# August 2014

Safe Routes to School Audit Report Canopy Oaks Elementary School



**Leon County Public Schools** 



# **Table of Contents**

| Acknowledgements   | iii |
|--|-----|
| Chapter 1: Introduction                                      | 1   |
| Project Purpose  | 1   |
| School Overview  | 1   |
| School Zone  | 1   |
| Chapter 2: On-Site Meeting and Inventory                     | 3   |
| Date and Weather Conditions                                  | 3   |
| Highlights and Key Observations of On-Site Meeting           | 3   |
| Circulation  | 3   |
| Inventory Map  | 4   |
| Issues and Opportunities                                     | 6   |
| Chapter 3: Student Travel Survey – Summary of Results        | 7   |
| Chapter 4: Parent Survey – Summary of Results                | 8   |
| Chapter 5: Neighborhood Field Review                         | 9   |
| Character of Neighborhood Area                               | 9   |
| Crash Data   | 9   |
| Neighborhood Assessment                                      | 9   |
| Walk/Bike Shed   | 10  |
| Methodology  | 10  |
| Evaluating Roadways  | 11  |
| Hazardous Walking Conditions, as defined per Florida Statute | 12  |
| Evaluating Other Factors and Barriers                        | 13  |
| Chapter 6: Findings and Recommendations                      | 15  |
| Infrastructure Improvements                                  | 15  |
| On-Site Recommendations                                      | 17  |
| Off-Site Recommendations                                     | 17  |
| Programs   | 19  |
| Policies   | 19  |
| Planning-Level Cost Estimates                                | 21  |
| Chapter 7: Conclusion  | 22  |

# Safe Routes to School Audit Report

| Appendix A: Student Travel Survey                     | 24 |
|---|----|
| Appendix B: Student Travel Survey – Detailed Analysis | 25 |
| Appendix C: Parent Survey                             | 29 |
| Appendix D: Parent Survey – Detailed Analysis         | 31 |

# Acknowledgements

Renaissance Planning Group and Wendy Grey Land Use Planning, LLC would like to thank the following organizations for their input, guidance, and resources in developing this Safe Routes to School Audit report for Canopy Oaks Elementary School.

**Capital Region Transportation Planning Agency (CRTPA)** 



Safe Routes to School (SRTS) National Partnership



**Leon County Public Schools (LCS)** 



Florida Department of Transportation (FDOT)



**Leon County Sheriff's Office (LCSO)** 



### **Prepared By:**





# **Chapter 1: Introduction**

# **Project Purpose**

The purpose of this Safe Routes to School (SRTS) audit report is to provide recommendations to improve student walking and bicycling rates to and from school. In addition, this report addresses other enhancements to improve the overall travel safety and convenience for students, parents and the school. Improvement recommendations are provided in the following categories: infrastructure, programs, and polices. This SRTS audit includes an array of considerations formulated from a range of research and analytical tools employed to better understand and comprehend the issues and concerns affecting current walking and bicycling rates of student to and from school. This report highlights a summary of students' school travel patterns through in-class student travel surveys, parent self-reported surveys, on-site meetings with school officials, and field reviews.

### **School Overview**

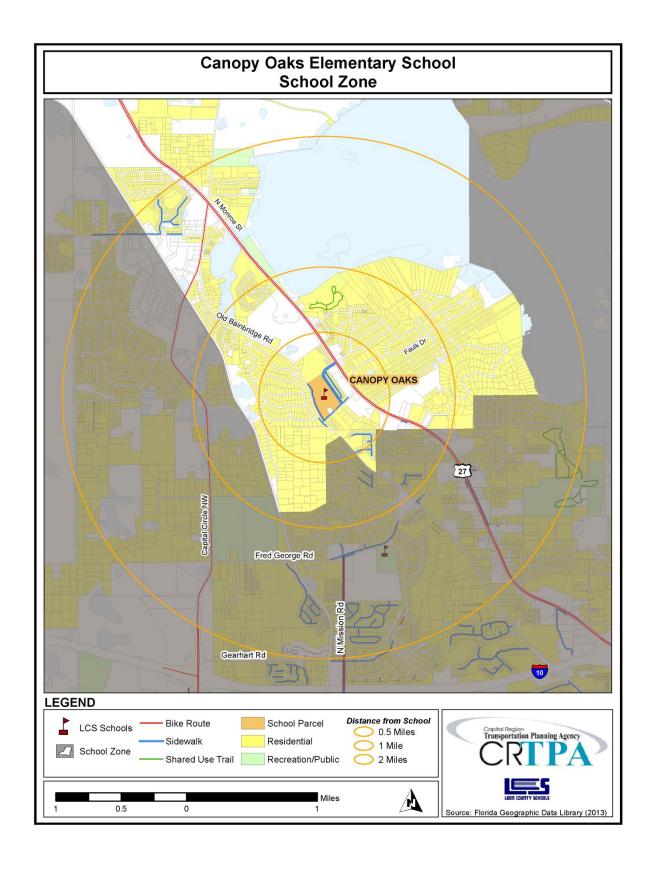
Canopy Oaks Elementary School is located at 3250 Point View Drive, Tallahassee, 32303 in Leon County, Florida. It is part of the Leon County Public Schools system. The school was established in 1998. Regular school hours are from 8:30am to 2:50pm. An after-school program is offered from 2:55pm to 6:00pm.

