdf)

<sup>29</sup> FDOT Forecasting and Trends Office. (2021). The FDOT Source Book – 2020. <https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/planning/fto/mobility/2020sourcebook.pdf>

<sup>30</sup> Florida Department of Transportation. (2020). *2045 Florida Transportation Plan: Vision Element*.

# EMERGING MODES

Since the publication of the last PBSSP, shared micromobility systems have emerged as a new offering for people walking and biking. Micromobility has been included as an evolving emphasis area within the SHSP. Micromobility vehicles are generally lightweight, small, and operate at speeds under 20 mph by both electric and human power. These include electric scooters (e-scooters), electric bicycles (e-bikes), or bicycles and are often offered as short-term rentals from a shared fleet operated by a local government or private company. Micromobility provides more travel options for short trips in denser urban areas and often complements walking and biking trips. People traveling by micromobility vehicles often travel on sidewalks or on bicycle facilities. In general, micromobility users are subject to the same fundamental principles as people walking and biking, and they are among the more vulnerable road users.

Micromobility services in Florida have fluctuated in recent years, with the number of operations decreasing between 2018 and 2019. The initial accelerated growth of micromobility has eclipsed the capacity of many local governments to modernize curb and street design as well as development codes.<sup>31</sup> Dockless programs, in particular, have experienced pushback due to the challenge of encouraging orderly and safe vehicle parking. Additional safety concerns relate to riding behavior since many micromobility users travel in mixed traffic and without helmets, making users and people walking nearby susceptible to injuries. Advances in vehicle tracking and positioning, improved biking and walking infrastructure, and educational campaigns have helped mitigate these issues and create safe and successful micromobility operations. Several cities, including Tallahassee and Miami, have had success implementing pilot micromobility programs, during which local authorities can assess outcomes and respond to challenges before expanding to longer-term programs.

<sup>31</sup> FDOT. (2021). Florida Strategic Highway Safety Plan.



# SAFETY TRENDS AND PATTERNS

## DATA AND METHODS

Crash circumstances, who is involved, and where they occur can reveal important safety trends and patterns. By examining crash data, we can more effectively target safety efforts to address the most common and most harmful crash trends. Efforts to address the safety trends presented below will have real implications for anyone who moves through our state.

Unless otherwise specified, the following trends are representative of crashes during the consecutive five-year period of 2016-2020, resulting in fatalities or serious injuries to people biking or walking.<sup>32</sup> A crash is classified as fatal if it results in the death of a person walking or biking within 30 days of the crash. A serious injury is an incapacitating and typically life-altering injury that usually requires hospitalization and transport to a medical facility.

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**REMEMBER  
THAT BEHIND  
EVERY CRASH  
STATISTIC IS A  
REAL PERSON.**



<sup>32</sup> At the time of writing, 2020 data is preliminary.

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For more information about lives lost, visit [DrivingDownHeartache.org](https://DrivingDownHeartache.org)

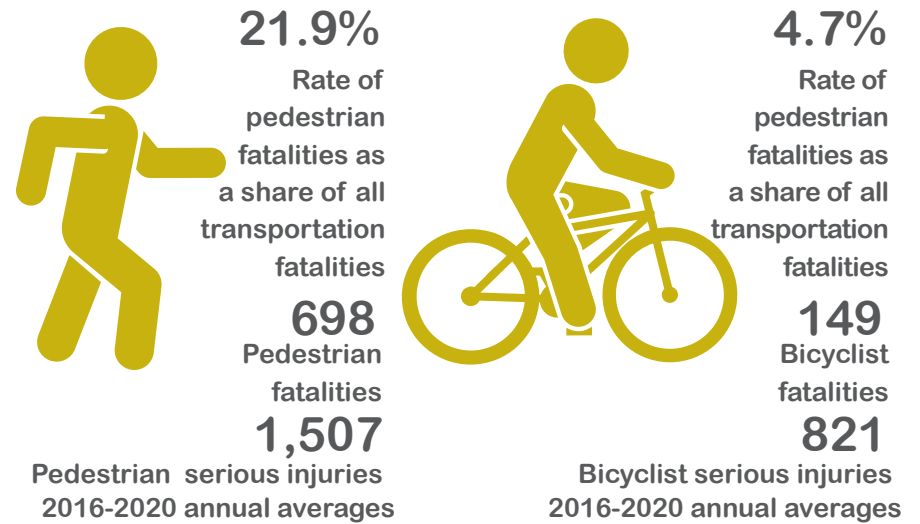
# SYSTEMWIDE

Serious injuries to people walking and biking have remained consistent and decreased slightly from 2016–2020.<sup>33</sup> During this period, serious injuries to both people walking and biking have declined by 12%, amounting to 298 fewer life-altering injuries each year. It's important to note that the variation in crashes in 2020 may have been affected by the COVID-19 pandemic and the related decrease in travel.

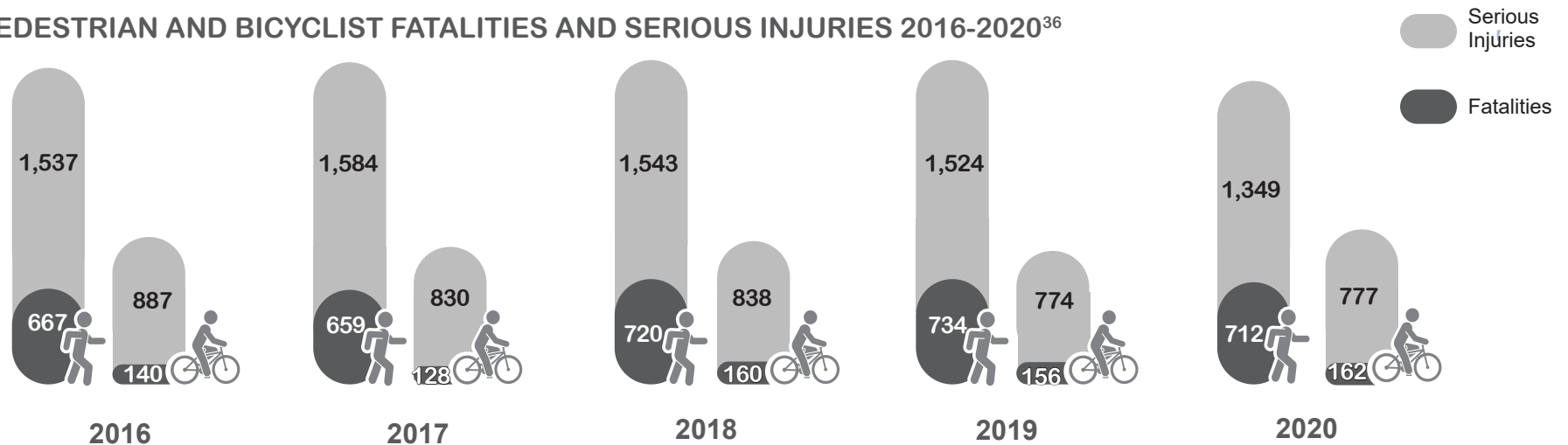
Both pedestrian and bicycle fatalities have increased since the release of the last PBSSP, with the most significant jump occurring between 2017 and

2018, when pedestrian fatalities increased by 9% and bicyclist fatalities increased by 25%. In 2018, Florida had the most bicycle fatalities of any US state.<sup>34</sup>

Between 2016 and 2020, 90% of all pedestrian and bicyclist fatalities and serious injuries on state roadways occurred in just 25 of Florida's 67 counties.<sup>35</sup> These 25 counties have been prioritized in an effort to allocate limited resources to areas with the highest representation of crashes resulting in death or a life-altering injury.



## PEDESTRIAN AND BICYCLIST FATALITIES AND SERIOUS INJURIES 2016-2020<sup>36</sup>



<sup>33</sup> At the time of writing, 2020 serious injury crash data was not available from FLHSMV and was supplemented with data from Signal 4 Analytics.

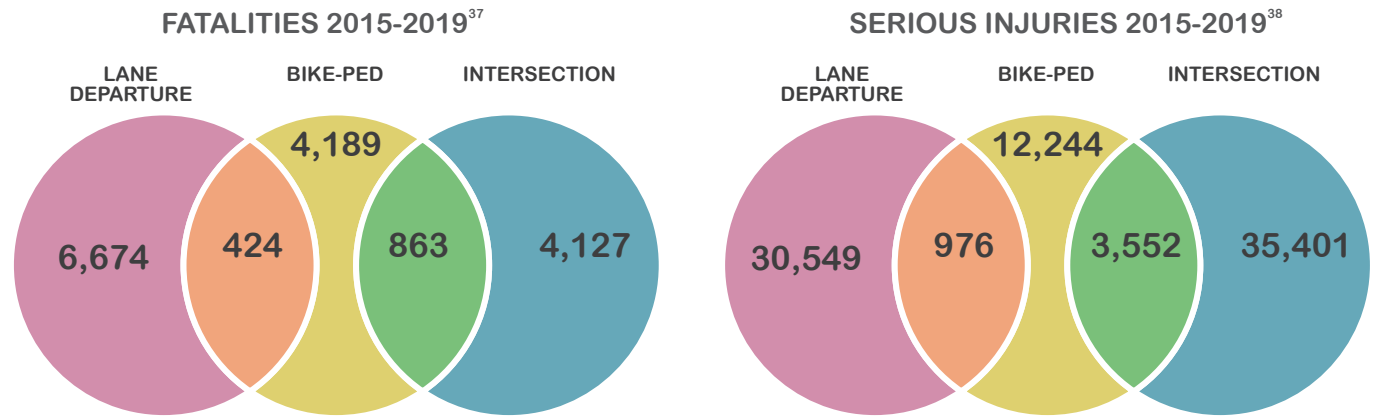
<sup>34</sup> Florida Department of Transportation. (2021). *Strategic Highway Safety Plan*.

<sup>35</sup> FLHSMV, Signal 4 Analytics, Safety Data Integration Space (2016-2020). Includes crashes on all public roadways.

<sup>36</sup> FLHSMV (Fatalities 2016-2020, Serious Injuries 2016-2019), Signal 4 Analytics (Serious Injuries 2020). Includes crashes on all public roadways.



