

Public Works Department

**Orange County
Vision Zero Action Plan**

Discussion Item

August 27, 2024



Presentation Outline

- Purpose
- Background
- Vision Zero Action Plan Overview
- Resolution
- Implementation
- Summary
- Action Requested





Purpose

- Present an overview of the newly developed Orange County Vision Zero Action Plan (VZAP) and accompanying Resolution to eliminate fatalities and severe injuries by 2040
- Discuss key components in the development of the VZAP including the development of a high injury network database, toolkit of safety countermeasures, projects' selection and prioritization, community involvement and funding options
- Seek approval and adoption of the VZAP and Resolution to implement the Vision Zero Initiative countywide, where all transportation related projects and programs will be planned, designed, constructed, maintained and operated under the “Safety First” culture



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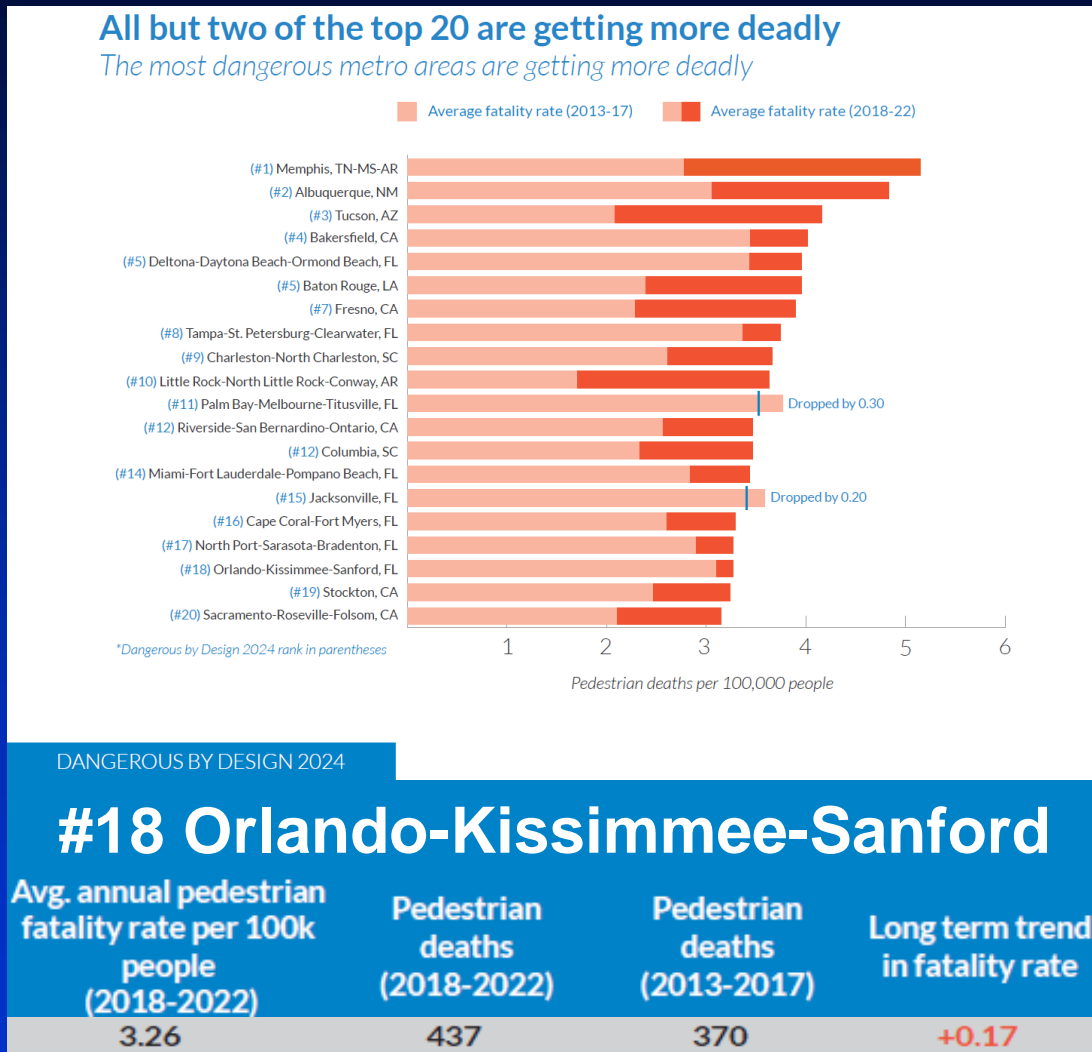




Background

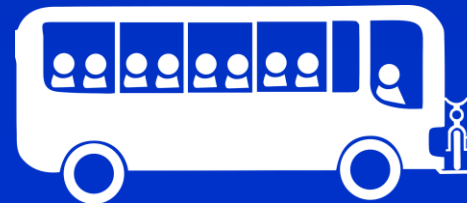
- From 2019 to 2023 Orange County experienced 343 pedestrian/bicycle fatalities and 917 pedestrian/bicycle serious injuries
- National statistics from the 2024 Dangerous By Design report continues to rank the Orlando-Kissimmee-Sanford, FL (#18) within the top twenty nation wide metro areas with increasing rates of vulnerable users' deaths

Fatalities and severe injuries continue to be an epidemic



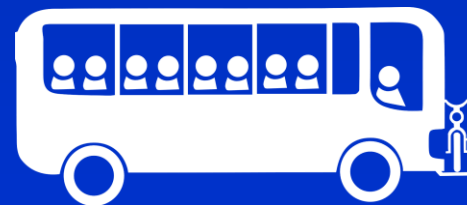
Background

- Orange County approved on August 9, 2022, the Vision Zero Resolution directing staff to create a Vision Zero Action Plan
- The main goals and objectives of the VZAP were as follows:
 - To implement proven safety countermeasures, while prioritizing transportation equity in underrepresented areas
 - To create a framework and a comprehensive strategy for achieving the Vision Zero goals
 - To develop procedures and performance goals and metrics



Background

- Since the last update to the Board on June 20, 2023, the following milestones have been achieved:
 - Selection of a Vision Zero Task Force group
 - Identification of high injury corridors specific for Orange County roads
 - Development of a Vision Zero webpage and dashboard
 - Creation of the Orange County Vision Zero logo and marketing materials
 - Formulating evaluation criteria for projects selection and prioritization
 - Multiple engagements with internal and external stakeholders





