North Florida TPO
Transportation Planning Organization
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Regional System Safety Plan

Regional System Safety Plan

Final Report

Prepared for:

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Transportation Planning Organization
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Executive Summary

The 2019 North Florida TPO Regional System Safety Plan updates the previous Regional Strategic Safety Plan completed in 2012. Using a data-driven process, the updated plan identifies safety conditions and needs within the region, provides a framework for addressing regional safety issues and is a resource to the region's 2045 Long Range Transportation Plan (LRTP). It is intended that the plan's crash analysis, survey results and suggested strategies guide priorities within the region to facilitate improved safety performance.

Traffic Crash Conditions

Regional Trends

A total of 249,870 traffic crashes occurred in North Florida during the last five years, 2014 through 2018 (Table ES1). During this period, population and vehicle miles traveled (VMT) increased by eight and 5% respectively, while the region's total crashes increased by 16% (from 46,222 to 53,441 crashes). The region's crash rates also increased. Crashes per million VMT increased by 10% (from 2.6 to 2.8).

Table ES1. Regional Crashes, Population and Vehicle Miles, 2014 – 2018

	2014	2015	2016	2017	2018	5-Year Total	Percent Change (2014 – 2018)
Traffic Crashes	46,222	47,748	50,564	51,898	53,441	249,873	15.6%
Population	1.4 Million	1.4 Million	1.4 Million	1.5 Million	1.5 Million	7.2 Million	8.2%
VMT	48.4 Million	49.0 Million	49.6 Million	50.2 Million	50.8 Million	248.0 Million	5.0%
Crash Rate	2.6	2.7	2.8	2.8	2.9	2.8	10.1%

Source: *Signal Four Analytics*, ETM

From 2014 to 2018, the total number of crashes resulting in deaths and serious injuries decreased by 30% (from 1,289 to 907 crashes).

Table ES2. Fatal and Serious Injury Crashes, 2014 – 2018

	2014	2015	2016	2017	2018	5-Year Total	Percent Change (2014 – 2018)
Total Crashes	46,222	47,748	50,564	51,898	53,441	249,873	15.6%
Fatal & Serious Injury Crashes	1,289	1,298	1,207	1,175	907	5,876	-29.6%
Share of Total Crashes	2.8%	2.7%	2.4%	2.3%	1.7%	2.4%	---

Source: *Signal Four Analytics*, ETM

During the same period, the frequency of death and serious injuries, as well as the associated rates, also decreased. The number of deaths and serious injuries per 100,000 people decreased by 37% (from 113 to 71).

Table ES3. Fatal and Serious Injuries, 2014 – 2018

	2014	2015	2016	2017	2018	5-Year Total	Percent Change (2014 – 2018)
Fatalities and Serious Injuries	1,572	1,609	1,442	1,429	1,063	7,115	-32.4%
Fatality and Serious Injury Rate	112.9	113.4	99.4	96.8	70.6	472.3	-37.5%

Source: *Signal Four Analytics*, ETM

Emphasis Areas

To help identify and focus potential solutions, the strategies described in this report address the following types of crashes: careless driving, distracted driving, intersection, lane departure, motorcyclist, pedestrian and bicyclist and unrestrained occupant. These crashes are emphasized based on crash analysis results, survey results and legislative priorities of the North Florida TPO. Table ES4 lists crash characteristics for these emphasis areas, sorted alphabetically by emphasis area name.

Table ES4. Major Emphasis Areas (sorted alphabetically)

Emphasis Area	Total Crashes (rounded)	Percent of the Region's Total Crashes	Percent of the Region's Fatal & Serious Injury Crashes	Percent of the Region's Fatal Crashes	Percent of Crashes Resulting in Death or Injury
Regional Crashes	249,870	100%	2.4%	0.4%	26%
Careless Driving	**69,260**	**28%**	**27%**	6%	32%
Distracted Driving	32,850	13%	14%	5%	31%
Intersection	**71,840**	**29%**	**34%**	**28%**	34%
Lane Departure	**53,210**	**21%**	**26%**	**30%**	22%
Motorcyclist	4,000	2%	15%	17%	**76%**
Pedestrian and Bicyclist	5,950	2%	16%	**31%**	**82%**
Unrestrained Occupant (No seat belt)	5,090	2%	15%	**28%**	**70%**

Notes: Sorted by Emphasis Area in alphabetical order, the Top three percentages in each column are shown in bold font, crashes are rounded to the nearest ten**,** crashes may belong to more than one emphasis area
Source: *Signal Four Analytics*, ETM

Based on the number of total crashes (and serious and fatal injury crashes), the region's top three emphasis areas are intersection, careless driving and lane departure.

- Intersection crashes represent 29% of the region's total crashes (71,840) and 34% of the region's serious and fatal injury crashes (1,997).
- Careless driving crashes represent 28% of the region's total crashes (69,260) and 27% of the region's serious and fatal injury crashes (1,565).
- Lane departure crashes represent 21% of the region's total crashes (53,207) and 26% of the region's serious and fatal injury crashes (1,523).

Pedestrian and bicyclist, motorcyclist and unrestrained occupant crashes are also important within the region as most (more than 70% for each type) result in death or injury. Of the region's 5,950 pedestrian and bicyclist crashes over the five-years, 82% resulted in injury or death. Furthermore, although pedestrian and bicyclists crashes represent a small share of the region's total crashes (2%), they represent almost one-third of the region's fatal crashes (31%).

The Regional System Safety Plan supports Florida's Strategic Highway Safety Plan which addresses similar issues at the state level.

High-Crash Corridors

Forty-two corridors were identified as high-crash corridors, as approximately 55,250 crashes occurred on these roadways during the analysis period. Described in Figure ES1 and Table ES5, the corridors are mostly state roadways. Of the 42 high-crash corridors, most are in Duval County (33); four are in St. Johns County, three in Clay County and two in Nassau County.

Additional characteristics of these corridor-specific crashes are listed below.

- Distracted driving was a contributing cause for 14% of total high-crash corridor crashes (7,879 crashes), and for 13% of the region's total crashes.
- Of the 132 deaths due to crashes along the corridors, 19 (14%) did not wear seat belts.
- On high-crash corridors, 73% of crashes occurred during the day, 20% occurred at night, 4% occurred at dawn or dusk and the light condition for 3% was unknown.
- On high-crash corridors, 83% of crashes occurred on dry pavement, 14% occurred on wet pavement and the road surface for 3% was unknown.
- Forty-six percent of crashes on high-crash corridors involved rear-end crashes. Eleven percent were due to sideswipes and 10% due to left turns.
- Regarding day of the week, the percentage of corridor crashes occurring on Friday was the highest, at 17%. Wednesday and Thursday each represented 16% of corridor crashes, Tuesday 15% and Monday 14%. Saturday and Sunday represented the lowest percentage of corridor crashes, at 12% and 9%, respectively.
- The corridor crashes were evenly split between the 12 months, with each month representing about 8 to 9% of total corridor crashes.
- Six of the seven downtown Jacksonville corridors are one-way streets.

Figure ES1. High-Crash Corridors, 2014 – 2018

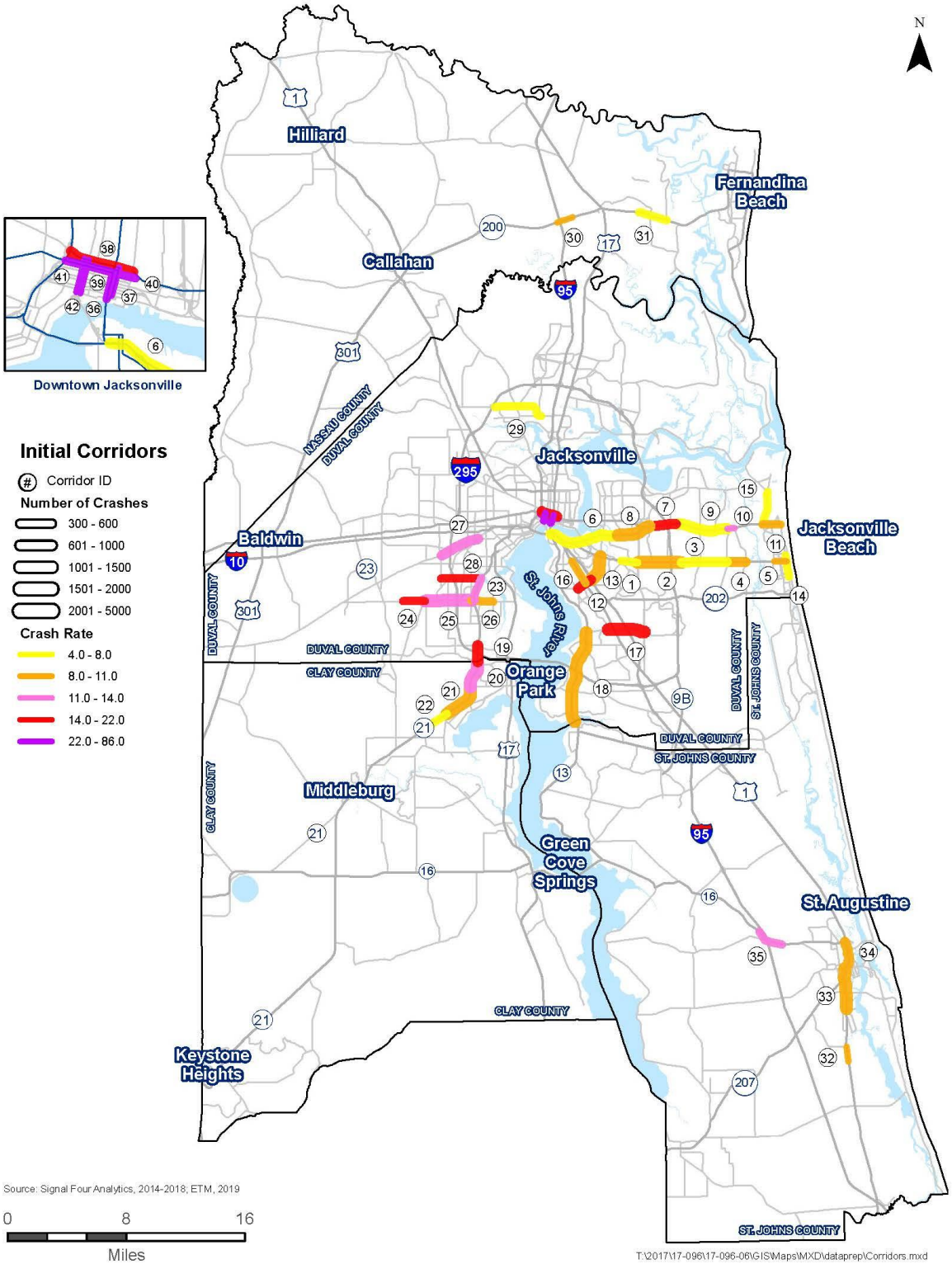


Table ES5. High-Crash Corridors (sorted by corridor ID#)

ID #	Roadway	From	To	Miles	County	Total Crashes	Crash Rate (MVMT)
1	US 90/SR 212/Beach Boulevard	Parental Home	W. of Southside Boulevard	1.11	Duval	792	6.46
2	US 90/SR 212/Beach Boulevard	W. of Southside Boulevard	Central Parkway	2.95	Duval	2836	9.49
3	US 90/SR 212/Beach Boulevard	Central Parkway	W. of Hodges	3.08	Duval	1239	4.45
4	US 90/SR 212/Beach Boulevard	W. of Hodges	San Pablo	1.27	Duval	1131	10.83
5	US 90/SR 212/Beach Boulevard	Penman	A1A	0.87	Duval	361	8.62
6	SR 10/Atlantic Boulevard	I-95	Arlington Road	4.47	Duval	1763	7.67
7	SR 10/Atlantic Boulevard	Arlington Road	Arlington Expressway	1.73	Duval	1440	14.70
8	SR 10/Atlantic Boulevard	Arlington Expressway	Sandalwood Boulevard	2.14	Duval	2229	10.01
9	SR 10/Atlantic Boulevard	Sandalwood Blvd	Hodges	3.55	Duval	1727	4.62
10	SR 10/Atlantic Boulevard	Hodges	San Pablo	0.48	Duval	536	11.15
11	SR 10/Atlantic Boulevard	SR A1A/Mayport Rd	SR A1A/3rd Street	1.28	Duval	753	10.70
12	SR 109/University Boulevard S.	St. Augustine Rd	I-95	1.10	Duval	1326	16.36
13	SR 109/University Boulevard S.	I-95	US 90/SR 212/Beach Boulevard	3.72	Duval	2075	8.28
14	SR A1A/3rd St	16th Avenue South	6th Ave North	1.49	Duval	675	7.22
15	SR A1A/Mayport Road	SR 10/Atlantic Boulevard	SR A1A; Mayport Crossing Rd	2.30	Duval	935	7.43
16	US 1/Philips Highway	SR 126/Emerson Street	SR 109/University Boulevard	1.60	Duval	730	10.14
17	SR 152/Baymeadows Road	Old Kings Road	E. of SR 115/Southside	2.49	Duval	2574	14.89
18	SR 13/San Jose Blvd	Baymeadows	S. of Julington Creek	5.86	Duval	4970	9.34
19	SR 21/Blanding Boulevard	Collins Road	Duval/Clay County Line	1.02	Duval	1941	17.19
20	SR 21/Blanding Boulevard	Duval/Clay County Line	SR 224/Kingsley Avenue	1.87	Clay	2900	11.72
21	SR 21/Blanding Boulevard	SR 224/Kingsley Avenue	College Drive	2.62	Clay	2677	8.55
22	SR 21/Blanding Boulevard	College Drive	Tanglewood Boulevard	1.22	Clay	764	7.40
23	SR 21/Blanding Boulevard	S. of SR 134/103rd Street	SR 208/Wilson Road	1.58	Duval	940	11.45
24	SR 134/103rd Street/Timuquana Road	Connie Jean Road	Old Middleburg Rd	1.46	Duval	705	21.66
25	SR 134/103rd Street/Timuquana Road	Old Middleburg Rd	Jammes Rd	3.11	Duval	2970	13.05
26	SR 134/103rd Street/Timuquana Road	Jammes Rd	Catoma Street	1.50	Duval	652	9.45
27	SR 228/Normandy Boulevard	I-295	Lenox Avenue (near Post St.)	2.23	Duval	1412	13.18

ID #	Roadway	From	To	Miles	County	Total Crashes	Crash Rate (MVMT)
28	SR 208/Wilson Boulevard	Fouraker Rd	SR 103/Lane Avenue	1.49	Duval	637	15.25
29	SR 104/Dunn Avenue	Biscayne Boulevard	I-295	3.68	Duval	859	6.85
30	SR200/A1A/The Buccaneer Trail	Semper Fi Drive (W. of I-95)	Bobby Moore Circle	1.08	Nassau	364	8.80
31	SR200/A1A/The Buccaneer Trail	Gene Lassere Boulevard	Blackrock Road	1.91	Nassau	641	5.06
32	US-1	E Watson Drive/Watson Road	Wildwood Drive	1.00	St. Johns	347	9.42
33	US-1	Lewis Point Road	King Street	2.78	St. Johns	2109	9.78
34	US-1/Ponce De Leon Boulevard	King Street	SR 16	1.93	St. Johns	1219	9.65
35	SR 16	Toms Road (NW of I-95)	Fortner Road	1.33	St. Johns	964	11.38
36	US-1/Main Street	Independent Drive	US 23/State Street	0.56	Duval	645	54.19
37	Ocean Street	Independent Drive	US 23/State Street	0.56	Duval	500	60.25
38	US 23/State Street	Lee Street	Liberty Street	1.06	Duval	1079	20.00
39	Union Street	Lee Street	Liberty Street	1.06	Duval	994	18.51
40	US 90/Beaver Street	Lee Street	Liberty Street	1.06	Duval	772	74.51
41	Jefferson Street	Water Street	US 23/State Street	0.58	Duval	540	65.91
42	Broad Street	Water Street	US 23/State Street	0.58	Duval	529	85.80

Summary of Survey Results

As part of the Regional System Safety Plan update, the North Florida TPO developed a survey to garner public input on where and how to invest in safety projects. Approximately 700 people responded (answered at least one question) with 55% from Duval County, 21% from St. Johns County, 18% from Clay County, 3% from Nassau County and 3% from other areas.

Problem Behaviors (Survey Feedback)

Driving distracted while looking at a phone, followed by driving aggressively or carelessly were ranked as the biggest problem behaviors. Driving under the influence of alcohol or drugs was deemed the least problematic with only 5% of survey respondents scoring these behaviors as one of the biggest problems.

Strategies to Improve Traffic Safety (Survey Feedback)

Roadway design/markings and enforcement ranked as the top two strategies needed to improve safety.

When given a choice of behaviors to target for additional enforcement, respondents overwhelmingly selected distracted driving (56%), followed by speeding (18%) and drivers failing to yield to bicyclists and pedestrians (13%). Although education was viewed as the least-needed strategy, there were many comments on the importance of education. Many reflected a desire for education across multiple audiences, particularly teens, adults and those who violate traffic laws.

The survey also asked respondents to indicate steps needed to make travel safer for drivers, pedestrians and bicyclists. The top three steps cited as most helpful (very/extremely) in making travel safer are as follows:

For drivers:

- Provide additional enforcement to reduce distracted driving (74%)
- Encourage pedestrian- and bicyclist-friendly development and redevelopment to reduce speeding (62%)
- Provide additional enforcement to reduce speeding (58%)

For pedestrians

- Add/Repair sidewalks and road markings (69%)
- Add marked crosswalks on roads (at intersections) (65%)
- Encourage pedestrian-friendly development and redevelopment (65%)

For bicyclists

- Add physically separated bike lanes (84%)
- Provide more enforcement to ensure drivers follow laws (63%)
- Add/repair marked bike lanes and existing road markings (59%)

Strategies

The North Florida Regional System Safety Plan outlines potential strategies and countermeasures to help achieve the region's safety goals and performance targets. To encourage safe travel, the plan's strategies seek to reduce crashes, lower crash severity and promote safety in the design or retrofit of the transportation system.

Collectively, the plan's strategies identify potential ways to plan and design roadways, incorporate technology, enforce traffic laws and regulations and educate the community. The intent is that the strategies address safety throughout the four-county region including high-crash corridors and major emphasis areas such as intersection, distracted driving and pedestrian and bicyclist crashes. Sample strategies and countermeasures from the plan to reduce pedestrian and bicyclist crashes are summarized below.

Engineering, Design and Technology

- Develop policies and plan for the use of Complete Street and context sensitive strategies, that focus on safe streets for everyone
- Limit pedestrian and bicyclist conflicts by installing geometric, traffic control and/or pedestrian lighting improvements
- Implement regular maintenance of marked roadway lines, including crosswalks, pedestrian signals and other critical infrastructure
- Carefully integrate Connected Autonomous Vehicle (CAV)/Connected Vehicle (CV) technology to help motor vehicles detect and avoid pedestrian and other vulnerable road users, as part of Smart North Florida Laws, Licensing and Enforcement

Enforcement, Laws and Licensing

- Support high visibility and targeted enforcement strategies to increase compliance with traffic laws
- Improve pedestrian and bicyclist information in driver's training and consider the need for revised licensing policies Education, Communications and Outreach

Education and Outreach

- Complete pedestrian road safety audits (or similar type of review) as part of targeted safety education and outreach
- Educate and promote awareness and correct use of new, underused and/or mis-used transportation infrastructure
- Learn from and consider partnering with Florida's Pedestrian Safety Coalition and safety initiatives such as Florida's Pedestrian and Bicycling Safety Resource Center Traffic Data and Information Systems

Data

- Implement a new, annual pedestrian and bicyclist count program, collecting counts at strategic locations within the region to establish crash rates

1 – Introduction and Background

Overview

The 2019 North Florida TPO Regional System Safety Plan serves as an update to the TPO's previous Regional Strategic Safety Plan completed in 2012. The plan identifies safety conditions and needs within the region, provides a framework for addressing regional safety issues and is a resource to the region's 2045 Long Range Transportation Plan (LRTP) and annual system performance report. Recognizing the national and state traffic safety emphasis on decreasing traffic deaths, the region's plan supports the alignment of safety-related goals, strategies and investments to ensure resources are dedicated to reducing traffic fatalities and serious injuries.

Methodology and Crash Data

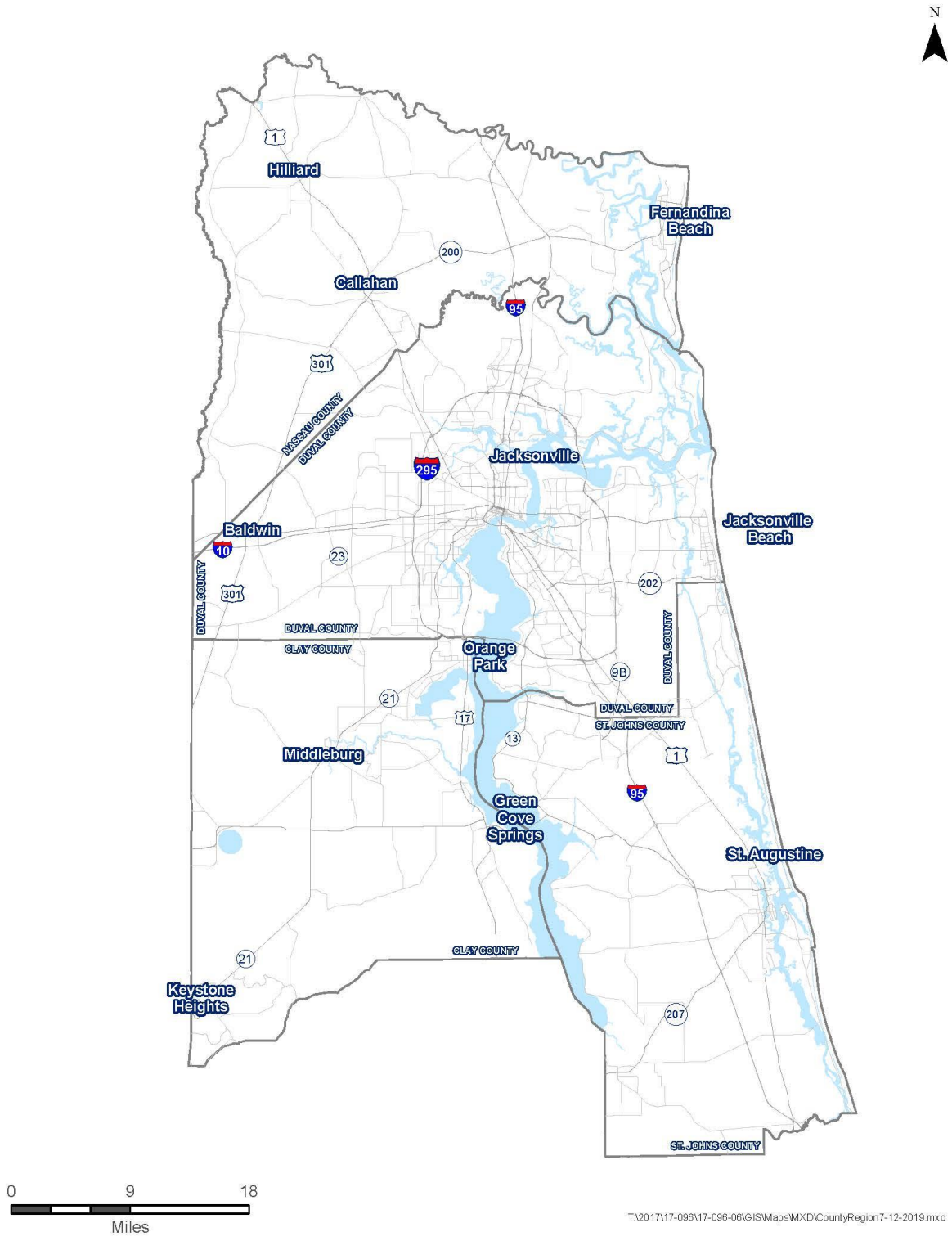
The Regional System Safety Plan utilizes data analysis to identify key safety concerns and strategies. Crash data serves as the primary source to guide the plan. *Signal Four Analytics* is an interactive, web-based geospatial analytical tool utilizing Florida Department of Highway Safety and Motor Vehicle (DHSMV) crash data. This crash data is generated from long[1] or short form Florida Traffic Crash Reports. *Signal Four Analytics* combines the use of both long and short form crashes and up-to-date crashes to offer a robust dataset that provides insight into regional crash trends and conditions. Therefore, *Signal Four Analytics* data may contain a greater number of crashes than other crash data sources. In addition to crash data, a safety survey was implemented to incorporate public input.

Study Area

As illustrated on Figure 1, the North Florida TPO planning area is in northeast Florida and includes all of Clay, Duval, Nassau and St. Johns Counties.

[1] The motor vehicle crashes reported on long forms are generally more severe crashes, and the use of long form reports for these crashes is required by Florida Statute (F.S. 316.066).

Figure 1. North Florida TPO Region (Study Area)



Planning and Policy Implications

The North Florida TPO's planning efforts, including the Regional System Safety Plan, align with national and state safety plans and programs. At the national level, safety is a priority factor in the transportation planning process. There is an emphasis on safety in the most recent federal transportation legislation, the 2015 Fixing America's Surface Transportation (FAST) ACT, and the national traffic safety vision, "Toward Zero Deaths". The State of Florida shares the national traffic safety vision and formally adopted, "Driving Down Fatalities".

Highway Safety Improvement Program (HSIP) and Safety Performance Targets

HSIP is a core Federal-aid program (23 U.S.C. §148) with the purpose of achieving a significant reduction in fatalities and serious injuries[2] on all public roads. As part of the HSIP, states and MPOs are required to report serious injuries and fatalities resulting from traffic crashes and adopt safety performance targets. Aligned with the national and state vision of zero traffic deaths, North Florida TPO has adopted the State of Florida's annual aspirational targets, as listed below and required by 23 CFR[3] 490 National Performance Measures for the HSIP.

Measure	Target
• Number of Fatalities	0
• Number of Serious Injuries	0
• Fatality Rate	0
• Serious Injury Rate	0
• Total Number of Non-Motorized Fatalities and Serious Injuries	0

The Florida Department of Transportation (FDOT) reports annually on the progress being made to advance HSIP implementation and evaluation efforts. To be eligible for HSIP funds, all safety improvement projects must address a Florida Strategic Highway Safety Plan emphasis area, be identified through a data-driven process and contribute to a reduction in fatalities and serious injuries. Appendix A contains Resolution 2019-7, adopting safety performance targets for the North Florida TPO, and related safety performance data.

Florida Strategic Highway Safety Plan (SHSP)

A SHSP is a major component and requirement of the HSIP and is designed to serve as the "umbrella" safety plan for all other state, regional, and local safety plans. Florida's 2016 SHSP developed by FDOT describes a strategic approach for improving safety on Florida's public roadways by eliminating fatalities and reducing serious injuries. The plan is data-driven and focuses on 13 Emphasis Areas reflecting ongoing and emerging highway safety issues in Florida. The plan contains strategies aligning with the "*4 E's*" (engineering, education, enforcement, and emergency response) and defines a framework for how activities are implemented (safety coalitions, FDOT, other State agencies, MPOs, local governments and other traffic safety

[2] The definition of serious injury corresponds to incapacitating injury (injury severity value "4") on the Florida Traffic Crash Report form. This is officer-reported.

[3] Code of Federal Regulations

partners). The SHSP is updated at least every five years by FDOT. Florida anticipates completing its next SHSP update in 2021. The current SHSP covers years 2016-2021.

Highway Safety Plan (HSP)

Based on Florida's SHSP goals and objectives, the HSP is Florida's action plan for distributing National Highway Traffic Safety Administration (NHTSA) highway safety funds. Like the SHSP, the HSP focuses on priority areas (called emphasis areas in the SHSP) proven to be effective in reducing crashes, serious injurious and fatalities. Annually, Florida and other states submit an HSP to the NHTSA for approval describing their highway safety program and planned activities that will decrease serious injuries and fatalities. Subgrants are awarded to state and local safety-related agencies as "seed" money to assist in developing and implementing programs in traffic safety priority areas. Funding is apportioned to states annually based on a formula that considers population and road miles.

North Florida TPO Safety Planning Efforts

Long Range Transportation Plan (LRTP) – Path Forward 2045

The North Florida Regional System Safety Plan aligns with the region's LRTP and Transportation Improvement Program (TIP). It is intended that the resulting crash analysis, survey results and strategies within the safety plan will help prioritize transportation projects within the region. Adoption of the Path Forward 2045 LRTP is anticipated November 2019.

With 1,958 total respondents, a survey for the Path Forward 2045 LRTP asked residents to share their current and long-term transportation needs to guide development of the LRTP.

- When survey respondents were asked their top three most critical transportation issues, *controlling distracted driving* ranked second (61%) and improving pedestrian *safety* ranked fourth (34%).
- When asked to rank how important technology is to various aspects of transportation, *decreasing roadway crashes and making them safer for motorists/bicyclists/pedestrians* ranked first (66%), and *providing safer intersections for pedestrians* ranked third (29%).
- When asked how the region should invest in additional transportation improvements, *implement technology to improve traffic safety/efficiency* was ranked first by 83% of respondents.
- When asked for the three most significant transportation challenges in our region in the next 25 years, *safety* tied for fourth place, selected by 21% of the survey respondents.

Legislative Priorities

In 2019, distracted driving was a legislative priority for the North Florida TPO; specifically, *reducing distracted driving by regulating the use of electronic wireless communication devices as a primary offense*. In May 2019, Florida's Governor signed the Florida Ban on Texting While Driving Law.[4] The law authorizes law enforcement officers to stop motor vehicles and issue citations to people who are texting while driving. The intent of the law is to improve safety, prevent crashes and reduce injuries and deaths. The new law also bans the use of any handheld wireless communications devices in school and construction zones.

The North Florida TPO also supported legislation that *promotes bicycle and pedestrian safety through a statewide public awareness and education campaign, and by strengthening both bicycle and pedestrian safety efforts*.

Past Safety-Related Plans and Efforts

The plan also builds on past safety-related plans and efforts within the region. The North Florida TPO's previous Regional Strategic Safety Plan was completed in 2012. Since the 2012 Regional Safety Plan, the North Florida TPO has developed successful safety campaigns, training and educational resources for partner agencies and the public. These include the following:

- Beach Boulevard Pedestrian Safety Campaign (2018) – Pedestrian safety campaign to educate the public, change unsafe behaviors and reduce crashes along the corridor (a more detailed summary of this campaign is included in Section 3 of this report);
- Slow Your Roll St. Augustine - Pedestrian and bicyclist public awareness campaign targeting St. Augustine residents and students;
- Yield to Life/Look ALL-Ways - Bicyclist and pedestrian safety campaign in Atlantic Beach along Atlantic Boulevard to increase awareness and reduce crashes involving motorists, bicyclists and pedestrians; and
- CareMore Driving Argyle – Public awareness campaign in Argyle Forest to encourage careful and less distracted driving.

Additionally, in 2009 TPO staff partnered with the region's law enforcement, fire rescue, transportation agencies and Road Rangers to develop *TIMe4Safety* Training Materials for First Responders. The resulting training program (DVD and Traffic Incident Management Handbook) is used by first responders to enhance safety at the scene of traffic crashes.

[4] 2019 Florida Statutes, Title XXIII, Chapter 316.305

2 – Survey Results

As part of the Regional System Safety Plan update, the North Florida TPO developed a survey to garner public input on where and how to invest in safety projects. The survey was published May 31 - July 13, 2019. It was promoted via the TPO's website, social media, e-newsletters (to 2707 contacts), TPO staff and committee outreach, and email (to North Florida TPO partner agencies, media, civic and business contacts).

Approximately 700 people responded (answered at least one question) with 55% from Duval County, 19% from St. Johns County, 18% from Clay County, 3% from Nassau County, 2% from other areas and 3% unknown. Respondents most often travel locally by driving (93%), bicycling (4%) and other modes of transportation (3%).

Appendix B contains the list of survey questions. A full listing of responses and comments is available upon request. Key findings are summarized below.

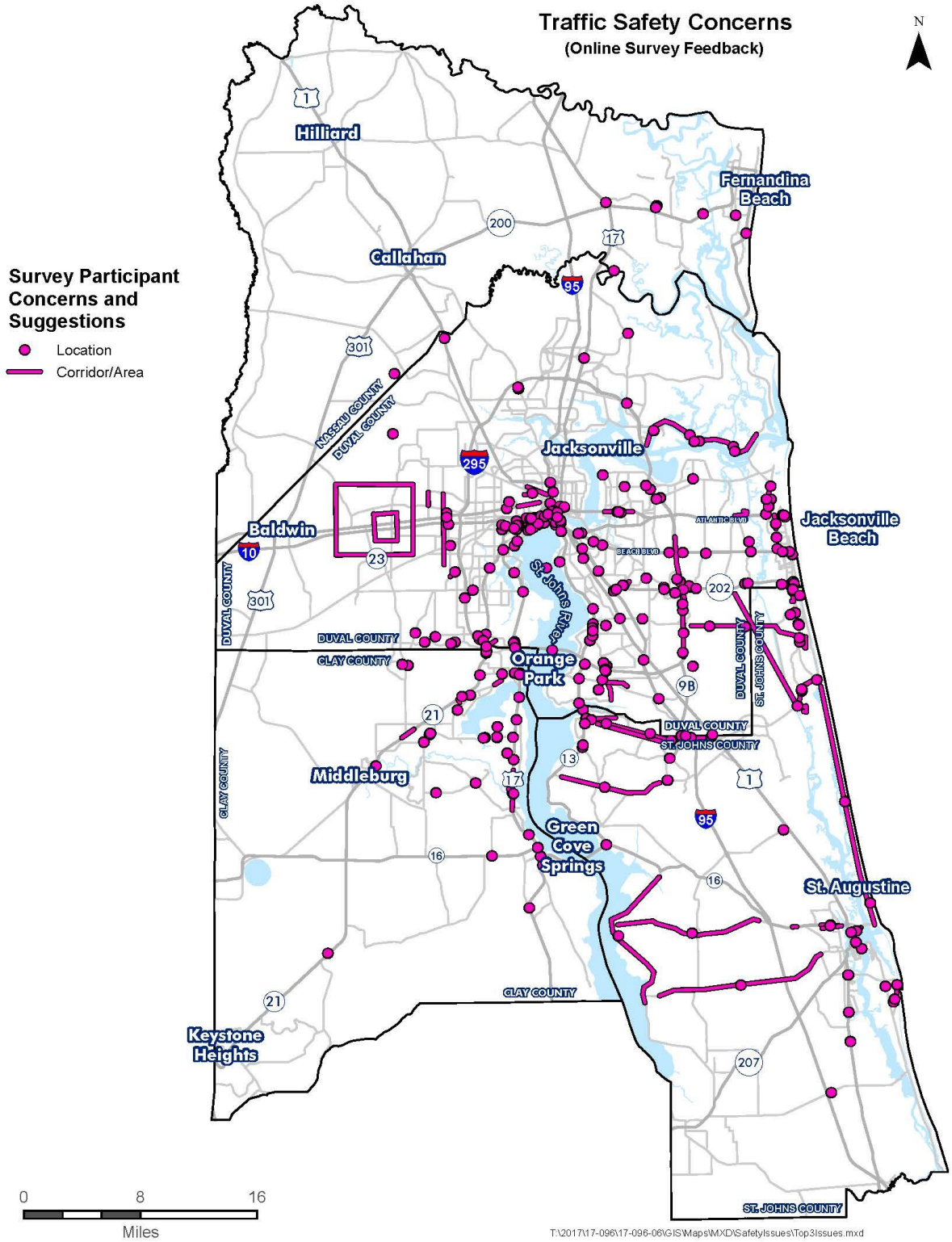
Traffic Safety Problem Locations

The survey asked respondents to "…*mark up to three locations where you feel there is a traffic safety issue and explain*." Comments were collected that referenced over 400 locations. The locations are illustrated in Figure 2.

Approximately 51% of the comments/locations were in Duval County, 27% in St. Johns County, 19% in Clay County and 3% in Nassau County. Many of the comments/locations were regarding the southside area of Duval County (20%) and the beaches areas of both Duval and St. Johns Counties (20%).

About half of the comments addressed safety for drivers or all road users, while the other half addressed pedestrian and/or bicyclist safety.

Figure 2. Survey Traffic Safety Concerns

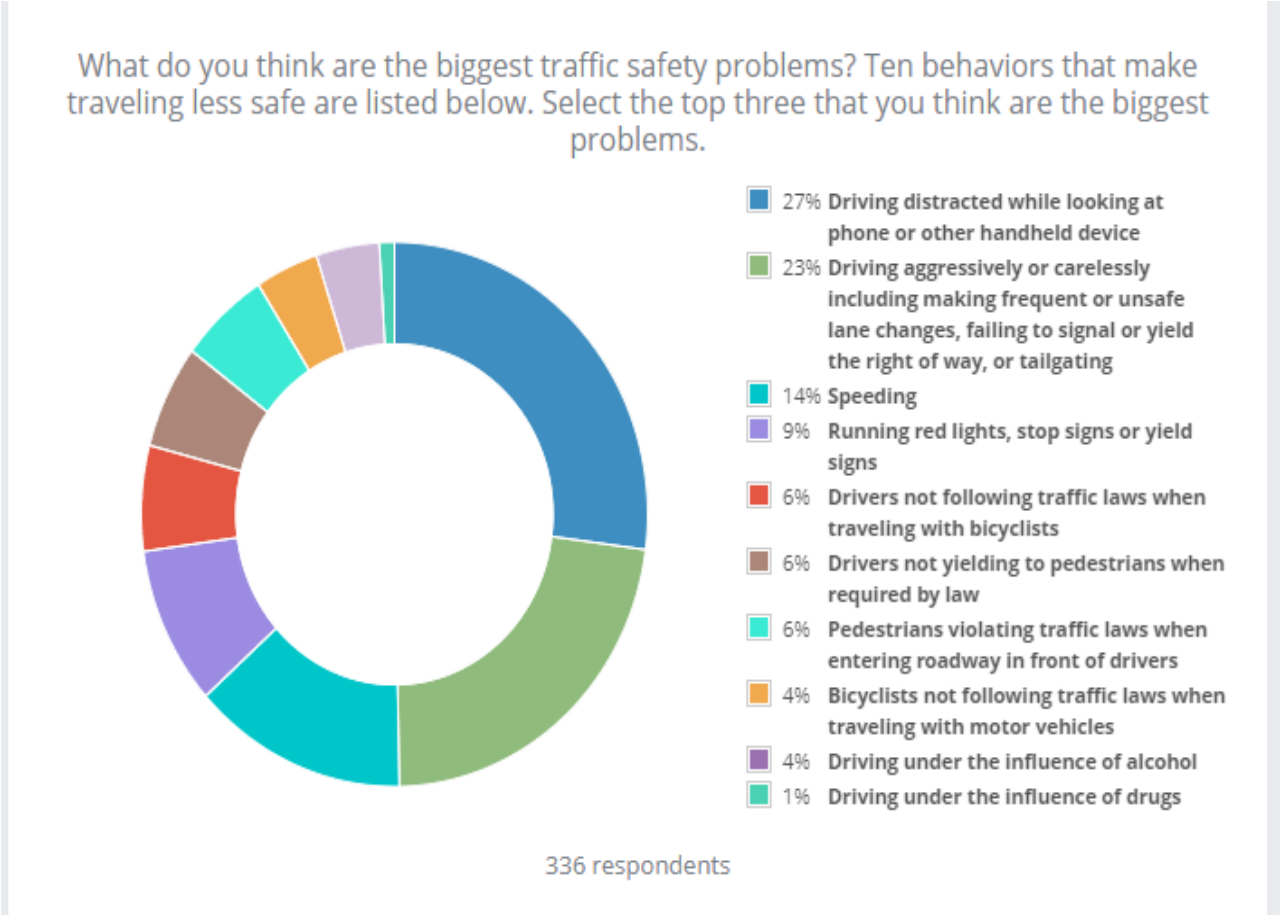


Top Safety Problem Behaviors

Survey respondents were asked, "*What do you think are the biggest traffic safety problems? Ten behaviors that make traveling less safe are listed below. Select the top three that you think are the biggest problems*."

Driving distracted while looking at a phone followed by driving aggressively or carelessly were ranked as the biggest problem behaviors by 27% and 23% of survey respondents, respectively. Driving under the influence of alcohol or drugs was deemed the least problematic with only a total of 5% scoring these behaviors as one of the biggest problems. Additional responses are listed in Figure 3.

Figure 3. Ranking of Safety Problem Behaviors



Strategies to Improve Traffic Safety (Survey Feedback)

The survey asked respondents to rank four traffic safety strategies. "*What types of strategies are needed to improve traffic safety? Four general traffic safety improvement categories are listed below. Click on, drag and drop these items to rank them starting with the most needed at the top to the least needed at the bottom.*"

Roadway design/markings and enforcement ranked as the top two strategies needed to improve safety while roadway operations and education finished third and fourth, respectively. Merging was referenced over 50 times in respondent comments and concerns were related to roadway design at specific locations, as well as driver knowledge and courtesy. Specific rankings are indicated below:

- Roadway/markings - rank: 1.87
- Enforcement - rank: 1.92
- Roadway operations including traffic signals, signs and speed limits - rank: 2.36
- Education - rank: 2.75

When given a choice of six behaviors to target for additional enforcement, respondents overwhelmingly selected distracted driving, followed by speeding and drivers failing to yield to bicyclists and pedestrians. Specific results are listed below:

- Distracted driving (56%)
- Speeding (18%)
- Drivers' failure to yield to pedestrians and bicyclists (13%)
- Drivers' failure to yield to other drivers (8%)
- Red-light running (4%)
- Impaired driving (2%)

Education was viewed as the least needed strategy, although there were many comments on the importance of education. Many survey respondents reflected a desire for education across multiple audiences, particularly teens, adults and those who violate traffic laws. When selecting which audience would benefit the most from traffic safety education, responses were as follows:

- Teens (34%)
- Adults (30%)
- Those who violate traffic laws (22%)
- Children (pedestrian and bicyclist) (10%)
- Senior Citizens (4%)

Steps Needed to Make Travel Safer

The survey also asked respondents to indicate steps needed to make travel safer for drivers, pedestrians and bicyclists. Three separate questions asked, "*In general, how helpful would the following steps be in making travel safer for pedestrians/bicyclists/drivers?*"

The top six steps cited as most helpful (very or extremely) in making travel safer are as follows:

Making travel safer for drivers:

- Provide additional enforcement to reduce distracted driving (74%)
- Encourage pedestrian- and bicyclist-friendly development and redevelopment to reduce speeding (62%)
- Provide additional enforcement to reduce speeding (58%)
- Provide additional enforcement to reduce driving under the influence (55%)
- Provide more driver education (45%)
- Provide more enforcement to ensure bicyclists and pedestrians follow laws (42%, 41%)

For pedestrians:

- Add/Repair sidewalks and road markings (69%)
- Add marked crosswalks on roads (at intersections) (65%)
- Encourage pedestrian-friendly development and redevelopment (65%)
- Add pedestrian signals to crosswalks (64%)
- Provide more enforcement to ensure drivers follow laws (63%)
- Give pedestrians time to cross before drivers turn (62%)

For bicyclists:

- Add physically separated bike lanes (84%)
- Provide more enforcement to ensure drivers follow laws (63%)
- Add/Repair marked bike lanes and existing road markings (59%)
- Provide more driver education (58%)
- Encourage road designs that will reduce speeding (53%)
- Provide more enforcement to ensure bicyclists follow laws (51%)

Tables 1 – 3 on the next three pages display responses for all steps.

Table 1. Pedestrian Safety (Survey Feedback)

In general, how helpful would the following steps be in making travel safer for pedestrians?

	Not at All	Slightly	Somewhat	Very	Extremely
Add/Repair sidewalks and existing road markings	3%	8%	20%	39%	30%
Add marked crosswalks on roads (at intersections)	2%	10%	23%	33%	32%
Add marked mid-block crossings with flashing beacons	8%	13%	25%	26%	27%
Add pedestrian signals to crosswalks	3%	9%	24%	37%	27%
Add more time to traffic signals to allow pedestrians to cross	6%	18%	27%	22%	28%
Give pedestrians time to cross before drivers turn	2%	15%	21%	32%	30%
Lower speed limits	19%	22%	30%	14%	15%
Provide more lighting at marked crosswalks	6%	14%	25%	28%	26%
Provide more driver education	7%	18%	24%	28%	24%
Provide more pedestrian education	6%	18%	29%	22%	25%
Provide more enforcement to ensure pedestrians follow laws	8%	17%	27%	25%	23%
Provide more enforcement to ensure drivers follow laws	5%	6%	26%	34%	29%
Encourage people to walk more so drivers get used to interacting with pedestrians	35%	21%	22%	11%	11%
Encourage pedestrian-friendly development and redevelopment	5%	9%	21%	26%	39%
Encourage road designs that will reduce speeding	8%	10%	28%	24%	29%

294 respondents

Table 2. Bicycle Safety (Survey Feedback)

In general, how helpful would the following steps be in making travel safer for bicyclists?

