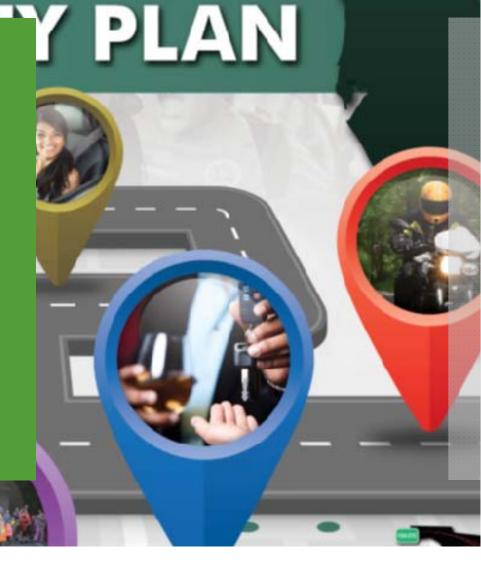


FLORIDA STRATEGIC HIGHWAY

Joe Santos, PE

State Safety Engineer, Florida Department of Transportation

FDOT D7 Local Agency Traffic Safety Academy
February 15, 2017



# FL SHSP: Part of a bigger plan.





#### Florida Transportation Plan Policy Element

December 2015

The Florida Transportation Plan (FTP) is the single overarching statewide plan guiding Florida's transportation future. It is a plan for all of Florida, created by, and providing direction to, the Florida Department of Transportation (FDOT) and all organizations that are involved in planning and managing Florida's transportation system, including statewide, regional, and local partners. The FTP includes a 50-year Vision Element, a 25-year Policy Element, and a five-year Implementation Element.

www.floridatransportationplan.com



#### Florida Strategic Highway Safety Plan

August 2016

The Strategic Highway Safety Plan (SHSP) was developed as a part of the FTP Implementation Element to address highway safety and aligns with the FTP Vision Element and FTP Policy Element. The SHSP is a statewide, data-driven safety plan for all of Florida's road users. The plan is the state's five-year comprehensive roadway safety plan for achieving Florida's vision of zero traffic-related fatalities. The SHSP includes 13 Emphasis Areas that guide Florida's safety efforts.

www.fdot.gov/safety/



For more information regarding the Strategic Highway Safety Plan please contact:

FDOT Safety Office (850) 414-3100

www.fdot.gov

For more information on the Florida Transportation Plan please contact:

FDOT Office of Policy Planning (850) 414-4800

# Florida Transportation Plan and Strategic Highway Safety Plan

#### Florida Transportation Plan Policy Element December 2015

- Single overarching statewide plan guiding Florida's transportation future
- Created by, and providing direction to, the Florida Department of Transportation (FDOT) and all organizations that are involved in planning and managing Florida's transportation system, including statewide, regional, and local partners.

#### Florida Strategic Highway Safety Plan August 2016

- Developed as a part of the FTP Implementation Element
- Statewide, data-driven safety plan for all of Florida's road users.
- five-year comprehensive roadway safety plan for achieving Florida's vision of zero traffic-related fatalities
- The SHSP includes 13
   Emphasis Areas that guide
   Florida's safety efforts.

Safety Partners **FDOT DHSMV FHP** FSA **FPCA MPOAC** FRE **FACERS FHWA NHTSA FMCSA** 



Vision:

**A Fatality Free Transportation System**  We support the national vision of "Toward Zero Deaths"

We share the vision of a

fatality-free roadway system

We serve as ambassadors of traffic safety, including the promotion of the Strategic Highway Safety Plan and its goals

Terry L. Rhødes, Executive Director

James Christian, Division Administrator

Colonel Gene Spaulding, Director

Mayor Susan Haynie, Chair

Federal Highway Administration

amer

Sheriff Bobby Schultz, Chairman

Tom Byron, P.E., Executive Director

Carmen Hayes, Regional Administrator National Highway Traffic Safety Administration

Chief Brett Railey, President 2015-2016

Ramon D. Gavarrete, P.E., Past-President Florida Association of County Engineers and Road Superintendents

Jeff Sanderson, Division Administrator Federal Motor Carrier Safety Administration

# Introduction

- Florida shares the national traffic safety vision
- SHSP is a statewide plan focused on 13 Emphasis Areas



# What's Inside...

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# How was the Strategic Highway Safety Plan developed?



