

# FLORIDA PEDESTRIAN AND BICYCLE STRATEGIC SAFETY PLAN

SAFETY DOESN'T HAPPEN BY ACCIDENT



# Florida Pedestrian and Bicycle Strategic Safety Plan

Prepared by

**The Center for Urban Transportation Research  
University of South Florida**

Prepared for

**Florida Department of Transportation**

February 2013



# Table of Contents

1.0	Introduction.....	1
1.1	Florida Strategic Highway Safety Plan.....	1
1.2	Florida’s Challenge.....	1
1.3	Purpose of the PBSSP.....	3
1.4	PBSSP Development Process.....	3
1.4.1	Pedestrian Safety Assessment.....	4
1.4.2	Pedestrian 101 Training.....	4
1.4.3	Pedestrian and Bicycle Safety Statewide Meetings.....	4
1.5	Florida Pedestrian and Bicycle Safety Coalition.....	5
1.6	Pedestrian and Bicycle Safety Stakeholders.....	5
1.6.1	Public Agencies.....	5
1.6.2	Private Organizations.....	6
1.6.3	Citizens.....	6
2.0	Pedestrian and Bicycle Crash Analysis.....	7
2.1	Top Ten Highest Priority Counties.....	7
2.2	Pedestrian and Bicycle Crash Characteristics.....	9
2.2.1	Injuries and Fatalities.....	9
2.2.2	Age.....	12
2.2.3	Residence.....	14
2.2.4	Location.....	14
2.2.5	Time of Occurrence.....	16
2.2.6	Alcohol.....	18
2.2.7	Pedestrian Action.....	19
3.0	Pedestrian and Bicycle Strategic Safety Plan.....	20
3.1	Vision.....	20
3.2	Mission.....	20
3.3	Goal.....	20
3.4	Emphasis Areas.....	20
3.5	Data, Analysis, and Evaluation.....	20
3.6	Driver Education and Licensing.....	23
3.7	Highway and Traffic Engineering.....	24
3.8	Law Enforcement and Emergency Services.....	26
3.9	Communication Program.....	28
3.10	Outreach Program.....	29
3.11	Legislation, Regulation, and Policy.....	32
	Appendix.....	34

## List of Tables

Table 2-1. Percent of Pedestrian Fatalities Involving Specified Body Regions.....	11
Table 2-2. Pedestrian Traffic Fatalities in Florida by Nature of Injury (2009-2011).....	11
Table 2-3. Percentage of Pedestrian Crashes by Residency .....	14
Table 2-4. Crash Rates per 100,000 Persons for Florida Residents Involving Impaired Driving .....	18
Table 2-5. Pedestrian Fatalities, Injuries and Crashes Caused by Impaired Driving.....	19
Table A-1. Pedestrian Fatality History by County.....	34
Table A-2. Pedestrian Injuries by County .....	35
Table A-3. Bicycle Fatality History by County .....	36
Table A-4. Bicycle Injuries by County.....	37
Table A-5. Pedestrian and Bicycle Safety Coalition Membership.....	38

## List of Figures

Figure 1-1. Pedestrian fatality rates per 100,000 persons.....	2
Figure 1-2. Bicycle fatality rates per 100,000 persons. ....	2
Figure 2-1. Pedestrian fatalities and injuries in top 10 counties.....	8
Figure 2-2. Bicycle fatalities and injuries in top 10 counties. ....	8
Figure 2-3. Injury severity of pedestrian crashes.....	9
Figure 2-4. Pedestrian crash injuries in Florida by year. ....	10
Figure 2-5. Pedestrian traffic fatalities in Florida by age and year.....	12
Figure 2-6. Hospitalizations in Florida for nonfatal injuries sustained in pedestrian traffic crashes by age and year. ....	13
Figure 2-7. Emergency room visits in Florida for nonfatal injuries sustained in pedestrian traffic crashes by age and year.....	14
Figure 2-8. Statewide pedestrian crashes by site location.....	15
Figure 2-9. Distribution for pedestrian crashes by time of day. ....	16
Figure 2-10. Distribution for pedestrian crashes by day of week. ....	17
Figure 2-11. Distribution of pedestrian crashes by month.....	17
Figure 2-12. Statewide pedestrian crashes by pedestrian action.....	19

# 1.0 Introduction

## 1.1 Florida Strategic Highway Safety Plan

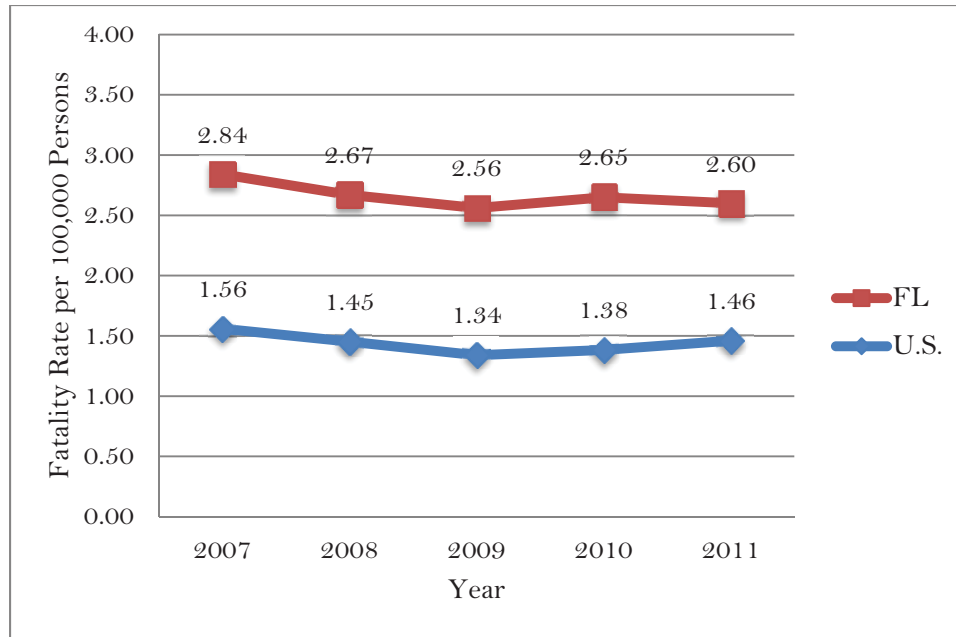
The Florida Strategic Highway Safety Plan (SHSP) is aimed at providing a comprehensive framework for reducing traffic fatalities and serious injuries on all public roads. The SHSP establishes targeted statewide goals, objectives, and key emphasis areas developed in consultation with federal, state, local, and private sector safety stakeholders. The key areas addressed in the SHSP are aggressive driving, intersection crashes, vulnerable road users, lane departure crashes, impaired driving, at-risk drivers (aging road users and teens), distracted driving, and traffic data. It addresses pedestrian and bicycle safety issues in the Vulnerable Road Users emphasis area where the goal is to reduce the rate of fatalities, injuries, and crashes of those users. The Florida Pedestrian and Bicycle Strategic Safety Plan (PBSSP) supplements and expands on the SHSP by providing more detailed objectives and strategies to improve pedestrian and bicycle safety in Florida.

## 1.2 Florida's Challenge

The 2011 Florida pedestrian fatality rates were nearly double the national average and bicycle fatality rates were nearly triple the national average. Based on the National Highway Traffic Safety Administration (NHTSA) Traffic Safety Facts reports, Florida had the highest pedestrian fatality rate among all states in 2011, 2.60 pedestrian fatalities per 100,000 persons. While the Florida pedestrian fatality rate declined slightly in 2011 compared to 2010, the bicycle fatality rate increased from 0.40 fatalities per 100,000 persons, to 0.63.

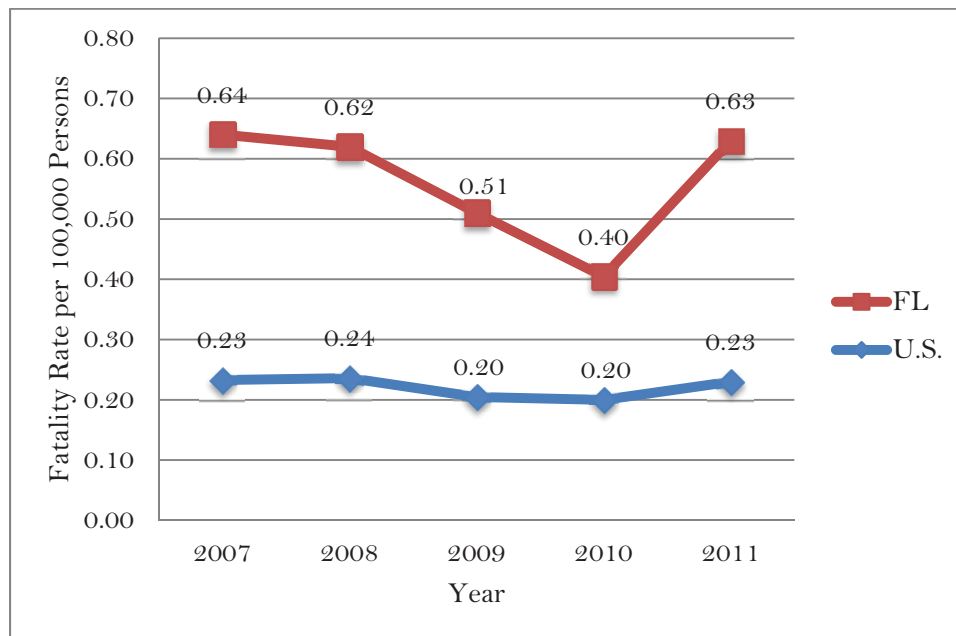
Florida represented six percent of the U.S. population in 2011, but accounted for 11 percent of all U.S. pedestrian fatalities and 17.4 percent of all U.S. bicycle fatalities. According to the "Dangerous by Design" report, Florida has the top four metropolitan areas on the list of most dangerous large metro areas for walking in the U.S.: 1) Orlando-Kissimmee, 2) Tampa-St. Petersburg-Clearwater, 3) Jacksonville, and 4) Miami-Fort Lauderdale-Pompano Beach.

Figure 1-1 and Figure 1-2 show the national and Florida trends related to pedestrian and bicycle fatalities from 2007 to 2011, based on the available data from the NHTSA Fatality Analysis Reporting System (FARS).



**Figure 1-1. Pedestrian fatality rates per 100,000 persons.**

*Source: NHTSA FARS.*



**Figure 1-2. Bicycle fatality rates per 100,000 persons.**

*Source: NHTSA FARS.*

Pedestrians and bicyclists are considered vulnerable road users because of the lack of protection in case of a crash. The number of hospitalizations and emergency room visits related to pedestrian and bicycle crashes show that the magnitude of the problem extends beyond what police reported crashes show. In 2010, pedestrian traffic crashes in

Florida resulted in 499 fatalities, 2,072 nonfatal hospitalizations, and 7,650 nonfatal emergency room (ER) visits.

Finally, the financial impacts and burdens of pedestrian fatalities and injuries are significant and the full extent unknown. Based on the emergency room discharge data from the Florida Agency for Health Care Administration (2008-2010), the reimbursement sources for hospitalizations are commercial insurance (41%), self-pay or under insured (34%), Medicaid (16%), and Medicare (7%).