The number of students enrolled at the school, for the 2013 school year, was approximately 720. The school has a current capacity for 742 students. The school includes grade levels Pre-Kindergarten through 5<sup>th</sup> Grade.

Students attending this school feed into Raa Middle School and either Godby or Leon High Schools.

### **School Zone**

The Canopy Oaks Elementary school zone encompasses the neighborhoods of Duck Lake Point and Huntington Estates, as well as, the water body of Lake Jackson. Land uses in the school zone consist of almost entirely residential with one cemetery just east of North Monroe Street. The Canopy Oaks school zone includes two major roadways. North Monroe Street and Old Bainbridge Road run in a northwest to southeast, mostly parallel, to one another through the school zone and divide the zone into east and west. Important recreational areas in the school zone include the Jackson View Trail and Old Bainbridge Road Park.



# **Chapter 2: On-Site Meeting and Inventory**

### **Date and Weather Conditions**

The on-site inventory meeting was conducted on Friday, February 22, 2013. The weather was mostly overcast and/or rainy with temperatures in the mid 60 degrees Fahrenheit.

### **Highlights and Key Observations of On-Site Meeting**

During this visit, Canopy Oaks Elementary School representatives provided insight about students' travel to and from school and discussed what was working, or not working well. The meeting began by discussing current policies, programs, and administration related to students' travel to and from school. Examples of safety education programs discussed include crossing guards, safety patrols, and traffic education. Additionally, before- and after-school programs provided for students were discussed.

It was noted that flashing lights (i.e. school zone warning lights) are located along Perkins Road, at both the intersection of Point View Drive as well as near Maria Circle. It was noted that there are several perimeter fences and restrictive access gates around the campus for safety and security reasons. Students are permitted to arrive to school as early as 7:45am and there are after school programs available until 6:00pm. The school has room for up to 170 students to participate in the after school program.

There are two designated crossing guards at the intersection of Old Bainbridge Road & Perkins Road as well as at the mid-block crossing in front of the school along Point View Drive. School representatives noted that the school does have a safety committee that meets regularly to address any safety concerns on campus. Additionally, school representatives noted that there is a new residential apartment complex being built off of North Monroe Street, near the school that is projected to add about 74 students to the school which could mean more potential walkers and bicyclists in the future.

### Circulation

During a tour of the school, school representatives provided explanations of school circulation patterns as to where and how children were entering and exiting school grounds via walking or bicycle and arriving and departing by automobile or school bus.

While the school is located in a family dense residential neighborhood, there are two major roadways east and west of the school, As a result, there are only about eight students that are known to walk or bicycle to/from school, as many must rely heavily on school busing and automobile rides. Some sidewalks around the school area are quite narrow and could use some improvements. Walkers and bicyclists may enter campus from one point along Point View Drive as well as an unsupervised, restrictive-access gate behind the school, along Old Bainbridge Road. The school has five small outdoor bicycle racks that are located near the front of campus. There were no bicycles parked during the site visit. However, it was noted that there was one bicycle parked at an undesignated location near the rear bike/ped gate access.

The bus drop-off and pick-up zone functions adequately. The zone for arrival and departure is covered and there is direct access to a walking facility. Also, there are benches for students waiting to depart in

the afternoons. There are three buses in the mornings and afternoon. Each is color-coded to allow students to more easily recognize their bus. Additionally, there are five before school program vans and eight after school program vans that use the school bus zone.