The mission of the FDOT Vital Few Safety initiative is to improve safety, enhance mobility, and inspire innovation by focusing on Florida's most prevalent safety issues. There are significant overlaps between the three Vital Few Safety focus areas. Between 2015-2019, 31% of bicycle and pedestrian fatalities and 37% of bicycle and pedestrian serious injuries resulted from lane departure or intersection crashes.<sup>39</sup>



<sup>37</sup> FLHSMV (2015-2019). Includes crashes on all public roadways.

<sup>38</sup> Ibid.

<sup>39</sup> Ibid.

Between 2016 and 2020, fatal and serious injuries to people walking and biking in Florida were estimated to have a societal cost over

**55 BILLION DOLLARS.**

Not only do each of these crashes alter the course of many lives, but they also create significant economic impacts in the form of medical expenses, property damage, lost productivity, and other societal costs. Between 2016 and 2020, fatal and serious injuries to people walking and biking in Florida are estimated

to have a societal cost over 55 billion dollars.<sup>40</sup> Each person seriously or fatally injured in a crash represents a valuable member of our communities, and their tragic deaths and life-altering injuries irreversibly impact their roles as parents, volunteers, and professionals.

The median hospital charge for pedestrians and bicyclists

admitted to a Florida hospital for the treatment of injuries sustained during a crash is \$127,160 and \$88,290, respectively. Of those pedestrians and bicyclists who incur medical expenses as a result of a crash, one-quarter must self-pay or do not have enough health insurance coverage.<sup>41</sup>

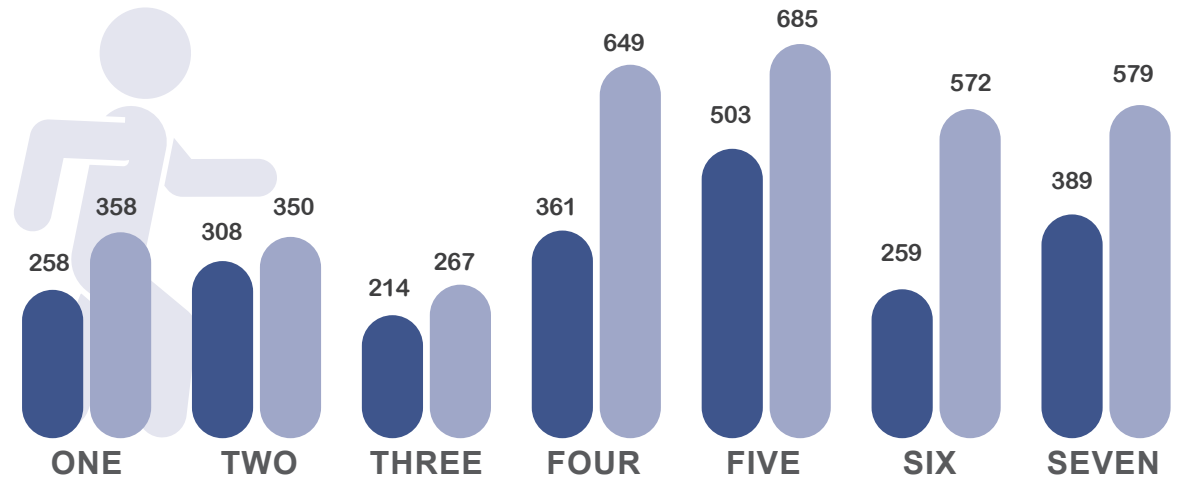
<sup>40</sup> Florida Department of Transportation. (2021). *FDOT Design Manual*, Section 122 Design Exceptions and Design Variations, Historical Crash Method (HCM). <https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/roadway/fdm/2021/2021fdm122varexcept.pdf?>

<sup>41</sup> Florida Department of Health, Division of Community Health Promotion Public Health Research Unit. (2020). *Statewide Economic Impact*

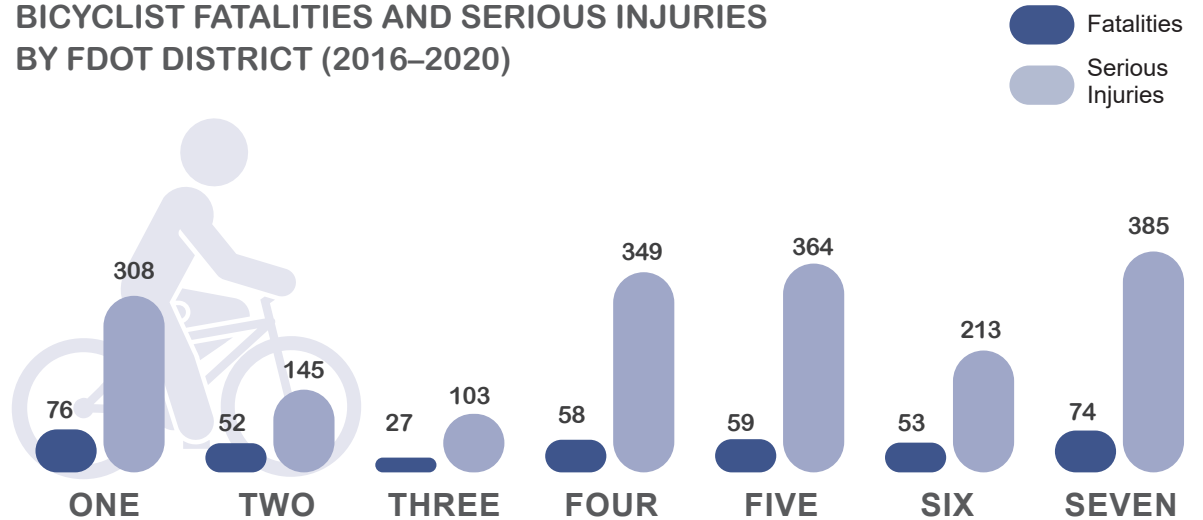
# DISTRICTWIDE

Between 2016-2020, FDOT Districts Four, Five, and Seven reported the highest number of fatal or serious injury bicycle and pedestrian crashes on state roadways.<sup>42</sup> These districts are home to several of the largest urban areas in the state, so higher walking and biking activity is expected; however, additional factors such as land use, speed, and the presence or absence of dedicated bicycle or pedestrian facilities can contribute to higher crash numbers.

## PEDESTRIAN FATALITIES AND SERIOUS INJURIES BY FDOT DISTRICT (2016 – 2020)



## BICYCLIST FATALITIES AND SERIOUS INJURIES BY FDOT DISTRICT (2016–2020)



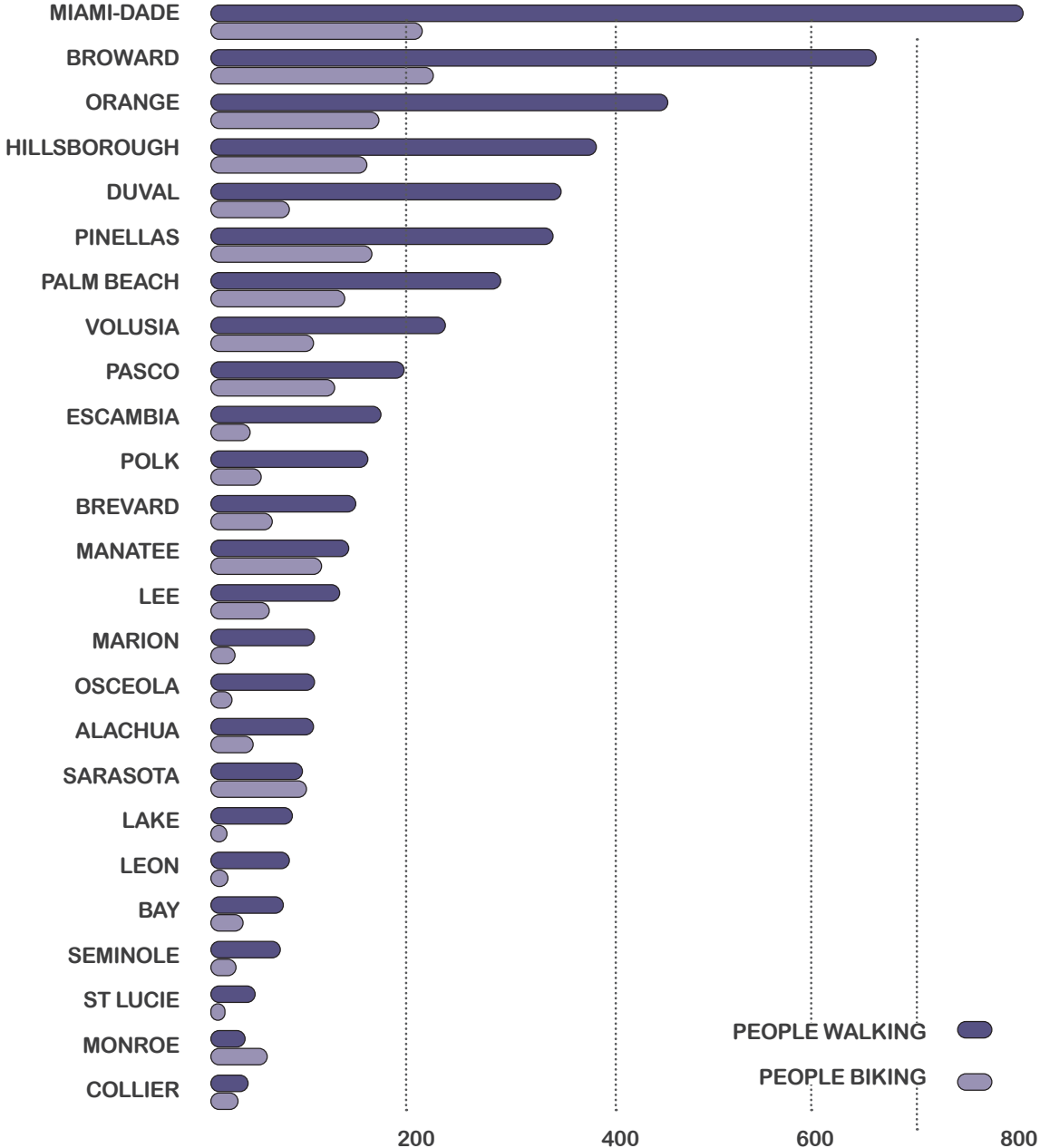
<sup>42</sup> Safety Data Integration Space (2016-2020). Includes crashes on the state highway system.