	Not at All	Slightly	Somewhat	Very	Extremely
Add/repair marked bike lanes and existing road markings	4%	8%	30%	24%	35%
Add physically separated bike lanes	2%	3%	11%	31%	53%
Add sharrows (shared lane markings)	15%	14%	40%	17%	15%
Lower speed limits	19%	17%	33%	16%	15%
Provide more bicyclist education	4%	13%	34%	25%	23%
Provide more driver education	5%	10%	28%	28%	30%
Provide more enforcement to ensure bicyclists follow laws	7%	13%	29%	25%	25%
Provide more enforcement to ensure drivers follow laws	4%	7%	26%	31%	32%
Encourage people to bike more so drivers get used to interacting with bicyclists	30%	21%	25%	13%	11%
Encourage road designs that will reduce speeding	10%	12%	25%	20%	33%

242 respondents

Table 3. Driver Safety (Survey Feedback)

In general, how helpful would the following steps be in making travel safer for drivers?

	Not at All	Slightly	Somewhat	Very	Extremely
Reduce speed limits on local roads	23%	17%	31%	17%	12%
Reduce speed limits on major roadways	30%	19%	30%	12%	9%
Provide additional enforcement to reduce speeding	9%	10%	24%	27%	31%
Provide additional enforcement to reduce driving under the influence	4%	13%	29%	22%	32%
Provide additional enforcement to reduce distracted driving	3%	5%	18%	27%	47%
Provide more driver education	5%	17%	33%	21%	24%
Provide more pedestrian education	8%	20%	37%	18%	17%
Provide more bicyclist education	7%	21%	36%	16%	21%
Provide more enforcement to ensure pedestrians follow laws	10%	16%	34%	18%	23%
Provide more enforcement to ensure bicyclists follow laws	9%	16%	32%	18%	24%
Encourage pedestrian- and bicyclist-friendly development and redevelopment to reduce speeding	8%	12%	18%	20%	42%

223 respondents

Technology to Improve Traffic Safety

Technology to improve traffic safety is being developed as part of the Smart North Florida movement. This will include things like pedestrian sensors, signal timing coordination and rail crossing notification.

Survey respondents were asked their thoughts about using technology to improve traffic safety. Responses were favorable. Many responses cautioned that technology is only one facet needed to improve traffic safety. The following quotes are sample survey comments related to technology.

- "I would support if the technology works properly and [is] maintained."
- "We need to continue to adapt and utilize new technologies in innovative ways to improve our roadways, improve the safety for our pedestrians and bicyclists and encourage more people to walk or bike to get to places."
- "Signal timing and synchronization of lights is much needed throughout the area."
- "Technology can work, when programmed properly, but road user education and enforcement of laws/rules is needed to prompt changes."

Sample Survey Comments

The survey collected over 1,000 comments. Sample comments relating to many of the previously mentioned safety issues and strategies are listed below.

Distracted Driving

- "I don't think there are any dangerous spots that I drive. It's the distracted drivers on cell phones. Nearly every time I drive. I hope the new law will actually be enforced."
- "The use of cell phones while driving is overwhelming. No need to reiterate the results of distracted driving, we all know them. Something has to be done about it - either the phone needs to be automatically disabled except for emergency calls once the vehicle is in motion or the car manufactures need to put in a blocking device. Impractical? Perhaps. But it is a major cause of accidents. Enforcement needs to be immediate and swift - on site fines perhaps or immediate points on a license?"

Merging

Merging was referenced multiple times in respondent comments, including concerns related to roadway design, driver knowledge and courtesy.

- "Merge onto MLK from Blvd St (north) is difficult, especially at rush hour. Merge onto I-95 S. from MLK (north) can be equally challenging."
- "Westbound I-295 to northbound Old St Augustine Road [OSA]. No merge lane on OSA and angle of entry into OSA forces drivers to look over their shoulder to see approaching traffic."
- "Need signage on the on ramp to I-95 north about how the right lane becomes the Philips Highway exit to prevent excess last second merging."
- "When I'm merging onto the freeway, and I do merge properly by driving close to freeway speed, the cars on the freeway do not let me in. It's so rude. I've almost crashed into barriers several times."

Careless Driving, Speeding and Enforcement

- "Wish we could find a way to make cameras work to catch & stop offenders....enforcement, enforcement. Wow... Think of the revenue! Jacksonville drivers are rude, discourteous, and arrogant. Would love to see more cited."
- "Apparently some people think it's cool to drive 75 mph up and down 220 and have zero regards for those obeying the speed limit. If you're not lucky you may be smashed into, pushed off the road or have a gun pulled on you by one of these clowns. Again. Due to lack of enforcement and no consequences (these people just go to a traffic school online which is a total joke and avoid license points and are back to their careless habits in no time)"
- "I never see the police stopping drivers because of traffic violations. We need more police on the road enforcing traffic laws. "
- "Lack of enforcement. Speeding, tailgating lack of signaling and aggressive driving!" [on JTB west of 3rd Street, west of San Pablo Road and west of I-295]
- "Lots of speeding and illegal passing on SR 21 between SR 16 and Keystone Heights. I've had 2 near misses that would have been head-on collisions."
- **"**US 17 leading to Fleming Island is a constant raceway. We need more lights to slow down the traffic."

Pedestrians

Respondents expressed the need for enforcement and education relative to pedestrian/driver yielding and crossing. In reviewing the comments, it appears that there is a lack of understanding of and adherence to laws relative to pedestrian/motorist behavior. Sample comments relating to these issues are listed below.

- "If you have a green light making a left turn, the pedestrian still has the right of way. This happens at … the light by the SS Walmart."

- "Not sure what to say except pedestrians are EVERYWHERE in the road on Merrill Rd. We cannot drive for pedestrians. They do not use the pedestrian crosswalks or stop lights or flashers. They will be 20 ft from intersection with crosswalks-- but they walk across Merrill Rd at any location!! Defiantly. Education or tickets are needed!"

- "Pedestrians need to be taught to stop, look both ways, and listen before attempting to cross! Also, to wear bright, and even better - reflective clothing at night!"

- "At A1A and 16th, the intersection is not safe for pedestrians. Whether walking or walking a bike in the crosswalk with the walk signal, drivers turning frequently will not stop or wait for pedestrians to cross."

- "A1A on Vilano Beach from Serenata Beach Club to the Vilano Bridge is very dangerous. We have lived here for over 19 years, and the traffic these last few years has increased to a scary level with people trying to cross the A1A to get to the beach at the end of each street. It takes a lot longer to wait for a big opening to cross the street. Then, when you think you have a big opening, you realize how fast the car that was far away is approaching. There is no room for error…The speed limit NEEDS TO BE REDUCED to 40mph to make it safer for people to cross to the beach."

Bicyclists

The desire for physically separated bike facilities was a predominant theme in respondent comments. Examples are listed below.

- "This city does not understand what a bike path is. Not on the street because that is suicide here, but a path that runs along the side of the road. I don't ride much here because too dangerous on the street and subject to a ticket if on the sidewalk."

- "There is a power line along St. Johns Parkway that could connect CR 210 almost to St Augustine Road that would be worthy to consider for off-road access for bikes and pedestrians. Closing gaps is important...but I believe off-road connections could do a lot to improve safety and usability in this area."

- "I believe that the greatest number of cyclists are in the King St, Myrtle Ave, Moncrieff Streets area. However, you will not reach them with surveys. You need to go out there and count them."

- "I would like to see more bike lanes in Yulee; on Chester Rd., Blackrock Rd., Pages Dairy Rd. Hwy 17."

- "AIA through Ponte Vedra Beach needs a bike and walking path separated from motor vehicle traffic. The current bike lane separated by a 5-inch white painted stripe on the pavement is not adequate."

Traffic Engineering/Design

- "Unsafe passing on blind hilly stretch [of SR 21 near Keystone Heights]. Happens driving north and south. Often precipitated by slow moving sand trucks joining traffic… [Suggestion for] yellow caution signage that indicates/reminds drivers of blind stretches."

- "Additional crosswalks are needed on Plantation Oaks Blvd. to facilitate students crossing from the north to the south side of the road PRIOR to walking over the overpass and then darting across traffic on the opposite side to get to OLHS and OLJH".

- "The Robena Rd. and Lem Turner intersection is dangerous. There should be a traffic light there."

- "Heckscher Dr is getting more and more traffic and that traffic is backing up on Heckscher going into Huguenot Park...more people would use a sidewalk if…available. Heckscher is too dangerous to walk or bicycle on. A separate sidewalk is needed."

- "Hamilton St. and College St. [and/or Post St. and Hamilton St.] intersection should be a 4-way stop using a light, not stop signs. People are always blowing through the stop sign facing Hamilton."

- "The entire State and Union area that separates Springfield from downtown is very dangerous."

- "8th street near UF Health is too wide and has too much speeding traffic around where people are walking to work and school"

- "… regarding SR 200 [in Nassau County] and the difficulty of exiting to side streets. In some cases, there are exit lanes and some not. When no lane is there, people have to slow down to make the sharp turn in a 55-mph zone with a lot of heavy log trucks who cannot stop easily. Secondly, the intersection coming out of Shuckers and the Shave Bridge is a serious accident waiting to happen. People need to go West on SR 200 have a very difficult time merging onto 200 with short line of sight and speeding cars. A westbound ramp needs to be incorporated for the two restaurants and VFW hall all using that intersection."

- "No bike lanes on County Road 13 and they need to reduce the speed…from the Shands Bridge down to County Road 208."

- "Inadequate pedestrian crosswalk signage and high volume of vehicles." [A1A near St. Johns Pier in St. Augustine.]

Problem Behaviors to Target for Additional Enforcement

- "No cell phones!!!"

- "Speeding is a catch all because distracted drivers and drunks behind the wheel usually speed. Let's start there. No reason to have 60 mph speed limits around here on secondary roads and def not 55 on route 17. It's asking for people to disobey especially the left lane qualifiers."

- "This is one of the worst towns in the nation for non-drivers, they should be protected."

Target Audiences for Education

- "Really all groups should be targeted in different ways. Kids should be introduced to bike and walking safety, teens should have specific bike/ped qualifiers on their driving test, adults should be kept up to date with campaigns, seniors should probably be re-educated and take another test and those who violate laws should have to do the same."

- "I think we give people a license and we never again have them sharpen the saw unless they are traffic violators. So, the bulk of our drivers get very rusty and it shows in how they drive. We need to have people take the test every 7 years - not just give them a license renewal after an eye exam. It's just not enough and it shows."

- "Teens will always be inexperienced drivers and need education. Senior Citizens can be a problem due to their age and diminished skill. The real problem are the adults: driving while distracted, aggressive driving, etc."

Additional Comments

At the end of the survey, respondents were given an opportunity to provide any additional comments relating to traffic safety. These comments reflected sentiments expressed previously in the survey, as well as a desire for holistic planning approaches. Sample comments are listed below.

- "Change how we build communities, go back to grid street networks, and build businesses close enough where people don't have to drive all the time."

- "More bike lanes, more safe crosswalks, more road diets, better transit, better pedestrian environment along with enforcement and education are needed. It is an all the above kind of problem, but road design is probably by far the most important. This should also be coupled with better land use and zoning regulations, so it is important to partner with local jurisdictions to make holistic changes."

- "Jacksonville is experiencing it's moment right now. People are moving here in droves and so too are businesses and economic prosperity. Now is the time for Jacksonville to decide if it wants to be like every other large American city; car-centric, sprawled out, environmentally damaging, and reduced quality of life; OR, it can choose to take its own path with a comprehensive network of separated bike lanes across the city, quality public transit in all it's different forms, larger side-walks to encourage walkability. It's these initiatives and more that will foster Jacksonville's sense of community and give the city a character that will last for ages and attract many more people."

- "Bike paths everywhere that are separated with a raised barrier. Look at expanding locations and width as is done in Nocatee"

- "Ex-professional truck driver 3 million miles est. Very little enforcement in Jax, Fl. Police themselves violate traffic rules on a regular basis. Almost 90% of all traffic do not use turn signals. Probably 70% on the phone. Drivers consistently run red lights. Merging traffic does not know how to merge, they expect traffic flow to adjust to them joining. many drivers do not use headlights in the rain. Way too many dangerous drivers here very aggressive, they only care about themselves."

3 – Trends and Conditions

A data-driven approach to safety planning is important. This section of the report summarizes crash conditions at the regional, corridor and intersection level.

North Florida Region

To assess regional crash conditions, the project team downloaded and evaluated *Signal Four Analytics* crash data for the North Florida TPO's four-county planning area (Clay, Duval, Nassau and St. Johns Counties). Below, a series of data tables and figures summarize the region's traffic crashes describing factors such as annual trends, crash rates, crash severity, road type, county and emphasis area. Appendix C provides additional regional crash data.

Regional Crash Trends

Table 4 shows that almost 250,000 traffic crashes occurred in North Florida over the last five years, from January 2014 through December 2018. Measured in terms of both vehicle miles traveled (VMT) and population, the region's average crash rate during this period is 2.76 crashes per million VMT and 3,449 crashes per 100,000 people.

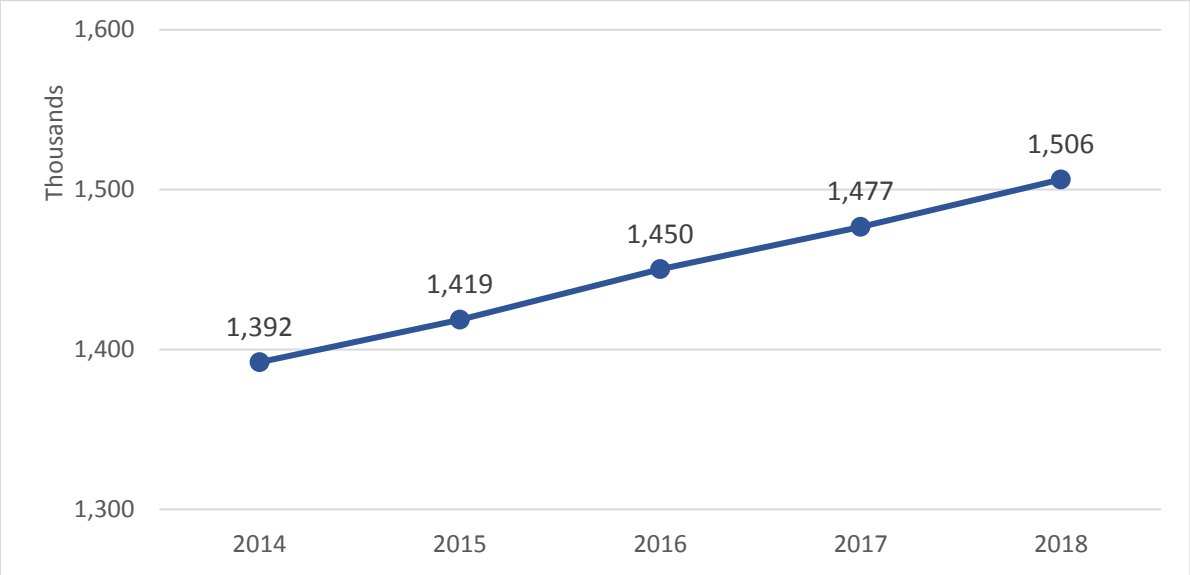
Annual trends for population, VMT and total crashes are illustrated in Figures 4 – 8. Population and VMT increased 8 and 5%, respectively, from 2014 to 2018. During this time period, the region's crashes increased 16%.

Table 4. Regional Crash Characteristics, 2014 – 2018

Year	Total Crashes	Population	Total Vehicle Miles Traveled (VMT)	Crashes per Million VMT	Crashes per 100,000 people
2014	46,222	1,392,034	48,377,854	2.62	3,320
2015	47,748	1,418,622	49,007,440	2.67	3,366
2016	50,564	1,450,275	49,581,045	2.79	3,487
2017	51,898	1,476,697	50,208,716	2.83	3,514
2018	53,441	1,506,346	50,789,331	2.88	3,548
5-Year Total (2014 - 2018)	249,873	7,243,974	247,964,387	2.76	3,449
Percent Change (2014 - 2018)	15.6%	8.2%	5.0%	10.1%	6.8%

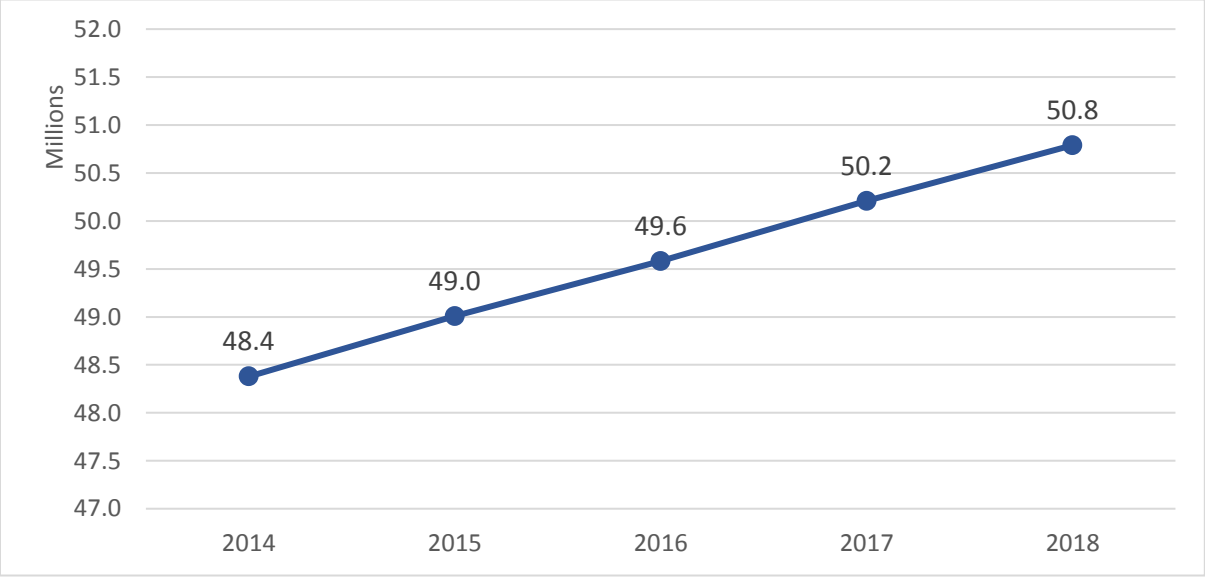
Source: US Census Bureau State & County Quick Facts (population), *Signal Four Analytics* (crash data), NERPM-AB 1v3 (VMT), ETM

Figure 4. Regional Population, 2014 – 2018



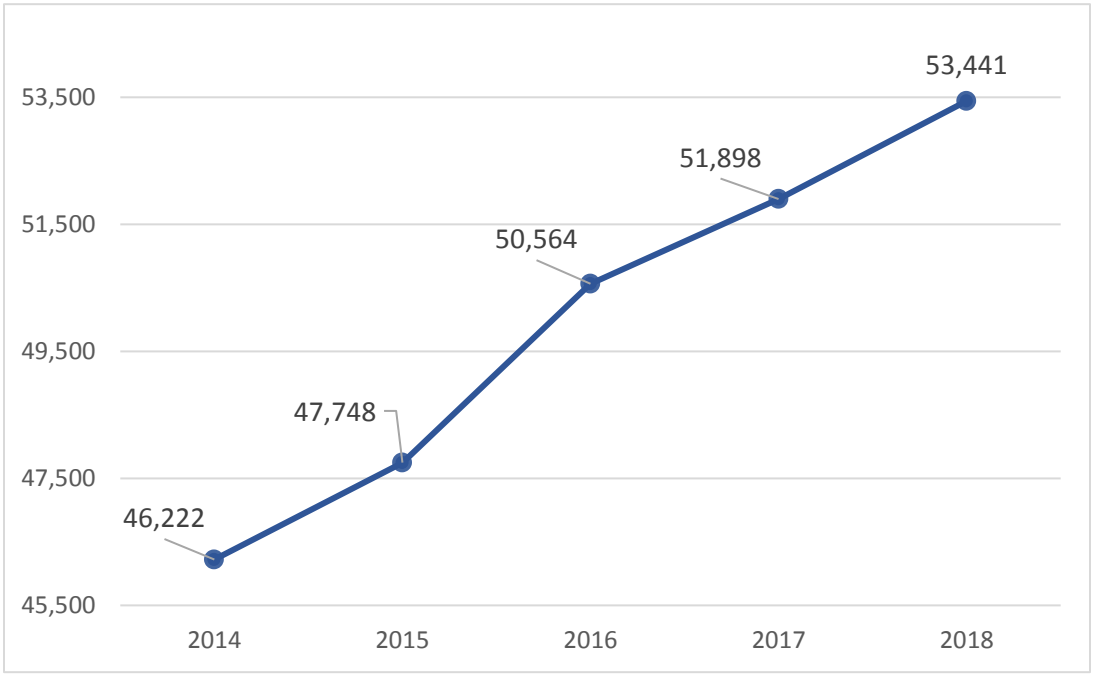
Source: US Census Bureau State & County Quick Facts, ETM

Figure 5. Regional VMT, 2014-2018



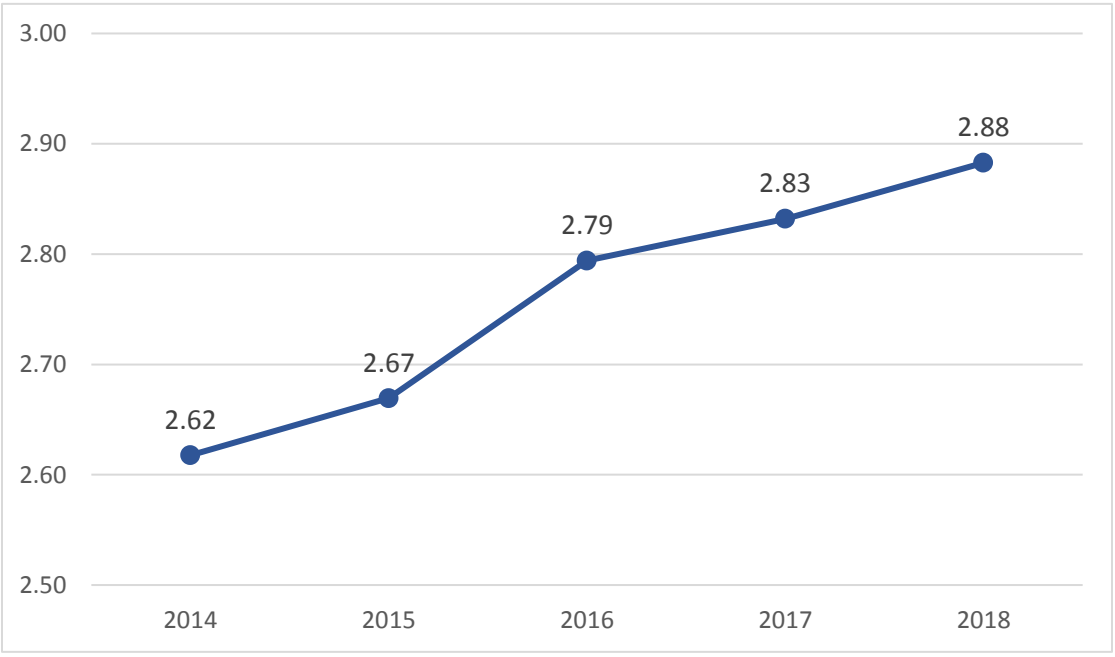
Source: NERPM-AB 1v3, ETM

Figure 6. Annual Crashes within the Region, 2014 - 2018



Source: *Signal Four Analytics*, ETM

Figure 7. Crashes per Million VMT, 2014 - 2018



Source: *Signal Four Analytics* (crash data), NERPM-AB 1v3 (VMT), ETM

Crash Severity

Severity describes the extent to which persons are injured or killed in a crash. Of the region's total traffic crashes from 2014 through 2018, Table 5 displays that one-quarter involve an injury (62,911 crashes) and less than 1% involve a death (1,027 crashes). Most crashes, referred to as "property damage only (PDO)," do not involve an injury or death.

Table 5. Crashes by Severity, 2014 – 2018

	Property Damage Only (PDO) Crashes	Injury Crashes	Fatal Crashes	Total
TPO Region	185,935	62,911	1,027	249,873
Percent	74.4%	25.2%	0.4%	100.0%

Source: *Signal Four Analytics*, ETM

Table 6 contains the region's most severe crashes, crashes resulting in serious injuries and fatalities. These crashes represent 2.4% of the region's total.

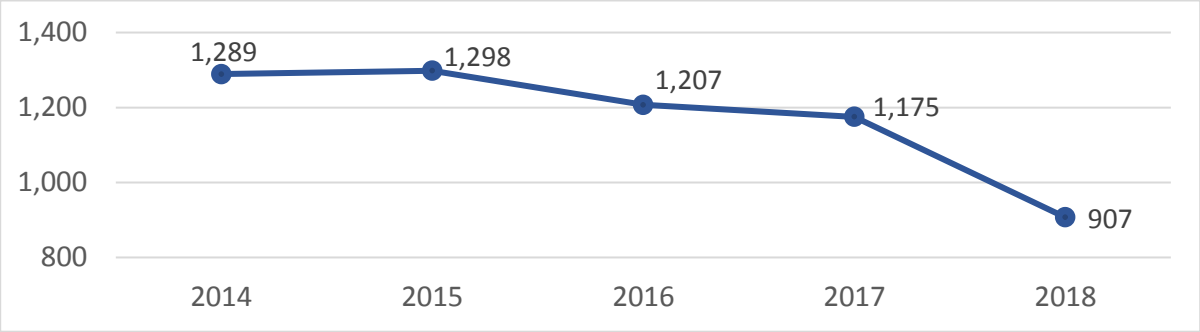
Table 6. Serious Injury and Fatal Crashes, 2014 – 2018

	Serious Injury Crashes	Fatal Crashes	Serious & Fatal Injury Crashes	Total
TPO Region	4,849	1,027	5,876	249,873
Percent	1.9%	0.4%	2.4%	100.0%

Source: *Signal Four Analytics*, ETM

Figure 8 illustrates that crashes resulting in serious injuries and fatalities decreased by 30% between 2014 and 2018 (from 1,289 to 907 crashes). As previously mentioned, during this same period total crashes within the region increased by 16%.

Figure 8. Fatal and Serious Injury Crashes within the Region, 2014 – 2018



Source: *Signal Four Analytics*, ETM

Crashes by Roadway Type

In Table 7, traffic crashes on roadways represent about 86% of the region's total. The other 14% represent either crashes with unknown locations (3%) or occurring in parking lots (11%). Regionwide, approximately 48% of crashes occur on state roadways. In Table 8, of the region's injury and serious injury crashes, more than half occur on state roadways (59% and 64%, respectively). In Table 9, 3.1% of state roadway crashes involve serious and fatal injuries, compared to 2.4% of crashes throughout the region.

Table 7. Crashes by Roadway Type, 2014 – 2018

	Crashes	Percent of Region's Total
TPO Region	249,873	100.0%
Local	93,329	37.4%
State	120,568	48.3%
Unknown	8,047	3.2%
Parking Lot	27,929	11.2%

Source: *Signal Four Analytics*, ETM

Table 8. Crash Severity by Roadway Type, 2014 – 2018

	PDO		All Injury		Serious Injury		Fatality	
TPO Region	185,935	100.0%	62,911	100.0%	4,849	100.0%	1,027	100.0%
Local	68,967	37.1%	24,037	38.2%	1,663	34.3%	325	37.4%
State	82,968	44.6%	36,905	58.7%	3,079	63.5%	695	48.3%
Unknown	7,833	4.2%	213	0.3%	18	0.4%	1	3.2%
Parking Lot	26,167	14.1%	1,756	2.8%	89	1.8%	6	11.2%

Source: *Signal Four Analytics*, ETM

Table 9. Crash Severity Percentages by Roadway Type, 2014 – 2018

	PDO	All Injury	Serious	Fatal	Serious and Fatal	Total
TPO Region	74.4%	25.2%	1.9%	0.4%	2.4%	100.0%
Local Roadways	73.9%	25.8%	1.8%	0.3%	2.1%	100.0%
State Roadways	68.8%	30.6%	2.6%	0.6%	3.1%	100.0%
Unknown	97.3%	2.6%	0.2%	0.0%	0.2%	100.0%
Parking Lot	93.7%	6.3%	0.3%	0.0%	0.3%	100.0%

Source: *Signal Four Analytics*, ETM

County Crash Characteristics

Tables 10 through 12 describe crash characteristics by county. Duval County has the highest percentage of total crashes, population and VMT. In terms of growth over the five-year period, Nassau County has the highest percent increase in total crashes (35.4%), although St. Johns County has the highest percent increase in population (16.7%) and VMT (8.9%) from 2014 to 2018.[5]

Table 10. Crashes by County, 2014 - 2018

	Crashes	Percent of Region's Total
TPO Region	249,873	100.0%
Clay	29,173	11.7%
Duval	180,220	72.1%
Nassau	8,648	3.5%
St. Johns	31,832	12.7%

Source: *Signal Four Analytics*, ETM

Table 11. Crash Characteristics by County, 2018

County	Population (2018)	Percent of Region's Population	VMT (2018)	Percent of Region's VMT	Total Crashes (2018)	Percent of Region's Crashes
TPO Region	1,506,346	100.0%	50,789,331	100.0%	53,441	100.0%
Clay	216,072	14.3%	5,743,258	11.3%	5,496	10.3%
Duval	950,181	63.1%	33,477,848	65.9%	39,230	73.4%
Nassau	85,832	5.7%	3,216,311	6.3%	1,943	3.6%
St. Johns	254,261	16.9%	8,351,915	16.4%	6,772	12.7%

Source: US Census Bureau State & County Quick Facts (population), *Signal Four Analytics* (crash data), NERPM-AB 1v3 (VMT), ETM

[5] See Appendix A for annual population and VMT by county.

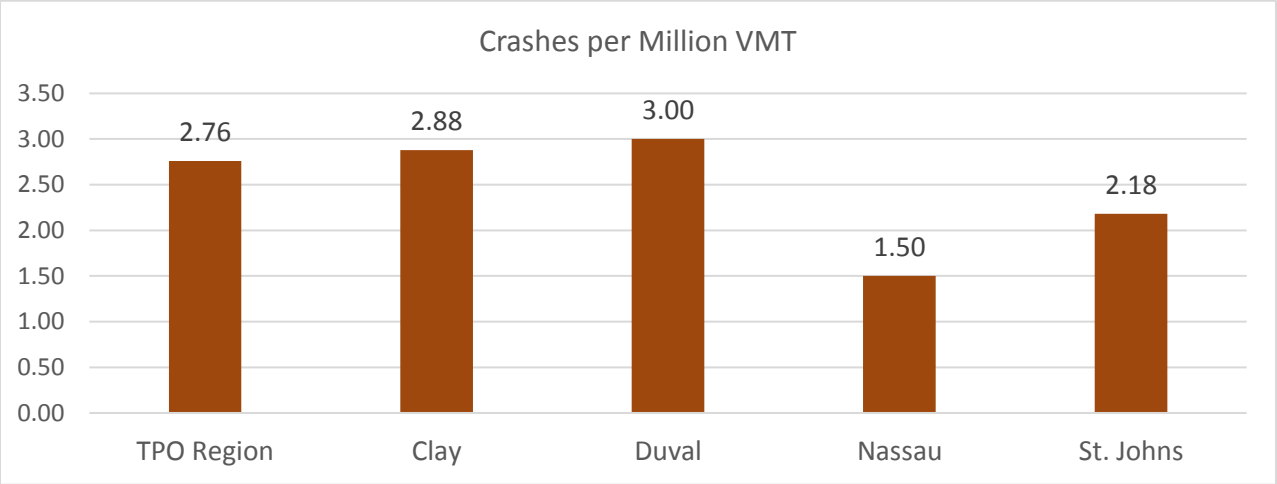
Duval and Clay Counties have average crash rates that are higher than regional crash rates. For example, in Figure 9, crashes per million VMT for Clay County (2.88) and Duval County (3.00) are higher than the region's rate (2.76). However, in Figure 10, Duval County is the only county with a higher crash rate per 100,000 people (3,878) than the regional rate (3,449).

Table 12. Annual Crashes and Crash Rates by County, 2014-2018

Year	TPO Region	Clay	Duval	Nassau	St. Johns
2014	46,222	5,183	34,157	1,435	5,447
2015	47,748	6,016	33,733	1,702	6,297
2016	50,564	6,546	35,539	1,837	6,642
2017	51,898	5,932	37,561	1,731	6,674
2018	53,441	5,496	39,230	1,943	6,772
Percent Change (2014 - 2018)	15.6%	6.0%	14.9%	35.4%	24.3%
Crashes per Million VMT	2.76	2.88	3.00	1.50	2.18
Crashes per 100,000 people	3,449	2,808	3,898	2,142	2,703

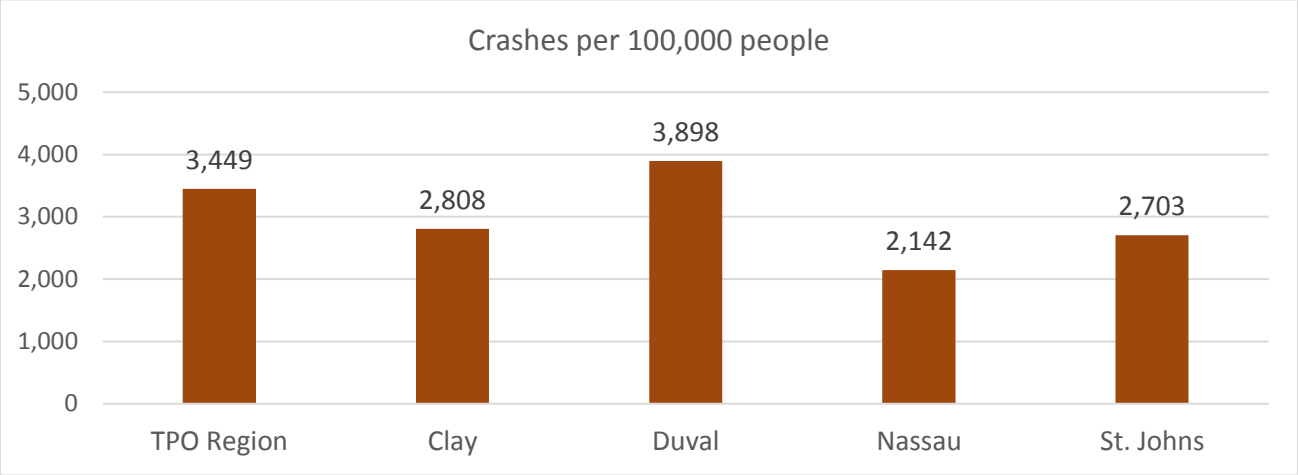
Source: US Census Bureau State & County Quick Facts (population), *Signal Four Analytics* (crash data), NERPM-AB 1v3 (VMT), ETM

Figure 9. Average Crash Rates – Crashes per Million VMT



Source: *Signal Four Analytics*, ETM

Figure 10. Average Crash Rates – Crashes per 100,000 people



Source: *Signal Four Analytics*, ETM

Table 13 lists the region's crash severity percentages by county. The percentage of property damage only (PDO), injury and fatal crashes for each county are listed. PDO crashes represent most crashes while fatal crashes represent a very small percentage. Nassau County, with the region's smallest number of crashes, has slightly higher injury and fatal crash percentages.

Table 13. Crash Severity Percentage by County

Crash Type	Total Crashes	PDO Percent	Injury Percent	Fatal Percent	Total Percent
TPO Region	249,873	74.4%	25.2%	0.4%	100.0%
Clay County	29,173	79.1%	20.5%	0.4%	100.0%
Duval County	180,220	73.1%	26.5%	0.4%	100.0%
Nassau County	8,648	71.6%	27.4%	1.0%	100.0%
St. Johns	31,832	78.3%	21.1%	0.5%	100.0%

Source: *Signal Four Analytics*, ETM

In Table 14, the most severe crashes (serious injury and fatal crashes) decreased in Clay, Duval and St. Johns Counties, and significantly increased in Nassau County. Duval and St. Johns County crashes resulting in serious injuries and deaths decreased more than 30% between 2014 and 2018 (from 972 to 615 in Duval County and from 166 to 113 in St. Johns County). In Nassau County, serious and fatal injury crashes increased over 70% during the same period (from 57 to 98) largely due to increases in intersection, careless driving, unrestrained occupant (no seat belt) and motorcyclist related crashes.

Table 14. Fatal and Serious Injury Crashes by County, 2014 – 2018

Fatal & Serious Injury Crashes	2014	2015	2016	2017	2018	Total	Percent Change (2014-2018)
TPO Region	1,289	1,298	1,207	1,175	907	5,876	-29.6%
Clay	94	106	89	98	81	468	-13.8%
Duval	972	921	882	864	615	4,254	-36.7%
Nassau	57	76	85	80	98	396	71.9%
St. Johns	166	195	151	133	113	758	-31.9%

Source: *Signal Four Analytics*, ETM

Emphasis Area Crashes

An evaluation of emphasis areas helps stakeholders focus resources on the top priorities as these areas address many of the key factors contributing to crashes. Tables 15 through 20 rank the region's crashes by the Florida Emphasis Areas[6] contained in the Florida SHSP (Strategic Highway Safety Plan). Emphasis Area crashes are ranked in order of total crashes (Table 15), serious and fatal injury crashes (Table 16), serious injury crashes (Table 17), fatal crashes (Table 18), percent injury and fatal crashes (Table 19) and percent serious injury and fatal crashes (Table 20), respectively. The tables help pinpoint the areas where there is the greatest potential to decrease fatalities and injuries. Appendix D contains notes for how the crashes were selected from *Signal Four Analytics* for each emphasis area.

[6] Exceptions: Careless driving - Careless driving is not a Florida emphasis area (as of the 2016 Florida SHSP). Careless driving was included in this analysis as a separate emphasis area since it was an analysis factor in the North Florida TPO's 2012 Safety Plan. Speeding - The Florida SHSP combines speeding with aggressive driving. In this analysis speeding crashes are not evaluated as a separate emphasis area. There were less than 300 speeding crashes over the five-year period, representing only 0.12 percent of total five-year crashes within the region, 0.29 percent of the total fatal crashes and 0.00 percent of total serious injury crashes.

Table 15 shows that intersection, careless driving and lane departure are the top three emphasis areas based on the number of total crashes. From 2014 to 2018, the number of total intersection crashes increased by 2,722, and the number of total lane departure crashes increased by 2,222. Careless driving crashes decreased by 563.

Emphasis areas with the highest percent increase in total crashes during this time period are work zone and commercial motor vehicle, 120% and 37%, respectively.

Table 15. Total Crashes by Emphasis Area[7]

Total Crashes (2014 – 2018)					2014 - 2018	
Total Crash Rank	**Emphasis Area**	**Total Crashes**	**Percent of All Crashes**	**Average Annual**	**Change**	**Percent Change**
	Regional Crashes	249,873	100.0%	49,975	7,219	16%
1	Intersection	71,840	29%	14,368	2,772	22%
2	Careless Driving	69,260	28%	13,852	-563	-4%
3	Lane Departure	53,207	21%	10,641	2,222	24%
4	Aging Drivers	39,412	16%	7,882	1,917	27%
5	Distracted Driving	32,851	13%	6,570	339	5%
6	Teen Driver	31,714	13%	6,343	930	16%
7	Aggressive Driving	14,513	6%	2,903	-187	-6%
8	Commercial Motor Vehicle	12,125	5%	2,425	716	37%
9	Impaired Driving	7,835	3%	1,567	-52	-3%
10	Pedestrian and Bicyclist	5,950	2%	1,190	36	3%
11	Work Zone	5,289	2%	1,058	689	120%
12	Unrestrained Occupant	5,090	2%	1,018	-486	-42%
13	Motorcyclist	3,998	2%	800	-55	-7%

Sorted by number of Total Crashes, Source: *Signal Four Analytics*, ETM

[7] A crash may belong to more than emphasis area. For example, a motorcyclist crash in an intersection represents two emphasis areas. Therefore, the sum of all emphasis area crashes is more than the region's total crashes.

In the region, there were 5,876 (2.4%) fatal and serious injury (combined) crashes during the five-year period. Table 16 displays intersection, careless driving and lane departure as the top three emphasis areas based on the number of combined serious and fatal injury crashes. All but two emphasis areas (work zone and commercial motor vehicle) experienced a decrease in serious and fatal injury crashes from 2014 to 2018.

Table 16. Serious Injury and Fatal Crashes by Emphasis Area[8]

Serious Injury and Fatal Crashes (2014 – 2018)					2014 - 2018	
Serious & Fatal Crash Rank	**Emphasis Area**	**Fatal & Serious Injury Crashes**	**Percent of All Fatal & Serious Injury Crashes**	**Average Annual**	**Change**	**Percent Change**
	Regional Crashes	5,876	100%	1,175	-382	-30%
1	Intersection	1,997	34%	399	-145	-33%
2	Careless Driving	1,565	27%	313	-134	-38%
3	Lane Departure	1,523	26%	305	-76	-23%
4	Aging Drivers	946	16%	189	-68	-33%
5	Pedestrian and Bicyclist	945	16%	189	-9	-5%
6	Unrestrained Occupant	869	15%	174	-37	-20%
7	Motorcyclist	865	15%	173	-50	-28%
8	Distracted Driving	833	14%	167	-38	-23%
9	Impaired Driving	717	12%	143	-58	-34%
10	Teen Driver	642	11%	128	-36	-27%
11	Aggressive Driving	599	10%	120	-104	-64%
12	Commercial Motor Vehicle	341	6%	68	2	3%
13	Work Zone	163	3%	33	12	48%

Sorted by number of Serious and Fatal Injury Crashes

Source: *Signal Four Analytics*, ETM

[8] A crash may belong to more than emphasis area. For example, a motorcyclist crash in an intersection represents two emphasis areas. Therefore, the sum of all emphasis area crashes is more than the regional total.

There were 4,849 (1.9%) serious injury crashes in the region between 2014 and 2018. Table 17 displays intersection, careless driving and lane departure as the top three emphasis areas based on the number of serious injury crashes.

Table 17. Serious Injury Crashes by Emphasis Area[9]

Serious Injury Crashes (2014 – 2018)					2014 - 2018	
Serious Injury Crash Rank	**Emphasis Area**	**Serious Injury Crashes**	**Percent of All Serious Injury Crashes**	**Average Annual**	**Change**	**Percent Change**
	Regional Crashes	4,849	100%	970	-384	-35%
1	Intersection Crashes	1,708	35.2%	342	-153	-38%
2	Careless Driving	1,504	31.0%	301	-125	-36%
3	Lane Departure Crashes	1,219	25.1%	244	-78	-29%
4	Distracted Driving	777	16.0%	155	-36	-23%
5	Aging Drivers	757	15.6%	151	-71	-40%
6	Motorcyclist	690	14.2%	138	-48	-32%
7	Pedestrian and Bicyclist	630	13.0%	126	-10	-7%
8	Unrestrained Occupant	580	12.0%	116	-44	-33%
9	Aggressive Driving	543	11.2%	109	-101	-66%
10	Teen Driver Crashes	541	11.2%	108	-35	-30%
11	Impaired Driving Crashes	467	9.6%	93	-55	-44%
12	Commercial Motor Vehicle	240	4.9%	48	-5	-10%
13	Work Zone Crashes	136	2.8%	27	13	62%

Sorted by number of Serious Injury Crashes

Source: *Signal Four Analytics*, ETM

[9] A crash may belong to more than emphasis area. For example, a motorcyclist crash in an intersection represents two emphasis areas. Therefore, the sum of all emphasis area crashes is more than the regional total.

There were 1,027 (0.4%) fatal crashes in the region during the five-year period. Table 18 displays pedestrian and bicyclist, lane departure, intersection and unrestrained occupants as the top emphasis areas based on the number of fatal crashes. Thirty-one percent of all fatal crashes involved a pedestrian or bicyclist.

Table 18. Fatal Crashes by Emphasis Area[10]

Fatal Crashes (2014 – 2018)					2014 - 2018	
Fatal Crash Rank	**Emphasis Area**	**Fatal Crashes**	**Percent of All Fatal Crashes**	**Average Annual**	**Change**	**Percent Change**
	Regional Crashes	1,027	100%	205	2	1%
1	Pedestrian and Bicyclist	315	31%	63	1	2%
2	Lane Departure	304	30%	61	2	4%
3	Intersection	289	28%	58	8	17%
4	Unrestrained Occupant	289	28%	58	7	13%
5	Impaired Driving	250	24%	50	-3	-7%
6	Aging Drivers	189	18%	38	3	10%
7	Motorcyclist	175	17%	35	-2	-6%
8	Commercial Motor Vehicle	101	10%	20	7	44%
9	Teen Driver	101	10%	20	-1	-5%
10	Careless Driving	61	6%	12	-9	-64%
11	Aggressive Driving	56	5%	11	-3	-33%
12	Distracted Driving	56	5%	11	-2	-25%
13	Work Zone	27	3%	5	-1	-25%

Sorted by number of Fatal Crashes
Source: *Signal Four Analytics*, ETM

[10] A crash may belong to more than emphasis area. For example, a motorcyclist crash in an intersection represents two emphasis areas. Therefore, the sum of all emphasis area crashes is more than the regional total.