### **1.3 Purpose of the PBSSP**

The purpose of Florida's Pedestrian and Bicycle Strategic Safety Plan (PBSSP) is to focus funding and resources on the areas that have the greatest opportunity to reduce pedestrian and bicycle fatalities, injuries, and crashes. The PBSSP is designed to provide a comprehensive strategy to address pedestrian and bicycle safety issues by identifying goals, objectives, strategies, tasks, and performance measures for key program areas. The five-year plan will provide guidance to the FDOT Bicycle/Pedestrian Safety Program and key stakeholders concerned with improving pedestrian and bicycle safety, including the Florida Department of Highway Safety and Motor Vehicles (DHSMV), the Florida Department of Health (DOH), law enforcement, local governing agencies, and pedestrian and bicycle safety advocates. The PBSSP will make great strides to meet the Florida Strategic Highway Safety Plan's goal to achieve a five percent annual reduction in the actual number of fatalities and serious injuries for pedestrians and bicycles.

The Florida Department of Transportation (FDOT) is the designated lead agency for the PBSSP and provides funding support.

### **1.4 PBSSP Development Process**

The development of the PBSSP spanned a one-year period between January 2012 and January 2013. The process began with Florida Transportation Secretary Ananth Prasad's initiation of a Bicycle/Pedestrian Focused Initiative to begin addressing the safety issues identified in a report released by a national transportation safety coalition, Transportation for America. In October 2011, Secretary Prasad appointed FDOT District 1 Secretary Billy Hattaway to lead the Bicycle/Pedestrian Focused Initiative and serve as a champion for Florida's pedestrian and bicycle safety. In March 2012, Ms. Lora Bailey Hollingsworth was selected to serve as the FDOT Chief Safety Officer to provide guidance and full support on the initiative to reduce pedestrian and bicycle fatalities, injuries, and crashes in Florida. In May 2012, Ms. Trena McPherson was appointed by Ms. Hollingsworth as the State Bicycle/Pedestrian Safety Program



Manager to develop Florida's Pedestrian and Bicycle Strategic Safety Plan, form a Florida Pedestrian and Bicycle Safety Coalition, and lead the Coalition to vigorously implement the plan. The FDOT Safety Office involved a wide range of safety partners throughout the process. The following sections describe the key activities conducted to develop the PBSSP.

#### **1.4.1 Pedestrian Safety Assessment**

The National Highway Traffic Safety Administration (NHTSA) assembled a multidisciplinary Technical Assessment Team (TAT) of national experts to conduct a thorough review of the state's pedestrian safety efforts. The technical assessment was conducted in Tallahassee between January 8 and 13, 2012. Arrangements were made for state program experts and key individuals to deliver briefings and provide support materials to the TAT over a five-day period. Based on the assessment results, the TAT provided recommendations for improvement. The recommendations played an integral role in the development of the PBSSP. The plan outlines objectives and strategies to accomplish the recommendations and action steps desired by stakeholders.

#### **1.4.2 Pedestrian 101 Training**

The Florida Public Safety Institute hosted NHTSA's Pedestrian 101 training in Tallahassee, Florida, May 30-31, 2012. The National Highway Institute (NHI), in partnership with the National Highway Traffic Safety Administration (NHTSA), designed a course, Pedestrian Safety Program Management, on how to manage a comprehensive program to reduce pedestrian crashes and create more walkable communities. This course is designed so that those involved in pedestrian safety can gain the skills and knowledge to manage a successful and sustainable pedestrian safety program. Materials for the course were developed by the Transportation Safety Institute (TSI), an agency whose parent organization is the Research and Innovative Technology Administration (RITA) within the U.S. Department of Transportation (DOT). The two-day course was instructed by FDOT and NHTSA trainers.

#### **1.4.3 Pedestrian and Bicycle Safety Statewide Meetings**

FDOT sponsored a series of roundtable discussions to gain stakeholder input on the PBSSP; learn what strategies are being used to improve pedestrian and bicycle safety; hear thoughts about effective programs, regulations, and other opportunities to improve pedestrian safety; and identify a core group of persons committed to pedestrian safety improvement to serve on a coalition.

Roundtable discussions were held at the following locations and dates:

- Tampa, Florida, August 6, 2012
- Bartow, Florida, August 6, 2012
- Miami, Florida, August 7, 2012
- Ft. Lauderdale, Florida, August 8, 2012
- DeLand, Florida, August 9, 2012
- Jacksonville, Florida, August 10, 2012

The roundtable discussions allowed participants to offer recommendations for improving the PBSSP and to recruit their participation and commitment to help implement the plan.

## **1.5 Florida Pedestrian and Bicycle Safety Coalition**

The purpose of the Coalition is to prioritize and implement the strategies identified in the PBSSP to reduce pedestrian and bicycle related fatalities, injuries, and crashes in Florida. The State Bicycle/Pedestrian Safety Program Manager, Ms. Trenda McPherson, facilitated the establishment of a Florida Pedestrian and Bicycle Safety Coalition to help implement the PBSSP. The Coalition includes representatives from the Florida Department of Transportation, Department of Highway Safety and Motor Vehicles, Florida Highway Patrol, Department of Health, Florida Emergency Medical Services, Florida Committee on Trauma, Florida Public Transportation Association, the University of South Florida, Florida Sheriff's Association, Florida Police Chiefs Association, Florida Judicial Outreach Liaison, Lynx Orlando, Florida Bicycle Association, AAA Auto Club South, and many other safety advocates. The Coalition meets regularly to discuss and update the progress on implementing the PBSSP.

## **1.6 Pedestrian and Bicycle Safety Stakeholders**

Many agencies, organizations, and groups have responsibilities and interests in pedestrian and bicycle safety issues. NHTSA identified the programs and activities that make up a comprehensive pedestrian and bicycle safety program. The PBSSP provides a plan for the implementation process.

### **1.6.1 Public Agencies**

Several state agencies play key roles in the pedestrian safety planning process. FDOT houses several offices that are focused on pedestrian and bicycle safety. The State Safety Office manages the Pedestrian and Bicycle Program and the Safe Routes to School Program. The Office of Design, State Traffic Engineering and Operations Office, Office

of Maintenance, Office of Construction, and Office of Materials provide transportation services that must integrate pedestrian and bicycle safety into their work.

The Bicycle/Pedestrian Partnership Council will promote the livability, health, and economic benefits of bicycle and pedestrian activity by serving as a forum to provide guidance to FDOT, its partners, and other stakeholders on policy matters and issues affecting the bicycle and pedestrian transportation needs of Florida.

The Florida DHSMV houses the Florida Highway Patrol (FHP), the Division of Driver Licenses, and the Division of Motor Vehicles. Each of these divisions provides key input into the pedestrian and bicycle safety planning process because of its enforcement, licensing, and vehicle registration responsibilities.

The Department of Health is involved in promoting physical activity including walking and bicycling through a variety of programs and initiatives. The Department of Health's Division of Emergency Medical Operations is responsible for oversight of emergency medical services, emergency operations, public health preparedness, injury prevention, trauma, and brain and spinal cord injury.

Local agencies are also key players in the implementation of pedestrian and bicycle safety strategies. Local law enforcement agencies, community traffic safety teams (CTST), planning and engineering departments, school districts and public health agencies are responsible for implementing programs to reduce pedestrian and bicycle crashes and educate the public.

### **1.6.2 Private Organizations**

Pedestrian and bicycle advocacy groups, safety and health organizations, as well as business partners are also involved in the pedestrian and bicycle safety planning process. These organizations advocate for safe conditions for pedestrians and bicycles and may provide pedestrian and bicycle safety information to the community and the general public.

### **1.6.3 Citizens**

Walking and biking advocates and enthusiasts participate in planning activities related to pedestrian and bicycle safety. These groups generally provide a public viewpoint on legislation, enforcement activities, and proposed strategies to improve pedestrian and bicycle safety.

## 2.0 Pedestrian and Bicycle Crash Analysis

A number of factors are associated with pedestrian and bicycle crashes. Understanding these factors will help the Coalition to identify goals and strategies to address pedestrian and bicycle safety issues. The following sections identify the locations and factors that uniquely contribute to pedestrian and bicycle crashes in Florida.

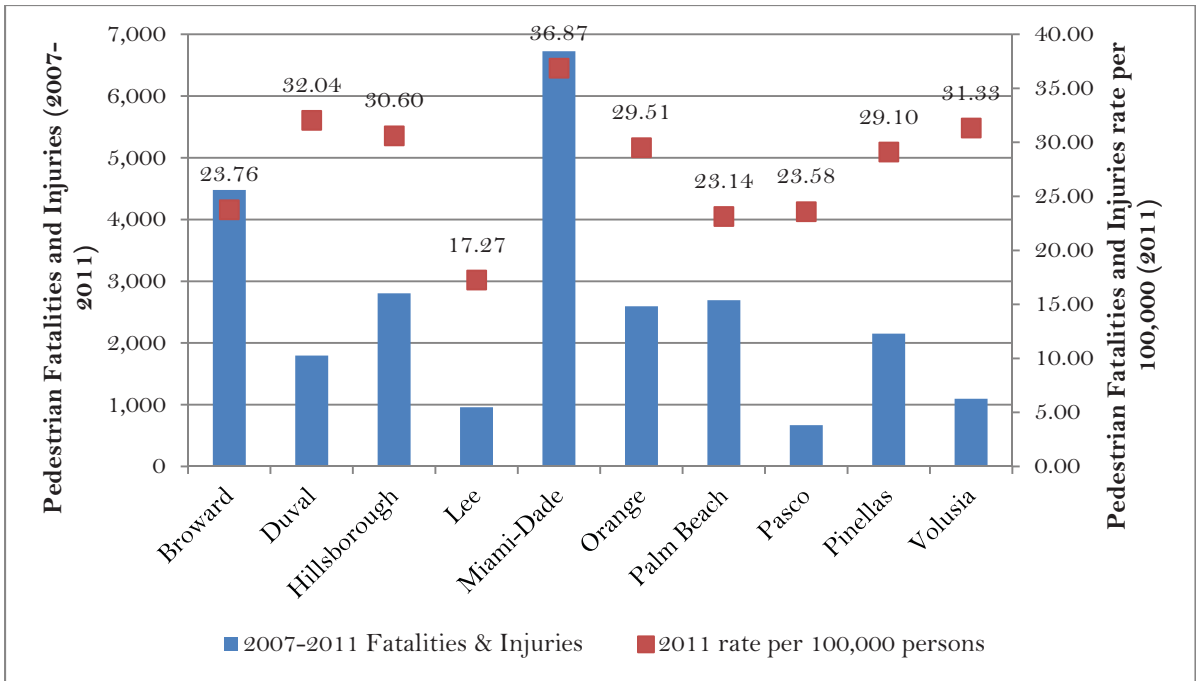
### 2.1 Top Ten Highest Priority Counties

According to the Florida DHSMV Traffic Crash Statistics Reports, the ten counties with the highest number of pedestrian fatalities and injuries for 2007-2011 are as follows:

<u>Fatalities</u>	<u>Injuries</u>
1. Miami-Dade	1. Miami-Dade
2. Broward	2. Broward
3. Orange	3. Palm Beach
4. Hillsborough	4. Hillsborough
5. Palm Beach	5. Orange
6. Pinellas	6. Pinellas
7. Duval	7. Duval
8. Volusia	8. Volusia
9. Polk	9. Lee
10. Lee	10. Polk