The parent drop-off and pick-up zone is highly functional and adequately accommodates the volume of automobiles entering and exiting the site daily. The zone for arrival and departures is covered and there are ushers to assists students. There are benches available to hold children who are waiting to depart in the afternoons. Students are seated by grade level and there is a microphone system in place to dismiss students. During school commuting hours, temporary traffic control devices (i.e. cones and signs) are used in the automobile zone. School representatives reported that some drivers, approximately 50%, park their vehicles in short-term parking instead of using the automobile pick-up/drop-off line.

### **Inventory Map**

An aerial photograph showing Canopy Oaks Elementary School is located on the following page. As shown in the photo, the school fronts Point View Drive. Students can access campus from Point View Drive near Layla Street. Bicycle parking racks are located near the front entrance of the school.

Standard width sidewalks are located along both sides of Point View Drive and there is a midblock crosswalk that connects directly to a sidewalk that enters onto campus. The school-side of Perkins Road also features standard width sidewalks.

The automobile pick-up and drop-off zone is located directly in front of the school's main entrance. Automobiles both enter and exit the zone at separate driveways along Point View Drive. Visitor and staff parking spaces are located in this area as well as just northwest of the automobile zone. The bus drop-off and pick-up zone is separately located along Perkins Road. Buses enter from and exit onto Perkins Road. Parking spaces are located in this area as well.



### **Issues and Opportunities**

School-specific issues, opportunities, and impediments concerning the SRTS program were discussed.

The presence of two major roadways on either side of the campus seems to be the primary issue with students' ability to walk and bicycle to school. For example, further out from campus, North Monroe Street is a wide, busy roadway that may not be appropriate for crossing by elementary school children, especially those at lower grade levels. This kind of external factor is often difficult to overcome, at least in the short term.

Canopy Oaks Elementary is located in a family dense residential neighborhood comprised of a mix of residential that includes single-family homes, townhomes, and condominiums. The neighborhood street pattern throughout the area includes looped streets that connect in a semi-gridded manner. There is no bike-ped infrastructure throughout the Duck Lake Point and Huntington Estates neighborhoods. However, sidewalks are present on Old Bainbridge Road, Perkins Road, and Point View Drive, all of which surround the school. Additionally, a crosswalk connects the Duck Lake Point neighborhood to the school via Old Bainbridge Road & Perkins Road. The neighborhoods east of North Monroe Street, presently, have no sidewalk network but, have the potential to be walkable with added bike-ped infrastructure.

With what opportunities that do exist to increase walking and bicycling, including student safety, consideration should be given to Point View Drive, Perkins Road, North Monroe Street. Also, school-related and —supportive committees such as the Parent/Teacher Organization (PTO) can be used to help educate parents on the opportunities and benefits to having their children walk or bicycle to school, where such options are feasible.

These groups can also help get the word out to parents concerning on-campus issues, such as appropriate behavior and protocol within the parent drop-off/pick-up zone. While it is nice to park and walk students to class, parents should be advised to use the automobile drop-off/pick-up line where there is supervision and better facilitation of automobile circulation.

# **Chapter 3: Student Travel Survey - Summary of Results**

School administrators carried out a school-wide travel survey to evaluate the ways in which students from Kindergarten through 5<sup>th</sup> Grade traveled to their school from home during a one week period. (A copy of the student travel survey can be found in **Appendix A**.)

Student travel survey results were counted and grouped by grade level. They were analyzed for the school as a whole as well as by grade level groupings of Kindergarten through 2<sup>nd</sup> Grade, and 3<sup>rd</sup> Grade through 5<sup>th</sup> Grade, respectively. (A detailed description of the analysis by mode for the two grade level groupings can be found in **Appendix B**.)

The survey indicates that the vast majority of students at Canopy Oaks Elementary School – approximately three out of four students – are dropped-off at school by car. The percentage rises slightly for younger-aged children, which is not uncommon. Riding a school bus and walking to school ranked a distant second and third place at approximately 19 percent and 3 percent of students, respectively. The percentage of those riding a bus to school rises slightly for older-aged children. Of those walking to school, two times as many were older students from 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> grades. Less than one percent of the students reported biking to school and none of the students surveyed reported arriving by public bus. (To note, there are no public buses within a reasonable distance to the school.)

