

# **Gulf Gate Area Study**



Transportation Planning  
1001 Sarasota Center Boulevard  
Sarasota, FL 34240

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## Speeding Analysis

The 85<sup>th</sup> percentile speeds were considered for speeding analysis within the study area. This is the expected speed that 85 percent of the drivers will drive at or below the free-flowing conditions and is used to determine the safe and strategic speed limit along a section of roadway. **Table 1** lists the posted speeds and 85<sup>th</sup> percentile speeds for roadways measured within the study area. **Figure 2** is a graphical view showing the posted speed limits and the 85<sup>th</sup> percentile speed of the road segments. The 85<sup>th</sup> percentile speeds were found to be from 5 mph below to 14 mph above the posted speed limits along the roadway network.

Table 1 – Gulf Gate Area 85<sup>th</sup> Percentile Speed

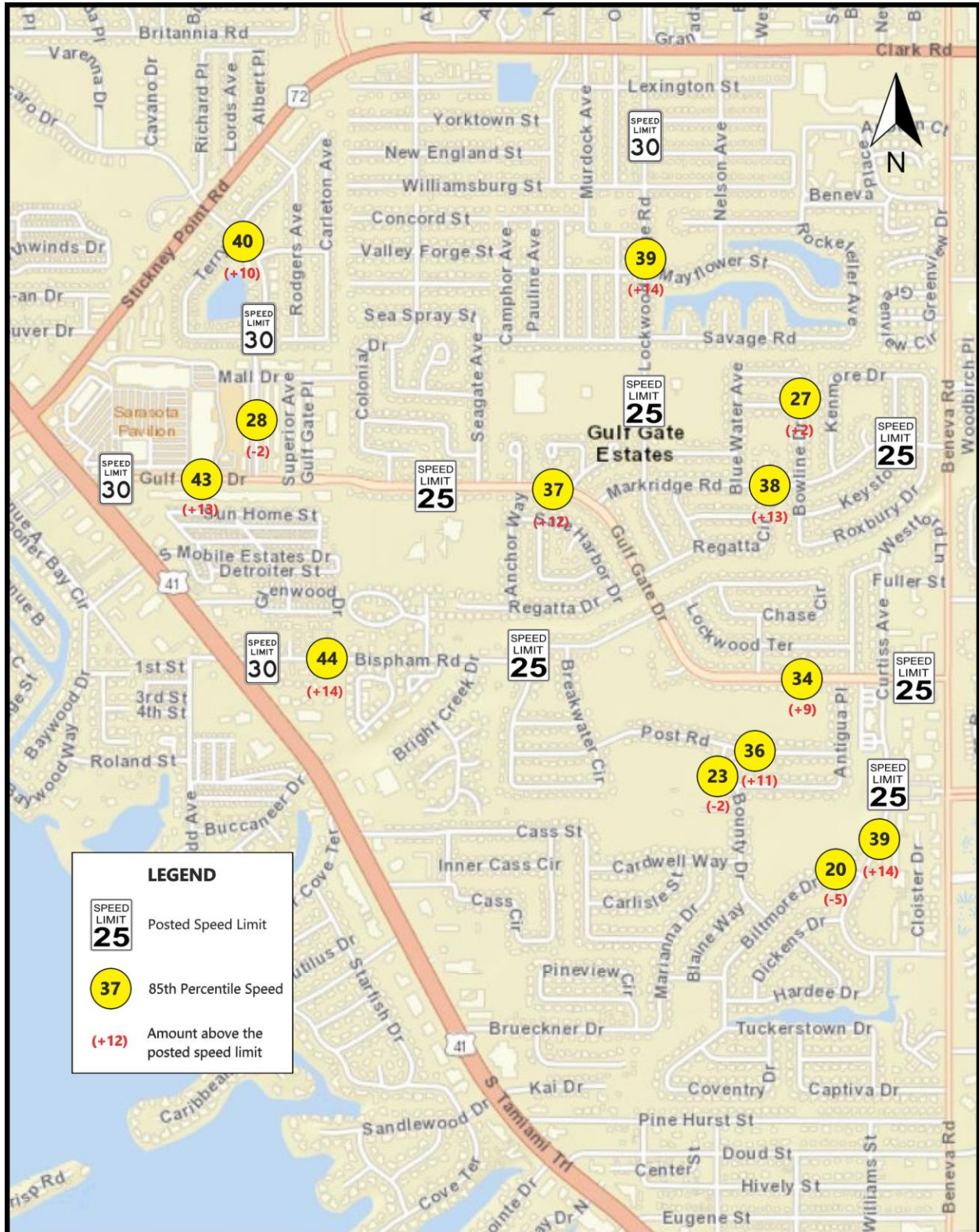
| Road Segment        |                     |                   | Segment Attributes |              |                                   |    |    |    | Amount above the Posted Speed Limit |      |
|---------------------|---------------------|-------------------|--------------------|--------------|-----------------------------------|----|----|----|-------------------------------------|------|
| Roadway Name        | Roadway Limits      |                   | No. of Lanes       | Posted Speed | 85 <sup>th</sup> Percentile Speed |    |    |    |                                     |      |
|                     |                     |                   |                    |              | NB                                | SB | EB | WB |                                     | Date |
| Gateway Avenue      | Stickney Point      | Mall Drive        | 2                  | 30           | 40                                | 35 |    |    | 7/25/2017                           | 10   |
| Gateway Avenue      | Mall Drive          | Gulf Gate Drive   | 2                  | 30           | 28                                | 28 |    |    | 7/25/2017                           | -2   |
| Gulf Gate Drive     | U.S. 41             | Gateway Ave       | 2                  | 30           |                                   |    | 41 | 43 | 7/25/2017                           | 13   |
| Gulf Gate Drive     | Gateway Ave         | Bispham Road      | 2                  | 25           |                                   |    | 34 | 37 | 7/12/2016                           | 12   |
| Gulf Gate Drive     | Bispham Road        | Beneva Road       | 2                  | 25           |                                   |    | 32 | 34 | 7/25/2017                           | 9    |
| Lockwood Ridge Road | Clark Road          | Markridge Road    | 2                  | 30/25        | 39                                | 39 |    |    | 7/18/2017                           | 14   |
| Bispham Road        | U.S. 41             | Gulf Gate Drive   | 2                  | 30/25        |                                   |    | 44 | 42 | 8/8/2018                            | 14   |
| Markridge Road      | Lockwood Ridge Road | Kenmore Drive     | 2                  | 25           |                                   |    | 36 | 38 | 4/5/2019                            | 13   |
| Bowline Drive       | Prairie Lane        | Keystone Drive    | 2                  | 25           | 27                                | 26 |    |    | 4/5/2019                            | 2    |
| Post Road           | Antigua Place       | Breakwater Circle | 2                  | 25           |                                   |    | 33 | 36 | 4/5/2019                            | 11   |
| Bounty Drive        | Post Road           | Antigua Place     | 2                  | 25           | 23                                |    |    |    | 4/5/2019                            | -2   |
| Curtiss Avenue      | Cloister Drive      | Dickens Drive     | 2                  | 25           | 39                                | 37 |    |    | 4/5/2019                            | 14   |
| Biltmore Drive      | Bounty Drive        | Curtiss Avenue    | 2                  | 25           |                                   |    | 20 |    | 4/5/2019                            | -5   |

When the vehicle traffic was measured on Curtiss Avenue with an MH Corbin traffic analyzer from April 3 to 5, 2019, the average vehicle speed was found to be 30 to 32 mph and an 85<sup>th</sup> percentile speed of 39 mph. There were 32 vehicles that exceeded 55 mph on Curtiss Avenue each day of the study which is about 2.4 percent of the daily volume of vehicles. During the same study 3 vehicles exceeded 55 mph on Markridge Road each day of the study which is less than 1 percent of the daily volume of vehicles. The statistics for roadways measured within the study area during April 3 to 5, 2019, are shown in **Table 2**.

Table 2 – Average Vehicle Speeds from April 3 to 5, 2019

| Roadway Name   | Roadway Limits      |                   | Speed Limit | Average Speed | No. of vehicles exceeding 55 mph each day | Daily Volume (AADT) | % of vehicles exceeding 55 mph each day |
|----------------|---------------------|-------------------|-------------|---------------|---|---------------------|---|
| Markridge Road | Lockwood Ridge Road | Kenmore Drive     | 25          | 30 to 32      | 3   | 1,905               | <1%                                     |
| Bowline Drive  | Prairie Lane        | Keystone Drive    | 25          | 22            | 1   | 168                 | <1%                                     |
| Post Road      | Antigua Place       | Breakwater Circle | 25          | 27 to 30      | 9   | 402                 | 2.1%                                    |
| Bounty Drive   | Post Road           | Antigua Place     | 25          | 19            | 3   | -                   | 1.1%                                    |
| Curtiss Avenue | Cloister Drive      | Dickens Drive     | 25          | 30 to 32      | 32  | 1,307               | 2.4%                                    |
| Biltmore Drive | Bounty Drive        | Curtiss Avenue    | 25          | 18            | 2   | -                   | <1%                                     |

Figure 2 – 85<sup>th</sup> Percentile Speed



### Sheriff’s Office Traffic Study

The Sarasota County Sheriff’s Office conducted a traffic survey on Markridge Road and Curtiss Avenue on July 13 to 23, 2019, using a Jamar Radar Recorder. There was a total of 11,590 vehicles captured on the survey on Markridge Road over the course of the 10 days with an 85<sup>th</sup> percentile speed of 36 mph. Approximately 4.5 percent of the vehicles exceeded the 25 mph speed limit by 15 mph or more.

During this same study there were 8,991 vehicles captured on the survey on Curtiss Avenue with a combined 85<sup>th</sup> percentile speed of 32 mph. Less than 1 percent of the vehicles exceeded the speed limit by 15 mph or more. According to the sheriff’s office the survey from Curtiss Avenue did not show vehicle speeding but the results from Markridge Road did indicate a high volume of speeding.

### Additional Traffic Counts

Sarasota County conducted additional traffic counts with an MH Corbin traffic analyzer on Curtiss Avenue, Markridge Road and Post Road from March 11 to 13, 2020. These counts were performed to validate previous traffic counts collected on these roadways. **Table 3** lists the posted speeds and 85<sup>th</sup> percentile speeds for the roadways measured. The 85<sup>th</sup> percentile speeds were found to be from 8 to 13 mph above the posted speed limits on these roads. These values are comparable to those previously measured in April 2019.