Table 19 shows pedestrian and bicyclist, motorcyclist, and unrestrained occupant as the top three emphasis areas based on the percentage of total crashes resulting in death or injury. Eighty-two percent of pedestrian and bicyclist crashes, 76% of motorcyclist crashes and 70% of unrestrained occupant crashes result in death or injury.

Table 19. Percent of Emphasis Area Crashes Resulting in Death or Injury (2014 – 2018)[11]

Percent Death/ Injury Rank	Emphasis Area	Total Crashes	Fatal & Injury Crashes	Crashes Resulting in Death or Injury
	Regional Crashes	249,873	63,938	26%
1	Pedestrian and Bicyclist	5,950	4,857	82%
2	Motorcyclist	3,998	3,056	76%
3	Unrestrained Occupant	5,090	3,541	70%
4	Aggressive Driving	14,513	6,333	44%
5	Impaired Driving	7,835	3,399	43%
6	Intersection	71,840	24,377	34%
7	Careless Driving	69,260	22,444	32%
8	Distracted Driving	32,851	10,336	31%
9	Work Zone	5,289	1,510	29%
10	Aging Drivers	39,412	10,828	27%
11	Teen Driver	31,714	8,593	27%
12	Lane Departure	53,207	11,441	22%
13	Commercial Motor Vehicle	12,125	2,279	19%

Sorted by percent of crashes resulting in death or injury**,** Source: *Signal Four Analytics*, ETM

[11] A crash may belong to more than emphasis area. For example, a motorcyclist crash in an intersection represents two emphasis areas. Therefore, the sum of all emphasis area crashes is more than the regional total.

Table 20 shows motorcyclist, unrestrained occupant and pedestrian and bicyclist as the top three emphasis areas based on the percentage of total crashes resulting in death or serious injury. Twenty-two percent of motorcyclist crashes result in death or serious injury.

Table 20. Percent of Emphasis Area Crashes Resulting in Death or Serious Injury (2014 – 2018)[12]

Percent Death/ Serious Injury Rank	Emphasis Area	Total Crashes	Fatal & Serious Injury Crashes	Crashes Resulting in Death or Serious Injury
	Regional Crashes	249,873	5,876	2%
1	Motorcyclist	3,998	865	22%
2	Unrestrained Occupant	5,090	869	17%
3	Pedestrian and Bicyclist	5,950	945	16%
4	Impaired Driving	7,835	717	9%
5	Aggressive Driving	14,513	599	4%
6	Work Zone	5,289	163	3%
7	Lane Departure	53,207	1,523	3%
8	Commercial Motor Vehicle	12,125	341	3%
9	Intersection	71,840	1,997	3%
10	Distracted Driving	32,851	833	3%
11	Aging Drivers	39,412	946	2%
12	Careless Driving	69,260	1,565	2%
13	Teen Driver	31,714	642	2%

Sorted by percent of crashes resulting in death or serious injury**,** Source: *Signal Four Analytics*, ETM

[12] A crash may belong to more than emphasis area. For example, a motorcyclist crash in an intersection represents two emphasis areas. Therefore, the sum of all emphasis area crashes is more than the regional total.

Table 21 compares the percentage rankings contained in Tables 15 – 20.

Intersection, careless driving and lane departure are the top three emphasis areas based on the percentage of total crashes and percentage of serious and fatal injury crashes. Pedestrian and bicyclist, lane departure, intersection and unrestrained occupants are the top emphasis areas based on the percentage of fatal crashes for each emphasis area. Most crashes involving vulnerable road users result in the highest percentages of deaths or injuries.

Table 21. Emphasis Area Comparison[13]

Emphasis Area	Percent of Region's Total Crashes	Percent of Region's Fatal & Serious Injury Crashes	Percent of Region's Fatal Crashes	Percent of Region's Serious Injury Crashes	Percent Resulting in Death or Injury	Percent Resulting in Death or Serious Injury
Regional Crashes	100%	2.4%	0.4%	1.9%	26%	2.4%
Aggressive Driving	6%	10%	5%	11%	44%	4%
Aging Drivers	16%	16%	18%	16%	27%	2%
Careless Driving	**28%**	**27%**	6%	**31%**	32%	2%
Commercial Motor Vehicle	5%	6%	10%	5%	19%	3%
Distracted Driving	13%	14%	5%	16%	31%	3%
Impaired Driving	3%	12%	24%	10%	43%	9%
Intersection	**29%**	**34%**	**28%**	**35%**	34%	3%
Lane Departure	**21%**	**26%**	**30%**	**25%**	22%	3%
Motorcyclist	2%	15%	17%	14%	**76%**	**22%**
Pedestrian and Bicyclist	2%	16%	**31%**	13%	**82%**	**16%**
Teen Driver	13%	11%	10%	11%	27%	2%
Unrestrained Occupant	2%	15%	**28%**	12%	**70%**	**17%**
Work Zone	2%	3%	3%	3%	29%	3%

Sorted alphabetically, top 3 emphasis areas in each column are highlighted, Source: *Signal Four Analytics*, ETM

[13] A crash may belong to more than one emphasis area.

Generally, for the emphasis areas highlighted in Table 21[14], greater percentages of serious and/or fatal injury crashes occur on state roadways than local roadways. For example, Table 22 displays crash data by roadway type for pedestrian and bicyclist related crashes. Although 35% of total pedestrian/bicyclist crashes occur on state roads, 56% of serious and fatal injury pedestrian/bicyclist crashes and 70% of fatal pedestrian/bicyclist crashes occur on state roads.

Table 22. Pedestrian and Bicyclist Crashes – Severity and Roadway Type

Road Type	Total Crashes		Serious & Fatal Injury Crashes		Fatal Crashes	
	No.	%	No.	%	No.	%
Total	5,950	100.0%	945	100.0%	315	100.0%
Local Roads	3,065	51.5%	371	39.3%	89	28.3%
State Roads	2,075	34.9%	528	55.9%	223	70.8%
Unknown	86	1.4%	8	0.8%	0	0.0%
Parking Lots	724	12.2%	38	4.0%	3	1.0%

Source: *Signal Four Analytics*, 2014-2018, ETM

Table 23 displays data by roadway type for intersection crashes. Although 47% of total intersection crashes occur on state roads, 58% of serious and fatal injury intersection crashes and 65% of fatal intersection crashes occur on state roads.

Table 23. Intersection Crashes – Severity and Roadway Type

Road Type	Total Intersection Crashes		Serious & Fatal Injury Intersection Crashes		Fatal Intersection Crashes	
	No.	%	No.	%	No.	%
Total	71,840	100.0%	1,997	100.0%	289	100.0%
Local Roads	36,806	51.2%	825	41.3%	99	34.3%
State Roads	33,784	47.0%	1,161	58.1%	188	65.1%
Unknown	380	0.5%	3	0.2%	0	0.0%
Parking Lots	870	1.2%	8	0.4%	2	0.7%

Source: *Signal Four Analytics*, 2014-2018, ETM

[14] Careless driving, intersection, lane departure, motorcyclists, pedestrian and bicyclists and unrestrained occupants

Regional Deaths and Serious Injuries

Table 24 reports total deaths and serious injuries, not crashes. Over the five-year analysis period, the number of deaths during traffic crashes increased 3%. However, the number of serious injuries decreased 37%. During the same period, death rates and fatal and serious injury rates also decreased.

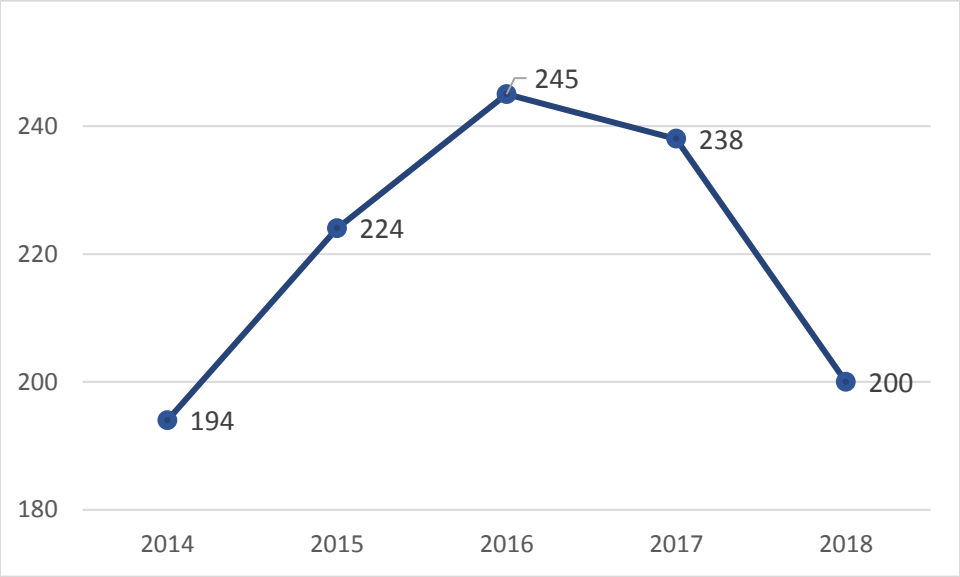
Table 24. Deaths and Serious Injuries (2014 – 2018)

	2014	**2015**	**2016**	**2017**	**2018**	**Percent Change (2014 -2018)**
Fatalities	194	224	245	238	200	3.1%
Serious Injuries	1,378	1,385	1,197	1,191	863	-37.4%
Fatalities and Serious Injuries	1,572	1,609	1,442	1,429	1,063	-32.4%
Death and Serious Injuries per 100,000 People						
Fatality Rate	13.9	15.8	16.9	16.1	13.3	-4.7%
Fatality and Serious Injury Rate	112.9	113.4	99.4	96.8	70.6	-37.5%
Death and Serious Injuries per Million VMT						
Fatality Rate	4.0	4.6	4.9	4.7	3.9	-1.8%
Fatality and Serious Injury Rate	32.5	32.8	29.1	28.5	20.9	-35.6%

Source: *Signal Four Analytics*, ETM

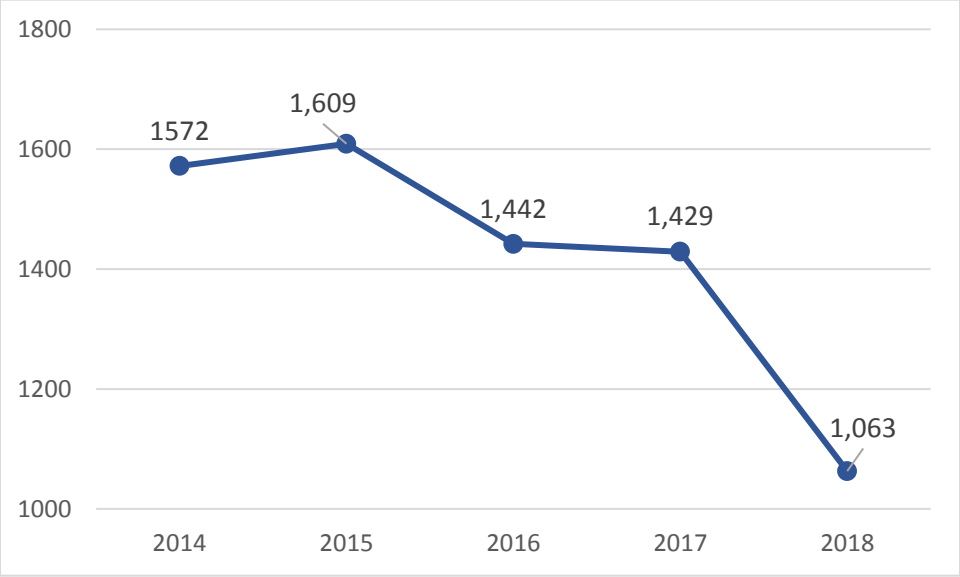
The figures below illustrate annual number of deaths (Figure 11) and annual fatal and serious injuries (Figure 12) over the five-year period from 2014 to 2018.

Figure 11. Annual Fatalities



Source: *Signal Four Analytics*, ETM

Figure 12. Annual Fatalities and Serious Injuries



Source: *Signal Four Analytics*, ETM

Table 25 and Figures 13 and 14 compare traffic death rates for the four-county North Florida TPO region with state and national rates. At the time of the analysis, state and national data was not available for year 2018. For the four years, 2014 through 2017, the region's death rates are higher than state and national death rates. Regarding percent change from 2014 to 2017, the region's percent change is lower than the state (15.6% for the region compared to 18.3% for the state), and higher than the United States (15.6% for the region compared to 10.9% for the nation).

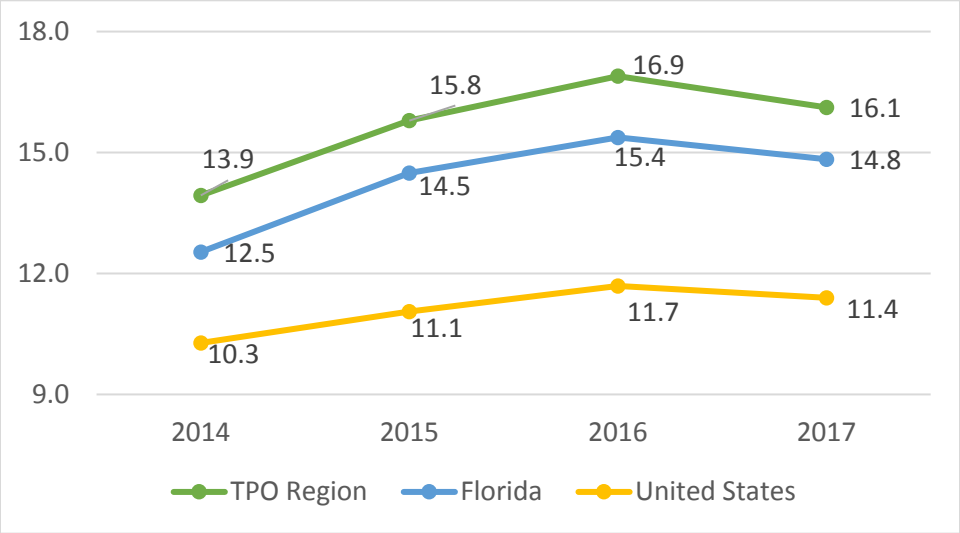
Table 25 also includes traffic death rates by county. Each county rate shaded in gray is higher than the respective regional rate. For example, in 2017 death rates for Nassau, St. Johns and Duval Counties (24.2, 18.0 and 16.3, respectively) were higher than the regional rate (16.1). Duval County had the highest percent increase (22%, from 13.4 to 16.3), while Nassau County consistently maintained the highest rate each year (22.2, 19.3, 28.5 and 24.2, respectively).

Table 25. Traffic Death Rates - County, Region, State and National

Deaths per 100,000 people	2014	2015	2016	2017	Percent Change (2014 -2017)
Clay	9.0	18.8	13.0	9.9	9.8%
Duval	13.4	14.7	17.2	16.3	22.0%
Nassau	22.2	19.3	28.5	24.2	9.0%
St. Johns	17.9	16.3	15.3	18.0	0.8%
TPO Region	13.9	15.8	16.9	16.1	15.6%
Florida	12.5	14.5	15.4	14.8	18.3%
United States	10.3	11.1	11.7	11.4	10.9%

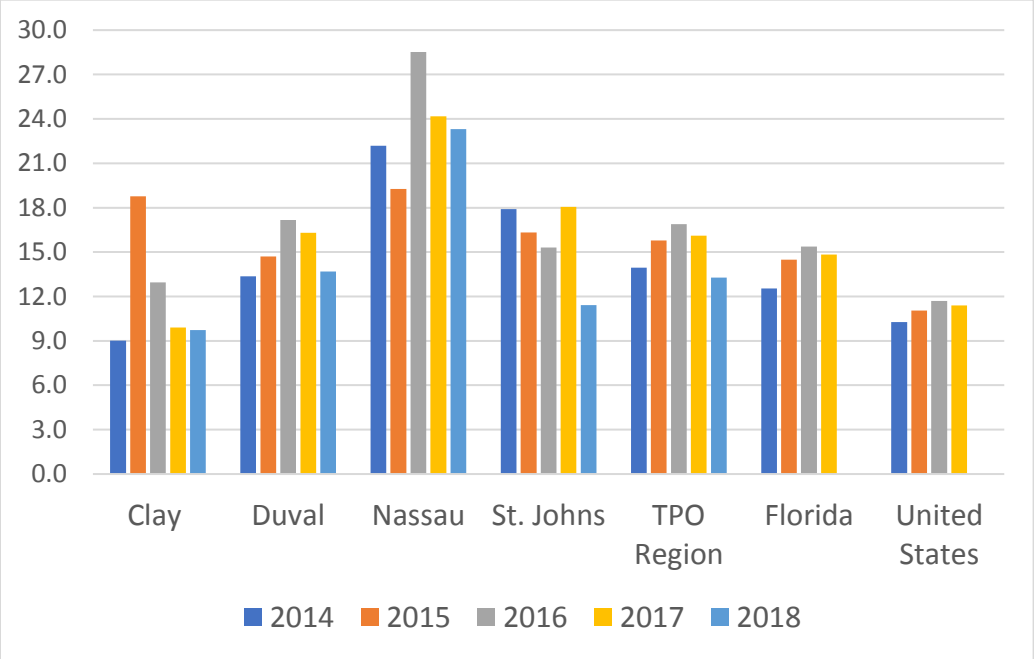
Source: *Signal Four Analytics*, ETM

Figure 13. North Florida Region, Florida and National Death Rates



Source: *Signal Four Analytics*, NHTSA https://cdan.nhtsa.gov/SASStoredProcess/guest#TAB1, ETM

Figure 14. North Florida (County and Region), Florida and National Death Rates



Source: *Signal Four Analytics*, NHTSA https://cdan.nhtsa.gov/SASStoredProcess/guest#TAB1, ETM

Regional Crash Maps

Geographical Information Systems (GIS) software tools were utilized to illustrate the location of crashes. Figures 15 and 16 depict concentrations of crashes across the region for total crashes (Figure 15) and fatal and serious injury crashes (Figure 16), respectively. The highest concentration of crashes occurs in the more heavily traveled and populated areas of the region: Jacksonville and Jacksonville Beach in Duval County, the St. Augustine and northern St. Johns County areas, and Orange Park in Clay County.

A GIS optimized hotspot analysis tool was utilized to identify crash densities (number of crashes per mile) and hot spots along the region's roadways. Figures 17 and 18 depict concentrations of crashes along functionally classed roadways for total crashes (Figure 17) and fatal and serious injury crashes (Figure 18), respectively. Clusters of crashes are located on roadways throughout the region, particularly on the more heavily traveled roadways.

Figure 15. Regional Crashes, 2014 - 2018

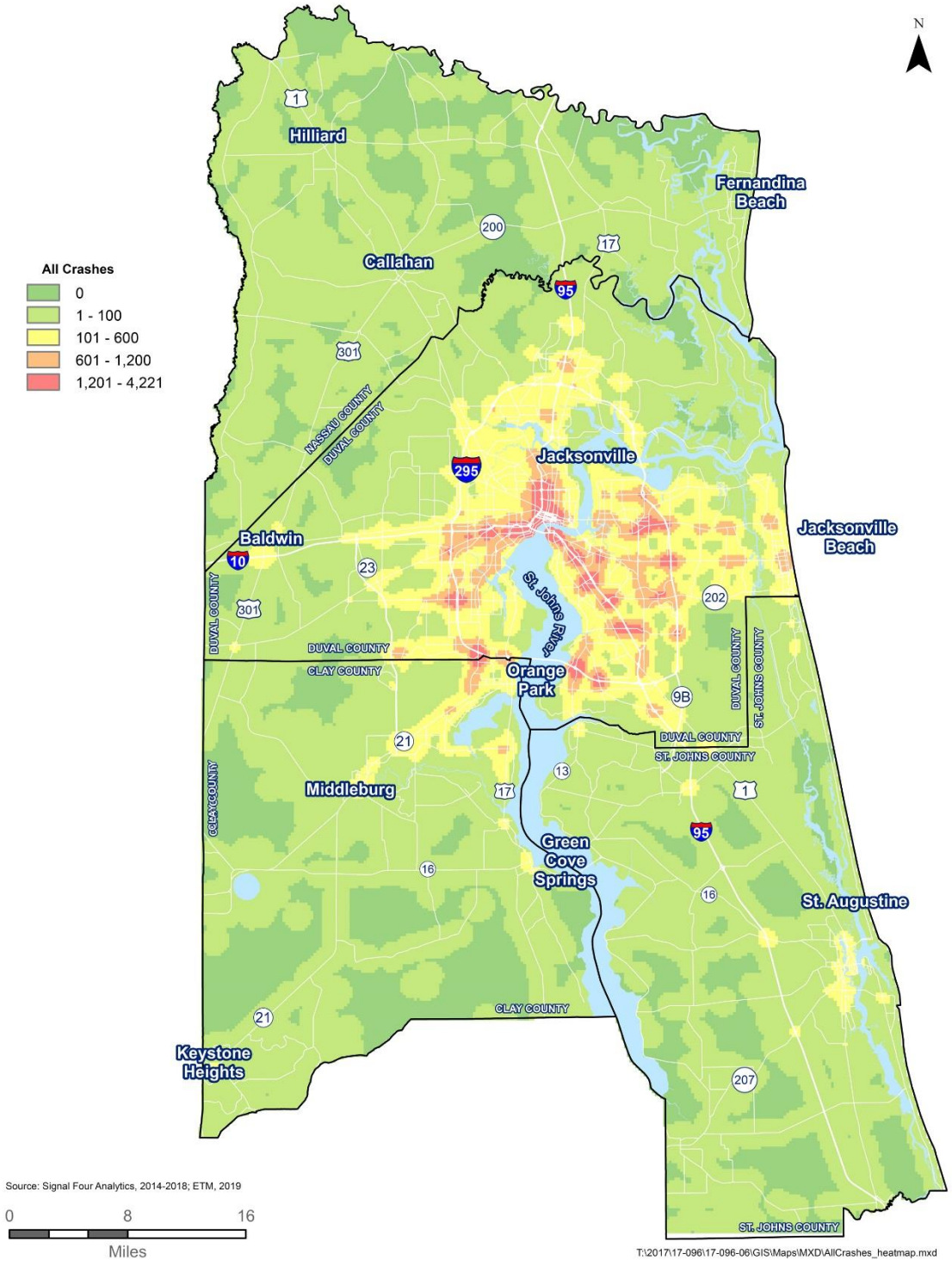


Figure 16. Fatal and Serious Injury Crashes, 2014 - 2018

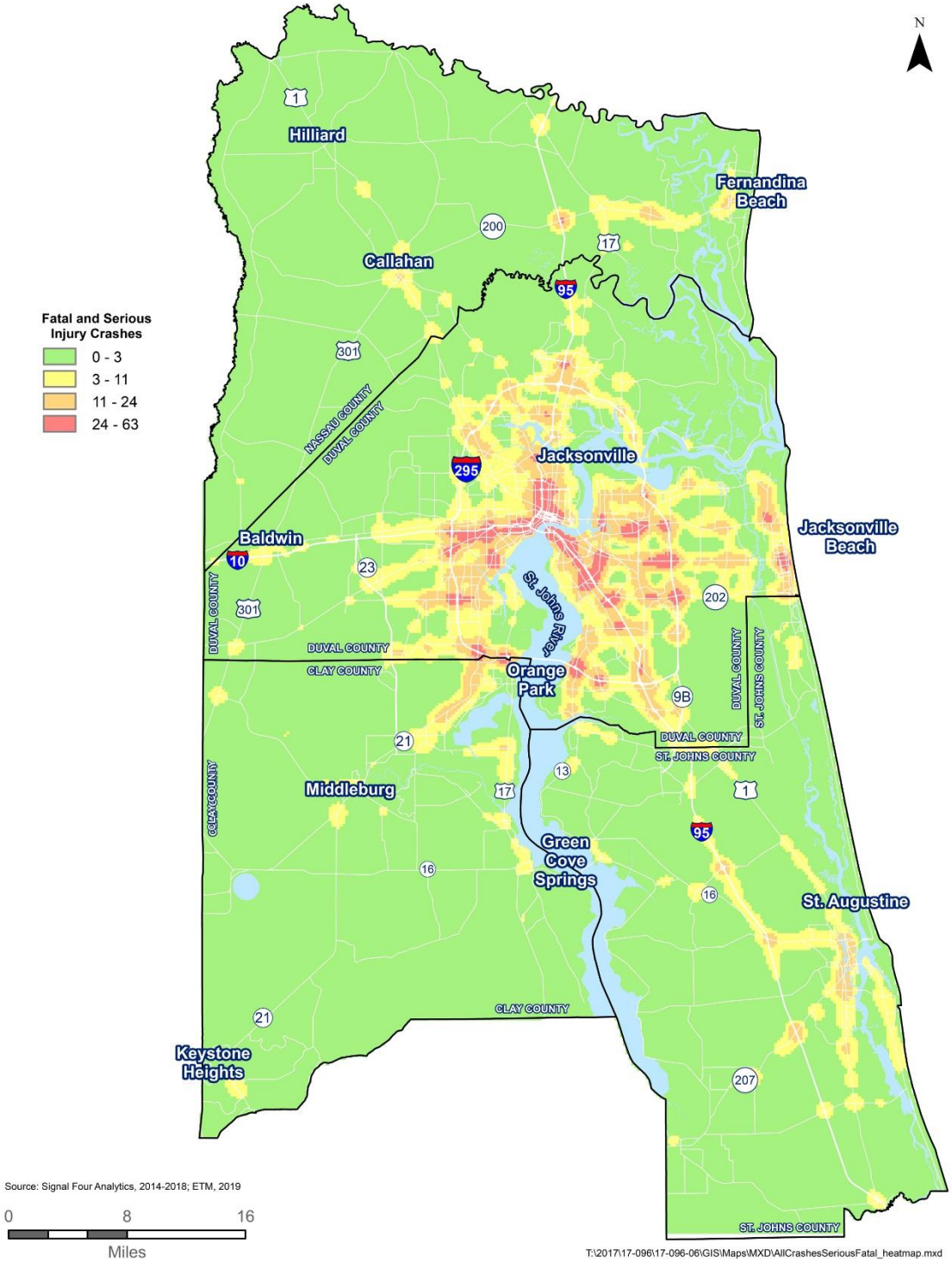


Figure 17. Regional Crashes on Roadways, per Square Mile, 2014 – 2018

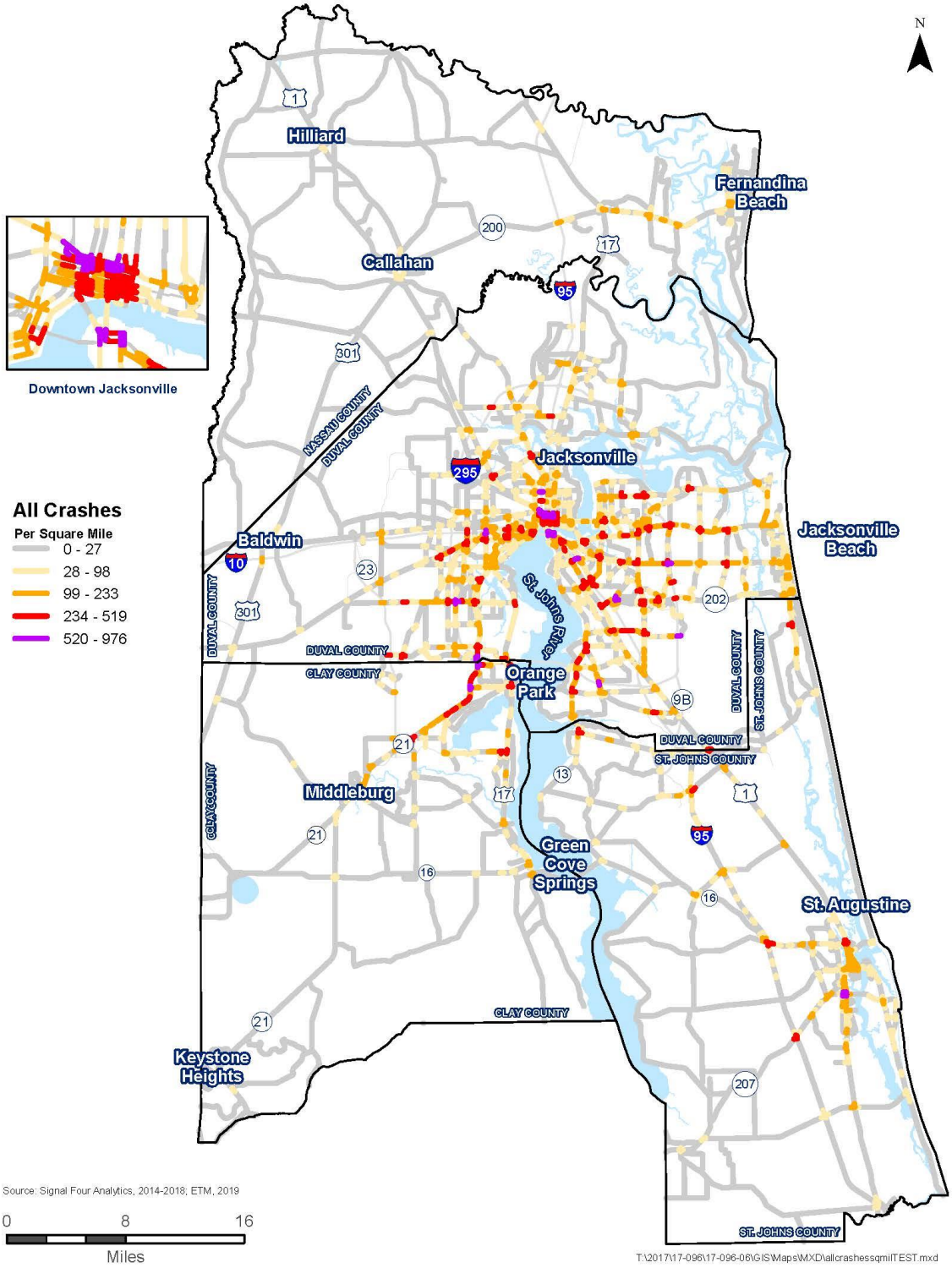
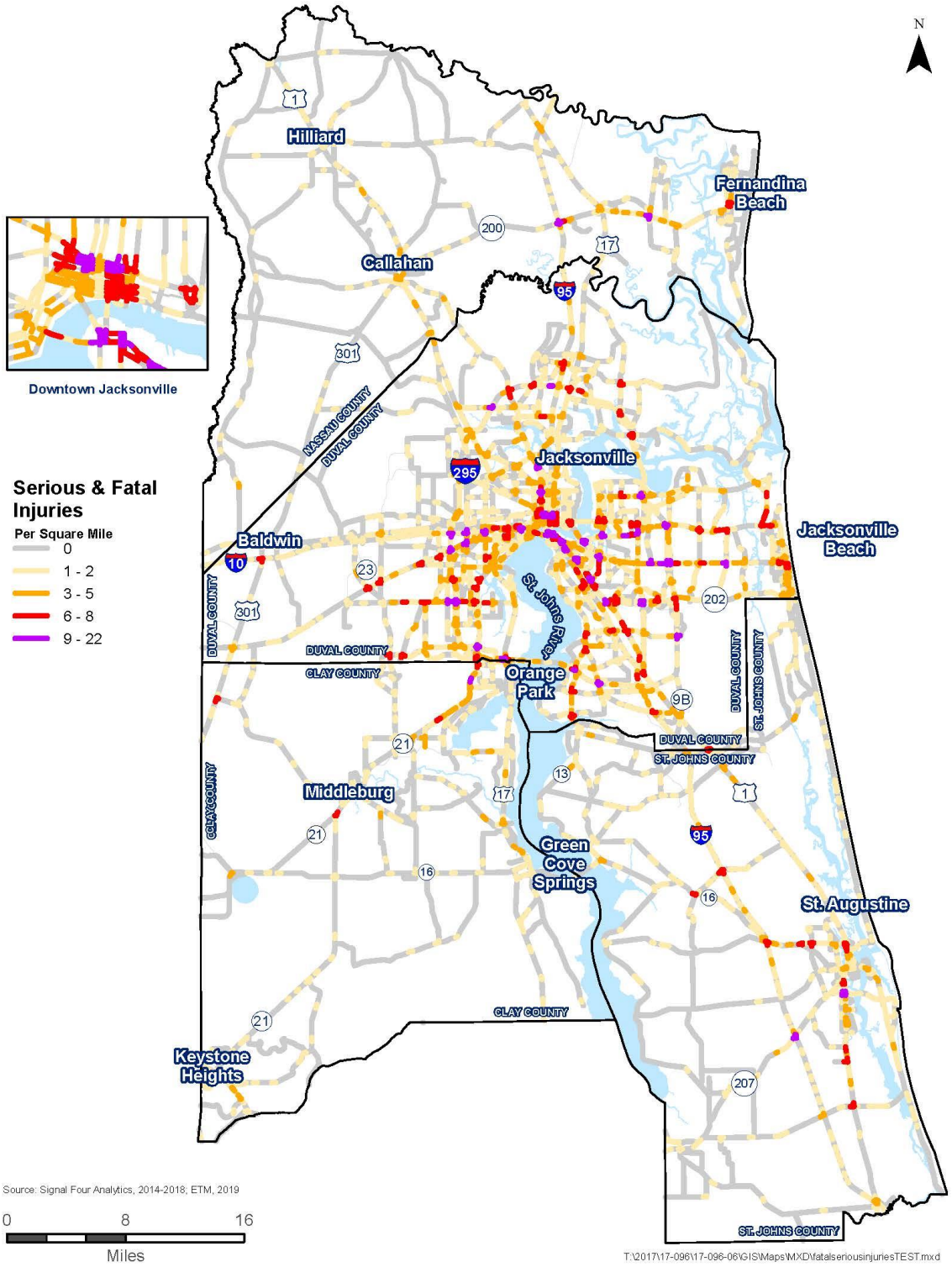


Figure 18. Fatal and Serious Injury Crashes on Roadways, per Square Mile, 2014 - 2018



High-Crash Corridors (2014 – 2018)

Corridor Characteristics

Based on a review of maps displaying crash densities along collector and arterial roadways (described in the previous section in Figures 17 and 18), several corridors were selected for corridor level analysis (Table 26)[15]. Crash data from FDOT's Crash Analysis Reporting System (CARS) augmented with *Signal Four Analytics* was utilized for the corridor level analysis.

The following information was identified for each corridor: length, average vehicles per day, total number of traffic crashes and overall crash rates. In addition, several crash characteristics were totaled across the five years (2014 – 2018) for each corridor: light condition, road condition, injury type of crashes, number and type of injuries (and fatalities), contributing causes, crash type, month and day. This data is listed in Appendix E.

The 42 corridors represent approximately 55,250 crashes, 22% of total regional crashes for the five-year period from 2014 – 2018. Of the high-crash corridors, most are in Duval County (33); four are in St. Johns County, three in Clay County and two in Nassau County. These corridors represent mostly state roadways.

Additional characteristics of these corridor crashes are listed below.

- Six of the seven downtown Jacksonville corridors are one-way streets.
- The high-crash corridors represent approximately 1,130 serious injury crashes (23% of the total) and 175 fatal crashes (17% of the total) during the five-year period.
- The high-crash corridors represent 1,480 serious injuries and deaths (approximately 21% of the region's total) for the five-year period.
- Distracted driving was a contributing cause for 14% of total high-crash corridor crashes (7,879 crashes), and for 13% of the region's total crashes.
- Of the 132 deaths due to crashes along the corridors, 19 (14%) did not wear seat belts.
- On high-crash corridors, 73% of crashes occurred during the day, 20% occurred at night, 4% occurred at dawn or dusk and the light condition for 3% was unknown.
- On high-crash corridors, 83% of crashes occurred on dry pavement, 14% occurred on wet pavement and the road surface for 3% was unknown.

[15] Freeways and interstates were not included

- Forty-six percent of crashes on high-crash corridors involved rear-end crashes. Eleven percent were due to sideswipes and 10% due to left turns. Regarding day of week, the percentage of corridor crashes occurring on Friday was the highest, at 17%. Wednesday and Thursday each represented 16% of corridor crashes, Tuesday 15% and Monday 14%. Saturday and Sunday represented the lowest percentage of corridor crashes, at 12% and 9%, respectively. The corridor crashes were evenly split between the 12 months, with each month representing about eight to nine percent of total corridor crashes.

Figures 19 and 20 illustrate crash conditions and underserved populations, respectively, for the high-crash corridors listed in Table 26. Each corridor is labeled with a corridor/map identification number that corresponds to Table 26. Figure 19 displays crash frequency and crash rate for the corridors, while Figure 20 illustrates each corridor's proximity to underserved population groups within the region. Of the illustrated corridors, those with the highest overall crash rates (shown on Figure 19 as purple, with crash rates ranging from 22 to 86) are in downtown Jacksonville. These corridor roadways, with the top five crash rates, are Broad Street, US 90/Beaver Street, Jefferson Street, Ocean Street and US-1/Main Street. Roadways with the next highest crash rates (shown on Figure 19 as red, with crash rates ranging from 14 to 22) are also in Duval County. These are: US 23/State Street and Union Street in downtown Jacksonville; SR 134/103rd Street, SR 21/Blanding Boulevard and SR 208/Wilson Boulevard on the west side of the St. Johns River; and SR 109/University Boulevard South, SR 152/Baymeadows Road and SR 10/Atlantic Boulevard on the east side of the river.

In Figure 20, the data is described as the average percent of minority and low income in Census block groups and is shown as a nationwide percentile. Corridors with the highest average underserved-population percentile (for block groups within one-half mile of the corridor) are US 23/State Street (92%), Union Street (92%), US 90/Beaver Street (92%) and SR 104/Dunn Avenue (82%). A block group at the 80th percentile nationwide, for example, means that only 20% of the US population has a higher value.

The data is from the Environmental Protection Agency (EPA) ESCREEN tool, an environmental justice screening and mapping tool that utilizes standard and nationally consistent data to highlight places that may have higher environmental burdens and vulnerable populations. The EPA uses demographic data from the U.S. Census Bureau American Community 5-year Summary Survey (ACS). Minority is defined as all people other than non-Hispanic white-alone individuals. Low-income is defined as percent of block group population at or below twice the federal "poverty level."

Table 26. High-Crash Corridors (sorted by Corridor/Map ID)

Map ID	Roadway Name	From	To	Miles	County	Total Crashes	Overall Crash Rate (MVMT)
1	US 90/SR 212/Beach Boulevard	Parental Home Road	SR 115/Southside Boulevard	1.11	Duval	792	6.46
2	US 90/SR 212/Beach Boulevard	SR 115/Southside Boulevard	Central Parkway	2.95	Duval	2836	9.49
3	US 90/SR 212/Beach Boulevard	Central Parkway	Hodges Boulevard	3.08	Duval	1239	4.45
4	US 90/SR 212/Beach Boulevard	Hodges Boulevard	San Pablo Parkway	1.27	Duval	1131	10.83
5	US 90/SR 212/Beach Boulevard	Penman Road	SR A1A/3rd Street	0.87	Duval	361	8.62
6	SR 10/Atlantic Boulevard	I-95	Arlington Road	4.47	Duval	1763	7.67
7	SR 10/Atlantic Boulevard	Arlington Road	Arlington Expressway	1.73	Duval	1440	14.70
8	SR 10/Atlantic Boulevard	Arlington Expressway	Sandalwood Boulevard	2.14	Duval	2229	10.01
9	SR 10/Atlantic Boulevard	Sandalwood Blvd	Hodges Boulevard	3.55	Duval	1727	4.62
10	SR 10/Atlantic Boulevard	Hodges Boulevard	San Pablo Parkway	0.48	Duval	536	11.15
11	SR 10/Atlantic Boulevard	SR A1A/Mayport Road	SR A1A/3rd Street	1.28	Duval	753	10.70
12	SR 109/University Boulevard S.	St. Augustine Road	I-95	1.10	Duval	1326	16.36
13	SR 109/University Boulevard S.	I-95	US 90/SR 212/Beach Boulevard	3.72	Duval	2075	8.28
14	SR A1A/3rd St	16th Avenue South	6th Ave North	1.49	Duval	675	7.22
15	SR A1A/Mayport Road	SR 10/Atlantic Boulevard	Old Mayport Rd	2.30	Duval	935	7.43
16	US 1/Philips Highway	SR 126/Emerson Street	SR 109/University Boulevard	1.60	Duval	730	10.14
17	SR 152/Baymeadows Road	Old Kings Road	SR 115/Southside Boulevard	2.49	Duval	2574	14.89
18	SR 13/San Jose Blvd	SR 152/Baymeadows Road	Julington Creek	5.86	Duval	4970	9.34
19	SR 21/Blanding Boulevard	Collins Road	Duval/Clay County Line	1.02	Duval	1941	17.19
20	SR 21/Blanding Boulevard	Duval/Clay County Line	SR 224/Kingsley Avenue	1.87	Clay	2900	11.72
21	SR 21/Blanding Boulevard	SR 224/Kingsley Avenue	College Drive	2.62	Clay	2677	8.55
22	SR 21/Blanding Boulevard	College Drive	Tanglewood Boulevard	1.22	Clay	764	7.40
23	SR 21/Blanding Boulevard	SR 134/103rd Street	SR 208/Wilson Road	1.58	Duval	940	11.45
24	SR 134/103rd Street	Connie Jean Road	Old Middleburg Road S.	1.46	Duval	705	21.66
25	SR 134/103rd Street	Old Middleburg Road	Jammes Road	3.11	Duval	2970	13.05
26	SR 134/103rd Street/Timuquana Road	Jammes Road	Catoma Street	1.50	Duval	652	9.45
27	SR 228/Normandy Boulevard	I-295	Lenox Avenue (near Post St.)	2.23	Duval	1412	13.18
28	SR 208/Wilson Boulevard	Fouraker Road	SR 103/Lane Avenue	1.49	Duval	637	15.25

Map ID	Roadway Name	From	To	Miles	County	Total Crashes	Overall Crash Rate (MVMT)
29	SR 104/Dunn Avenue	Biscayne Boulevard	I-295	3.682	Duval	859	6.85
30	SR200/A1A/The Buccaneer Trail	Semper Fi Drive (W. of I-95)	Bobby Moore Circle (E. of William Burgess Blvd.)	1.08	Nassau	364	8.80
31	SR200/A1A/The Buccaneer Trail	Gene Lassere Boulevard	Blackrock Road	1.91	Nassau	641	5.06
32	US-1	E. Watson Road	Wildwood Drive	1.00	St. Johns	347	9.42
33	US-1	Lewis Point Road	King Street	2.78	St. Johns	2109	9.78
34	US-1/Ponce De Leon Boulevard	King Street	SR 16	1.93	St. Johns	1219	9.65
35	SR 16	Toms Road (NW of I-95)	Fortner Road	1.33	St. Johns	964	11.38
36	US-1/Main Street	Independent Drive	US 23/State Street	0.56	Duval	645	54.19
37	Ocean Street	Independent Drive	US 23/State Street	0.56	Duval	500	60.25
38	US 23/State Street	Lee Street	Liberty Street	1.06	Duval	1079	20.00
39	Union Street	Lee Street	Liberty Street	1.06	Duval	994	18.51
40	US 90/Beaver Street	Lee Street	Liberty Street	1.06	Duval	772	74.51
41	Jefferson Street	Water Street	US 23/State Street	0.58	Duval	540	65.91
42	Broad Street	Water Street	US 23/State Street	0.58	Duval	529	85.80

Source: Crash Data – FDOT *Crash Analysis Reporting (CAR) System*, *State Safety Office Geographic Information System (SSOGis)* and *Signal Four Analytics*; FDOT Florida Traffic Online (https://tdaappsprod.dot.state.fl.us/fto/); ETM