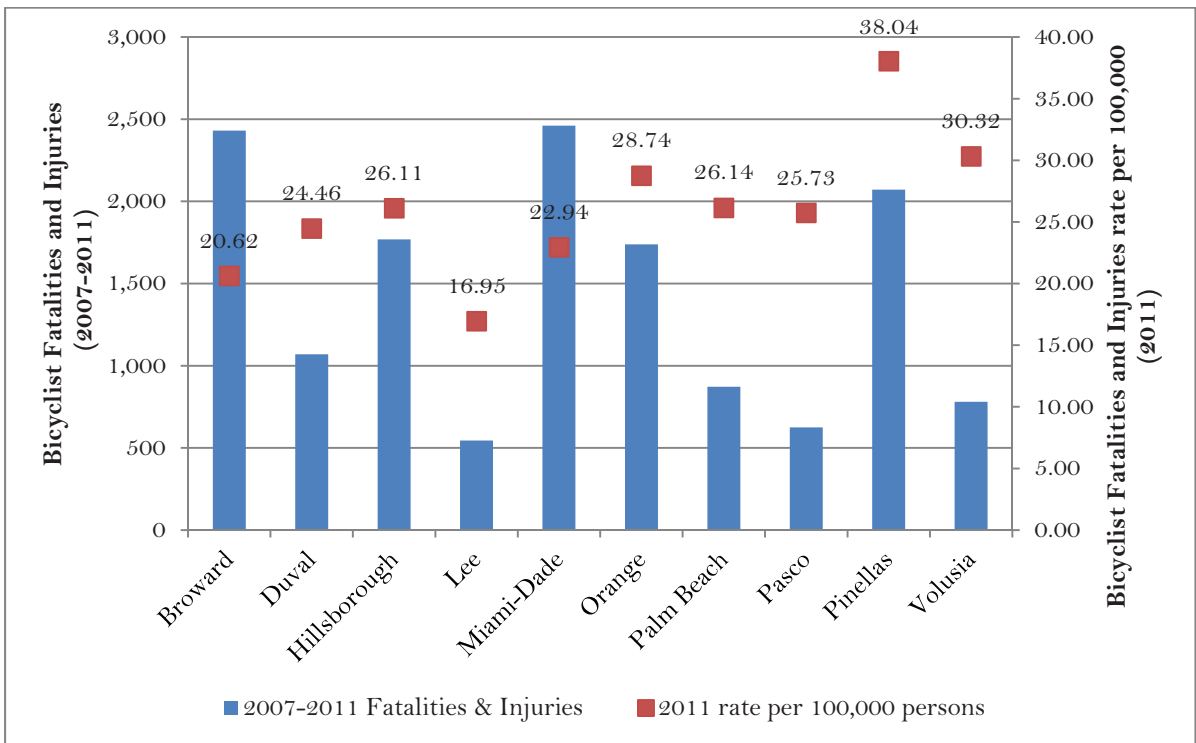
Initial efforts will focus on the following top ten counties (based on the combination of pedestrian fatality and injury totals for 2007 to 2011 from FDOT Crash Analysis Reporting System -CARS): Miami-Dade, Broward, Hillsborough, Orange, Palm Beach, Pinellas, Duval, Pasco, Volusia, and Lee as shown in Figure 2-1. Rollout of the program will eventually be statewide as implementation of the PBSSP progresses.

Between 2007 and 2011, there were 532 bicycle fatality crashes on Florida roads and highways, and 21,935 were injured. The top 10 counties in Florida with the highest number of bicycle fatalities and injuries during this time period were as follows: Broward, Miami-Dade, Pinellas, Hillsborough, Orange, Duval, Palm Beach, Pasco, Lee, and Alachua (Figure 2-2). These counties represented 62 percent of bicycle fatalities and injuries in Florida from 2007 through 2011.



**Figure 2-1. Pedestrian fatalities and injuries in top 10 counties.**

*Source: FDOT CAR System.*



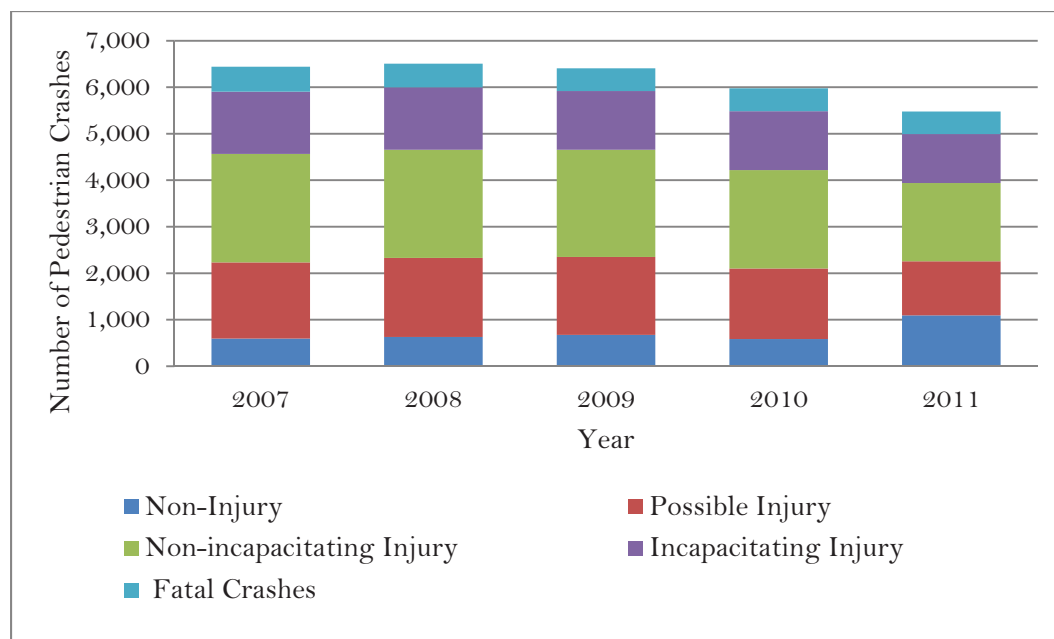
**Figure 2-2. Bicycle fatalities and injuries in top 10 counties.**

*Source: FDOT CAR System.*

## 2.2 Pedestrian and Bicycle Crash Characteristics

### 2.2.1 Injuries and Fatalities

The injury severity of pedestrian crashes for the years 2007 to 2011 is shown in Figure 2-3. Even though the total number of crashes has slightly decreased, the number of injuries and fatalities remains high.

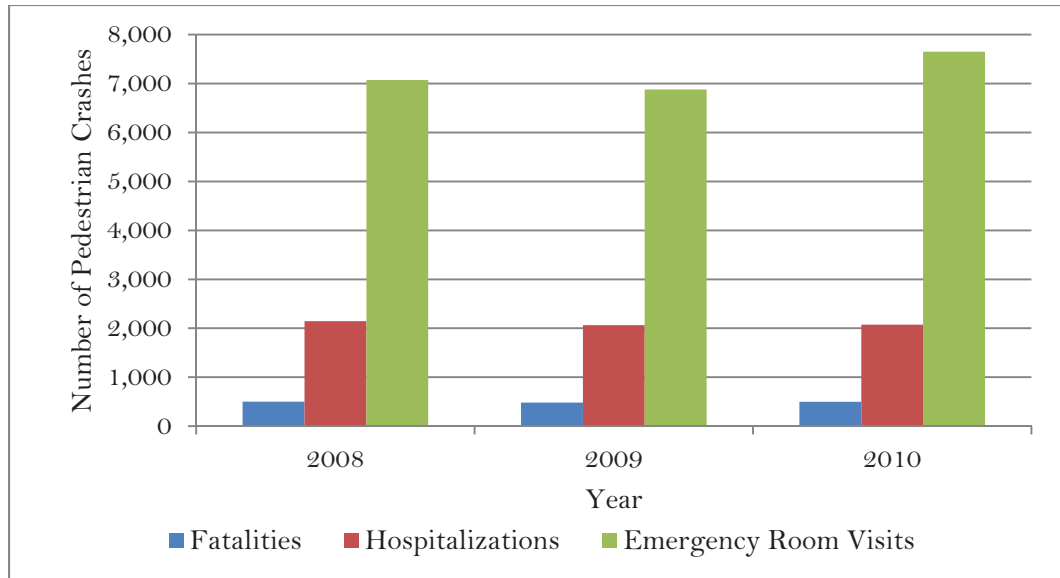


**Figure 2-3. Injury severity of pedestrian crashes.**

*Source: FDOT CAR System.*

The proportion of pedestrian crashes to total crashes has declined 0.41 percent from 2009 through 2011 but has remained above three percent. Although this reduction in percentage of crashes is positive, pedestrian fatalities occurring in 2011 still account for nearly 21 percent of all fatalities.

Pedestrian crashes are more likely to result in fatal or serious injuries (requiring inpatient or outpatient hospital care and treatment) more than any other type of traffic crashes. The number of hospitalizations and emergency room visits related to pedestrian crashes show that the magnitude of the problem may be larger than what police reported crashes show. Figure 2-4 shows pedestrian fatalities, hospitalizations, and emergency room visits from 2008 to 2010.



**Figure 2-4. Pedestrian crash injuries in Florida by year.**

*Source: Hospital Discharge Data, Florida Agency for Health Care Administration.*

*\*2011 data not available at time of publication.*

In 2010, pedestrian traffic crashes in Florida resulted in 499 fatalities, 2,072 nonfatal hospitalizations, and 7,650 nonfatal emergency room (ER) visits. From 2008 to 2009, fatalities decreased 3.98 percent to 482, hospitalizations decreased 3.82 percent to 2,064; and ER visits decreased 2.76 percent to 6,877. From 2009 to 2010, fatalities increased 3.40 percent to 499; hospitalizations increased .39 percent to 2,072 and ER visits increased 10.1 percent to 7,650.

The financial impact of pedestrian fatalities and injuries is significant and the full extent unknown. Based on the emergency room discharge data from the Florida Agency for Health Care Administration (2008-2010), the reimbursement sources for hospitalizations are commercial insurance (41%), self-pay or under insured (34%), Medicaid (16%), and Medicare (7%).

According to the Vital Statistics death records data, available from 2008-2010, 39.8 percent of pedestrian traffic fatalities were associated with multiple body regions, 30 percent with traumatic brain injuries, and 27.6 percent with injuries to an unspecified region.

**Table 2-1. Percent of Pedestrian Fatalities Involving Specified Body Regions**

Injured Body Region	Percent
Multiple body regions	39.8
Traumatic Brain Injury	30.0
Unspecified	27.6
Trunk, other	7.8
Neck	6.0
Thorax	5.9
Spinal Cord	4.2
Vertebral column	4.2
Abdomen, lower back, pelvis	2.9
System-wide	2.9
Other lower extremity	2.4
Head and neck	1.4
Pelvis and lower back	1.0
Abdomen	0.8
Other head	0.2
Upper extremity	0.1
Hip	0.1

Source: Vital Statistics death records. Period: 2008, 2009 and 2010. Additional limitations: Pedestrians only, ICD10 code V00-V09.  
\*2011 data not available at time of publication.

Death certificates provide limited information about the nature of injuries contributing to pedestrian traffic fatalities. According to Table 2-2, nearly 98 percent of certificates cited at least one unspecified injury as an immediate or contributing cause of death, internal organ injuries were implicated in 11 percent, and fractures in 6.7 percent of fatalities.

**Table 2-2. Pedestrian Traffic Fatalities in Florida by Nature of Injury (2009-2011)**

Nature of Injury	(%)	Nature of Injury	(%)	Nature of Injury	(%)
Unspecified Nature	97.53	Multiple Injuries	<1	Poisoning	<1
Internal Organ	10.99	Amputation	<1	Superficial Wound, Bruise	<1
Fracture	6.73	Crush	<1		
Dislocation	3.22	Open Wound	<1		
Blood Vessel	2.02	Toxic Effects	1.27		

\*One fatality may involve multiple injury natures.