Background

- The residents of Central Florida are demanding that our agencies collaborate and solve safety concerns, calling for strategic partnerships amongst FDOT, MPO, OCSO, OCPS, counties and municipalities
- The FDOT promotes Target Zero by influencing dangerous driving behavior before a crash occurs
- MetroPlan/Orange County agencies promote the Vision Zero initiative(s) by deploying strategic safety countermeasures



Innovation

Collaboration

Inclusion



Background

Safe Streets & Roads for All (SS4A) Grant

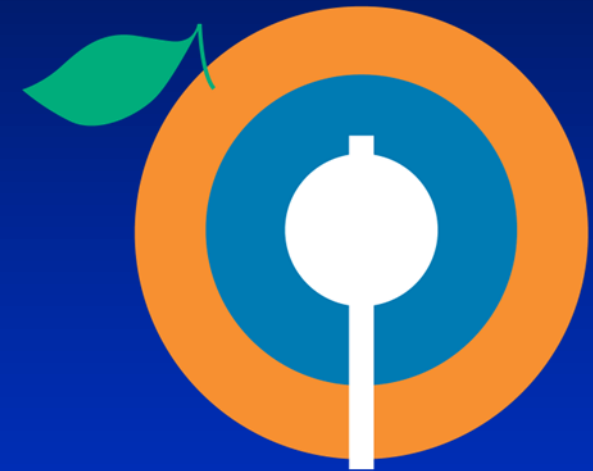
- The first round, Orange County teamed with MetroPlan to pursue a planning grant for the Regional and local agencies Vision Zero Action Plans - \$3.79 Million
- The second round, Orange County and UCF are pursuing a demonstration grant for using Artificial Intelligence for near misses - \$3.00 Million
- The third round, Orange County will pursue an implementation grant for installation of safety projects recommended in our VZAP - \$3.00 Million





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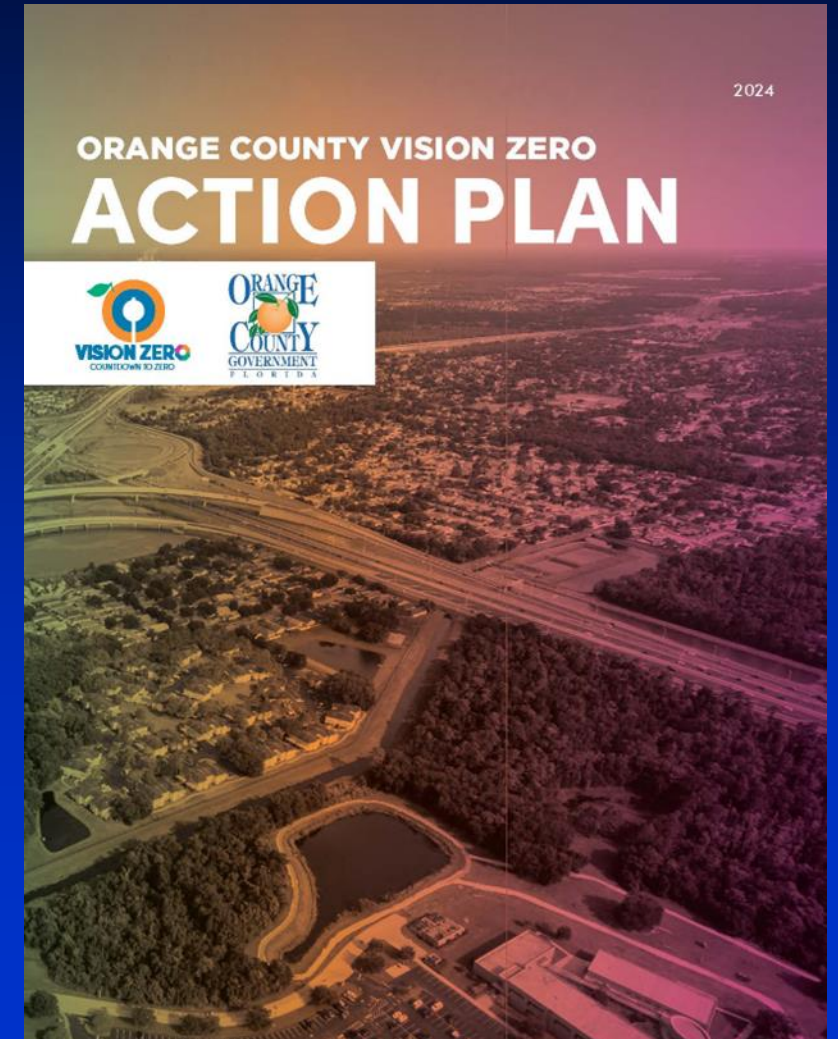


VISION ZERO 
COUNTDOWN TO ZERO



Vision Zero Action Plan Overview

- **Vision Zero Action Plan is organized into 6 main Chapters**
 - Chapter 1: Introduction
 - Chapter 2: Crash Analysis and Trends
 - Chapter 3: Public Engagement
 - Chapter 4: Policy Review and Benchmarking
 - Chapter 5: Toolkit and Prioritization
 - Chapter 6: Plan Recommendations





Vision Zero Action Plan Overview

Chapter 1: Introduction

- **Saving lives. That's what it's all about. The only acceptable number for traffic deaths is ZERO, because Orange County's 1.4 million residents deserve to travel safely**
- **The purpose of the Orange County VZAP is to articulate the County's commitment towards achieving zero road fatalities and serious injuries by 2040**
- **This plan outlines a comprehensive, data-driven approach to improving road safety for all users, utilizing the Safe System Approach**



Vision Zero Action Plan Overview

Chapter 1: Introduction

- The Safe System Approach is “Principles Based” to create a safety culture
- Achieving a Safe Systems requires all five elements
- Safe Roads is a continuum, not an absolute



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



Vision Zero Action Plan Overview

Chapter 1: Introduction

■ Safe System Principles

- Death and serious injuries are unacceptable
- Humans make mistakes
- Humans are vulnerable
- Responsibility is shared
- Safety is proactive
- Redundancy is crucial

