

# **2017 Child Restraint Survey Final Report**



**Prepared for:  
Florida Department of Transportation;  
State Safety Office**

**Prepared by:  
Preusser Research Group, Inc.**

**August 17, 2017**

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## Protecting Children Riding in Passenger Vehicles

Child safety seats have been shown to reduce fatal injury by 71 percent for infants (under 1-year old) and by 54 percent for toddlers (1 to 4 years old) in passenger cars. The corresponding reductions in light trucks are 58 percent and 59 percent respectively. Among children under 5 years old, an estimated 252 lives were saved nationwide in 2014 by restraint use (National Highway Traffic Safety Administration [NHTSA], 2014).

Data also show that older children and adults alike are far more likely to survive a severe crash with less injury when wearing a safety belt (Centers for Disease Control [CDC], 2017).

### Florida’s Child Restraint Laws

Florida law (Florida Statute 316.613) requires that children 5 years of age or younger must be properly restrained no matter where they are sitting in the vehicle. Children through age 3 must be secured in a separate carrier or a vehicle manufacturer's integrated child safety seat. For children ages 4 through 5 years, a separate carrier, an integrated child safety seat, or a safety belt may be used.

Child safety experts recommend that children aged 12 and under should ride properly buckled in the back seat. Airbags can kill young children riding in the front seat. A rear facing car seat should never be used in the front seat or in front of an airbag.

### Types of Restraint

Type of restraint is determined based on age, weight, and height of the child. The device manufacturer provides directions that should be followed. Car seat inspection stations are located throughout Florida. Information on types of restraint and experts who can help answer questions on proper seats and correct installation can be located at the Florida Department of Transportation’s web portal:

<http://www.floridaopr.com>

### FLORIDA LAW PROTECTING CHILD PASSENGERS

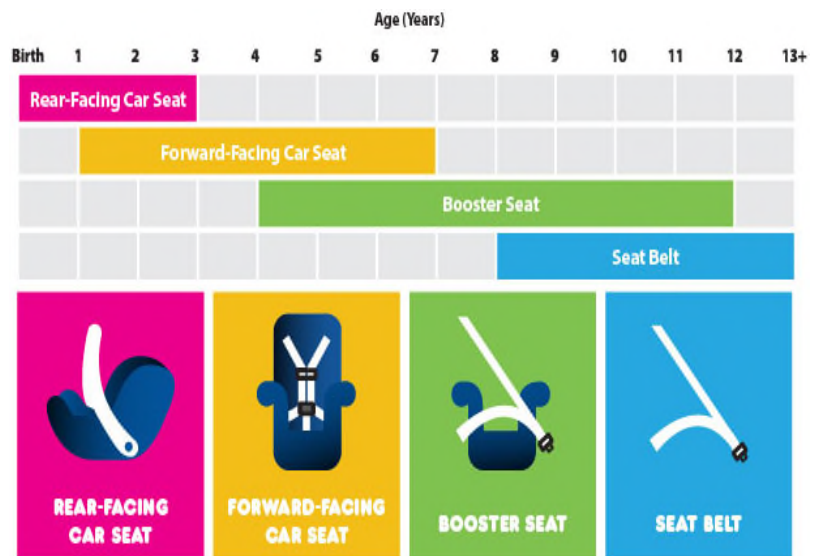
#### Statute 316.613

Florida law requires all children from birth to age 3 be placed in a restraint device that is a separate carrier or a vehicle manufacturer’s integrated car seat.

Florida law requires all children 4 and 5 years of age to ride in a separate carrier, an integrated child seat or child booster seat, or safety belt.

The Florida Department of Transportation and The Florida Department of Highway Safety and Motor Vehicles recommends keeping children ages 12 and under in the back seat.

**What is the fine for a child restraint violation? \$60.00 and 3 points.**



### 2017 Child Observational Survey

The Florida Department of Transportation (FDOT) contracting with Preusser Research Group, Inc. (PRG) developed an observational survey during the spring of 2017 that estimates child restraint use across the State of Florida. The survey, first implemented during the month of May 2017, includes one-hour observation periods, across 200 distinct sites. These 200 sites were spread across 20 counties (10 per county). The 20 counties covered the 10 television/radio Designated Market Areas (DMA) serving the State of Florida. The two most populated counties in each DMA were selected.

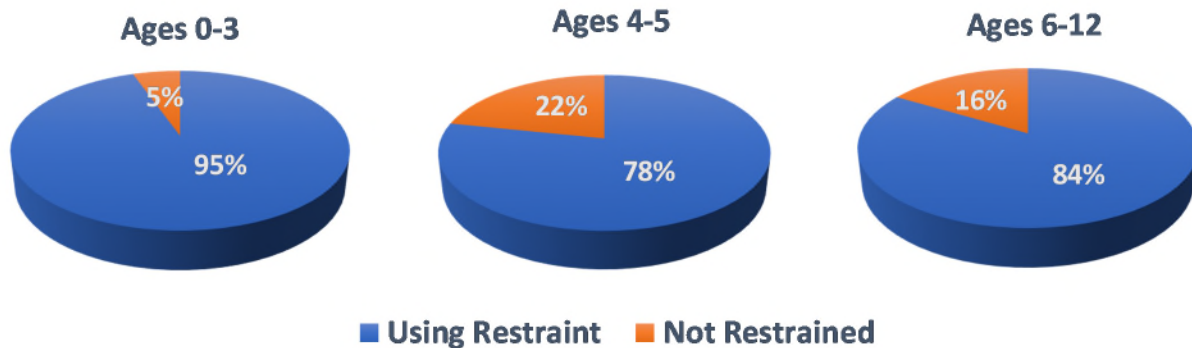
Trained data collectors were positioned near daycare centers, shopping centers, recreational areas, and fast food restaurants. These sites were selected to maximize the number of children in the vehicles observed. The data collected included: types of child restraint used in rear and front seats; estimated age of child passenger(s) (ages: 0-3; 4-5; 6-12); driver characteristics (sex, age, race); and vehicle type (car, SUV, pickup, van). A copy of the data collection form used by observers is appended to this Interim Report.

### 2017 Survey Results

Observers collected data on 5,230 children riding in 4,550 passenger vehicles. In most cases, information was collected on one child per vehicle. However, observers could collect information on up to four children per vehicle. **The survey indicated that 85.9 percent (+/- 0.96; 95% confidence) of the children observed, ages 0-12, were restrained across the State of Florida.**

Observers estimated an age category for child passengers. Age category was recorded for 5,145 of the 5,230 observed children. The survey results indicated that youngest children (ages 0-3; n=1,770) were restrained most often (**95%**). Children ages 4-5 (n=1,303) were observed restrained least often (**78%**). Older children (ages 6-12; n=2,072) were restrained **84 percent** of the time.






### RESTRAINT USAGE BY AGE CATEGORY



## 2017 Florida Observational Survey for Child Restraint Use

Observed restraint type by age category indicates that children, by and large, use the proper restraint type when not unrestrained. It is important to note that an unobtrusive, observational survey like the one presented here cannot tell if a child is **correctly** using a child safety seat or booster seat. Also, there may be cases where booster seat usage is recorded as “seat belted” due to not detecting a backless booster seat.

### RESTRAINT TYPE/USE BY AGE CATEGORY

	<u>Ages 0-3</u> (n=1,770)	<u>Ages 4-5</u> (n=1,303)	<u>Ages 6-12</u> (n=2,072)
 <b>Rear-Facing Infant Seat</b>	<b>27%</b> (n=481)	<b>0%</b> (n=0)	<b>0%</b> (n=0)
 <b>Forward-Facing Car Seat</b>	<b>65%</b> (n=1,152)	<b>8%</b> (n=104)	<b>0%</b> (n=1)
 <b>Booster Seat</b>	<b>0%</b> (n=7)	<b>46%</b> (n=599)	<b>4%</b> (n=77)
 <b>Safety Belt</b>	<b>2%</b> (n=34)	<b>24%</b> (n=315)	<b>80%</b> (n=1,654)
 <b>No Restraint Used</b>	<b>5%</b> (n=96)	<b>22%</b> (n=285)	<b>16%</b> (n=340)

### Where are Children Positioned and How is that Associated with Restraint Use?

Younger children tend to be in the back seat, but as they grow older, they begin to migrate into the front of the vehicle. The diagram below shows the proportion of children observed in the front and the back seats of passenger vehicles and shows belt use in the front versus the rear. The survey found that nearly all (**98%**) of the passengers between the ages 0-3 rode in the rear seat and that most (**95%**) were restrained. Restraint use was much lower (**55%**) among the few (**2%**) observed in the front seat. Children ages 4-5 are still riding in the rear seat, by and large (**91%**), but restraint use is lower (**79%**) compared to younger years. Usage in the front seat is even lower (**63%**) for this age group. Older children ages 6-12 were more evenly distributed in the front and rear compared to younger children. Restraint use measured higher for this age group when observed in the front compared to when riding in the rear (**89%** versus **80%**).