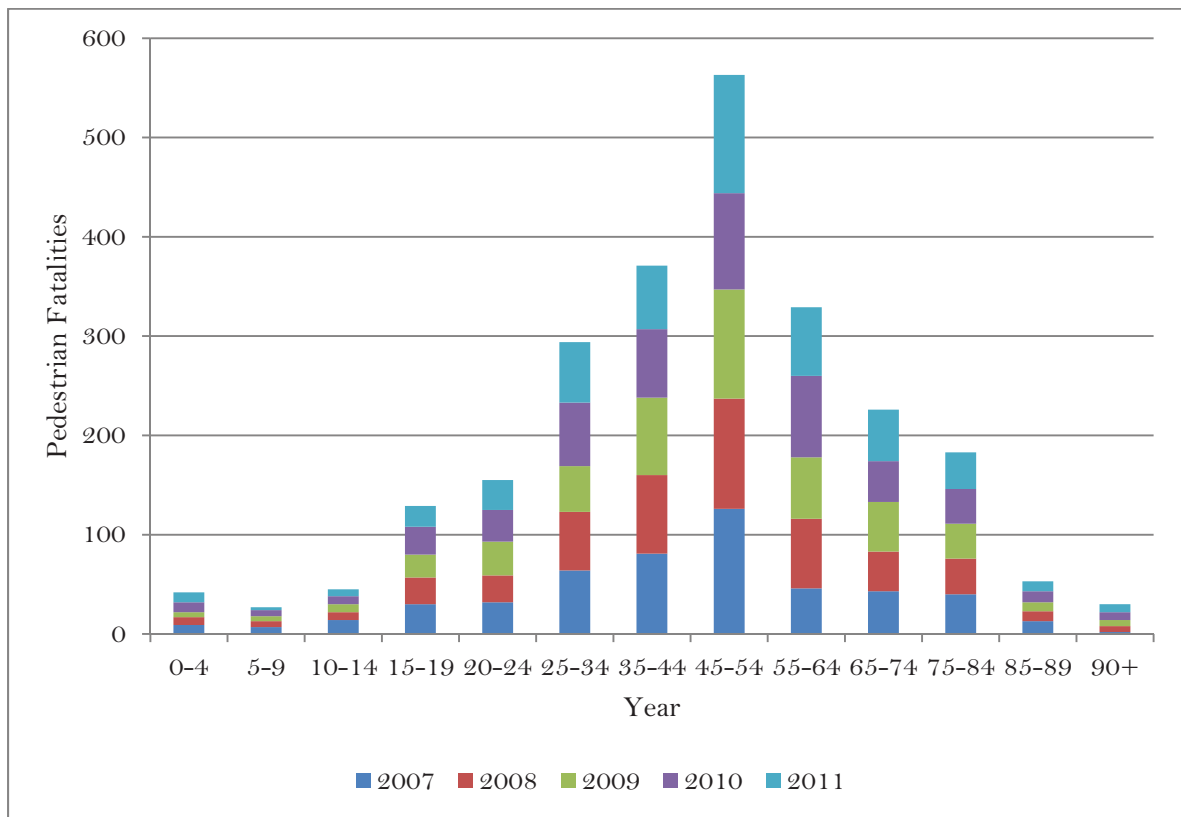
Source: Vital Statistics death records. Period: 2009-2011. Additional limitations: Pedestrians only, ICD10 code V00-V09.



### 2.2.2 Age

Figure 2-5 shows pedestrian traffic fatalities in Florida by age group and year. In the five year period from 2007 to 2011:

- More pedestrians ages 45-54 were fatally injured in pedestrian crashes than any other group, followed by pedestrians ages 35-44 and 55-64.
- The largest overall increase in pedestrian fatalities was among pedestrians ages 65-74 which increased three percent from 2008 to 2011.
- The largest overall decrease in pedestrian fatalities was among pedestrians ages 35-44 which decreased three percent from 2008 to 2011.

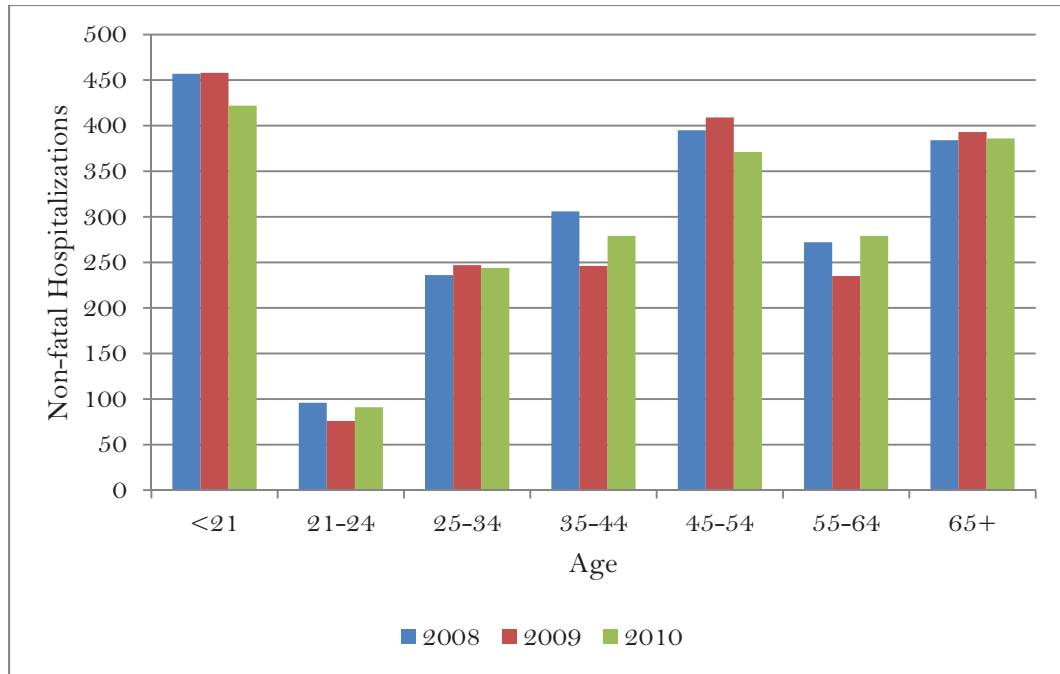


**Figure 2-5. Pedestrian traffic fatalities in Florida by age and year.**

*Source: FL DHSMV Crash Facts.*

Figure 2-6 shows the hospitalizations in Florida for nonfatal injuries sustained in pedestrian crashes. In the three year period 2008-2010:

- More pedestrians under age 21 were hospitalized in Florida for nonfatal injuries than any other group, followed by pedestrians ages 45-54.
- Pedestrians ages 55-64 experienced the largest increase in hospitalizations for nonfatal injuries from 2009 to 2010 with 19 percent.

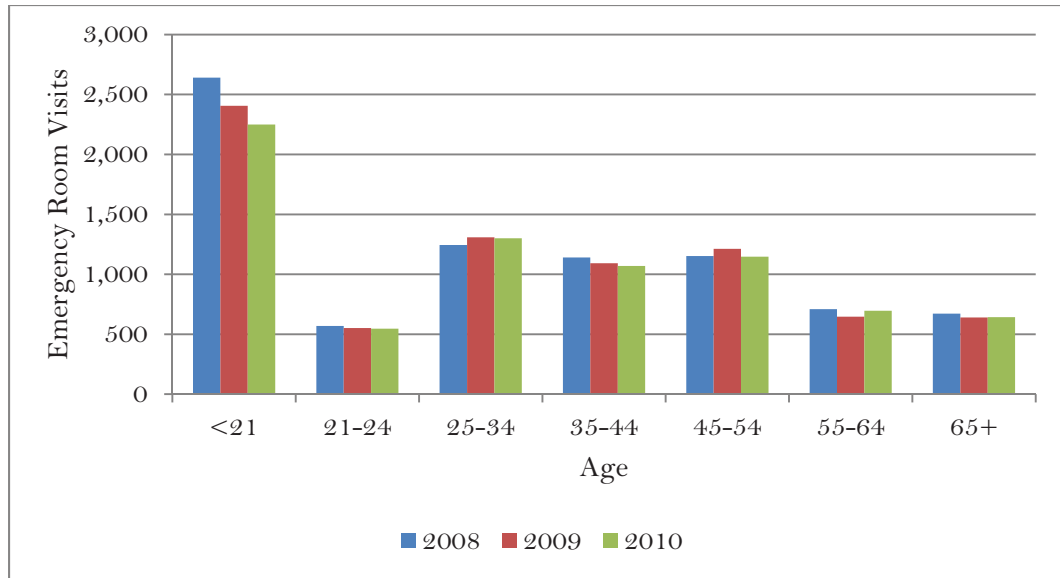


**Figure 2-6. Hospitalizations in Florida for nonfatal injuries sustained in pedestrian traffic crashes by age and year.**

*Source: Florida Department of Health.  
\*2011 data not available at time of publication.*

From 2009 to 2010, four age groups experienced a decrease and three experienced an increase in the number of hospitalizations. Figure 2-7 shows emergency room visits in Florida for nonfatal injuries sustained in pedestrian crashes by age group. In the three year period from 2008 to 2010:

- More pedestrians under age 21 visited an Emergency Room (ER) in Florida for nonfatal injuries sustained in pedestrian traffic crashes than any other age group, followed by pedestrians ages 25-34, 45-54, and 35-44.
- Pedestrians ages 21-24 experienced the highest decrease in number of ER visits for nonfatal injuries (6.5%), however this remains a problem.



**Figure 2-7. Emergency room visits in Florida for nonfatal injuries sustained in pedestrian traffic crashes by age and year.**

*Source: Florida Department of Health.  
\*2011 data not available at time of publication.*

### 2.2.3 Residence

Despite the large numbers of seasonal residents in Florida, Table 2-3 shows that the vast majority (86%) of pedestrians injured in pedestrian traffic crashes in Florida are residents of Florida and the county in which the crash occurred.

**Table 2-3. Percentage of Pedestrian Crashes by Residency**

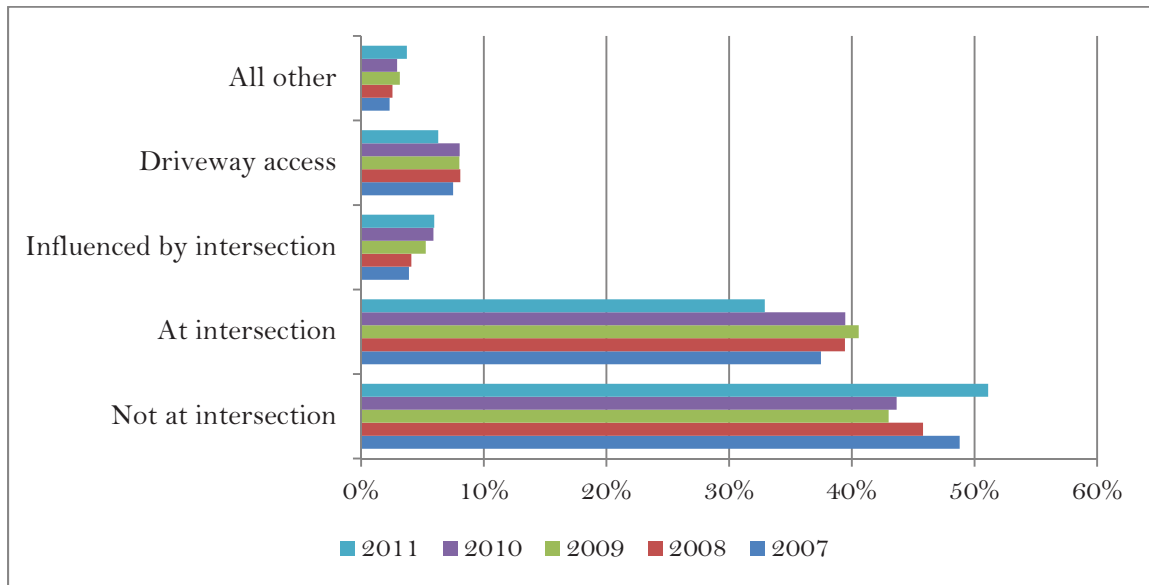
Residency of Pedestrians	2007	2008	2009	2010	2011
Same County as Crash	82%	82%	82%	80%	80%
Florida-other county	6%	6%	6%	6%	6%
Out of State	3%	3%	3%	3%	3%
International	1%	2%	1%	1%	1%
Unknown	8%	7%	8%	10%	10%

*Source: FDOT CAR System.*

### 2.2.4 Location

Pedestrian crashes and fatalities occur at greater frequencies in some locations due to traffic operational characteristics and population. According to data obtained from the FDOT Crash Analysis Reporting (CAR) System, pedestrian crashes occur most frequently at midblock locations without a crosswalk (identified as “not at intersection” in Figure 2-8). The second highest location for pedestrian crashes is at intersections, mainly due to left-turning maneuvers and right-turn-on-red maneuvers. Figure 2-8

shows the statewide breakdown of pedestrian crashes by site location. Note that the “All other” category includes railroad, bridge, entrance/exit ramp, toll booth, and public bus stop crashes involving pedestrians.