Principles of the Safe System Approach





Vision Zero Action Plan Overview

Chapter 2: Crash Trends and Analysis

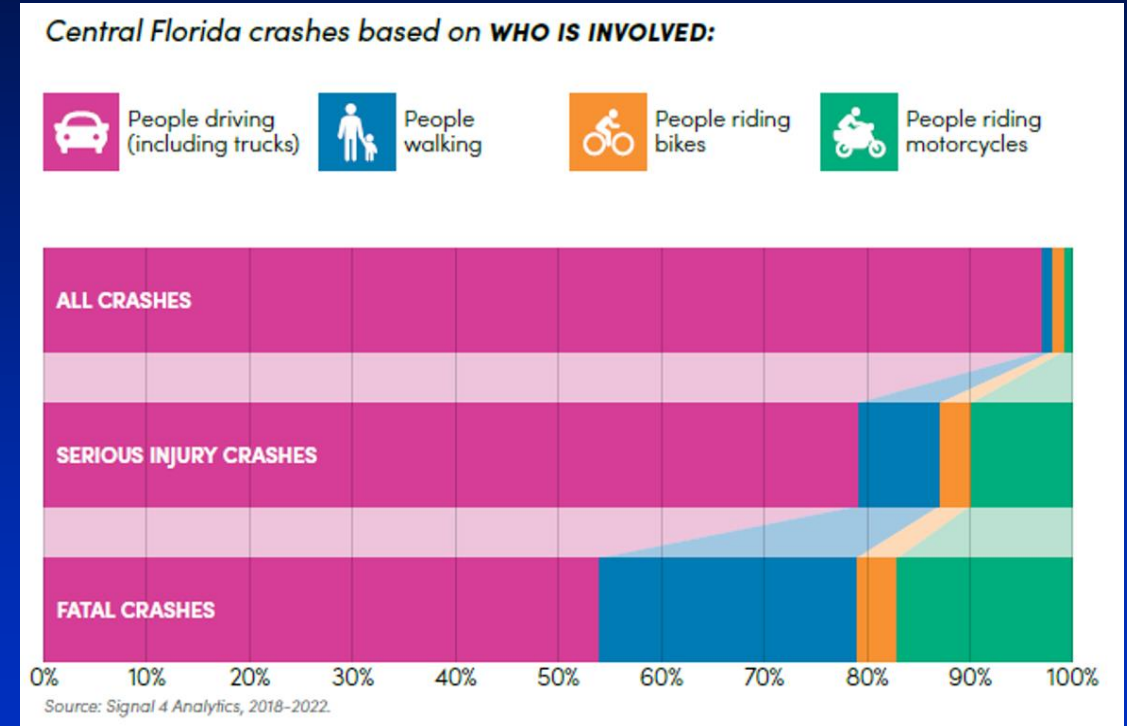
- A comprehensive strategy to improve roadway safety requires an understanding of local crash trends and the various factors contributing to such incidents
- Primary data for this analysis was sourced from the University of Florida's Signal Four (S4) Analytics crash data
- The crash analysis included those crashes that occurred within the five-year period between 2018 – 2022
- Crash patterns were categorized into groups of 'collision profiles' showing factors most common for crashes resulting in fatalities (K) or serious injuries (SI)



Vision Zero Action Plan Overview

Chapter 2: Crash Trends and Analysis

- Vulnerable users are disproportionately and severely affected during crashes
- Disadvantaged Communities experienced almost half (46%) of all fatal crashes in our region



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



Vision Zero Action Plan Overview

Chapter 2: Crash Trends and Analysis

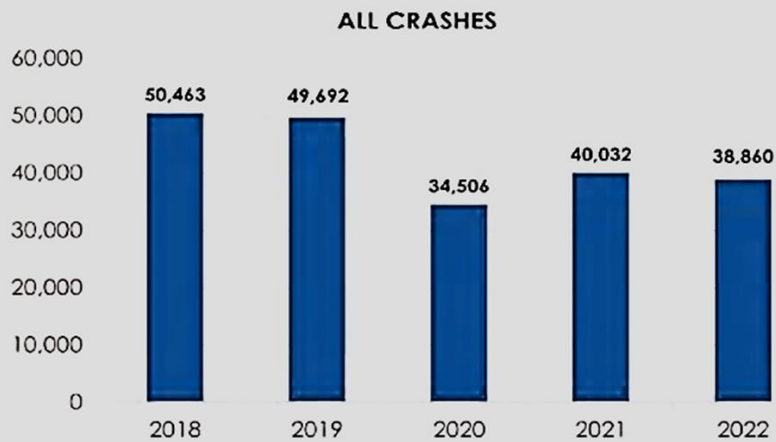
Orange County

**YEARS OF
CRASH DATA:**
2018-2022

TOTAL CRASHES:
213,553

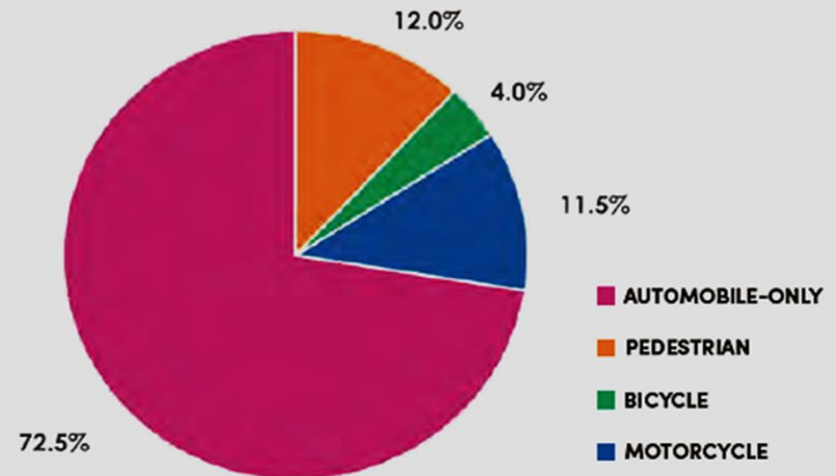
TOTAL FATAL CRASHES:
893

**TOTAL SERIOUS
INJURY CRASHES:**
5,588



*There has been a **22.9% decrease** in overall crashes in the five year period.*

PERCENT SHARE OF KSI CRASHES





Vision Zero Action Plan Overview

Chapter 3: Public Engagement

- The Steering Committee made up of key stakeholders collaborated with community partners and elected officials
- The Communications Department developed social media content for spreading awareness of the public meetings at various outlets
- The project team conducted in-person engagements for cross collaboration, promoting a grass roots approach to deal with this fatal crash epidemic





Vision Zero Action Plan Overview

Chapter 3: Public Engagement

How do we reach **ZERO** deaths on Orange County roads?