#### SUMMARY OF SCHOOL-WIDE RESULTS

|                 | Walk | Bicycle | Automobile | School Bus | Public Bus |
|-----------------|------|---------|------------|------------|------------|
| Average Overall | 3 %  | <1 %    | 77 %       | 19 %       | 0 %        |

# **Chapter 4: Parent Survey - Summary of Results**

School administrators carried out a school-wide survey to better understand the neighborhood safety issues and concerns of parents and the factors influencing their decision to allow their children to walk or bicycle to school. (A copy of the parent survey can be found in **Appendix C**.)

Parent survey results were counted and analyzed by grade level groupings of Kindergarten through 2<sup>nd</sup> Grade and 3<sup>rd</sup> Grade through 5<sup>th</sup> Grade, respectively. (A detailed description of the parent surveys for the two grade level groupings can be found in **Appendix D**.)

The surveys of students living within two miles from the school indicate that a greater percentage of Canopy Oaks Elementary School students are dropped off by car or ride a school bus in the morning, while fewer return home by the car in the afternoon. In the afternoon, there are greater percentages of students returning home by school bus, walking, or another mode not described specifically in the survey such as an after-school program van. Overall, approximately five percent of students commute to and from school by walking.

With regard to neighborhood safety, the concerns were generally agreed upon by parents from both Kindergarten through 2<sup>nd</sup> and 3<sup>rd</sup> through 5<sup>th</sup>. Survey respondents overall showed concerns the behavioral patterns of automobile drivers, generally, in terms of excessive driving speeds, typically along local neighborhood streets; sidewalks/walking, and transportation outside of the school zone. As for speeding complaints, specific problem locations cited include Old Bainbridge Road, Highway 27/ N. Monroe Street, Perkins Road, and Clara Kee Boulevard.

With regard to factors that might influence their decision to allow their child to walk or bike to school, survey responses indicate that factors such as accompanying children (by themselves/other parents), having continuous and separated bicycle/pedestrian pathways, enforcing speed limits in school zones, and the availability of crossing guards were mutually agreed upon by parents from both Kindergarten through 2<sup>nd</sup> and 3<sup>rd</sup> through 5<sup>th</sup>.

# **Chapter 5: Neighborhood Field Review**

A neighborhood field review was conducted on April 26<sup>th</sup>, 2013. The review consisted of an assessment of accessibility, connectivity and safety along neighborhood roadways within proximity to Canopy Oaks Elementary School. On the day of the field review, the weather was overcast with some light rain and temperatures in the 70's Fahrenheit. Following the field review, a walk/bike shed area was delineated on a map within the school zone, surrounding the school. This chapter includes a Walk/Bike Shed section describing the approach to defining the area and an associated map for Canopy Oaks Elementary School.

### **Character of Neighborhood Area**

Canopy Oaks Elementary is located in a family dense residential neighborhood comprised of a mix of residential that includes single-family homes, townhomes, and condominiums. The neighborhood street pattern throughout the area includes looped streets that connect in a semi-gridded manner. There is no bike-ped infrastructure throughout the Duck Lake Point and Huntington Estates neighborhoods. However, sidewalks are present on Old Bainbridge Road, Perkins Road, and Point View Drive, all of which surround the school. Additionally, a crosswalk connects the Duck Lake Point neighborhood to the school via Old Bainbridge Road & Perkins Road. The neighborhoods east of North Monroe Street, presently, have no sidewalk network but, have the potential to be very walkable with added bike-ped infrastructure. Bike infrastructure is limited to North Monroe Street but the width and speed on this roadway do not provide a comfortable space to bike. A CSX railroad line west of Old Bainbridge Road presents a significant barrier to walking and biking anywhere west of the school zone.

Major roadways in the school zone include:

- North Monroe Street, a northwest to southeast, four lane roadway with a posted speed limit between 40-45mph.
- Old Bainbridge Road, a northwest to southeast, two lane roadway with a posted speed limit 35mph or less.

### **Crash Data**

Crash data were collected from the Florida Department of Transportation's (FDOT) State Safety Office for years 2009-2011. Crashes reported include any crashes within Leon County and on any local and major roadways. The data were collected for a typical school year, August 15<sup>th</sup> to May 30<sup>th</sup>. Additionally, only bicycle and pedestrian crashes that occurred during typical school commute hours, 7:00am to 9:30am and 1:50pm to 4:20pm, and school days, Monday to Friday, were examined.