**SEATING POSITION AND RESTRAINT USE**

	<b>% in a REAR Seat % Restrained</b>	<b>% in the FRONT Seat % Restrained</b>
<b>Ages 0-3</b>	<b>98% (n=1,732)</b> 95%	<b>2% (n=33)</b> 55%
<b>Ages 4-5</b>	<b>91% (n=1,187)</b> 79%	<b>9% (n=112)</b> 63%
<b>Ages 6-12</b>	<b>58% (n=1,193)</b> 80%	<b>42% (n=867)</b> 89%
<b>Total*</b>	<b>4,112</b>	<b>1,012</b>

\*Table includes passengers whose age and seating position were recorded (n=5,124). Seating position was not recorded for 21 children.

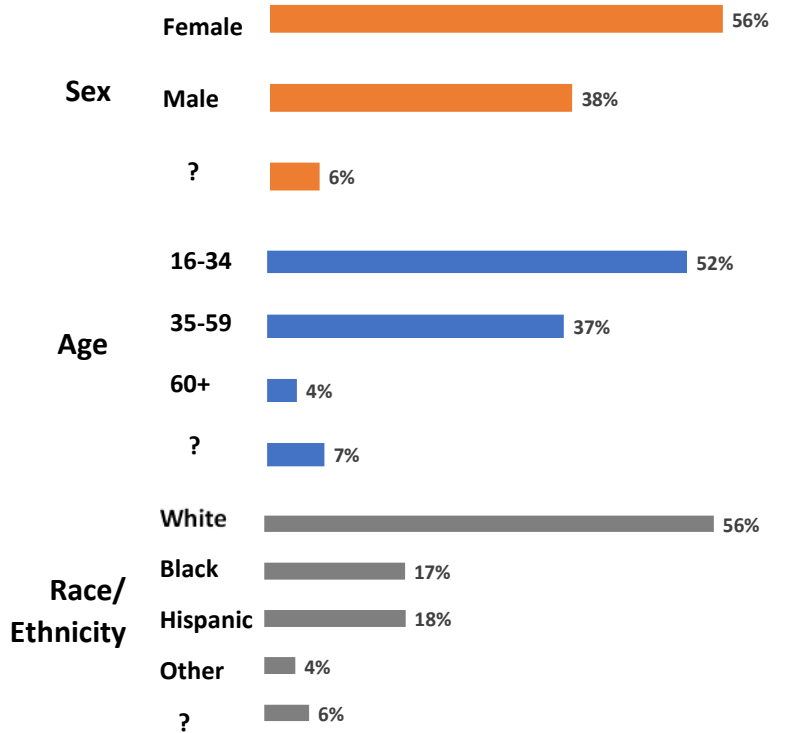
**Characteristics of Drivers with Children**

The survey found **drivers with children** were more often female (56%, n=2,560) than male (38%, n=1,709); sometimes the sex of the driver was not determined (6%, n=281).

Children were most likely with drivers between the ages of 16-34 (52%, 2,377) followed by drivers between the ages 35-59 (37%, n=1,679). Children least often appeared with drivers 60 years and older (4%, n=169). Sometimes the age of driver was not determined (7%, n=325)

Race/ethnicity of drivers with children in the car closely matched U.S. Census data for the State of Florida. Fifty-six percent were coded as White (n=2,539); 17 percent Black (n=792); 18 percent Hispanic (n=798); and 4 percent Other (n=171). Again, sometimes driver race/ethnicity was not determined (6% unknown, n=249).

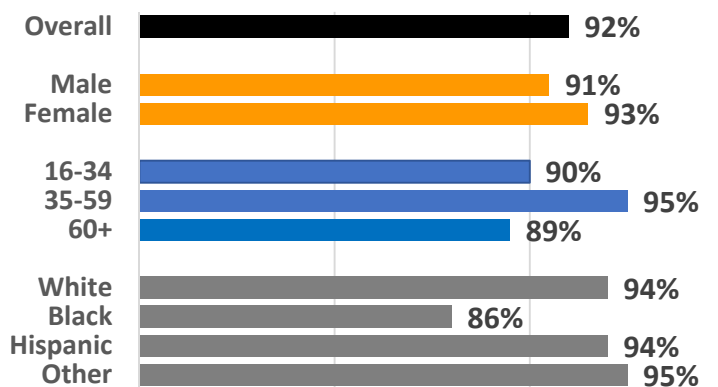
**DRIVER CHARACTERISTICS**



### Driver Belt Use

Drivers transporting children were belted 92 percent of the time (based on n=4,012 drivers whose safety belt usage was known). Driver characteristics were associated with varying belt usage. Female drivers whose restraint use was captured (n=2,365) were belted slightly more than male drivers (n=1,610), by two percentage points (93% versus 91%, respectively). Drivers between the ages 35-59 (n=1,630) were belted more often than younger drivers (n=2,185) by five percentage points and more than drivers 60 years and older (n=161) by six percentage points. The survey indicated a difference in belt use by Race/Ethnicity. White (n=2,369) and Hispanic (n=740) drivers were belted 94 percent of the time while Black drivers (n=715) were belted 86 percent of the time. Drivers with race coded "Other" (n=163) were belted 95 percent of the time.

#### DRIVER WITH CHILD BELT USE



### How is Driver Belt Use Related to Child Restraint Use?

The survey found driver belt use is associated with child restraint usage. A child was far less likely to be restrained when a driver was not belted. The survey indicated children ages 4-5 were least likely restrained with an unbuckled driver (**only 16% using restraint**) followed by children ages 6-12 (**only 25% using restraint**). Even the youngest passengers (ages 0-3) were **unrestrained at an alarming rate of 28 percent**, when the driver was not belted.