Figure 19. Crash Frequency and Rate for High-Crash Corridors, 2014 – 2018

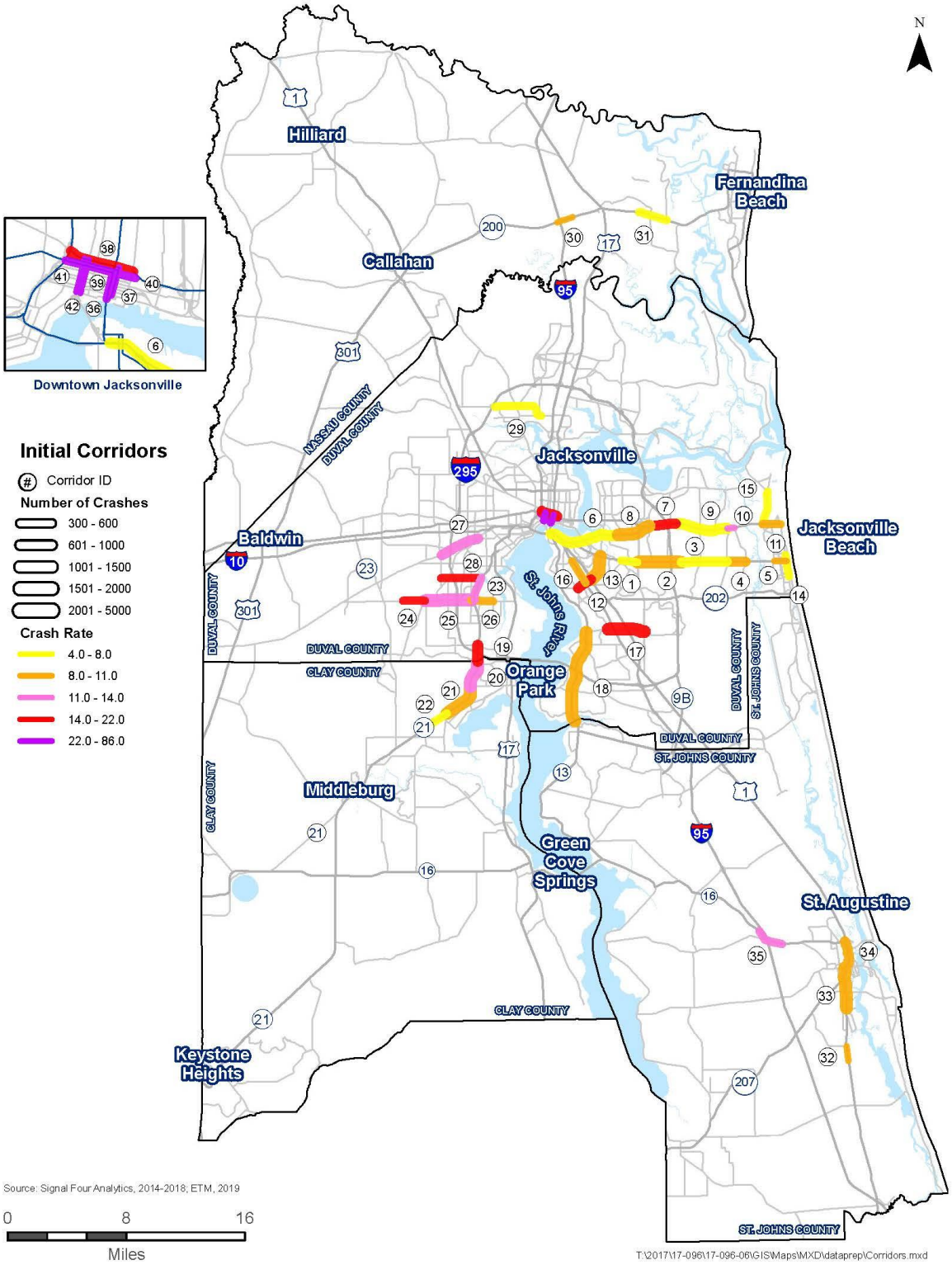
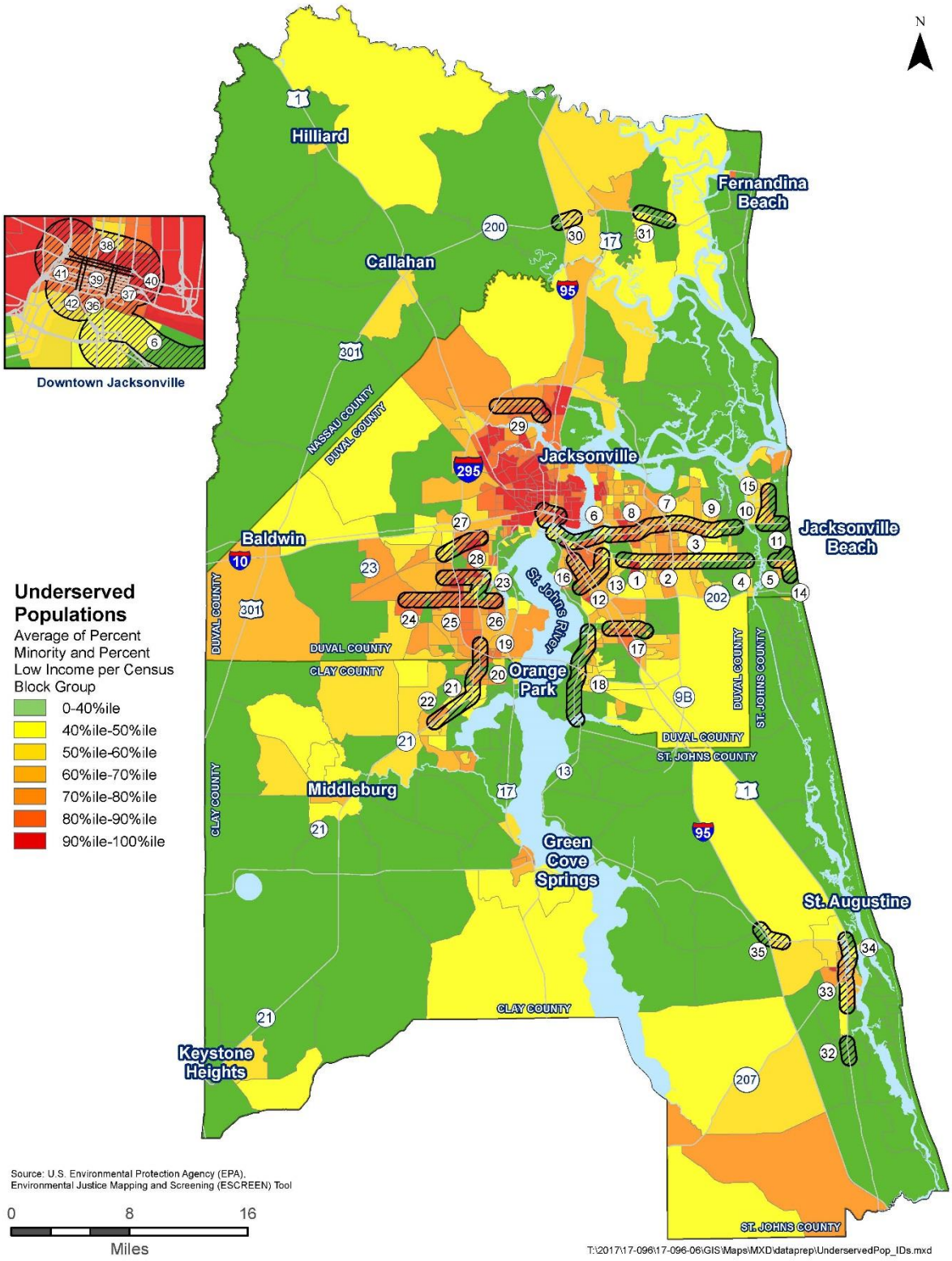


Figure 20. Underserved Populations and High Crash Corridors



Corridor Ranking

The following factors were used to rank the corridors:

- Total, overall crash rate
- Fatal and serious injury crash rates
- Bicyclist and pedestrian crash rates
- Distracted driving crash rates
- Underserved population groups within one-half mile of the corridors

The list of ranked high-crash corridors was prepared by considering: 1) the number of factors for which the corridor ranked in the top 15, and 2) the overall crash rate. Using this ranking methodology, Table 27 and Figure 21 illustrate priority for the high-crash corridors. The highest 15 ranked corridors are primarily corridors with the highest overall crash rate.

For each of the five factors, each corridor was assigned a rank from one through 42. A high rank for a corridor (such as 1 -15, for the top 15) indicates the crash rate is relatively high when compared to crash rates for other listed corridors. A high rank for the underserved population factor, indicates that the average underserved-population percentile for block groups within one-half mile of the corridor is relatively high when compared to other corridors.

Table 27. High-Crash Corridor Ranking (sorted by Issue Count: Count of Rankings 1 – 15)

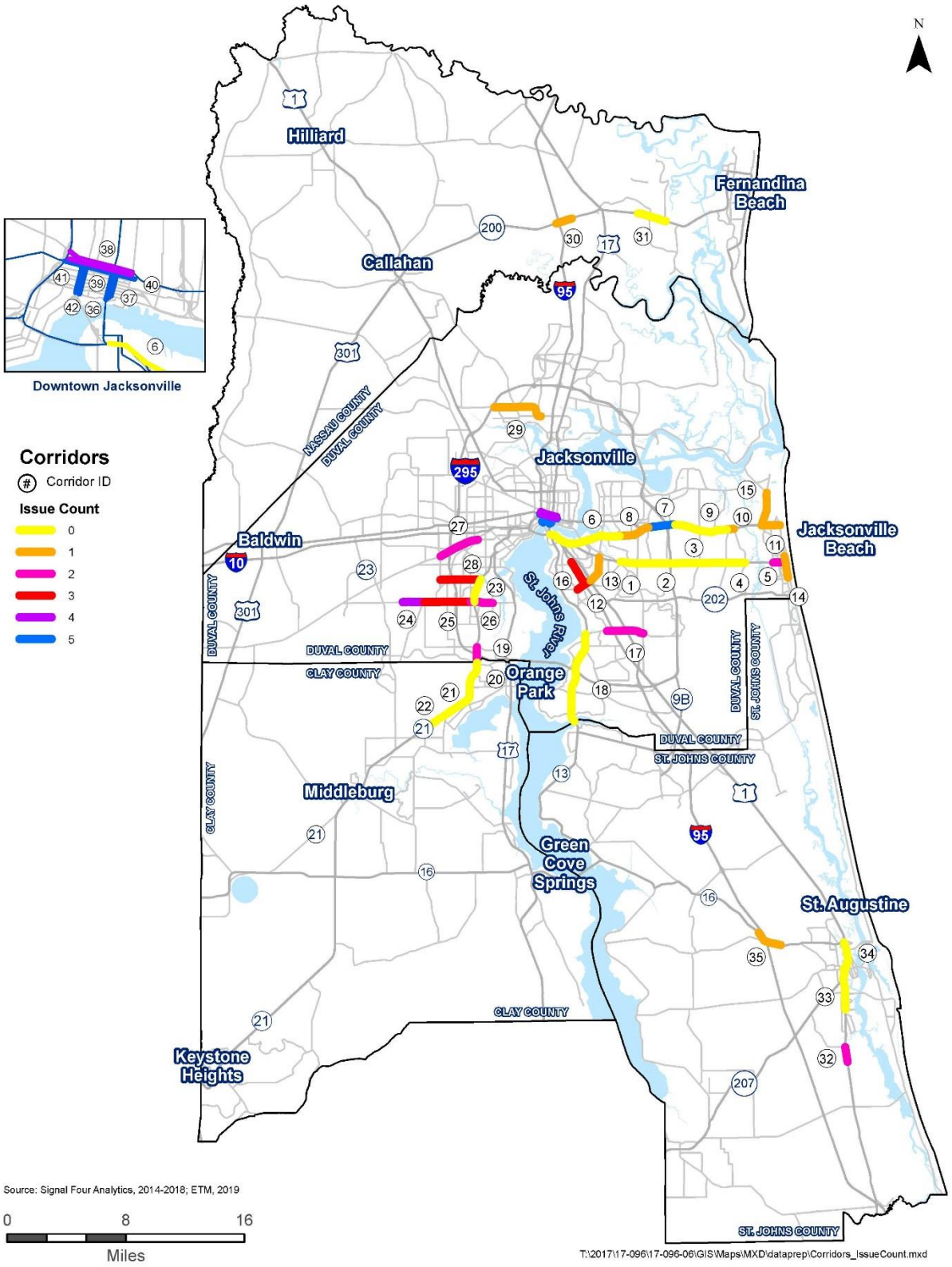
Rank	ID #	Location				Ranking Factors (1 – 42 rank)					Issue Count (# times ranked in the top 15)
		Roadway	From	To	County	Total Crash Rate Rank	Fatal & Serious Injury Crash Rate Rank	Ped/Bike Crash Rate Rank	Distracted Driving Crash Rate Rank	Average Underserved Population Percentile Rank	
1	42	Broad Street	Water Street	US 23/State Street	Duval	**1**	**4**	**2**	**1**	**6**	**5**
2	40	US 90/Beaver Street	Lee Street	Liberty Street	Duval	**2**	**1**	**1**	**4**	**3**	**5**
3	41	Jefferson Street	Water Street	US 23/ State Street	Duval	**3**	**3**	**5**	**2**	**6**	**5**
4	37	Ocean Street	Independent Drive	US 23/ State Street	Duval	**4**	**5**	**4**	**3**	**9**	**5**
5	36	US-1/Main Street	Independent Drive	US 23/ State Street	Duval	**5**	**2**	**3**	**5**	**10**	**5**
6	7	SR 10/Atlantic Boulevard	Arlington Road	Arlington Expressway	Duval	**13**	**11**	**9**	**13**	**13**	**5**
7	24	SR 134/103rd Street/ Timuquana Road	Connie Jean Road	Old Middleburg Rd	Duval	**6**	**6**	**8**	**8**	17	**4**
8	38	US 23/State Street	Lee Street	Liberty Street	Duval	**7**	19	**7**	**14**	**1**	**4**
9	39	Union Street	Lee Street	Liberty Street	Duval	**8**	**14**	**6**	18	**1**	**4**
10	12	SR 109/University Boulevard S.	St. Augustine Rd	I-95	Duval	**10**	**12**	17	**9**	21	**3**
11	28	SR 208/Wilson Boulevard	Fouraker Rd	SR 103/Lane Avenue	Duval	**11**	**10**	32	16	**14**	**3**
12	25	SR 134/103rd Street/ Timuquana Road	Old Middleburg Rd	Jammes Rd	Duval	**15**	17	**12**	20	**11**	**3**
13	16	US 1/Philips Highway	SR 126/Emerson Street	SR 109/ University	Duval	22	**15**	**14**	28	**8**	**3**
14	19	SR 21/Blanding Boulevard	Collins Road	Duval/Clay County Line	Duval	**9**	25	31	**7**	18	**2**
15	17	SR 152/Baymeadows Road	Old Kings Road	E. of SR 115/ Southside	Duval	**12**	31	26	**12**	26	**2**

Rank	ID #	Location				Ranking Factors (1 – 42 rank)					Issue Count (# times ranked in the top 15)
		Roadway	From	To	County	Total Crash Rate Rank	Fatal & Serious Injury Crash Rate Rank	Ped/Bike Crash Rate Rank	Distracted Driving Crash Rate Rank	Average Underserved Population Percentile Rank	
16	27	SR 228/Normandy Boulevard	I-295	Lenox Avenue (near Post St.)	Duval	**14**	**13**	20	23	16	**2**
17	26	SR 134/103rd Street/ Timuquana Road	Jammes Rd	Catoma Street	Duval	27	18	**10**	36	**12**	**2**
18	32	US-1	E Watson Drive/ Watson Road	Wildwood Drive	St. Johns	28	**9**	29	**15**	37	**2**
19	5	US 90/SR 212/Beach Boulevard	Penman	A1A	Duval	31	**8**	**13**	25	35	**2**
20	35	SR 16	Toms Road (NW of I-95)	Fortner Road	St. Johns	18	29	36	**10**	36	**1**
21	10	SR 10/Atlantic Boulevard	Hodges	San Pablo	Duval	19	32	30	**11**	41	**1**
22	11	SR 10/Atlantic Boulevard	SR A1A/Mayport Rd	SR A1A/3rd Street	Duval	21	16	19	**6**	39	**1**
23	8	SR 10/Atlantic Boulevard	Arlington Expressway	Sandalwood Boulevard	Duval	23	35	25	21	**5**	**1**
24	30	SR200/A1A/The Buccaneer Trail	Semper Fi Drive (.25 mil W. of I-95)	Bobby Moore Circle (.25 mi.	Nassau	30	**7**	42	22	33	**1**
25	13	SR 109/University Boulevard S.	I-95	US 90/SR 212/ Beach	Duval	33	24	28	34	**15**	**1**
26	15	SR A1A/Mayport Road	SR 10/Atlantic Boulevard	SR A1A; Mayport	Duval	35	20	**11**	32	31	**1**
27	14	SR A1A/3rd St	16th Avenue South	6th Ave North	Duval	37	26	**15**	27	40	**1**
28	29	SR 104/Dunn Avenue	Biscayne Boulevard	I-295	Duval	38	23	38	39	**4**	**1**
29	20	SR 21/Blanding Boulevard	Duval/Clay County Line	SR 224/Kingsley	Clay	16	37	27	19	24	**0**
30	23	SR 21/Blanding Boulevard	SR 134/ 103rd Street/ Timuquana	SR 208/Wilson Road	Duval	17	22	18	29	20	**0**
31	4	US 90/SR 212/Beach Boulevard	W. of Hodges	San Pablo	Duval	20	27	22	26	41	**0**
32	33	US-1	Lewis Point Road	King Street	St. Johns	24	36	16	17	23	**0**

Rank	ID #	Location				Ranking Factors (1 – 42 rank)					Issue Count (# times ranked in the top 15)
		Roadway	From	To	County	Total Crash Rate Rank	Fatal & Serious Injury Crash Rate Rank	Ped/Bike Crash Rate Rank	Distracted Driving Crash Rate Rank	Average Underserved Population Percentile Rank	
33	34	US-1/Ponce De Leon Boulevard	King Street	SR 16	St. Johns	25	28	21	38	29	**0**
34	2	US 90/SR 212/Beach Boulevard	W. of Southside Boulevard	Central Parkway	Duval	26	21	23	30	19	**0**
35	18	SR 13/San Jose Blvd	Baymeadows	S. of Julington Creek	Duval	29	34	35	24	38	**0**
36	21	SR 21/Blanding Boulevard	SR 224/Kingsley Avenue	College Drive	Clay	32	41	33	33	27	**0**
37	6	SR 10/Atlantic Boulevard	I-95	Arlington Road	Duval	34	30	37	35	22	**0**
38	22	SR 21/Blanding Boulevard	College Drive	Tanglewood Boulevard	Clay	36	39	24	37	25	**0**
39	1	US 90/SR 212/Beach Boulevard	Parental Home	W. of Southside Boulevard	Duval	39	40	34	40	32	**0**
40	31	SR200/A1A/The Buccaneer Trail	Gene Lassere Boulevard	Blackrock Road	Nassau	40	33	41	31	34	**0**
41	9	SR 10/Atlantic Boulevard	Sandalwood Blvd	Hodges	Duval	41	42	40	42	28	**0**
42	3	US 90/SR 212/Beach Boulevard	Central Parkway	W. of Hodges	Duval	42	38	39	41	30	**0**

Source: ETM

Figure 21. Priority for High-Crash Corridors



High-Crash Frequency Intersections

Crashes that occur at roadway intersections represent a significant portion of the region's crashes. During the five-year period from 2014 to 2018, intersection crashes represented about 30% of the region's total crashes and 34% of the region's serious and fatal injury crashes. Table 28 displays serious and fatal injury intersection crashes as a percent of the region's crashes.

Table 28. Regional Crashes at Intersections, 2014 – 2018

	Serious Injury	Fatal	Serious Injury and Fatal	Total
Regional Crashes	4,849	1,027	5,876	249,873
Intersection Crashes	1,708	289	1,997	71,840
% Intersection Crashes	35%	28%	34%	29%

Source: Signal Four Analytics

Table 29 lists the region's top 25 intersections by number of total crashes. Intersections within a half-mile radius of underserved populations are highlighted in yellow. For this list, underserved population is defined as a block group with an average percent minority and percent low income percentile of 70% or higher. A block group at the 70th percentile nationwide, for example, means that only 30% of the US population has a higher value.

Tables 30 – 33 list each county's top 25 intersections by total crashes.

Table 29. The Region's Top 25 Intersection Crashes (sorted by total crashes), 2014 - 2018

Region Rank	County Rank	Intersection Name	Total Crashes	Fatal & Incapacitating Injury Crashes	Bike/Ped Crashes	City	County
1	1	BLANDING BLVD & WELLS RD	435	4	7	Unincorporated	Clay
2	1	BLANDING BLVD & E YOUNGERMAN CIR & YOUNGERMAN CIR	344	4	3	Jacksonville	Duval
3	2	BLANDING BLVD & LOCH RANE BLVD & KINGSLEY AVE	312	3	5	Unincorporated	Clay
4	2	BLANDING BLVD & ARGYLE FOREST BLVD	310	0	1	Jacksonville	Duval
5	3	CONNIE JEAN RD & 103RD ST	291	7	9	Jacksonville	Duval
5	3	BAYMEADOWS RD & PHILIPS HWY	291	10	3	Jacksonville	Duval
6	4	ATLANTIC BLVD & SOUTHSIDE BLVD & SOUTHSIDE CONNECTOR BLVD	283	4	2	Jacksonville	Duval
7	5	103RD ST & FIRESTONE RD	279	4	4	Jacksonville	Duval
8	6	BLANDING BLVD & COLLINS RD	278	8	6	Jacksonville	Duval
8	1	US-1 & SR-312	278	7	3	Unincorporated	St Johns
9	7	PHILIPS HWY & SR-109 & UNIVERSITY BLVD W	268	5	0	Jacksonville	Duval
10	8	BEACH BLVD & UNIVERSITY BLVD S	267	6	5	Jacksonville	Duval
11	9	RICKER RD & 103RD ST	249	7	6	Jacksonville	Duval
12	10	HODGES BLVD & BEACH BLVD	244	5	6	Jacksonville	Duval
13	11	ATLANTIC BLVD & HODGES BLVD & JOEANDY RD	234	4	2	Jacksonville	Duval
14	12	SOUTHSIDE BLVD & BAYMEADOWS RD	222	3	4	Jacksonville	Duval
14	12	ATLANTIC BLVD & LIVE OAK DR & MONUMENT RD & ARLINGTON EXPY	222	3	7	Jacksonville	Duval
15	3	BLANDING BLVD & COLLEGE DR	221	1	5	Unincorporated	Clay
16	13	BEACH BLVD & ST JOHNS BLUFF RD & ST JOHNS BLUFF RD S	217	5	8	Jacksonville	Duval
17	14	UNIVERSITY BLVD N & ATLANTIC BLVD & UNIVERSITY BLVD S	205	10	2	Jacksonville	Duval
18	4	BLANDING BLVD & ARORA BLVD	203	3	11	Unincorporated	Clay
19	15	BLANDING BLVD & 103RD ST	195	3	8	Jacksonville	Duval
20	2	SR-16 & N PONCE DE LEON BLVD & PICOLATA RD	193	1	3	St Augustine	St Johns
21	16	CLAIRE LN & SAN JOSE BLVD	192	1	3	Jacksonville	Duval
22	17	MCCORMICK RD & MONUMENT RD	190	3	3	Jacksonville	Duval

Source: *Signal Four Analytics* (Sorted by Total Intersection Crashes)

Table 30. Top 25 Intersection Crashes in Clay County, 2014 - 2018

Rank	Intersection Name	Total Crashes	Crash Severity	Fatal Crashes	Fatal & Incapacitating	Injury Crashes	Bike/Ped Crashes	City
1	BLANDING BLVD & WELLS RD	435	1.744	0	4	108	7	Unincorporated
2	BLANDING BLVD & LOCH RANE BLVD & KINGSLEY AVE	312	1.644	0	3	67	5	Unincorporated
3	BLANDING BLVD & COLLEGE DR	221	1.85	1	1	59	5	Unincorporated
4	BLANDING BLVD & ARORA BLVD	203	1.99	0	3	67	**11**	Unincorporated
5	BLAIRMORE BLVD E & BLANDING BLVD & BLAIRMORE BLVD W	183	2.196	3	**7**	62	**9**	Unincorporated
6	BLANDING BLVD & CR-218	173	1.815	0	1	47	4	Unincorporated
7	BLANDING BLVD & CAMP FRANCIS JOHNSON RD	153	2.15	1	3	55	0	Unincorporated
8	BLANDING BLVD & BRANAN FIELD RD & BAXLEY RD	149	1.845	0	2	42	1	Unincorporated
8	OAK LN & BLANDING BLVD & KNIGHT BOXX RD	149	1.724	0	0	36	3	Unincorporated
8	US-17 & CR-220 & BALD EAGLE RD	149	1.704	0	1	35	0	Unincorporated
9	BLANDING BLVD & SUZANNE AVE	147	1.972	1	3	44	3	Unincorporated
10	LONDONDERRY DR & BLANDING BLVD & RIDGECREST AVE	144	2.083	0	4	52	4	Unincorporated
11	BLANDING BLVD & HENLEY RD & OLD JENNINGS RD	142	1.718	0	**5**	34	3	Unincorporated
12	BLANDING BLVD & LESTER DR & PARKWOOD DR	122	2.032	0	1	42	4	Unincorporated
13	TOWN CENTER BLVD & CR-220	121	1.966	0	2	39	1	Unincorporated
13	BLANDING BLVD & SPENCER RD	121	1.892	0	3	36	3	Unincorporated
14	BLANDING BLVD & EDSON DR	118	1.983	1	2	35	7	Unincorporated
15	BLANDING BLVD & BOLTON RD & CONSTITUTION DR	114	2.026	0	1	39	6	Unincorporated
16	BLANDING BLVD & JEFFERSON AVE	104	2.269	3	**5**	33	**8**	Unincorporated
17	BLANDING BLVD & EVERETT AVE	99	1.666	0	0	22	1	Unincorporated
18	SR-16 & S ORANGE AVE & GREEN COVE AVE	92	1.684	0	2	21	0	Unincorporated
19	HENLEY RD & CR-220	91	1.824	0	2	25	0	Unincorporated
20	DISCOVERY DR & OAKLEAF PLANTATION PKWY & BRANAN FIELD RD & CHALLENGER DR	86	2.267	2	2	29	0	Unincorporated
20	BLANDING BLVD & CR-220	86	1.558	0	0	16	0	Unincorporated
21	FILMORE ST & BLANDING BLVD	84	1.928	0	3	26	3	Unincorporated

Source: *Signal Four Analytics* (Sorted by Total Intersection Crashes)

Table 31. Top 25 Intersection Crashes in Duval County, 2014 - 2018

Rank	Intersection Name	Total Crashes	Crash Severity	Fatal Crashes	Fatal & Incapacitating Injury Crashes	Injury Crashes	Bike/Ped Crashes	City
1	BLANDING BLVD & E YOUNGERMAN CIR & YOUNGERMAN CIR	344	1.758	0	4	87	3	Jacksonville
2	BLANDING BLVD & ARGYLE FOREST BLVD	310	1.9	0	0	93	1	Jacksonville
3	CONNIE JEAN RD & 103RD ST	291	2.103	0	7	107	9	Jacksonville
3	BAYMEADOWS RD & PHILIPS HWY	291	1.831	1	**10**	77	3	Jacksonville
4	ATLANTIC BLVD & SOUTHSIDE BLVD & SOUTHSIDE CONNECTOR BLVD	283	1.957	2	4	83	2	Jacksonville
5	103RD ST & FIRESTONE RD	279	1.892	0	4	83	4	Jacksonville
6	BLANDING BLVD & COLLINS RD	278	1.992	0	8	92	6	Jacksonville
7	PHILIPS HWY & SR-109 & UNIVERSITY BLVD W	268	1.794	0	5	71	0	Jacksonville
8	BEACH BLVD & UNIVERSITY BLVD S	267	1.887	0	6	79	5	Jacksonville
9	RICKER RD & 103RD ST	249	2	0	7	83	6	Jacksonville
10	HODGES BLVD & BEACH BLVD	244	1.934	0	5	76	6	Jacksonville
11	ATLANTIC BLVD & HODGES BLVD & JOEANDY RD	234	1.628	0	4	49	2	Jacksonville
12	SOUTHSIDE BLVD & BAYMEADOWS RD	222	1.743	0	3	55	4	Jacksonville
12	ATLANTIC BLVD & LIVE OAK DR & MONUMENT RD & ARLINGTON EXPY	222	1.689	0	3	51	7	Jacksonville
13	BEACH BLVD & ST JOHNS BLUFF RD & ST JOHNS BLUFF RD S	217	1.94	0	5	68	8	Jacksonville
14	UNIVERSITY BLVD N & ATLANTIC BLVD & UNIVERSITY BLVD S	205	2.004	1	**10**	65	2	Jacksonville
15	BLANDING BLVD & 103RD ST	195	2.128	2	3	66	8	Jacksonville
16	CLAIRE LN & SAN JOSE BLVD	192	1.776	1	1	46	3	Jacksonville
17	MCCORMICK RD & MONUMENT RD	190	1.952	2	3	53	3	Jacksonville
18	SOUTHSIDE BLVD & GATE PKWY W & GATE PKWY N	188	1.734	0	3	46	2	Jacksonville
19	POWERS AVE & UNIVERSITY BLVD W	187	1.893	1	5	52	5	Jacksonville
20	BEACH BLVD & SAN PABLO RD S	186	1.87	0	4	54	2	Jacksonville
21	MCDUFF AVE S & ROOSEVELT BLVD	179	2.039	0	3	62	1	Jacksonville
22	LANE AVE S & NORMANDY BLVD	175	2.057	1	4	58	6	Jacksonville
23	FOURAKER RD & NORMANDY BLVD	172	1.994	0	4	57	2	Jacksonville

Source: *Signal Four Analytics* (Sorted by Total Intersection Crashes)

Table 32. Top 25 Intersection Crashes in Nassau County, 2014 - 2018

Rank	Intersection Name	Total Crashes	Crash Severity	Fatal Crashes	Fatal & Incapacitating Injury Crashes	Injury Crashes	Bike/Ped Crashes	City
1	US-17 & SR-200	148	1.945	1	2	43	0	Unincorporated
2	SR-200 & CHESTER RD & AMELIA CONCOURSE	140	2.028	0	**5**	48	0	Unincorporated
3	SR-200 & FELMOR RD & MINER RD	92	1.771	1	2	20	1	Unincorporated
4	S 14TH ST & SADLER RD	88	1.75	0	1	22	0	Unincorporated
5	SR-200 & ARRIGO BLVD	80	2	1	3	23	1	Unincorporated
6	SR-200 & MENTORIA RD	78	2.487	1	**7**	35	0	Unincorporated
7	SR-200 & MT ZION LOOP & BLACKROCK RD	76	2.131	1	1	25	0	Unincorporated
7	SR-200 & OLD NASSAUVILLE RD & O-NEIL SCOTT RD	76	2.078	2	2	20	0	Unincorporated
8	SR-200 & CHRISTIAN WAY & GENE LASSERE BLVD	72	1.666	0	1	16	0	Unincorporated
9	S 8TH ST & BONNIEVIEW RD & SADLER RD	66	1.681	0	2	15	**2**	Unincorporated
10	SR-200 & BARNWELL RD	60	2.2	0	1	24	0	Unincorporated
11	S KINGS RD & SR-200 & US-301	58	1.827	0	3	16	**2**	Callahan
12	S 8TH ST & AMELIA ISLAND PKWY	51	2	0	2	17	0	Unincorporated
13	US-17 & PAGES DAIRY RD	48	2.75	0	4	28	0	Unincorporated
14	SR-200 & FLORA PARKE BLVD & NASSAU PL	46	1.782	0	2	12	0	Unincorporated
15	SEMPER FI DR & SR-200	37	2.135	0	2	14	0	Unincorporated
16	ROY BOOTH RD & RATLIFF RD & S KINGS RD	32	3.187	2	**5**	16	1	Unincorporated
17	CHESTER RD & PAGES DAIRY RD	31	2.129	1	2	8	1	Unincorporated
18	LICENSE RD & SR-200	29	3.034	1	3	16	0	Unincorporated
18	SR-200 & WILLIAM BURGESS BLVD	29	1.931	0	3	9	0	Unincorporated
18	GEIGER RD & SR-200 & S 8TH ST & TJ COURSON RD	29	1.931	0	1	9	1	Unincorporated
19	S 14TH ST & TJ COURSON RD & PARK AVE	28	1.75	0	1	7	1	Fernandina Beach
20	SADLER RD & CITRONA DR & WILL HARDEE RD	26	2.038	0	1	9	0	Fernandina Beach
21	PEEPLES RD & SR-200 & ST PETER BLVD	25	2.32	0	3	11	1	Unincorporated
22	US-1 & S KINGS RD & RHODEN LN	24	1.75	0	0	6	0	Callahan

Source: *Signal Four Analytics* (Sorted by Total Intersection Crashes)

Table 33. Top 25 Intersection Crashes in St. Johns County, 2014 - 2018

Rank	Intersection Name	Total Crashes	Crash Severity	Fatal Crashes	Fatal & Incapacitating Injury Crashes	Injury Crashes	Bike/Ped Crashes	City
1	US-1 & SR-312	278	1.665	1	**7**	58	3	Unincorporated
2	SR-16 & N PONCE DE LEON BLVD & PICOLATA RD	193	1.528	0	1	34	3	St Augustine
3	INTERNATIONAL GOLF PKWY & SR-16 & PACETTI RD	161	2.074	1	**5**	54	0	Unincorporated
4	OLD MOULTRIE RD & SR-312	133	1.766	0	1	34	0	Unincorporated
5	US-1 & SR-206	124	2.177	1	**5**	45	0	Unincorporated
6	SR-207 & ROLLING HILLS DR & S HOLMES BLVD	117	2.153	0	1	45	1	Unincorporated
7	SR-13 & RACE TRACK RD & FRUIT COVE RD N	116	1.362	0	1	14	0	Unincorporated
8	US-1 & VALLEY RIDGE BLVD	112	1.964	0	4	36	1	Unincorporated
9	OUTLET MALL BLVD & SR-16	107	1.532	0	0	19	1	Unincorporated
10	SR-207 & SR-312 & WHISPERING WOODS LN	102	1.823	0	1	28	2	Unincorporated
11	KENTON MORRISON RD & WOODLAWN RD & SR-16	101	2.247	0	5	42	1	Unincorporated
12	N PONCE DE LEON BLVD & W KING ST & S PONCE DE LEON BLVD	94	1.765	0	2	24	**5**	St Augustine
13	US-1 & ST AUGUSTINE SOUTH DR & LEWIS POINT RD	92	1.88	0	3	27	0	Unincorporated
14	SR-16 & FOUR MILE RD	85	1.941	1	4	23	3	Unincorporated
15	SGT TUTTEN DR & SR-312	83	1.722	0	0	20	2	Unincorporated
15	WILDWOOD DR & US-1	83	1.506	0	0	14	0	Unincorporated
16	US-1 & PALENCIA CLUB DR & INTERNATIONAL GOLF PKWY	78	1.884	0	1	23	0	Unincorporated
16	SR-A1A & SR-312 & COUNTY ROAD A1A-BR	78	1.5	0	0	13	0	Unincorporated
17	RACE TRACK RD & DURBIN CREEK BLVD	76	2.078	2	3	20	3	Unincorporated
17	SR-16 & CR-208	76	1.789	0	2	20	0	Unincorporated
18	SR-207 & WILDWOOD DR	73	2.109	0	1	27	2	Unincorporated
18	RACE TRACK RD & FLORA BRANCH BLVD	73	1.739	0	1	18	0	Unincorporated
18	US-1 & SHORE DR	73	1.616	0	1	15	3	Unincorporated
19	SR-13 & ROBERTS RD	71	1.718	0	0	17	0	Unincorporated
20	SR-13 & SR-16	69	1.956	0	2	22	0	Unincorporated

Source: *Signal Four Analytics* (Sorted by Total Intersection Crashes)

Pedestrian and Bicyclist Crashes

Pedestrians and bicyclists are vulnerable users of the region's roadways. On average, 1,100 pedestrian and bicyclist crashes occur every year in North Florida[16]. Although these crashes represent a small share of the region's total crashes (only 2%), they represent a much higher share of the region's fatal crashes (31%). Additionally, of the region's 5,950 pedestrian and bicyclist crashes over the five-year period, most resulted in injury or death (82%), and 16% resulted in serious injury or death.

The most recent "Dangerous by Design" report (January 2019) completed by Smart Growth America, identifies Jacksonville as the sixth most dangerous "metro area" for walking, down from fourth most dangerous in the prior report. Additionally, the report identifies Florida as the most dangerous state in the nation for walking. Eight of the top 10 most dangerous areas for pedestrians are located in Florida. The report also states that people of color and older adults are overrepresented among pedestrian deaths.

FDOT's Pedestrian and Bicycle Strategic Safety Plan (PBSSP) is the Florida's five-year comprehensive implementation plan to decrease traffic-related pedestrian and bicyclist fatalities. To help guide safety initiatives over the next five years, FDOT's plan identifies six areas including communication, outreach, and education. In the May 2017 PBSSP, Duval County ranks seventh among Florida's 67 counties for pedestrian and bicyclist fatalities and injuries.

At the local level, the City of Jacksonville (COJ) recently completed a Pedestrian and Bicycle Master Plan that includes a Pedestrian Safety Action Plan and recommendations for improving bicycling infrastructure. The project's discovery phase revealed that serious and fatal crashes are heavily concentrated on major arterial roadways, especially FDOT roads, and that pedestrian and bicyclist crashes are heavily concentrated on roads with higher speeds and multiple lanes.

North Florida Pedestrian and Bicycle Crash Report

In 2017, in preparation for a safety education campaign, the North Florida TPO evaluated pedestrian and bicyclist crashes within the region, identified potential locations for a safety campaign, and implemented a pedestrian safety education campaign along SR 212/Beach Boulevard between Southside Boulevard and Interstate 295.

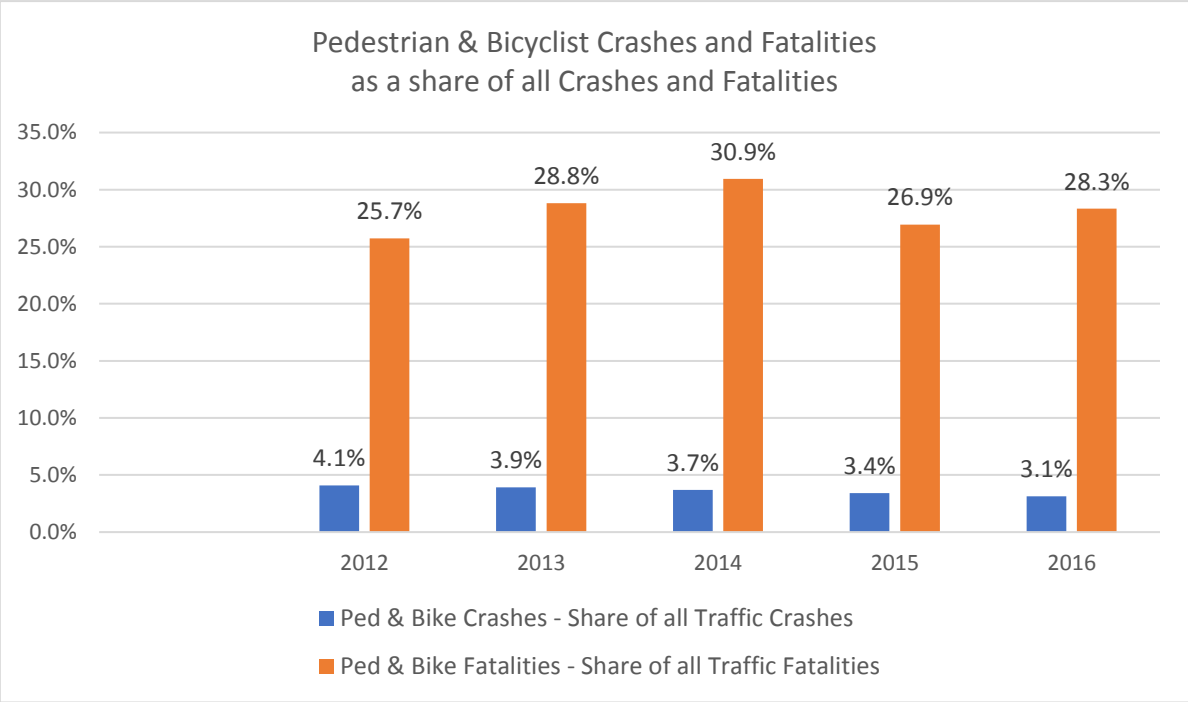
[16] Between 2014 – 2018 (in Clay, Duval, Nassau and St. Johns Counties)

Summary Issues and Problem Areas

While pedestrian and bicyclist crashes as a share of all traffic crashes decreased, the number of pedestrian and bicyclist fatalities as a share of all traffic fatalities increased (Figure 23). This analysis was based on a four-year period from July 2012 to June 2016.

- A greater share of the region's fatal pedestrian and bicyclist crashes occur on state roadways (60%) than other roadway types.
- More fatal pedestrian and bicyclist crashes occur at night (77%) than during the day.
- Over one-quarter of fatal pedestrian and bicyclist crashes (27%) are alcohol related and 10% are drug related.
- Within the region, like total crashes, most pedestrian and bicyclist crashes occur in Duval County (74%).
- Pedestrians represent 58% of the region's pedestrian and bicyclist crashes and 85% of the pedestrian and bicyclist fatalities.

Figure 22. Pedestrian and Bicyclist Crashes and Deaths as a share of Total Crashes and Deaths



Critical Pedestrian and Bicycle Corridors

The project team identified and ranked concentrations of pedestrian and bicyclist crashes along state roadways. Several corridors were identified as potential safety campaign locations (Table 34). The highest ranked locations have very similar physical characteristics as they are all multi-lane state roadways that carry a high volume of vehicles, with abutting commercial land use areas and a high concentration of driveways. The number of lanes on these roadways range from five to seven, and speeds range from 35 to 45 mph. Ultimately, Beach Boulevard was selected for the campaign based on the relative density and severity of crashes, the presence of traditionally underserved communities and no upcoming construction projects along the corridor that would interfere with the safety campaign.

Driver not yielding to pedestrians crossing the roadway

Many pedestrians don't use marked crosswalks

Table 34. Top 15 Pedestrian & Bicyclist Crash Clusters

Score Rank	Score	Road Name	From	To	County	Length (miles)	Crashes	Crashes per Mile	% Bicycle	% Ped.	Severe Crashes per Mile	Crashes per Mile Rank	Bicycle Crashes per Mile Rank	Ped. Crashes per Mile Rank	Severe Crashes per Mile Rank	Injury per Mile Rank	Number of times ranked in the Top 5
1	**33.48**	103rd/Timuquana Road	Ricker Road	Seaboard Avenue	Duval	2.54	67	26.39	37%	63%	7.09	1	4	1	1	1	**5**
2	**30.47**	Beach Boulevard	Southside Boulevard	St. Johns Bluff	Duval	2.20	56	25.47	50%	50%	5.00	2	2	4	3	2	**5**
3	**25.79**	University Boulevard	St. Augustine Road	I-95	Duval	1.05	21	20.06	43%	57%	5.73	3	5	7	2	8	**3**
4	**22.94**	US-1	SR 207	SR 312	St. Johns	1.00	19	18.95	68%	32%	3.99	4	1	21	8	5	**3**
5	**22.09**	Beach Boulevard	Hodges Boulevard	San Pablo Parkway	Duval	1.27	22	17.36	64%	36%	4.73	7	3	18	5	6	**2**
6	**21.39**	University Boulevard	I-95	Beach Boulevard	Duval	1.82	31	17.00	26%	74%	4.39	8	19	5	6	7	**1**
7	**20.78**	Blanding Boulevard	I-295	Kingsley Avenue	Clay	1.88	35	18.65	31%	69%	2.13	5	13	3	26	4	**3**
8	**20.09**	State, Union, Beaver St.	I-95	Liberty St.	Duval	3.19	53	16.64	25%	75%	3.45	9	21	6	11	9	
9	**19.72**	Atlantic Boulevard	N Arlington Road	I-295	Duval	3.30	54	16.38	43%	57%	3.34	10	8	10	13	12	
10	**19.27**	Dunn Avenue	Biscayne Boulevard	I-95	Duval	1.04	19	18.31	21%	79%	0.96	6	23	2	42	3	**2**
11	**18.98**	Beach Boulevard	Hogan Road	Southside Boulevard	Duval	1.63	23	14.08	30%	70%	4.90	12	20	9	4	10	**1**
12	**17.35**	103rd/Timuquana Road	Shindler Drive	Ricker Road	Duval	1.50	23	15.35	35%	65%	2.00	11	16	8	29	11	
13	**16.64**	Blanding Boulevard	Camp Francis	Jefferson	Clay	1.44	20	13.86	40%	60%	2.77	13	14	11	19	15	
14	**16.01**	Blanding Boulevard	Kingsley Avenue	Camp Francis	Clay	1.87	23	12.27	57%	43%	3.73	18	9	23	9	19	
15	**15.67**	Atlantic Boulevard	Mayport Road/A1A	3rd Street	Duval	1.28	17	13.32	47%	53%	2.35	14	11	14	23	17	

Summary of Beach Boulevard Pedestrian Safety Campaign

Between 2012 and 2016, 66 people walking or riding bikes were injured or killed by motorists in this section of Beach Boulevard. Of the 66 crashes, pedestrian crashes were most severe as all four fatalities were pedestrians. A review of existing conditions revealed that pedestrians and drivers contribute to unsafe conditions. Drivers often don't look out for pedestrians or cyclists and fail to yield to them when turning. Many pedestrians don't use marked crosswalks, push the crossing buttons or follow signals. There also seems to be confusion about the benefits of using pedestrian pushbuttons at signalized intersections.

Recognizing that these crashes are a serious issue, the Beach Boulevard Pedestrian Safety Campaign expanded upon previous successful initiatives such as the North Florida TPO's CareMore Driving Argyle Campaign and developed outreach activities specifically targeted to this area of Beach Boulevard.