# LOCAL TRENDS

Similarly, crashes are not distributed evenly across counties, Metropolitan Planning Organizations (MPOs), or Transportation Planning Organizations (TPOs). These differences have implications for resource distribution, including emergency services, High Visibility Enforcement, funding for safety projects, and health care. FDOT has prioritized the 25 counties with the highest numbers of fatal or serious injuries to people walking and biking by directing additional resources and safety efforts to these areas. Of the 25 priority counties, Miami-Dade, Broward, and Orange County lead the state in fatalities and serious injuries for both people walking and biking.

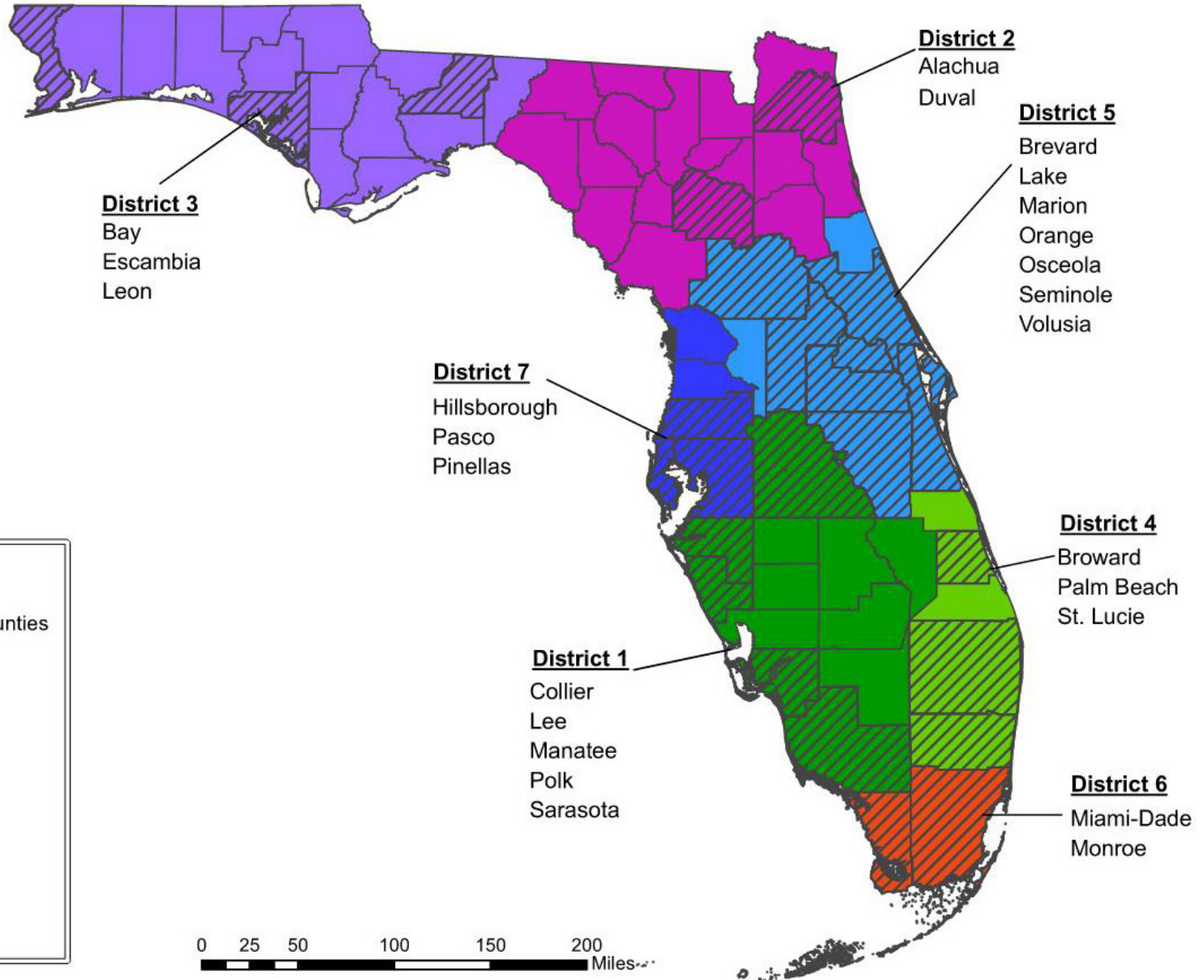
## PEDESTRIAN AND BICYCLIST FATALITIES AND SERIOUS INJURIES BY 25 PRIORITY COUNTIES (2016-2020)<sup>40</sup>



<sup>43</sup> Safety Data Integration Space (2016-2020). Includes crashes on the state highway system.



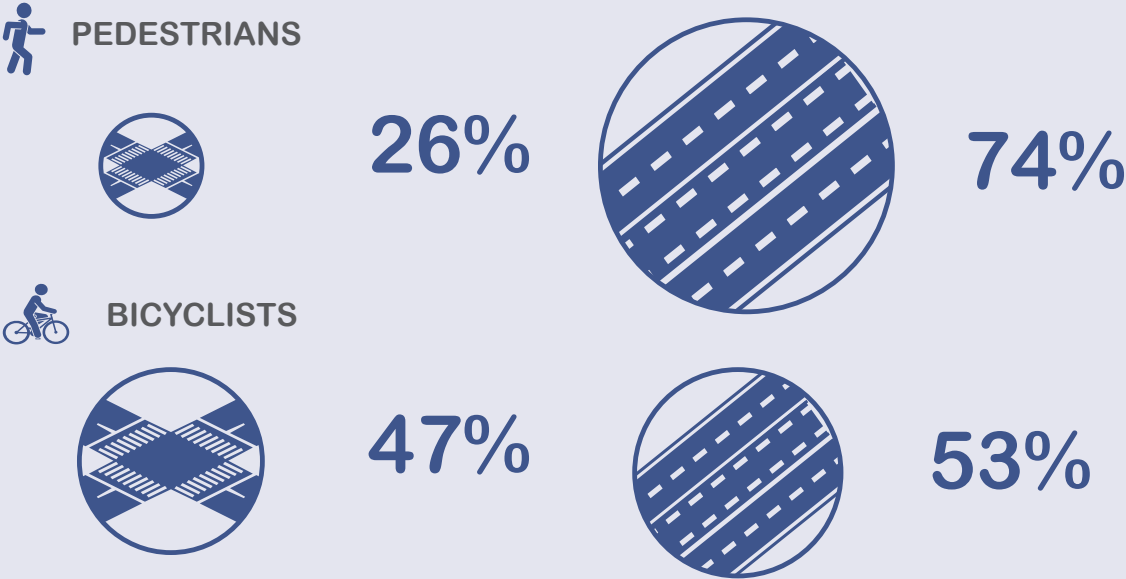
# FLORIDA'S 25 PRIORITY COUNTIES FOR PEDESTRIAN AND BICYCLE CRASHES



# DISPELLING CRASH MYTHS

## MYTH #1: CRASHES INVOLVING PEOPLE WALKING AND BIKING USUALLY OCCUR AT INTERSECTIONS.

**Fact:** The majority of pedestrian crashes are reported to occur away from intersections. In contrast, nearly half of bicycle crashes are reported to occur at intersections, where conflicts between turning vehicles and people biking are more common.<sup>44</sup>

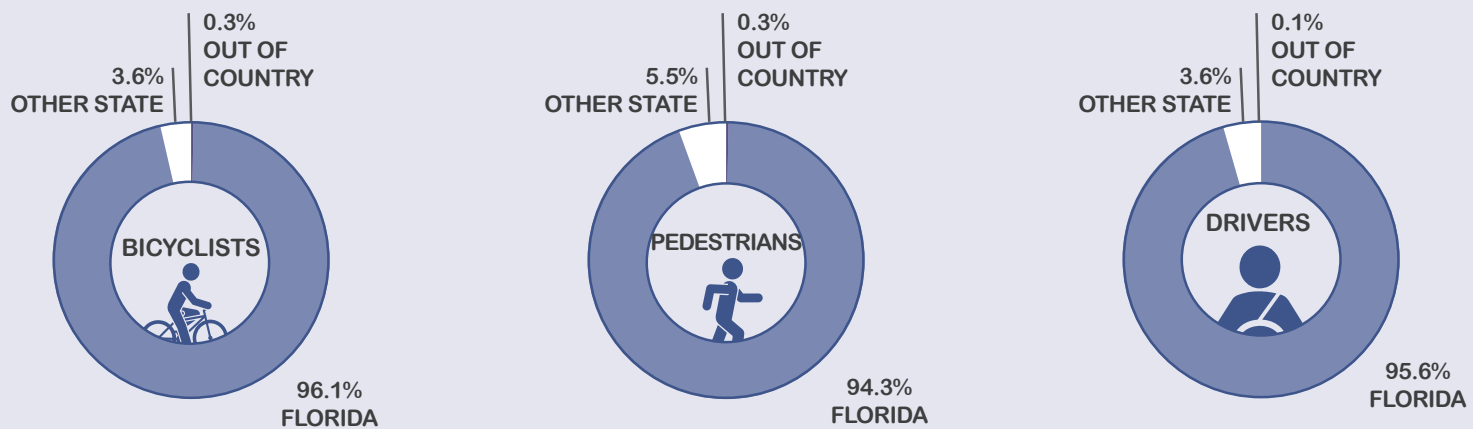


<sup>44</sup> CAR System (2016-2020). Includes crashes on all public roadways.



## MYTH #2: SEASONAL TOURISTS ARE RESPONSIBLE FOR MOST OF FLORIDA'S CRASHES.

**Fact:** While crashes do tend to increase during the winter months, **95% of bicyclists, pedestrians, and drivers in fatal or serious injury bicycle and pedestrian crashes reside in Florida.** <sup>45</sup> In 2019, 87% of people walking and 92% of people biking who were fatally injured in Florida were Florida residents. <sup>46</sup> Furthermore, **83% of fatal or serious injury bicycle and pedestrian crashes occur within the driver's home county.**<sup>47</sup> Therefore, these severe crashes are happening in drivers' own communities, where they live and drive regularly.