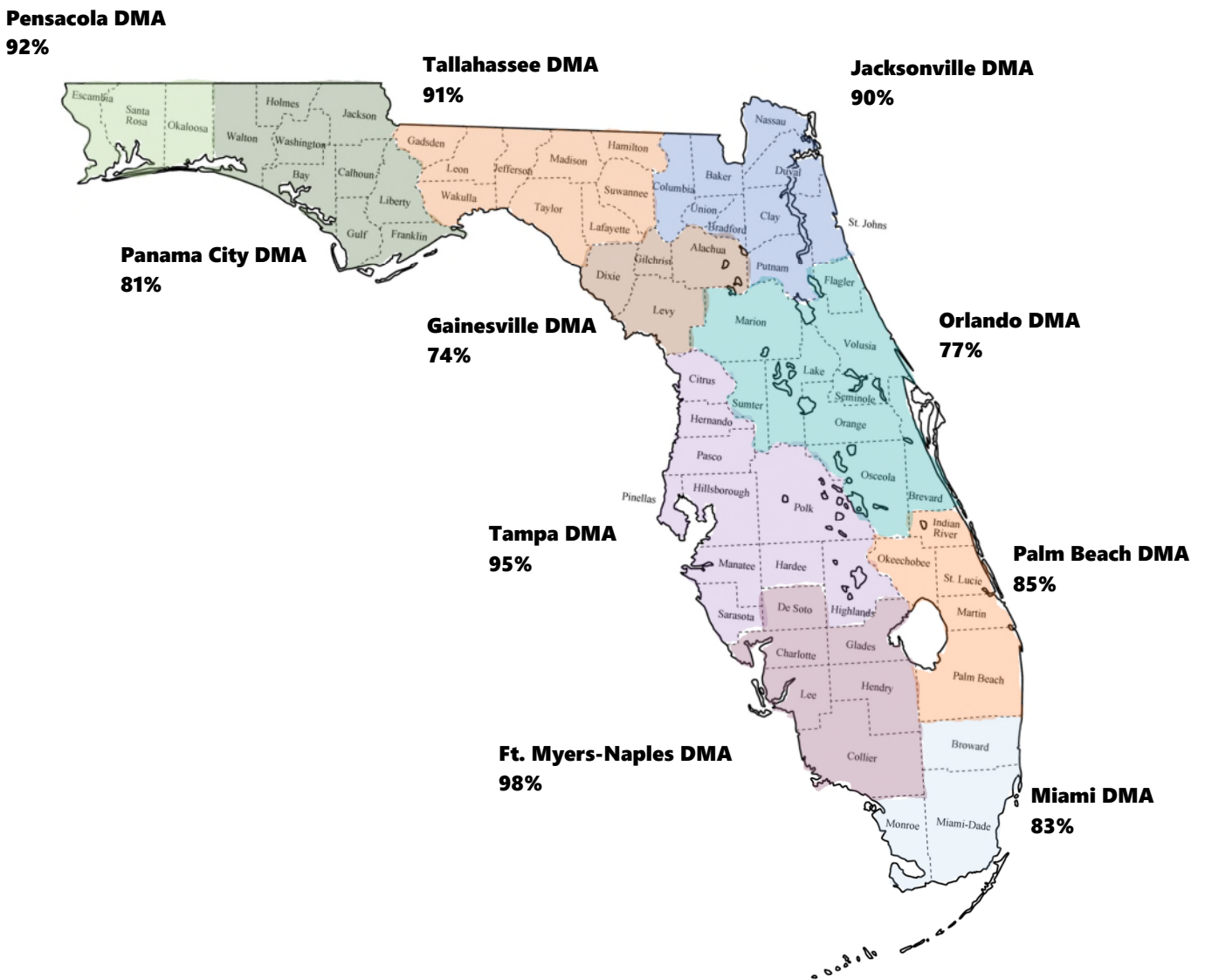
#### RESTRAINT USAGE BY AGE CATEGORY



**Restraint Use by Designated Market Area**

Restraint use for children up to age 12 by Designated Market Area is displayed in the figure below. **Results presented by DMA and county should be viewed with some level of caution. Future replication of the survey design will help to better understand restraint use across the DMAs.** Sample sizes were not always large and distribution of age varied between DMAs. Also, survey sites were chosen mostly out of convenience (20 sites per DMA spread evenly across the two most populated counties in the DMA). Individual observer differences could also be a factor in determining restraint use. Variations might be due to real differences or survey bias or both.

**OVERALL CHILD RESTRAINT USE (AGES 0-12)  
BY DESIGNATED MARKET AREA (DMA)**





**NUMBER OF OBSERVED CHILDREN PER COUNTY AND DMA BY AGE CATEGORY**

DMA	COUNTY	Age 0-3	Age 4-5	Age 6-12	Unk. Age	County Total	DMA Total	RESTRAINT USE BY AGE CATEGORY			
								0-3	4-5	<6	6-12
Pensacola	Escambia	100	38	84	2	224	493	97%	89%	95%	94%
	Okaloosa	149	39	80	1	269		99%	82%	95%	92%
Panama City	Walton	32	35	82	3	152	327	100%	80%	90%	76%
	Bay	56	38	79	2	175		98%	82%	91%	73%
Tallahassee	Gadsden	82	26	46	2	156	461	90%	46%	80%	82%
	Leon	164	41	98	2	305		99%	83%	96%	95%
Jacksonville	Clay	64	45	84	5	198	371	97%	89%	94%	89%
	Duval	61	43	65	4	173		97%	91%	94%	90%
Gainesville	Alachua	95	74	53	7	229	477	87%	74%	82%	82%
	Levy	57	83	102	6	248		91%	54%	69%	70%
Orlando	Orange	186	184	137	2	509	831	85%	68%	77%	73%
	Brevard	133	110	76	3	322		87%	75%	81%	71%
Tampa	Pinellas	62	89	124	4	279	567	98%	90%	93%	96%
	Hillsborough	55	79	152	2	288		98%	97%	98%	93%
Palm Beach	St. Lucie	100	69	134	14	317	718	99%	77%	90%	81%
	Palm Beach	97	96	197	11	401		99%	77%	88%	82%
Ft. Myers-Naples	Lee	42	67	102	0	211	423	100%	100%	100%	94%
	Collier	34	57	121	0	212		100%	96%	98%	99%
Miami	Broward	131	55	128	10	324	562	95%	67%	87%	82%
	Dade	70	35	128	5	238		93%	60%	82%	76%
<b>TOTAL</b>		<b>1,770</b>	<b>1,303</b>	<b>2,072</b>	<b>85</b>	<b>5,230</b>					

**Appendix A.**  
**Data Collection Form**

**2017 Florida Observational Survey for Child Restraint Use**

**FLORIDA Child Restraint Use Data Collection Form 2017 - SAMPLE**

SITE #: \_\_\_\_\_ COUNTY: \_\_\_\_\_ Observer Name: \_\_\_\_\_ DATE: \_\_\_\_\_



TIME: \_\_\_\_\_ a.m. p.m. DAY OF WEEK: Sun M Tu W Th F Sat DIRECTION OF TRAVEL: N S E W  
 (circle one) (circle one)

LOCATION: \_\_\_\_\_  
 (street) (cross street or other landmark)

SITE TYPE: 1-Daycare Facility 2-Food Establishment 3-Shopping Center/Grocery Store 4- Entertainment/Recreation place  
 (circle one)



SAME VEHICLE AS PREVIOUS  OBSERVED ON ADJACENT STREET

VEHICLE TYPE:		DRIVER			
<input type="checkbox"/> Passenger Car	<input type="checkbox"/> SUV	RESTRAINT USE:	AGE:	GENDER:	RACE:
<input type="checkbox"/> Van/Minivan	<input type="checkbox"/> Pickup Truck	<input type="checkbox"/> Belted <input type="checkbox"/> Unk	<input type="checkbox"/> 16-34 <input type="checkbox"/> 60+	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> White <input type="checkbox"/> Hispanic <input type="checkbox"/> Unk
		<input type="checkbox"/> Not Belted	<input type="checkbox"/> 35-59 <input type="checkbox"/> Unk	<input type="checkbox"/> Unk	<input type="checkbox"/> Black <input type="checkbox"/> Other

CHILD PASSENGER 1			CHILD PASSENGER 2		
RESTRAINT USE:	AGE:		RESTRAINT USE:	AGE:	
<input type="checkbox"/> Standard Belt <input type="checkbox"/> Backless Booster	<input type="checkbox"/> 0-3 <input type="checkbox"/> 4-5		<input type="checkbox"/> Standard Belt <input type="checkbox"/> Backless Booster	<input type="checkbox"/> 0-3 <input type="checkbox"/> 4-5	
<input type="checkbox"/> Rear-Facing CSS <input type="checkbox"/> Not Belted	<input type="checkbox"/> 6-12		<input type="checkbox"/> Rear-Facing CSS <input type="checkbox"/> Not Belted	<input type="checkbox"/> 6-12	
<input type="checkbox"/> Front-Facing CSS <input type="checkbox"/> Unk			<input type="checkbox"/> Front-Facing CSS <input type="checkbox"/> Unk		
<input type="checkbox"/> High Back Booster		Seating Position	<input type="checkbox"/> High Back Booster		Seating Position



SAME VEHICLE AS PREVIOUS  OBSERVED ON ADJACENT STREET

VEHICLE TYPE:		DRIVER			
<input type="checkbox"/> Passenger Car	<input type="checkbox"/> SUV	RESTRAINT USE:	AGE:	GENDER:	RACE:
<input type="checkbox"/> Van/Minivan	<input type="checkbox"/> Pickup Truck	<input type="checkbox"/> Belted <input type="checkbox"/> Unk	<input type="checkbox"/> 16-34 <input type="checkbox"/> 60+	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> White <input type="checkbox"/> Hispanic <input type="checkbox"/> Unk
		<input type="checkbox"/> Not Belted	<input type="checkbox"/> 35-59 <input type="checkbox"/> Unk	<input type="checkbox"/> Unk	<input type="checkbox"/> Black <input type="checkbox"/> Other

CHILD PASSENGER 1			CHILD PASSENGER 2		
RESTRAINT USE:	AGE:		RESTRAINT USE:	AGE:	
<input type="checkbox"/> Standard Belt <input type="checkbox"/> Backless Booster	<input type="checkbox"/> 0-3 <input type="checkbox"/> 4-5		<input type="checkbox"/> Standard Belt <input type="checkbox"/> Backless Booster	<input type="checkbox"/> 0-3 <input type="checkbox"/> 4-5	
<input type="checkbox"/> Rear-Facing CSS <input type="checkbox"/> Not Belted	<input type="checkbox"/> 6-12		<input type="checkbox"/> Rear-Facing CSS <input type="checkbox"/> Not Belted	<input type="checkbox"/> 6-12	
<input type="checkbox"/> Front-Facing CSS <input type="checkbox"/> Unk			<input type="checkbox"/> Front-Facing CSS <input type="checkbox"/> Unk		
<input type="checkbox"/> High Back Booster		Seating Position	<input type="checkbox"/> High Back Booster		Seating Position