To educate the public, change behaviors and ultimately reduce crashes along the corridor, the North Florida TPO implemented a Pedestrian Safety Campaign along Beach Boulevard. Campaign activities began the week of April 23, 2018 and continued through May 20, 2018. For pedestrians, the campaign promoted the benefits of using the pedestrian pushbuttons and marked crosswalks at signalized intersections. Drivers were encouraged to watch out for and yield to pedestrians, especially when turning.

The campaign corridor includes the highest percentages of Hispanic-origin individuals living within Duval County. Therefore, advertising and outreach featured bilingual materials and messaging. These materials included sidewalk decals, postcards mailed to nearby residents, social media, radio/print ads and a website. A major outreach initiative took place at the Beach Boulevard Flea Market, where a bilingual team spoke with over 100 people, many of whom were primarily Spanish speaking. The campaign also included outreach to businesses and churches.

Several recommendations and next steps were offered to improve safety along the corridor as a result of lessons learned from the campaign. Next steps included identifying more effective ways to plan and design roadways, incorporate technology, educate the community and enforce traffic laws and regulations. Engineering, education and enforcement are all important tools for traffic safety. Recommendations focused on improving pedestrian crosswalks and pedestrian signal displays on traffic signals; future studies to improve safety along the corridor (a leading pedestrian interval study and a complete street corridor study); continued stakeholder coordination and education; and regular, on-going maintenance of existing roadway infrastructure.

4 – Traffic Safety Improvement Strategies

As part of encouraging safe travel, the Regional System Safety Plan suggests strategies to reduce crashes, lower crash severity and promote the implementation of safety in the design or retrofit of the transportation system.

Safety Performance

The Regional System Safety Plan outlines strategies to help achieve the region's safety goals and performance targets.

- States and MPOs are required to report serious injuries and fatalities resulting from traffic crashes and adopt safety performance targets. Aligned with national and state requirements and zero-traffic-death vision statements, the North Florida TPO has adopted the State of Florida's aspirational targets of 0 for number of fatalities, number of serious injuries, fatality rate, serious injury rate and total number of non-motorized fatalities and serious injuries.
- Additionally, through the North Florida TPO's 2045 Long Range Transportation Plan (LRTP) process, the region has approved several goals, objectives and measures. They are listed below.

2045 LRTP Goal 3: Encourage Safe and Secure Travel - Investing in projects that enhance safety will lead to reduced crashes and lower crash severity for all [travel] modes.

OBJECTIVE 3.1: Reduce crashes for all [travel] modes.

Performance Measure		**Benchmark**
3.1.1	Number of vehicle crashes	Reduce the number of vehicle crashes. (Existing value is reported in the Congestion Management Process.)
3.1.2	Crash rate per million vehicle miles	Reduce the crash rate. (Existing value is reported in the Congestion Management Process.)
3.1.3	Number of serious injuries	Reduce the number of serious injuries. (Existing value is reported in the Congestion Management Process.)
3.1.4	Rate of serious injuries per million vehicle miles	Reduce the crash rate. (Existing value is reported in the Congestion Management Process.)
3.1.5	Number of non-motorized fatalities and non-motorized serious injuries	Reduce the number of non-motorized fatalities and non-motorized serious injuries. (Existing value is reported in the Congestion Management Process.)

Performance Measure		Benchmark
3.1.6	Number of bicycle crashes	Reduce the number of bicycle crashes. (Existing value is reported in the Congestion Management Process.)
3.1.7	Number of pedestrian crashes	Reduce the number of pedestrian crashes. (Existing value is reported in the Congestion Management Process.)

OBJECTIVE 3.2: Reduce fatal crashes for all modes.

Performance Measure		Benchmark
3.2.1	Number of fatalities	Reduce the number of fatalities. (Existing value is reported in the Congestion Management Process.)
3.2.2	Fatality rate per million vehicle miles	Reduce the fatality rate. (Existing value is reported in the Congestion Management Process.)
3.2.3	Number of bicycle fatalities	Reduce the number of bicycle fatalities. (Existing value is reported in the Congestion Management Process.)
3.2.4	Number of pedestrian fatalities	Reduce the number of pedestrian fatalities. (Existing value is reported in the Congestion Management Process.)

OBJECTIVE 3.3: Promote the implementation of safety and security improvements in the design or retrofit of all transportation systems.

Performance Measure		
3.3.1	Implemented safety measures on high-crash corridors identified in the Regional Strategic Safety Plan.	Reported in the Regional Strategic Safety Plan.

Major Emphasis Areas and 4-E Approach

To improve safety within North Florida, several potential strategies and countermeasures are described. The strategies and countermeasures are suggested to help address some of the most serious safety problems within the region.

As contained in the Florida Strategic Highway Safety Plan (SHSP), an emphasis area is an area of opportunity to improve safety through developing strategies using the 4-E's approach. Engineering, enforcement, education and emergency response (the 4-E's) are all important tools for traffic safety. Therefore, the region's strategies and countermeasures identify safe ways to plan and design roadways and communities, enforce traffic laws and regulations and educate the public.

To help focus potential solutions, the strategies described in this report address the following types of crashes: careless driving, distracted driving, intersection, lane departure, motorcyclist, pedestrian and bicyclist and unrestrained occupants. These emphasis areas are emphasized based on crash analysis results, survey results and safety-related legislative priorities of the North Florida TPO (i.e., distracted driving, pedestrian and bicyclist). Table 35 restates crash characteristics for these emphasis areas, sorted alphabetically.

Table 35. Major Emphasis Areas (sorted alphabetically)

Emphasis Area	Total Crashes (rounded)	Percent of the Region's Total Crashes	Percent of the Region's Fatal & Serious Injury Crashes	Percent of the Region's Fatal Crashes	Percent of Crashes Resulting in Death or Injury
Regional Crashes	249,870	100%	2.4%	0.4%	26%
Careless Driving	**69,260**	**28%**	**27%**	6%	32%
Distracted Driving	32,850	13%	14%	5%	31%
Intersection	**71,840**	**29%**	**34%**	**28%**	34%
Lane Departure	**53,210**	**21%**	**26%**	**30%**	22%
Motorcyclist	4,000	2%	15%	17%	**76%**
Pedestrian and Bicyclist	5,950	2%	16%	**31%**	**82%**
Unrestrained Occupant (No seat belt)	5,090	2%	15%	**28%**	**70%**

Sorted by Emphasis Area in alphabetical order, the Top three percentages in each column are shown in bold font, Crashes are rounded to the nearest ten**,** crashes may belong to more than one emphasis area,
Source: *Signal Four Analytics*, ETM

Strategies and Potential Countermeasures

The following strategies and countermeasures (Tables 36-41) represent potential solutions to safety issues within the region. Strategies and countermeasures address safety throughout the four-county region including high-crash corridors and major emphasis areas such as intersection crashes, distracted driving crashes and pedestrian and bicyclist crashes. Technology and maintenance-related solutions are also included.

Each emphasis area includes strategies from the 2016 Florida SHSP as a reference. Other resources used to develop the toolbox include the "Beach Boulevard Pedestrian Safety Campaign Report" (2019); presentations from the "FDOT Vision Zero Long Range Planning Workshop" held in May 2019 in Jacksonville, Florida; National Highway Traffic Safety Administration's (NHTSA) "Countermeasures that Work: Ninth Edition" guide (2017); NHTSA "Fatal Traffic Crash Data" summary (2016); Federal Highway Administration's (FHWA) "Making Our Roads Safer One Countermeasure at a Time" guide, Office of Safety (2017)[17]; and FHWA's "Every Day Counts (EDC-5) Safe Transportation for Every Pedestrian (STEP)".

[17] https://safety.fhwa.dot.gov/provencountermeasures

Strategies and Countermeasures - Careless Driving Crashes

Careless driving is a Florida traffic violation that generally refers to a disregard for traffic rules, lack of proper attention and good judgement and/or not considering the design and use of a road while driving a motor vehicle. Specifically, Florida Statutes (316.1925) state that Careless Driving is: *"(1) Any person operating a vehicle upon the streets or highways within the state shall drive the same in a careful and prudent manner, having regard for the width, grade, curves, corners, traffic, and all other attendant circumstances, so as not to endanger the life, limb, or property of any person. Failure to drive in such manner shall constitute careless driving and a violation of this section. (2) Any person who violates this section shall be cited for a moving violation, punishable as provided in chapter 318."*

Enforcement strategies help deter unsafe driving behaviors and encourage all road users to obey traffic laws and safely share the road. However, enforcement alone will not have a lasting effect. Using enforcement strategies with engineering and education strategies is more comprehensive and more likely to achieve longer term results.

Table 36. Careless Driving Strategies and Countermeasures

Careless Driving	Strategy/Countermeasure	4-E Approach
Engineering, Design and Technology		
Implement Complete Street and context sensitive strategies along corridors and at intersections to mitigate speeding and other potential symptoms of careless driving.		Engineering
Limit traffic conflicts by installing and maintaining geometric, traffic control and lighting improvements. These may include, but may not be limited to, retroreflective backplates, advanced warning flashers (prepare to stop when flashing), speed feedback sign with action message, stop sign flashing beacons, corridor access management and roundabouts.		Engineering
Limit crash severity by installing rumble strips, stripes and flashing beacons with warning signs to mitigate lane or road departures, and other potential symptoms of careless driving.		Engineering
Laws, Licensing and Enforcement		
Develop and/or support high visibility, targeted enforcement activities to increase driver compliance with traffic laws, including speeding and yielding the right of way laws.		Enforcement
Consider coordinating with and/or supporting activities to improve the skill level of drivers through training and/or modifying driver's license requirements.		Enforcement, Education
Education, Communications and Outreach		
Identify factors related to careless driving as part of a targeted safety campaign that could include both enforcement and education concerning the risks related to careless driving. Consider using the CareMore branding (or similar branding) that was utilized in the North Florida TPO's CareMore Argyle and Beach Boulevard Pedestrian Safety Campaigns.		Enforcement, Education
Florida SHSP Strategies - Careless Driving		
Careless driving is not an emphasis area in the Florida SHSP.		Not applicable

Strategies and Potential Countermeasures - Distracted Driving Crashes

Distracted driving may include anything that takes a driver's attention away from driving. Examples of distracted activities while driving are texting or other cell phone use, eating, talking to a passenger, reading, adjusting the radio or temperature controls and being fatigued or drowsy. Distractions may take a driver's eyes off the road (visual), mind off driving (cognitive) and hands off the wheel (manual).

Distracted driving crashes can be difficult to determine because pre-crash distractions may leave no evidence for law enforcement to observe. A study of newly licensed drivers found that novice drivers were eight times more likely to be involved in a crash or near crash when dialing a cell phone and seven times more likely when reaching for a cell phone.

NHTSA documented that human choices are linked to 94% of serious crashes nationwide[18] and has estimated the effectiveness of countermeasures regarding distracted driving[19].

- Graduated driver's license requirements for beginning drivers (effectiveness demonstrated for nighttime and passenger restrictions)
- High-visibility cell phone/text messaging enforcement (effectiveness demonstrated)
- Communications and outreach (effectiveness not determined)

NHTSA also promotes vehicle technologies that hold the potential to reduce crashes, serious injuries and deaths.

[18] National Highway Traffic Safety Administration (NHTSA) "2016 Fatal Traffic Crash Data" summary, https://www.nhtsa.gov/press-releases/usdot-releases-2016-fatal-traffic-crash-data

[19] National Highway Traffic Safety Administration's (NHTSA) "Countermeasures that Work: Eighth Edition" guide, 2015, Chapter 4, 21 – 22.

Table 37. Distracted Driving Strategies and Countermeasures

Distracted Driving	Strategy/Countermeasure	4-E Approach
Engineering, Design and Technology		
Implement safety measures such as rumble strips and stripes, more easily visible road signs, flashing beacons with warning signs, wide and visible edge lines and better lighting at night to mitigate lane departures, speeding and other symptoms of distracted driving.		Engineering
Consider Connected Autonomous Vehicle (CAV) technology. For example, driver alert control technologies may be able to detect driver alertness by monitoring driver performance then alerting the driver.		Engineering
Laws, Licensing and Enforcement		
Support high visibility, targeted enforcement of Florida's new primary Distracted Driving Law.		Enforcement
Consider support of a graduated driver license (GDL) – 3-phase system for beginning/teen drivers (learner's permit, intermediate-provisional license and full license). An intermediate license may allow unsupervised driving under certain conditions such as a limited number of passengers, only daytime driving and restrictions on cell phone use.		Enforcement
Education, Communications and Outreach		
Partner with other agencies or organizations to promote awareness of Florida's new Distracted Driving Law		Education
Partner with other agencies or organizations to promote awareness of distracted driving risks particularly to young drivers, including teens and young adults.		Education
Florida SHSP Strategies - Distracted Driving		
Implement effective roadway design and operation practices such as rumble strips, stripes and flashing beacons with warning signs to mitigate lane departures, speeding, and other symptoms of distracted driving to reduce congestion and improve mobility.		Engineering
Change societal attitudes about distracted driving through intensive public education activities.		Education
Collaborate with other public and private organizations to offer innovative solutions such as policies that prohibit distracted driving when using company or organization vehicles.		Enforcement, Education

Strategies and Countermeasures - Intersection Crashes

Intersections are potential points of conflict in the transportation network. Florida uses Complete Streets and context sensitive design strategies that consider multiple modes of transportation, all user needs and local community context. Roundabouts have been proven to reduce the number of fatal and severe injury crashes by 82% over a stop-controlled intersection and 78% over a signalized intersection[20].

The Federal Highway Administration (FHWA) [21] has documented the following as proven countermeasures.

- Signal backplates with retroreflective borders to enhance traffic signal visibility (15% reduction in total crashes)
- Corridor access management including intersections (5-23% reductions in total crashes along 2-lane rural roads and 25-31% reduction in injury and fatal crashes along urban/suburban arterials)
- Left and right turn lanes at two-way stop-controlled intersections (28-48% reduction in total crashes for left turn lanes and 14-26% reduction in total crashes for right turn lanes
- Reduced left-turn intersections (30% reduction in intersection-related injury crash rate for median U-turn)
- Roundabouts (78-82% reduction in severe crashes depending on the type of intersection)
- Systemic application of multiple low-cost countermeasures such as enhanced signing and pavement markings at many stop-controlled intersections within a jurisdiction to increase driver awareness and recognition of the intersections (10% reduction in injury and fatal crashes and 15% reduction in nighttime crashes)
- Review and update timing policies and procedures concerning yellow change intervals (8-14% reduction in total crashes, 12% reduction in injury crashes and 36-50% reduction in red light running)

[20] 2016 Florida Strategic Highway Safety Plan (SHSP)
[21] Federal Highway Administration's (FHWA) Making Our Roads Safer One Countermeasure at a Time guide, Office of Safety (2017)[21]

Table 38. Intersection Strategies and Countermeasures

Intersection Crashes	Strategy/Countermeasure	4-E Approach
Engineering, Design and Technology		
Work with FDOT, counties and local communities to study, plan for and program the use of Complete Street and context sensitive strategies along corridors and at intersections.		Engineering
Work with FDOT, counties and local communities to limit conflicts by installing geometric, traffic control and lighting improvements. These may include, but are not limited to, reflective backplates, lighting, flashing yellow arrows/signals, advanced warning flashers (prepare to stop when flashing), stop sign flashing beacons, pavement markings, corridor access management and roundabouts.		Engineering
Work with FDOT, counties and local communities to install pedestrian lighting at intersections.		Engineering
Encourage the use of intersection control evaluation (ICE) to limit the number of conflict points, required for new intersections or modifications to existing intersections, and to consider context and the need of all road users.		Engineering
Continue to implement and improve signal optimization initiatives along roadway corridors.		Engineering
Implement Connected Autonomous Vehicle (CAV)/Connected Vehicle (CV) technology as part of Smart North Florida. For example, consider vehicle-to-infrastructure (V2I), CAV/CV applications (signal phase and timing), pedestrian in signalized crosswalk and signal priority.		Engineering
Laws, Licensing and Enforcement		
Support high visibility enforcement of drivers yielding to pedestrians at intersections.		Enforcement
Education, Communications and Outreach		
Partner with other agencies or organizations to educate and promote awareness and the correct use of new and/or underused transportation infrastructure, such as pedestrian push button signals and crosswalks		Education
Florida SHSP Strategies for Intersections		
Reduce the frequency and severity of crashes at intersections by limiting conflicts through geometric, traffic control and lighting improvements		Engineering
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.		Engineering
Use traditional and alternative designs and technologies to reduce conflict risks such as innovative interchange designs, access management, and roundabouts.		Engineering
Improve the awareness and visibility of traffic control devices to allow all users to safely navigate intersections.		Engineering, Education

Strategies and Countermeasures - Lane Departure Crashes

Roadway departure crashes are frequently severe and are non-intersection crashes that occur when a vehicle either crosses the center line, edge line or otherwise leaves the traveled way. Example lane departure conditions include when a vehicle leaves the travel lane by crossing the median into oncoming traffic, improperly passes, runs off the road or travels the wrong way along a ramp or roadway.

The Federal Highway Administration (FHWA)[22] has documented the following as proven countermeasures for road departure crashes.

- Enhanced delineation and friction for horizontal curves
    - Chevron signs (16% reduction in non-intersection fatal and injury crashes and 25% reduction in nighttime crashes)
    - High friction surface treatments (52% reduction in wet road crashes and 24% reduction in curve crashes)
- Longitudinal rumble strips and strips
    - Center line rumble strips (44-64% reduction in head-on, opposite-direction, and sideswipe fatal and injury crashes)
    - Shoulder rumble strips (13-51% reduction in single-vehicle, run-off road fatal and injury crashes)
- Safety Edge$_{SM}$ to eliminate vertical drop-offs at the pavement edge, allowing drifting vehicles to return to the pavement safely (11% reduction in fatal and injury crashes)
- Roadside design improvements at curves involving several treatments that target the high-risk roadside-environment along the outside of horizontal curves
    - Example improvements to provide for a safe recovery: clear zone, slope flattening and adding or widening shoulders (nationwide, 80% of all fatal crashes at curves are roadway departure crashes)
    - Example improvements to reduce crash severity: cable barrier, guardrail and concrete barrier

[22] Federal Highway Administration's (FHWA) "Making Our Roads Safer One Countermeasure at a Time" guide, Office of Safety (2017)[22]

Table 39. Lane Departure Strategies and Countermeasures

Lane Departure Crashes	Strategy/Countermeasure	4-E Approach
Engineering, Design and Technology		
Work with FDOT, counties and local communities to study, plan for and program the use of appropriate safety countermeasures such as roadside design improvements at curves, median barriers, chevrons, advisory speed limit signs, high-friction surface treatment, rumble strips and wrong-way driving countermeasures at ramps such as red rectangular rapid flashing beacons (RRFB) and LED highlighted signs.		Engineering
Consider Connected Vehicle (CV) technology as part of Smart North Florida. For example, the Tampa Hillsborough Expressway Authority (THEA) has a CV pilot project that includes a wrong way entry application to warn drivers of potential and actual wrong way travel, sending alerts to upstream drivers if no corrective action is taken.		Engineering
Laws, Licensing and Enforcement		
Targeted, high visibility enforcement on driver risk factors that can cause a lane departure crash such as speeding, distracted driving, or impaired driving.		Enforcement
Education, Communications and Outreach		
Targeted, high visibility education on driver risk factors that can cause a lane departure crash such as speeding, distracted driving, or impaired driving.		Education
Florida SHSP Strategies - Lane Departures		
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.		Engineering
Investigate and implement new and innovative countermeasures including best practices used by other jurisdictions.		Not specific
Focus enforcement and education efforts on driver risk factors that can cause a lane departure crash such as speeding, distracted driving, or impaired driving.		Enforcement, Education
Support efforts by MPOs and local governments to address safety on local and regional roads.		Not specific

Strategies and Countermeasures - Motorcyclist Crashes

Like pedestrians and bicycle riders, motorcyclists are very vulnerable to serious injuries and fatalities resulting from crashes as the motorcycle offers little protection in a crash. NHTSA research using 2015 crash data states that, nationwide, speeding is more prevalent in fatal crashes involving motorcycle operators than among other types of motor vehicle operators. Additionally, over one-quarter of the motorcycle riders involved in crashes in 2015 did not have valid motorcycle operator licenses. Another trend is the increased use of low-powered cycles such as mopeds, electric-assist bicycles and scooters. NHTSA states that while "countermeasures aimed at motorcyclists are likely to also apply to low-powered cycles…low-powered cycles may face different safety problems than motorcycle riders".

NHTSA has documented the effectiveness of countermeasures aimed at motorcyclists.[23] The most effective countermeasures cited were:

- universal coverage state motorcycle helmet use laws ("demonstrated to be effective by several high-quality evaluations with consistent results") and
- detection, enforcement and sanctions for alcohol-impaired motorcyclists ("likely to be effective based on balance of evidence from high-quality evaluations or other sources").

The effectiveness for licensing and training, helmet promotion/enforcement programs and various types of communications and outreach programs for motorcyclists were cited as being either "undetermined" or "limited/no high-quality evaluation evidence". According to NHTSA research, the problem of alcohol impairment is substantial for motorcyclists, more than for drivers of other motor vehicles.

[23] National Highway Traffic Safety Administration's (NHTSA) Countermeasures that Work: Ninth Edition guide, 2017, Motorcycle Safety Countermeasures (5-5 to 5-20)

Table 40. Motorcyclist Strategies and Countermeasures

Motorcyclist Crashes	Strategy/Countermeasure	4-E Approach
Engineering, Design and Technology		
Consider the unique vulnerabilities and characteristics of motorcycles when designing and improving the transportation infrastructure.		Engineering
Laws, Licensing and Enforcement		
Consider support of high visibility enforcement (such as sobriety checkpoints/patrols), coupled with education. Use officers trained in identifying impaired motorcycle riders and other motor vehicle drivers. Promote sanctions that could include vehicle impoundment or forfeiture.		Enforcement, Education
Consider coordination with and/or support of activities to improve the skill levels of motorcyclists through increased participation in rider education programs and proper license endorsements.		Enforcement, Education
Education, Communications and Outreach		
Coordinate with and support activities to promote the safe operation of motorcycles, including sharing the road, responsible riding (including no alcohol impairment) and the use of personal gear such as helmets. For example, coordinate with FDOT's Motorcycle Safety Coalition and Program that provides education and support for motorcycle riders, trainers, sponsors, local government, law enforcement agencies and emergency services throughout Florida.		Education
Florida SHSP Strategies for Motorcycle Crashes		
Improve the skill levels of motorcyclists through increased participation in rider education programs and proper license endorsements.		Enforcement, Education
Promote the safe operation of motorcycles, including sharing the road, responsible riding and the use of personal safety gear.		Education
Consider the unique vulnerabilities and characteristics of motorcycles when designing and improving the transportation infrastructure.		Engineering

Strategies and Countermeasures – Pedestrian and Bicyclist Crashes

Pedestrian and bicyclist crashes within the five-year period of 2014 through 2018 represent 31% of the region's fatal crashes; the highest percentage of 13 emphasis areas. And of the region's total pedestrian and bicyclist crashes during the analysis period, 82% resulted in death or injury; again, the highest percentage of the region's 13 analysis areas. Since the region's last safety plan in 2012, the North Florida TPO has implemented successful safety campaigns focused on reducing pedestrian and bicyclist crashes. Recommendations from the 2018 Beach Boulevard Pedestrian Safety Campaign focus on improving crosswalks and pedestrian signal displays on traffic signals; future studies to improve safety along the corridor (a feasibility study of leading pedestrian intervals and a complete street corridor study); continued stakeholder coordination and education; and regular, on-going maintenance of existing roadway infrastructure.

According to Florida's SHSP, Florida has made several changes to reduce pedestrian and bicyclist crashes, deaths and injuries. These include a statewide Complete Streets Policy and Implementation Plan, an intersection lighting plan, updated design guidance [Complete Streets Policy and Handbook], a comprehensive communications plan, high-visibility enforcement efforts, a strong emphasis on pedestrian and bicyclist safety in driver education, revisions to Florida's Driver Handbook and driver license exam, and improved emergency response to victims of traffic crashes.

The Federal Highway Administration (FHWA), [24] and the Florida State Transportation Innovation Council[25] have documented the following as proven countermeasures for pedestrian and bicyclist crashes.

- Leading pedestrian interval (60% reduction in pedestrian-vehicle crashes at intersections and particularly beneficial at intersections with high left-turning volumes)
- Medians and pedestrian-crossing islands in urban and suburban areas (raised median has a 46% reduction in pedestrian crashes; pedestrian crossing island has a 32-56% reduction in pedestrian crashes)
- Pedestrian hybrid beacons (69% reduction in pedestrian crashes, 29% reduction in total crashes, 15% reduction in serious and fatal crashes)
- Rectangular Rapid Flashing Beacon at uncontrolled, marked crosswalks (47% reduction in pedestrian crashes)

[24] Federal Highway Administration's (FHWA) "Making Our Roads Safer One Countermeasure at a Time" guide, Office of Safety (2017)[24] and "Safe Transportation for Every Pedestrian" (STEP), EDC-4 Countermeasure Tech Sheets, FHWA, 2018

[25] Florida State Transportation Innovation Council (STIC) presentation to the Florida MPO Advisory Council, November 1, 2018

- Road diet (a 19-47% reduction in total crashes with 4-lane to 3-lane road diet conversions)
- Raised crosswalks or raised intersections (45% reduction in pedestrian crashes)
- Crosswalk visibility enhancements (23-48% reduction in traffic crashes)
- Sidewalks (65-89% reduction in crashes involving pedestrians walking along roadways)
- Paved shoulders (71% reductions in crashes involving pedestrians walking along roadways)

A leading pedestrian interval gives pedestrians the opportunity to begin walking across an intersection (and establish their presence in the crosswalk) three to seven seconds before the traffic signal turns green for vehicles. Pedestrian hybrid beacons are traffic control devices designed to help people safely cross busy or higher-speed roadways at midblock crossings and uncontrolled intersections. A road diet typically involves converting an existing four-lane undivided roadway to a three-lane roadway consisting of two through lanes and a center two-way left-turn lane.

NHTSA has documented the effectiveness of countermeasures aimed at pedestrians and bicyclists.[26] Studies have provided evidence of the role of the transportation environment in pedestrian safety. Complete Streets policies are examples of low-cost and impactful countermeasures. The countermeasures cited in the report generally focused on education, training, licensing and/or enforcement rather than engineering countermeasures. The most effective pedestrian countermeasures cited were:

- Pedestrian safety zones/target resources to problem areas, for all pedestrians ("demonstrated to be effective in certain situations")
- Reduce and enforce speed limits, for all pedestrians ("Likely to be effective")
- Conspicuity enhancement/increase opportunity for drivers to see and avoid pedestrians, ("Likely to be effective")
- Enforcement strategies, for all pedestrians ("Likely to be effective")
- Elementary-age child pedestrian training ("Likely to be effective")
- Safe routes to school ("Likely to be effective")

Children's safety clubs and child supervision for preschool-age children, child school bus training for school-age children, communications and outreach addressing impaired pedestrians, sweeper patrols of impaired pedestrians, driver training for pedestrians, pedestrian gap-acceptance training for pedestrians and university educational campaign for pedestrians were cited as being either "undetermined" or "limited/no high-quality evaluation evidence".

[26] NHTSA "Countermeasures that Work: Ninth Edition" guide, 2017, Pedestrian Safety Countermeasures (8-14 to 8-41), Bicycle Safety Countermeasures (9-11 to 9-36)

The most effective bicyclist countermeasures cited were:

- Bicyclist helmet laws for children (“effective”)
- Bicyclist helmet laws for adults (“effective”)
- Safe Routes to School (“promising, and likely to be effective”)
- Active lighting and rider conspicuity, for all bicyclists (“promising, and likely to be effective”)

Several potential countermeasures for bicyclists were cited as being either “undetermined” or “limited/no high-quality evaluation evidence”. These include:

- Education for adult cyclists
- Promoting bicyclist helmet use with education for all bicyclists
- Implementing enforcement strategies for all bicyclists
- Motorist passing bicyclist laws
- Driver training and share the road awareness for drivers and bicyclists

Table 41. Pedestrian and Bicyclist Strategies and Countermeasures

Pedestrian/Bicyclist Crashes	Strategy/Countermeasure	4-E Approach
Engineering, Design and Technology		
Work with FDOT, counties and local communities to study, develop policies and plan for the use of Complete Street and context sensitive strategies along corridors and at intersections that focus on safe streets for all users.		Engineering/ Planning
Work with FDOT, counties and local communities to limit pedestrian and bicyclist conflicts by installing geometric, traffic control and pedestrian lighting improvements. These may include, but are not limited to, crosswalks, crosswalk visibility enhancements, raised crosswalks, pedestrian bulb outs, pedestrian countdown signals, extended walk times in areas with high walk rates, leading pedestrian intervals, medians and pedestrian crossing islands in urban and suburban areas, pedestrian hybrid beacons, Rectangular Rapid Flashing Beacons, road diets, sidewalks/walkways, paved shoulders, separated/protected bike lanes, buffered bike lanes and off-road trails or shared use paths.		Engineering
Implement regular maintenance of marked roadway lines, including crosswalks, pedestrian signals and other critical infrastructure.		Engineering, Maintenance
Carefully integrate Connected Autonomous Vehicle (CAV)/Connected Vehicle (CV) technology to help motor vehicles detect and avoid pedestrian and other vulnerable road users, as part of Smart North Florida.		Engineering
Laws, Licensing and Enforcement		
Support high visibility and targeted enforcement strategies to increase compliance with traffic laws, particularly of drivers not yielding to pedestrians in marked crosswalks and drivers speeding through high pedestrian crash and/or high walk rate areas.		Enforcement
Include pedestrian and bicyclist information in driver's training. Consider the need for revised licensing policies related to license renewal, testing and training curriculum.		Enforcement/ Licensing
Education, Communications and Outreach		
Complete pedestrian road safety audits (or similar type of review) as part of targeted safety education and outreach along with television, website and social media PSAs with video showing what pedestrians endure.		Education and Engineering
Educate and promote awareness and correct use of new, underused and/or mis-used transportation infrastructure, such as pedestrian push button signals and pedestrian crosswalks. Communication and outreach may be aimed at pedestrians, bicyclists and/or drivers to increase traffic law compliance by all three groups.		Education
Learn from and consider partnering with Florida's Pedestrian Safety Coalition and safety initiatives such as Florida's Pedestrian and Bicycling Safety Resource Center. The center provides educational materials, information and critical safety equipment such as bicyclist helmets across the state.		Education
Traffic Data and Information Systems		
Implement a new, annual pedestrian and bicyclist count program, collecting counts at strategic locations within the region, to establish crash rates.		All

Pedestrian/Bicyclist Crashes	Strategy/Countermeasure	4-E Approach
Florida SHSP Strategies for Pedestrian and Bicyclist Crashes		
	Increase awareness and understanding of safety issues and compliance with traffic laws and regulations related to pedestrians and bicyclists.	Education, Enforcement
	Develop and use a systematic approach to identify locations and behaviors prone to pedestrian and bicyclist crashes and implement multi-disciplinary countermeasures.	Engineering
	Create urban and rural built environments to support and encourage safe bicycling and walking.	Engineering
	Support national, state, and local initiatives and policies that promote bicyclist and pedestrian safety.	Education

In summary, the previous strategies and countermeasures are suggested as potential solutions to critical safety issues within the region. The intent is that the strategies and countermeasures address safety throughout the four-county region including high-crash corridors and the region's major emphasis areas (careless driving, distracted driving, intersection, lane departure, motorcyclist, pedestrian and bicyclist and unrestrained occupant). The potential solutions identify ways to plan and design roadways and communities, enforce traffic laws and regulations, and educate and encourage the public.

5 –Next Steps

Determine Strategies/Countermeasures for Priority Corridors and Emphasis Areas – Identify detailed crash characteristics and appropriate strategies and countermeasures for priority, high-crash corridors and intersections. Consider Complete Streets corridor studies for some of the corridors. Also, identify high-risk roadway features and low-cost treatments for priority emphasis areas. Determine if solutions can be achieved, and funds leveraged, as part of programmed or planned transportation projects.

Coordinate with Stakeholders to Develop More Comprehensive Solutions - The implementation of strategies and countermeasures will require continued coordination with FDOT, the Jacksonville Transportation Authority and other transit operators, counties, local governments, law enforcement and other stakeholders. Consider convening a multi-agency collaborative stakeholder group to assist with prioritizing high-crash corridors and emphasis areas, selecting appropriate strategies/countermeasures for corridors/intersections and emphasis areas, and identifying funding sources. The stakeholder group can also assist with influencing safety-related policy and legislation and communicating the value and contribution of safety planning.

Develop a Pedestrian and Bicyclist Count Program – As listed in Table 41, Pedestrian and Bicyclist Strategies and Countermeasures, implement a new, annual pedestrian and bicyclist count program, collecting counts at strategic locations within the region. The purpose is to allow establishment of accurate pedestrian and bicyclist crash rates and to identify trends in usage. Consider count locations along the list of pedestrian-bicyclist crash corridors, near high-ridership bus stops and pedestrian generators/activity-centers, and before/after pedestrian-bicyclist-related projects.

Improve Crash Data – Coordinate with FDOT, law enforcement and other stakeholders to improve the accuracy of crash data. Crashes are often coded to parking lots or other locations that represent the location of the officer when completing the report, not the crash location. Accurate geographic coding of crash data is critical for improved data-driven, GIS analyses.

Appendix F contains safety tools and resource information, including safety funding sources, presented at the FDOT District 2 Local Government Transportation Summit (November 14, 2018).

Appendices

Appendix A - TPO Safety Performance Targets

North Florida TPO
Transportation Planning Organization
PLAN • FUND • MOBILIZE

RESOLUTION 2019-7
ADOPTING SAFETY PERFORMANCE TARGETS

WHEREAS, as required by 23 CFR 490, for Calendar Year 2020 the Florida Department of Transportation has adopted aspirational targets for number of *fatalities*, *number of serious injuries*, *fatality rate*, *serious injury rate*, *total number of non-motorized fatalities* and *serious injuries*; and

WHEREAS, the North Florida Transportation Planning Organization is also required to adopt annual performance targets for these measures;

NOW, THEREFORE, BE IT RESOLVED THAT the North Florida TPO adopts the Florida Department of Transportation performance targets as follows:

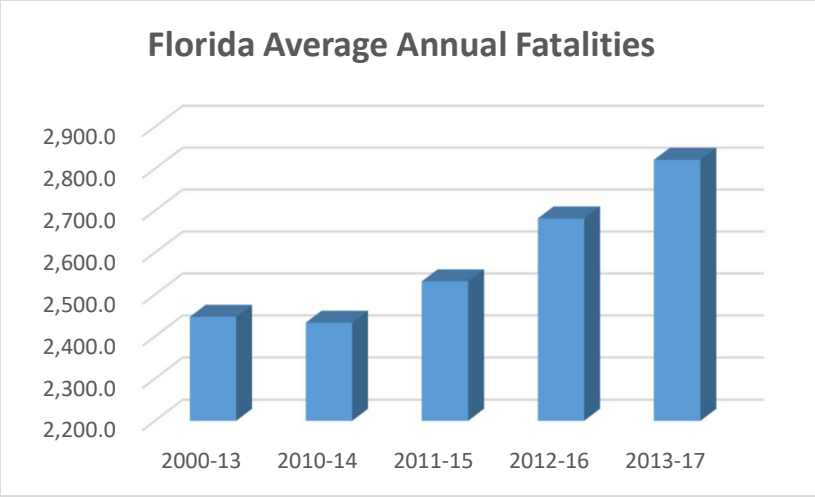
National Performance Measures to Assess Safety	
FHWA Performance Measure	**FDOT 2019 Target**
Number of Fatalities	0
Number of Serious Injuries	0
Fatality Rate	0
Serious Injury Rate	0
Total Number of Non-Motorized Fatalities and Serious Injuries	0

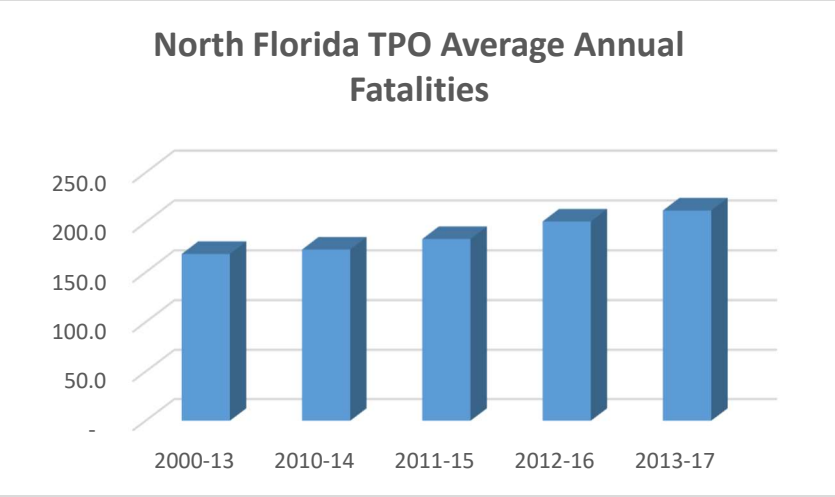
Adopted by the North Florida Transportation Planning Organization in regular meeting assembled in the City of Jacksonville the 10th day of October 2019.

ATTEST:

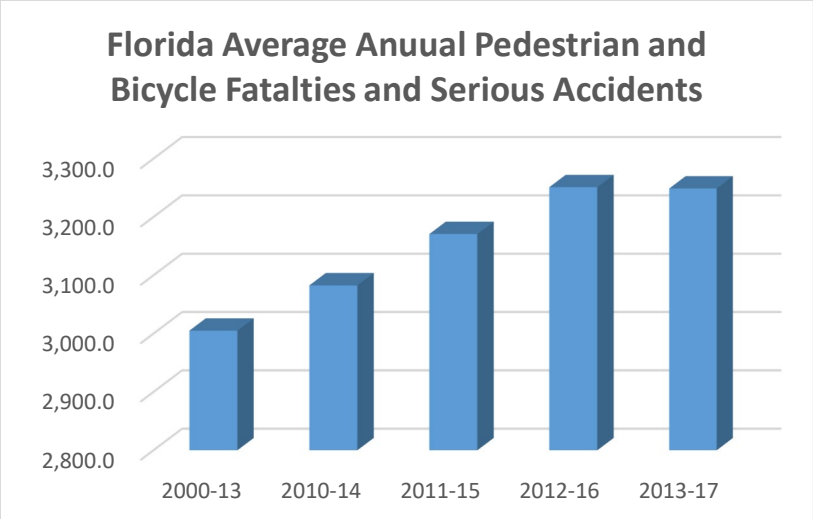
The Honorable Danny Leeper, Chairman

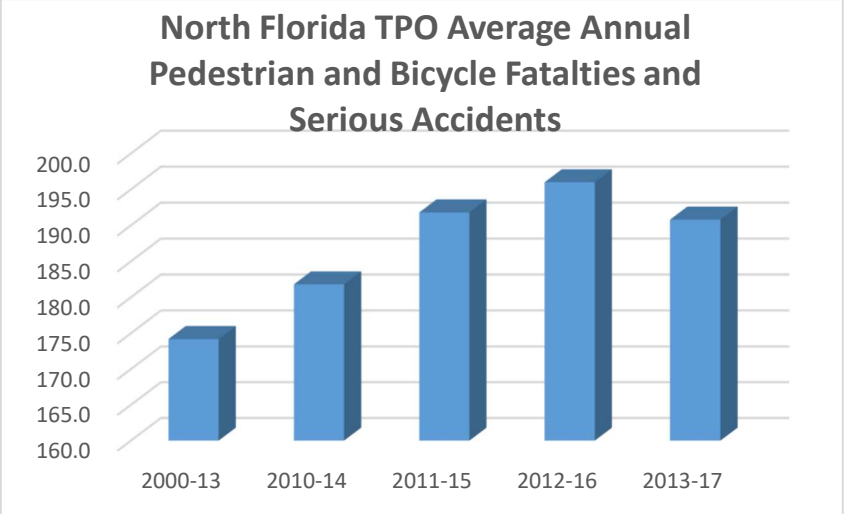
Jeff Sheffield, Executive Director





Fatal Crashes 2000-2017





Florida Department of Transportation Safety Performance Data 2000-2017

STATE OF FLORIDA

	Average Annual Fatalities	% Change	Average Annual Fatality Rates	% Change	Average Annual Serious Injuries	% Change	Average Annual Serious Injury Rate	% Change	Average Anuual Pedestrian and Bicycle Fatalties and Serious Accidents	% Change
2000-13	2,446.6		1.256		20,889.6		10.718		3,005.2	
2010-14	2,432.8	-0.6	1.243	-1	20,519.0	**-1.8**	10.481	-2.2	3,082.8	2.6
2011-15	2,531.2	4	1.277	2.7	20,504.2	-0.1	10.357	-1.2	3,170.8	2.9
2012-16	2,681.4	5.9	1.328	4	20,830.6	1.6	10.348	-0.1	3,251.2	2.5
2013-17	2,821.0	5.2	1.360	2.4	20,910.0	0.4	10.122	-2.2	3,249.0	-0.1

NORTH FLORIDA TPO

2000-13	168.4		1.112		1,261.0		8.329		174.2	
2010-14	172.8	2.6	1.136	2.2	1,299.2	3.0	8.547	2.6	181.8	4.4
2011-15	183.4	6.1	1.188	4.6	1,341.2	3.2	8.716	2	191.8	5.5
2012-16	201.0	9.6	1.269	6.8	1,371.2	2.2	8.728	0.1	196.0	2.2
2013-17	212.0	5.5	1.301	2.5	1,328.8	-3.1	8.226	-5.8	190.8	-2.7

Appendix B -

North Florida TPO, Regional Strategic Safety Plan Update - Survey Questions

Q1	What is your five-digit zip code?
Q2	On the map below, mark up to three locations where you feel there is a traffic safety issue and explain.
Q3	What do you think are the biggest traffic safety problems? Ten behaviors that make traveling less safe are listed below. Select the top three that you think are the biggest problems.
Q4	What types of strategies are needed to improve traffic safety? Four general traffic safety improvement categories are listed below. Click on, drag and drop these items to rank them starting with the most needed at the top to the least needed at the bottom.
Q5	In general, how helpful would the following steps be in making travel safer for pedestrians?
Q6	If you marked any steps as very or extremely helpful in the previous question *(peds)*, please add a point on the map to show the one most critical place where it is needed and describe in the comment box.
Q7	In general, how helpful would the following steps be in making travel safer for bicyclists?
Q8	If you marked any steps in the previous question *(bike)* as very or extremely helpful, please add a point on the map to show the one most critical place where it is needed and describe in the comment box.
Q9	In general, how helpful would the following steps be in making travel safer for drivers?
Q10	If you marked any steps as very or extremely helpful in the previous question *(driver)*, please add a point on the map to show the one most critical place where it is needed and describe in the comment box.
Q11	If additional funding were available, which audience would benefit the most from traffic safety education? (**select only one**)
Q12	If additional funding were available for traffic safety enforcement, which of the following problem behaviors should be targeted? (**select only one**)
Q13	Technology to improve traffic safety is being developed as part of the Smart North Florida movement. This will include things like pedestrian sensors in streetlights, signal timing coordination and rail crossing notification. What are your thoughts about using technology to improve traffic safety?
Q14	How do you most often travel locally?
Q15	Please provide any additional final comments or suggestions related to traffic safety.
Q16	Please provide your contact information below if you would like to participate in the gift card drawing or wish to receive follow-up information about the survey.
Q17	The following questions are optional and help us target our outreach and education efforts. What is your age?
Q18	What is your race/ethnicity?
Q19	What is your highest formal education level?