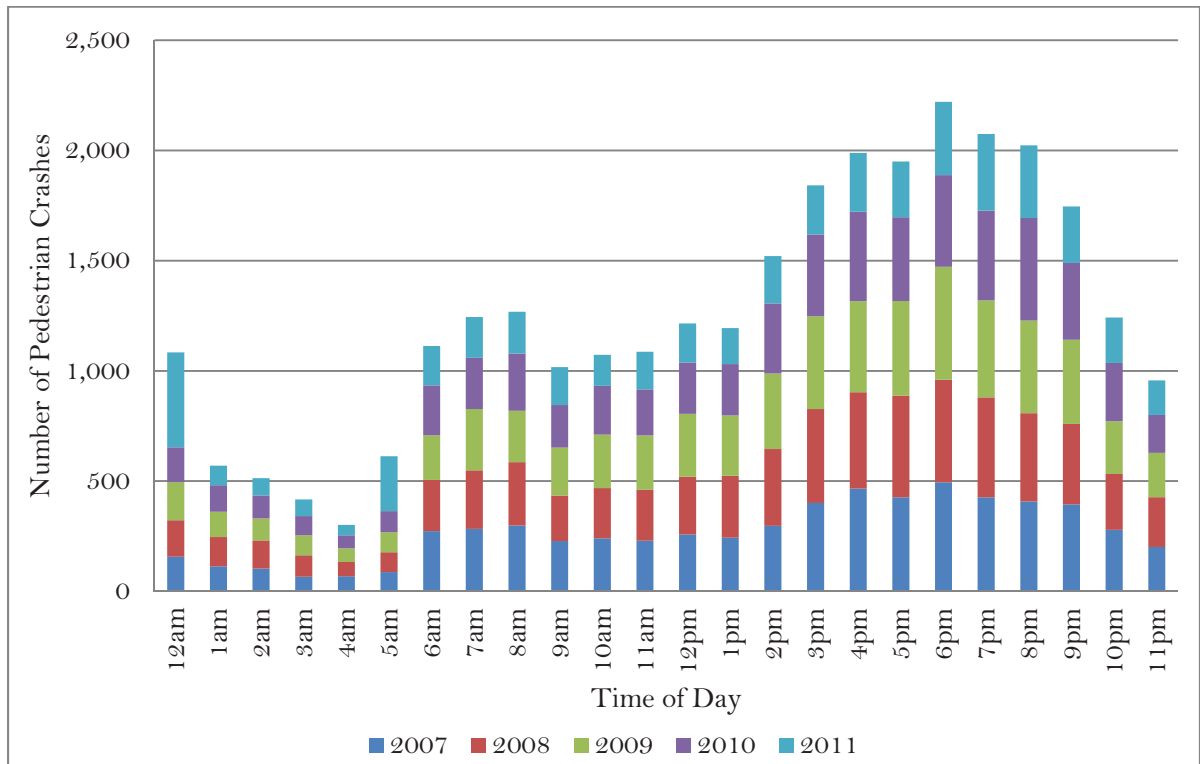
**Figure 2-8. Statewide pedestrian crashes by site location.**

*Source: FDOT CAR System.*

Parking lots also pose a threat to pedestrians and bicycles. Parking lot pedestrian and bicycle crashes are grossly underreported in data sets due to challenges presented by state and local laws governing the reporting of parking lot traffic crashes in police reports. According to the “Aging Driver and Pedestrian Safety: Parking Lot Hazards Study” an estimated 32 percent of backing crashes involved a pedestrian fatality and 60 percent of backing crashes involving a pedestrian injury occurred in parking lots. The study was conducted in five counties in the west central region of Florida and assessed data taken from police reports from pedestrian-vehicle collisions that occurred between 2004 and 2008. After an extensive examination of the police reports and recoding of the data set, it was determined there were 1,394 total cases and 254 cases involving fatal or incapacitating injuries in parking lots. Understanding the factors related to pedestrian-vehicle crashes in non-traffic settings, such as parking lots, needs to be addressed in Florida.

### 2.2.5 Time of Occurrence

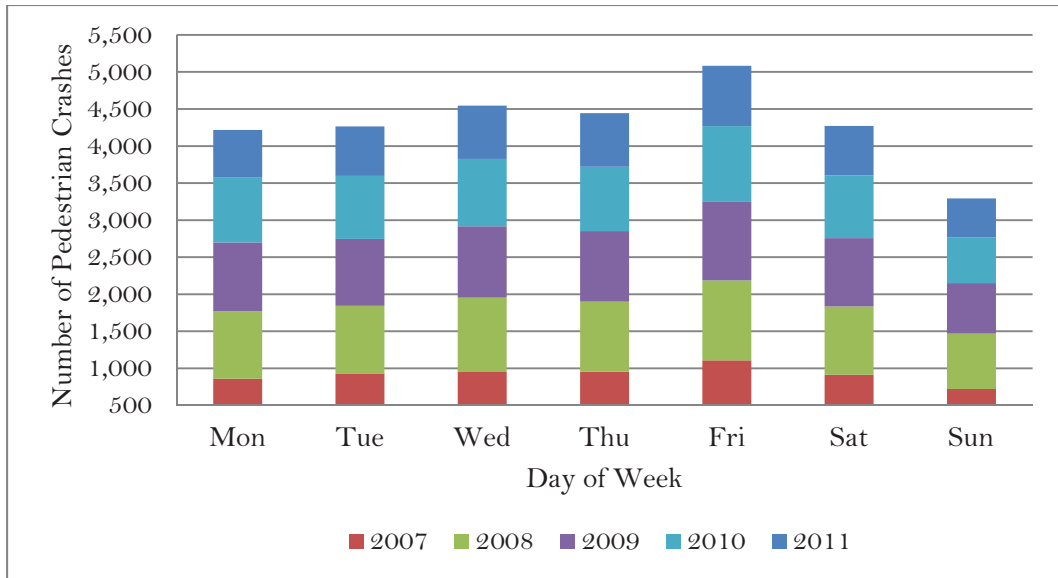
In Florida, between 2008 and 2011, approximately 52 percent of pedestrian crashes occurred between 2:00 PM and 9:00 PM. Two major factors contributing to pedestrian crashes during this time period are evening rush hour and non-daylight hours. According to NHTSA's Traffic Safety Facts 2010 Data on Pedestrians, the majority (68%) of pedestrian fatalities in 2010 occurred during non-daylight hours.



**Figure 2-9. Distribution for pedestrian crashes by time of day.**

*Source: FDOT CAR System.*

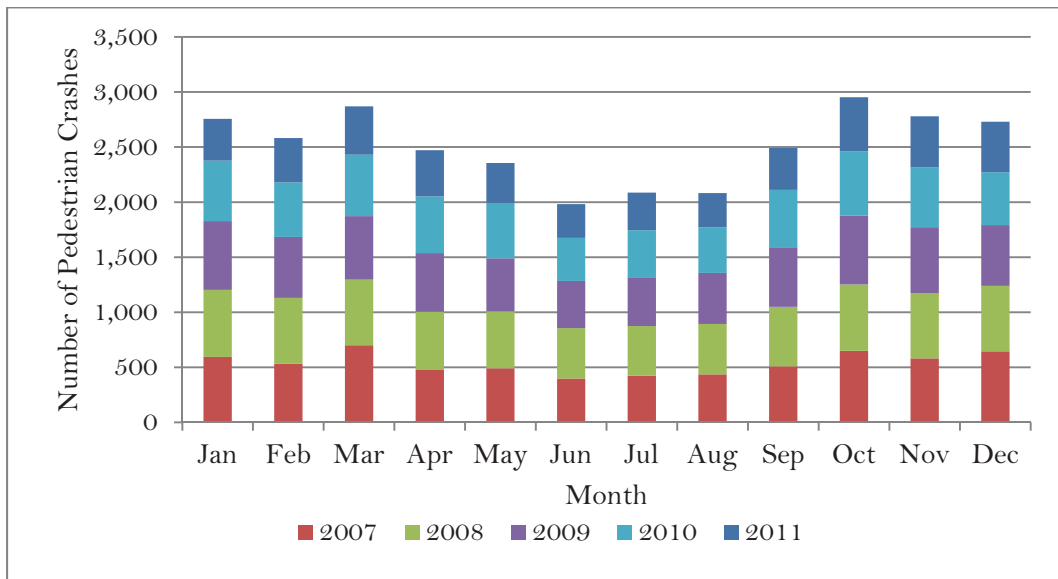
A higher percentage of crashes occur on Fridays than any other day of the week. Figure 2-10 shows the distribution of day of the week on which pedestrian crashes occurred for the last five years. The weekend (including Friday, Saturday, and Sunday) accounts for 41.4 percent of total pedestrian crashes. The remaining four days account for 58.6 percent of total pedestrian crashes.



**Figure 2-10. Distribution for pedestrian crashes by day of week.**

*Source: FDOT CAR System.*

As expected, more crashes occur from October to March in Florida. During these months, the climate is relatively warmer and drier than northern states and Canada, so there is an influx of temporary residents in the state, which ultimately means there are more pedestrians out on the roads.



**Figure 2-11. Distribution of pedestrian crashes by month.**

*Source: FDOT CAR System.*

## 2.2.6 Alcohol

Alcohol impairment is a contributing factor to pedestrian and bicycle crashes in Florida. Based on the Florida Traffic Crash Statistics Reports, the crash rates for Florida residents involving impaired driving are shown below (Table 2-4), grouped by age. Impaired operation of motor vehicles by persons under 34 years of age is a very serious problem.

**Table 2-4. Crash Rates per 100,000 Persons for Florida Residents Involving Impaired Driving**

Age Group	2006	2007	2008	2009	2010
<19	13.38	13.04	11.89	10.98	8.27
20-24	25.43	25.42	22.76	20.76	17.78
25-29	16.7	17.85	17.15	16.64	13.8
30-34	12.14	12.35	12.49	11.87	11.23
35-39	10.86	10.8	11.58	10.41	8.67
40-44	11.22	10.9	10.98	9.94	8.51
45-49	10.35	9.84	10.17	9.86	8.6
50-54	7.48	7.48	7.93	7.85	7.19
55-59	5.46	5.17	5.43	5.48	5.1
60-64	3.38	3.45	3.68	3.91	3.59
65-69	2.44	2.59	2.36	3.91	3.59
70-74	1.85	1.91	1.92	1.69	1.22
75-79	1.29	1.01	1.45	1.15	1.14
80-84	0.93	0.58	0.59	0.75	1.04
85-89	0.6	0.54	0.17	0.58	0.35
90+	1.12	0.84	0.79	0.48	1.02

Source: FL DHSMV Traffic Crash Statistics Report 2010.