BICYCLE AND PEDESTRIAN FATALITIES AND SERIOUS INJURIES BY MONTH (2016-2020)



<sup>45</sup> CAR System (2016-2020). Includes crashes on all public roadways with recorded address information.

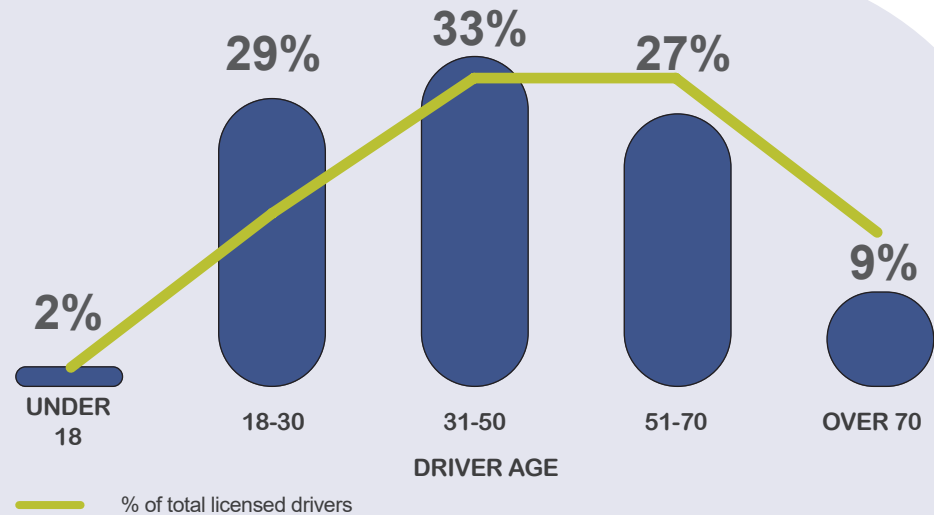
<sup>46</sup> Florida Department of Health, Division of Community Health Promotion, Public Health Research Unit. (2020). *Statewide Economic Impact*.

<sup>47</sup> CAR System (2016-2020). Includes crashes on all public roadways with recorded address information.

### MYTH #3: FLORIDA'S AGING POPULATION IS RESPONSIBLE FOR THE STATE'S HIGH CRASH RATE.

**Fact:** While people over 70 make up 16% of Florida's licensed drivers, only 9% of drivers involved in fatal or serious injury bicycle and pedestrian crashes are in this age group.<sup>48</sup>

<sup>48</sup> Florida Department of Highway Safety and Motor Vehicles. (2021). Licensed Drivers by County, Gender, and Age Group as of January 1, 2021. <https://www.flhsmv.gov/pdf/driver-vehiclereports/2021annuallicenseddrive-report.pdf> and CAR System (2016-2020). Includes crashes on all public roadways.

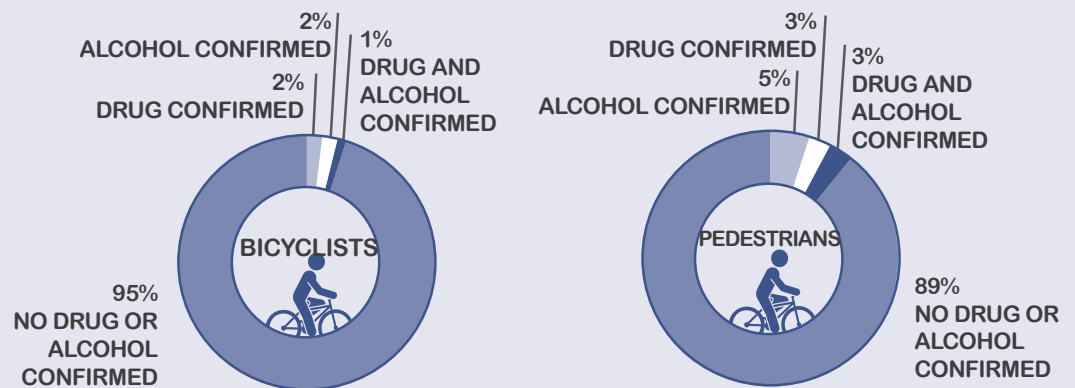


### MYTH #4: MOST CRASHES THAT AFFECT PEOPLE WALKING AND BIKING INVOLVE DRUGS OR ALCOHOL.

**Fact:** Alcohol and/or drug use was confirmed for only 11% of pedestrians and 5% of bicyclists who suffered fatal or serious injuries between 2016-2019.<sup>49</sup> During the same time period, only 3% of drivers involved in these crashes were suspected of alcohol use and 1% were suspected of drug use.<sup>50</sup>

<sup>49</sup> FLHSMV, 2016-2019. Includes crashes on all public roadways. <sup>50</sup> CAR System (2016-2020). Includes crashes on all public roadways.

#### FATALITIES AND SERIOUS INJURIES FROM CRASHES 2016-2019



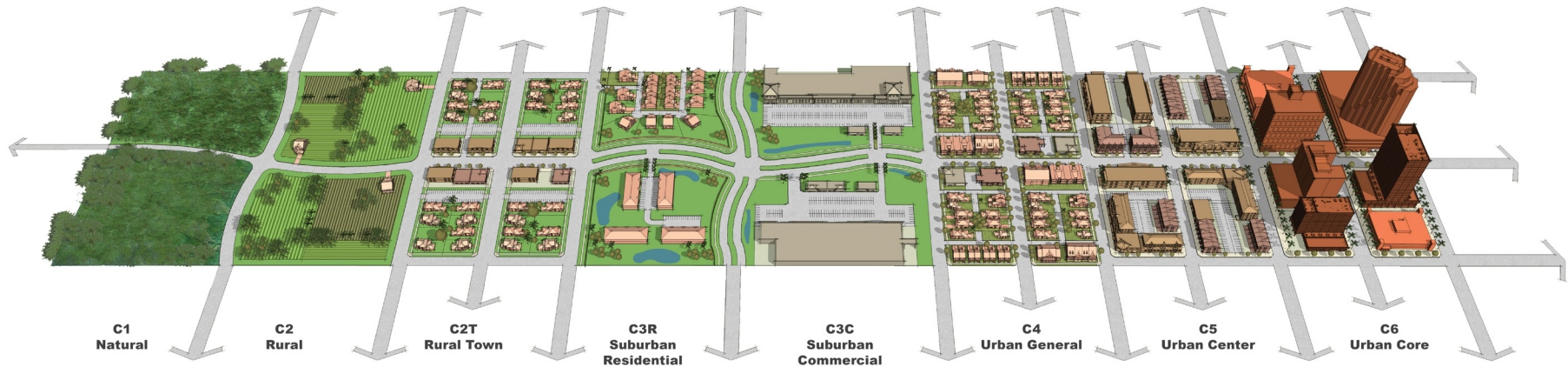
# ROADWAY CHARACTERISTICS AND CONTEXT CLASSIFICATION

Bicycle and pedestrian crashes are not evenly distributed across roadway types and context classifications within Florida. This can partly be explained by the fact that biking and walking activity is expected to increase in suburban and urban contexts where there are diverse land uses and blocks are shorter and more connected. However, the disproportionate crash trends exhibited in these contexts suggests that other factors, such as crossing density, vehicle speeds, or traffic volumes in these contexts could be contributing to higher crashes.

## TYPICAL TRANSPORTATION ACTIVITY BY CONTEXT CLASSIFICATION

C1-Natural				
C2-Rural				
C2T-Rural Town				
C3R-Suburban Residential				
C3C-Suburban Commercial				
C4-Urban General				
C5-Urban Center				
C6-Urban Core				

## CONTEXT CLASSIFICATION



See Objective 4



Recent analysis of pedestrian and cyclist exposure and risk on the non-limited access state highway system shows that corridors with C3C or C4 context classification, higher posted speeds, and higher transit frequency have the highest likelihood of bicycle and pedestrian crashes based on the exposure and risk in these areas.<sup>51</sup> For example, although **only 24% of the state roadway system is classified as suburban commercial (C3C), 51% of fatal bicycle and pedestrian crashes occur on these roadways.** Following C3C roadways, urban general (C4) roadways have the second-highest amount of fatal or serious injury bicycle and pedestrian crashes. More fatal or serious injury bicycle and pedestrian crashes occur in C3C and C4 contexts than all other context classifications combined. Crash data from the 25 priority counties follows this trend.

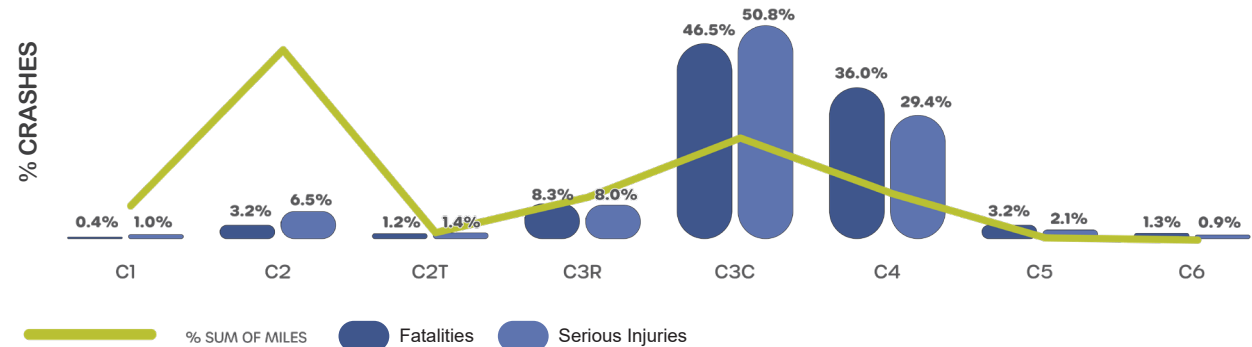
Comparing pedestrian crashes on corridors of differing speeds reveals that the highest concentration of fatal or serious injury bicycle and pedestrian crashes occur on roadways with posted speeds of 45 mph, followed by roadways with posted speeds of 40 mph. Over 40% of crashes occur on only 28% of the roadway miles. More fatal or serious injury bicycle and pedestrian crashes occur on roadways posted at 40 and 45 mph than all other roadways combined.