Appendix C -

Accompanying Crash Tables and Maps

North Florida Trends: Population, VMT, Traffic Crashes and Crash Rates (2014 – 2018)

North Florida Region	2014	2015	2016	2017	2018	Percent Change (2014 - 2018)
Total Population	1,392,034	1,418,622	1,450,275	1,476,697	1,506,346	8.2%
Total Crashes	46,222	47,748	50,564	51,898	53,441	15.6%
Total VMT	48,377,854	49,007,440	49,581,045	50,208,716	50,789,331	5.0%
Crashes/Million VMT	2.62	2.67	2.79	2.83	2.88	10.1%
Crashes/100,000 people	3,320	3,366	3,487	3,514	3,548	6.8%

Clay County	2014	2015	2016	2017	2018	Percent Change (2014 - 2018)
Total Population	199,798	202,529	208,311	212,230	216,072	8.1%
Total Crashes	5,183	6,016	6,546	5,932	5,496	6.0%
Total VMT	5,374,655	5,459,826	5,549,265	5,653,164	5,743,258	6.9%
Crashes/Million VMT	2.64	3.02	3.23	2.87	2.62	-0.8%
Crashes/100,000 people	2,594	2,970	3,142	2,795	2,544	-1.9%

Duval County	2014	2015	2016	2017	2018	Percent Change (2014 - 2018)
Total Population	897,698	911,626	926,255	937,934	950,181	5.8%
Total Crashes	34,157	33,733	35,539	37,561	39,230	14.9%
Total VMT	32,254,965	32,587,946	32,875,886	33,193,070	33,477,848	3.8%
Crashes/Million VMT	2.90	2.84	2.96	3.10	3.21	10.7%
Crashes/100,000 people	3,805	3,700	3,837	4,005	4,129	8.5%

Nassau County	2014	2015	2016	2017	2018	Percent Change (2014 - 2018)
Total Population	76,619	77,891	80,622	82,721	85,832	12.0%
Total Crashes	1,435	1,702	1,837	1,731	1,943	35.4%
Total VMT	3,082,141	3,117,283	3,147,559	3,183,563	3,216,311	4.4%
Crashes/Million VMT	1.28	1.50	1.60	1.49	1.66	29.8%
Crashes/100,000 people	1,873	2,185	2,279	2,093	2,264	20.9%

St. Johns County	2014	2015	2016	2017	2018	Percent Change (2014 - 2018)
Total Population	217,919	226,576	235,087	243,812	254,261	16.7%
Total Crashes	5,447	6,297	6,642	6,674	6,772	24.3%
Total VMT	7,666,092	7,842,385	8,008,335	8,178,920	8,351,915	8.9%
Crashes/Million VMT	1.95	2.20	2.27	2.24	2.22	14.1%
Crashes/100,000 people	2,500	2,779	2,825	2,737	2,663	6.6%

Source: US Census Bureau State & County Quick Facts (population), *Signal Four Analytics* (crashes), NERPM-AB 1v3 (VMT)

Annual Crashes by County (2014 - 2018)

Total Crashes	2014	2015	2016	2017	2018	Total	Percent Change (2014-2018)
TPO Region	46,222	47,748	50,564	51,898	53,441	249,873	15.6%
Clay	5,183	6,016	6,546	5,932	5,496	29,173	6.0%
Duval	34,157	33,733	35,539	37,561	39,230	180,220	14.9%
Nassau	1,435	1,702	1,837	1,731	1,943	8,648	35.4%
St. Johns	5,447	6,297	6,642	6,674	6,772	31,832	24.3%

Fatal & Serious Injury Crashes	2014	2015	2016	2017	2018	Total	Percent Change (2014-2018)
TPO Region	1,289	1,298	1,207	1,175	907	5,876	-29.6%
Clay	94	106	89	98	81	468	-13.8%
Duval	972	921	882	864	615	4,254	-36.7%
Nassau	57	76	85	80	98	396	71.9%
St. Johns	166	195	151	133	113	758	-31.9%

Serious Injury Crashes	2014	2015	2016	2017	2018	Total	Percent Change (2014-2018)
TPO Region	1,107	1,093	978	948	723	4,849	-34.7%
Clay	77	76	64	78	61	356	-20.8%
Duval	859	796	733	716	495	3,599	-42.4%
Nassau	40	62	65	62	80	309	100.0%
St. Johns	131	159	116	92	87	585	-33.6%

Fatal Crashes	2014	2015	2016	2017	2018	Total	Percent Change (2014-2018)
TPO Region	182	205	229	227	184	1,027	1.1%
Clay	17	30	25	20	20	112	17.6%
Duval	113	125	149	148	120	655	6.2%
Nassau	17	14	20	18	18	87	5.9%
St. Johns	35	36	35	41	26	173	-25.7%

Source: *Signal Four Analytics*, 2014-2018

Crash Severity by County, 5-Year Total (2014 – 2018)

Crash Type	PDO Crashes	Injury Crashes	Fatal Crashes	Total
TPO Region	185,935	62,911	1,027	249,873
Clay County	23,078	5,983	112	29,173
Duval County	131,725	47,840	655	180,220
Nassau County	6,194	2,367	87	8,648
St. Johns	24,938	6,721	173	31,832

Crash Type	PDO Crashes	Injury Crashes	Fatal Crashes	Total
Clay County	79.1%	20.5%	0.4%	100.0%
Duval County	73.1%	26.5%	0.4%	100.0%
Nassau County	71.6%	27.4%	1.0%	100.0%
St. Johns	78.3%	21.1%	0.5%	100.0%

Crash Type	PDO Crashes	Injury Crashes	Fatal Crashes	Total Crashes
TPO Region	100.0%	100.0%	100.0%	100.0%
Clay County	12.4%	9.5%	10.9%	11.7%
Duval County	70.8%	76.0%	63.8%	72.1%
Nassau County	3.3%	3.8%	8.5%	3.5%
St. Johns	13.4%	10.7%	16.8%	12.7%

Source: *Signal Four Analytics*, 2014-2018

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Annual Emphasis Area Crashes (2014 – 2018) - North Florida TPO Region

Emphasis Area	2014			2015			2016			2017			2018		
	Serious	Fatal	Total	Serious	Fatal	Total	Serious	Fatal	Total	Serious	Fatal	Total	Serious	Fatal	Total
Aggressive Driving	153	9	3063	134	19	2889	128	13	2842	76	9	2843	52	6	2876
Aging Drivers	179	30	7096	173	33	7252	153	44	7745	144	49	8306	108	33	9013
Careless Driving	343	14	13661	338	11	14342	304	17	13969	301	14	14190	218	5	13098
Commercial Motor Vehicle	48	16	1924	50	24	2317	49	19	2596	50	19	2648	43	23	2640
Distracted Driving	158	8	6369	183	16	6324	159	14	6632	155	12	6818	122	6	6708
Impaired Driving	126	46	1558	94	49	1627	90	57	1630	86	55	1514	71	43	1506
Intersection	398	48	12642	412	59	12966	372	62	15230	281	64	15588	245	56	15414
Lane Departure	268	57	9399	264	52	10196	242	69	10992	255	67	10999	190	59	11621
Motorcyclist	150	31	769	147	42	834	152	35	884	139	38	797	102	29	714
Pedestrian and Bicyclist	135	61	1147	135	60	1181	113	68	1186	122	64	1253	125	62	1183
Speeding	0	0	55	0	0	66	0	1	60	0	0	62	0	2	54
Teen Driver	116	19	5807	110	18	6188	118	21	6394	116	25	6588	81	18	6737
Unrestrained Occupant	132	53	1157	124	53	1239	129	74	1217	107	49	806	88	60	671
Work Zone	21	4	575	28	7	910	19	5	1162	34	8	1378	34	3	1264
ALL CRASHES	1107	182	46222	1093	205	47748	978	229	50564	948	227	51898	723	184	53441

Source: *Signal Four Analytics*, 2014-2018
Sorted alphabetically by Emphasis Area

Five-Year Emphasis Area Crashes (2014 – 2018) - North Florida TPO Region

Emphasis Area	PDO	%	All Injury	%	Serious	%	Fatal	%	Injury and Fatal	%	Total	%
Aggressive Driving	8180	4%	6277	10%	543	11%	56	5%	6333	44%	14513	6%
Aging Drivers	28584	15%	10639	17%	757	16%	189	18%	10828	27%	39412	16%
Careless Driving	46816	25%	22383	36%	1504	31%	61	6%	22444	32%	69260	28%
Commercial Motor Vehicle	9846	5%	2178	3%	240	5%	101	10%	2279	19%	12125	5%
Distracted Driving	22515	12%	10280	16%	777	16%	56	5%	10336	31%	32851	13%
Impaired Driving	4436	2%	3149	5%	467	10%	250	24%	3399	43%	7835	3%
Intersection	47463	26%	24088	38%	1708	35%	289	28%	24377	34%	71840	29%
Lane Departure	41766	22%	11137	18%	1219	25%	304	30%	11441	22%	53207	21%
Motorcyclist	942	1%	2881	5%	690	14%	175	17%	3056	76%	3998	2%
Pedestrian and Bicyclist	1093	1%	4542	7%	630	13%	315	31%	4857	82%	5950	2%
Speeding	195	0%	99	0%	0	0%	3	0%	102	34%	297	0%
Teen Driver	23121	12%	8492	13%	541	11%	101	10%	8593	27%	31714	13%
Unrestrained Occupant	1549	1%	3252	5%	580	12%	289	28%	3541	70%	5090	2%
Work Zone	3779	2%	1483	2%	136	3%	27	3%	1510	29%	5289	2%
ALL CRASHES	185935		62911		4849		1027		63938	26%	249873	

Source: *Signal Four Analytics*, 2014-2018
Sorted alphabetically by Emphasis Area

Annual Emphasis Area Crashes (2014 – 2018) - Clay County

Emphasis Area	2014			2015			2016			2017			2018		
	Serious	Fatal	Total	Serious	Fatal	Total	Serious	Fatal	Total	Serious	Fatal	Total	Serious	Fatal	Total
Aggressive Driving	8	1	227	7	3	309	10	2	341	11	1	256	7	2	229
Aging Drivers	15	2	918	15	7	1132	8	5	1198	13	5	1110	6	1	1073
Careless Driving	21	2	792	13	1	804	14	0	854	9	0	725	9	2	819
Commercial Motor Vehicle	2	0	144	1	4	145	1	3	173	2	2	190	2	1	169
Distracted Driving	10	0	508	18	7	572	11	0	887	12	1	809	15	2	614
Impaired Driving	17	4	188	10	9	228	14	8	173	6	7	162	13	5	138
Intersection	26	4	1189	42	9	1532	28	8	2290	29	3	1681	17	9	1345
Lane Departure	20	5	652	15	10	1126	23	8	1269	14	6	960	13	3	1083
Motorcyclist	18	4	101	13	6	105	15	7	111	12	3	86	6	3	73
Pedestrian and Bicyclist	9	9	150	14	2	123	9	5	129	20	2	136	13	8	133
Speeding	0	0	1	0	0	5	0	0	3	0	0	3	0	1	1
Teen Driver	6	4	953	11	2	1040	11	2	1124	15	1	1053	12	1	954
Unrestrained Occupant	12	6	96	15	11	115	13	10	122	15	3	83	7	5	71
Work Zone	1	0	42	2	2	53	1	1	123	0	0	103	3	0	53
ALL CRASHES	77	17	5183	76	30	6016	64	25	6546	78	20	5932	61	20	5496

Source: *Signal Four Analytics*, 2014-2018
Sorted alphabetically by Emphasis Area

Five-Year Emphasis Area Crashes (2014 – 2018) - Clay County

Emphasis Area	PDO	%	All Injury	%	Serious	%	Fatal	%	Injury and Fatal	%	Total	%
Aggressive Driving	787	3%	566	9%	43	12%	9	8%	575	42%	1362	5%
Aging Drivers	4172	18%	1239	21%	57	16%	20	18%	1259	23%	5431	19%
Careless Driving	2703	12%	1286	21%	66	19%	5	4%	1291	32%	3994	14%
Commercial Motor Vehicle	649	3%	162	3%	8	2%	10	9%	172	21%	821	3%
Distracted Driving	2186	9%	1194	20%	66	19%	10	9%	1204	36%	3390	12%
Impaired Driving	504	2%	352	6%	60	17%	33	29%	385	43%	889	3%
Intersection	5303	23%	2701	45%	142	40%	33	29%	2734	34%	8037	28%
Lane Departure	4143	18%	915	15%	85	24%	32	29%	947	19%	5090	17%
Motorcyclist	125	1%	328	5%	64	18%	23	21%	351	74%	476	2%
Pedestrian and Bicyclist	150	1%	495	8%	65	18%	26	23%	521	78%	671	2%
Speeding	10	0%	2	0%	0	0%	1	1%	3	23%	13	0%
Teen Driver	4066	18%	1048	18%	55	15%	10	9%	1058	21%	5124	18%
Unrestrained Occupant	90	0%	362	6%	62	17%	35	31%	397	82%	487	2%
Work Zone	256	1%	115	2%	7	2%	3	3%	118	32%	374	1%
ALL CRASHES	23078		5983		356		112		6095	21%	29173	

Source: *Signal Four Analytics*, 2014-2018
Sorted alphabetically by Emphasis Area

Annual Emphasis Area Crashes (2014 – 2018) - Duval County

Emphasis Area	2014			2015			2016			2017			2018		
	Serious	Fatal	Total	Serious	Fatal	Total	Serious	Fatal	Total	Serious	Fatal	Total	Serious	Fatal	Total
Aggressive Driving	127	5	2460	102	8	2101	88	10	2000	45	6	2123	27	1	2208
Aging Drivers	132	14	4771	118	14	4556	107	28	4754	99	30	5350	80	25	5992
Careless Driving	274	7	10957	249	6	11413	243	13	10988	251	8	11449	164	2	10494
Commercial Motor Vehicle	33	5	1385	31	14	1717	31	10	1949	34	12	1946	26	17	1952
Distracted Driving	121	5	4819	130	5	4422	111	11	4229	117	8	4518	76	3	4464
Impaired Driving	86	30	1074	55	27	1082	62	37	1157	64	34	1053	42	22	1053
Intersection	320	32	9298	286	33	8893	290	38	10186	198	48	11116	166	35	11132
Lane Departure	205	40	7367	190	29	7455	172	40	8096	203	45	8310	137	41	8765
Motorcyclist	97	20	514	99	24	558	107	26	600	104	24	556	68	19	506
Pedestrian and Bicyclist	101	36	817	97	42	871	83	47	866	79	48	896	83	43	856
Speeding	0	0	43	0	0	48	0	1	52	0	0	50	0	0	42
Teen Driver	93	12	3833	74	13	3924	78	12	3999	79	17	4212	52	14	4377
Unrestrained Occupant	94	36	884	76	33	923	90	43	906	71	29	581	53	37	463
Work Zone	13	4	440	21	4	735	16	2	886	30	7	1021	25	3	928
ALL CRASHES	859	113	34157	796	125	33733	733	149	35539	716	148	37561	495	120	39230

Source: *Signal Four Analytics*, 2014-2018
Sorted alphabetically by Emphasis Area

Five-Year Emphasis Area Crashes (2014 – 2018) - Duval County

Emphasis Area	PDO	%	All Injury	%	Serious	%	Fatal	%	Injury and Fatal	%	Total	%
Aggressive Driving	6114	5%	4748	10%	389	11%	30	5%	4778	44%	10892	6%
Aging Drivers	17912	14%	7400	15%	536	15%	111	17%	7511	30%	25423	14%
Careless Driving	37180	28%	18085	38%	1181	33%	36	5%	18121	33%	55301	31%
Commercial Motor Vehicle	7324	6%	1567	3%	155	4%	58	9%	1625	18%	8949	5%
Distracted Driving	15139	11%	7281	15%	555	15%	32	5%	7313	33%	22452	12%
Impaired Driving	3094	2%	2175	5%	309	9%	150	23%	2325	43%	5419	3%
Intersection	32625	25%	17814	37%	1260	35%	186	28%	18000	36%	50625	28%
Lane Departure	31419	24%	8379	18%	907	25%	195	30%	8574	21%	39993	22%
Motorcyclist	637	0%	1984	4%	475	13%	113	17%	2097	77%	2734	2%
Pedestrian and Bicyclist	729	1%	3361	7%	443	12%	216	33%	3577	83%	4306	2%
Speeding	152	0%	82	0%	0	0%	1	0%	83	35%	235	0%
Teen Driver	14275	11%	6002	13%	376	10%	68	10%	6070	30%	20345	11%
Unrestrained Occupant	1300	1%	2279	5%	384	11%	178	27%	2457	65%	3757	2%
Work Zone	2862	2%	1128	2%	105	3%	20	3%	1148	29%	4010	2%
ALL CRASHES	131725		47840		3599		655		48495	27%	180220	

Source: *Signal Four Analytics*, 2014-2018
Sorted alphabetically by Emphasis Area

Annual Emphasis Area Crashes (2014 – 2018) - Nassau County

Emphasis Area	2014			2015			2016			2017			2018		
	Serious	Fatal	Total	Serious	Fatal	Total	Serious	Fatal	Total	Serious	Fatal	Total	Serious	Fatal	Total
Aggressive Driving	10	1	130	7	4	154	13	0	130	8	0	84	9	1	84
Aging Drivers	8	4	324	10	2	361	16	1	395	15	4	380	15	3	451
Careless Driving	10	1	298	25	1	380	18	2	336	24	1	353	28	1	418
Commercial Motor Vehicle	6	6	112	7	4	126	9	2	131	6	2	145	8	3	164
Distracted Driving	5	0	198	11	1	302	11	0	329	6	1	327	10	1	352
Impaired Driving	4	3	62	7	4	71	4	8	76	8	3	92	6	8	86
Intersection	13	4	434	22	5	497	22	4	554	21	3	587	33	2	633
Lane Departure	11	4	301	17	4	423	22	8	450	16	5	388	17	9	397
Motorcyclist	3	1	29	10	4	40	9	0	35	4	2	37	12	5	39
Pedestrian and Bicyclist	6	5	46	4	3	35	3	5	31	8	4	38	8	1	31
Speeding	0	0	8	0	0	11	0	0	1	0	0	6	0	1	1
Teen Driver	4	1	216	6	1	255	8	5	291	10	3	254	10	1	360
Unrestrained Occupant	3	6	44	12	4	63	10	9	63	11	8	54	12	11	51
Work Zone	5	0	34	3	0	44	1	1	69	3	1	161	6	0	207
ALL CRASHES	40	17	1435	62	14	1702	65	20	1837	62	18	1731	80	18	1943

Source: *Signal Four Analytics*, 2014-2018
Sorted alphabetically by Emphasis Area

Five-Year Emphasis Area Crashes (2014 – 2018) - Nassau County

Emphasis Area	PDO	%	All Injury	%	Serious	%	Fatal	%	Injury and Fatal	%	Total	%
Aggressive Driving	305	5%	271	11%	47	15%	6	7%	277	48%	582	7%
Aging Drivers	1383	22%	514	22%	64	21%	14	16%	528	28%	1911	22%
Careless Driving	1088	18%	691	29%	105	34%	6	7%	697	39%	1785	21%
Commercial Motor Vehicle	486	8%	175	7%	36	12%	17	20%	192	28%	678	8%
Distracted Driving	1006	16%	499	21%	43	14%	3	3%	502	33%	1508	17%
Impaired Driving	202	3%	159	7%	29	9%	26	30%	185	48%	387	4%
Intersection	1816	29%	871	37%	111	36%	18	21%	889	33%	2705	31%
Lane Departure	1444	23%	485	20%	83	27%	30	34%	515	26%	1959	23%
Motorcyclist	37	1%	131	6%	38	12%	12	14%	143	79%	180	2%
Pedestrian and Bicyclist	36	1%	127	5%	29	9%	18	21%	145	80%	181	2%
Speeding	19	0%	7	0%	0	0%	1	1%	8	30%	27	0%
Teen Driver	988	16%	377	16%	38	12%	11	13%	388	28%	1376	16%
Unrestrained Occupant	42	1%	195	8%	48	16%	38	44%	233	85%	275	3%
Work Zone	359	6%	154	7%	18	6%	2	2%	156	30%	515	6%
ALL CRASHES	6194		2367		309		87		2454	28%	8648	

Source: *Signal Four Analytics*, 2014-2018
Sorted alphabetically by Emphasis Area

Annual Emphasis Area Crashes (2014 – 2018) - St. Johns County

Emphasis Area	2014			2015			2016			2017			2018		
	Serious	Fatal	Total	Serious	Fatal	Total	Serious	Fatal	Total	Serious	Fatal	Total	Serious	Fatal	Total
Aggressive Driving	8	2	246	18	4	325	17	1	371	12	2	380	9	2	355
Aging Drivers	24	10	1083	30	10	1203	22	10	1398	17	10	1466	7	4	1497
Careless Driving	38	4	1614	51	3	1745	29	2	1791	17	5	1663	17	0	1367
Commercial Motor Vehicle	7	5	283	11	2	329	8	4	343	8	3	367	7	2	355
Distracted Driving	22	3	844	24	3	1028	26	3	1187	20	2	1164	21	0	1278
Impaired Driving	19	9	234	22	9	246	10	4	224	8	11	207	10	8	229
Intersection	39	8	1721	62	12	2044	32	12	2200	33	10	2204	29	10	2304
Lane Departure	32	8	1079	42	9	1192	25	13	1177	22	11	1341	23	6	1376
Motorcyclist	32	6	125	25	8	131	21	2	138	19	9	118	16	2	96
Pedestrian and Bicyclist	19	11	134	20	13	152	18	11	160	15	10	183	21	10	163
Speeding	0	0	3	0	0	2	0	0	4	0	0	3	0	0	10
Teen Driver	13	2	805	19	2	969	21	2	980	12	4	1069	7	2	1046
Unrestrained Occupant	23	5	133	21	5	138	16	12	126	10	9	88	16	7	86
Work Zone	2	0	59	2	1	78	1	1	84	1	0	93	0	0	76
ALL CRASHES	131	35	5447	159	36	6297	116	35	6642	92	41	6674	87	26	6772

Source: *Signal Four Analytics*, 2014-2018
Sorted alphabetically by Emphasis Area

Five-Year Emphasis Area Crashes (2014 – 2018) - St. Johns County

Emphasis Area	PDO	%	All Injury	%	Serious	%	Fatal	%	Injury and Fatal	%	Total	%
Aggressive Driving	974	4%	692	10%	64	11%	11	6%	703	42%	1677	5%
Aging Drivers	5117	21%	1486	22%	100	17%	44	25%	1530	23%	6647	21%
Careless Driving	5845	23%	2321	35%	152	26%	14	8%	2335	29%	8180	26%
Commercial Motor Vehicle	1387	6%	274	4%	41	7%	16	9%	290	17%	1677	5%
Distracted Driving	4184	17%	1306	19%	113	19%	11	6%	1317	24%	5501	17%
Impaired Driving	636	3%	463	7%	69	12%	41	24%	504	44%	1140	4%
Intersection	7719	31%	2702	40%	195	33%	52	30%	2754	26%	10473	33%
Lane Departure	4760	19%	1358	20%	144	25%	47	27%	1405	23%	6165	19%
Motorcyclist	143	1%	438	7%	113	19%	27	16%	465	76%	608	2%
Pedestrian and Bicyclist	178	1%	559	8%	93	16%	55	32%	614	78%	792	2%
Speeding	14	0%	8	0%	0	0%	0	0%	8	36%	22	0%
Teen Driver	3792	15%	1065	16%	72	12%	12	7%	1077	22%	4869	15%
Unrestrained Occupant	117	0%	416	6%	86	15%	38	22%	454	80%	571	2%
Work Zone	302	1%	86	1%	6	1%	2	1%	88	23%	390	1%
ALL CRASHES	24938		6721		585		173		6894	22%	31832	

Source: *Signal Four Analytics*, 2014-2018
Sorted alphabetically by Emphasis Area

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Total Crashes by Emphasis Area (*Signal Four Analytics*, 2014-2018)

Total Crash Rank	Emphasis Area	Total Crashes	Percent of All Crashes	Average Annual	Change (2014 -2018)	Percent Change (2014 -2018)
	Regional Crashes	249,873	100.0%	49,975	7,219	16%
1	Intersection	71,840	29%	14,368	2,772	22%
2	Careless Driving	69,260	28%	13,852	-563	-4%
3	Lane Departure	53,207	21%	10,641	2,222	24%
4	Aging Drivers	39,412	16%	7,882	1,917	27%
5	Distracted Driving	32,851	13%	6,570	339	5%
6	Teen Driver	31,714	13%	6,343	930	16%
7	Aggressive Driving	14,513	6%	2,903	-187	-6%
8	Commercial Motor Vehicle	12,125	5%	2,425	716	37%
9	Impaired Driving	7,835	3%	1,567	-52	-3%
10	Pedestrian and Bicyclist	5,950	2%	1,190	36	3%
11	Work Zone	5,289	2%	1,058	689	120%
12	Unrestrained Occupant	5,090	2%	1,018	-486	-42%
13	Motorcyclist	3,998	2%	800	-55	-7%

Sorted by number of Total Crashes

Percent Change Rank	Emphasis Area	Total Crashes	Percent of All Crashes	Average Annual	Change (2014 -2018)	Percent Change (2014 -2018)
	Regional Crashes	249,873	100.0%	49,975	7,219	16%
1	Work Zone	5,289	2%	1,058	689	120%
2	Commercial Motor Vehicle	12,125	5%	2,425	716	37%
3	Aging Drivers	39,412	16%	7,882	1,917	27%
4	Lane Departure	53,207	21%	10,641	2,222	24%
5	Intersection	71,840	29%	14,368	2,772	22%
6	Teen Driver	31,714	13%	6,343	930	16%
7	Distracted Driving	32,851	13%	6,570	339	5%
8	Pedestrian and Bicyclist	5,950	2%	1,190	36	3%
9	Impaired Driving	7,835	3%	1,567	-52	-3%
10	Careless Driving	69,260	28%	13,852	-563	-4%
11	Aggressive Driving	14,513	6%	2,903	-187	-6%
12	Motorcyclist	3,998	2%	800	-55	-7%
13	Unrestrained Occupant	5,090	2%	1,018	-486	-42%

Sorted by Percent Change of Total Crashes from 2014 to 2018

Fatal Crashes by Emphasis Area (*Signal Four Analytics*, 2014-2018)

Fatal Crash Rank	Emphasis Area	Fatal Crashes	Percent of All Fatal Crashes	Average Annual	Change (2014 -2018)	Percent Change (2014 -2018)
	Regional Crashes	1,027	100%	205	2	1%
1	Pedestrian and Bicyclist	315	31%	63	1	2%
2	Lane Departure	304	30%	61	2	4%
3	Intersection	289	28%	58	8	17%
4	Unrestrained Occupant	289	28%	58	7	13%
5	Impaired Driving	250	24%	50	-3	-7%
6	Aging Drivers	189	18%	38	3	10%
7	Motorcyclist	175	17%	35	-2	-6%
8	Commercial Motor Vehicle	101	10%	20	7	44%
9	Teen Driver	101	10%	20	-1	-5%
10	Careless Driving	61	6%	12	-9	-64%
11	Aggressive Driving	56	5%	11	-3	-33%
12	Distracted Driving	56	5%	11	-2	-25%
13	Work Zone	27	3%	5	-1	-25%

Sorted by number of Fatal Crashes

Percent Change Rank	Emphasis Area	Fatal Crashes	Percent of All Fatal Crashes	Average Annual	Change (2014 -2018)	Percent Change (2014 -2018)
	Regional Crashes	1,027	100%	205	2	1%
1	Commercial Motor Vehicle	101	10%	20	7	44%
2	Intersection	289	28%	58	8	17%
3	Unrestrained Occupant	289	28%	58	7	13%
4	Aging Drivers	189	18%	38	3	10%
5	Lane Departure	304	30%	61	2	4%
6	Pedestrian & Bicyclist	315	31%	63	1	2%
7	Teen Driver	101	10%	20	-1	-5%
8	Motorcyclist	175	17%	35	-2	-6%
9	Impaired Driving	250	24%	50	-3	-7%
10	Distracted Driving	56	5%	11	-2	-25%
11	Work Zone	27	3%	5	-1	-25%
12	Aggressive Driving	56	5%	11	-3	-33%
13	Careless Driving	61	6%	12	-9	-64%

Sorted by Percent Change of Fatal Crashes from 2014 to 2018

Serious and Fatal Crashes by Emphasis Area (*Signal Four Analytics*, 2014-2018)

Serious & Fatal Crash Rank	Emphasis Area	Fatal & Serious Injury Crashes	Percent of All Fatal & Serious Injury Crashes	Average Annual	Change (2014 -2018)	Percent Change (2014 -2018)
	Regional Crashes	5,876	100%	1,175	-382	-30%
1	Intersection	1,997	34%	399	-145	-33%
2	Careless Driving	1,565	27%	313	-134	-38%
3	Lane Departure	1,523	26%	305	-76	-23%
4	Aging Drivers	946	16%	189	-68	-33%
5	Pedestrian and Bicyclist	945	16%	189	-9	-5%
6	Unrestrained Occupant	869	15%	174	-37	-20%
7	Motorcyclist	865	15%	173	-50	-28%
8	Distracted Driving	833	14%	167	-38	-23%
9	Impaired Driving	717	12%	143	-58	-34%
10	Teen Driver	642	11%	128	-36	-27%
11	Aggressive Driving	599	10%	120	-104	-64%
12	Commercial Motor Vehicle	341	6%	68	2	3%
13	Work Zone	163	3%	33	12	48%

Sorted by number of Serious and Fatal Injury Crashes

Percent Change Rank	Emphasis Area	Fatal & Serious Injury Crashes	Percent of All Fatal & Serious Injury Crashes	Average Annual	Change (2014 -2018)	Percent Change (2014 -2018)
	Regional Crashes	5,876	100%	1,175	-382	-30%
1	Work Zone	163	3%	33	12	48%
2	Commercial Motor Vehicle	341	6%	68	2	3%
3	Pedestrian and Bicyclist	945	16%	189	-9	-5%
4	Unrestrained Occupant	869	15%	174	-37	-20%
5	Distracted Driving	833	14%	167	-38	-23%
6	Lane Departure	1,523	26%	305	-76	-23%
7	Teen Driver	642	11%	128	-36	-27%
8	Motorcyclist	865	15%	173	-50	-28%
9	Intersection	1,997	34%	399	-145	-33%
10	Aging Drivers	946	16%	189	-68	-33%
11	Impaired Driving	717	12%	143	-58	-34%
12	Careless Driving	1,565	27%	313	-134	-38%
13	Aggressive Driving	599	10%	120	-104	-64%

Sorted by Percent Change of Serious and Fatal Crashes from 2014 to 2018

Percent Resulting in Death or Injury (by Emphasis Area)

Percent Result in Death/Injury Rank	Emphasis Area	Total Crashes	Fatal & Injury Crashes	Percent of Crashes Resulting in Death or Injury
	Regional Crashes	249,873	63,938	26%
1	Pedestrian and Bicyclist	5,950	4,857	82%
2	Motorcyclist	3,998	3,056	76%
3	Unrestrained Occupant	5,090	3,541	70%
4	Aggressive Driving	14,513	6,333	44%
5	Impaired Driving	7,835	3,399	43%
6	Intersection	71,840	24,377	34%
7	Careless Driving	69,260	22,444	32%
8	Distracted Driving	32,851	10,336	31%
9	Work Zone	5,289	1,510	29%
10	Aging Drivers	39,412	10,828	27%
11	Teen Driver	31,714	8,593	27%
12	Lane Departure	53,207	11,441	22%
13	Commercial Motor Vehicle	12,125	2,279	19%

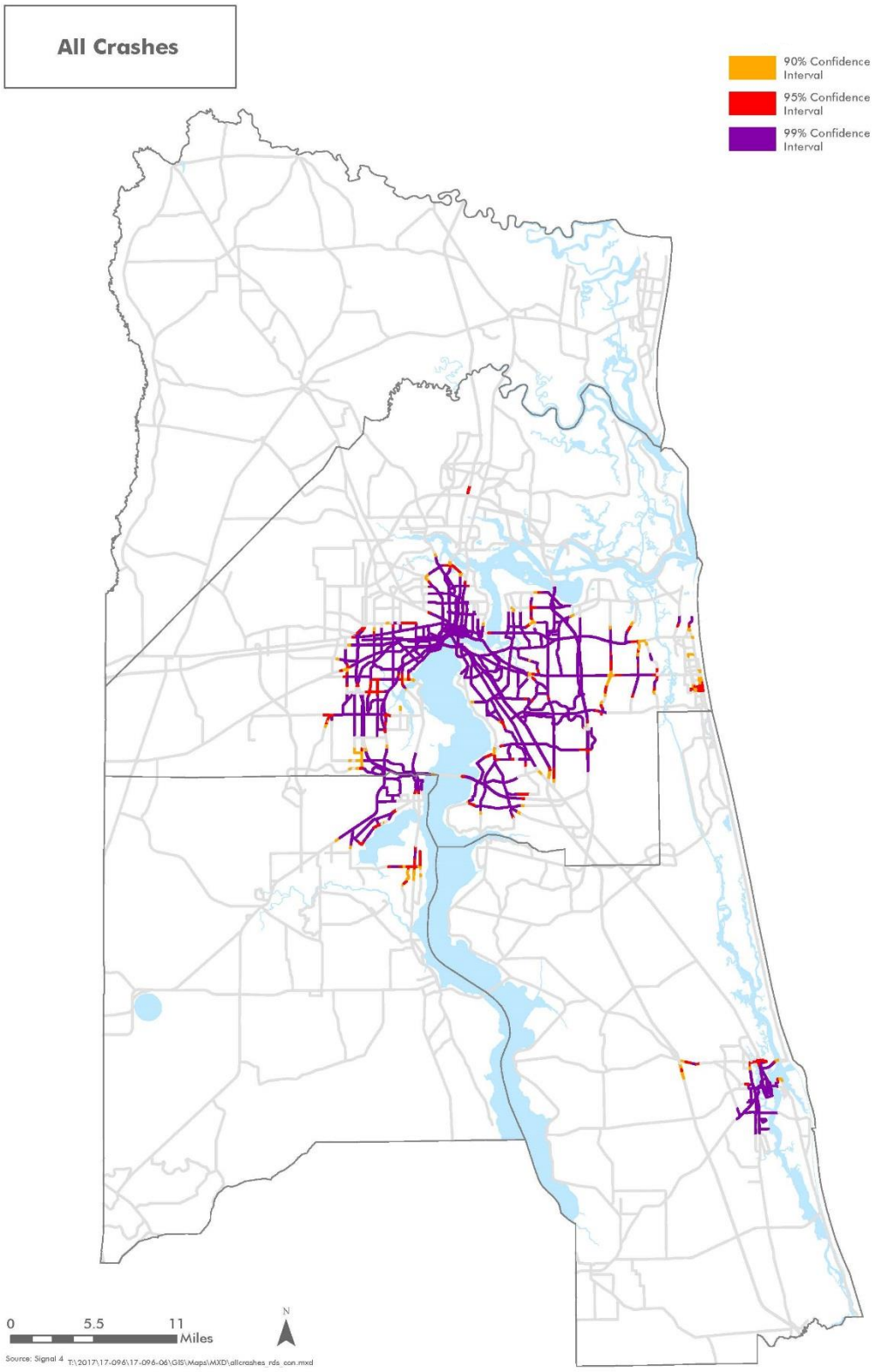
Sorted by Percent Resulting in Death or Injury, (*Signal Four Analytics*, 2014-2018)

Percent Resulting in Death or Serious Injury (by Emphasis Area)

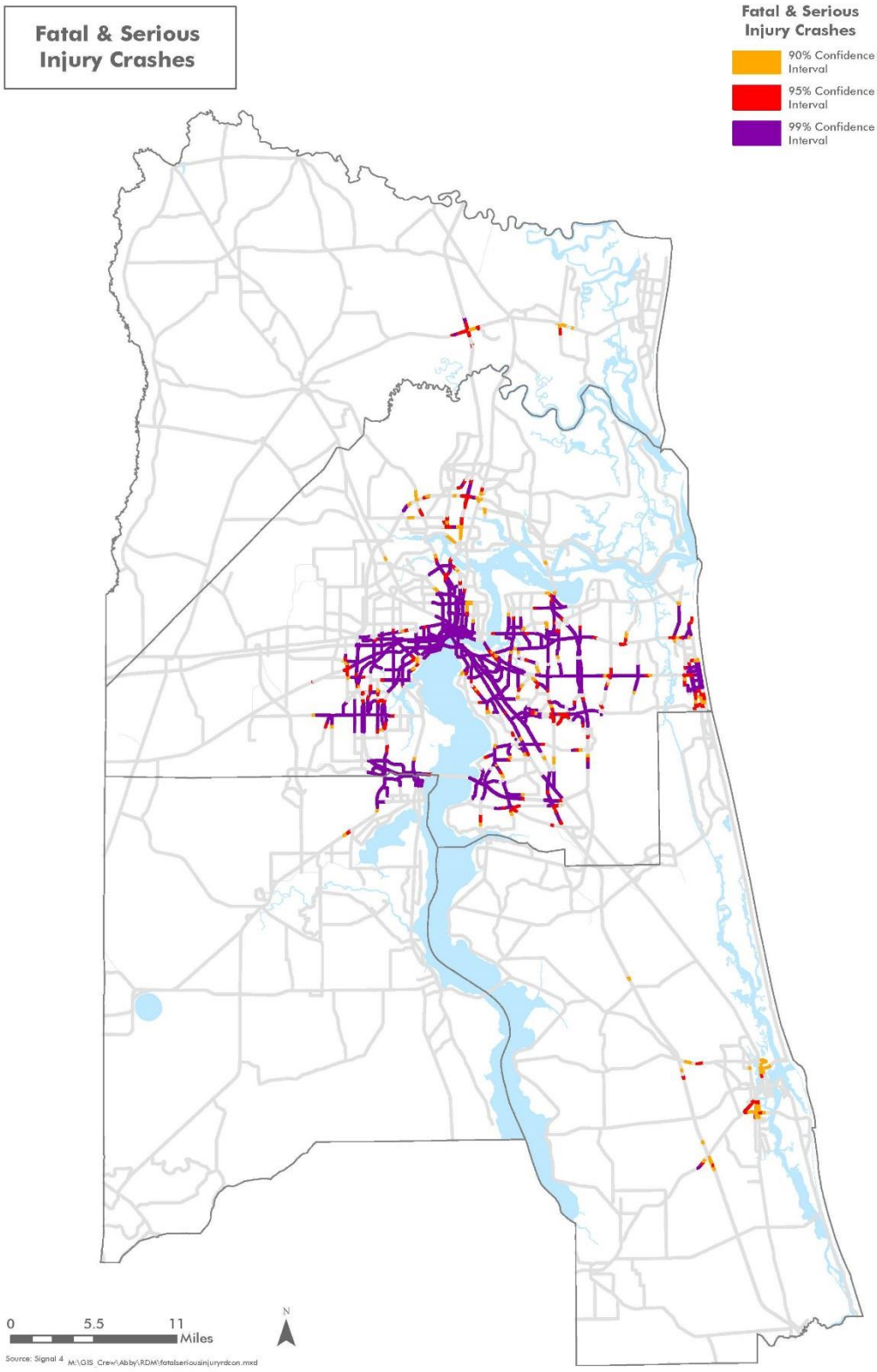
Percent Result in Death/Serious Injury Rank	Emphasis Area	Total Crashes	Fatal & Serious Injury Crashes	Percent of Crashes Resulting in Death or Serious Injury
	Regional Crashes	249,873	5,876	2%
1	Motorcyclist	3,998	865	22%
2	Unrestrained Occupant	5,090	869	17%
3	Pedestrian and Bicyclist	5,950	945	16%
4	Impaired Driving Crashes	7,835	717	9%
5	Aggressive Driving	14,513	599	4%
6	Work Zone Crashes	5,289	163	3%
7	Lane Departure Crashes	53,207	1,523	3%
8	Commercial Motor Vehicle	12,125	341	3%
9	Intersection Crashes	71,840	1,997	3%
10	Distracted Driving Crashes	32,851	833	3%
11	Aging Drivers	39,412	946	2%
12	Careless Driving	69,260	1,565	2%
13	Teen Driver Crashes	31,714	642	2%

Sorted by Percent Resulting in Death or Serious Inj., *Signal Four Analytics*, 2014-18

Confidence Interval for All Crashes - Roadways, 2014 - 2018



Confidence Interval for Fatal and Serious Injury Crashes - Roadways, 2014 - 2018



Appendix D[27] -

Emphasis Area Notes

(*Signal Four Analytics* - Online Filter Options)

1. Aggressive Driving
    a. Crash Filtering Used
        i. Behavior Factors
            1. Aggressive Driving
    b. Mapping
        i. Use .mxd files
2. Aging Drivers
    a. Crash Filtering Used
        i. Driver Age 65+
    b. Mapping
        i. Use .mxd files
3. All
    a. Crash Filtering Used
        i. All crashes by year and by county
    b. Mapping
        i. Use .mxd files
4. Bike Ped
    a. Crash Filtering Used
        i. Bike / Ped Crash Type
            1. Pedestrian
            2. Bicyclist
            3. Not Typed
    b. Mapping
        i. Use .mxd files

[27] Appendix D contains notes for how the crashes were selected for each emphasis area and how they were mapped (i.e. either .csv file or .mxd file). Signal Four Analytics generates *.csv spreadsheet files with columns for some emphasis areas. Other emphasis areas require the use of Signal Four's online filter options. "Common Violations" and "Behavior Factor" are the options for searching within Signal4. In the case of careless driving, aggressive driving and distracted driving: Careless Driving is the violation "ticket" received, and the behavior factor could have been "aggressive driving" or "distracted driving." A crash can be both careless driving and aggressive driving or careless driving and distracted driving.