\*2011 DHSMV data not available at time of publication.

According to the impaired driving data by county analysis from the FDOT, the total numbers of pedestrian fatalities, injuries, and crashes caused by impaired driving from 2009 to 2011 were 336, 778, and 924, respectively. The top 10 pedestrian fatalities by impaired driving from 2009 to 2011 in Florida by county are shown in Table 2-5 below.

Alcohol consumption by pedestrians is also recognized as a significant contributor to pedestrian crashes. Based on the Florida DHSMV 2008-2010 data, approximately ten percent of all pedestrians involved in crashes had been impaired. Alcohol consumption by bicycles is also a problem in bicycle crashes according to the 2010 Florida DHSMV data. In 2010, 6.43 percent of all bicycles in crashes had been impaired.

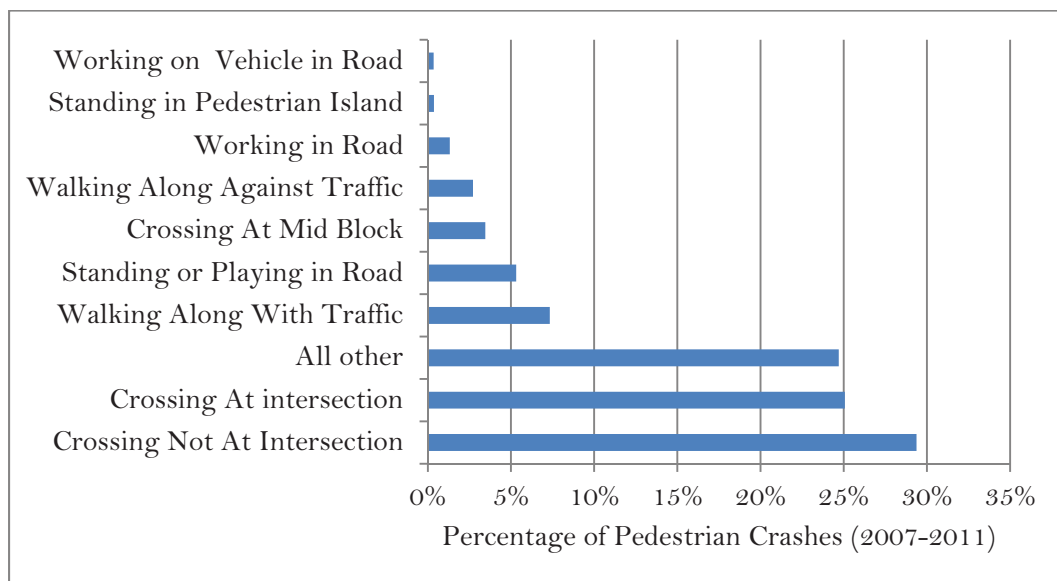
**Table 2-5. Pedestrian Fatalities, Injuries and Crashes Caused by Impaired Driving**

County	Fatalities	Injuries	Crashes
Hillsborough	34	95	93
Miami-Dade	34	79	81
Orange	27	61	70
Palm Beach	27	60	69
Pinellas	18	55	68
Broward	17	33	50
Volusia	17	32	40
Polk	16	28	32
Duval	15	26	31
Manatee	13	23	31

Source: FDOT CAR System (2009-2011).

### 2.2.7 Pedestrian Action

One of the major factors in crashes is what the pedestrian was doing at the time of the crash. For crashes with complete records, the majority of pedestrians were crossing somewhere other than at an intersection (29%) while crossing at an intersection was a close second (25%). It is noteworthy to mention that the "all other" crashes is an area that needs better understanding and focus because it encompasses about 25 percent of all pedestrian crashes and does not indicate a clear reported location.



**Figure 2-12. Statewide pedestrian crashes by pedestrian action.**

Source: FDOT CAR System.



## **3.0 Pedestrian and Bicycle Strategic Safety Plan**

### **3.1 Vision**

Provide a safe transportation system where people of all ages and abilities can walk, bike, utilize transit, and travel by automobile safely and comfortably in a pedestrian and bicycle friendly environment.

### **3.2 Mission**

The State of Florida will use a unified, comprehensive approach to improve pedestrian and bicycle safety through leadership, innovation, and program delivery.

### **3.3 Goal**

To improve the overall safety of pedestrians and bicycles by reducing pedestrian- and bicycle-related crashes, injuries, and fatalities while ensuring that all areas of Florida's transportation system provide safe and accessible travel options for pedestrians and bicycles.

### **3.4 Emphasis Areas**

- Data, Analysis, and Evaluation
- Driver **E**ducation and Licensing
- Highway and Traffic **E**ngineering
- Law **E**nforcement and **E**mergency Services
- Communication Program
- Outreach Program
- Legislation, Regulation, and Policy

### **3.5 Data, Analysis, and Evaluation**

#### **Goal**

Collect and analyze pedestrian- and bicycle-related data to provide stakeholders with complete, accurate, uniform, and accessible information to make appropriate and timely decisions, and to use as a method of evaluating program activities and implementation of Florida's Pedestrian and Bicycle Strategic Safety Plan (PBSSP).

### **Objective 3.5.1**

Conduct regular problem identification and evaluation activities to determine pedestrian and bicycle fatality, injury, and crash trends and to provide guidance in development and implementation of countermeasures.

- a) Develop a master plan that identifies specific goals, measureable objectives, and evaluation plans for all projects dedicated to pedestrian and bicycle safety.
- b) Identify potential data sources and the agencies responsible for collecting, maintaining, and disseminating pedestrian- and bicycle-related data.
- c) Identify and prioritize the state's pedestrian and bicycle safety problem locations and contributing causes.
- d) Provide a mechanism for sharing information on hot spot locations.
- e) Disseminate information and data to stakeholders.
- f) Identify a method for collecting data on pedestrian- and bicycle-related incidents in parking lots.

### **Objective 3.5.2**

Conduct and publicize statewide surveys of public knowledge and attitudes about pedestrian and bicycle safety.

- a) Examine and test different exposure variables affecting pedestrian and bicycle safety.
- b) Develop training for data collection/entry, train personnel to conduct statewide surveys, and evaluate effectiveness.

### **Objective 3.5.3**

Evaluate the use of program resources and the effectiveness of existing countermeasures for the general public and high-risk populations.

- a) Utilize collected data to evaluate the performance of the PBSSP.
- b) Ensure that target groups are linked to cost-effective and operationally feasible countermeasures.

#### **Objective 3.5.4**

Ensure that evaluation results are used to identify problems, plan new programs, and improve existing programs.

- a) Utilize the Pedestrian Safety Problem Identification Tool (PIT) to identify community context in order to gain insight into pedestrian safety problems.
- b) Conduct program oversight to ensure education, engineering, and enforcement issues have been considered.

#### **Objective 3.5.5**

Promote inter- and intra-agency efforts to link crash, injury, violation, and registration records.

- a) Identify relevant information that is not currently being collected, and discover how to better capture this data.
- b) Create partnerships with stakeholders that would need pedestrian- and bicycle-related data.

#### **Objective 3.5.6**

Improve detailed analyses of police crash reports involving pedestrians and bicyclists.

- a) Provide supplemental information and training to LE on the importance of completing crash forms completely and correctly.
- b) Ensure that the revised electronic crash system will meet the reporting needs of all safety partners.
- c) Establish a statewide repository for all crash reports, including short forms.
- d) Support efforts to include pedestrian- and bicycle- related options on crash forms around the state.

## **3.6 Driver Education and Licensing**

### **Goal**

Address pedestrian and bicycle safety in driver education training, materials, and licensing programs in the classroom and behind the wheel, including strategies for motorists, pedestrians, and bicycles on safely sharing the road.

### **Objective 3.6.1**

Partner with the Florida Department of Highway Safety and Motor Vehicles (FLDHSMV) to include additional information pertaining to pedestrian and bicycle laws in all motor vehicle handbook updates.

- a) Identify FLDHSMV partners to enhance and broaden communication efforts.
- b) Update the motor vehicle handbook so that it better illustrates common driving scenarios that involve vulnerable road users.

### **Objective 3.6.2**

Encourage the inclusion of additional questions pertaining to pedestrian and bicycle laws on the Florida driver license exam.

- a) Partner with those who develop the web based driving exams.
- b) Enhance the web based driving exam by providing audio and visual content for driving scenarios that involve vulnerable road users so that the test also becomes a learning tool.
- c) Evaluate online driver license exams in other states in order to examine control of “open-book” testing.

### **Objective 3.6.3**

Support the development of pedestrian and bicycle training to be used in lieu of fines in the adjudication process.

- a) Partner with FLDHSMV to provide alternative training for judiciary to use in lieu of fines.
- b) Review other states’ adjudication processes regarding the use of training in lieu of fines.

- c) Develop partnerships with judicial and prosecutor representatives.

#### **Objective 3.6.4**

Ensure that pedestrian safety information is fully incorporated in every aspect of driver education, training, and licensing.

- a) Form alliances with all agencies responsible for driver education and training.
  - i. Partner with Florida's Drive with CARE program, directed at teens.
  - ii. Partner with the Florida Sheriff's Association Teen Driver Challenge.
  - iii. Partner with Car Fit Florida.
  - iv. Partner with the American Association of Retired Persons (AARP) and AAA.

#### **Objective 3.6.5**

Incorporate pedestrian and bicycle information into the curriculum of traffic school diversion programs and monitor its delivery.

- a) Examine current training courses/materials available online.
- b) Develop a pedestrian and bicycle curriculum addition for use by traffic school diversion programs.

### **3.7 Highway and Traffic Engineering**

#### **Goal**

Ensure that state and local pedestrian and bicycle programs include a highway and traffic engineering component that is coordinated with enforcement and educational efforts to improve the safety of pedestrians and bicycles through design, construction, operation, and maintenance.

#### **Objective 3.7.1**

Identify, promote, and implement pedestrian and bicycle best practices on Florida's transportation network.

- a) Develop recommended practices for state and local engineers and public works departments.

- b) Develop communication, training, and technology transfer promoting and discussing pedestrian and bicycle best practices.
- c) Implement improved pedestrian and bicycle features with ongoing transportation projects.

### **Objective 3.7.2**

Facilitate the establishment and implementation of regional master plans by local governments for bike/ped facilities to ensure that safety and accessibility are addressed.

- a) Work with local governments to prepare and implement pedestrian and bicycle transportation master plans.
- b) Recommend effective measures for post evaluation.

### **Objective 3.7.3**

Promote the application of “Complete Streets” to improve bicycle and pedestrian safety and access.

- a) Consolidate existing language on CSS and TDLC into a “Complete Streets” policy.
- b) Develop training and resources on implementation of “Complete Streets,” to include guidance on evaluation of performance trade-offs.
- c) Establish FDOT expertise in urban design.
- d) Support local governments’ “Complete Streets” initiatives.

### **Objective 3.7.4**

Promote Road Safety Audits (RSA) to include pedestrian and bicycle safety components.

- a) Work with the Federal Highway Administration (FHWA) to gain an understanding of how Florida conducts RSAs.
- b) Identify and partner with state and local Pedestrian Safety Audit (PSA) teams.
- c) Distribute materials supporting the Pedestrian Road Safety Audit Guidelines and Prompt Lists developed by FHWA.

- d) Evaluate the need for road safety and pedestrian safety audit training and resources in Florida.

### **Objective 3.7.5**

Educate production and operations workforce on roadway conditions that may be hazardous to pedestrians and bicycles.

- a) Create training materials to educate stakeholders on accommodations and safety for pedestrians and bicycles.
- b) Evaluate work zone safety training for safe accommodations for pedestrians and bicyclists.