SAME VEHICLE AS PREVIOUS  OBSERVED ON ADJACENT STREET

VEHICLE TYPE:		DRIVER			
<input type="checkbox"/> Passenger Car	<input type="checkbox"/> SUV	RESTRAINT USE:	AGE:	GENDER:	RACE:
<input type="checkbox"/> Van/Minivan	<input type="checkbox"/> Pickup Truck	<input type="checkbox"/> Belted <input type="checkbox"/> Unk	<input type="checkbox"/> 16-34 <input type="checkbox"/> 60+	<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> White <input type="checkbox"/> Hispanic <input type="checkbox"/> Unk
		<input type="checkbox"/> Not Belted	<input type="checkbox"/> 35-59 <input type="checkbox"/> Unk	<input type="checkbox"/> Unk	<input type="checkbox"/> Black <input type="checkbox"/> Other

CHILD PASSENGER 1			CHILD PASSENGER 2		
RESTRAINT USE:	AGE:		RESTRAINT USE:	AGE:	
<input type="checkbox"/> Standard Belt <input type="checkbox"/> Backless Booster	<input type="checkbox"/> 0-3 <input type="checkbox"/> 4-5		<input type="checkbox"/> Standard Belt <input type="checkbox"/> Backless Booster	<input type="checkbox"/> 0-3 <input type="checkbox"/> 4-5	
<input type="checkbox"/> Rear-Facing CSS <input type="checkbox"/> Not Belted	<input type="checkbox"/> 6-12		<input type="checkbox"/> Rear-Facing CSS <input type="checkbox"/> Not Belted	<input type="checkbox"/> 6-12	
<input type="checkbox"/> Front-Facing CSS <input type="checkbox"/> Unk			<input type="checkbox"/> Front-Facing CSS <input type="checkbox"/> Unk		
<input type="checkbox"/> High Back Booster		Seating Position	<input type="checkbox"/> High Back Booster		Seating Position

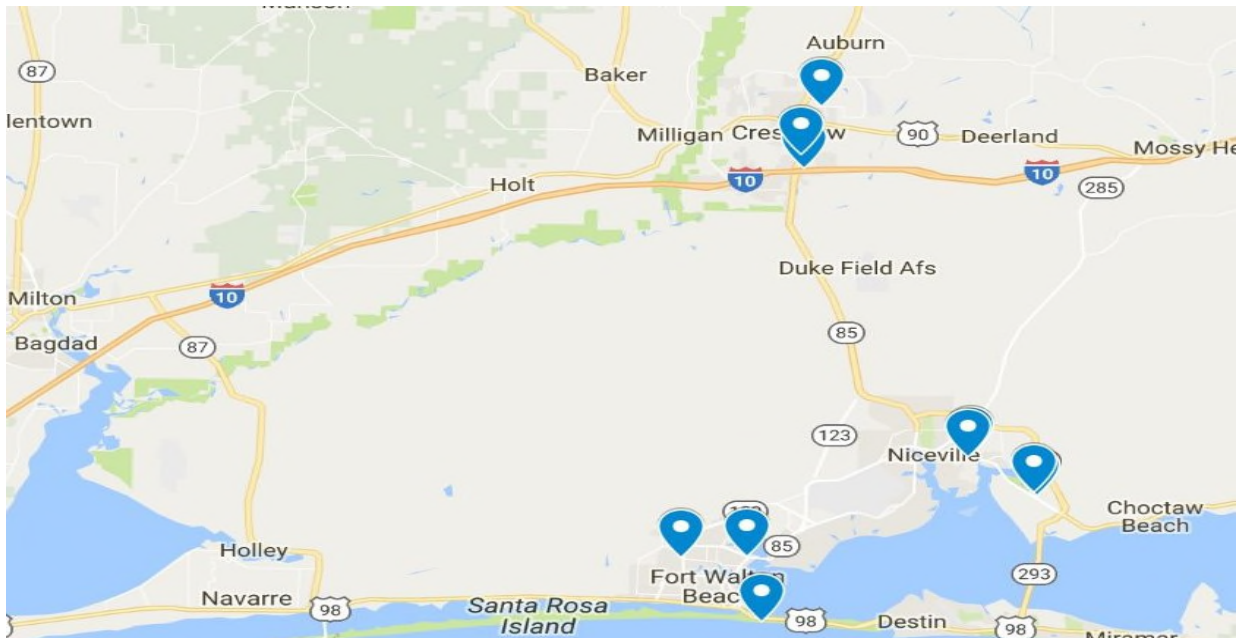
**Appendix B.**  
**Observation Location Maps**

Observation Locations in PENSACOLA Designated Media Market Area

Escambia County<sup>1</sup>



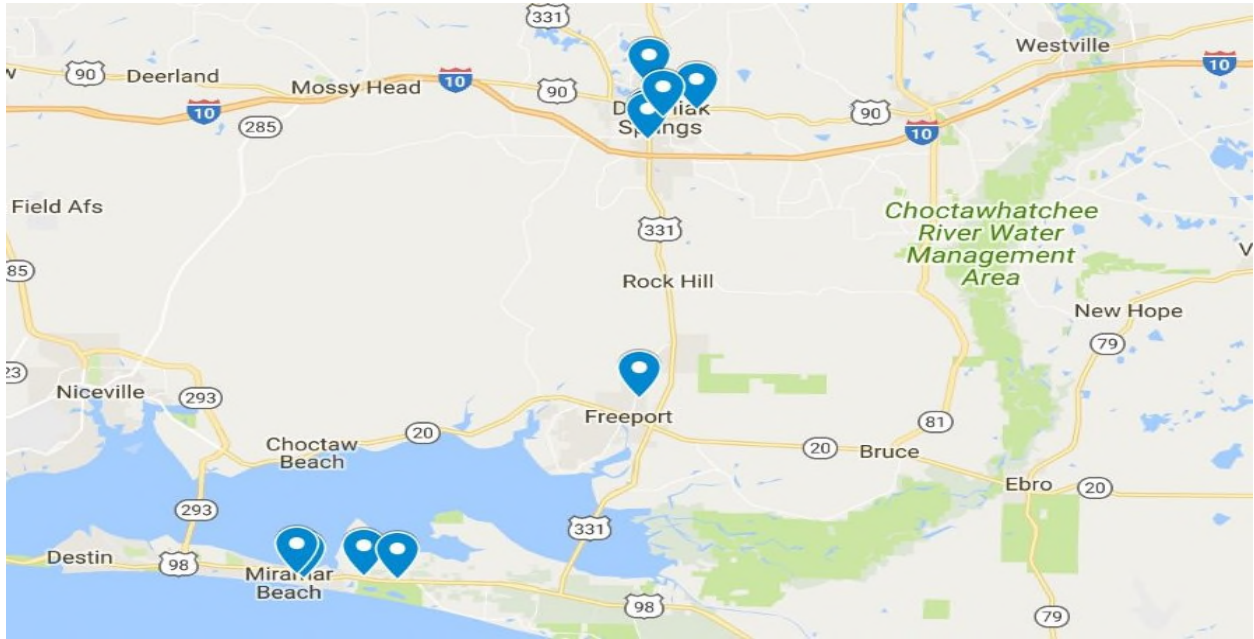
Okaloosa County<sup>1</sup>



<sup>1</sup> Less than 10 pins showing because of overlapping pins or some site(s) used twice on different day of week and time of day.