Join your commissioner for an interactive public meeting and become part of the conversation on road safety.

Jan 18 District 1 - Commissioner Nicole Wilson

6:30 to 8:00 pm
Rosen Jewish Community Center
11184 S Apopka Vineland Rd,
Orlando, FL 32836

Jan 25 District 2 - Commissioner Christine Moore

6:30 to 8:00 pm
John Bridges Community Center
445 W 13th St, Apopka, FL 32703

Feb 1 District 4 - Commissioner Maribel Gomez Cordero

6:30 to 8:00 pm
Meadow Woods Recreation Center
1751 Rhode Island Woods Cir,
Orlando, FL 32824

Feb 22 District 6 - Commissioner Mike Scott

6:30 to 8:00 pm
Orange County
Multicultural Center
7149 W Colonial Dr, Orlando, FL
32818

Feb 27 District 3 - Commissioner Maya Uribe

6:30 to 8:00 pm
The Episcopal Church of Jesus of
Nazareth
26 Willow Dr, Orlando, FL 32807

Feb 29 District 5 - Commissioner Emily Bonilla

6:30 to 8:00 pm
Orlando Magic Recreation Center
4863 N Goldenrod Rd, Winter Park,
FL 32792

Learn how you can curb traffic-related deaths:
ocfl.net/VisionZero



Goals & Objectives

- Understanding the key components of the Safe Systems Approach
- Identifying safety needs in the District's high injury corridors
- Discussing the application of the Safety Countermeasures Toolkit
- Engaging early on key stakeholders to participate in the engineering, enforcement and education efforts



Vision Zero Action Plan Overview

Chapter 3: Public Engagement



“ We need speed bumps or speed cameras or traffic lights to slow down drivers. ”

“ Multiple driveways to access business are very close and create dangerous conditions. ”

“ Schools need speed camera enforcement. ”

“ I see many trucks speeding. ”

“ Lower the speed limit on arterial roads. ”

“ I promote pedestrian advancement countywide within a mile of school. In general, we need trees and other layers of protection. ”

“ Kids waiting for the bus are in the dark in the morning on Hiawassee and Clarcona Ocoee. Lighting improvements are requested. ”

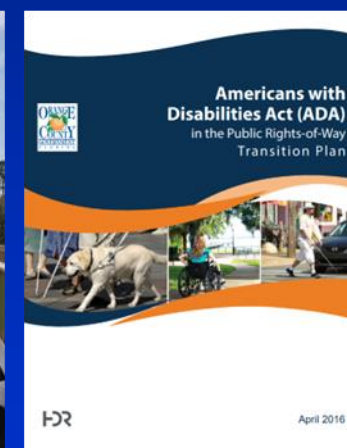
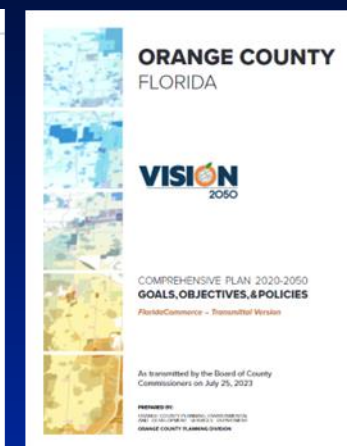
“ Invest in more public transit to get cars off the road. ”



Vision Zero Action Plan Overview

Chapter 4: Policy Review and Benchmarking

- Conducted a thorough examination of various local, state, & national documents
 - Local Policy Review - Orange County Code Draft 4.0, Draft Vision 2050 Comprehensive Plan, Pedestrian and Bicycle Safety Action Plan, and Americans with Disabilities Act (ADA) in the Public Rights-of-Way Transition Plan
 - State and National Review – FDOT Strategic Highway Safety Plan, MetroPlan Orlando Plans, USDOT FHWA Strategies to Coordinate Zero Deaths Efforts for State & Local Agencies
- Orange County must continue aligning County's policies and practices with the Vision Zero principles





Vision Zero Action Plan Overview

Chapter 4: Policy Review and Benchmarking

- **Living document that implements strategies, evaluates progress and makes corrective actions as needed by:**
 - Identifying an interdepartmental safety working group
 - Engaging the community through education
 - Prioritizing projects by building on the high injury network methodology
 - Promoting speed management strategies
 - Building a robust data framework
 - Ensuring accountability and transparency
 - Providing recognition through strong branding



Vision Zero Action Plan Overview

Chapter 4: Policy Review and Benchmarking

- **Commissioners input from public meetings and briefings:**
 - Need for championing the Vision Zero Initiative
 - Desire to improve roadway safety throughout the County
 - Pedestrian and bicyclist safety concerns are top priority
 - Set specific funding for this initiative
 - Look for opportunities to pursue state and federal grants
 - Start to implement traffic safety countermeasures within the top 24 corridors (four per each District)
 - Track progress closely and provide reports
 - Engage the community on how we apply the 4E(s) to safety – Engineering, Education, Enforcement & Emergency Services



Vision Zero Action Plan Overview

Chapter 5: Toolkit and Prioritization

- **Establish a shared understanding of the Safe System strategy to address roadway safety issues in our community**
- **The key objectives of the Toolkit are:**
 - Inform stakeholders of the safety treatment options and context use
 - Communicate safety tools by using easy-to-understand language & graphics
 - Facilitate coordination between staff, contractors, developers, and the community
 - Ensure clear understanding and realistic expectations about safety applications, effectiveness, time delivery and implementation cost



Vision Zero Action Plan Overview

Chapter 5: Toolkit and Prioritization

SPEED MANAGEMENT

- Speed Safety Cameras
- Variable Speed Limits
- Appropriate Speed Limits for All Road Users

ROADWAY DEPARTURE

- Wider Edge Lines
- Enhanced Delineation for Horizontal Curves
- Longitudinal Rumble Strips and Stripes on Two-Lane Roads
- SafetyEdgeSM
- Roadside Design Improvements at Curves
- Median Barriers

INTERSECTIONS

- Backplates with Retroreflective Borders
- Corridor Access Management
- Dedicated Left- and Right-Turn Lanes at Intersections
- Reduced Left-Turn Conflict Intersections
- Roundabouts
- Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections
- Yellow Change Intervals