<sup>51</sup> CAR System, Signal 4 Analytics (2013-2019). Includes crashes on the state highway system for which context classification is defined.

## CRASHES BY CONTEXT CLASSIFICATION

Non-Limited Access State Highway System (2013–2019)

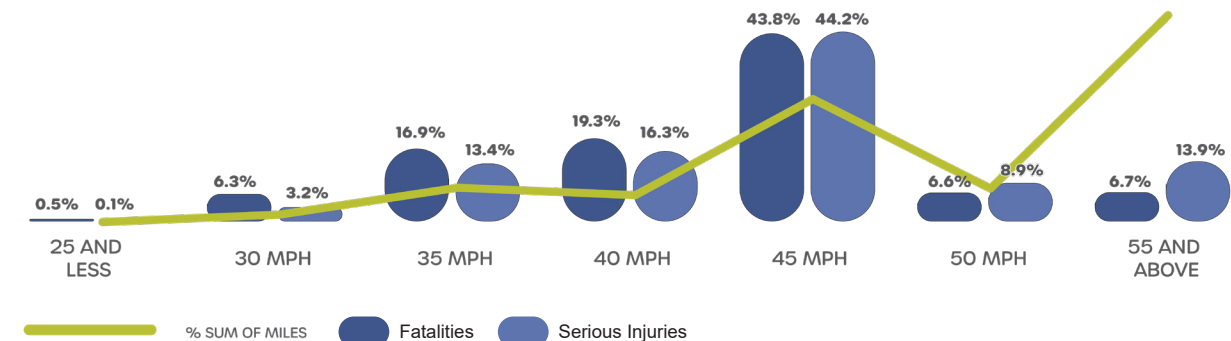
OVER **50%** OF FATAL AND SERIOUS INJURY CRASHES occur on **23.8%** OF THE SYSTEM



## CRASHES BY SPEED

Non-Limited Access State Highway System (2013-2019)

OVER **43%** OF FATAL AND SERIOUS INJURY CRASHES occur on **28.2%** OF THE SYSTEM



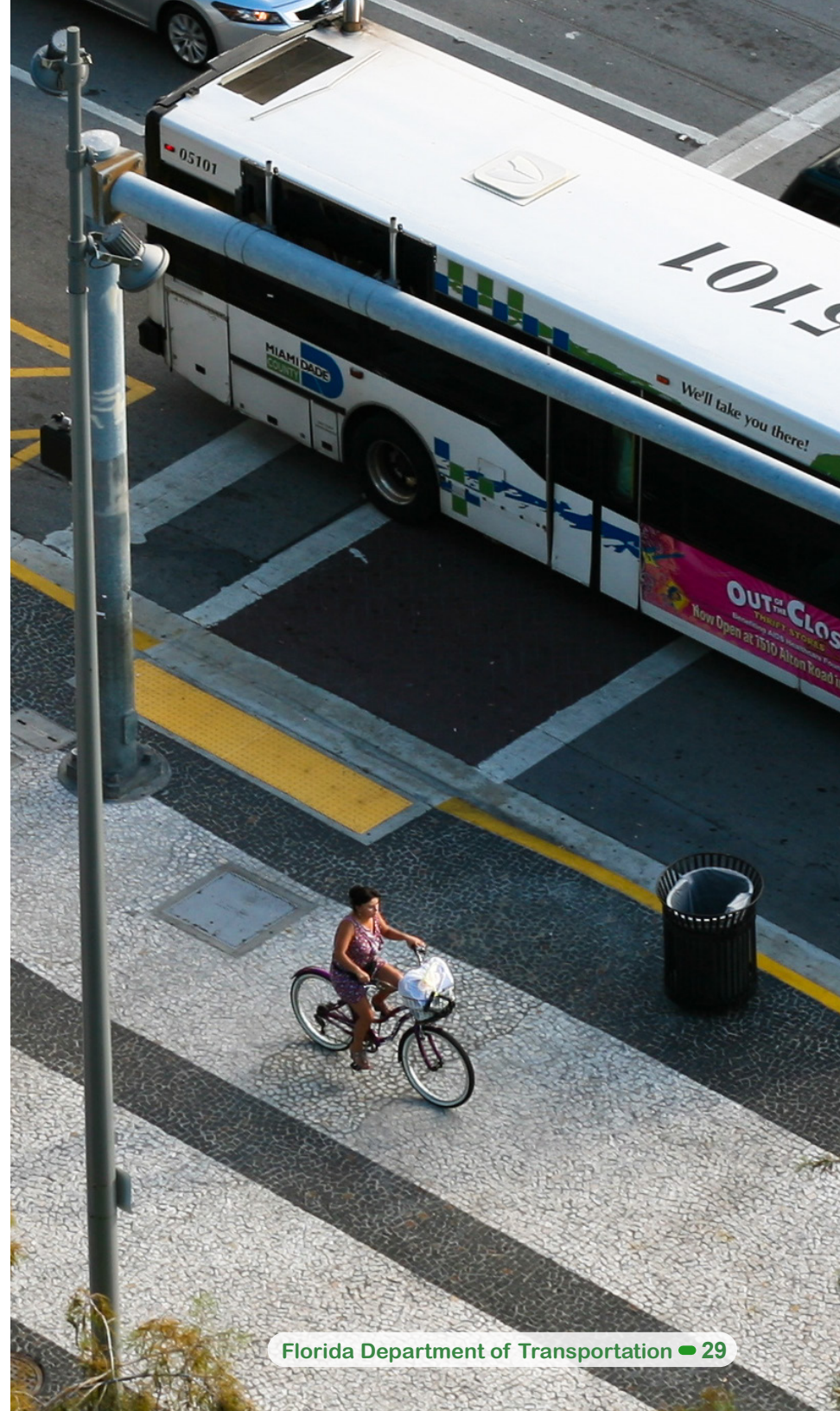
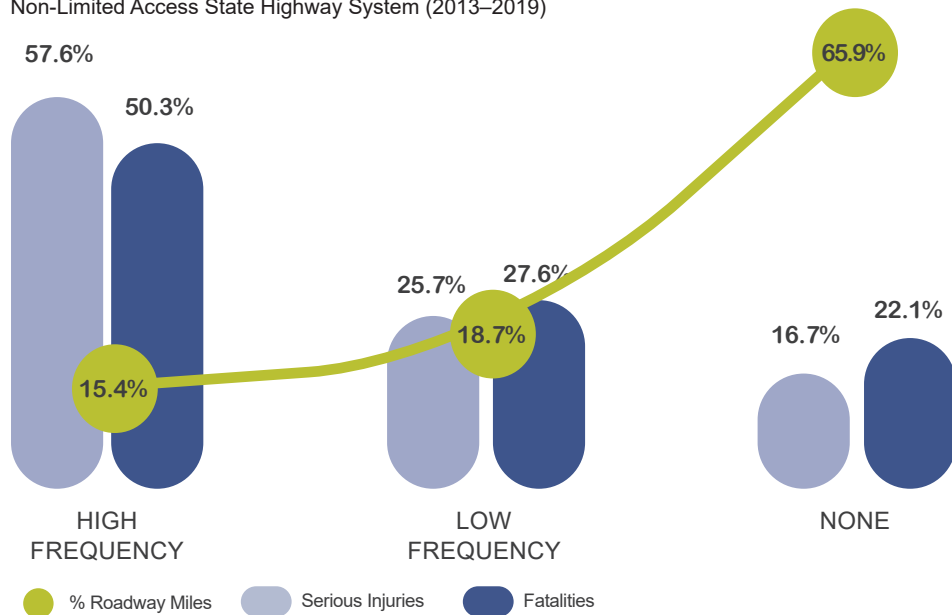
Recent crash analysis also reviewed facilities with transit service, comparing fatal or serious injury crashes on corridors with higher frequency (AM peak hour headways of 30 minutes or less) and lower frequency (AM peak headways greater than 30 minutes) transit service with non-transit corridors.

Roads with higher frequency transit service had the highest rate of fatal or serious injury crashes, compared to lower frequency transit corridors and non-transit corridors, despite there being many more roadways without transit service on the statewide network. This disparity is likely due to increased walking and

biking activity along these corridors as transit riders connect to transit stops or their final destinations. Characteristics of these corridors (typically higher speeds, infrequent crossings, and more lanes to be crossed) also play a key role.

### CRASHES BY TRANSIT PRESENCE

Non-Limited Access State Highway System (2013–2019)