## **3.8 Law Enforcement and Emergency Services**

### **Goal**

Ensure that state and community pedestrian and bicycle safety programs include law enforcement and emergency service components that strongly emphasize their responsibility in keeping pedestrians and bicycles safe.

### **Objective 3.8.1**

Increase law enforcement's knowledge of pedestrian and bicycle safety.

- a) Recommend all law enforcement agencies to participate in the NHTSA pedestrian training for law enforcement.
- b) Assist law enforcement agencies to identify and utilize resources that support pedestrian and bicycle safety.
- c) Incorporate pedestrian and bicycle safety elements into all law enforcement activities.
- d) Include pedestrian and bicycle laws in the Quick Reference Guide given to law enforcement agencies.
- e) Support high visibility enforcement of laws affecting the safety of pedestrians and bicycles.

### **Objective 3.8.2**

Increase Emergency Medical Services' (EMS) knowledge of pedestrian and bicycle safety.

- a) Educate EMS on the most common types of injuries incurred by pedestrians and bicycles as a result of traffic crashes.
- b) Work with EMS and trauma partners to develop protocols specific to emergency response to crashes involving pedestrians and bicycles.

### **Objective 3.8.3**

Partner with EMS and trauma centers to provide public education on pedestrian and bicycle safety.

- a) Identify an EMS spokesperson to establish partnerships with EMS and trauma centers.
- b) Identify an Emergency Medical Services for Children (EMSC) spokesperson to establish partnerships with EMS and trauma centers.
- c) Develop educational materials for distribution to EMS and trauma center partners.
- d) Partner with the EMSC to promote and incorporate components of the Safe Routes to School program into their objectives.

### **Objective 3.8.4**

Encourage all law enforcement agencies to develop agency goals specific to pedestrian and bicycle safety.

- a) Develop a database of agencies that currently have goals specific to pedestrian and bicycle safety.
- b) Develop an incentive program for law enforcement agencies to develop agency goals specific to pedestrian and bicycle safety.

### **Objective 3.8.5**

Promote high visibility enforcement specific to pedestrians and bicycles in areas of the state where pedestrian and bicycle crashes and fatalities are overrepresented.



- a) Combine enforcement with outreach, education, and paid media campaigns.
- b) Encourage the use of an enforcement campaign targeted specifically at pedestrian and bicycle safety, to include a motorist component and non-motorist component.

## **3.9 Communication Program**

### **Goal**

Coordinate with stakeholders to develop and implement a comprehensive communications plan that will improve public awareness of pedestrian and bicycle crash problems and programs directed at preventing them.

### **Objective 3.9.1**

Deliver messaging that is consistent, predictable, repeatable, and able to be utilized by all partners and stakeholders.

- a) Utilize the FDOT Public Information Office (PIO) and similar offices from partners in the SHSP to communicate pedestrian and bicycle safety messages.
- b) Promote paid media funding to a comprehensive pedestrian and bicycle safety communications plan.
- c) Utilize social marketing to promote pedestrian and bicycle safety to motorists, pedestrians, and bicyclists.

### **Objective 3.9.2**

Establish strategic alliances with partners that can assist in communicating pedestrian and bicycle safety messages.

- a) Partner with non-traditional stakeholders to distribute safety materials that promote the Alert Today, Alive Tomorrow message.
- b) Encourage education of the general public on pedestrian- and bicycle-related incidents in parking lots.
- c) Promote law enforcement campaigns targeted at pedestrian and bicycle safety.

### **Objective 3.9.3**

Focus on culturally relevant and multilingual campaigns to improve awareness of pedestrian and bicycle laws and crash problems.

- a) Identify specific audience segments and locations to maximize resources and effectiveness using traffic-related data and market research.
- b) Develop alliances with culturally relevant private and public partners.
- c) Promote awareness of pedestrian and bicycle safety during major cultural events throughout the state.
- d) Distribute materials and resources to promote pedestrian and bicycle safety to targeted groups.

### **Objective 3.9.4**

Promote high visibility law enforcement in conjunction with paid media efforts.

- a) Develop a year-round communications plan that provides emphasis during periods of heightened enforcement for impaired drivers.
- b) Develop a year-round communications plan that provides funding to promote pedestrian and bicycle safety.
- c) Develop messages consistent with national campaigns when such campaigns exist.

## **3.10 Outreach Program**

### **Goal**

Advocate extensive community involvement in pedestrian and bicycle safety education and skills training by involving individuals and organizations outside the traditional highway safety community, to include a focus on older pedestrians, young children, and immigrant populations.

### **Objective 3.10.1**

Significantly expand the Ped/Bike Resource Center to include materials available for identified, at-risk populations, ensuring their cultural sensitivity, appropriateness, usability, and desirability.

- a) Ensure outreach materials are reaching our target audience.
- b) Develop materials in Spanish and other non-English languages in lieu of translation.

### **Objective 3.10.2**

Identify and replicate evidence-based programs in high priority areas across the state, with particular emphasis on pedestrian and bicycle safety.

- a) Evaluate the effectiveness of countermeasures used by evidence-based programs.
- b) Identify best practices with non-traditional partners, such as universities, Boy/Girl Scouts, and other civic organizations.

### **Objective 3.10.3**

Develop pedestrian and bicycle safety campaigns that specifically target motorists.

- a) Develop and implement a communications strategy that supports a “share the road” approach.
- b) Promote a cultural shift towards sharing the road with pedestrians and bicycles.

### **Objective 3.10.4**

Develop bicycle safety campaigns that specifically target sharing the road and obeying traffic laws.

- a) Work with local traffic operations to promote the use of safety road signs for bicycles.
- b) Increase bicycle awareness by creating educational programs in areas with high bicycle fatalities and injuries.
- c) Utilize alliances with bicycle safety advocates to promote safety campaigns.

### **Objective 3.10.5**

Develop campaigns targeting impaired operation of motor vehicles in conjunction with high visibility enforcement efforts to reduce pedestrian and bicycle crashes in high impact counties.

- a) Review other state pedestrian and bicycle safety campaigns that target impaired operation of motor vehicles.
- b) Implement an impaired driving campaign promoting pedestrian and bicycle safety.

### **Objective 3.10.6**

Develop campaigns targeting impaired or distracted pedestrians and bicyclists to reduce crashes in high impact counties.

- a) Review other state pedestrian and bicycle safety campaigns that target impaired pedestrians and bicyclists.
- b) Include distracted pedestrian/bicyclist messages in safety campaigns.

### **Objective 3.10.7**

Develop campaigns targeting transit users that promote pedestrian and bicycle safety.

- a) Conduct and publicize statewide surveys of transit riders to understand passenger travel patterns as well as to ascertain their opinions on pedestrian and bicycle safety.
- b) Develop partnerships with local transit authorities to gain their data collected on travel patterns.
- c) Utilize survey data to target identified problem areas in order to develop transit user directed campaigns.

### **Objective 3.10.8**

Increase awareness of the safety, accessibility, and mobility needs of aging pedestrians and bicyclists.

- a) Identify high population areas for aging pedestrians and bicyclists.
- b) Evaluate pedestrian and bicycle facilities to ensure they are designed and constructed to improve the level of personal mobility and safety of aging pedestrians and bicyclists with mobility challenges.
- c) Develop pedestrian and bicycle safety workshops and educational programs that target the older population.

- d) Coordinate with the Safe Mobility for Life Coalition to implement their plan and distribute materials they've developed for this demographic.
- e) Partner with law enforcement (LE) agencies to conduct LE campaigns in areas with a high population of aging pedestrians and bicyclists.

### **Objective 3.10.9**

Partner with school-based education programs to promote pedestrian and bicycle safety.

- a) Promote the Safe Routes to School program through our partnership.
- b) Promote classroom and extracurricular activities related to pedestrian and bicycle safety such as "Safety Town" (a two-week program for preschool children that teaches safety lessons) within the schools.

## **3.11 Legislation, Regulation, and Policy**

### **Goal**

Coordinate with appropriate public and private agencies to support legislation, regulation, and policies that promote pedestrian and bicycle safety.

### **Objective 3.11.1**

Promote linkage of state, local, and regional safety plans to increase coordination between stakeholders.

- a) Identify and review all state, local, and regional safety action plans to ensure they have an emphasis on pedestrian and bicycle safety.
- b) Support stakeholders with plans that have an emphasis on pedestrian and bicycle safety.
- c) Develop a plan to disseminate collective resources from contributing safety plans to stakeholders.
- d) Establish a process for periodic review of coordination efforts between stakeholders.
- e) Coordinate a work program to facilitate multimodal projects.

**Objective 3.11.2**

Ensure traffic laws and regulations support the safety of pedestrians and bicyclists.

- a) Create a task team within the Coalition to review all legislation, regulations, and policies that address and impact pedestrians and bicycles.
- b) Educate the legislature and support legislative initiatives to improve pedestrian- and bicycle-related regulations.
- c) Promote and encourage the implementation of local ordinances that improve pedestrian and bicycle access and facilities.

# Appendix

**Table A-1. Pedestrian Fatality History by County**

County	2007	2008	2009	2010	County	2007	2008	2009	2010
Alachua	6	2	5	4	Leon	3	2	6	10
Baker	0	0	0	0	Levy	2	1	3	0
Bay	7	6	8	1	Madison	0	0	0	0
Bradford	0	0	1	0	Manatee	8	7	13	8
Brevard	10	18	11	13	Marion	12	10	8	12
Broward	65	51	46	53	Martin	3	3	6	1
Calhoun	0	0	1	1	Miami-Dade	76	66	65	76
Charlotte	5	4	4	1	Monroe	4	7	4	4
Citrus	3	2	2	3	Nassau	5	2	1	2
Clay	3	0	2	1	Okaloosa	3	1	3	7
Collier	7	4	5	6	Okeechobee	0	1	1	2
Columbia	4	4	1	2	Orange	40	28	32	43
De Soto	1	2	0	1	Osceola	7	10	5	3
Dixie	0	1	0	0	Palm Beach	33	32	39	21
Duval	32	16	25	22	Pasco	17	17	13	11
Escambia	8	6	8	10	Pinellas	29	25	30	22
Flagler	0	4	1	1	Polk	10	26	17	13
Franklin	0	0	0	0	Putnam	1	2	4	4
Gadsden	4	3	2	1	St. Johns	3	5	8	5
Gilchrist	0	1	0	0	St. Lucie	2	5	6	3
Glades	0	1	0	0	Santa Rosa	2	6	1	3
Gulf	0	0	0	0	Sarasota	3	8	6	7
Hamilton	0	0	0	0	Seminole	7	8	5	11
Hardee	1	1	2	3	Sumter	1	2	0	3
Hendry	0	1	2	1	Suwannee	2	0	0	0
Hernando	2	5	4	2	Taylor	1	0	0	0
Highlands	2	3	2	5	Union	2	0	0	1
Hillsborough	47	47	32	42	Volusia	14	15	20	26
Indian River	2	8	1	2	Wakulla	0	1	0	0
Jackson	1	2	1	0	Walton	2	0	0	1
Jefferson	1	0	0	1	Washington	0	0	2	0
Lake	8	10	3	9	Unknown	0	0	0	2
Lee	19	11	15	13	Statewide	530	502	482	499