Crosscutting

- Pavement Friction Management
- Lighting
- Local Road Safety Plans
- Road Safety Audit

PEDESTRIANS/BICYCLES

- Crosswalk Visibility Enhancements
- Bicycle Lanes
- Rectangular Rapid Flashing Beacons (RRFB)
- Leading Pedestrian Interval
- Medians and Pedestrian Refuge Islands in Urban and Suburban Areas
- Pedestrian Hybrid Beacons
- Road Diets (Roadway Reconfiguration)
- Walkways

MAKING OUR ROADS SAFER | One Countermeasure at a Time

ZERO IS OUR GOAL
A SAFE SYSTEM IS HOW WE GET THERE

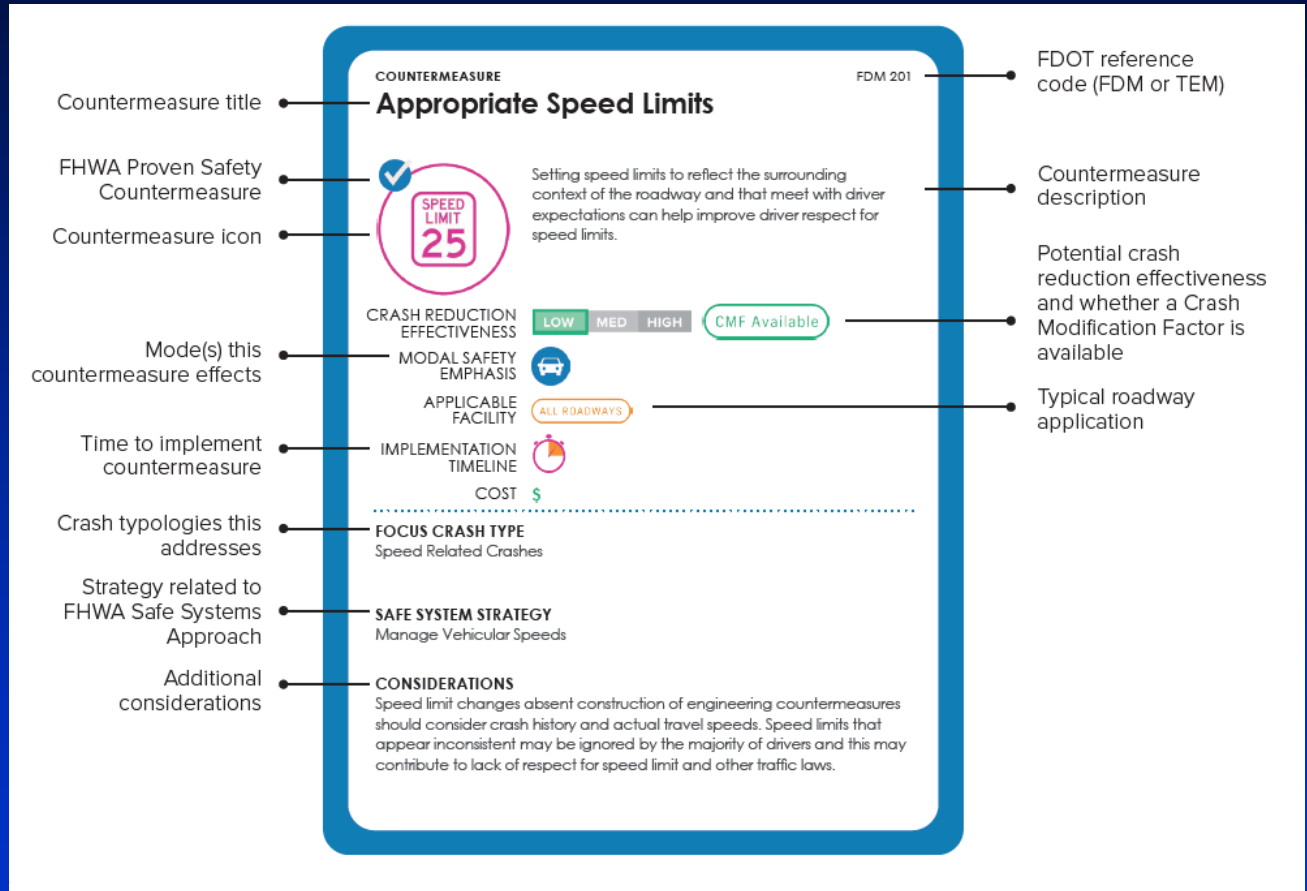


Vision Zero Action Plan Overview

Chapter 5: Toolkit and Prioritization

CATEGORIES

- Signals
- Signing and Striping
- Bikeways
- Pedestrian Facilities
- Intersection/Roadways
- Speed Management
- Other Strategies