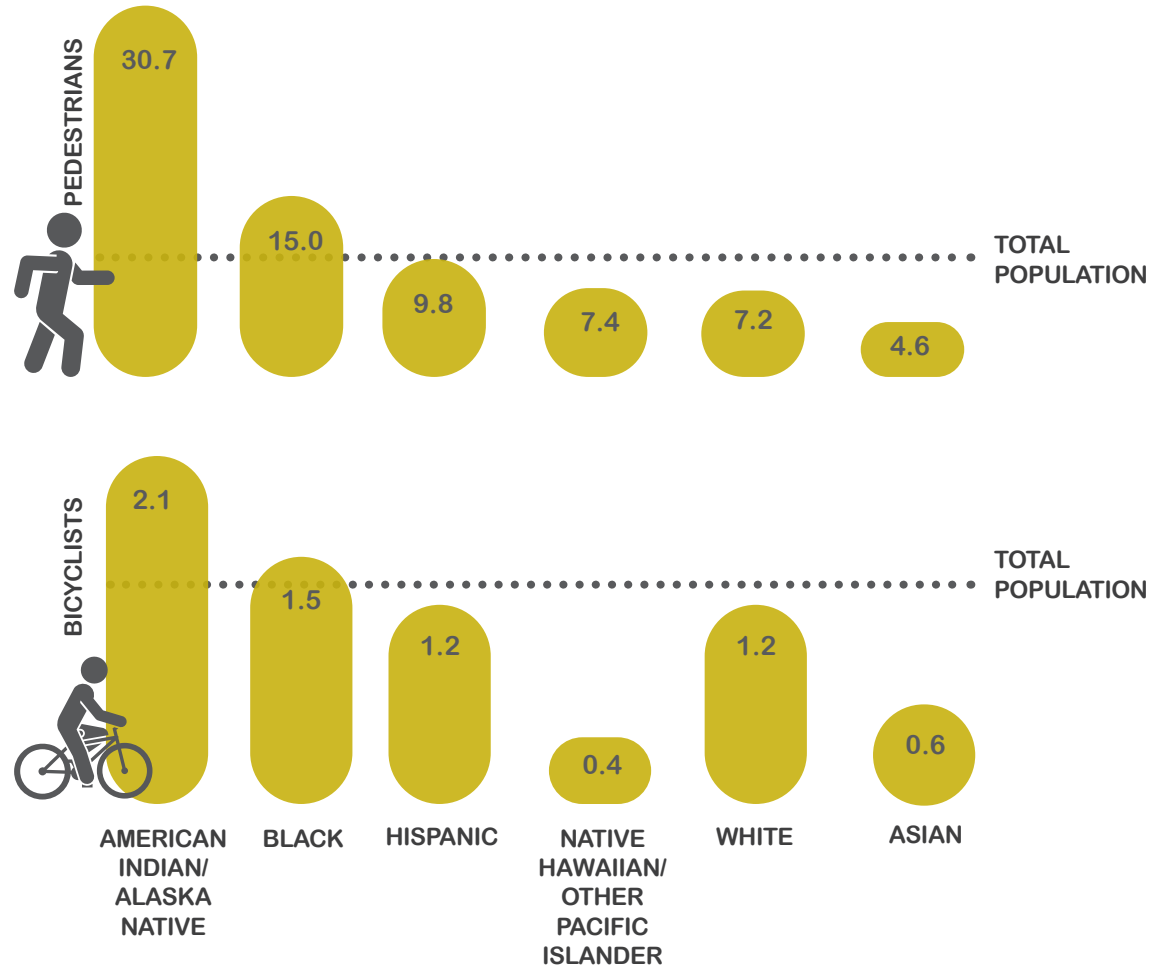
# EQUITY AND SAFETY

**EQUITY IS THE CONSISTENT AND SYSTEMATIC FAIR, JUST, AND IMPARTIAL TREATMENT OF ALL INDIVIDUALS, INCLUDING INDIVIDUALS WHO BELONG TO UNDER SERVED COMMUNITIES WHO HAVE BEEN DENIED SUCH TREATMENT.**<sup>52</sup>

Equity is an essential part of any safety framework, and it lies at the foundation of each goal in this strategic plan. Crashes—and the burdens that result from them—are an equity and public health issue. Not all people walking and biking have the same likelihood of being seriously injured or killed in a crash. An analysis of nationwide crash data from 2015–2019 found that American Indian/Alaskan Native and Black populations experience higher per-capita rates of pedestrian and bicyclist traffic deaths compared to the total

population. With the exception of motorcycle deaths, White people generally experience lower traffic fatality rates than Black, Indigenous, and People of Color (BIPOC) populations.<sup>53</sup> Another analysis of traffic injuries and exposure found that **Black women are the only demographic group with a higher risk of death as pedestrians than as motor vehicle occupants.**<sup>54</sup> This disparity comes from several factors, including a lack of transportation access, increased traffic exposure, and lack of investment in infrastructure. For example, people of color and people with low-income are more likely to rely on transit, walking, or biking due to historical disinvestment and an ongoing lack of transportation options in their communities.<sup>55</sup>

TRAFFIC DEATHS PER 100,000 POPULATION, US 2015–2019<sup>52</sup>



52 The White House. (2021). *Executive Order on Diversity, equity, Inclusion, and Accessibility in the Federal Workforce*. [https://www.whitehouse.gov/briefing-room/presidential-actions/2021/06/25/executive-order-on-diversity-equity-inclusion-and-accessibility-in-the-federal-workforce/#:~:text=\(c\)%20The%20term%20%E2%80%9Cequity.have%20been%20denied%20such%20treatment.](https://www.whitehouse.gov/briefing-room/presidential-actions/2021/06/25/executive-order-on-diversity-equity-inclusion-and-accessibility-in-the-federal-workforce/#:~:text=(c)%20The%20term%20%E2%80%9Cequity.have%20been%20denied%20such%20treatment.)

53 Governors Highway Safety Association. (2021). *An Analysis of Traffic Fatalities by Race and Ethnicity*. <https://www.ghsa.org/resources/Analysis-of-Traffic-Fatalities-by-Race-and-Ethnicity21>

54 McAndrews, C. et al. (2016.) Linking transportation and population health to reduce racial and ethnic disparities in transportation injury: Implications for practice and policy. *International Journal of Sustainable Transportation*, 11(3), 197-205. <https://doi.org/10.1080/15568318.2016.1231354>

55 Anderson, Monica. (2016). *Who Relies on Public Transit in the U.S.* Pew Research Center. <https://www.pewresearch.org/fact-tank/2016/04/07/who-relies-on-public-transit-in-the-u-s/> and McKenzie, Brian. (2014). *Modes Less Traveled – Bicycling and Walking to Work in the United States 2008-2012: American Community Survey Reports*. United States Census Bureau. <https://www2.census.gov/library/publications/2014/acs/acs-25.pdf>



When the demand for these modes is not met with sufficient infrastructure, crashes disproportionately impact geographic areas, demographic groups, and income levels. Florida matches these national trends. Historic disinvestment in minoritized communities and income disparities often lead to differences in traffic safety and exposure.

Enforcement is a tool that improves and promotes safety for people walking and biking. Statewide, the High Visibility Enforcement (HVE) program has helped reduce unlawful and undesirable traffic behaviors, with 16 of the 23 participating counties experiencing a reduction in fatalities and serious injuries along HVE segments during

the 2020-2021 program. However, high crash corridors are more likely to be located in marginalized communities, where historic disinvestment may have contributed to higher crash rates. In addition, national traffic stop and arrest data indicate that Black drivers are more likely than White drivers to be stopped and searched by law enforcement. Recognizing this context illustrates the importance of equitable enforcement and infrastructure investments to increase safety for people walking and biking so as to avoid adversely impacting underserved communities. In addition to applying an equity framework to the goals of this plan, equity will continue to be at the forefront of plan implementation.

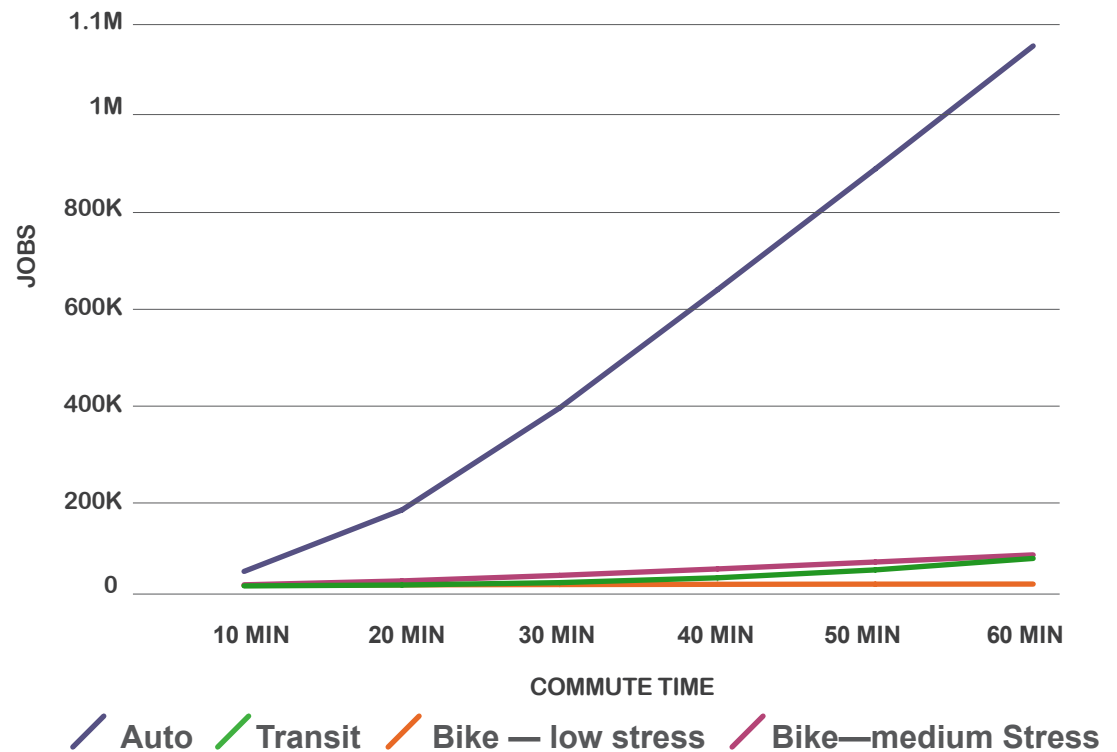
## JOB ACCESSIBILITY



Job accessibility, or the number of jobs available within various commute times, is an additional measure of equity. Wide disparities exist between

the number of jobs available by automobile, bicycle, or transit. In Florida, more than a million additional jobs are accessible by automobile than by other modes.<sup>56</sup>

Expanding bicycle facilities, providing safe access to transit stops and shelters, and improving transit reliability and frequency can increase job accessibility for people who lack access to a vehicle.