# How Was the Strategic Highway Safety Plan Developed?

The 2016 SHSP was updated through collaboration with Florida's safety partners. It is aligned with and builds on the recently adopted FTP, the state's long-range transportation plan. Both the FTP and the SHSP share the vision of a fatality-free roadway system to protect Florida's 20 million residents and more than 105 million annual visitors.

The SHSP update process included:

- Analysis of safety data collected by FDOT, the Florida Department of Highway Safety and Motor Vehicles (DHSMV), and other sources to identify trends in
  the number of traffic fatalities and serious injuries and factors often associated with these events. All data presented in the SHSP are from DHSMV for 2011
  to 2015 unless otherwise noted. This plan was developed using the most recent data available at the time of plan approval.
- Consideration of extensive partner and public input gathered through the FTP update process in 2015. This process engaged more than 15,000 participants
  through a 35-member Steering Committee, four advisory groups, three statewide events, 13 regional forums and workshops, and more than 350 partner
  briefings. This input reaffirmed the state's commitment to maintaining a safe and secure transportation system for residents, visitors, and businesses. The
  process also highlighted several safety issues of concern to the public, including bicycle and pedestrian safety, commercial vehicles, the impacts of changing
  technologies, and the role of design and operational decisions in creating a safe environment.
- Coordination with eight strategic safety coalitions representing statewide, regional, and local partners from both the public and private sectors. These
  coalitions provided targeted input on the emphasis areas specifically related to their current strategic plans, and defined key strategies for the next five years.
- Coordination with Florida's 27 metropolitan planning organizations (MPOs), including review of safety-related goals, objectives, and strategies in MPO
  plans and targeted outreach sessions through Florida's Metropolitan Planning Organization Advisory Council.
- · Review and approval by:



















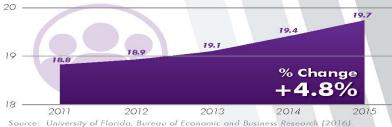


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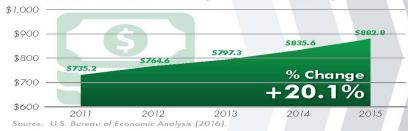
#### What Factors Influence Fatalities?







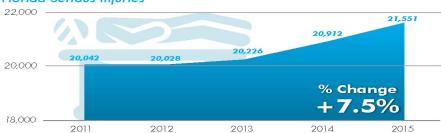
#### Florida Gross Domestic Product (in billions of dollars)



#### Florida Vehicle Miles Traveled (in billions)



#### Florida Serious Injuries



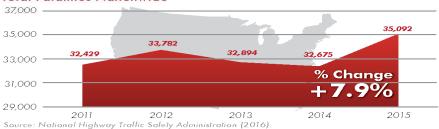
Source: Florida's Integrated Report Exchange System (FIRES) (2016).

#### Florida Fatality Rate

## 1.42 per 100 Million Vehicle Miles Traveled

Source: Florida Department of Transportation; Department of Highway Safety and Motor Vehicles (2016).

#### Total Fatalities Nationwide





# What Key Trends Are Shaping Florida's Transportation System?



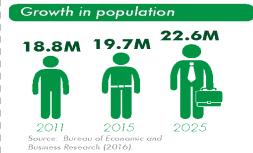
Source: U.S. Census Bureau (2013).

Source: Florida Department of Highway Safety and Motor Vehicles, (2016).