Observation Locations in PANAMA CITY Designated Media Market Area

Walton County<sup>2</sup>



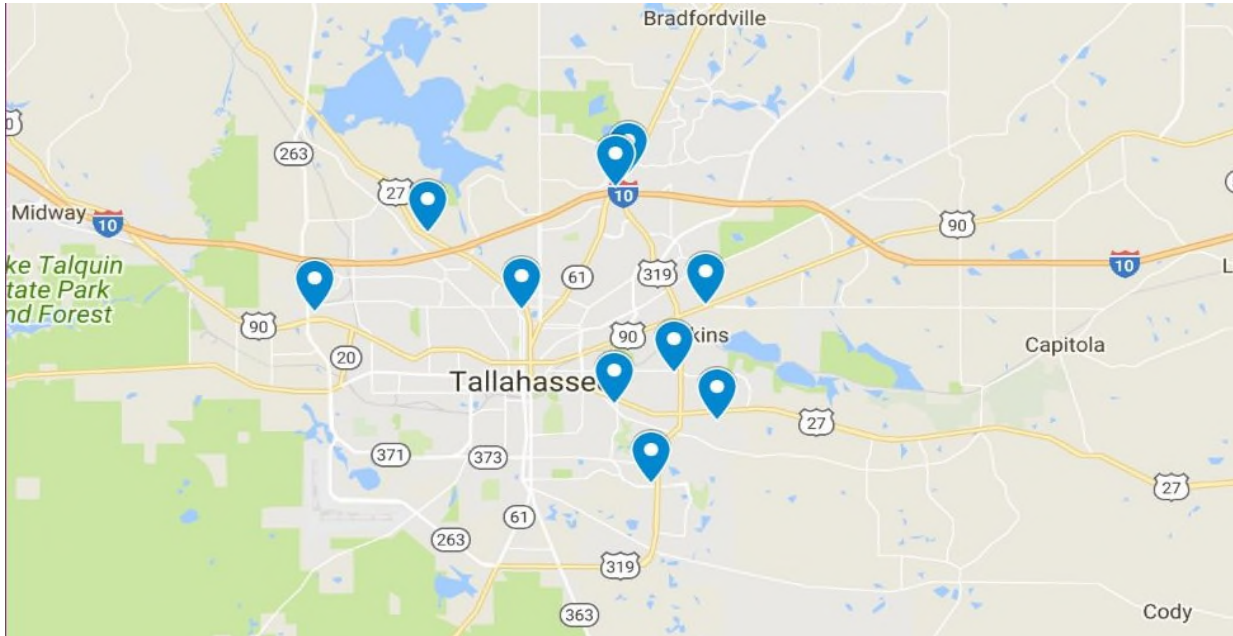
Bay County<sup>1</sup>



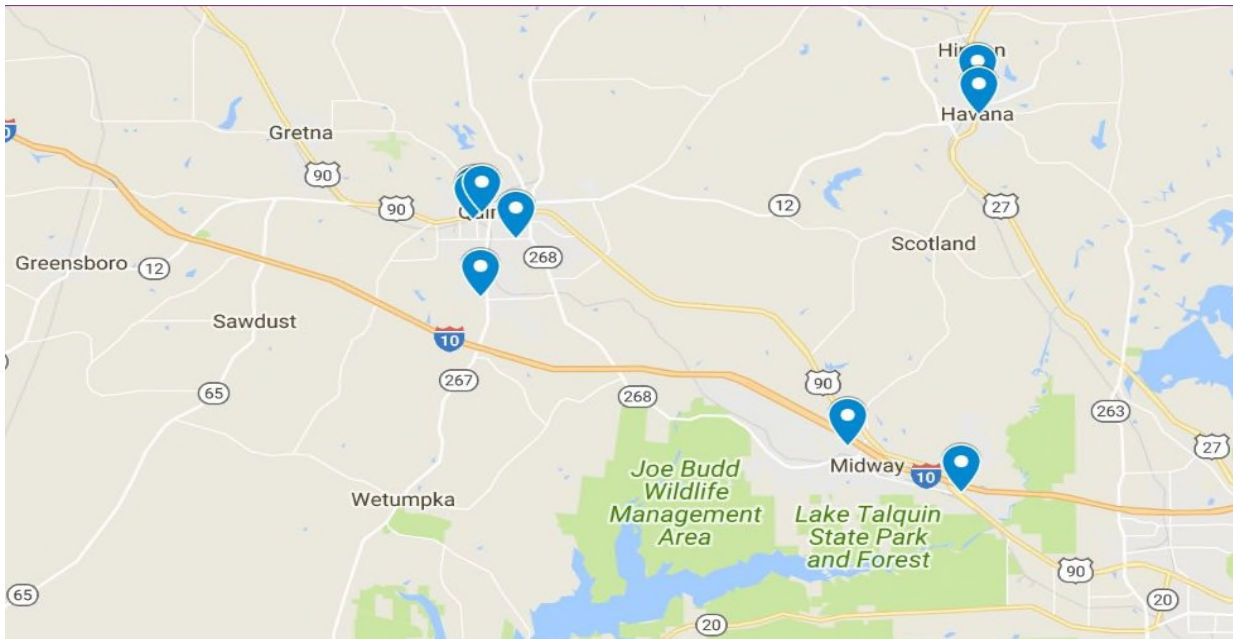
<sup>2</sup> Less than 10 pins showing because of overlapping pins or some site(s) used twice on different day of week and time of day.

Observation Locations in TALLAHASSEE Designated Media Market Area

Leon County



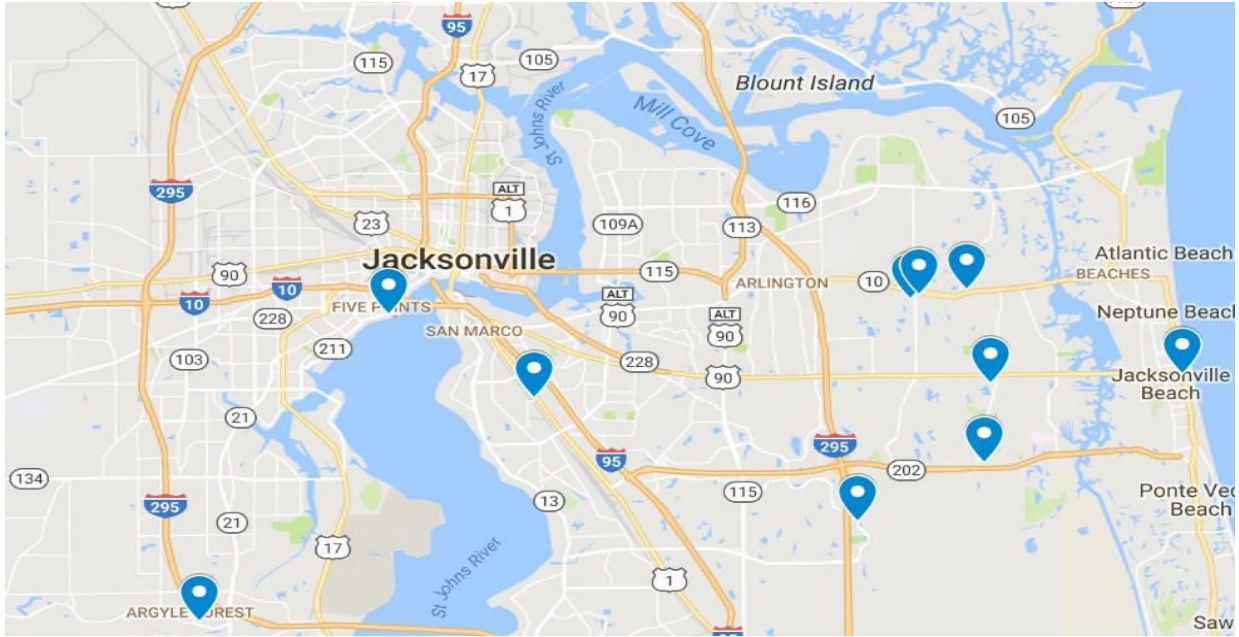
Gadsden County<sup>3</sup>



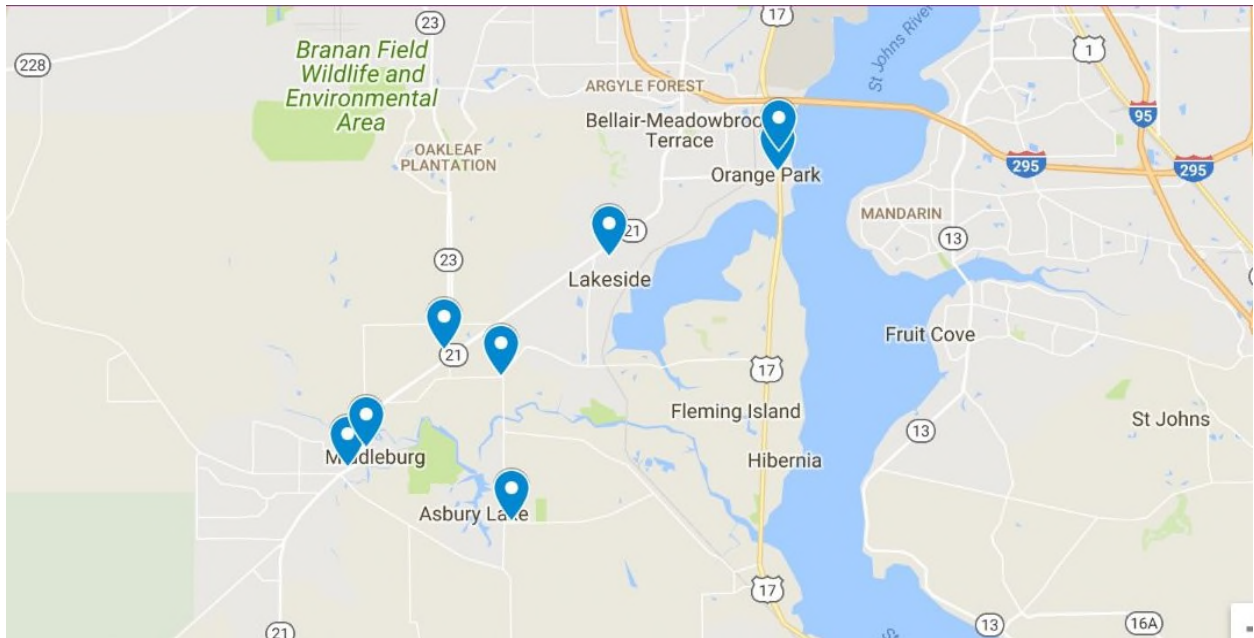
<sup>3</sup> Less than 10 pins showing because of overlapping pins or some site(s) used twice on different day of week and time of day.