Table 3 –85<sup>th</sup> Percentile Speed from March 11 to 13, 2020

| Road Segment   |                 |                   | Segment Attributes |              |                                   |    |    |    | Amount above the Posted Speed Limit |      |
|----------------|-----------------|-------------------|--------------------|--------------|-----------------------------------|----|----|----|-------------------------------------|------|
| Roadway Name   | Roadway Limits  |                   | No. of Lanes       | Posted Speed | 85 <sup>th</sup> Percentile Speed |    |    |    |                                     |      |
|                |                 |                   |                    |              | NB                                | SB | EB | WB |                                     | Date |
| Curtiss Avenue | Gulf Gate Drive | Beneva Road       | 2                  | 25           | 38                                | 37 |    |    | 3/13/2020                           | 13   |
| Markridge Road | Beneva Road     | Gulf Gate Drive   | 2                  | 25           |                                   |    | 37 | 34 | 3/13/2020                           | 12   |
| Post Road      | Antigua Place   | Breakwater Circle | 2                  | 25           |                                   |    | 33 | 33 | 3/13/2020                           | 8    |

Statistics for the roadways measured during March 11 to 13, 2020, are shown in **Table 4**. These values are comparable to those previously measured in April 2019.

Table 4 – Average Vehicle Speed from March 11 to 13, 2020

| Roadway Name   | Roadway Limits  |                   | Speed Limit | Average Speed | No. of vehicles exceeding 55 mph each day | Daily Volume (AADT) | % of vehicles exceeding 55 mph each day |
|----------------|-----------------|-------------------|-------------|---------------|---|---------------------|---|
| Curtiss Avenue | Gulf Gate Drive | Beneva Road       | 25          | 31 to 33      | 28  | 1,571               | 1.8%                                    |
| Markridge Road | Beneva Road     | Gulf Gate Drive   | 25          | 29 to 32      | 9   | 1,803               | <1%                                     |
| Post Road      | Antigua Place   | Breakwater Circle | 25          | 28            | 3   | 335                 | 1.1%                                    |

## Buses and Trucks

A resident of Gulf Gate Woods reported school buses and parcel delivery trucks speeding on Curtiss Avenue. A study of vehicle traffic on Curtiss Avenue was conducted on April 3 to 5, 2019, with an MH Corbin traffic analyzer that measured the number of buses and trucks to be from three to nine percent of the total classified vehicles. When residents observe school buses or parcel delivery trucks exceeding the posted speed limit they can call and report the situation to the Sarasota County Schools Transportation Department or the respective trucking company.

## Multi-Way Stop Signs

There are currently stop signs on the minor street at the intersections of Markridge Road at Bowline Drive, Post Road at Bounty Drive and Curtiss Avenue at Biltmore Drive. The GGCA Traffic and Safety Committee requested multi-way stop signs at these intersections to curtail motorists from speeding. The locations of these intersections are identified in **Figure 3**.

Sarasota County Transportation staff conducted an engineering review to evaluate if there is justification to install multi-way stop signs at these three intersections. Multi-Way stops on local streets in Sarasota County are evaluated based on Resolution Number 2018-179 which includes the warrants found in the Manual on Uniform Traffic Control Devices (MUTCD) in addition to giving the Board of County Commissioners the latitude to make decisions to install stop signs based on their discretion to promote the safety, health and welfare of the traveling public in Sarasota County.

To satisfy the local warrant, a point system is calculated based on annual crash rate, traffic volume, traffic speed, special circumstances and average daily traffic split. Per the Resolution, a total of seven points must be met to warrant the need for a multi-way stop controlled intersection.

County staff determined that none of the three intersections met the local warrant and recommended that multi-way stop signs should not be used at these intersections for speed control. **Table 5** lists the results of the intersection warrants. It should be noted per the Resolution, it is not mandatory that a warrant found in the MUTCD be met for the installation of multi-way stop signs on local streets in residential neighborhoods.

Figure 3 – Intersections Petitioned for Multi-way Stop Signs

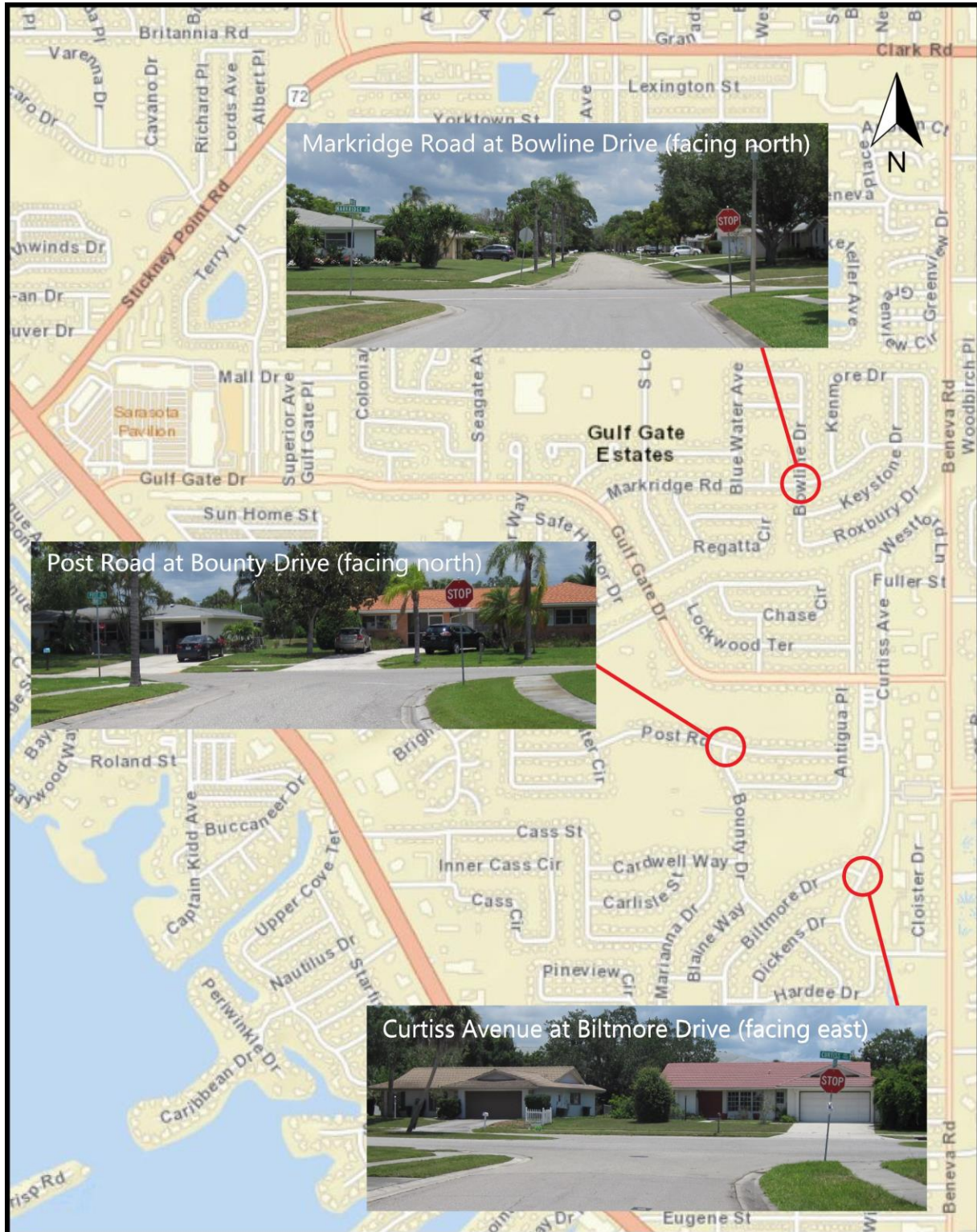


Table 5 – Local Warrants for Multi-Way Stop Signs

| Roadway Intersection              | Total Points | Satisfy Point Requirement | Satisfy Criteria Requirement | Meets Warrant |
|-----------------------------------|--------------|---------------------------|------------------------------|---------------|
| Markridge Road and Bowline Drive  | 6            | No                        | No                           | No            |
| Post Road and Bounty Drive        | 3.5          | No                        | No                           | No            |
| Curtiss Avenue and Biltmore Drive | 6            | No                        | No                           | No            |

Research on traffic abatement measures found that multi-way stops do not reduce speeds on residential streets and that unwarranted stop signs should not be used. Problems caused when unwarranted stop signs are installed include traffic noise, automobile pollution, traffic enforcement and undesirable driver behavior. Compliance is poor at unwarranted multi-way stops because drivers feel little reason to yield the right-of-way when there are usually no vehicles on the minor street. Drivers will also increase speed between intersections to make up time they lost at the “unnecessary” stop sign.

Safety of pedestrians is decreased at unwarranted multi-way stops. This results from the expectation that vehicles will stop at posted stop signs, but many drivers will get in the habit of running the “unnecessary” stop signs. Increased fuel consumption and vehicle emissions are a result of multi-way stops. Noise is also increased in the vicinity of these intersections from vehicles braking and accelerating up to speed.

### Cut Through Traffic

Residents of Gulf Gate Estates and Gulf Gate Woods are concerned about cut through traffic in their neighborhood. Roadways they suspect are being used as cut through roads are Gulf Gate Drive, Markridge Road, Curtiss Avenue and Post Road. Gulf Gate Drive is a major collector in the county’s thoroughfare network and serves to move traffic from local streets to arterial roads and therefore should not be considered a cut through road.

Markridge Road, Curtiss Avenue and Post Road are county maintained local roads. Commuters are not committing a traffic violation when accessing these public platted roads. Additionally, there are over 1,500 households in the Gulf Gate community. These households can generate 14,000 trips per day. It is possible that the perceived cut through traffic may be generated from within the community itself.