# More aging road users on Florida's roads of Florida's population will be 5 + by 2040 These users tend to have a harder time seeing, reacting to,

and recovering from events that cause crashes.

Source: Bureau of Economic and Business Research (2016).



Growth in visitors

159M

107M

87M

2011 2015 2025

Source: Florida Office of Economic and Demographic Research (2015).

How Can We Improve Safety On Both State and Local Roads?

#### Florida's Transportation System

#### State Highways

12,116 Centerline Miles10% of All Intersections60% of Total Fatalities

#### Local Roads

**108,264** Centerline Miles **88%** of All Intersections **39%** of Total Fatalities

#### Rail-Highway Crossings

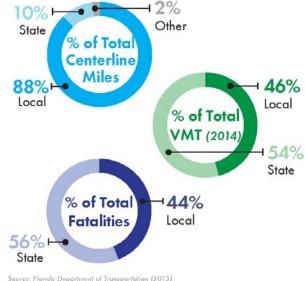
**3,731** Public At-Grade Crossings **1,245** Private At-Grade Crossings

#### Bicycle/Pedestrian

7,418 Miles of Bicycle Facilities on State Highway System
3,627 Miles of Pedestrian Facilities on State Highway System

Source: Florida Department of Transportation (2016)

#### Comparing State and Local Roads



Source: Florida Department of Transportation (2015).



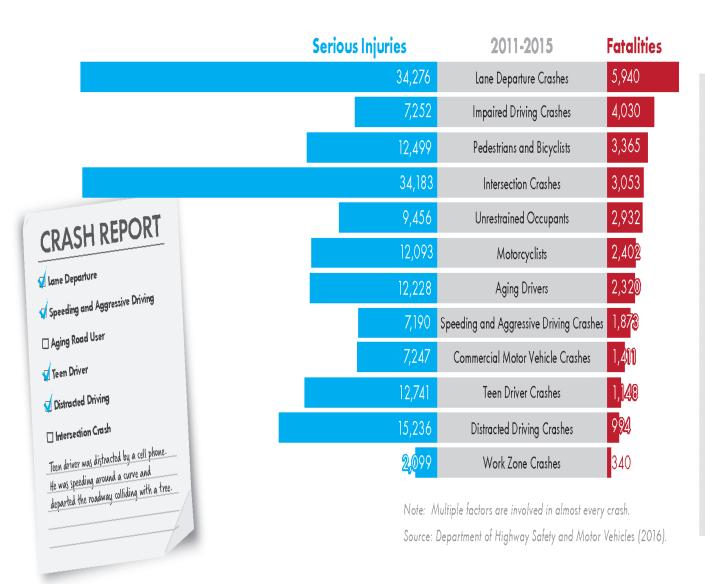
What are the 13 Emphasis Areas?



Education

**Emergency Response** 

# What are the 13 Emphasis Areas?



# What Are the Overarching SHSP Strategies?

## **Engineering**

Identify, develop, and deploy engineering solutions and best practices that encourage safe driving behavior and reduce roadway fatalities and serious injuries.

Incorporate policies and practices into roadway design, construction, operation, and maintenance that make Florida's transportation system safer for all users.

Ensure infrastructure design allows for safe and efficient access for first responders.

#### **Enforcement**

Increase targeted
enforcement activities
in high-crash locations and at
relevant times.

Increase enforcement of high-risk driving behaviors.

Coordinate with prosecutors and the courts to improve prosecution and adjudication of traffic safety-related cases.

# What Are the Overarching SHSP Strategies?

#### Education

Educate all road users on sharing the road.

Develop and implement communication strategies for all road users and improve public awareness of highway safety.

# Increase training and educational opportunities

for first responders and other traffic safety partners focused on reducing roadway-related fatalities and serious injuries.

Increase motorists' understanding of engineering solutions and best practices, and vehicle technologies that can reduce the number and injury severity of crashes.