Observation Locations in JACKSONVILLE Designated Media Market Area

Duval County



Clay County<sup>4</sup>

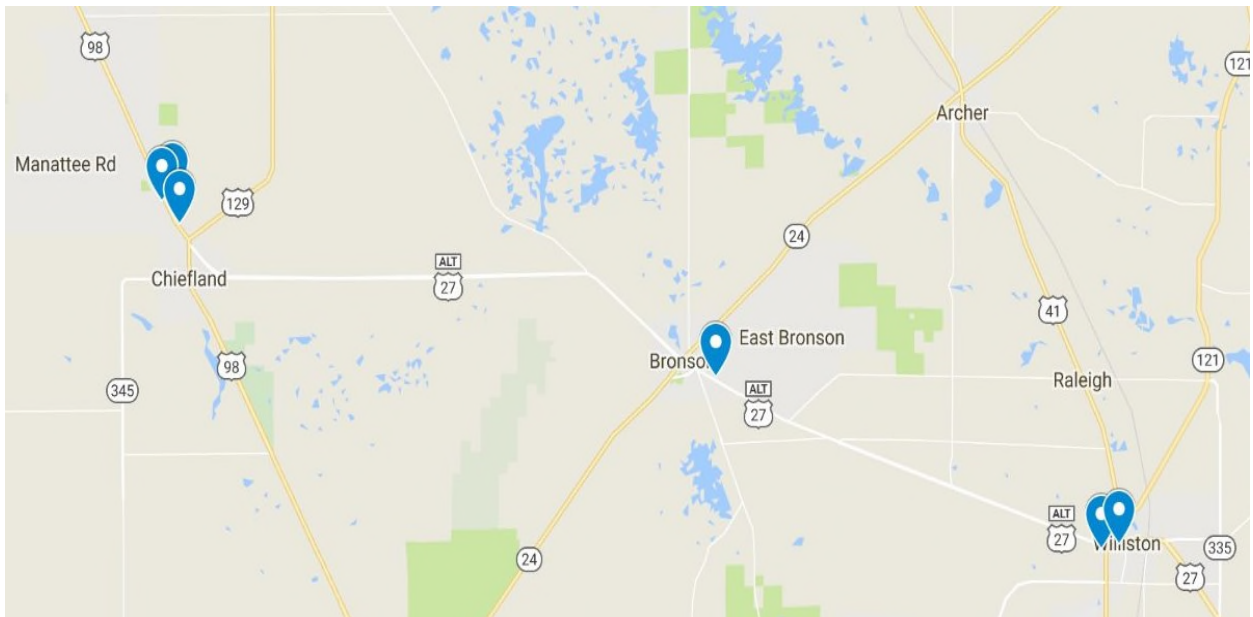


<sup>4</sup> Less than 10 pins showing because of overlapping pins or some site(s) used twice on different day of week and time of day.



Observation Locations in GAINESVILLE Designated Media Market Area

Alachua County

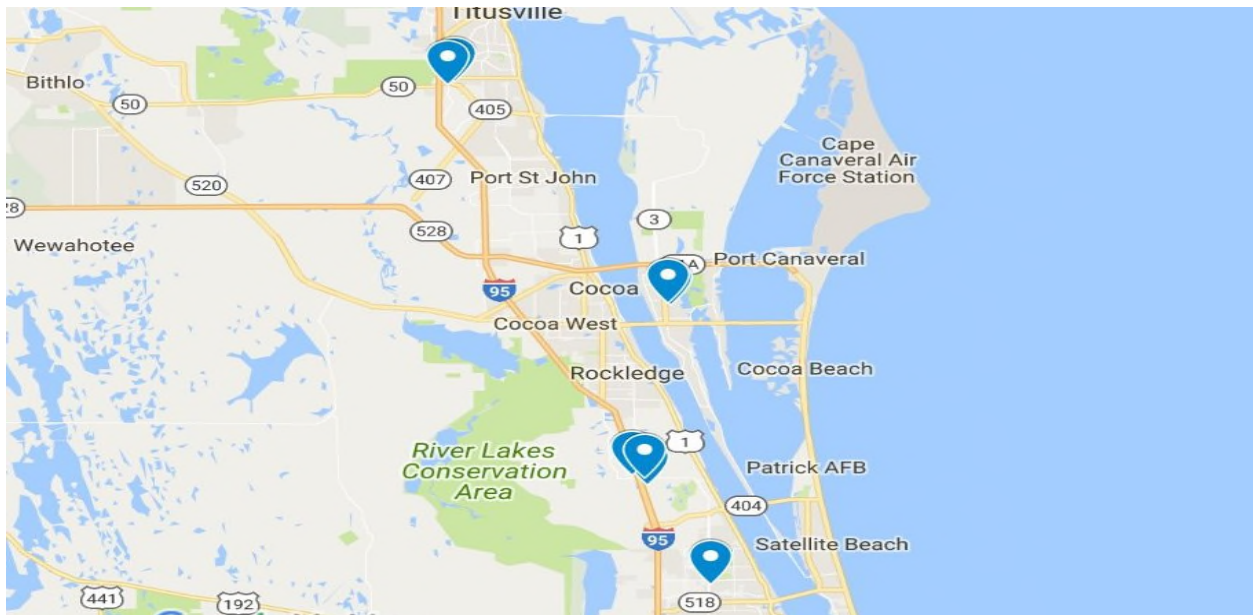
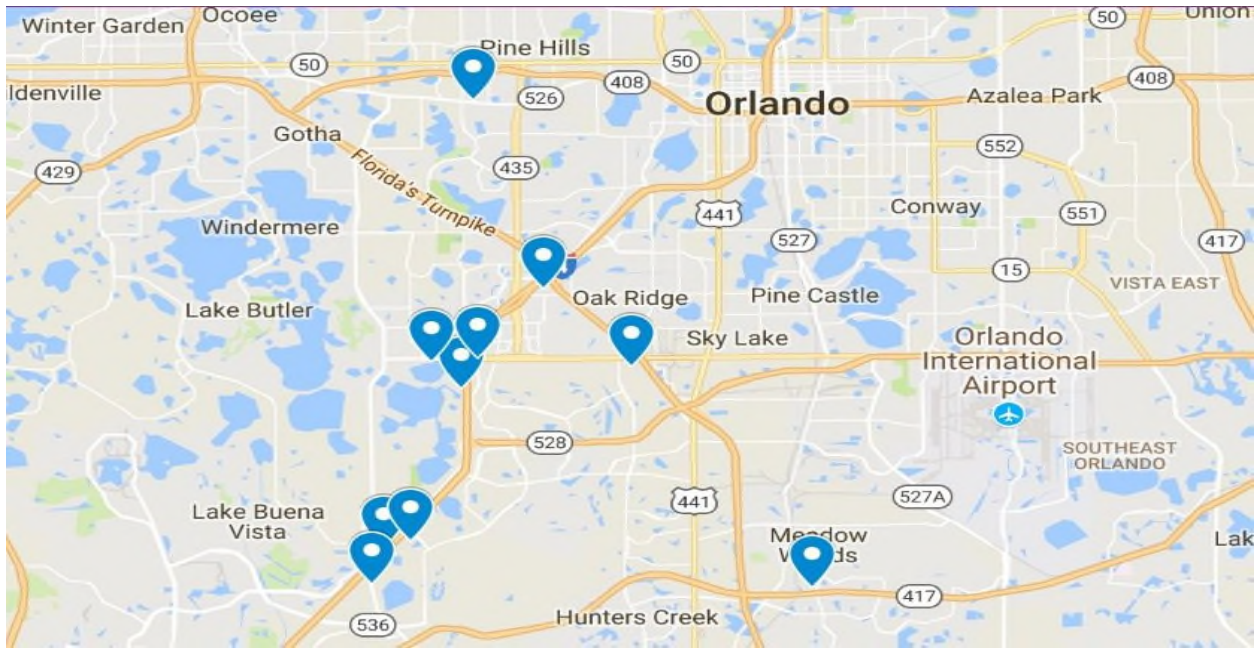


Levy County<sup>5</sup>

<sup>5</sup> Less than 10 pins showing because of overlapping pins or some site(s) used twice on different day of week and time of day.