A theory, by the residents, for cut through traffic on Markridge Road and Curtiss Avenue is an avoidance of the traffic signal lights on Beneva Road at Kingston Boulevard, Gulf Gate Drive and Palmer Ranch Parkway because of poor signal timing. The timing of the traffic signals on Beneva Road has recently been optimized. Therefore, the avoidance of the traffic signal lights on Beneva Road would be a personal decision made by motorists using the roadway network and not due to signal timing.

Additional analysis is needed to determine the existence of cut through traffic in the Gulf Gate area. One method to determine the existence of cut through traffic is to use a Location-Based Services (LBS) consultant. The Sarasota/Manatee Metropolitan Planning Organization (MPO) has a subscription with StreetLight Data, Inc. to provide location-based data for transportation analytics and modeling. The StreetLight InSight® platform sources information from mobile device applications to determine what share of traffic on a road is local and what share is cut through. This method will provide a real-time look at about 28 percent of the study area traffic and compare it to measured AADT on these roadways. Coordination with the MPO will be needed to obtain the transportation information from StreetLight Data for Origin-Destination (OD) and cut through traffic.

Another method to determine the validity and level of cut through traffic is to collect hourly tube counts along several roads within the neighborhood. A comparison of PM peak hour volumes to daily volumes may determine which roads within the neighborhood are being used as cut through routes. Peak hour volumes equal to or less than 10 percent of the daily traffic may be considered normal traffic while the volume above 10 percent may be considered cut through traffic.

It should be noted there are several attractors within the study area that are generating trips which are not considered cut through traffic. These attractors include the Gulf Gate Library, Sarasota Pavilion, and shops and restaurants along Gateway Avenue, Superior Avenue and Gulf Gate Drive. The churches within the Gulf Gate Estates are additional attractors for trips to the neighborhood.

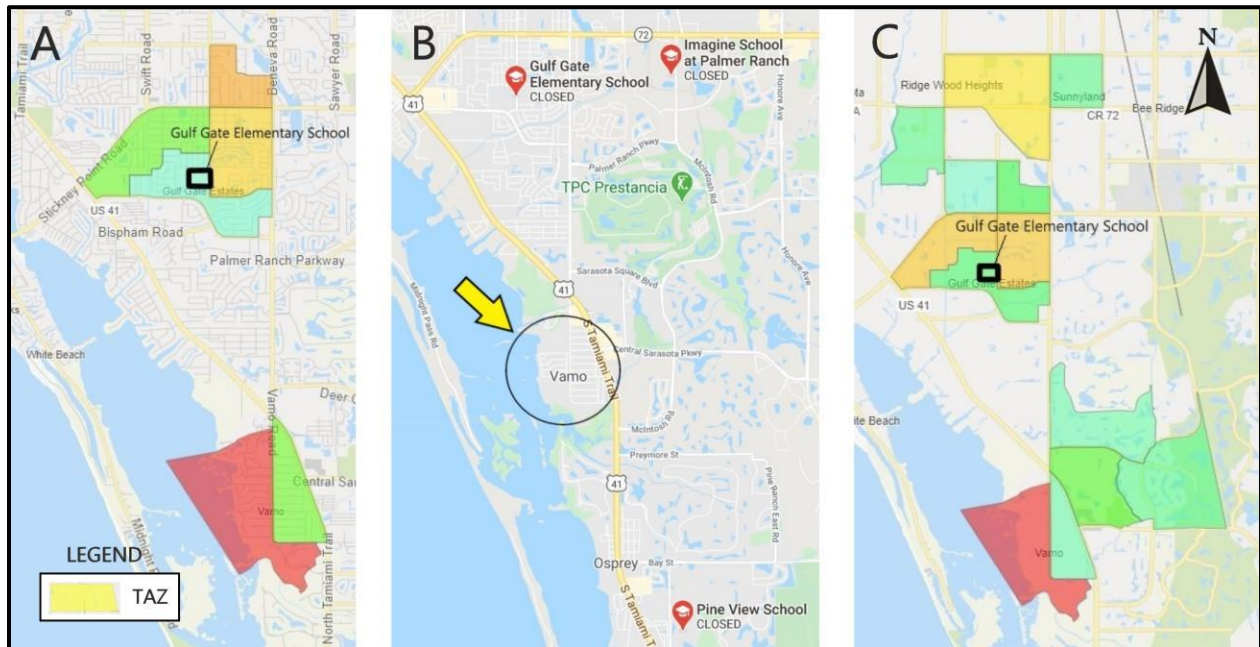
### **StreetLight Data**

Sarasota County coordinated with Sarasota/Manatee MPO to use StreetLight Data for Origin-Destination (OD), speeding and cut through traffic information within the Gulf Gate Area. Several data evaluations were conducted using StreetLight Data to determine the OD for Gulf Gate Elementary School, Markridge Road and Curtiss Avenue. Additional data evaluations were run to examine cut through traffic on Markridge Road, Curtiss Avenue, Post Road and Bispham Road.

#### *Gulf Gate Elementary School*

The OD analyses of trips to the Gulf Gate Elementary School utilized data sourced from 2017 and 2018. The Traffic Analysis Zones (TAZs) that contributed the most trips to the Gulf Gate Elementary School are identified in **Figure 4A** below. The greatest source of trips were generated from zones immediately near the school and 20 percent of the total OD trips originated from Vamo, Florida. Vamo is located south of the Gulf Gate Elementary School and is identified in **Figure 4B**. **Figure 4C** shows additional traffic zones in the extended area where fewer trips originated that had destinations at the Gulf Gate Elementary School.

Figure 4 – Gulf Gate Elementary School Trip Evaluation



*Speeding and Cut Through Traffic*

Information sourced from mobile device applications during 2019 was used to evaluate the traffic on Markridge Road and Curtiss Avenue. Peak travel times on Markridge Road were observed from 8 AM to 9 AM and 2 PM to 4 PM with an Estimated Annual Average Daily Traffic (AADT) of 4,662. The peak travel time on Curtiss Avenue was observed from 3 PM to 5 PM with an AADT of 2,513. During the Peak PM travel time about 94 percent of the vehicles were travelling on these roads at 30 mph or less.

The top origination and destination TAZs for trips that passed through Markridge Road and Curtiss Avenue are shown in **Figures 5 and 6**. The darker orange and purple colors indicate the greater number of origin trips where the lighter colors indicate a lesser number of origin trips. The study showed that the top trips passing through Markridge Road are local trips with origins and destinations nearby such as the Sarasota Pavilion, TPC Prestancia golf course and Legacy Trail. Most vehicles passing through Curtiss Avenue originated from local traffic zones south and west of the roadway and have destinations north and south of the roadway.

Figure 5 – Markridge Road Top TAZs

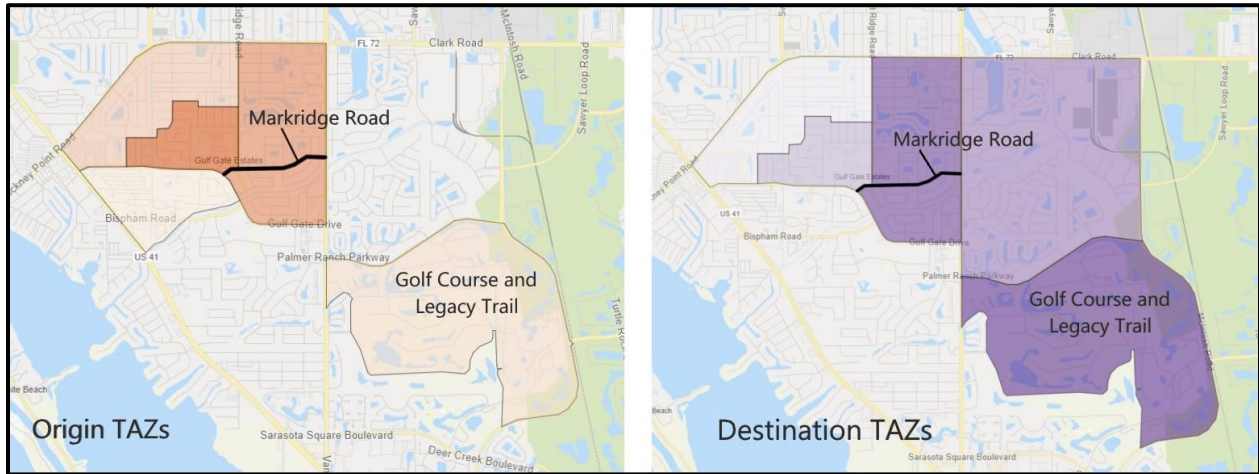
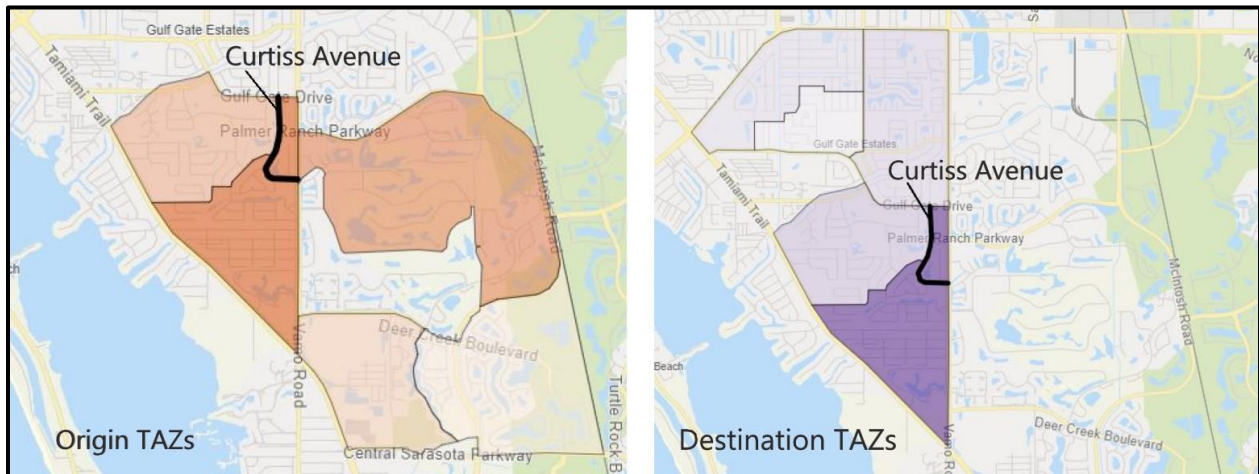