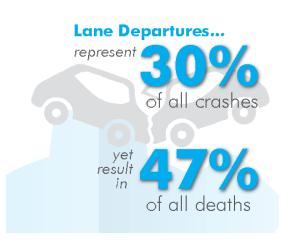
## Emergency Response

Improve emergency response time.

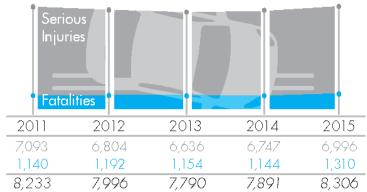
Provide training to first responders to improve trauma management.

Facilitate the quick clearance of traffic crashes.

# Lane Departure



#### Fatalities and Serious Injuries



- Use the Highway Safety Manual and other tools to identify the most prevalent crash types and contributing factors, and match the most effective countermeasures to reduce crashes where lane departures are a current problem and where there is future crash potential.
- Investigate and implement new and innovative countermeasures including best practices used by other jurisdictions.
- Focus enforcement and education efforts on driver risk factors that can cause a lane departure crash such as speeding, distracted driving, or impaired driving.
- Support efforts by MPOs and local governments to address safety on local and regional roads.

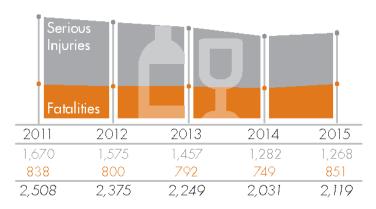
# Impaired Driving

Drivers refused to be tested for impairment in

35% of impaired driving crashes resulting in a fatality or serious injury

Source: National Traffic Highway Safety Administration (NHTSA).

#### Fatalities and Serious Injuries

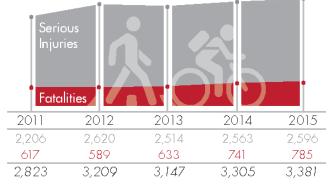


- Combine high-visibility enforcement with increased public awareness of the dangers, costs, and consequences of impaired driving, with emphasis on high-risk populations and locations.
- Reduce repeat impaired driving behavior through targeted enforcement, effective and efficient prosecution, enhanced penalties for subsequent offenses, and improved evaluation, intervention, and treatment of substance abuse.
- Identify opportunities to prevent or counteract impaired driving through training of law
  enforcement, court, and substance abuse treatment personnel, recognition of emerging trends and
  new best practices, use of tools such as ignition interlock devices, and revision of laws and rules.

# Pedestrians and Bicyclists



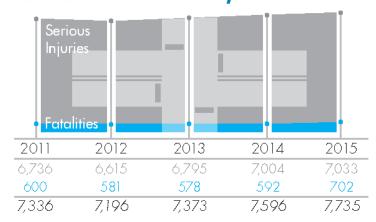
#### **Fatalities and Serious Injuries**



- Increase awareness and understanding of safety issues and compliance with traffic laws and regulations related to pedestrians and bicyclists.
- Develop and use a systematic approach to identify locations and behaviors prone to pedestrian and bicycle crashes and implement multi-disciplinary countermeasures.
- Create urban and rural built environments to support and encourage safe bicycling and walking.
- Support national, state, and local initiatives and policies that promote bicycle and pedestrian safety.

## Intersections

#### Fatalities and Serious Injuries



- Reduce the frequency and severity of crashes at intersections by limiting conflicts through geometric, traffic control, and lighting improvements.
- Institute and promote Highway Safety Manual analyses and road safety audits/assessments
  using multi-disciplinary teams to review the operations and safety for all intersection users.
- Use traditional and alternative designs and technologies to reduce conflict risks such as innovative interchange designs, access management, and roundabouts.
- Improve the awareness and visibility of traffic control devices so all users can safety navigate an intersection.

# Occupant Protection

Florida's safety belt use rate is

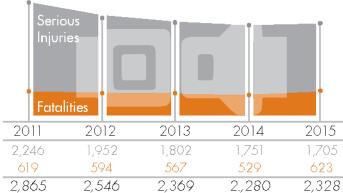
8940

National average is

8700

Source: National Highway Traffic Safety Administration (NHTSA).