Source: *FLDHSMV Traffic Crash Statistics Report 2010.*

*\*2011 DHSMV data not available at time of publication.*

**Table A-2. Pedestrian Injuries by County**

County	2007	2008	2009	2010	County	2007	2008	2009	2010
Alachua	103	140	115	113	Leon	120	133	142	131
Baker	9	4	6	2	Levy	5	14	9	8
Bay	90	94	71	84	Liberty	1	0	1	1
Bradford	8	6	3	7	Madison	3	2	5	7
Brevard	121	163	205	167	Manatee	135	121	146	147
Broward	918	1,005	950	968	Marion	99	95	94	88
Calhoun	1	2	3	2	Martin	29	32	30	27
Charlotte	41	39	63	55	Miami-Dade	1,338	1,466	1,390	1,306
Citrus	28	25	33	26	Monroe	36	45	51	39
Clay	54	61	36	44	Nassau	22	12	19	16
Collier	113	101	87	76	Okaloosa	50	49	44	42
Columbia	14	17	10	22	Okeechobee	15	17	8	15
De Soto	12	7	10	12	Orange	506	569	523	509
Dixie	1	0	2	2	Osceola	111	96	112	115
Duval	407	335	361	320	Palm Beach	566	583	560	550
Escambia	108	131	125	121	Pasco	146	171	146	148
Flagler	32	19	29	20	Pinellas	403	460	480	436
Franklin	1	0	1	6	Polk	178	167	193	178
Gadsden	8	8	8	7	Putnam	28	34	26	35
Gilchrist	0	2	2	0	St. Johns	60	48	47	22
Glades	2	3	2	3	St. Lucie	87	78	68	74
Gulf	2	2	2	7	Santa Rosa	25	33	23	25
Hamilton	3	4	1	5	Sarasota	136	106	110	125
Hardee	5	2	8	3	Seminole	111	112	99	76
Hendry	16	9	8	7	Sumter	14	11	21	15
Hernando	36	44	42	41	Suwannee	0	7	2	11
Highlands	10	16	21	15	Taylor	5	3	2	5
Hillsborough	557	618	578	496	Union	1	4	1	1
Holmes	0	0	1	2	Volusia	230	230	211	194
Indian River	46	32	32	31	Wakulla	3	6	8	4
Jackson	7	12	14	15	Walton	12	9	9	10
Jefferson	1	5	2	0	Washington	3	8	0	2
Lafayette	2	0	2	3	Unknown	0	0	0	1
Lake	65	69	73	69	Statewide	7,529	7,878	7,676	7,290
Lee	230	192	190	176					

Source: FLDHSMV Traffic Crash Statistics Report 2010.  
 \*2011 DHSMV data not available at time of publication.



**Table A-3. Bicycle Fatality History by County**

County	2007	2008	2009	2010	County	2007	2008	2009	2010
Alachua	5	4	3	0	Leon	0	3	0	1
Baker	0	0	0	0	Levy	0	0	0	0
Bay	1	0	3	1	Liberty	0	0	0	0
Bradford	0	1	1	0	Madison	0	0	0	0
Brevard	7	1	1	0	Manatee	1	1	1	1
Broward	6	12	10	5	Marion	4	6	1	1
Calhoun	0	0	0	0	Martin	0	6	1	0
Charlotte	2	0	0	1	Miami-Dade	12	5	12	7
Citrus	0	0	1	1	Monroe	2	1	1	3
Clay	0	1	1	0	Nassau	0	0	1	0
Collier	3	4	1	1	Okaloosa	3	1	0	0
Columbia	0	0	0	0	Okeechobee	0	1	0	0
De Soto	0	1	0	0	Orange	14	9	6	4
Dixie	0	0	0	0	Osceola	1	1	0	2
Duval	10	4	4	7	Palm Beach	10	8	11	4
Escambia	2	2	4	0	Pasco	4	2	4	5
Flagler	0	1	0	1	Pinellas	4	10	10	2
Franklin	0	0	0	0	Polk	3	3	3	2
Gadsden	0	0	0	0	Putnam	0	2	1	0
Gilchrist	0	1	0	0	St. Johns	1	2	0	0
Glades	0	0	0	0	St. Lucie	1	2	1	1
Gulf	0	0	0	0	Santa Rosa	1	0	1	2
Hamilton	0	0	0	0	Sarasota	5	3	1	0
Hardee	0	0	0	0	Seminole	0	2	0	1
Hendry	1	2	0	0	Sumter	1	0	0	0
Hernando	1	2	2	0	Suwannee	0	0	0	0
Highlands	0	0	0	1	Taylor	1	0	0	1
Hillsborough	6	4	6	11	Union	0	0	0	0
Holmes	0	0	0	0	Volusia	3	3	1	4
Indian River	0	0	1	1	Wakulla	0	0	0	0
Jackson	0	0	0	0	Walton	0	1	0	0
Jefferson	0	0	0	0	Washington	0	0	0	0
Lafayette	0	0	0	0	Unknown	0	0	0	0
Lake	2	0	1	2	Statewide	121	118	99	76
Lee	4	6	4	3					

Source: FL DHSMV Traffic Crash Statistics Report 2010.  
 \*2011 DHSMV data not available at time of publication.

**Table A-4. Bicycle Injuries by County**

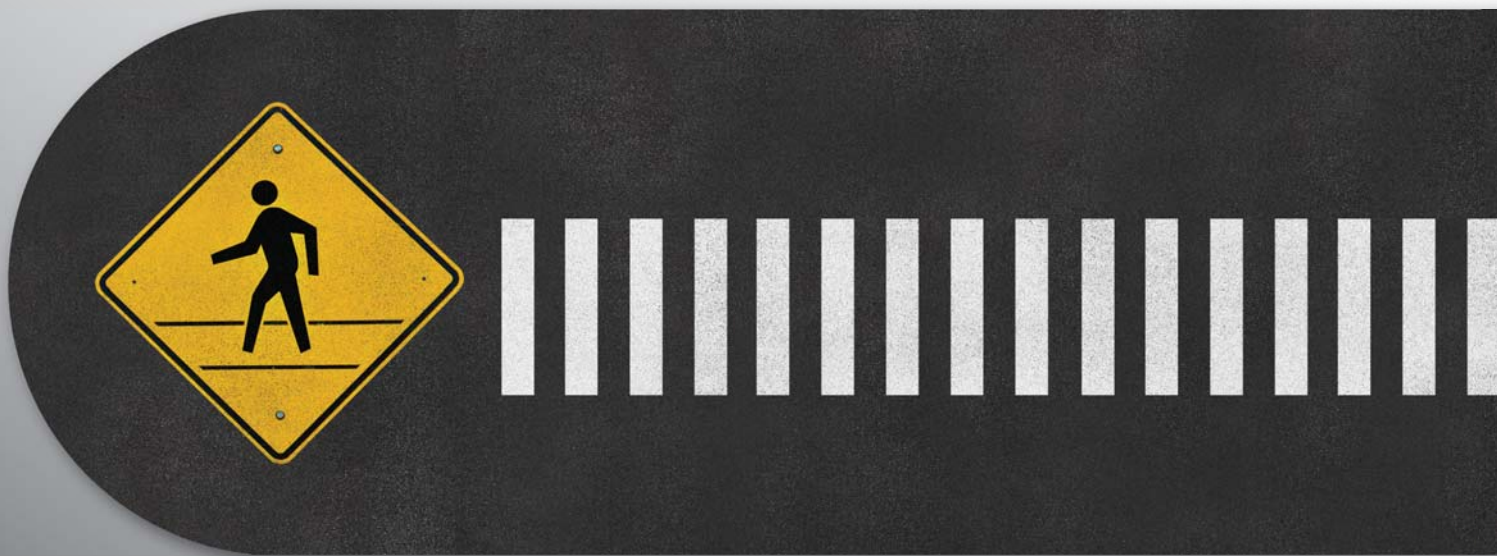
County	2007	2008	2009	2010	County	2007	2008	2009	2010
Alachua	97	102	105	92	Leon	63	68	61	65
Baker	1	3	1	4	Levy	3	1	2	1
Bay	41	39	40	48	Liberty	0	1	1	2
Bradford	3	1	3	2	Madison	0	2	0	1
Brevard	115	130	112	112	Manatee	100	99	101	106
Broward	467	515	505	549	Marion	44	51	42	36
Calhoun	0	0	0	0	Martin	46	49	46	47
Charlotte	49	27	34	40	Miami-Dade	403	454	452	530
Citrus	13	7	9	10	Monroe	70	70	86	95
Clay	20	27	22	34	Nassau	10	5	5	16
Collier	117	91	72	90	Okaloosa	42	21	27	34
Columbia	9	8	4	10	Okeechobee	6	8	3	6
De Soto	6	3	3	5	Orange	285	280	284	295
Dixie	2	2	1	1	Osceola	35	41	27	54
Duval	214	211	214	193	Palm Beach	336	335	335	364
Escambia	77	80	82	68	Pasco	111	125	124	130
Flagler	18	15	6	11	Pinellas	430	450	449	368
Franklin	0	1	0	0	Polk	77	85	91	108
Gadsden	3	3	4	4	Putnam	4	7	11	5
Gilchrist	0	0	0	0	St. Johns	43	44	57	38
Glades	0	0	0	0	St. Lucie	46	46	51	54
Gulf	0	0	1	1	Santa Rosa	11	9	17	11
Hamilton	1	0	1	0	Sarasota	87	123	113	116
Hardee	2	2	3	2	Seminole	59	62	78	64
Hendry	2	2	2	2	Sumter	7	9	4	5
Hernando	28	23	14	13	Suwannee	5	5	1	3
Highlands	9	7	8	11	Taylor	2	3	2	0
Hillsborough	367	321	346	377	Union	0	1	0	0
Holmes	0	0	0	1	Volusia	161	138	147	174
Indian River	27	21	29	25	Wakulla	1	4	3	1
Jackson	2	3	2	1	Walton	4	10	7	9
Jefferson	1	1	1	0	Washington	1	1	1	0
Lafayette	0	0	0	0	Unknown	0	0	0	0
Lake	28	30	18	30	Statewide	4,303	4,380	4,376	4,600
Lee	92	98	106	125					

Source: FL DHSMV Traffic Crash Statistics Report 2010.

\*2011 data not available at time of publication.

**Table A-5. Pedestrian and Bicycle Safety Coalition Membership (alphabetical order)**

Name	Agency
Ausher, Jerry	FDOT – D2 Champion
Bacon, Julie	EMSC Advisory Council
Bacot, Lisa	Florida Public Transportation Assoc.
Bond, Julie	CUTR at USF
Burton, J.R.	Hillsborough County Sheriff's Office
Bustos, Tim	Florida Bicycle Association
Byers, Patricia	Ryder Trauma Center - Miami
Carr, Melanie Weaver	FDOT – Office of Policy Planning
Carson, Kristen	FDOT – D7
Cruse, Lucas	CUTR at USF
Freeman, Jacqueline	FHP
Grube, Karl	State JOL
Gruener, Leilani	DOH
Hattaway, Billy	FDOT – Statewide Champion
Heidelberg, Courtney	DHSMV
Hollingsworth, Lora Bailey	FDOT – State Safety Office
Jeffries, Ken	FDOT – D6 Champion
Kourtellis, Achilleas	CUTR at USF
Larsson, Kristin	CUTR at USF
Lin, Pei-Sung	CUTR at USF
McCarter, Linda	DHSMV
McPherson, Trenda	FDOT – State Safety Office
Minns, Laura	Lynx Orlando
Pego, Gus	FDOT – D6 Secretary
Richter, Cory	Indian River Fire and Rescue
Roop, Al	IPTM
Santos, Joe	FDOT – State Safety Office
Shepard, Michael	FDOT – Central Office
Skrelunas, David	FDOT – D7
Smith, Karen	FDOT – State Safety Office
Stacks, Cheryl	City of St. Petersburg
Sullivan, Frank	FDOT – Central Office
Taborda, Luis	Miami PD
Weaver, Matthew	FDOT – D1 Champion
Weidner, Jeff	FDOT – D4 Champion
Wilson, Mark	FDOT – Central Office
Young, Brenda	FDOT – D5 Champion



Funded by the Florida Department of Transportation