There were no bicycle or pedestrian crashes reported within the theoretical two-mile walk/bike radius of Canopy Oaks Elementary School between 2009 and 2011.

# **Neighborhood Assessment**

The overall neighborhood layout surrounding Canopy Oaks Elementary School lends itself somewhat well to walkability. There are a good number of homes located within one-half to one-mile west of the school. Streets in these neighborhoods tend to be low speed and low volume; however, the addition of

new sidewalks and crosswalks would be beneficial to non-motorized commutes to/from school. Neighborhoods southwest of the school tend to have larger parcel sizes with few residences, and lack bike/ped infrastructure, which do not really promote walking and bicycling for students. Overall, the area surrounding Canopy Oaks has little to no routes to/from school with complete bike/ped infrastructure. Project-specific recommendations can be found in the Findings and Recommendations chapter of this report.

### Walk/Bike Shed

As mentioned previously, a walk/bike shed area was delineated on a map within the school zone, surrounding the school. The Canopy Oaks Elementary School walk/bike shed map is included at the end of this chapter.

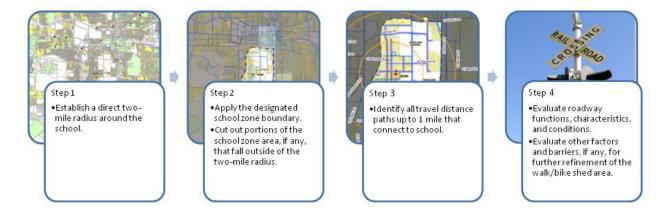
The walk/bike shed area and associated map are not meant to suggest that elementary school students of all ages, maturity level, and experience should commute to and/or from school within the area delineated. Certainly, younger children such as kindergarten students are not expected to walk or bike to school from practically any distance without the accompaniment of either a parent or much older sibling. Also, older children such as 5<sup>th</sup> graders without the appropriate experience or maturity level will likewise be more limited in their accessibility to school. Therefore, the walk/bike shed map functions more as a guide for parents, school administrators and students to evaluate and identify areas potentially commutable and conducive to walking and bicycling to school. The final decision to walk or bicycle to school is still at the discretion of the parents.

The walk/bike shed for Canopy Oaks Elementary School extends just east of the school to North Monroe Street, where its four lanes of high-speed traffic forms the eastern limits of the walk/bike shed. A sidewalk connection along Perkins Road extends the walk/bike shed west of the school to the Duck Lake Point neighborhood where there are series of local, neighborhood streets with low speeds and low traffic volumes.

It should be noted that certain improvement recommendations could potentially expand the potential walk/bike shed area, due to improved conditions for walking and bicycling.

### **Methodology**

Many factors were evaluated to ultimately determine the limits of the walk/bike shed area. The general methodology for identifying the shed included the following steps:



### **Evaluating Roadways**

Four types of safety hazards were evaluated pertaining to roadways. They include:

- Sidewalks along roadways
- Roadways without sidewalks
- Roadway crossing points
- Railroad crossing points (along roadways)

Primary hazard conditions include, but are not necessarily limited to factors such as:

- Sidewalk width (where present)
- Separation between the walking/bicycling space and the vehicular travel space
- Intersection control measures for crossing
- Number of rail tracks (for railroad crossings)
- Traffic volume
- Traffic speed
- Roadway geometry
- Length of a hazardous condition present

Multiple factors are no doubt present for each hazard. And no two factors or situations are the same. This makes evaluation as much of an art as a science. Nonetheless, there are certain conditions in and of themselves that are considered decisive limitations to elementary school children walking and/or bicycling to school. Such conditions where walking and/or bicycling are deemed hazardous include the following. It should be noted that only one condition from either table needs to be met for a situation to be deemed hazardous.