JOB ACCESSIBILITY BY MODE IN FLORIDA (2019)



See  Objectives 4 & 7 See  Objective 6

<sup>56</sup> Accessibility Observatory at the University of Minnesota. (2020). 2019 *Transit Accessibility Report: Florida*. [https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/planning/fto/accessibility/2019-transit-rpt.pdf?sfvrsn=ad143557\\_4](https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/planning/fto/accessibility/2019-transit-rpt.pdf?sfvrsn=ad143557_4) and Accessibility Observatory at the University of Minnesota. (2020). 2019 *Bike Accessibility Report: Florida*. [https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/planning/fto/accessibility/2019bike.pdf?sfvrsn=b327dd15\\_4](https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/planning/fto/accessibility/2019bike.pdf?sfvrsn=b327dd15_4) and Accessibility Observatory at the University of Minnesota. (2020). 2019 *Auto Accessibility Report: Florida*. [https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/planning/fto/accessibility/2019auto.pdf?sfvrsn=41a203ac\\_4](https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/planning/fto/accessibility/2019auto.pdf?sfvrsn=41a203ac_4)

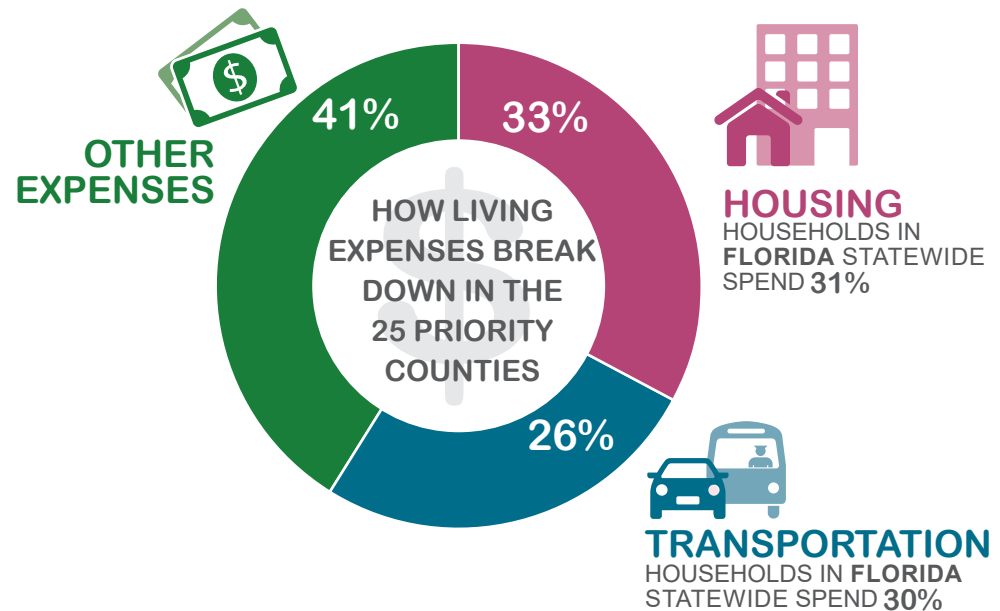
## HOUSING + TRANSPORTATION AFFORDABILITY INDEX

The Housing + Transportation (H+T) Affordability Index estimates the average ratio of annual income to the costs of housing and transportation at the community level.<sup>57</sup> The standard measure of affordability suggests that housing should not cost more than 30% of household earnings, and the combination of housing and transportation should cost no more than 45% of household earnings. The H+T Index reveals that housing and transportation costs exceed the benchmark of 45% in the state of Florida and in each of its 25 priority counties.

Those who reside in location-efficient communities, which comprise mixed-use, compact, and convenient access to services, jobs, amenities, and transit, usually have lower transportation costs. However, according to the H+T Affordability Index,

only one Florida county contains a location efficient community. Coupled with safer walking and biking facilities, making goods, services, and amenities more accessible through infill development can create more location-efficient neighborhoods in Florida.

Maintaining and operating a personal vehicle, especially in areas without other transportation options, contributes to higher household transportation costs. Comparing the H+T Index across Florida counties reveals that rural counties have some of the highest housing and transportation costs, where residents are more likely to depend on personal vehicles. The three counties with the highest housing and transportation costs are Lafayette County (73%), Glades County (72%), and Madison County (72%). Of the 25 priority counties, the highest H+T Index is found in Palm Beach County, with an average combined housing and transportation cost of 66% of income.



**IN 25 PRIORITY COUNTIES**  
HOUSING + TRANSPORTATION COMBINED COSTS



**59%**  
OF A FAMILY'S INCOME

**IN FLORIDA**  
HOUSING + TRANSPORTATION COMBINED COSTS



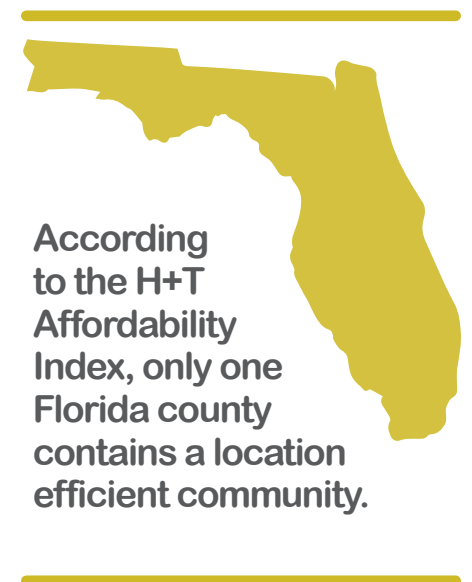
**61%**  
OF A FAMILY'S INCOME

**A COMBINED H+T INDEX OF**



**45%**  
IS CONSIDERED AFFORDABLE

Source: Center for Neighborhood Technology



<sup>57</sup> Center for Neighborhood Technology. (2021). Housing + Transportation Index. <https://www.cnt.org/tools/housing-and-transportation-affordability-index>

# PEDESTRIAN AND BICYCLE STRATEGIC PLAN EMPHASIS AREAS

Florida's Pedestrian and Bicycle Safety Coalition is organized into seven emphasis areas, each with goals and objectives that contribute to the overarching goal of eliminating fatal and serious injuries crashes involving people walking and biking.

This section presents key accomplishments along with goals and objectives for each emphasis area.

Many of the objectives identified will require internal partnerships between two or more emphasis areas.

**The icons shown represent these partnerships and draw clear connections between safety objectives.**



**DATA, ANALYSIS,  
AND EVALUATION**



**LAW  
ENFORCEMENT**



**DRIVER EDUCATION  
& LICENSING AND  
LEGISLATION,  
REGULATION, & POLICY**



**PLANNING, DESIGN,  
AND OPERATIONS  
(ENGINEERING)**



**COMMUNICATION,  
OUTREACH, AND  
EDUCATION**



**EMERGENCY  
MEDICAL SERVICES**



**VISION ZERO  
FLORIDA**





# DATA, ANALYSIS, AND EVALUATION

## COALITION HIGHLIGHTS

Since the last Pedestrian and Bicycle Strategic Safety Plan, FDOT developed several safety data dashboards, including a safety needs list dashboard and FDOT’s Safety Data Integration Space, which integrates data from various applications to empower users to answer questions about safety. There are also ongoing efforts to merge crash data from the statewide Crash Analysis Reporting System (CAR) and Signal 4 Analytics (S4A) to consolidate crash data into a single reliable source for users.

### GOAL

**Increase data literacy and facilitate the use of timely, relevant, and quality data to support equitable and data-driven decision-making to improve the mobility and safety of people walking and biking in Florida.**

#### OBJECTIVES

#### SUPPORTING PARTNERSHIPS

1. Maintain and provide transparent access to timely, relevant, and quality data.
2. Analyze and synthesize data related to emerging trends, Law Enforcement, Emergency Services, and Communication, Outreach, and Education.
3. Supplement state roadway data with data from municipalities and regional and local agencies.
4. Complete cross-cutting analyses integrating crash data with exposure, roadway characteristics, land use, equity, and behavioral and demographic characteristics.



5. Analyze existing performance measures and identify additional relevant measures to accurately track safety performance for people walking and biking.

6. Promote data literacy among FDOT, partner agencies, and the general public to enable equitable resource allocation.



7. Promote equity in transportation decision-making, with special consideration of historically underserved, marginalized, and adversely affected communities and high-risk demographics, including populations with disabilities, and federally-protected groups.



8. Track and analyze all funding sources used on projects with mobility and safety benefits for people walking and biking.



9. Develop and refine a return-on-investment strategy that is easily understood by executive-level policy and decision makers.





# LAW ENFORCEMENT COALITION HIGHLIGHTS

Since the launch of the High Visibility Enforcement (HVE) Program in 2014, FDOT has made progress in reducing unlawful and undesirable traffic behaviors that contribute to pedestrian and bicycle fatalities and serious injuries. Sixty law enforcement agencies participated in the 2020–2021 HVE program and together performed HVE operations on 71% of the prioritized high crash segments.<sup>58</sup> Due to these efforts, 16 of the 23 participating counties experienced a reduction in fatalities and serious injuries along HVE segments. In 2020, the HVE iPass Program was implemented for law enforcement and agencies. The Florida School Crossing Guard Training Program was also updated in 2020.

In addition, new training programs educate law enforcement on new roadway engineering technology and applications for people walking and biking, including Pedestrian Hybrid Beacons (PHBs), Rectangular Rapid Flashing Beacons (RRFBs), cycle tracks, and bicycle boxes. These courses teach law enforcement how Florida motor vehicle statutes apply to drivers, cyclists, and pedestrians using these new devices.

## GOAL

Identify, develop, and implement diverse enforcement strategies in support of Target Zero.

OBJECTIVES	SUPPORTING PARTNERSHIPS
1. Conduct training and continuing education programs to engage law enforcement.	
2. Encourage multidisciplinary partnerships between law enforcement and engineering to enhance roadway design.	
3. Advance High Visibility Enforcement (HVE) activities in the areas where traffic crashes resulting in fatal or serious injuries to people walking and biking are most prevalent, and integrate enforcement activities based on problem identification and community context.	

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- 4. Collaborate with and serve as a resource to partner agencies in developing data-driven goals and programs.

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  - 5. Continue to recognize enforcement agencies and professionals for significant contributions to pedestrian and bicyclist safety through the annual Law Enforcement Challenge Awards Program.

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<sup>58</sup> Institute of Police Technology and Management, ASHA Planning Consultancy. (2021). *Florida's Bicycle Pedestrian Focused Initiative: Communication and High Visibility Enforcement Program*.



# EMERGENCY MEDICAL SERVICES

## COALITION HIGHLIGHTS

In 2015, the EMS Strong campaign was implemented to recognize Emergency Medical Services (EMS) professionals in communities across the state. In that same year, Florida's statewide Injury Surveillance System (ISS) began reporting statistics to monitor the frequency of fatal and non-fatal injuries and provide information to the injury prevention community. In 2017, Until Help Arrives training and skills for bystanders during emergencies was established.