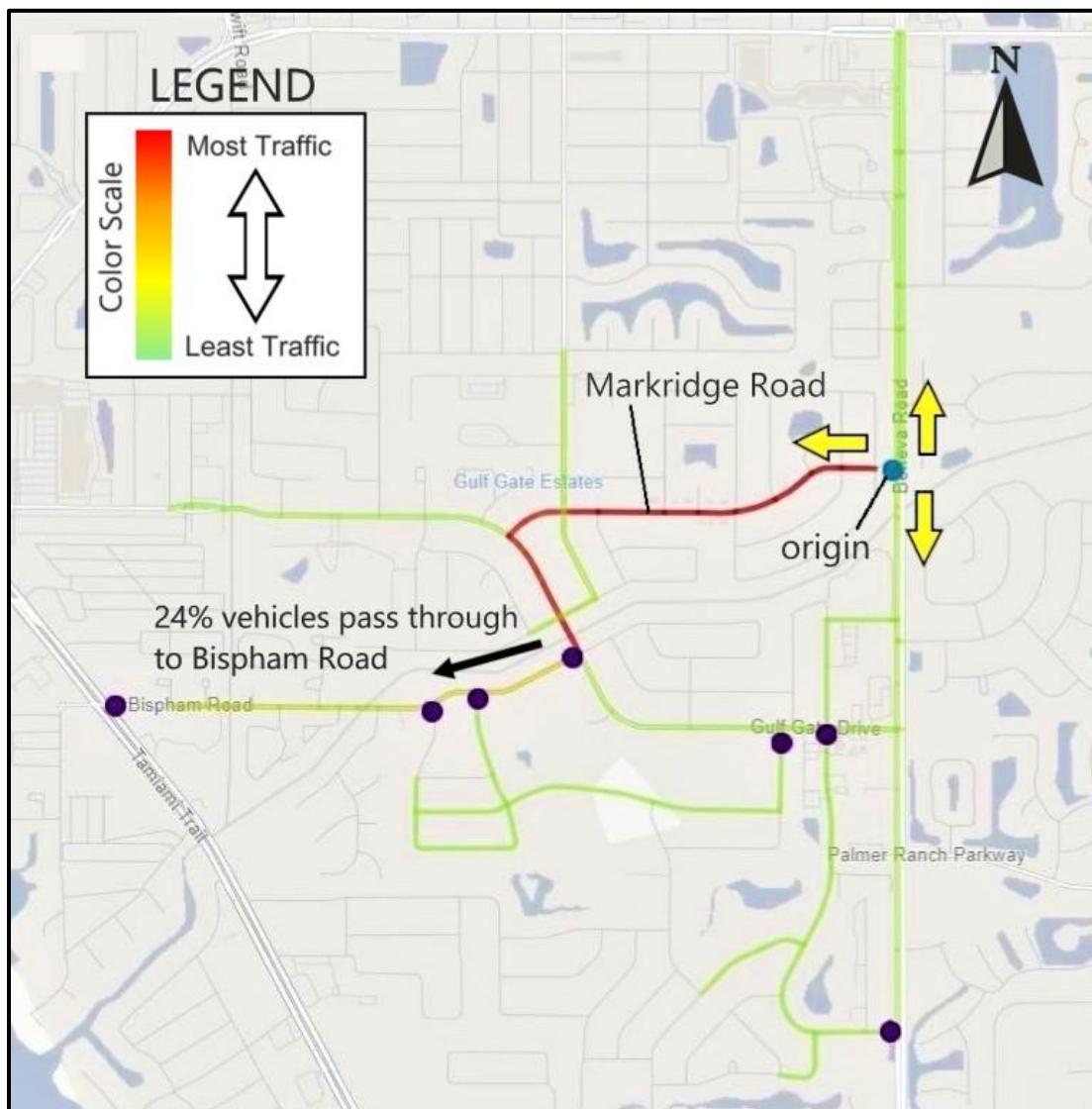
Figure 6 – Curtiss Avenue Top TAZs



*Pass-through gates and Vehicle Pathways*

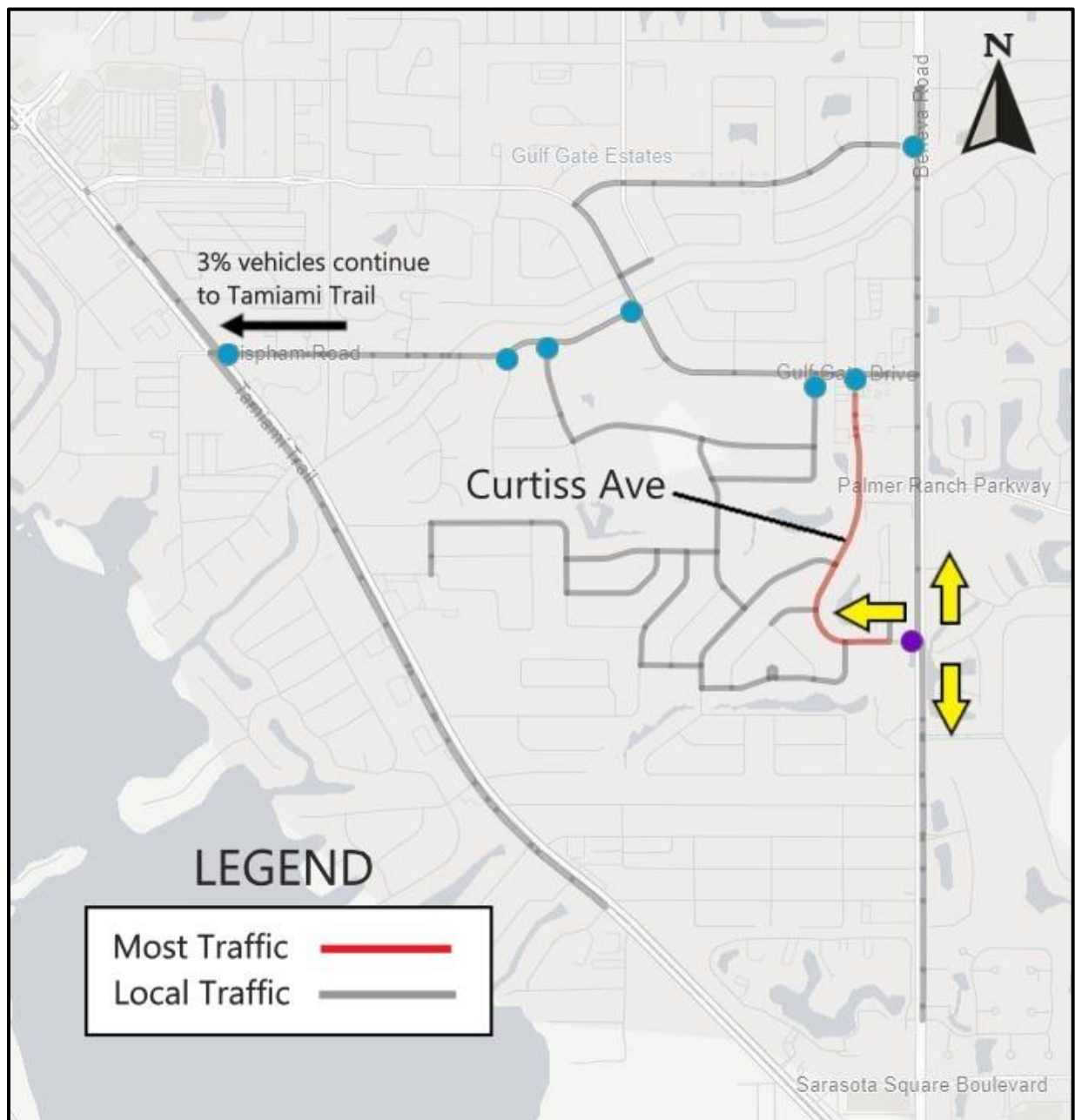
Pass-through gates were created in StreetLight Data at intersections within the study area to observe the pathways of traffic. **Figure 7** identifies a pass-through gate (origin) and the main routes (top routes) that vehicles travel after passing through the Markridge Road gate. The purple nodes in the figure indicate the pass-through gates created for the trip studies. The line colors show the main pathways of vehicles after they passed through the origin. The number of vehicles are arranged in a color scale where red indicates road segments with the most vehicular traffic. Orange, yellow and green show the pathways and destinations of vehicles passing through the origin in decreasing amounts with green having the least traffic. This analysis shows that traffic passing through Markridge Road are local trips with about 24 percent of the trips passing through to Bispham Road.