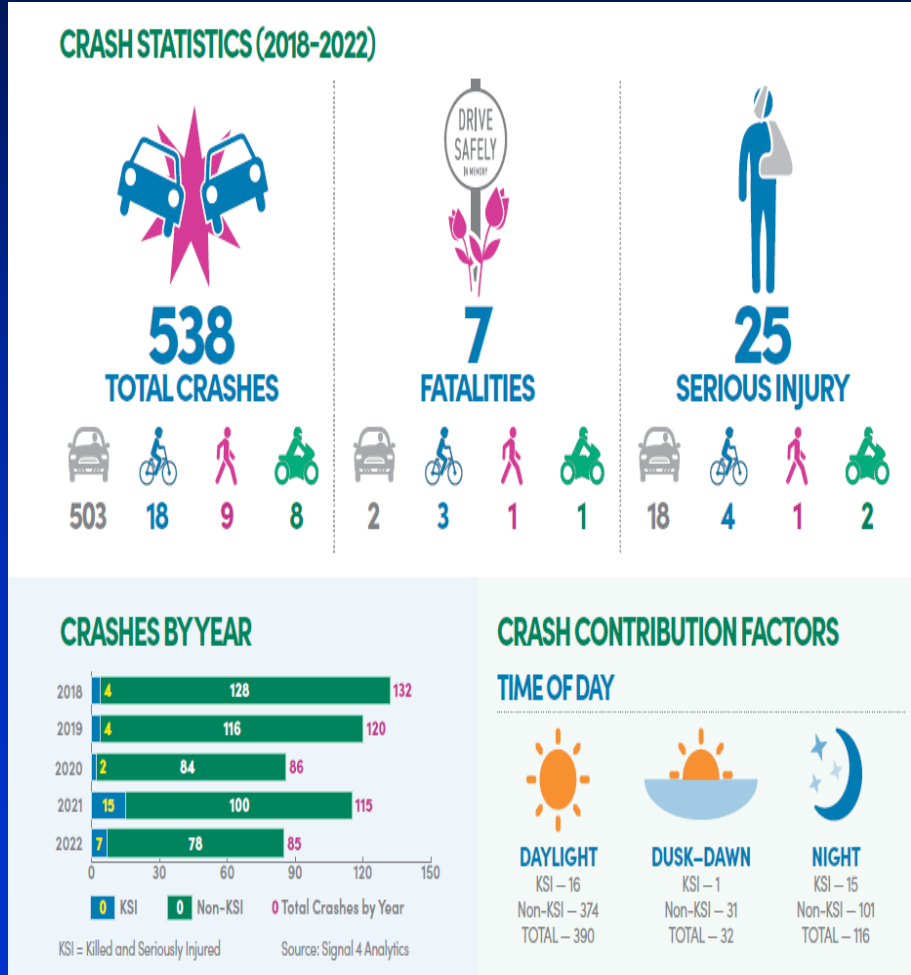
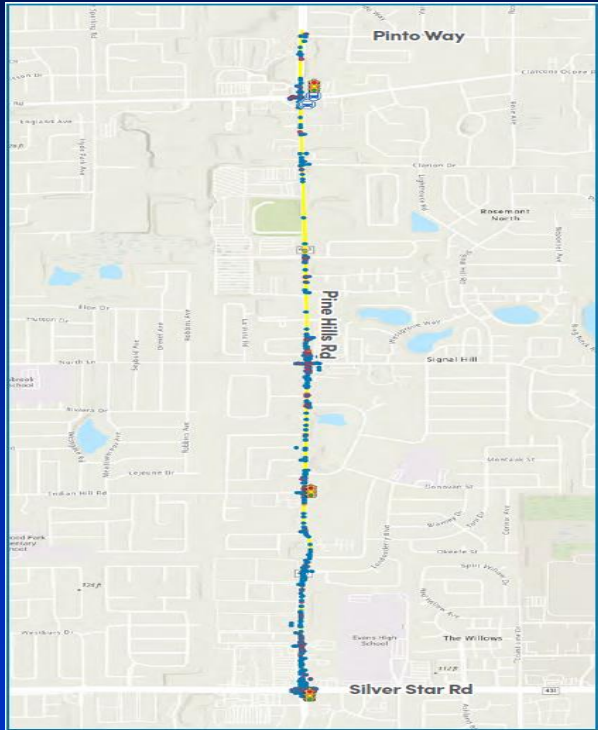




Vision Zero Action Plan Overview

Chapter 5: Toolkit and Prioritization

Pine Hills Road – Between Silver Star Road and Pinto Way





Vision Zero Action Plan Overview

Chapter 5: Toolkit and Prioritization

Top 24 Corridors within Orange County

- Prioritization based on the number and severity of crashes
- Countermeasures selected based on short, medium and long-term implementation
- Cost estimate for safety countermeasures is approximately \$264 Million
- Available funding from the ATSP for safety is \$15 Million, which barely scratches the surface
- A future dedicated funding source will be needed to implement the recommendations from this VZAP

OVERALL RANK	LOCAL NAME	FROM	TO	BCC DISTRICT	OWNERSHIP	SEGMENT LENGTH (MI)	TOTAL CRASHES (KSI CRASHES)	PED CRASHES (KSI CRASHES)	BIKE CRASHES (KSI CRASHES)	MOTORCYCLE CRASHES (KSI CRASHES)	MOTORVEHICLE CRASHES (KSI CRASHES)
102	WALLACE RD	Burnway Dr	Stonehedge Dr	1	Non-State	0.64	56 (5)	1 (1)	2 (0)	3 (1)	50 (3)
138	WORLD CENTER DR	SR 535	International Dr	1	Non-State	0.62	262 (6)	1 (0)	0 (0)	3 (1)	256 (5)
160	APOPKA-VINELAND RD	SR 535	Lake St	1	Non-State	0.38	106 (3)	4 (2)	1 (0)	0	101 (1)
191	APOPKA-VINELAND RD	Palm Lake Dr	Conroy Windermere Rd	1	Non-State	1.13	146 (9)	2 (1)	4 (0)	1 (0)	139 (8)
39	KELLY PARK RD	E Welch Rd	Faye St	2	Non-State	0.89	229 (11)	10 (1)	1 (0)	5 (1)	213 (9)
84	PINE HILLS RD	Silver Star Rd	Pinto Way	2	Non-State	2.56	515 (38)	22 (9)	7 (3)	10 (5)	476 (21)
115	CLARCONA OCOEE RD	Arden Oaks Dr	Pine Hills Rd	2	Non-State	2.90	530 (28)	6 (1)	9 (0)	7 (3)	508 (24)
176	EDGEWATER DR	John Young Pkwy	Orange Blossom Trl	2	Non-State	2.24	311 (12)	2 (2)	5 (1)	2 (0)	302 (9)
6	DEAN RD	Semoran Rd	Goldenrod Rd	3	Non-State	0.50	498 (16)	6 (0)	4 (1)	7 (3)	481 (13)
31	S ORANGE AVE	E Landstreet Rd	Taft Vineland Rd	3	Non-State	1.08	275 (16)	1 (0)	2 (0)	7 (2)	265 (14)
51	OAK RIDGE RD	Orange Blossom Trl	Orange Ave	3	Non-State	1.67	283 (24)	6 (5)	7 (1)	10 (5)	258 (13)
109	LAKE UNDERHILL RD	San Juan Blvd	S Dean Rd	3	Non-State	4.51	1041 (31)	3 (1)	7 (1)	20 (9)	1011 (20)
117	ALAFAYA TRL	Lake Underhill Rd	SR 50	4	Non-State	1.43	598 (17)	7 (3)	3 (0)	7 (1)	581 (13)
124	FAIRWAY WINDS BLVD	Osceola CL	SR 417	4	Non-State	1.52	280 (18)	2 (0)	2 (0)	7 (3)	269 (15)
133	AVALON PARK BLVD	Timber Springs Blvd	SR 50	4	Non-State	2.80	291 (22)	2 (0)	13 (4)	4 (1)	272 (17)
145	WETHERBEE RD	S. Orange Blossom Trl	S. Orange Ave	4	Non-State	1.88	276 (15)	3 (1)	2 (0)	6 (4)	265 (10)
64	FORSYTH RD	Green Needle Dr	N. of University Blvd	5	Non-State	0.72	95 (7)	1 (1)	6 (1)	6 (4)	82 (2)
104	UNIVERSITY BLVD	Semoran Blvd	Goldenrod Rd	5	Non-State	1.76	539 (15)	11 (1)	13 (1)	7 (2)	508 (11)
116	UNIVERSITY BLVD	Dean Rd	Alafaya Trl	5	Non-State	2.24	657 (36)	8 (4)	5 (1)	15 (5)	629 (26)
120	DEAN RD	SR 408	River Park Blvd	5	Non-State	2.10	364 (15)	8 (2)	7 (1)	9 (1)	340 (11)
5	PINE HILLS RD	Old Winter Garden Rd	SR 50	6	Non-State	0.73	335 (29)	10 (3)	5 (0)	4 (0)	316 (26)
34	HIAWASSEE RD	SR 50	Silver Star Rd	6	Non-State	1.76	696 (25)	8 (4)	3 (0)	8 (1)	677 (20)
21	OAK RIDGE RD	Millenia Boulevard	Orange Blossom Trl	6	Non-State	2.79	1249 (47)	41 (11)	12 (2)	13 (5)	1183 (29)
32	KALEY ST	Rio Grande Ave	Parramore Ave	6	Non-State	0.75	51 (8)	1 (0)	1 (1)	2 (1)	47 (6)