Since the last PBSSP, the EMS emphasis area has been separated from the law enforcement emphasis area to allow the coalition to focus on the unique issues within each of these areas.

### GOAL

Improve medical response and reduce mortality and morbidity resulting from crashes involving people walking and biking.

#### OBJECTIVES

1. Increase primary prevention through the advancement of targeted strategies to improve EMS response to traffic crashes involving pedestrians and bicyclists to reduce mortality and morbidity and to reduce the risk of secondary crashes.



2. Provide responder education on key injuries sustained by pedestrians and bicyclists involved in crashes.



#### SUPPORTING PARTNERSHIPS

3. Support 100% participation in EMS incident reporting into the Florida Emergency Medical Services Tracking and Reporting System (EMSTARS) and maintain high standards in reporting to the National EMS Information System (NEMSIS).



4. Partner with the Public Information, Education & Relations (PIER) Committee of Florida's EMS Advisory Council to promote and educate on pedestrian and bicycle safety.



5. Collaborate with EMS, law enforcement, engineers and other injury prevention partners to share key insights and collaborate on efforts to reduce mortality and morbidity resulting from crashes involving people walking and biking.



6. Promote, advance, or accelerate the implementation of emergency vehicle preemption technology to reduce conflicts at intersections.





# DRIVER EDUCATION & LICENSING AND LEGISLATION, REGULATION, & POLICY

## COALITION HIGHLIGHTS

This emphasis area team helped promote legislation and policy related to safety for people walking and biking. A 2019 law was passed to ban texting while driving (F.S. 316.305).

New legislation in July 2020 established three tiers of electric bicycles and allows Floridians to ride e-bikes anywhere regular bikes are allowed. In addition, this legislation redefined “bicycle” in the Florida statutes by eliminating the 25-inch seat height requirement, therefore clearing the way for recumbent bicycles and adult tricycles to fall under this definition. Florida statutes were also updated to improve school bus safety in 2020.

The Bicycle and Pedestrian Safety Bill, effective July 2021, amended several statutes to clarify rules for motorists passing people biking, practices for people biking in groups, provide guidelines for riding a bicycle in a substandard width lane, authorized people biking to ride two abreast to avoid dangerous conditions, and required at least 25 questions in the driver license test bank to address bicycle and pedestrian safety. In 2021, Florida statutes were also created to permit standing/seat-less elliptical bikes.

### GOAL

**Strengthen legislation, regulations, policies and programs to support the overall goal of eliminating fatal and serious injury crashes involving people walking and biking.**

#### OBJECTIVES

1. Track and monitor federal and state legislation, trends, and policy priorities and their effect on safety for people walking and biking as needed for program implementation.
2. Facilitate updates to state laws, policies, and regulations that affect the safety of people walking and biking.
3. Advance the adoption of local laws, ordinances, and policies at the county and municipal levels that improve the safety of people walking and biking.

#### SUPPORTING PARTNERSHIPS



4. Collaborate with Florida Department of Highway Safety and Motor Vehicles (FLHSMV) to incorporate updated information on safe driving practices related to walking and biking into the Florida Driver’s License Handbook and driver education programs.



5. Serve as resource to FLHSMV when updating questions pertaining to walking and biking related laws on the Class E Non-Commercial Driver Licenses Knowledge Exam.



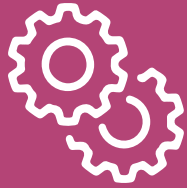
6. Partner with key stakeholders involved in novice driver training to expand driver knowledge on vulnerable road users and to encourage driver training for all novice drivers.



7. Partner with law enforcement to improve both the accuracy and breadth of crash reporting to better address those driving behaviors which most commonly lead to fatalities and injuries among people walking and biking.







# PLANNING, DESIGN, AND OPERATIONS (ENGINEERING)

## COALITION HIGHLIGHTS

FDOT has made considerable progress designing and operating state roadways for people who walk and bike. They adopted a Complete Streets Policy and developed the Florida Department of Transportation Design Manual (FDM) and its companion Context Classification Guide to link roadway context with appropriate design speeds and design criteria. For the first time, the 2018 FDM includes design criteria for state roadways that are below 45 mph, and includes criteria for design speeds as low as 25 mph for the most urban roadways. Roadways that are designed and operated at lower design speeds have the potential to greatly decrease the fatal and serious injury crashes for all modes, but especially for people walking and biking. Some highlights of FDOT's Complete Streets and Context-based approach that directly relate to the objective of reducing fatal and serious injury crashes include:

- Using contexts to identify where we can anticipate people walking and biking
- Linking contexts to roadway design speeds
- Context-appropriate design criteria
- Wider sidewalks in more urban contexts
- Designating target speeds on all projects
- Separated bicycle and pedestrian facilities on roadways with speeds above 35 mph
- Speed management tools to reinforce target speeds

Within the last five years, FDOT has also updated its Speed Zoning and Traffic Engineering Manuals, adopted an Intersection Control Evaluation process, and established the SAFE Strides 2 Zero network screening initiative.

## GOAL

**Prioritize safety for non-motorized users on Florida's transportation facilities to encourage implementation of safe systems resulting in safer behavior by and increased safety for all roadway users.**

### OBJECTIVES

1. Increase application of speed management techniques to reduce crash severity.
2. Partner with local agencies to implement zoning and land use planning that promotes and enables the regular, safe, and comfortable use of nonmotorized modes.
3. Promote a broader range of safe transportation choices by improving network connectivity.
4. Accelerate the piloting and implementation of existing and emerging safety countermeasures to improve the safety of people who walk and bike.

### SUPPORTING PARTNERSHIPS



5. Evaluate the effectiveness of and expand guidance to promote public understanding of new and implemented safety devices for people walking and biking.



6. Identify root causes for each crash type contributing to fatal and serious injury bicycle and pedestrian crashes to inform enforcement protocols and engineering decisions directed at those factors.



7. Collaborate with transit agencies during the design process to improve safety for people walking and biking near transit stops and promote safe access to transit.

8. Develop and implement processes for conducting safety assessments to identify challenges and solutions for people walking and bicycling.



9. Identify, develop, and deploy engineering solutions and best practices to limit conflicts at intersections, driveways, and mid block locations.

10. Develop, test, and deploy connected and automated vehicle infrastructure to reduce traffic crashes resulting in fatal or serious injuries to pedestrians and bicyclists.



# COMMUNICATION, OUTREACH, AND EDUCATION

## COALITION HIGHLIGHTS

As a result of this Coalition team’s efforts, education and outreach efforts have reached millions of people across the state Florida. During the 2020-2021 HVE program, over 150 million impressions were delivered over broadcast television and radio in the 25 priority counties. In addition to traditional media, geo-fencing was introduced to target safety messages to over 15 million devices used by people who were confirmed to travel along HVE corridors. In 2019, the Driving Down Heartache website was launched to honor lives lost due to roadway tragedies and to encourage personal accountability for all road users. In 2021, the Coalition began a statewide behavioral market segmentation approach to create personalized experiences to target the messages of safety for people walking and biking through understanding the target audiences and their needs. This emphasis area has been at the forefront of enhancing the PBSSP the same year that the PBSSP began development.

### GOAL

**Develop and deploy clear and targeted communication, outreach, and educational campaigns both internally and externally with the goal of increasing awareness, facilitating behavior change for all road users, and decreasing fatalities and injuries to people walking and biking.**

OBJECTIVES	SUPPORTING PARTNERSHIPS
1. Expand strategic partnerships with associations, community groups, non-profits, the Department of Education, and other non-traditional organizations that can assist in developing and communicating walking and biking safety messages.	
2. Collaborate with stakeholders in partnership with the SHSP, the Pedestrian and Bicycle Safety Coalition, Safe Mobility for Life Coalition, county administrators, and MPO/TPO officials to internally communicate walking and biking safety at all levels.	
3. Develop and implement data-driven targeted outreach and communication strategies to improve the safety of people who walk and bike.	

4. Identify information and datasets that would improve public information campaigns and support safety efforts for people walking and biking.
5. Ensure that outreach programs have the maximum impact in mitigating fatalities and serious injuries for people walking and biking by continually reviewing the causation and contributing factors for bicycle and pedestrian crashes.
6. Identify educational opportunities and venues that are accessible to all ages and abilities and are hosted in partnership with trusted local institutions and ensure communication is culturally relevant, multilingual, and consistent.
7. Increase the understanding of all road users on how to share intersections safely.
8. Continue multi jurisdictional recognition program for safe communities, cities, counties, and/or agencies.



# VISION ZERO COALITION HIGHLIGHTS

Since the addition of the Vision Zero emphasis area in 2019 with the update of the SHSP, nine vision zero partners from local agencies have joined the Coalition. These local agencies have been active partners in promoting and spreading the statewide goal of eliminating fatal and serious injury crashes.

## GOAL

**Eliminate fatalities and serious injuries for people walking and biking.**

OBJECTIVES	SUPPORTING PARTNERSHIPS
1. Wherever possible, use humanizing language to describe deadly and serious injury crashes for people walking and biking.	
2. Engage municipal leaders and obtain commitment to safety with the goal to achieve zero traffic deaths and serious injuries.	
3. Establish a Safe System approach that focuses on design, speed management strategies, and how everyone shares the responsibility to achieve zero deaths.	
4. Work with Planning, Design, and Operations (Engineering) to implement countermeasures aimed at improving safety for people walking and biking.	
5. Develop and disseminate clear messages about safety and people walking and biking within local communities.	
6. Develop and apply comprehensive evaluation methods and communicate outcomes to partners and the public.	
7. Create and foster strategic partnerships with the Department of Health, MPOs, TPOs, cities, and counties to disseminate Vision Zero messaging effectively and build on existing outreach efforts.	
8. Educate legislators about Vision Zero principles and the significance of deadly and serious injury crashes for people walking and biking.	



TARGET  
**ZERO**  
FATALITIES & SERIOUS INJURIES

A white silhouette of the state of Florida, positioned to the right of the word "ZERO".