Figure 7 – Pathways of Vehicles Entering Markridge Road



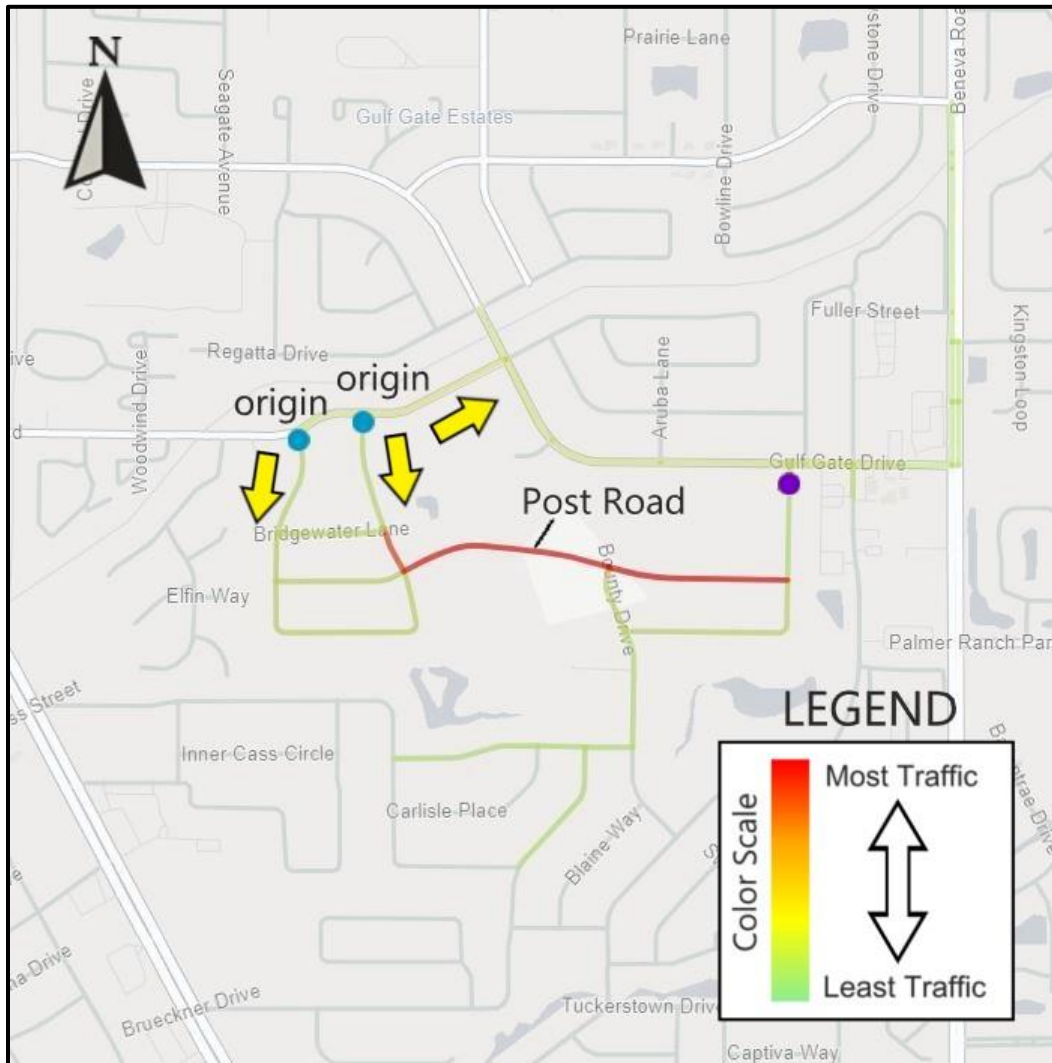
A pass-through gate was created in StreetLight Data near the intersection of Curtiss Avenue and Beneva Road to observe the pathways of traffic. **Figure 8** identifies the pass-through gate (origin) and the most frequent routes that vehicles travel after passing through this node. The red line indicates the pathway for most of the vehicles and gray shows the pathways for the remainder of the vehicles. The analysis shows that many of the trips passing through Curtiss Avenue are local trips using the local roadway network while three percent of the trips continue to destinations on Tamiami Trail.

Figure 8 – Pathways of Vehicles Entering Curtiss Avenue



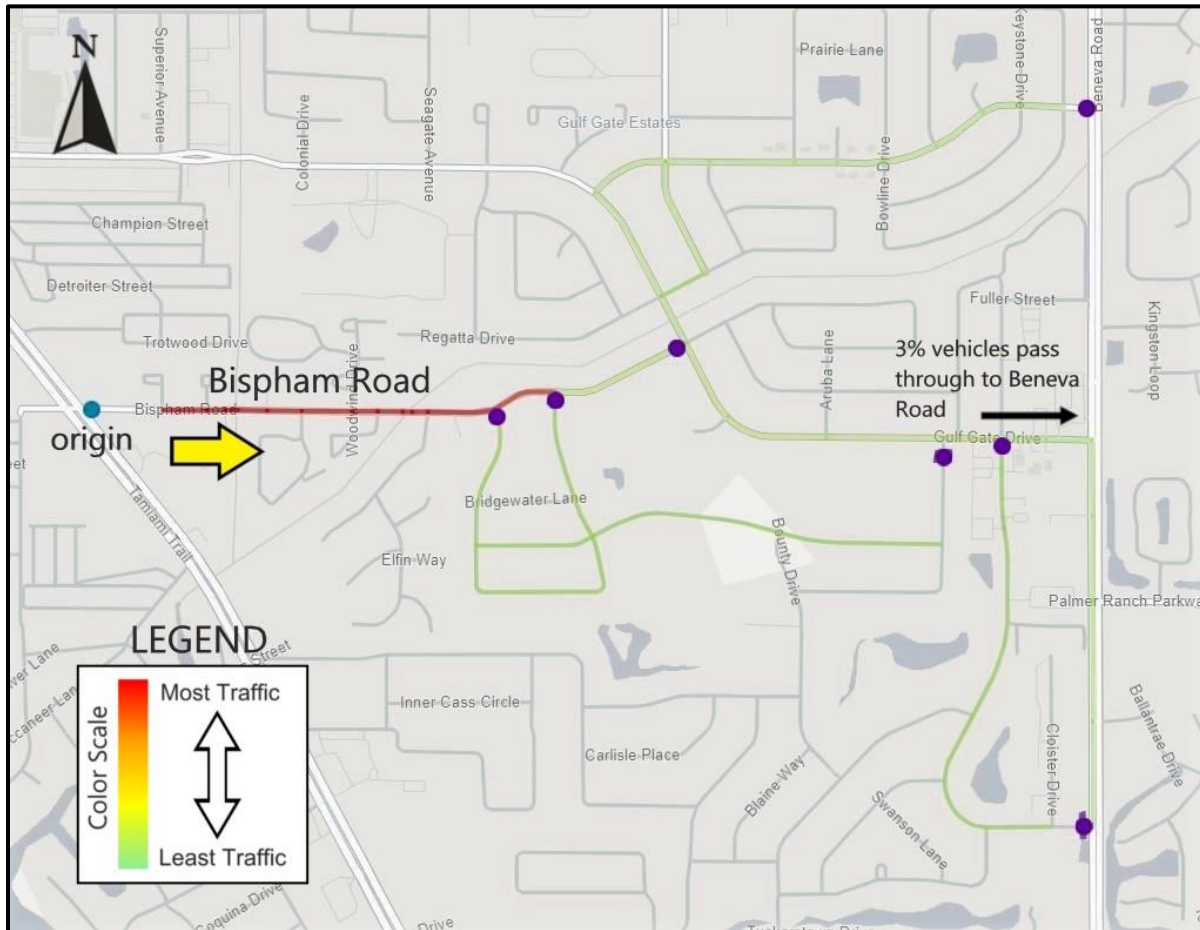
There was a perception from some Gulf Gate residents that Post Road was being used for cut through traffic. Pass-through gates were created in StreetLight Data to observe the pathways of vehicles utilizing Post Road. **Figure 9** identifies these pass-through gate (origins) and the routes most frequently travelled. The red lines show the main pathways of vehicles followed by orange, yellow and green. The data indicates that Post Road is being used by local traffic generated from within the community and is not used for cut through traffic.

Figure 9 – Pathways of Vehicles Using Post Road



**Figure 10** shows the pathways of vehicles that pass through a gate established on Bispham Road near South Tamiami Trail. The data indicates that most of the trips passing through this origin are local traffic using the local roadway network and about three percent of the vehicles continued east to Beneva Road.

Figure 10 – Pathways of Vehicles Using Bispham Road



### Crash Analysis

Sarasota County publishes an annual Crash Summary Report that provides information about crashes throughout the county for each calendar year. The report includes the top 20 signalized intersections with the highest crash rates, a breakdown of crash types and driver contributing circumstances. In 2017 the top crash rates for signalized intersections ranged from 1.37 to 2.37 per Million Vehicles Entering (MVE). The Beneva Road/Sarasota Square Boulevard intersection is near the study area and ranked number 17 of the top 20 signalized intersections in the 2017 report with a crash rate of 1.47 MVE. No signalized intersections within the study area were listed in the 2017 Crash Summary Report.

Data from traffic crash records for the years 2014 to 2018 was examined for the four-way stop intersection of Gulf Gate Drive and Curtiss Avenue. Eight crashes were reported during this time period that involved four angle crashes, three rear end crashes and one fixed object crash. Six of these crashes occurred during daylight, clear weather and dry road surface conditions. The remaining two crashes took place at dawn and dusk when the weather was clear and the road was dry. There were no injuries or fatalities resulting from these crashes. The crashes were due to careless driving, following too closely, and not stopping at the stop sign.

Recorded crashes for the years 2014 to 2018 were also examined for the intersection of Markridge Road and Beneva Road. Thirteen crashes were reported during this five-year period that included eight angle crashes, three rear end crashes, one fixed object crash and one sideswipe crash. Ten of these crashes took place during the day, two at dusk and one at night. There were six injuries and no fatalities resulting from these crashes. The crashes were due to careless or negligent driving, not stopping at the stop sign, failure to yield to traffic, improper lane change and from a box that fell off a pickup truck.

Two of the reported crashes at the intersection of Markridge Road and Beneva Road were because the motorists did not properly judge the oncoming speed of the southbound vehicles on Beneva Road and drove into traffic from Markridge Road. A possible factor in these crashes is that the driver's vision was obstructed by overhanging tree branches as shown in **Figure 11**. These branches are from a rubber tree growing on private property. Due to the tree's growth habit, the branches will need to be trimmed approximately every 3 to 6 months in order to keep from obstructing the view for motorists coming out of Markridge Road. Another solution would be to remove the rubber tree and replace it with a tree that will not create a continuous sight distance problem.