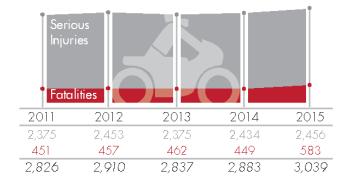


- Enforce occupant protection use laws, regulations, and policies to provide clear guidance to the public concerning motor vehicle occupant protection systems including those aimed at children.
- Determine which population groups are at highest risk for not wearing safety belts, and develop culturally relevant public education and outreach to increase awareness of the benefits of safety belt use among these groups.
- Develop and implement programs that use the media, including social media, to improve public awareness of the importance of safety belts.

# Motorcyclists



#### Fatalities and Serious Injuries

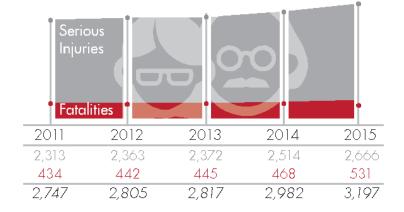


- Improve the skill levels of motorcyclists through increased participation in rider education programs and proper license endorsements.
- Promote the safe operation of motorcycles, including sharing the road, responsible riding, and the use of personal safety gear.
- Consider the unique vulnerabilities and characteristics of motorcyclists when designing and improving transportation infrastructure.

# Aging Road User

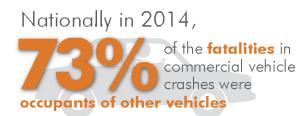


#### Fatalities and Serious Injuries



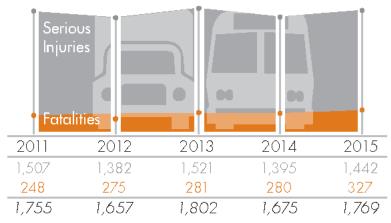
- Promote and educate drivers on comprehensive driving evaluations and safety strategies to prevent crashes.
- Expand transportation choices and promote community design features to meet the mobility needs of an aging population.
- Develop and distribute resources and tools to support safe driving skills and encourage early planning to safely transition from driving.

# Commercial Motor Vehicles





#### Fatalities and Serious Injuries

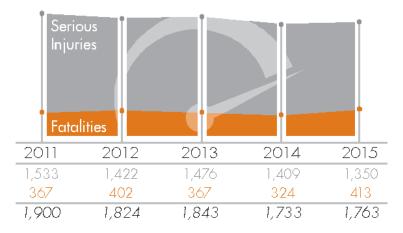


- Conduct targeted enforcement for violations in high crash locations associated with commercial vehicles.
- Use public awareness program, outreach efforts, and social media to increase motorist awareness of safe driving around commercial vehicles.
- Collaborate with the trucking and bus industry on programs and initiatives to improve safety and reduce crashes.

# Speeding and Aggressive Driving



#### Fatalities and Serious Injuries

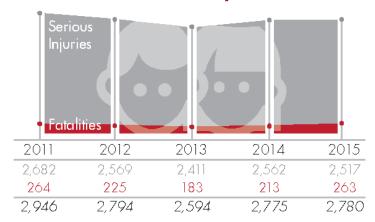


- Enforce speeding and aggressive driving laws by focusing on high-risk locations.
- Incorporate technology and other innovations at high risk locations.
- Evaluate crash hot spots and implement appropriate engineering countermeasures to control speed and reduce aggressive driving behavior.
- Conduct community-based public awareness and education regarding speeding and aggressive driving.

## **Teen Drivers**



#### Fatalities and Serious Injuries



- Educate stakeholders about the potential safety benefits of improving Florida's Graduated
   Driver Licensing law to include passenger and cell phone restrictions.
- Educate parents, caregivers, and role models on the dangers of impaired driving for teen
  drivers including the prohibition on providing alcohol or drugs to anyone under the age of 21.
- Work with law enforcement agencies to increase enforcement of GDL and other traffic safety laws including safety belt use and impaired driving.