Observation Locations in ORLANDO Designated Media Market Area

Orange County

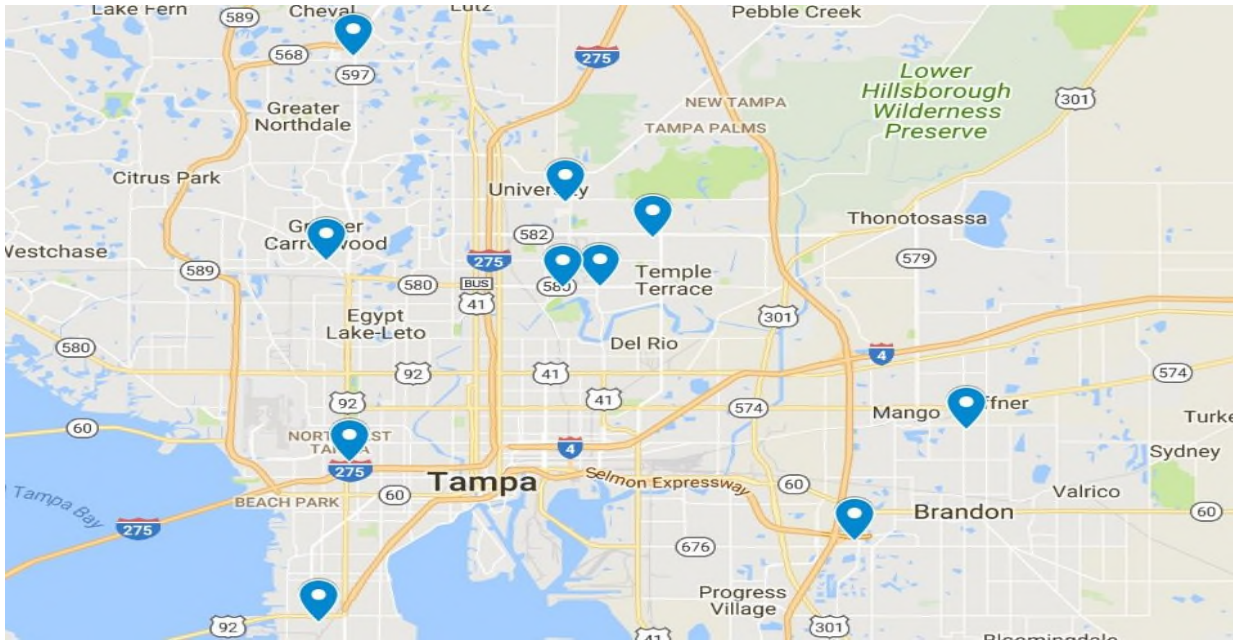


Brevard County<sup>6</sup>

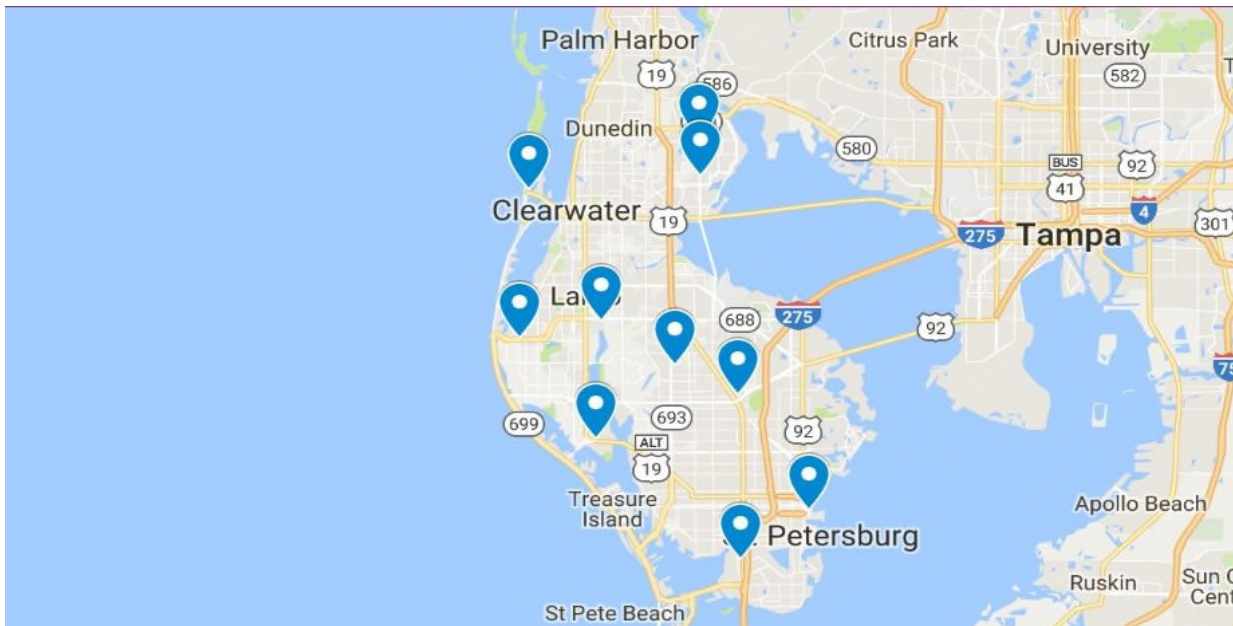
<sup>6</sup> Less than 10 pins showing because of overlapping pins or some site(s) used twice on different day of week and time of day.