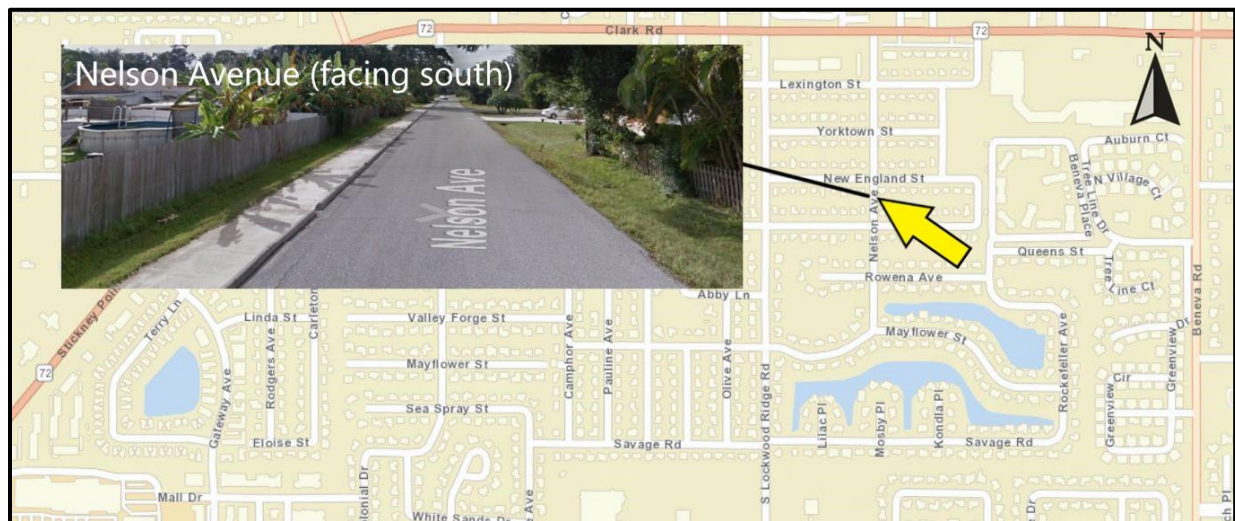
Figure 11 – Overhanging Tree Branches



## Bicycle and Pedestrian Crash Analysis

There was a crash on Nelson Avenue at 6:57 PM on March 11, 2017, that involved a bicycle and a motor vehicle. The location of the bicycle crash is identified in **Figure 12**. The Florida Highway Patrol reported that a bicyclist was riding southbound on Nelson Avenue while a motorist was also travelling southbound on Nelson Avenue. The motorist had an estimated speed of 30 mph. At 100 feet south of the intersection of Nelson Avenue and New England Street the bicyclist cut across the roadway directly in the path of the motor vehicle. The motor vehicle collided with the left side and rear tire of the bicycle. There were approximately 10 feet of skid marks from the motor vehicle leading to the area of the collision. The patrol officer charged the bicyclist with failure to yield to traffic.

Figure 12 – Location of Bicycle Crash



Pedestrian crashes within the study area were examined from 2014 to April 2019. On October 18, 2016, a pedestrian was walking south across Gulf Gate Drive near Mobile Gate Drive at 7:43 PM. The pedestrian was struck by a vehicle and died. The crash report listed wrong-way walking as an action by the non-motorist. On March 18, 2017, a pedestrian was traveling southbound within the marked crosswalk on Gulf Gate Drive at Gateway Avenue and was struck by a vehicle. The crash report stated that the motorist failed to yield the right-of-way and use due care toward the pedestrian.

At 6:20 PM on April 3, 2015, a pedestrian on roller-blades was struck by a vehicle at the intersection of Gulf Gate Drive and Bispham Road. The crash report stated that the pedestrian failed to yield to traffic and traveled directly into the path of the vehicle. On February 23, 2019, a pedestrian was walking north on the east side of Curtiss Avenue and stopped at the Gulf Gate Library dirt overflow parking lot and waited to cross the road toward the Gulf Gate Library. While the pedestrian was stopped, a vehicle backed from a space in the dirt overflow parking lot and made contact with the pedestrian. The pedestrian did not fall to the ground and no injury was observed or reported.

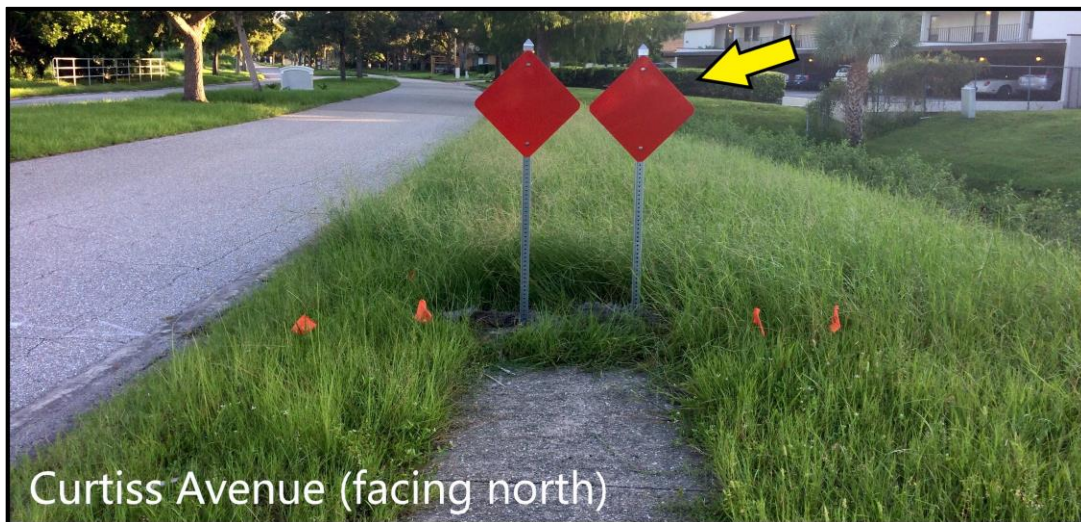
### Sidewalk Termination on Curtiss Avenue

It was reported that the sidewalk along the east side of Curtiss Avenue terminated at 270 feet south of Cloister Drive. **Figure 13** illustrates the condition of the sidewalk at this location. Sarasota County acknowledged this issue and initiated work to install signage to indicate the termination of the sidewalk. The installed signage is shown in **Figure 14**.

Figure 13 – Sidewalk Termination on Curtiss Avenue



Figure 14 – Sidewalk Termination Signs on Curtiss Avenue



The sidewalk gap on the east side of Curtiss Avenue extends from the sidewalk termination northward to Gulf Gate Drive and runs approximately 1,400 linear feet. The gap is not currently identified in the Sarasota County Sidewalk Priority Program. A sidewalk request form must be completed and submitted to Transportation Engineering in order to be added to the list of

sidewalk improvements. It should be noted that there are limited funds for the sidewalk gap program and there are priority sidewalk gaps already identified.

### Gulf Gate Elementary School

It was reported that queueing of personal vehicles from parents dropping off and picking up their children at Gulf Gate Elementary School causes traffic backup onto Lockwood Ridge Road (**Figures 15, 16 and 17**). The principal of Gulf Gate Elementary School stated that there are vehicles queued on Lockwood Ridge Road in the morning and afternoon due to approximately 500 vehicles entering the school at these times. She stated that her staff assists with the ingress and egress of these vehicles which takes about 30 minutes in the morning and afternoon to process. She further stated that queueing of vehicles onto the roadway network occurs at other schools in the county such as Riverview High School. The principal stated that she has addressed this issue, but no solution has been found to the temporary stacking of vehicles onto the roadway network. Parents are also using the parking lot at Gulf Gate Church located on the other side of Lockwood Ridge Road as a drop-off/pick-up area for their children.

Figure 15 – Lockwood Ridge Road



Figure 16 – Vehicles Queued on School Driveway



Figure 17 – Vehicles Queued on Lockwood Ridge Road North of School Driveway



It is recommended that the layout of Gulf Gate Elementary School be evaluated to determine if vehicles can queue on site rather than on Lockwood Ridge Road. Assessments have been successful at other school locations such as Ashton, Tatum Ridge, Philippi Shores and Fruitville Elementary Schools to add onsite queuing and lessen the queuing on the roadway.

Gulf Gate residents reported that other schools such as Sarasota Military Academy Prep and Riverview High School are using Gulf Gate Elementary School as a drop-off and pick-up hub that generates additional trips through the community (**Figure 18**). Speeding was reported on Markridge Road caused by parents in a hurry to drop-off and pick-up their children at the bus stop on Lockwood Ridge Road.

Figure 18 – School Bus using Gulf Gate Elementary School as a Hub



It was also reported that Third Church of Christ, Scientist on Curtiss Avenue near Beneva Road was being used as a staging area for school drop-off and pick-up (**Figure 19**). The concern is that this activity generates additional trips into the Gulf Gate community. There was no report of queuing of personal vehicles onto Curtiss Avenue from parents dropping off and picking up their children at this location.

Figure 19 – Third Church of Christ, Scientist on Curtiss Avenue



There was a claim from a citizen that no crossing guard was present during the school drop-off and pick-up times. Gulf Gate Elementary School was contacted about this issue and the principal stated that she provides two crossing guards from her staff that are present in front of the school when children arrive and depart from school. She also stated that the Sheriff’s office provides two crossing guards at the intersection of Clark Road and Lockwood Ridge Road in the morning and afternoon.

A resident who lives on Post Road observed at least one school bus driving down Post Road in the afternoon exceeding the speed limit at a “significant clip”. The Gulf Gate Elementary School assistant principal stated that she would contact the route supervisor and relay this information. Residents are encouraged to contact the Sarasota Schools Transportation Department and provide pertinent information (e.g. location, date, time and bus number) when school buses are observed speeding so that the driver can be identified.

### Traffic Safety

There are five E’s to traffic safety: Engineering, Enforcement, Education, Encouragement and Evaluation. The most effective traffic calming plans encompass all components and requires a team effort. Engineering measures alone will not produce the desired results to speeding problems, cut through traffic or vehicle crashes.

1. **Engineering measures** alter the road layout or appearance of the roadway to make driving more difficult and may include:
  - Pavement legends
  - Flashing beacons
  - Stop sign post reflectors
  
2. **Enforcement** can include:

- Increased police presence
  - Citations
  - Radar speed signs
3. **Education** involves students, parents, teachers, and other community members and emphasizes the shared responsibility of safe and attentive driving. Training and education include:
- Pedestrian and bicycle safety
  - Motorists instructed to not be in a hurry in school zones
  - Role models to encourage traffic compliance
4. **Encouragement** can get people excited about safety programs by hosting special events, holding schoolwide bicycle safety programs, or celebrating walking and biking with student art or other projects.
5. **Evaluation** is used to see if your strategies are working. Evaluating activities can help set goals and establish baseline data for planning projects.

### LED Stop Signs

LED Stop signs are typically used when there is limited visibility on the approach to an intersection or at a junction that does not have a stop controlled intersection for several miles. In these circumstances the LED Stop signs are intended to enhance visibility of the sign and increase stopping compliance by capturing the driver's attention. The LED Stop signs alert motorists of upcoming roadway changes so they do not unintentionally run the stop sign (**Figure 20**).