5. Careless Driving
    a. Crash Filtering Used
        i. Common Violations
            1. Careless Driving
    b. Mapping
        i. Use mxd files
6. Commercial Motor Vehicle
    a. Crash Filtering Used
        i. CMV Configuration
            1. Vehicle 10,000 lbs or less
            2. Single-Unit Truck (2-axle)
            3. Single-Unit Truck (3 + axles)
            4. Truck Pulling Trailer(s)
            5. Truck Tractor (bobtail)
            6. Truck Tractor/Semi-Trailer
            7. Truck Tractor/Double Truck
            8. Tractor/Triple
            9. Truck more than 10,000 lbs
            10. Bus/Large Van (9-15 occupants)
            11. Bus (more than 15 occupants)
            12. Other
            13. Unknown
    b. Mapping
        i. Use .mxd files
7. Distracted Driving
    a. Crash Filtering Used
        i. Behavioral Factor
            1. Distracted Driving
    b. Mapping
        i. Use .mxd files
8. Impaired
    a. Crash Filtering Used
        i. Behavioral Factors
            1. Alcohol Involved
            2. Drugs Involved
    b. Mapping
        i. Use .mxd files

9. Intersection Crashes
    a. Crash Filtering Used
        i. Used “All Crashes” and filtered out the crashes with:
            1. Type of Intersection
                a. Four-Way Intersection
                b. T-Intersection
                c. Y-Intersection
                d. Traffic Circle
                e. Roundabout
            2. First_HE_Relation_to_Jct
                a. Intersection-Related
                b. Intersection
    b. Mapping
        i. Use .csv files
        ii. Decimal Longitude
            1. Column BS
        iii. Decimal Latitude
            1. Column BT
10. Lane Departure includes:
    a. Crash Filtering Used
        i. Off Road -All
        ii. Crossed into Oncoming Traffic
        iii. Sideswipe
    b. Mapping
        i. Use .mxd files
11. Motorcyclists
    a. Crash Filtering Used
        i. Non-Auto Mode of Travel
            1. Motorcycle
    b. Mapping
        i. Use .mxd files
12. Teen Drivers
    a. Crash Filtering Used
        i. Drivers Age
            1. 15 – 19 years old
    b. Mapping
        i. Use .mxd files

13. Unrestrained Occupants
    a. Crash Filtering Used
        i. Used “All Crashes” and filtered out the crashes with injury unrestrained or fatality unrestrained
        ii. Then took SSOGIS data and filtered out the crashes with “No Belt” Yes.
        iii. Combined this data
        iv. This will be skewed due to SSOGIS data only processed through 2016, so there is limited data for 2017 and 2018.
    b. Mapping
        i. Use .csv files
        ii. Decimal Longitude
            1. Column BS
        iii. Decimal Latitude
            1. Column BT
14. Work Zone
    a. Crash Filtering Used
        i. Other Crash Circumstances
            1. Work Zone Related
            2. Workers in Work Zone
            3. Law Enforcement in Work Zone
        ii. Road Circumstances (marked -2)
            1. Work Zone
            2. Non-Highway Work
    b. Mapping
        i. Use .csv files
        ii. Decimal Longitude
            1. Column BS
        iii. Decimal Latitude
            1. Column BT
15. Notes
    a. State vs Local Roads
        i. These will not add up to the total because there are parking lot crashes and unknown crashes.
    b. Columns
        i. Crash Severity (this will either be Fatality, Injury, or Property Damage Only)
            1. AB
        ii. Possible_Injuries
            1. BG
        iii. Non_Incapacitating_Injuries
            1. BH
        iv. Incapacitating_Injuries
            1. BI
        v. Fatalities_30_Days BJ

Appendix E -

High-Crash Corridor Data

Corridors (Sorted by ID #)

								Average AADT							
ID #	SLD #	Roadway	From	To	Corridor Length	County	Total Crashes	2014	2015	2016	2017	2018	Average Vehicles Per Day	Overall Crash Rate (100 MVMT)	Overall Crash Rate (MVMT)
1	72190000	US 90/SR 212/Beach Boulevard	Parental Home	W. of Southside Boulevard	1.114	Duval	792	56,000	62,500	64,500	59,000	59,500	60,300	646.04	6.46
2	72190000	US 90/SR 212/Beach Boulevard	W. of Southside Boulevard	Central Parkway	2.946	Duval	2836	52,000	53,667	58,833	60,000	53,333	55,567	949.28	9.49
3	72190000	US 90/SR 212/Beach Boulevard	Central Parkway	W. of Hodges	3.079	Duval	1239	47,000	50,000	52,250	49,500	49,250	49,600	444.55	4.45
4	72190000	US 90/SR 212/Beach Boulevard	W. of Hodges	San Pablo	1.269	Duval	1131	43,500	45,000	46,000	46,000	45,000	45,100	1,082.83	10.83
5	72190000	US 90/SR 212/Beach Boulevard	Penman	A1A	0.869	Duval	361	26,500	27,000	27,000	26,300	25,200	26,400	862.23	8.62
6	7210000	SR 10/Atlantic Boulevard	I-95	Arlington Road	4.469	Duval	1763	27,500	29,125	28,625	28,500	27,250	28,200	766.53	7.67
7	7210000	SR 10/Atlantic Boulevard	Arlington Road	Arlington Expressway	1.731	Duval	1440	29,750	32,000	30,750	31,000	31,500	31,000	1,470.42	14.70
8	7210000	SR 10/Atlantic Boulevard	Arlington Expressway	Sandalwood Boulevard	2.144	Duval	2229	52,833	56,667	60,333	57,333	57,500	56,933	1,000.59	10.01
9	7210000	SR 10/Atlantic Boulevard	Sandalwood Blvd	Hodges	3.554	Duval	1727	54,000	56,500	60,750	59,000	57,750	57,600	462.26	4.62
10	7210000	SR 10/Atlantic Boulevard	Hodges	San Pablo	0.485	Duval	536	52,500	52,000	56,500	56,500	54,000	54,300	1,115.22	11.15
11	7210000	SR 10/Atlantic Boulevard	SR A1A/Mayport Rd	SR A1A/3rd Street	1.275	Duval	753	30,250	30,750	30,750	28,750	30,750	30,250	1,069.79	10.70
12	72014000	SR 109/University Boulevard S.	St. Augustine Rd	I-95	1.100	Duval	1326	38,667	40,667	40,667	40,167	41,667	40,367	1,636.31	16.36
13	72014000	SR 109/University Boulevard S.	I-95	US 90/SR 212/Beach Boulevard	3.720	Duval	2075	36,000	37,500	36,750	36,500	37,750	36,900	828.30	8.28
14	72100000	SR A1A/3rd St	16th Avenue South	6th Ave North	1.49	Duval	675	34,500	34,750	35,375	33,250	34,000	34,375	722.12	7.22
15	72230000	SR A1A/Mayport Road	SR 10/Atlantic Boulevard	SR A1A; Mayport Crossing Rd	2.3	Duval	935	28,467	30,100	30,600	30,800	29,900	29,973	743.17	7.43
16	72070000	US 1/Philips Highway	SR 126/Emerson Street	SR 109/Univeristy Bouelvard	1.604	Duval	730	24,000	22,500	24,000	26,500	26,000	24,600	1,013.73	10.14
17	72028000	SR 152/Baymeadows Road	Old Kings Road	E. of SR 115/Southside Boulevard	2.488	Duval	2574	37,400	38,000	39,000	37,900	38,000	38,060	1,489.45	14.89
18	72160000	SR 13/San Jose Blvd	Baymeadows	S. of Julington Creek	5.863	Duval	4970	47,500	48,125	51,500	48,375	53,250	49,750	933.64	9.34
19	72170000	SR 21/Blanding Boulevard	Collins Road	Duval/Clay County Line	1.021	Duval	1941	59,750	60,750	61,750	59,250	61,500	60,600	1,718.95	17.19
20	71070000	SR 21/Blanding Boulevard	Duval/Clay County Line	SR 224/Kingsley Avenue	1.874	Clay	2900	70,750	70,500	73,500	73,000	74,000	72,350	1,172.00	11.72
21	71070000	SR 21/Blanding Boulevard	SR 224/Kingsley Avenue	College Drive	2.621	Clay	2677	59,750	64,000	67,750	67,500	68,250	65,450	855.08	8.55
22	71070000	SR 21/Blanding Boulevard	College Drive	Tanglewood Boulevard	1.217	Clay	764	42,500	48,000	48,000	48,000	46,000	46,500	739.75	7.40
23	72170000	SR 21/Blanding Boulevard	S. of SR 134/103rd Street/Timuquana Road	SR 208/Wilson Road	1.579	Duval	940	27,750	27,250	29,250	28,500	29,750	28,500	1,144.56	11.45
24	72220000	SR 134/103rd Street/Timuquana Road	Connie Jean Road	Old Middleburg Rd	1.462	Duval	705	12,600	10,400	14,000	12,200	11,800	12,200	2,165.80	21.66
25	72220000	SR 134/103rd Street/Timuquana Road	Old Middleburg Rd	Jammes Rd	3.107	Duval	2970	38,500	38,000	41,833	41,500	40,833	40,133	1,305.11	13.05
26	72220000	SR 134/103rd Street/Timuquana Road	Jammes Rd	Catoma Street	1.500	Duval	652	24,750	24,500	26,000	25,250	25,500	25,200	945.13	9.45
27	72120000	SR 228/Normandy Boulevard	I-295	Lenox Avenue (near Post St.)	2.231	Duval	1412	25,133	27,167	27,500	25,800	26,000	26,320	1,317.61	13.18
28	72295000	SR 208/Wilson Boulevard	Fouraker Rd	SR 103/Lane Avenue	1.490	Duval	637	15,350	13,750	15,400	16,000	16,300	15,360	1,525.10	15.25
29	72018000	SR 104/Dunn Avenue	Biscayne Boulevard	I-295	3.682	Duval	859	17,975	18,275	19,775	18,000	19,225	18,650	685.44	6.85
30	74040000	SR200/A1A/The Buccaneer Trail	Semper Fi Drive (.25 mil W. of I-95)	Bobby Moore Circle (.25 mi. E. of William Burgess Blvd.)	1.076	Nassau	364	19,997	20,300	21,000	22,195	21,771	21,053	880.48	8.80
31	74060000	SR200/A1A/The Buccaneer Trail	Gene Lassere Boulevard	Blackrock Road	1.907	Nassau	641	36,000	37,250	36,500	37,750	34,500	36,400	505.99	5.06
32	78010000	US-1	E Watson Drive/Watson Road	Wildwood Drive	0.998	St. Johns	347	17,700	19,900	20,500	21,000	22,000	20,220	942.23	9.42
33	78010000	US-1	Lewis Point Road	King Street	2.777	St. Johns	2109	40,500	42,167	43,167	43,000	44,000	42,567	977.62	9.78
34	78010000	US-1/Ponce De Leon Boulevard	King Street	SR 16	1.934	St. Johns	1219	34,167	35,500	35,833	36,167	37,333	35,800	964.72	9.65
35	78060000	SR 16	Toms Road (NW of I-95)	Fortner Road	1.326	St. Johns	964	32,000	34,500	36,000	36,000	36,500	35,000	1,138.16	11.38
36	-	US-1/Main Street	Independent Drive	US 23/State Street	0.560	Duval	645	12,000	12,167	11,800	11,000	11,267	11,647	5,418.85	54.19
37	-	Ocean Street	Independent Drive	US 23/State Street	0.560	Duval	500	7,500	7,600	9,300	7,900	8,300	8,120	6,025.08	60.25
38	-	US 23/State Street	Lee Street	Liberty Street	1.060	Duval	1079	27,167	29,625	29,125	26,625	26,875	27,883	2,000.36	20.00
39	-	Union Street	Lee Street	Liberty Street	1.060	Duval	994	26,667	28,667	28,667	27,500	27,333	27,767	1,850.52	18.51
40	-	US 90/Beaver Street	Lee Street	Liberty Street	1.060	Duval	772	4,800	5,167	4,447	6,367	6,000	5,356	7,450.89	74.51
41	-	Jefferson Street	Water Street	US 23/State Street	0.580	Duval	540	6,700	7,400	8,100	8,400	8,100	7,740	6,591.16	65.91
42	-	Broad Street	Water Street	US 23/State Street	0.580	Duval	529	5,825	3,000	6,600	6,800	6,900	5,825	8,579.64	85.80

Corridor Crash Characteristics (Sorted by ID #)

				Light Condition				Road Conditions			Injury Crashes				
ID #	Roadway	From	To	Day	Night	Dawn/Dusk	Unknown	Wet	Dry	Unknown	PDO	Possible	Non-Incapacitating	Incapacitating	Fatality
1	US 90/SR 212/Beach Boulevard	Parental Home	W. of Southside Boulevard	589	163	38	1	130	660	1	550	178	49	12	2
2	US 90/SR 212/Beach Boulevard	W. of Southside Boulevard	Central Parkway	2069	636	123	4	508	2315	7	1911	589	243	75	14
3	US 90/SR 212/Beach Boulevard	Central Parkway	W. of Hodges	894	283	57	3	159	1076	2	837	267	94	32	7
4	US 90/SR 212/Beach Boulevard	W. of Hodges	San Pablo	788	283	55	2	145	982	1	800	226	78	21	3
5	US 90/SR 212/Beach Boulevard	Penman	A1A	232	116	8	5	29	327	4	199	62	78	22	0
6	SR 10/Atlantic Boulevard	I-95	Arlington Road	1297	372	84	3	276	1478	1	1199	351	155	46	5
7	SR 10/Atlantic Boulevard	Arlington Road	Arlington Expressway	1093	280	63	3	234	1202	3	977	315	107	32	8
8	SR 10/Atlantic Boulevard	Arlington Expressway	Sandalwood Boulevard	1750	379	98	1	334	1893	1	1577	440	168	39	4
9	SR 10/Atlantic Boulevard	Sandalwood Blvd	Hodges	1319	339	68	1	259	1467	1	1229	314	148	33	3
10	SR 10/Atlantic Boulevard	Hodges	San Pablo	395	116	23	2	95	439	2	376	109	41	10	0
11	SR 10/Atlantic Boulevard	SR A1A/Mayport Rd	SR A1A/3rd Street	532	192	27	2	101	650	2	512	124	94	21	2
12	SR 109/University Boulevard S.	St. Augustine Rd	I-95	1012	255	53	6	192	1127	6	938	254	103	28	3
13	SR 109/University Boulevard S.	I-95	US 90/SR 212/Beach Boulevard	1612	374	80	5	260	1807	4	1386	475	144	56	10
14	SR A1A/3rd St	16th Avenue South	6th Ave North	430	217	21	7	59	608	6	409	121	122	21	2
15	SR A1A/Mayport Road	SR 10/Atlantic Boulevard	SR A1A; Mayport Crossing Rd	684	215	33	3	118	816	1	632	159	105	32	7
16	US 1/Philips Highway	SR 126/Emerson Street	SR 109/Univeristy Bouelvard	487	210	31	2	93	635	2	515	132	57	20	6
17	SR 152/Baymeadows Road	Old Kings Road	E. of SR 115/Southside Boulevard	1970	497	97	4	363	2199	6	1869	508	154	35	2
18	SR 13/San Jose Blvd	Baymeadows	S. of Julington Creek	3878	884	188	13	722	4231	9	3618	912	328	92	13
19	SR 21/Blanding Boulevard	Collins Road	Duval/Clay County Line	1301	516	113	10	238	1692	10	1391	409	111	27	2
20	SR 21/Blanding Boulevard	Duval/Clay County Line	SR 224/Kingsley Avenue	1810	551	106	432	323	2144	431	2198	443	223	31	4
21	SR 21/Blanding Boulevard	SR 224/Kingsley Avenue	College Drive	1662	397	95	523	299	1857	521	2008	430	204	27	8
22	SR 21/Blanding Boulevard	College Drive	Tanglewood Boulevard	486	128	33	117	81	566	117	556	117	77	9	5
23	SR 21/Blanding Boulevard	S. of SR 134/103rd Street/Timuquana Road	SR 208/Wilson Road	700	202	31	7	169	766	5	633	192	91	19	5
24	SR 134/103rd Street/Timuquana Road	Connie Jean Road	Old Middleburg Rd	479	182	39	5	135	564	6	454	172	59	17	3
25	SR 134/103rd Street/Timuquana Road	Old Middleburg Rd	Jammes Rd	2114	674	164	16	561	2391	16	2017	629	249	68	5
26	SR 134/103rd Street/Timuquana Road	Jammes Rd	Catoma Street	449	177	23	3	109	539	3	416	147	67	17	5
27	SR 228/Normandy Boulevard	I-295	Lenox Avenue (near Post St.)	1010	314	80	8	236	1167	8	958	286	128	37	3
28	SR 208/Wilson Boulevard	Fouraker Rd	SR 103/Lane Avenue	453	147	33	3	103	530	3	435	137	46	17	1
29	SR 104/Dunn Avenue	Biscayne Boulevard	I-295	626	185	43	5	176	677	6	529	182	113	32	3
30	SR200/A1A/The Buccaneer Trail	Semper Fi Drive (.25 mil W. of I-95)	Bobby Moore Circle (.25 mi. E. of William Burgess Blvd.)	283	47	34	0	70	294	0	239	49	52	21	3
31	SR200/A1A/The Buccaneer Trail	Gene Lassere Boulevard	Blackrock Road	488	121	31	1	102	539	0	446	110	59	22	4
32	US-1	E Watson Drive/Watson Road	Wildwood Drive	257	66	18	0	66	275	0	257	35	32	10	7
33	US-1	Lewis Point Road	King Street	1584	317	60	148	218	1742	148	1652	269	147	33	8
34	US-1/Ponce De Leon Boulevard	King Street	SR 16	701	182	31	303	103	806	307	981	143	64	27	2
35	SR 16	Toms Road (NW of I-95)	Fortner Road	716	182	56	10	150	806	8	717	155	73	14	5
36	US-1/Main Street	Independent Drive	US 23/State Street	476	128	38	3	92	550	2	497	94	40	10	4
37	Ocean Street	Independent Drive	US 23/State Street	382	85	30	1	63	435	0	378	69	43	6	2
38	US 23/State Street	Lee Street	Liberty Street	806	222	50	1	157	920	1	817	182	63	16	1
39	Union Street	Lee Street	Liberty Street	714	213	64	3	137	852	3	728	175	71	17	3
40	US 90/Beaver Street	Lee Street	Liberty Street	648	92	30	1	93	676	0	549	140	69	12	1
41	Jefferson Street	Water Street	US 23/State Street	435	81	24	0	63	476	0	402	87	43	7	1
42	Broad Street	Water Street	US 23/State Street	424	78	26	1	66	462	1	395	86	42	6	0
				40,035	11,098	2,399	1,668	7,887	45,638	1,655	39,187	10,274	4,434	1,129	176
				72.5%	20.1%	4.3%	3.0%	14.3%	82.7%	3.0%	71.0%	18.6%	8.0%	2.0%	0.3%

Corridor Crash Characteristics (Sorted by ID #)

				#Injured (Injuries & Fatalities)				#Injured/ Fatal		Contributing Causes			
ID #	Roadway	From	To	Possible	Non - Incapacitating	Incapacitating	Fatality	Injuries Unrestrained	Fatalities Unrestrained	Distracted Driving	Impaired Driving (Alcohol/ Drugs)	Motorcycle Collision	Work Zone
1	US 90/SR 212/Beach Boulevard	Parental Home	W. of Southside Boulevard	239	72	14	1	6	0	105	15	7	1
2	US 90/SR 212/Beach Boulevard	W. of Southside Boulevard	Central Parkway	873	306	90	7	64	3	408	75	49	6
3	US 90/SR 212/Beach Boulevard	Central Parkway	W. of Hodges	385	114	38	4	7	1	206	50	16	2
4	US 90/SR 212/Beach Boulevard	W. of Hodges	San Pablo	325	95	25	3	6	0	147	54	20	0
5	US 90/SR 212/Beach Boulevard	Penman	A1A	76	97	22	0	10	0	60	48	13	3
6	SR 10/Atlantic Boulevard	I-95	Arlington Road	497	200	52	3	37	2	228	72	24	80
7	SR 10/Atlantic Boulevard	Arlington Road	Arlington Expressway	454	144	43	7	18	0	198	48	23	11
8	SR 10/Atlantic Boulevard	Arlington Expressway	Sandalwood Boulevard	609	219	47	6	23	0	354	62	34	23
9	SR 10/Atlantic Boulevard	Sandalwood Blvd	Hodges	418	206	39	1	9	2	247	46	29	8
10	SR 10/Atlantic Boulevard	Hodges	San Pablo	150	52	12	0	3	0	101	24	7	0
11	SR 10/Atlantic Boulevard	SR A1A/Mayport Rd	SR A1A/3rd Street	165	112	23	3	17	0	208	83	21	2
12	SR 109/University Boulevard S.	St. Augustine Rd	I-95	378	139	33	2	24	0	186	50	9	4
13	SR 109/University Boulevard S.	I-95	US 90/SR 212/Beach Boulevard	736	188	64	8	22	1	256	52	23	19
14	SR A1A/3rd St	16th Avenue South	6th Ave North	149	145	24	4	11	0	130	90	24	0
15	SR A1A/Mayport Road	SR 10/Atlantic Boulevard	SR A1A; Mayport Crossing Rd	212	124	35	8	7	0	144	76	32	0
16	US 1/Philips Highway	SR 126/Emerson Street	SR 109/Univeristy Bouelvard	194	79	28	5	13	0	100	53	10	9
17	SR 152/Baymeadows Road	Old Kings Road	E. of SR 115/Southside Boulevard	662	199	42	2	14	0	358	83	42	22
18	SR 13/San Jose Blvd	Baymeadows	S. of Julington Creek	1268	423	101	12	32	1	788	122	64	240
19	SR 21/Blanding Boulevard	Collins Road	Duval/Clay County Line	598	137	35	1	15	0	312	45	33	1
20	SR 21/Blanding Boulevard	Duval/Clay County Line	SR 224/Kingsley Avenue	678	275	38	4	25	0	409	80	40	2
21	SR 21/Blanding Boulevard	SR 224/Kingsley Avenue	College Drive	607	288	33	5	26	0	340	66	43	4
22	SR 21/Blanding Boulevard	College Drive	Tanglewood Boulevard	182	107	9	2	4	1	96	27	13	2
23	SR 21/Blanding Boulevard	S. of SR 134/103rd Street/Timuquana Road	SR 208/Wilson Road	285	117	25	4	16	0	113	34	22	6
24	SR 134/103rd Street/Timuquana Road	Connie Jean Road	Old Middleburg Rd	259	75	27	2	15	0	87	22	11	2
25	SR 134/103rd Street/Timuquana Road	Old Middleburg Rd	Jammes Rd	928	339	84	3	45	1	375	80	54	12
26	SR 134/103rd Street/Timuquana Road	Jammes Rd	Catoma Street	207	92	17	5	23	0	68	28	15	0
27	SR 228/Normandy Boulevard	I-295	Lenox Avenue (near Post St.)	445	174	51	3	27	0	168	32	15	5
28	SR 208/Wilson Boulevard	Fouraker Rd	SR 103/Lane Avenue	202	60	23	0	5	0	81	19	13	11
29	SR 104/Dunn Avenue	Biscayne Boulevard	I-295	253	150	39	1	25	1	112	18	8	7
30	SR200/A1A/The Buccaneer Trail	Semper Fi Drive (.25 mil W. of I-95)	Bobby Moore Circle (.25 mi. E. of William Burgess Blvd.)	69	70	34	1	5	2	65	9	7	83
31	SR200/A1A/The Buccaneer Trail	Gene Lassere Boulevard	Blackrock Road	151	80	26	2	7	1	147	24	16	124
32	US-1	E Watson Drive/Watson Road	Wildwood Drive	62	41	11	3	3	0	73	20	8	0
33	US-1	Lewis Point Road	King Street	391	178	36	5	11	0	377	63	44	4
34	US-1/Ponce De Leon Boulevard	King Street	SR 16	181	82	30	1	11	0	114	31	27	2
35	SR 16	Toms Road (NW of I-95)	Fortner Road	271	99	15	4	12	2	188	20	23	1
36	US-1/Main Street	Independent Drive	US 23/State Street	116	52	13	2	6	1	69	20	4	12
37	Ocean Street	Independent Drive	US 23/State Street	90	55	6	1	13	0	58	16	8	11
38	US 23/State Street	Lee Street	Liberty Street	236	74	18	2	18	0	107	28	14	20
39	Union Street	Lee Street	Liberty Street	245	99	17	4	28	0	89	23	12	16
40	US 90/Beaver Street	Lee Street	Liberty Street	180	90	13	0	8	0	69	6	9	10
41	Jefferson Street	Water Street	US 23/State Street	124	65	10	0	9	0	73	12	4	8
42	Broad Street	Water Street	US 23/State Street	135	51	7	1	9	0	65	4	6	15
				14,685	5,764	1,349	132	689	19	7,879	1,830	896	788
				67.0%	26.3%	6.2%	0.6%	3.1%	0.1%	14.3%	3.3%	1.6%	1.4%

Corridor Crash Characteristics (Sorted by ID #)

				Crash Type												
ID #	Roadway	From	To	Angle	Animal	Bicycle	Head On	Left Turn	Off Road	Other	Pedestrian	Rear End	Right Turn	Roll Over	Sideswipe	Unknown
1	US 90/SR 212/Beach Boulevard	Parental Home	W. of Southside Boulevard	28	1	7	10	70	30	92	12	381	15	3	120	22
2	US 90/SR 212/Beach Boulevard	W. of Southside Boulevard	Central Parkway	101	1	36	29	260	151	275	34	1580	30	10	262	63
3	US 90/SR 212/Beach Boulevard	Central Parkway	W. of Hodges	39	4	15	7	73	65	142	11	738	18	2	98	25
4	US 90/SR 212/Beach Boulevard	W. of Hodges	San Pablo	35	1	19	7	72	55	116	9	670	24	1	100	19
5	US 90/SR 212/Beach Boulevard	Penman	A1A	37	0	11	12	33	14	70	5	128	9	2	34	6
6	SR 10/Atlantic Boulevard	I-95	Arlington Road	83	1	13	30	209	158	213	12	617	36	9	328	47
7	SR 10/Atlantic Boulevard	Arlington Road	Arlington Expressway	81	1	15	13	201	48	155	30	697	34	3	124	37
8	SR 10/Atlantic Boulevard	Arlington Expressway	Sandalwood Boulevard	88	2	26	29	315	68	189	23	1115	43	5	279	46
9	SR 10/Atlantic Boulevard	Sandalwood Blvd	Hodges	78	1	12	10	188	72	243	10	889	33	3	164	24
10	SR 10/Atlantic Boulevard	Hodges	San Pablo	31	1	3	2	60	24	46	6	306	13	0	35	9
11	SR 10/Atlantic Boulevard	SR A1A/Mayport Rd	SR A1A/3rd Street	38	1	11	3	79	39	115	12	363	10	2	62	18
12	SR 109/University Boulevard S.	St. Augustine Rd	I-95	67	1	5	10	165	35	131	22	592	41	3	203	51
13	SR 109/University Boulevard S.	I-95	US 90/SR 212/Beach Boulevard	87	1	12	31	363	75	231	40	896	48	3	223	61
14	SR A1A/3rd St	16th Avenue South	6th Ave North	62	0	13	13	52	29	166	19	265	4	1	45	6
15	SR A1A/Mayport Road	SR 10/Atlantic Boulevard	SR A1A; Mayport Crossing Rd	35	1	27	6	80	69	152	25	372	18	3	126	21
16	US 1/Philips Highway	SR 126/Emerson Street	SR 109/Univeristy Bouelvard	48	0	7	10	75	32	112	18	294	24	2	85	23
17	SR 152/Baymeadows Road	Old Kings Road	E. of SR 115/Southside Boulevard	116	2	16	17	286	96	293	22	1297	65	5	299	54
18	SR 13/San Jose Blvd	Baymeadows	S. of Julington Creek	151	0	35	26	555	296	734	37	2454	82	18	484	91
19	SR 21/Blanding Boulevard	Collins Road	Duval/Clay County Line	50	1	5	14	142	38	165	15	1138	44	3	277	48
20	SR 21/Blanding Boulevard	Duval/Clay County Line	SR 224/Kingsley Avenue	94	0	20	20	213	47	275	33	1544	43	4	271	335
21	SR 21/Blanding Boulevard	SR 224/Kingsley Avenue	College Drive	69	0	29	22	190	59	371	22	1286	39	1	228	361
22	SR 21/Blanding Boulevard	College Drive	Tanglewood Boulevard	31	0	9	8	75	19	108	15	319	15	0	77	88
23	SR 21/Blanding Boulevard	S. of SR 134/103rd Street/Timuquana Road	SR 208/Wilson Road	59	0	7	10	171	38	150	20	366	12	0	80	27
24	SR 134/103rd Street/Timuquana Road	Connie Jean Road	Old Middleburg Rd	37	2	4	9	98	47	97	13	310	12	0	62	14
25	SR 134/103rd Street/Timuquana Road	Old Middleburg Rd	Jammes Rd	197	2	39	25	393	109	376	54	1337	47	13	299	77
26	SR 134/103rd Street/Timuquana Road	Jammes Rd	Catoma Street	49	1	13	10	132	37	87	17	226	18	0	39	23
27	SR 228/Normandy Boulevard	I-295	Lenox Avenue (near Post St.)	61	0	13	17	216	88	248	18	579	23	8	107	34
28	SR 208/Wilson Boulevard	Fouraker Rd	SR 103/Lane Avenue	34	1	2	8	114	39	62	5	274	9	6	68	14
29	SR 104/Dunn Avenue	Biscayne Boulevard	I-295	45	1	5	12	94	86	105	7	355	14	7	97	31
30	SR200/A1A/The Buccaneer Trail	Semper Fi Drive (.25 mil W. of I-95)	Bobby Moore Circle (.25 mi. E. of William Burgess Blvd.)	33	3	0	6	102	9	43	0	135	6	3	19	5
31	SR200/A1A/The Buccaneer Trail	Gene Lassere Boulevard	Blackrock Road	31	1	2	4	64	19	62	2	383	9	6	53	5
32	US-1	E Watson Drive/Watson Road	Wildwood Drive	26	5	0	4	36	18	84	7	124	5	5	23	4
33	US-1	Lewis Point Road	King Street	83	3	39	15	176	73	459	33	881	32	12	178	125
34	US-1/Ponce De Leon Boulevard	King Street	SR 16	32	0	24	15	54	46	219	12	498	11	4	65	237
35	SR 16	Toms Road (NW of I-95)	Fortner Road	34	3	4	5	105	58	179	7	439	20	16	83	11
36	US-1/Main Street	Independent Drive	US 23/State Street	111	0	3	8	19	21	140	23	116	7	0	160	37
37	Ocean Street	Independent Drive	US 23/State Street	107	0	5	5	23	21	100	12	80	7	1	112	25
38	US 23/State Street	Lee Street	Liberty Street	112	0	6	6	41	36	152	30	409	4	0	243	40
39	Union Street	Lee Street	Liberty Street	149	0	10	6	28	44	179	30	264	9	1	222	52
40	US 90/Beaver Street	Lee Street	Liberty Street	164	0	18	8	92	30	101	20	138	19	4	134	43
41	Jefferson Street	Water Street	US 23/State Street	128	0	3	3	33	14	86	6	140	7	1	100	19
42	Broad Street	Water Street	US 23/State Street	144	0	10	5	19	14	87	6	111	3	0	107	23
				3,085	42	553	510	5,766	2,366	7,410	754	25,106	962	170	6,175	2,301
				5.6%	0.1%	1.0%	0.9%	10.4%	4.3%	13.4%	1.4%	45.5%	1.7%	0.3%	11.2%	4.2%

Corridor Crash Characteristics (Sorted by ID #)

				Month											
ID #	Roadway	From	To	January	February	March	April	May	June	July	August	September	October	November	December
1	US 90/SR 212/Beach Boulevard	Parental Home	W. of Southside Boulevard	79	56	77	59	62	60	49	80	64	78	64	63
2	US 90/SR 212/Beach Boulevard	W. of Southside Boulevard	Central Parkway	238	225	254	231	229	225	239	251	234	259	213	234
3	US 90/SR 212/Beach Boulevard	Central Parkway	W. of Hodges	67	96	115	113	101	79	104	109	112	150	89	102
4	US 90/SR 212/Beach Boulevard	W. of Hodges	San Pablo	99	97	94	94	101	93	91	81	92	98	93	95
5	US 90/SR 212/Beach Boulevard	Penman	A1A	20	28	27	41	45	27	39	30	38	17	23	26
6	SR 10/Atlantic Boulevard	I-95	Arlington Road	205	146	140	148	146	137	133	134	129	144	161	133
7	SR 10/Atlantic Boulevard	Arlington Road	Arlington Expressway	115	118	108	119	118	113	104	131	135	128	129	121
8	SR 10/Atlantic Boulevard	Arlington Expressway	Sandalwood Boulevard	175	171	182	190	164	161	198	229	192	178	188	200
9	SR 10/Atlantic Boulevard	Sandalwood Blvd	Hodges	111	141	160	147	160	147	129	168	129	124	164	147
10	SR 10/Atlantic Boulevard	Hodges	San Pablo	46	40	50	41	47	47	43	50	49	36	40	47
11	SR 10/Atlantic Boulevard	SR A1A/Mayport Rd	SR A1A/3rd Street	48	63	64	79	66	54	77	62	62	62	59	57
12	SR 109/University Boulevard S.	St. Augustine Rd	I-95	117	99	118	104	122	90	103	113	114	104	119	123
13	SR 109/University Boulevard S.	I-95	US 90/SR 212/Beach Boulevard	163	180	179	177	195	164	169	165	143	192	165	179
14	SR A1A/3rd St	16th Avenue South	6th Ave North	42	56	68	61	74	49	83	51	47	48	48	48
15	SR A1A/Mayport Road	SR 10/Atlantic Boulevard	SR A1A; Mayport Crossing Rd	82	74	77	67	77	74	68	87	81	81	91	76
16	US 1/Philips Highway	SR 126/Emerson Street	SR 109/Univeristy Bouelvard	68	58	50	61	73	45	52	61	64	58	64	76
17	SR 152/Baymeadows Road	Old Kings Road	E. of SR 115/Southside Boulevard	198	224	238	242	233	182	185	194	204	242	218	208
18	SR 13/San Jose Blvd	Baymeadows	S. of Julington Creek	365	424	430	412	396	425	384	413	409	433	422	450
19	SR 21/Blanding Boulevard	Collins Road	Duval/Clay County Line	143	150	156	148	160	151	145	171	155	149	186	226
20	SR 21/Blanding Boulevard	Duval/Clay County Line	SR 224/Kingsley Avenue	210	213	263	240	252	236	210	254	235	243	243	300
21	SR 21/Blanding Boulevard	SR 224/Kingsley Avenue	College Drive	184	199	216	240	221	232	215	238	196	237	247	252
22	SR 21/Blanding Boulevard	College Drive	Tanglewood Boulevard	57	53	66	62	68	61	60	66	65	81	55	70
23	SR 21/Blanding Boulevard	S. of SR 134/103rd Street/Timuquana Road	SR 208/Wilson Road	75	73	85	61	69	77	82	83	76	78	92	89
24	SR 134/103rd Street/Timuquana Road	Connie Jean Road	Old Middleburg Rd	48	55	47	55	58	61	46	73	65	68	69	60
25	SR 134/103rd Street/Timuquana Road	Old Middleburg Rd	Jammes Rd	247	231	240	247	272	229	215	278	275	248	222	264
26	SR 134/103rd Street/Timuquana Road	Jammes Rd	Catoma Street	62	57	62	49	42	41	63	54	57	52	50	63
27	SR 228/Normandy Boulevard	I-295	Lenox Avenue (near Post St.)	137	97	102	107	124	107	94	117	116	127	131	153
28	SR 208/Wilson Boulevard	Fouraker Rd	SR 103/Lane Avenue	41	45	63	43	53	45	53	54	70	62	51	56
29	SR 104/Dunn Avenue	Biscayne Boulevard	I-295	65	66	64	99	71	63	79	82	64	62	67	77
30	SR200/A1A/The Buccaneer Trail	Semper Fi Drive (.25 mil W. of I-95)	Bobby Moore Circle (.25 mi. E. of William Burgess Blvd.)	29	32	43	39	27	29	22	30	36	26	28	23
31	SR200/A1A/The Buccaneer Trail	Gene Lassere Boulevard	Blackrock Road	33	55	54	50	53	56	59	53	64	63	54	47
32	US-1	E Watson Drive/Watson Road	Wildwood Drive	33	33	34	27	26	18	17	38	25	31	36	23
33	US-1	Lewis Point Road	King Street	151	170	172	205	163	187	175	174	160	202	152	198
34	US-1/Ponce De Leon Boulevard	King Street	SR 16	94	99	98	107	100	97	98	91	84	117	117	115
35	SR 16	Toms Road (NW of I-95)	Fortner Road	64	79	65	75	84	74	106	91	75	76	100	75
36	US-1/Main Street	Independent Drive	US 23/State Street	61	50	40	60	56	46	61	51	71	55	49	45
37	Ocean Street	Independent Drive	US 23/State Street	35	43	55	38	51	32	41	44	37	38	50	34
38	US 23/State Street	Lee Street	Liberty Street	76	94	99	105	85	85	82	74	90	100	89	100
39	Union Street	Lee Street	Liberty Street	84	65	88	82	80	80	87	76	81	88	95	88
40	US 90/Beaver Street	Lee Street	Liberty Street	69	55	58	62	64	67	55	80	69	59	72	61
41	Jefferson Street	Water Street	US 23/State Street	46	44	41	48	40	48	44	44	45	46	52	42
42	Broad Street	Water Street	US 23/State Street	47	41	46	40	54	49	39	43	46	43	35	46
				4,329	4,395	4,688	4,675	4,682	4,343	4,398	4,768	4,555	4,783	4,692	4,892
				7.8%	8.0%	8.5%	8.5%	8.5%	7.9%	8.0%	8.6%	8.3%	8.7%	8.5%	8.9%

Corridor Crash Characteristics (Sorted by ID #)

				Day						
ID #	Roadway	From	To	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	US 90/SR 212/Beach Boulevard	Parental Home	W. of Southside Boulevard	111	134	128	137	105	98	78
2	US 90/SR 212/Beach Boulevard	W. of Southside Boulevard	Central Parkway	393	428	464	441	467	390	249
3	US 90/SR 212/Beach Boulevard	Central Parkway	W. of Hodges	175	206	209	179	193	147	128
4	US 90/SR 212/Beach Boulevard	W. of Hodges	San Pablo	157	169	181	176	186	132	127
5	US 90/SR 212/Beach Boulevard	Penman	A1A	36	53	51	48	63	57	53
6	SR 10/Atlantic Boulevard	I-95	Arlington Road	260	289	287	273	285	225	137
7	SR 10/Atlantic Boulevard	Arlington Road	Arlington Expressway	215	227	200	211	273	195	118
8	SR 10/Atlantic Boulevard	Arlington Expressway	Sandalwood Boulevard	313	344	346	349	392	302	182
9	SR 10/Atlantic Boulevard	Sandalwood Blvd	Hodges	242	249	248	251	295	251	191
10	SR 10/Atlantic Boulevard	Hodges	San Pablo	79	85	84	73	100	72	43
11	SR 10/Atlantic Boulevard	SR A1A/Mayport Rd	SR A1A/3rd Street	105	105	111	95	143	107	87
12	SR 109/University Boulevard S.	St. Augustine Rd	I-95	190	217	214	235	249	118	103
13	SR 109/University Boulevard S.	I-95	US 90/SR 212/Beach Boulevard	350	352	368	297	361	182	161
14	SR A1A/3rd St	16th Avenue South	6th Ave North	73	82	81	78	108	124	129
15	SR A1A/Mayport Road	SR 10/Atlantic Boulevard	SR A1A; Mayport Crossing Rd	113	162	135	167	147	129	82
16	US 1/Philips Highway	SR 126/Emerson Street	SR 109/Univeristy Bouelvard	99	128	123	117	119	81	63
17	SR 152/Baymeadows Road	Old Kings Road	E. of SR 115/Southside Boulevard	391	432	440	460	478	193	174
18	SR 13/San Jose Blvd	Baymeadows	S. of Julington Creek	735	816	835	838	908	491	340
19	SR 21/Blanding Boulevard	Collins Road	Duval/Clay County Line	242	285	262	290	378	294	189
20	SR 21/Blanding Boulevard	Duval/Clay County Line	SR 224/Kingsley Avenue	426	405	428	465	494	430	251
21	SR 21/Blanding Boulevard	SR 224/Kingsley Avenue	College Drive	388	379	407	418	434	373	278
22	SR 21/Blanding Boulevard	College Drive	Tanglewood Boulevard	109	123	94	113	143	105	77
23	SR 21/Blanding Boulevard	S. of SR 134/103rd Street/Timuquana Road	SR 208/Wilson Road	136	159	139	131	194	110	71
24	SR 134/103rd Street/Timuquana Road	Connie Jean Road	Old Middleburg Rd	105	129	112	104	105	82	68
25	SR 134/103rd Street/Timuquana Road	Old Middleburg Rd	Jammes Rd	394	463	436	451	507	419	298
26	SR 134/103rd Street/Timuquana Road	Jammes Rd	Catoma Street	92	107	93	78	116	109	57
27	SR 228/Normandy Boulevard	I-295	Lenox Avenue (near Post St.)	213	196	200	235	253	190	125
28	SR 208/Wilson Boulevard	Fouraker Rd	SR 103/Lane Avenue	108	88	83	88	108	81	80
29	SR 104/Dunn Avenue	Biscayne Boulevard	I-295	141	134	146	128	136	85	89
30	SR200/A1A/The Buccaneer Trail	Semper Fi Drive (.25 mil W. of I-95)	Bobby Moore Circle (.25 mi. E. of William Burgess Blvd.)	55	58	66	49	79	31	26
31	SR200/A1A/The Buccaneer Trail	Gene Lassere Boulevard	Blackrock Road	120	107	78	105	116	68	47
32	US-1	E Watson Drive/Watson Road	Wildwood Drive	45	59	51	58	64	37	27
33	US-1	Lewis Point Road	King Street	321	290	371	325	376	253	173
34	US-1/Ponce De Leon Boulevard	King Street	SR 16	181	171	184	189	219	169	104
35	SR 16	Toms Road (NW of I-95)	Fortner Road	131	140	123	126	163	164	117
36	US-1/Main Street	Independent Drive	US 23/State Street	80	102	96	106	110	92	59
37	Ocean Street	Independent Drive	US 23/State Street	74	66	82	83	84	57	52
38	US 23/State Street	Lee Street	Liberty Street	150	165	172	168	183	120	121
39	Union Street	Lee Street	Liberty Street	129	147	157	158	179	124	100
40	US 90/Beaver Street	Lee Street	Liberty Street	118	115	144	145	127	74	48
41	Jefferson Street	Water Street	US 23/State Street	98	83	97	80	86	58	38
42	Broad Street	Water Street	US 23/State Street	94	78	87	87	97	50	36
				7,987	8,527	8,613	8,605	9,623	6,869	4,976
				14.5%	15.4%	15.6%	15.6%	17.4%	12.4%	9.0%

		Corridor Location					Corridor Data				
Rank	ID #	Roadway	From	To	Corridor Length	County	Overall Crash Rate (MVMT)	Fatal & Serious Injury Crash Rate (MVMT)	Bike/Ped Crash Rate (MVMT)	Distracted Driving Rate (MVMT)	Underserved Population (Avg. All Block Group Percentiles within 0.5 Mile)
1	42	Broad Street	Water Street	US 23/State Street	0.58	Duval	85.80	0.97	2.59	10.54	75.40%
2	40	US 90/Beaver Street	Lee Street	Liberty Street	1.06	Duval	74.51	1.25	3.67	6.66	91.53%
3	41	Jefferson Street	Water Street	US 23/State Street	0.58	Duval	65.91	0.98	1.10	8.91	75.40%
4	37	Ocean Street	Independent Drive	US 23/State Street	0.56	Duval	60.25	0.96	2.05	6.99	74.36%
5	36	US-1/Main Street	Independent Drive	US 23/State Street	0.56	Duval	54.19	1.18	2.18	5.80	69.26%
6	7	SR 10/Atlantic Boulevard	Arlington Road	Arlington Expressway	1.73	Duval	14.70	0.41	0.46	2.02	66.64%
7	24	SR 134/103rd Street/Timuquana Road	Connie Jean Road	Old Middleburg Rd	1.46	Duval	21.66	0.61	0.52	2.67	64.92%
8	38	US 23/State Street	Lee Street	Liberty Street	1.06	Duval	20.00	0.32	0.67	1.98	91.87%
9	39	Union Street	Lee Street	Liberty Street	1.06	Duval	18.51	0.37	0.74	1.66	91.87%
10	12	SR 109/University Boulevard S.	St. Augustine Rd	I-95	1.10	Duval	16.36	0.38	0.33	2.30	60.34%
11	28	SR 208/Wilson Boulevard	Fouraker Rd	SR 103/Lane Avenue	1.49	Duval	15.25	0.43	0.17	1.94	66.49%
12	25	SR 134/103rd Street/Timuquana Road	Old Middleburg Rd	Jammes Rd	3.11	Duval	13.05	0.32	0.41	1.65	69.23%
13	16	US 1/Philips Highway	SR 126/Emerson Street	SR 109/Univeristy Bouelvard	1.60	Duval	10.14	0.36	0.35	1.39	74.77%
14	19	SR 21/Blanding Boulevard	Collins Road	Duval/Clay County Line	1.02	Duval	17.19	0.26	0.18	2.76	63.39%
15	17	SR 152/Baymeadows Road	Old Kings Road	E. of SR 115/Southside Boulevard	2.49	Duval	14.89	0.21	0.22	2.07	52.36%
16	27	SR 228/Normandy Boulevard	I-295	Lenox Avenue (near Post St.)	2.23	Duval	13.18	0.37	0.29	1.57	65.97%
17	26	SR 134/103rd Street/Timuquana Road	Jammes Rd	Catoma Street	1.50	Duval	9.45	0.32	0.43	0.99	68.40%
18	32	US-1	E Watson Drive/Watson Road	Wildwood Drive	1.00	St. Johns	9.42	0.46	0.19	1.98	30.96%
19	5	US 90/SR 212/Beach Boulevard	Penman	A1A	0.87	Duval	8.62	0.53	0.38	1.43	33.81%
20	35	SR 16	Toms Road (NW of I-95)	Fortner Road	1.33	St. Johns	11.38	0.22	0.13	2.22	33.54%
21	10	SR 10/Atlantic Boulevard	Hodges	San Pablo	0.48	Duval	11.15	0.21	0.19	2.10	27.27%
22	11	SR 10/Atlantic Boulevard	SR A1A/Mayport Rd	SR A1A/3rd Street	1.28	Duval	10.70	0.33	0.33	2.96	28.98%
23	8	SR 10/Atlantic Boulevard	Arlington Expressway	Sandalwood Boulevard	2.14	Duval	10.01	0.19	0.22	1.59	75.60%
24	30	SR200/A1A/The Buccaneer Trail	Semper Fi Drive (.25 mil W. of I-95)	Bobby Moore Circle (.25 mi. E. of William Burgess Blvd.)	1.08	Nassau	8.80	0.58	0.00	1.57	41.75%
25	13	SR 109/University Boulevard S.	I-95	US 90/SR 212/Beach Boulevard	3.72	Duval	8.28	0.26	0.21	1.02	66.28%
26	15	SR A1A/Mayport Road	SR 10/Atlantic Boulevard	SR A1A; Mayport Crossing Rd	2.30	Duval	7.43	0.31	0.41	1.14	45.26%
27	14	SR A1A/3rd St	16th Avenue South	6th Ave North	1.49	Duval	7.22	0.25	0.34	1.39	27.77%
28	29	SR 104/Dunn Avenue	Biscayne Boulevard	I-295	3.68	Duval	6.85	0.28	0.10	0.89	81.61%
29	20	SR 21/Blanding Boulevard	Duval/Clay County Line	SR 224/Kingsley Avenue	1.87	Clay	11.72	0.14	0.21	1.65	53.64%
30	23	SR 21/Blanding Boulevard	S. of SR 134/103rd Street/Timuquana Road	SR 208/Wilson Road	1.58	Duval	11.45	0.29	0.33	1.38	62.30%
31	4	US 90/SR 212/Beach Boulevard	W. of Hodges	San Pablo	1.27	Duval	10.83	0.23	0.27	1.41	27.27%
32	33	US-1	Lewis Point Road	King Street	2.78	St. Johns	9.78	0.19	0.33	1.75	58.16%
33	34	US-1/Ponce De Leon Boulevard	King Street	SR 16	1.93	St. Johns	9.65	0.23	0.28	0.90	47.41%
34	2	US 90/SR 212/Beach Boulevard	W. of Southside Boulevard	Central Parkway	2.95	Duval	9.49	0.30	0.23	1.37	62.47%
35	18	SR 13/San Jose Blvd	Baymeadows	S. of Julington Creek	5.86	Duval	9.34	0.20	0.14	1.48	30.08%
36	21	SR 21/Blanding Boulevard	SR 224/Kingsley Avenue	College Drive	2.62	Clay	8.55	0.11	0.16	1.09	50.02%
37	6	SR 10/Atlantic Boulevard	I-95	Arlington Road	4.47	Duval	7.67	0.22	0.11	0.99	59.33%
38	22	SR 21/Blanding Boulevard	College Drive	Tanglewood Boulevard	1.22	Clay	7.40	0.14	0.23	0.93	53.06%
39	1	US 90/SR 212/Beach Boulevard	Parental Home	W. of Southside Boulevard	1.11	Duval	6.46	0.11	0.15	0.86	44.65%
40	31	SR200/A1A/The Buccaneer Trail	Gene Lassere Boulevard	Blackrock Road	1.91	Nassau	5.06	0.21	0.03	1.16	39.76%
41	9	SR 10/Atlantic Boulevard	Sandalwood Blvd	Hodges	3.55	Duval	4.62	0.10	0.06	0.66	49.51%
42	3	US 90/SR 212/Beach Boulevard	Central Parkway	W. of Hodges	3.08	Duval	4.45	0.14	0.09	0.74	47.10%