# Distracted Driving

At any given daylight moment across America,

660,000

DRIVERS 

USING CELL PHONES

or manipulating electronic devices while driving

Source: NHTSA, One Text or Call Could Wreck It All, Traffic Safety Marketing.

#### Fatalities and Serious Injuries

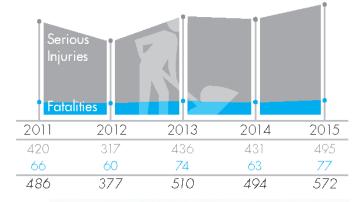


- Implement effective roadway design and operation practices such as rumble strips and stripes and flashing beacons with warning signs to mitigate lane departures, speeding, and other symptoms of distracted driving and to reduce congestion and improve mobility.
- Change societal attitudes about distracted driving through intensive public education activities.
- Collaborate with other public and private organizations to offer innovative solutions such
  as policies that prohibit distracted driving when using company or organization vehicles.

## **Work Zones**



#### **Fatalities and Serious Injuries**



- Apply advanced technology to improve work zone safety such as automated work zone information systems, simplified dynamic lane merge systems, portable changeable message signs, and queue warning systems.
- Educate road users about work zone safety and provide timely and accurate information regarding active work zones.
- Determine the feasibility and effectiveness of other improvements including installing reflectors on barrier walls, spacing on curves, changes in the penalties and fines to contractors for getting out of the roadway late, using of crash cushions, and correcting pavement marking errors.
- Work with law enforcement, contractors, and FDOT personnel to reduce speeding in and around work zones through a comprehensive approach of increased fines and increased law enforcement contacts.

# Traffic Records and Information Systems





- Develop and maintain complete, accurate, uniform, and timely traffic records data.
- Promote the use of traffic records data for decision-making purposes and ensure its accessibility.
- Facilitate collaboration of multi-agency initiatives and projects that improve traffic records information systems.
- Create the same key data fields and definitions among Florida's six data systems to allow end users to link traffic records data.

# Transition to Implementation

Emphasis area coalitions are charged with implementing the strategies of the SHSP. These coalitions represent a variety of federal, state, regional, local, and advocacy organizations whose expertise and interests include multiple modes of transportation, as well as engineering, education, enforcement, and emergency response. The coalitions meet regularly, and develop and track progress on detailed data-driven strategic plans that focus on proven strategies and activities to drive down fatalities and serious injuries.

#### Florida's Highway Safety Coalitions

Lane Departure and Intersection Coalition
Florida Impaired Driving Coalition
Florida Pedestrian and Bicycle Safety Coalition
Safe Mobility for Life Coalition
Florida Motorcycle Safety Coalition
Teen Safe Driving Coalition
Florida Traffic Records Coordinating Committee
Work Zone Safety Coalition

(review plans at http://www.fdot.gov/safety)

# How do we collaborate across jurisdictions modes, and disciplines?

- Continue to support Florida's existing safety coalitions to coordinate with stakeholders to drive down fatalities in specific emphasis areas.
- Establish ad hoc working groups or additional coalitions for the commercial motor vehicle, distracted driving, occupant protection, and speeding/aggressive driving emphasis areas that do not presently have established coalitions.
- Coordinate with Florida's MPOs and local governments on SHSP emphasis area implementation and future updates of their safety plans and programs.
- Continue to encourage **multi-disciplinary approaches to safety improvements** that consider engineering, education, enforcement, and emergency response solutions.
- Coordinate with land use, public health, and other partners to ensure safety considerations are a top priority in planning decisions related to transportation.