Figure 20 – LED Stop Sign



A representative of GGCA proposed using Flashing LED Stop signs at the Gulf Gate Drive and Curtiss Avenue intersection. The expectation is that the flashing LEDs would alert motorists to the stop signs and improve stopping compliance at the Multi-Way stop intersection. Multi-Way Stop signs, however, have been established at this intersection for several years. It is not

anticipated that replacing the existing stop signs with Flashing LED Stop signs will substantially change driver behavior at this intersection. Additionally, there have not been any reported issues with the visibility of the existing signage.

### Speed Limit Signs

The Manual on Uniform Traffic Control Devices (MUTCD) contains standards, guidance and options for signing within the right-of-way of roadways open to public travel. The MUTCD states that speed limit signs shall be located at points of change from one speed limit to another. Speed limit signs have therefore been installed at the entrance locations to the Gulf Gate community where the speed limit changes from the arterial roads, collector roads and adjacent streets to the community local roads (**Figure 21**). Additionally, there are plaques below these signs to indicate that the speed is applicable to the entire subdivision (**Figure 22**).

Figure 21 – Speed Limit Signs Installed at Gulf Gate Community Entrance Locations

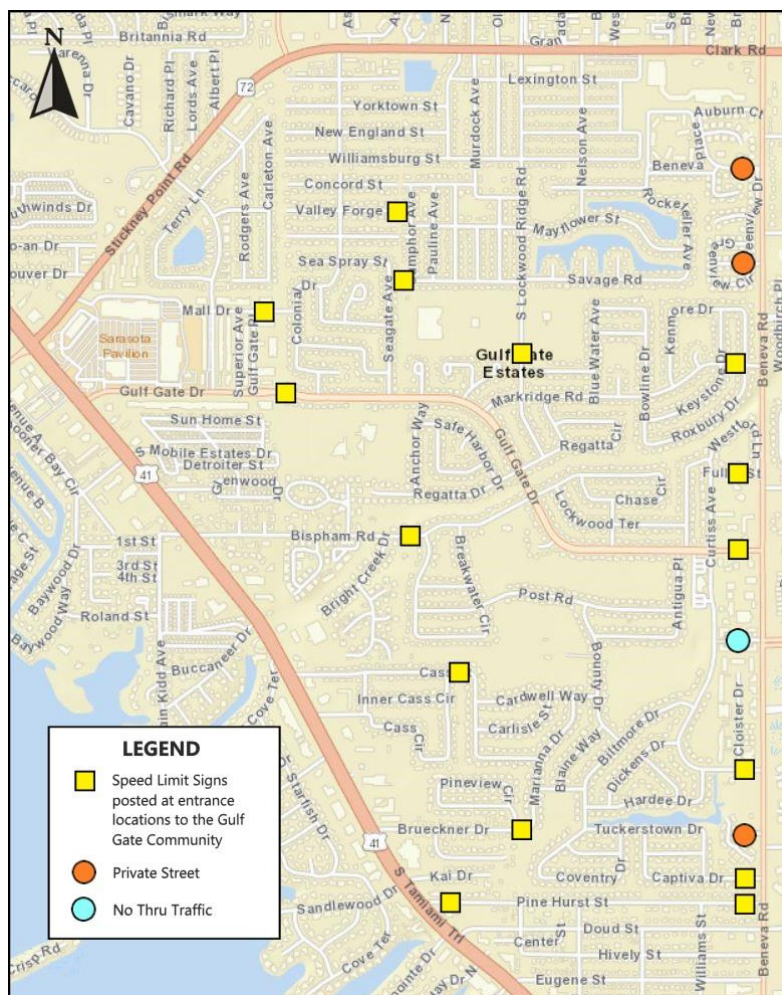
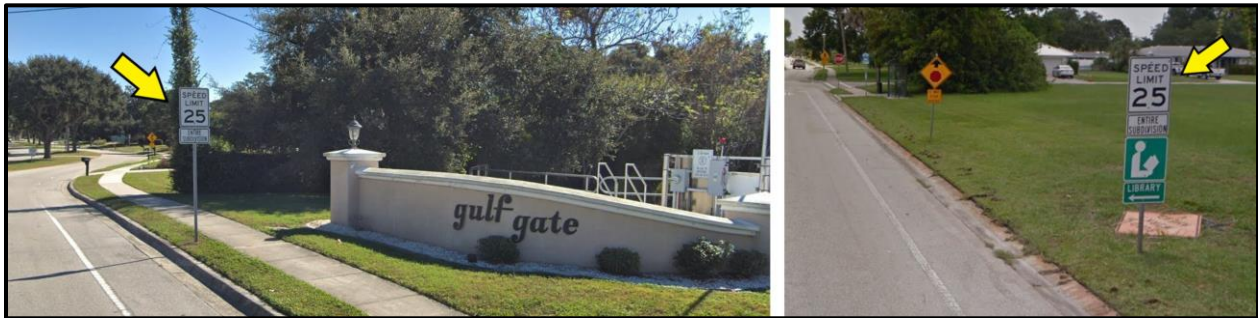


Figure 22 – Speed Limit Signs with Plaques



A guidance within the MUTCD is that regulatory signs such as speed limit signs should be used conservatively because these signs, if used in excess, tend to lose their effectiveness. Therefore, county staff does not recommend installing additional speed limit signs within the Gulf Gate subdivision in order to avoid excessive use and to maintain the value of the existing speed limit signs. The MUTCD also gives guidance that a Reduced Speed Limit Ahead sign should be used to inform road users of a reduced speed zone where the speed limit is being reduced by more than 10 mph or where engineering judgment indicates the need for advance notice to comply with the posted speed limit ahead. No locations have been identified within the Gulf Gate subdivision that require a Reduced Speed Limit Ahead sign.

### **Gulf Gate Library Overflow Parking**

The Gulf Gate Library Overflow Parking area was a vacant lot purchased by Friends of the Gulf Gate Library for additional library parking and later donated to Sarasota County on December 6, 2013. The Grand Opening of the new Gulf Gate Library took place on Saturday, January 24, 2015. The Gulf Gate Library development project did not include paving of the overflow parking lot. Additionally, there are no current projects in the Sarasota County Capital Improvement Program (CIP) that include paving the overflow parking lot nor installing a crosswalk with an actuated pedestrian signal at the overflow parking lot. Library patrons may park in the north or south paved parking lots at the Gulf Gate Library to avoid crossing Curtiss Avenue from the overflow parking lot.

### **Neighborhood Projects**

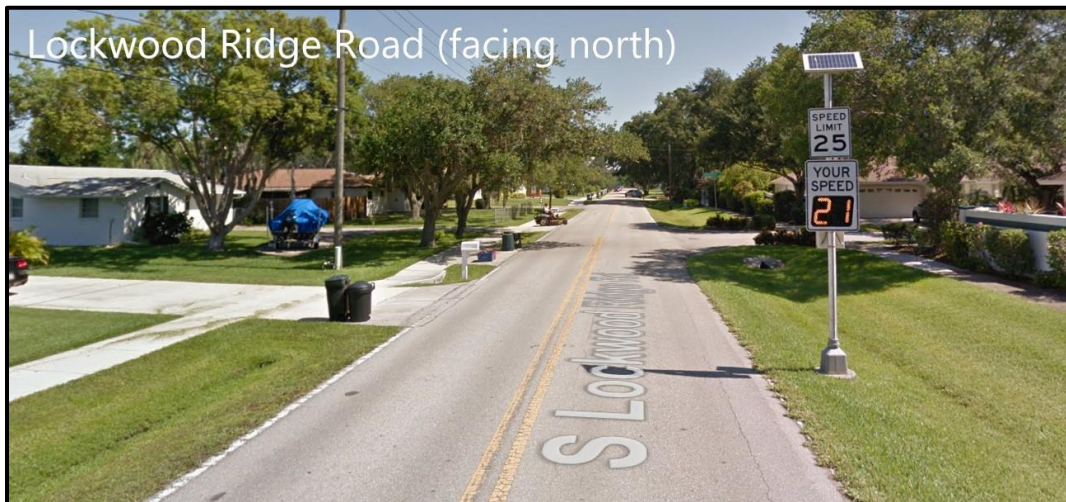
The following topics identify concerns within the Gulf Gate community with measures that may be considered to improve the performance of the roadway network. The items below are generally listed and are intended for discussion prior to implementation.

#### ***Speeding***

One of the major concerns within the Gulf Gate community is vehicles exceeding the speed limit in their neighborhood. A traffic analysis study in April 2019 measured the average speed of motorists to be plus or minus 7 mph from the posted speed limit of 25 mph. Although the

average measured speed was 18 to 32 mph, five percent of the daily traffic exceeded the speed limit by 15 mph or more. Initiatives that may reduce speeding within the Gulf Gate area include:

- 1) **Radar Speed Signs** are effective at slowing down speeding motorists and gives them the opportunity to change driver behavior. Radar speed signs have been installed north of the study area on Lockwood Ridge Road between Clark Road and Ashton Road. Similar signs could be considered for Curtiss Avenue and/or Markridge Road. It should be noted that these signs may lose their effectiveness after a few months due to motorists becoming familiar with the sign then complacent with their speed because the sign is not enforced.



- 2) **Enforcement** is an effective method to reduce speeding. To supplement efforts by the Sarasota County Sheriff's Office, the GGCA can hire off-duty deputies to patrol their neighborhoods for speeding violations and security. Deputy Sheriffs can be hired during their off-duty hours for four-hour shifts or more. Rates of service for the deputy, vehicle, and processing are posted on the Sarasota County Sheriff's Office website. Depending on GGCA's budget, deputies can be hired twice a month or more to patrol Curtiss Avenue, Post Road, and Markridge Road. The traffic survey conducted by the Sarasota County Sheriff's Office on July 13 to 23, 2019, identified the best times for enforcement on Markridge Road and Curtiss Avenue (shown below).