Vision Zero Action Plan Overview

Chapter 5: Toolkit and Prioritization

Orange County total cost of projected safety improvements projects is **\$2.8 Billion**

County Projects	Projected Costs (2025)
Safety Improvements	\$2.8B
Mobility & Accessibility Improvements	\$3.1B
Operations & Maintenance Improvements	\$1.9B
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Total Projected County Project Cost	\$7.8B

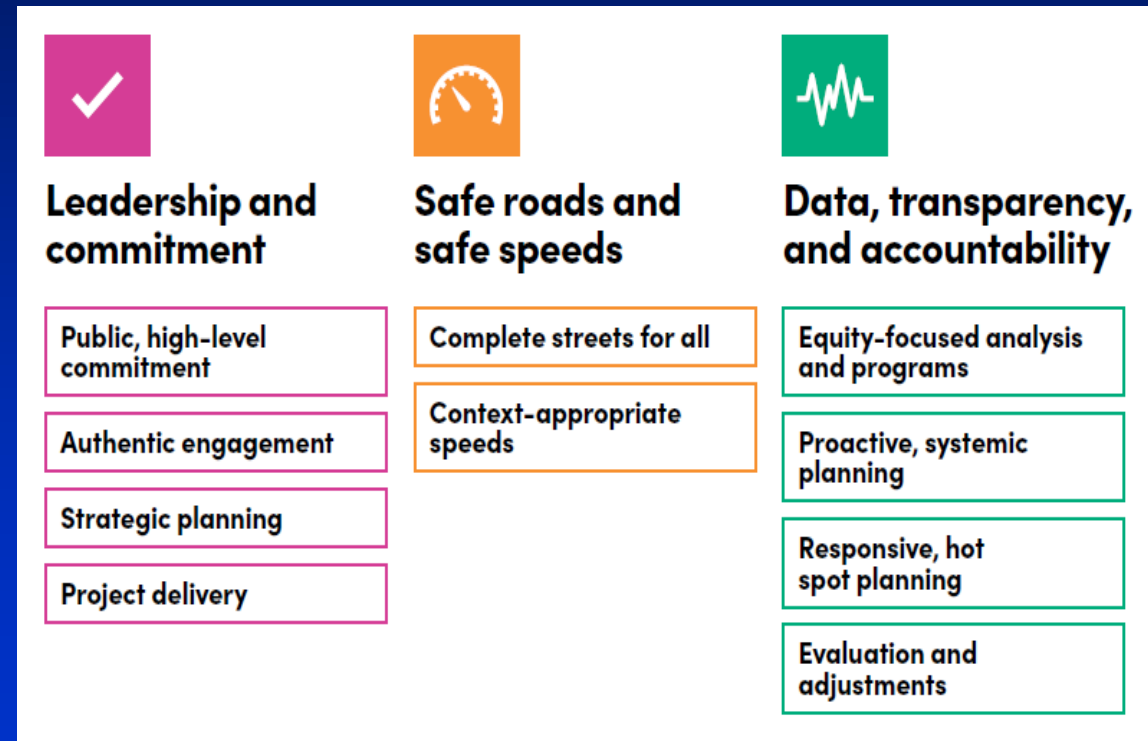


Vision Zero Action Plan Overview

Chapter 6: Plan Recommendations

- Develop implementation timeline
- Create performance measures
- Group actions by the core elements
- Monitor progress, adoption of new strategies as needed
- Provide funding for safety projects
- Track project progress through the dashboard
- VZAP will be refreshed or updated every five years

Vision Zero Core Elements





Vision Zero Action Plan Overview

Summary

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Resolution

Recitals

- **The Board declares that our crash statistics are unacceptable and can be eliminated by 2040**
- **Recognizes resolution 2022-M-42 and the County's commitment to Vision Zero, and that this resolution is intended to further this commitment**
- **Endorses the Safe System Approach as the foundation to Vision Zero**
- **The Vision Zero Action Plan has identified the County's highest priority corridors and safety countermeasures appropriate for implementation**



Resolution

- **Section 1: Adopts the Vision Zero Action Plan**
- **Section 2: Progress Monitoring**
 - Review crash data periodically to track progress and adjust strategy as necessary
- **Section 3: Vision Zero Priorities**
 - Address the roadway safety for vehicle, bicycle, and pedestrian modes through engineering, enforcement, education, equity, and technology applications
- **Section 4: Funding Commitment**
 - Seek funding through the CIP budget, partnerships, and local, state and federal grants
- **Section 5: Vision Zero Commitment**
 - Implementation of safety standard operating procedures through out the life of the projects
- **Section 6 Effective Date – Adopted on August 27th, 2024**