Observation Locations in TAMPA Designated Media Market Area

Hillsborough County



Pinellas County

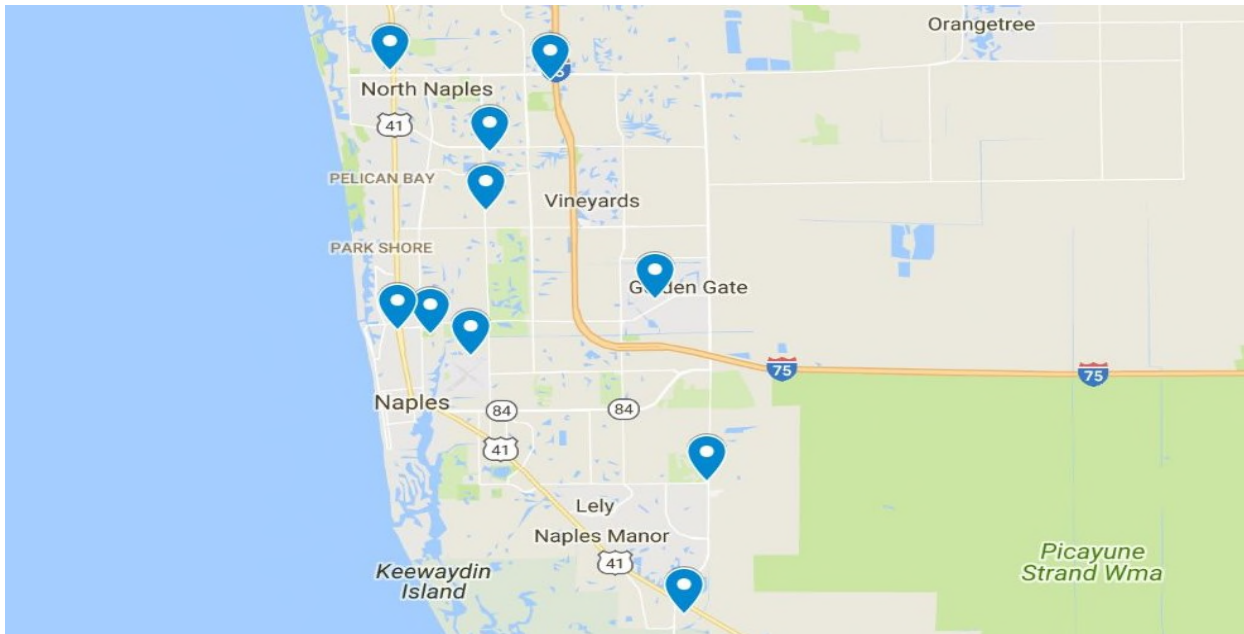


Observation Locations in FORT MEYERS-NAPLES Designated Media Market Area

Lee County

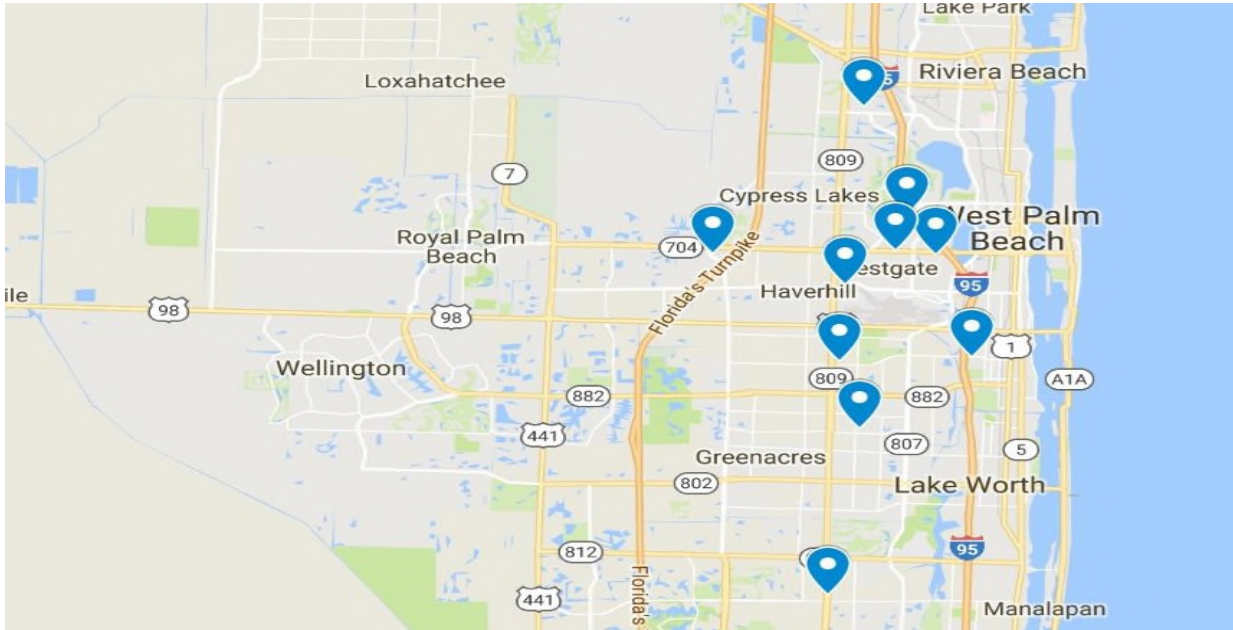


Collier County

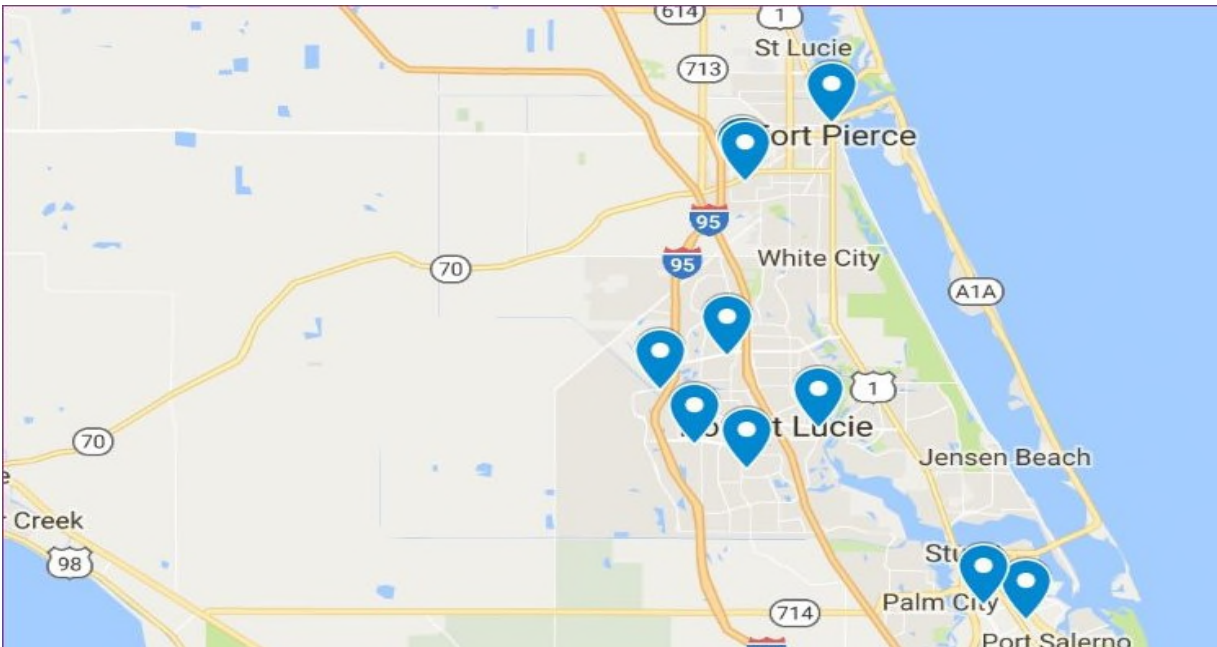


Observation Locations in PALM BEACH Designated Media Market Area

Palm Beach County



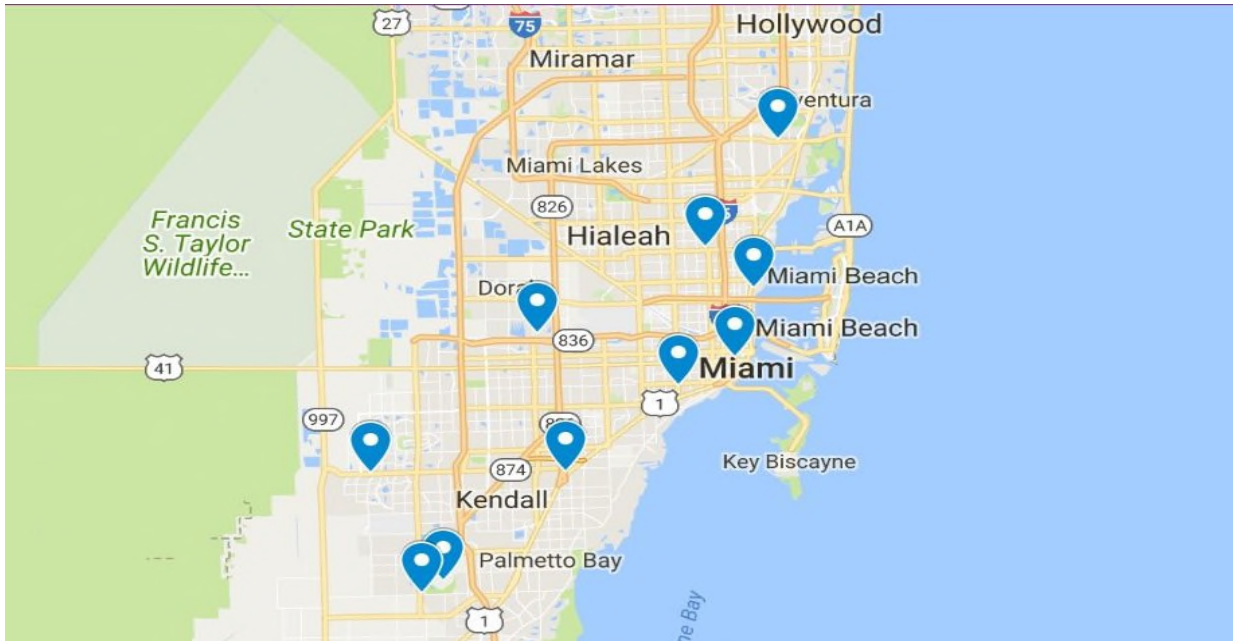
St. Lucie County<sup>7</sup>



<sup>7</sup> Less than 10 pins showing because of overlapping pins or some site(s) used twice on different day of week and time of day.

Observation Locations in MIAMI Designated Media Market Area

Miami-Dade County



Broward County