# How do we embrace innovation in all aspects of highway safety?

- Invest in research and evaluation of new technologies and practices that can reduce highway fatalities and serious injuries.
- Plan to use technology to improve communication across modes and design "smart streets" that provide information to all travelers to reduce conflicts.
- Monitor and evaluate innovations that may change travel behavior and demand for potential impact to safety.
- Update state and local safety plans and regulations to consider technologies and innovation that may reduce fatalities and serious injuries.

#### How do we better serve our customers?

- Communicate clear and consistent safety messages
  using a variety of mediums and venues that engage roadway
  users in their role in Driving Down Fatalities.
- Create transportation environments that are accommodating and safe for all roadway users.
- Educate roadway users on how to use new infrastructure and technologies, such as roundabouts and signalized crosswalks.
- Understand how changes in travel demand, preferences, and options impact highway safety.

# How do we improve data and performance?

- Commit to ongoing improvements in the quality, integration, and analysis of various traffic records data, including innovative uses of new and emerging data sources.
- Create a long-term strategy for managing traffic records data as a critical resource for highway safety agencies' and partners' decision-making and research, including data storage, sharing, privacy, and quality issues.
- Commit to ongoing highway safety research to identify proven strategies, programs, and initiatives that can be replicated across the state to realize further reductions in highway fatalities and serious injuries.
- Implement innovative techniques to measure progress and guide investment decisions to continuously improve traffic safety.
- Work with MPOs to coordinate target setting and performance measures
  between the state and local plans, consistent with federal requirements.

## Call To Action

To successfully implement the SHSP, all stakeholders should commit to:

- **Update** their safety plans, including other state, coalition, MPO, and local government plans, to align with the FTP and SHSP zero fatality vision.
- **Demonstrate** support and promote the SHSP vision of zero fatalities by implementing SHSP strategies on state, regional, and local transportation safety agency and organization websites.
- **Promote** initiatives that increase roadway users' understanding of the state's most significant traffic safety problems and their role in reducing fatalities and serious injuries.
- **Support** national, state, and local initiatives, policies, and safety projects that promote highway safety

Safety for Florida's residents and visitors is a top priority for the state that can only be achieved with the help of safety partners. Florida's traffic safety community must continue to work together to identify and implement innovative solutions that help reduce fatalities and serious injuries on Florida's roadway system. As we continue to work together, engage new partners, and follow through with the strategies outlines in the SHSP, we are confident that we can drive down roadway fatalities and serious injuries.

For more information please visit:

# www.fdot.gov/safety/





















# SHSP Resources

- Florida Strategic Highway Safety Plan
  - http://www.fdot.gov/safety/SHSP2012/SHSP-2012.shtm
- FDOT Crash Data Academy
  - <a href="http://www.fdot.gov/safety/11A-SafetyEngineering/crash%20data%20academy/academy.shtm">http://www.fdot.gov/safety/11A-SafetyEngineering/crash%20data%20academy/academy.shtm</a>

#### 2016 Crash Data Academy

academyrecording/SSOGis.mp4

#### **Presentations**

Vulnerable Road Users, Part 1 (October 27, 2016)

Traffic Crash Facts and the FIRES Portal (September 29, 2016)

Crash Investigation Process ( August 25, 2016)

Florida's New Strategic Highway Safety Plan (August 1, 2016)

**\$\$0GI\$** (June 23, 2016)

GIS Data (May 19, 2016)

CAR Online (April 24, 2016)

Crash Report Overview (March 24, 2016)

#### Recordings

Vulnerable Road Users, Part 1

Traffic Crash Facts and the FIRES Portal

**Crash Investigation Process** 

Florida's New Strategic Highway Safety Plan

SSOGIS GIS Data

**CAR Online** 

**Crash Report Overview** 

For more information contact Benjamin Jacobs@ benjamin.jacobs@dot.state.fl.us



# **QUESTIONS?**

Joe Santos, PE

State Safety Engineer, Florida Department of Transportation

FDOT D7 Local Agency Traffic Safety Academy

February 15, 2017