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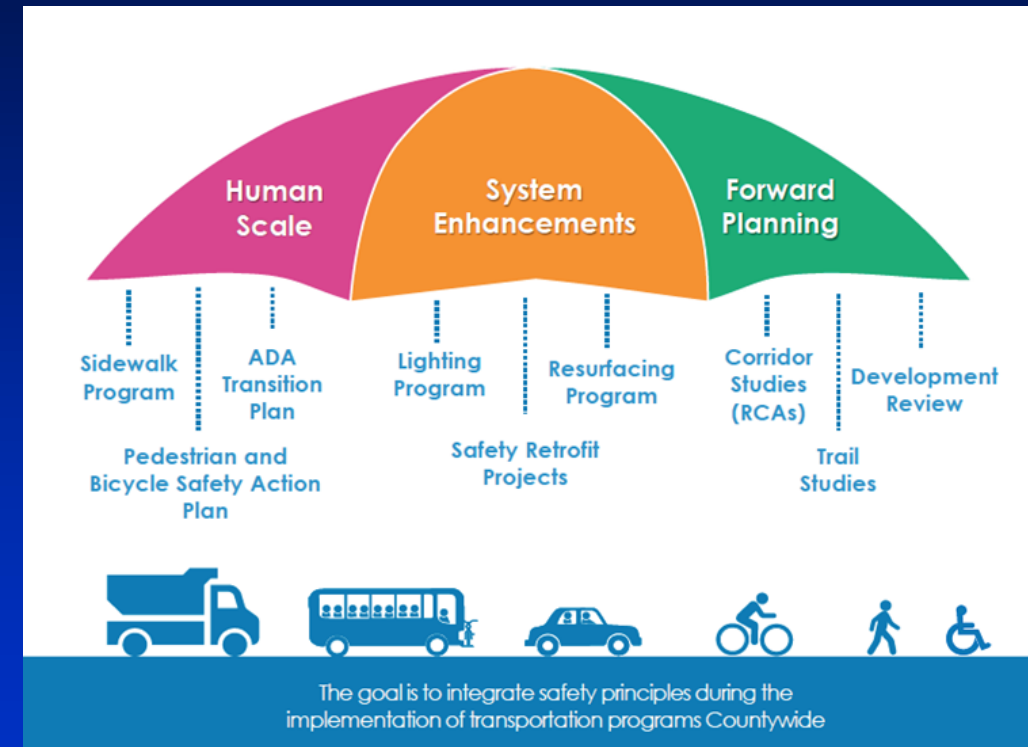


Implementation

- Approve the VZAP action plan
- Rank corridors with high crash rates along vulnerable populations to improve transportation safety and equity
- Select safety countermeasures based on the data-driven solutions
- Evaluate performance measures based on crash reductions
- Budget and schedule projects according to short, medium and long-term implementation phases
- Determine responsible Departments and/or Divisions
- Provide annual progress reporting to the Board
- Refresh Vision Zero Action Plan every five years

Implementation

- Integration of “Safety First” culture into all Programs, Projects and SOPs
 - Orange Code – adopts safety criteria and design standards for County roads
 - Vision 2050 – sets the planning principles and framework for safe and functional development infrastructure
 - Planning & Engineering – Incorporates safety countermeasures applicable to all projects
 - Construction – enforces safe work zones
 - Operations & Maintenance – preserves and integrates safety in all projects through SOPs





Implementation

CIP Design Projects

- Westwood Boulevard at Central Florida Parkway Intersection
- Avalon Road – US 192 to Hartzog Road
- Lake Underhill Road – Econlockhatchee Trail to Rouse Road
- Texas Avenue – Oakridge Road to Holden Avenue

ATSP Safety Projects

- Rio Grande – Holden Avenue to Gore Street
- Clarcona-Ocoee Road – Ocoee/Apopka to US441
- Seidel Road – Avalon Road to Summer Lake Park Boulevard
- Kirby Smith Road at North Shore Golf Club Intersection



Implementation

Accelerated Transportation Safety Program and Sales Tax Plan Improvements

Speed Management

- *Speed feedback signs*
- *Speed limit symbols striping*
- *Buffer bike lanes*
- *Roundabouts*
- *Narrowing of the travel lanes*

Access Management

- *Full/directional median openings*
- *Intersection/signal spacing*
- *Driveway spacing*
- *Median separators*
- *Turning/auxiliary lanes*

Pedestrian Safety

- *Sidewalk/curb ramps reconstruction*
- *Multi-use trails*
- *Intersection lighting improvements*
- *Pedestrian signal with raised crosswalk*
- *Rectangular rapid flashing beacons*

Traffic Calming

- *Speed cushions*
- *Mini roundabouts*
- *Raised pedestrian crosswalks*
- *Curb extensions*

Bus Shelters

- *Station marker*
- *Basic seating*
- *Overhead shelter*
- *Trash receptacle*
- *Solar lighting*
- *Maps and passenger information*
- *Fare media equipment*
- *Advertising panels*
- *Bicycle parking*
- *ADA accessibility*



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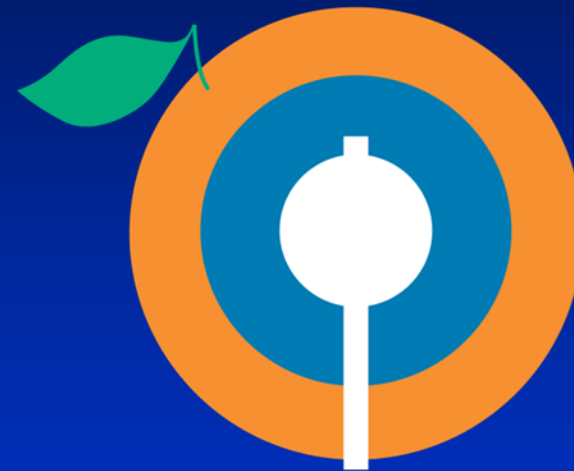
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- **VZAP will implement proven safety countermeasures to eliminate fatalities/severe injuries by 2040**
- **VZAP will create the framework and strategy for achieving the safety goals**
- **The Safe System Approach methodology will be applied to all transportation projects/programs countywide**
- **Safety Projects/Programs need a dedicated funding source to address shortfall of \$249 Million**
- **Additional funding sources must be pursued such as state shared sales tax, state and federal grants**



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VISION ZERO 
COUNTDOWN TO ZERO



Action Requested

- **Approval and execution of Resolution of the Orange County Board of County Commissioners regarding Orange County's Adoption of a Vision Zero Action Plan**

All Districts