**Sarasota County Sheriff's Office**

**Best Times for Enforcement**



|            | Location:<br>CURTISS AVE   |            | Location:<br>MARKRIDGE RD   |
|------------|--|------------|---|
| <b>Sun</b> | Combined: Noon to 4 PM<br>Direction 1: 2 PM to 6 PM<br>Direction 2: Noon to 4 PM   | <b>Sun</b> | Combined: 10 AM to 2 PM<br>Direction 1: 10 AM to 2 PM<br>Direction 2: 10 AM to 2 PM |
| <b>Mon</b> | Combined: 1 PM to 5 PM<br>Direction 1: Noon to 4 PM<br>Direction 2: 1 PM to 5 PM   | <b>Mon</b> | Combined: Noon to 4 PM<br>Direction 1: 3 PM to 7 PM<br>Direction 2: 11 AM to 3 PM   |
| <b>Tue</b> | Combined: 1 PM to 5 PM<br>Direction 1: 11 AM to 3 PM<br>Direction 2: 1 PM to 5 PM  | <b>Tue</b> | Combined: 3 PM to 7 PM<br>Direction 1: 2 PM to 6 PM<br>Direction 2: 9 AM to 1 PM    |
| <b>Wed</b> | Combined: 3 PM to 7 PM<br>Direction 1: 1 PM to 5 PM<br>Direction 2: 3 PM to 7 PM   | <b>Wed</b> | Combined: 3 PM to 7 PM<br>Direction 1: 3 PM to 7 PM<br>Direction 2: 7 AM to 11 AM   |
| <b>Thu</b> | Combined: 11 AM to 3 PM<br>Direction 1: 4 PM to 8 PM<br>Direction 2: 1 PM to 5 PM  | <b>Thu</b> | Combined: Noon to 4 PM<br>Direction 1: Noon to 4 PM<br>Direction 2: 8 AM to Noon    |
| <b>Fri</b> | Combined: 10 AM to 2 PM<br>Direction 1: 2 PM to 6 PM<br>Direction 2: 10 AM to 2 PM | <b>Fri</b> | Combined: Noon to 4 PM<br>Direction 1: Noon to 4 PM<br>Direction 2: 11 AM to 3 PM   |
| <b>Sat</b> | Combined: 10 AM to 2 PM<br>Direction 1: 10 AM to 2 PM<br>Direction 2: Noon to 4 PM | <b>Sat</b> | Combined: 2 PM to 6 PM<br>Direction 1: 2 PM to 6 PM<br>Direction 2: 8 AM to Noon    |

- 3) **Reporting.** When citizens observe school buses or parcel delivery trucks exceeding the posted speed limit they can immediately call and report the situation. Details about the event should include the date and time of day, speed of vehicle and vehicle identification. When school buses are in violation the Sarasota County Schools Transportation (941-486-2141) should be called. When delivery trucks are in violation the appropriate delivery company should be called. The speeding information will be useful for managers to instruct and/or reprimand their drivers as necessary.
  
- 4) **Neighborhood Security Cameras** can provide surveillance and assist the GGCA Security Patrol to observe and report unusual activity. The GGCA can hire a private company to install safety cameras at desired locations to observe traffic in the community. Cameras should be located on private property. Additionally, if installation work is needed to be done within the county's right-of-way, the appropriate permits will be needed. High quality cameras can capture license plate numbers. The information collected from these cameras may assist in identifying speeders, traffic offenders and crime suspects. The camera data can be used to remotely observe traffic and identify speeding vehicles when radar speed detection is added to the camera network.



### ***Stop Signs***

Another concern within the community is for drivers who do not stop at stop signs. The most effective method to keep motorists from running stop signs and correct driver behavior is enforcement. The Sarasota County Sheriff's Office monitors the four-way stop intersection at Gulf Gate Drive and Curtiss Avenue and issues citations to motorists who fail to obey the traffic control devices (stop signs). This intersection is next to the Gulf Gate Library. Drivers who run stop signs do so because they believe no one else is at the intersection, they are distracted, they failed to see the approaching traffic, or they did not come to a full stop.



### ***School Zones***

Per FDOT Speed Zoning Manual, the county is required to come into compliance with the manual by July 1, 2023. Transportation staff has recently completed data collection on the school zones within the unincorporated Sarasota County. Based on the data collected, the school zones for Gulf Gate Elementary need to be brought up to state standards, i.e. installation, removal and/or relocation of signs and pavement markings. These improvements are in the final design phase and afterwards will go through the bidding process. It is anticipated the improvements will begin in August 2020.

### ***GGCA Community Outreach***

A topic that can be discussed at GGCA meetings is a "Keep It Safe" neighborhood initiative. The Traffic & Safety Committee may produce quarterly newsletters to be sent to every household within the Gulf Gate community that addresses the need to comply with the neighborhood speed limits. The newsletter can discuss matters of traffic safety and initiate an effort to develop community pride in keeping the streets safe and driving within the speed limits. The newsletter can also include contact information to report speeding or contribute ideas.

An example to illustrate the need for this effort is the reported speeding on Post Road. The geographical layout of Post Road does not encourage cut through traffic; therefore, the observed passenger vehicle speeding is likely produced by the residents themselves. The GGCA can cultivate an attitude that improves driver behavior and awareness within the community through newsletters, stickers and neighborhood events. A suggested event is a neighborhood barbecue with a “Keep It Safe” theme that includes information tables and handouts.



### ***Education***

Educating motorists to the importance of paying attention while driving, not following too closely, proper use of signaling, and yielding to other vehicles would be an effective measure in reducing crashes and speeding within the Gulf Gate community. Participation in community support groups that focus on driver behavior, traffic awareness and driver impatience is another method to improve the performance and use of the roadways. Educational efforts may include:

- Distribution of driver safety literature and videos (available from the Sheriff’s Office, FDOT and PSAs)
- Driver safety meetings/classes held at the library or school
- Lessons within the school system that develop positive motorist behavior in children from an early age through high school

### ***SeeClickFix***

Sarasota County has partnered with SeeClickFix to allow citizens to report problems such as potholes, broken sidewalks, storm drain issues, traffic sign or signal problems and code violations within the county. SeeClickFix provides a mobile app and web portal service that encourages residents to become active citizens in taking care of and improving their neighborhoods. Residents and businesses can provide Sarasota County with pictures, specific descriptions and valuable information needed to resolve a problem within the community.



### ***WalkWise Florida***

WalkWise Florida provides pedestrian safety education to the citizens of Florida. Communities, HOAs and businesses can request a free 15 to 20 minute presentation with a discussion on bicycle and pedestrian safety. The campaign is funded by the Florida Department of Transportation (FDOT) and is managed by the University of South Florida (USF) Center for Urban Transportation Research (CUTR).



### **Conclusion**

The posted speed limit for the Gulf Gate community is 25 mph. A speeding analysis conducted within the study area showed that the 85<sup>th</sup> percentile speeds were from 5 mph below to 14 mph above the posted speed limit. There were some vehicles, however, that exceeded 55 mph on the area roadways.

Staff evaluated possible cut through traffic within the Gulf Gate area. The analysis showed that traffic travelling west through Markridge Road were local trips with about 24 percent of the trips passing through to Bispham Road. Vehicles passing through Curtiss Avenue were local trips except for three percent that continued to destinations on Tamiami Trail. No cut through traffic was observed on Post Road. Most of the trips passing through Bispham Road were local traffic using the local roadway network with about three percent of the vehicles continuing east to Beneva Road.

Crash records for the years 2014 to 2018 were examined for the four-way stop intersection of Gulf Gate Drive and Curtiss Avenue. Eight crashes were reported during this time period and no injuries or fatalities resulted from these crashes. The crashes were due to careless driving, following too closely, and not stopping at the stop sign. Thirteen crashes were reported for the years 2014 to 2018 at the intersection of Markridge Road and Beneva Road. Six injuries and no fatalities resulted from these crashes. The crashes were due to careless or negligent driving, not stopping at the stop sign, failure to yield to traffic, improper lane change and from a box that fell off a pickup truck. Two of the reported crashes were because the motorists did not properly judge the oncoming speed of the southbound vehicles on Beneva Road and drove into traffic from Markridge Road.

**Table 6** identifies possible neighborhood plan projects for consideration within the Gulf Gate area. The initiatives are divided into short-term (one to five years), mid-term (five to ten years) and long-term (ten years or more) categories. Specific details such as quantity, location, cost feasibility and construction schedule will need to be addressed before approval and implementation. Educational initiatives are listed after the engineering measures. Bicycle safety literature should include the importance of wearing helmets, bright colors, reflective vests and using bicycle lights. (Sarasota County has literature available on bicycle and pedestrian safety.) Driver safety videos can be approximately one minute in duration and produced for distribution on social media.

Table 6 – Neighborhood Plan Projects for Consideration

**Gulf Gate Community Neighborhood Plan Projects**

| PROJECT*   | Short-Term | Mid-Term | Long-Term |
|--|------------|----------|-----------|
| <b>Roadway Signs and Pavement Markings:</b>            |            |          |           |
| • Signage for End of Sidewalk on Curtiss Avenue        | X          |          |           |
| • Update School Zone Signs and Pavement Markings       | X          |          |           |
| • Radar Speed Signs                                    |            | X        |           |
| <b>Tree Trimming:</b>                                  |            |          |           |
| • Trim Beneva Road Overhanging Branches                | X          |          |           |
| • Replace Rubber Tree at 3381 Markridge Road           | X          |          |           |
| <b>Engineering:</b>                                    |            |          |           |
| • Evaluation of Cut Through Traffic                    | X          |          |           |
| • Improve School Site Design for queueing of vehicles  |            |          | X         |
| • Install Sidewalk in Sidewalk Gap on Curtiss Avenue   |            |          | X         |
| <b>Education:</b>                                      |            |          |           |
| • WalkWise Florida Presentation                        | X          |          |           |
| • Distribution of Bicycle/Pedestrian Safety Literature | X          |          |           |
| • Distribution of Driver Safety Literature             | X          |          |           |
| • Driver Safety Meetings/Classes                       | X          |          |           |
| • Driver Safety Videos for websites                    | X          |          |           |
| <b>GGCA Funded Projects:</b>                           |            |          |           |
| • Provide links to safety literature on GGCA website   | X          |          |           |
| • "Keep It Safe" Newsletter and Stickers               | X          |          |           |
| • "Keep It Safe" Neighborhood Barbecues                | X          |          |           |
| • Off-Duty Deputy Patrol                               | X          |          |           |
| • Neighborhood Security Cameras                        |            | X        |           |

\*Sarasota County's Traffic Calming Program has been suspended. A Board policy change is required to reinstitute the program.