Corridor Ranking (Issue Count Results)

		Corridor Location					Corridor Ranking					Issue Count
Rank	ID #	Roadway	From	To	Corridor Length	County	Overall Crash Rate Rank	Fatal & Serious Injury - Crash Rate Rank	Bike/Ped Crash Rate Rank	Distracted Driving Crash Rate Rank	Average Underserved Population within 0.5 mile Rank	Issue Count (number of times ranked in the top 15)
1	42	Broad Street	Water Street	US 23/State Street	0.58	Duval	**1**	**4**	**2**	**1**	**6**	**5**
2	40	US 90/Beaver Street	Lee Street	Liberty Street	1.06	Duval	**2**	**1**	**1**	**4**	**3**	**5**
3	41	Jefferson Street	Water Street	US 23/State Street	0.58	Duval	**3**	**3**	**5**	**2**	**6**	**5**
4	37	Ocean Street	Independent Drive	US 23/State Street	0.56	Duval	**4**	**5**	**4**	**3**	**9**	**5**
5	36	US-1/Main Street	Independent Drive	US 23/State Street	0.56	Duval	**5**	**2**	**3**	**5**	**10**	**5**
6	7	SR 10/Atlantic Boulevard	Arlington Road	Arlington Expressway	1.73	Duval	**13**	**11**	**9**	**13**	**13**	**5**
7	24	SR 134/103rd Street/Timuquana Road	Connie Jean Road	Old Middleburg Rd	1.46	Duval	**6**	**6**	**8**	**8**	17	**4**
8	38	US 23/State Street	Lee Street	Liberty Street	1.06	Duval	**7**	19	**7**	**14**	**1**	**4**
9	39	Union Street	Lee Street	Liberty Street	1.06	Duval	**8**	**14**	**6**	18	**1**	**4**
10	12	SR 109/University Boulevard S.	St. Augustine Rd	I-95	1.10	Duval	**10**	**12**	17	**9**	21	**3**
11	28	SR 208/Wilson Boulevard	Fouraker Rd	SR 103/Lane Avenue	1.49	Duval	**11**	**10**	32	16	**14**	**3**
12	25	SR 134/103rd Street/Timuquana Road	Old Middleburg Rd	Jammes Rd	3.11	Duval	**15**	17	**12**	20	**11**	**3**
13	16	US 1/Philips Highway	SR 126/Emerson Street	SR 109/Univeristy Bouelvard	1.60	Duval	22	**15**	**14**	28	**8**	**3**
14	19	SR 21/Blanding Boulevard	Collins Road	Duval/Clay County Line	1.02	Duval	**9**	25	31	**7**	18	**2**
15	17	SR 152/Baymeadows Road	Old Kings Road	E. of SR 115/Southside Boulevard	2.49	Duval	**12**	31	26	**12**	26	**2**
16	27	SR 228/Normandy Boulevard	I-295	Lenox Avenue (near Post St.)	2.23	Duval	**14**	**13**	20	23	16	**2**
17	26	SR 134/103rd Street/Timuquana Road	Jammes Rd	Catoma Street	1.50	Duval	27	18	**10**	36	**12**	**2**
18	32	US-1	E Watson Drive/Watson Road	Wildwood Drive	1.00	St. Johns	28	**9**	29	**15**	37	**2**
19	5	US 90/SR 212/Beach Boulevard	Penman	A1A	0.87	Duval	31	**8**	**13**	25	35	**2**
20	35	SR 16	Toms Road (NW of I-95)	Fortner Road	1.33	St. Johns	18	29	36	**10**	36	**1**
21	10	SR 10/Atlantic Boulevard	Hodges	San Pablo	0.48	Duval	19	32	30	**11**	41	**1**
22	11	SR 10/Atlantic Boulevard	SR A1A/Mayport Rd	SR A1A/3rd Street	1.28	Duval	21	16	19	**6**	39	**1**
23	8	SR 10/Atlantic Boulevard	Arlington Expressway	Sandalwood Boulevard	2.14	Duval	23	35	25	21	**5**	**1**
24	30	SR200/A1A/The Buccaneer Trail	Semper Fi Drive (.25 mil W. of I-95)	Bobby Moore Circle (.25 mi. E. of William Burgess Blvd.)	1.08	Nassau	30	**7**	42	22	33	**1**
25	13	SR 109/University Boulevard S.	I-95	US 90/SR 212/Beach Boulevard	3.72	Duval	33	24	28	34	**15**	**1**
26	15	SR A1A/Mayport Road	SR 10/Atlantic Boulevard	SR A1A; Mayport Crossing Rd	2.30	Duval	35	20	**11**	32	31	**1**
27	14	SR A1A/3rd St	16th Avenue South	6th Ave North	1.49	Duval	37	26	**15**	27	40	**1**
28	29	SR 104/Dunn Avenue	Biscayne Boulevard	I-295	3.68	Duval	38	23	38	39	**4**	**1**
29	20	SR 21/Blanding Boulevard	Duval/Clay County Line	SR 224/Kingsley Avenue	1.87	Clay	16	37	27	19	24	**0**
30	23	SR 21/Blanding Boulevard	S. of SR 134/103rd Street/Timuquana Road	SR 208/Wilson Road	1.58	Duval	17	22	18	29	20	**0**
31	4	US 90/SR 212/Beach Boulevard	W. of Hodges	San Pablo	1.27	Duval	20	27	22	26	41	**0**
32	33	US-1	Lewis Point Road	King Street	2.78	St. Johns	24	36	16	17	23	**0**
33	34	US-1/Ponce De Leon Boulevard	King Street	SR 16	1.93	St. Johns	25	28	21	38	29	**0**
34	2	US 90/SR 212/Beach Boulevard	W. of Southside Boulevard	Central Parkway	2.95	Duval	26	21	23	30	19	**0**
35	18	SR 13/San Jose Blvd	Baymeadows	S. of Julington Creek	5.86	Duval	29	34	35	24	38	**0**
36	21	SR 21/Blanding Boulevard	SR 224/Kingsley Avenue	College Drive	2.62	Clay	32	41	33	33	27	**0**
37	6	SR 10/Atlantic Boulevard	I-95	Arlington Road	4.47	Duval	34	30	37	35	22	**0**
38	22	SR 21/Blanding Boulevard	College Drive	Tanglewood Boulevard	1.22	Clay	36	39	24	37	25	**0**
39	1	US 90/SR 212/Beach Boulevard	Parental Home	W. of Southside Boulevard	1.11	Duval	39	40	34	40	32	**0**
40	31	SR200/A1A/The Buccaneer Trail	Gene Lassere Boulevard	Blackrock Road	1.91	Nassau	40	33	41	31	34	**0**
41	9	SR 10/Atlantic Boulevard	Sandalwood Blvd	Hodges	3.55	Duval	41	42	40	42	28	**0**
42	3	US 90/SR 212/Beach Boulevard	Central Parkway	W. of Hodges	3.08	Duval	42	38	39	41	30	**0**

Appendix F -

FDOT Resources from the 2018 District Two Local Government Transportation Summit (Safety Toolbox for Locals)

Safety Toolbox for Locals

Lorraine Moyle
State Local Program Administrator,
Florida Department of Transportation

Jeffrey Scott, PE
D2 Safety Engineer,
Florida Department of Transportation

Safety Tool Box for Locals

- Session Background – Lorraine Moyle
- How We Define Safety – Jeffrey Scott
- Local Programs Overview and Tools– Lorraine Moyle
- Crash Data Resources – Jeffrey Scott
- Resources and Assistance – Lorraine Moyle and Jeffrey Scott

D2 LOCAL GOVERNMENT
Transportation Summit
Partnerships with Purpose
2018

Safety Tool Box for Locals

- Session Background – Lorraine Moyle
  - Local agency questions regarding ‘Safety’ projects
  - Developed a ’Safety’ working group as a component of the Local Agency Program Community of Practice
  - Important step in the process is to consolidate and share relevant information regarding ‘Safety’ information

D2 LOCAL GOVERNMENT Transportation Summit Partnerships with Purpose 2018

Transportation Project Delivery Tool Box- Local Roadways

June 2017

OUTREACH TO LOCALS

Florida Department of Transportation

- FDOT Local Programs (http://www.fdot.gov/programmanagement/LP/Default.shtm)
- District Community Traffic Safety Teams (CTST) – (http://www.fdot.gov/safety/7B-YourCommunity/YourCommunity.shtm)
- Florida Strategic Highway Safety Plan (http://www.fdot.gov/safety/SHSP2012/SHSP-2012.shtm)
- Local Technical Assistance Program (LTAP)/Transportation Safety Center at University of Florida (http://www.techtransfer.ce.ufl.edu/t2ctt/ltap.asp)
- District Local Transportation Symposiums - D2 (Jacksonville), D3 (Chipley), D7 (Tampa) has something in place.
- Safe Routes to School Web Pages (http://www.srtsfl.org/)

Federal Highway Administration

- Local and Rural Road Safety Program (https://safety.fhwa.dot.gov/local_rural/) (Crash Facts, Funding, Policy and Guidance, Partners and Guidance)
- Training, Tools, Guidance and Countermeasures for Locals Practitioners (https://safety.fhwa.dot.gov/local_rural/training/) (Local Road Safety Videos for Elected Officials, 9 Proven Safety Countermeasures, Local Road Safety Checklists, Implementing Local Safety Management, Local Rural Road Owner's Manual, Local and Rural Road Safety Briefing Sheets)
- Roadway Safety Professional Capacity Building (https://rspcb.safety.fhwa.dot.gov/Default.aspx) (Technical Assistance, Training and Education, Higher Education, Noteworthy Practices, Communities of Practice

University of Florida, Technology Transfer Center

- Florida Local Technical Assistance Program (LTAP) (http://www.techtransfer.ce.ufl.edu/t2ctt/LTAP.asp)

Institute of Transportation Engineers (ITE)

- ITE Vision Zero (http://www.ite.org/visionzero/) (On Demand Resources, Safety Resources Toolbox, etc.)

FDOT Local Agency Program Community of Practice

FUNDING PROGRAMS

Safety Program Funds:

- **Highway Safety Plan (HSP)**- focus on behavior enforcement and education
- **Highway Safety Improvement Program (HSIP)**- focus on engineering infrastructure
- **Safe Routes to School (SRTS)** - schools and surrounding areas www.srtsfl.org

Other More Common Fund Types:

- **Federal-Aid Highway Program** (TAP, SU, etc.)
  - FDOT implements via Local Agency Program (LAP) off the State Highway System
- **Local Programs** FDOT Local Programs
  - SCOP, SCOP Municipalities, SCRAP, CIGP, TRIP
  - Main webpage for statewide information implemented January 1, 2016.
  - Implement statewide application cycle create consistent parameters, including due dates, for the local project applications

DATA, DATA SYSTEMS, and Training

- Florida Department of Highway Safety and Motor Vehicles (DHSMV) Florida Integrated Report Exchange System (FIRES) - FIRES
- Signal Four Analytics - https://s4.geoplan.ufl.edu/
- FDOT Crash Data Academy - FDOT Crash Data Academy
- GIS crash maps generated statewide by Central Office - ArcGIS
- Traffic Safety Web Portal - https://fdotewp1.dot.state.fl.us/TrafficSafetyWebPortal/

CONTRACT MECHANISMS

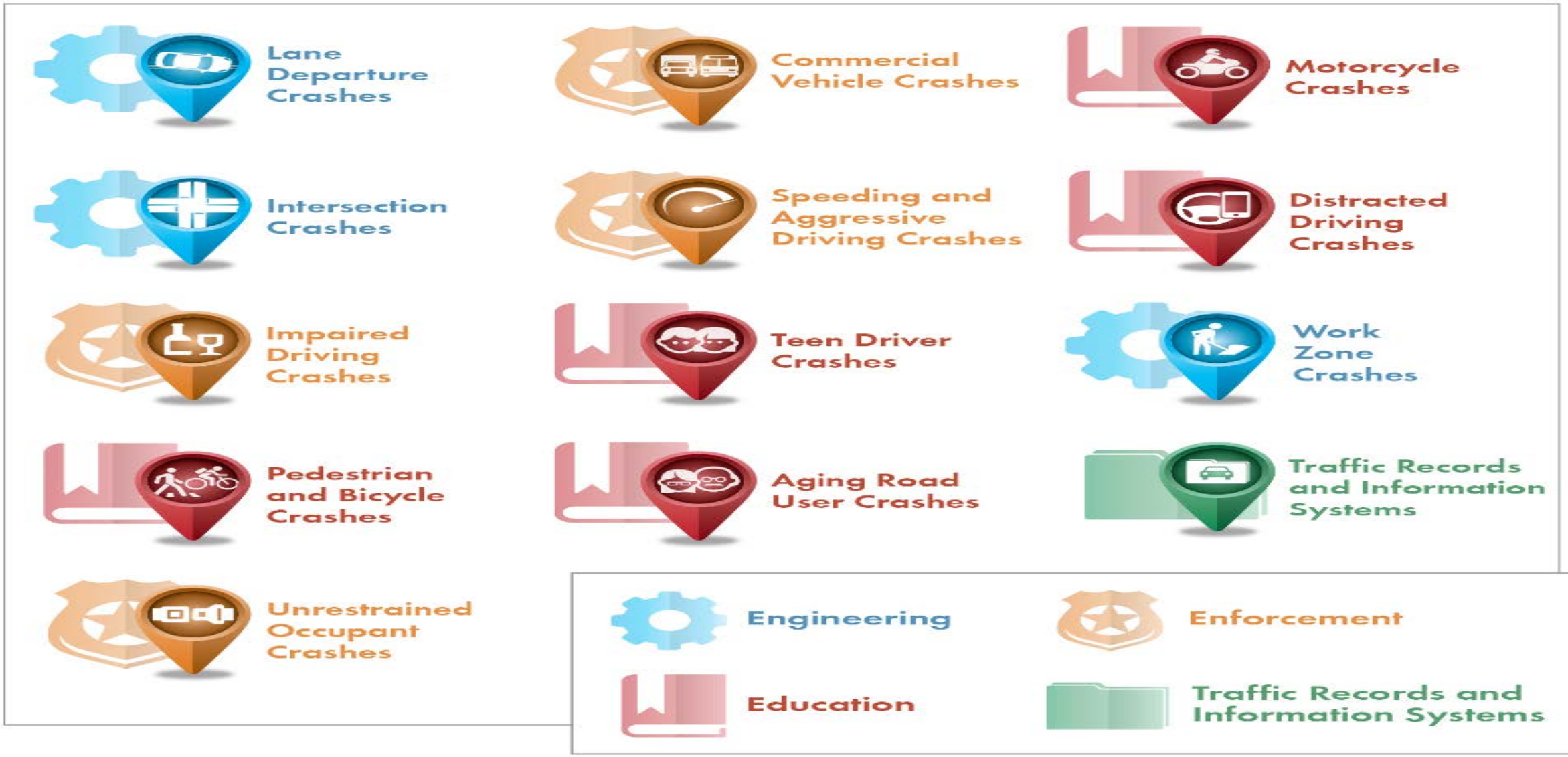
**It may or may not be feasible to implement all contract types in all Districts.*

- Design Push Button
- Design Build Push Button
- Push Button equipment purchase contracts
  - Require Public Interest Finding approved by FHWA
  - Limited to $5 million per contract
- Push button contracts for installation of signing, striping, guardrail, etc. for local use
  - Requires SEP-14
- Force account delivery by locals
  - FDOT provides safety equipment for locals to install
- Templates to be included in Tool Box for District use:
  - Maintenance agreements
  - Vendor agreements for local install

Safety Tool Box for Locals

- How We Define Safety – Jeffrey Scott
  - For FHWA Highway Safety Improvement Program safety focus is on the reduction of Fatal and Serious Injury Crashes and are an Emphasis Area of the Strategic Highway Safety Plan (SHSP)
  - For the Safe Routes To School the focus is on planning, design, and construction of infrastructure-related projects that will substantially improve the ability of students to walk and bicycle to school. The projects should directly support increased safety and convenience for school children in grades K-12 to bicycle and/or walk to school.

The Florida Strategic Highway Safety Plan - The Emphasis Areas



Crash Data for the SHSP

Relation of SHSP emphasis areas to federal measures

- Measurement of success in the SHSP is based on crash data, specifically the incidence of traffic fatalities and serious injuries
- Florida is driving down fatalities by focusing on specific actions and opportunities
- Coalitions and agencies work towards addressing the specifics in their areas of concern, all in support of the overarching plan

Fatalities and Serious Injuries by Emphasis Area

Serious Injuries	2011-2014	Fatalities
23,661	Lane Departure Crashes	4,247
35,524	Intersection Crashes	3,118
5,135	Impaired Driving Crashes	2,839
9,862	Pedestrians and Bicyclists	2,578
8,736	Unrestrained Occupants	2,474
15,586	Aging Driver Crashes	1,912
9,584	Motorcyclists	1,829
11,885	Commercial Vehicle Crashes	1,590
6,044	Speeding and Aggressive Driving Crashes	1,458
9,916	Teen Driver Crashes	865
11,612	Distracted Driving Crashes	769
1,714	Work Zone Crashes	268

Source: FDOT Safety Office (2016).

D2 LOCAL GOVERNMENT Transportation Summit Partnerships with Purpose 2018

Safety Tool Box for Locals

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D2 LOCAL GOVERNMENT
Transportation Summit
Partnerships with Purpose
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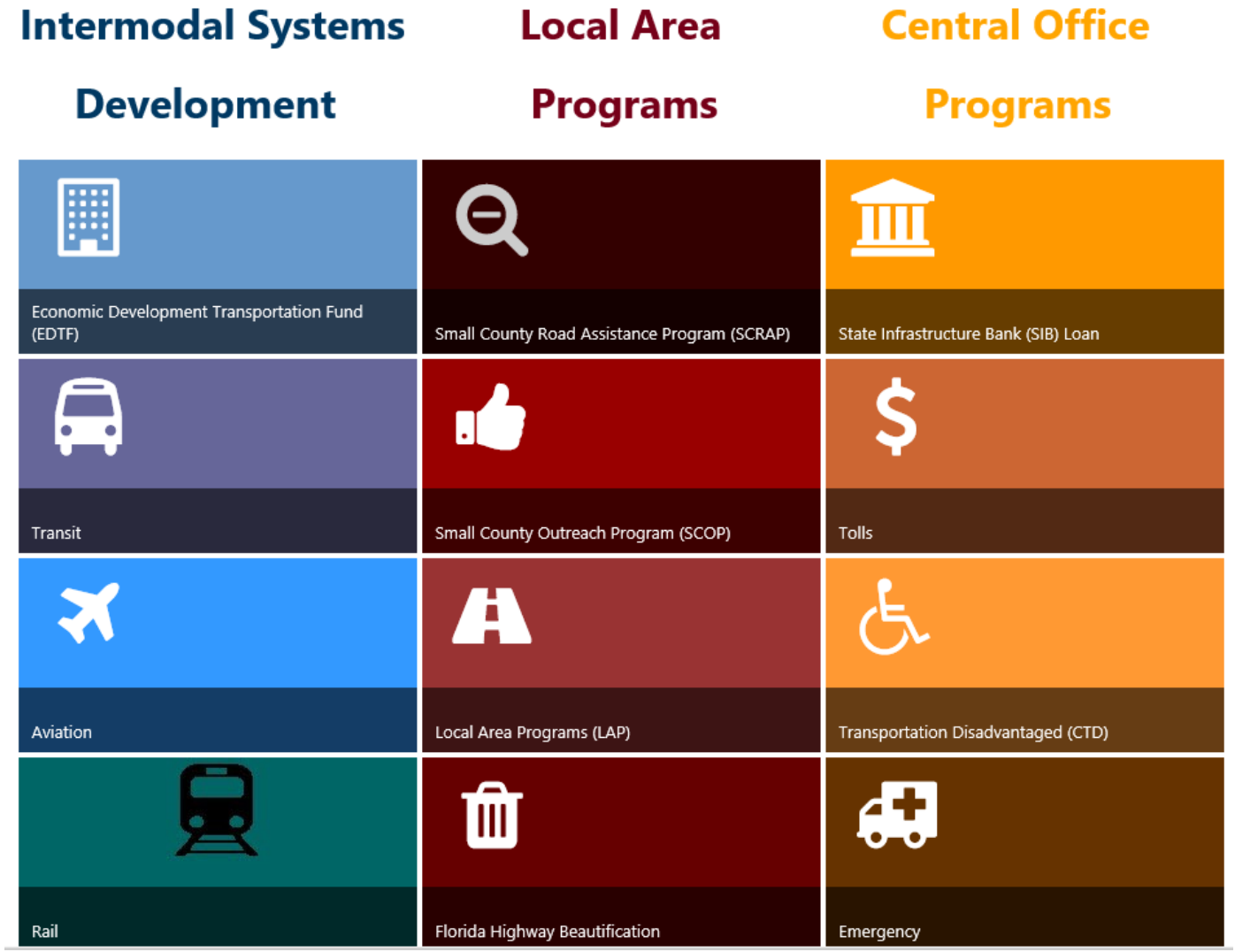
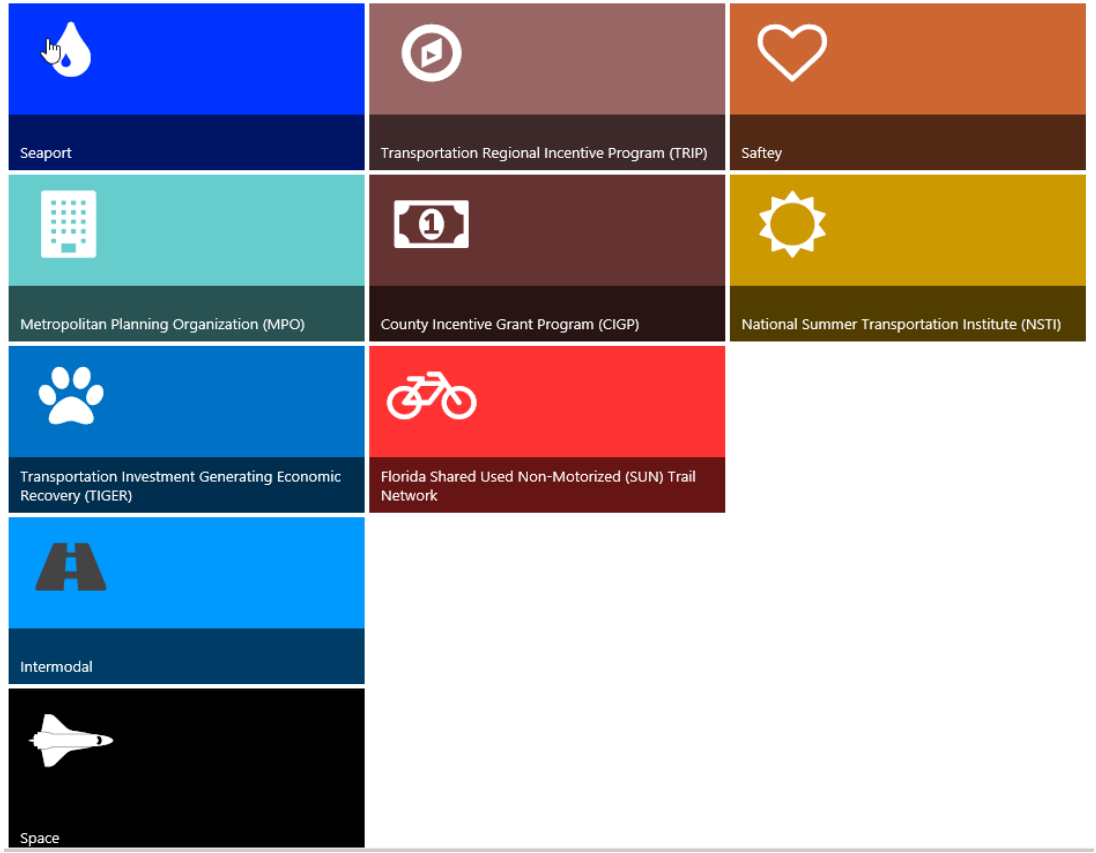
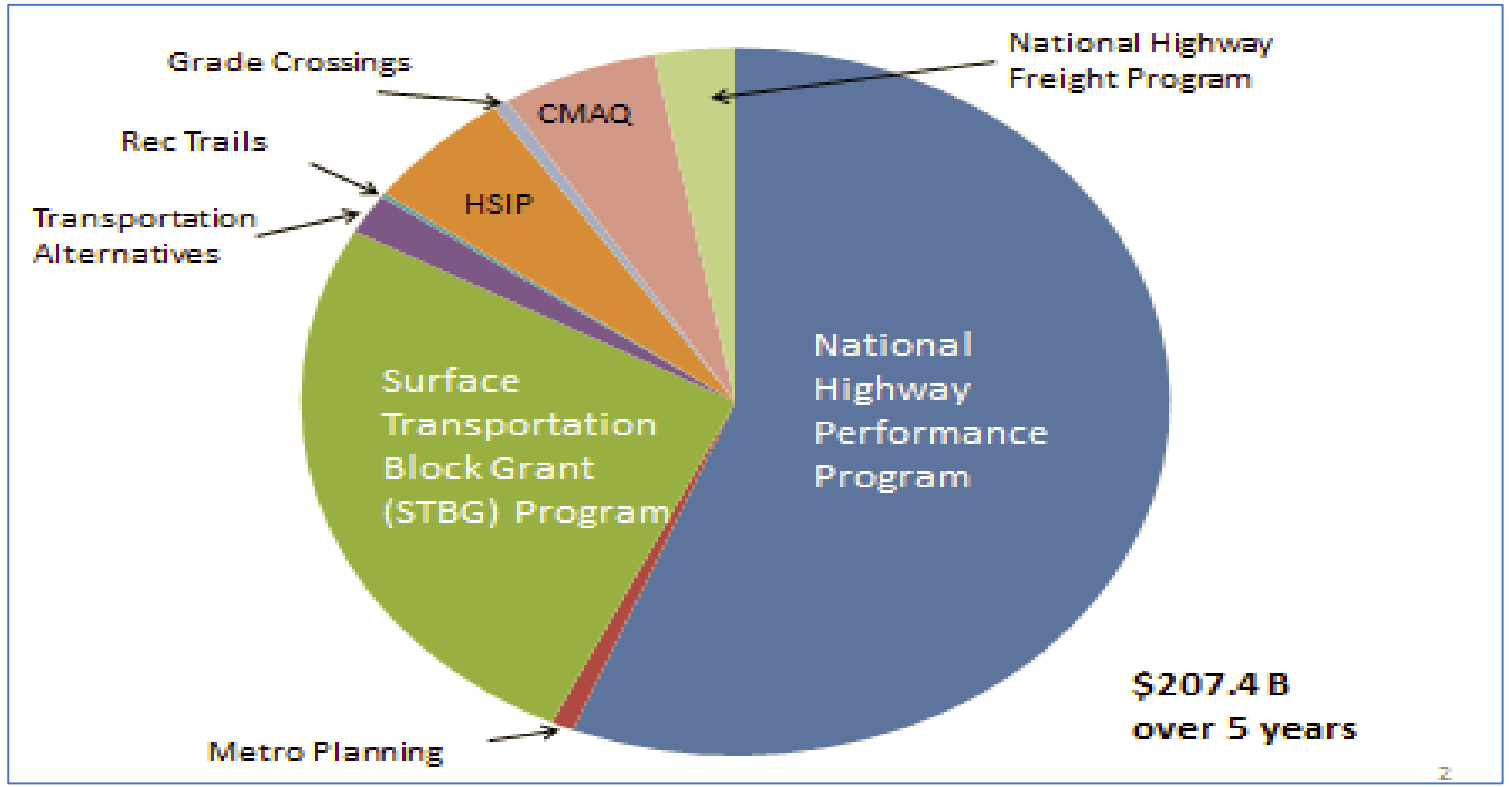
Safety Tool Box for Locals





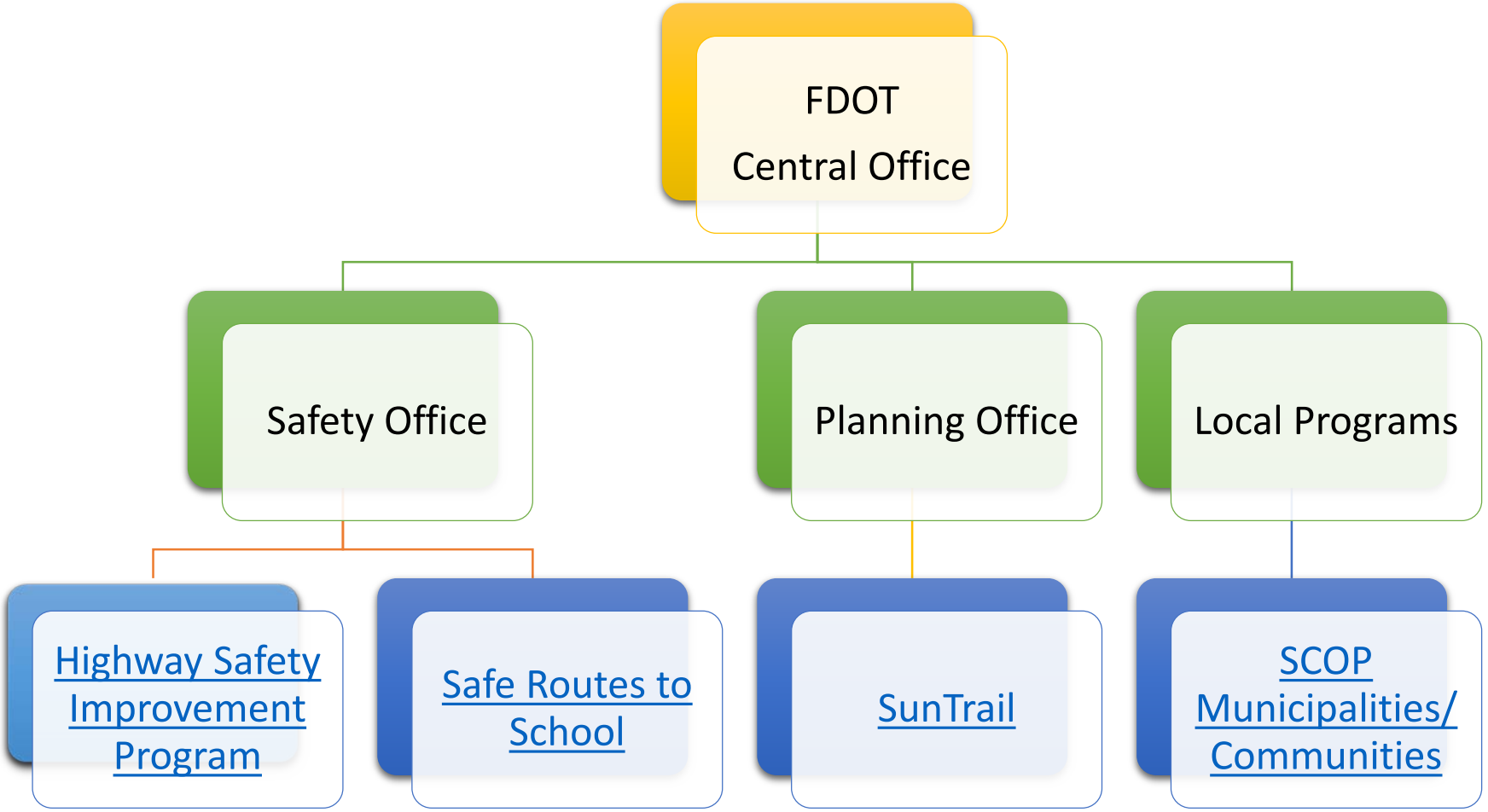
Federal-Aid Highway Program aka FDOT LOCAL AGENCY PROGRAM (LAP)



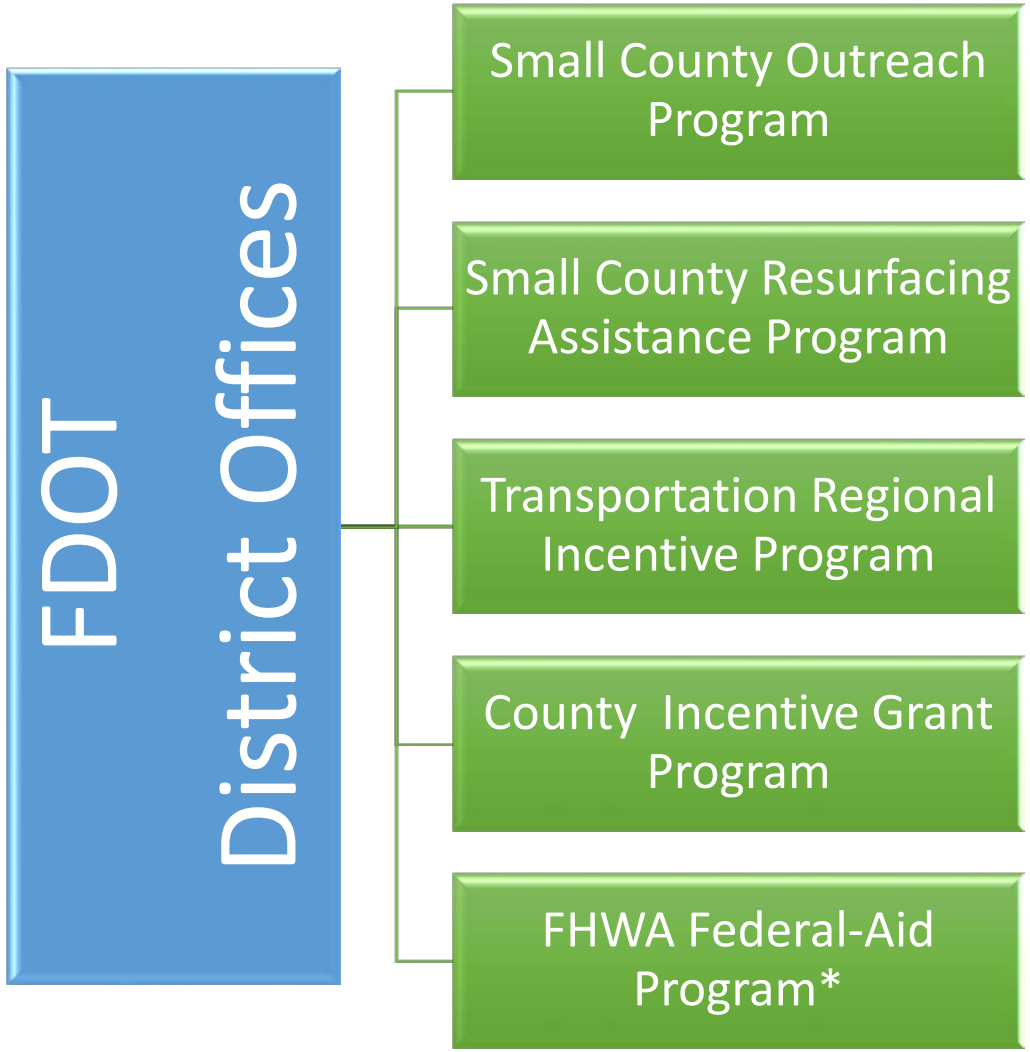
Any project funded with Federal-Aid (partial or in whole) and to be delivered by a local agency will be delivered via a LAP Agreement. LAP is a delivery method, not a fund type.

- Emergency Relief Program
- Off-system Bridge Replacement
- Federal Lands
- Safe Routes to Schools

Central Office Managed Programs



District Managed Programs



Safety Toolbox for Locals

Strategically identify and match projects with local, state, and federal funding sources.

- Identify key project elements such as the limits, scope, & environmental impacts to inform the process.

- Be strategic and apply for projects eligible under more than one funding program when possible.

- Be strategic in coordinating priority projects for local funding vs. Department (state and federal) funding.

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Small County Road Assistance Program

Chapter 339.2816 Florida Statutes

- **Resurfacing and reconstructing county roads**
- **Capacity improvements are not allowed unless addressing safety concerns (i.e. paved shoulders)**

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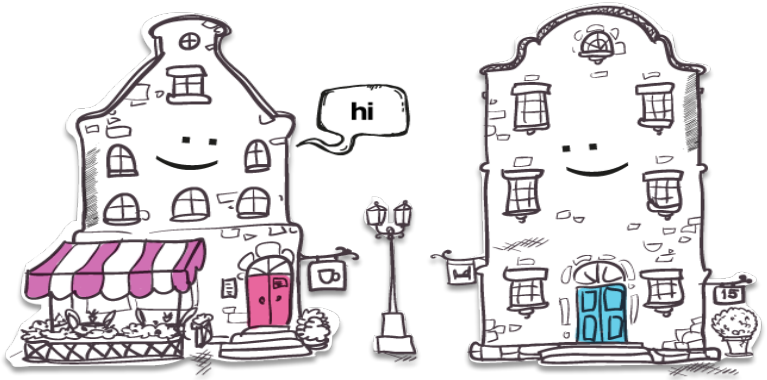
Safety Toolbox for Locals

Coordinate joint projects.

- Partnering with other communities/counties expands funding options.
- Balances funding match requirements across partner agencies (REDI options).
- TRIP is an example of a fund program only available to regional partners.
- LAP is an example of a program where partnering provides delivery options to those agencies who may not be “LAP Certified” with the Department.



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Rural Agency Partnering

Take advantage of REDI reduction or waiver of financial match requirements. Local match requirements are waived for 32 rural counties identified under the Rural Economic Development Initiative (REDI).

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LAP Partnering

Any local agency may apply for a Federal-Aid project to be delivered via LAP.

Project delivery options include:

- LAP Certification of your agency
- Project delivered by another LAP Certified agency via an MOU on behalf of a non-certified agency
- FDOT delivers the project on behalf of the agency. FDOT determines project schedule.

Safety Toolbox for Locals

Focus on utilizing resources efficiently and maximizing cost effectiveness.

COMMON RISK FACTORS AFFECTING PROJECT COMPETITIVENESS:

- Scoping the project thoroughly and including all requirements in the application is key! Don't leave out scope items to cut costs or reduce the local match.
- Right of way acquisition is much less time consuming and costly under local procedures.
- Environmental mitigation, permitting, and reviews are much less time consuming and costly under local procedures.
- Bundling multiple low dollar projects together maximizes resources. Low dollar construction projects require the same level of oversight as high dollar projects.
- Stagger high dollar, high risk projects to provide agency staff adequate time to deliver one project before embarking on the next. Project complexity and staff availability must be considerations.

Safety Toolbox for Locals

Identify a FDOT Champion.

- Your Florida Department of Transportation champion(s) are available and happy to help you navigate the process.
- Begin with your District Local Government Liaison & District Local Programs Administrator.
- Coordinate with your District Community Traffic Safety Team.

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Safety Tool Box for Locals

- Session Background – Lorraine Moyle
- How We Define Safety – Jeffrey Scott
- Local Programs Overview and Tools – Lorraine Moyle
- Crash Data Resources – Jeffrey Scott
- Resources and Assistance – Lorraine Moyle and Jeffrey Scott

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Safety Tool Box for Locals

Resources and Assistance

- **Florida Department of Transportation**
  - FDOT Local Programs (http://www.fdot.gov/programmanagement/LP/Default.shtm)
  - District Community Traffic Safety Teams (CTST) – (http://www.fdot.gov/safety/7B-YourCommunity/YourCommunity.shtm)
  - Florida Strategic Highway Safety Plan (http://www.fdot.gov/safety/SHSP2012/SHSP-2012.shtm)
  - Local Technical Assistance Program (LTAP)/Transportation Safety Center at University of Florida (http://www.techtransfer.ce.ufl.edu/t2ctt/ltap.asp)
  - District Local Transportation Symposiums - D2 (Jacksonville), D3 (Chipley), D7 (Tampa) has something in place.
  - Safe Routes to School Web Pages (http://www.srtsfl.org/)

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Safety Tool Box for Locals

Resources and Assistance (Cont'd)

- **Federal Highway Administration**
  - Local and Rural Road Safety Program (https://safety.fhwa.dot.gov/local_rural/) (Crash Facts, Funding, Policy and Guidance, Partners and Guidance)
  - Training, Tools, Guidance and Countermeasures for Locals Practitioners (https://safety.fhwa.dot.gov/local_rural/training/) (Local Road Safety Videos for Elected Officials, 9 Proven Safety Countermeasures, Local Road Safety Checklists, Implementing Local Safety Management, Local Rural Road Owner's Manual, Local and Rural Road Safety Briefing Sheets)
  - Roadway Safety Professional Capacity Building (https://rspcb.safety.fhwa.dot.gov/Default.aspx) (Technical Assistance, Training and Education, Higher Education, Noteworthy Practices, Communities of Practice

Safety Tool Box for Locals

Resources and Assistance (Cont'd)

- **Institute of Transportation Engineers (ITE)**
  - ITE Vision Zero (http://www.ite.org/visionzero/) (On Demand Resources, Safety Resources Toolbox, etc.)

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Safety Tool Box for Locals

Resources (Cont'd)

- **DATA, DATA SYSTEMS, and Training**
- Florida Department of Highway Safety and Motor Vehicles (DHSMV) Florida Integrated Report Exchange System (FIRES) - FIRES
- Signal Four Analytics - https://s4.geoplan.ufl.edu/
- FDOT Crash Data Academy - FDOT Crash Data Academy
- GIS crash maps generated statewide by Central Office - ArcGIS
- Traffic Safety Web Portal - https://fdotewp1.dot.state.fl.us/TrafficSafetyWebPortal/

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Resources (FDOT)

- FDOT State Safety Office - http://www.dot.state.fl.us/safety/
  - **FDOT SSO Safety Engineering -** http://www.dot.state.fl.us/safety/11A-SafetyEngineering/SafetyEngineering1.shtm
  - **FDOT SSO Crash Data Request On Line Form -** http://www.dot.state.fl.us/safety/11A-SafetyEngineering/TransSafEng/TrafCrashData_Form.html
- FDOT Traffic Safety Web Portal - https://fdotewp1.dot.state.fl.us/TrafficSafetyWebPortal/
  - **State Safety Office GIS Query Tool -** https://fdotewp1.dot.state.fl.us/SSOGis/Home.aspx

Resources (FDOT)

- FDOT Community Traffic Safety Team
  - Community Traffic Safety Teams (CTSTs) are locally based groups of highway safety advocates that are committed to a common goal of improving traffic safety in their communities.
    - http://www.fdot.gov/safety/7B-YourCommunity/YourCommunity.shtm
- Safe Routes To School (SRTS)
    - http://www.srtsfl.org/
- Florida Highway Safety Improvement Program (HSIP)
  - FHWA funded program supporting the Emphasis Areas of the SHSP. Implemented through district staff.
    - http://www.fdot.gov/safety/11A-SafetyEngineering/SafetyEngineering1.shtm#Safety Engineering Contacts

Resources (DHSMV & Signal 4)

- Florida Department of Highway Safety and Motor Vehicles Crash Reports – **http://www.flhsmv.gov/courts/crash/**
- Florida's Integrated Report Exchange System (FIRES) Portal - **https://firesportal.com/Pages/Public/Home.aspx**
- Signal 4 Analytics - **https://s4.geoplan.ufl.edu/**

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Recorded FDOT Webinars

Crash Data Academy

The Crash Data Academy is an ongoing series of webinars to help practitioners and the public understand and use Florida crash data. The webinars focus on topics in the engineering, enforcement, education and EMS / health disciplines. The webinars generally occur on the last Thursday of the month from 2:30 p.m. to 3:30 p.m.

Upcoming Webinars

April 26, 2018	**The National Highway Traffic Safety Administration (NHTSA) Fatality Analysis Reporting System (FARS) part 2**	**Register Here**
July 26, 2018	**TBA**	**TBA**

2018 Crash Data Academy

Presentations	**Recordings**
2016 Florida Traffic Crash Facts **February 22, 2018**	**2016 Florida Traffic Crash Facts**

2017 Crash Data Academy

Presentations	**Recordings**
Florida Responder Safety and Traffic Incident Management (TIM) **October 26, 2017**	**Florida Responder Safety and Traffic Incident Management (TIM)**

http://www.fdot.gov/safety/11A-SafetyEngineering/crash%20data%20academy/academy.shtm

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Local Agency Links and Resources

FDOT Local Programs Webpage

http://www.fdot.gov/programmanagement/lp/Default.shtm

LAP Training

http://www.fdot.gov/programmanagement/LAP/LAPTraining.shtm

Metropolitan Planning Support

http://www.fdot.gov/planning/policy/metrosupport/

Non-Metropolitan Planning Support

http://www.fdot.gov/planning/policy/ruralsupport/

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North Florida TPO
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