| Travel Along Roadways                                       |   |                        |                       |                                     |  |  |
|---|---|------------------------|-----------------------|-------------------------------------|--|--|
| Sidewalk Type   |   | Hazardous Condit       | ions                  |                                     |  |  |
|   | Type of Road  | Posted Speed<br>Limit  | Peak Hour<br>Traffic  | Length                              |  |  |
| < 2' wide sidewalk OR<br>without sidewalk                   | All roadways other<br>than local,<br>neighborhood streets | N/A                    | N/A                   | Exceeding<br>0.5 miles<br>in length |  |  |
| = 3' wide sidewalk OR<br = 4' separation from<br traffic    | More than 2 travel lanes                                  | Greater than 35<br>mph | Greater than 2,000    | Exceeding<br>1 mile in<br>length    |  |  |
| > 4' wide sidewalk AND<br>>/= 4' separation from<br>traffic | More than 4 travel lanes                                  | Greater than 45<br>mph | Greater than<br>3,500 | Exceeding<br>2 miles in<br>length   |  |  |

| Roadway Crossing Points                   |                             |                        |                       |        |  |  |  |
|---|-----------------------------|------------------------|-----------------------|--------|--|--|--|
| Crosswalk Type                            |                             | Hazardous Condit       | ions                  |        |  |  |  |
|   | Type of Road                | Posted Speed<br>Limit  | Peak Hour<br>Traffic  | Length |  |  |  |
| Unmarked Crosswalk Unsignalized Crosswalk | More than 2 travel lanes    | Greater than 25<br>mph | Greater than<br>1,500 | N/A    |  |  |  |
| Marked Crosswalk Signalized Crosswalk     | Greater than 4 travel lanes | Greater than 40<br>mph | Greater than 2,000    | N/A    |  |  |  |

### Hazardous Walking Conditions, as defined per Florida Statute

Section 1006.23 of the Florida Statutes defines hazardous walking conditions for elementary schoolaged students commuting to and from school. While these guidelines are useful, the scope and intent of the State's language are fairly general and broad. The standards are mostly liberally applied to extreme situations. For example, a four-foot wide 'surface sufficient for walking' that is only three feet in distance from the edge of a curb-less roadway with a 55 mph posted speed limit would likely not meet the required criteria, per State Statute, for hazardous walking conditions for elementary-aged students walking to or from school. Most experts would agree that such conditions as described are likely too challenging for elementary students to handle.

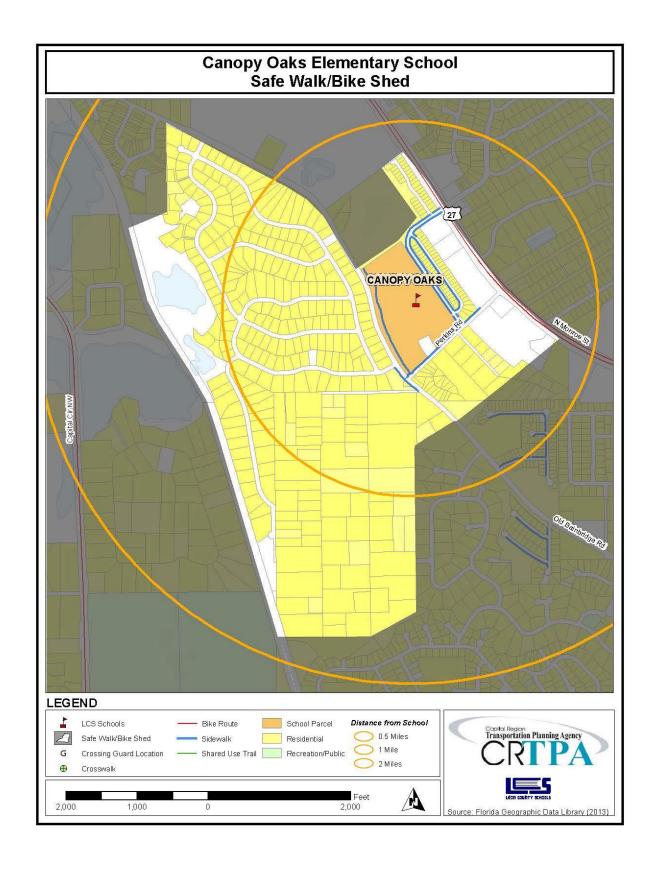
In determining a safe walking and bicycling area, this report applies a methodology and criterion that is more stringent than State standards and more in line with existing studies, research and opinions collected from numerous experts in the fields of pedestrian and bicycle transportation and safe routes to school planning. In addition, this report goes much further than simply identifying sidewalk/pathway

deficiencies; it also considers intersection conditions, pavement markings, signage, and a number of other attributes that can impact safe routes to school.

### **Evaluating Other Factors and Barriers**

In addition to that identified above, information collected from the field review, anecdotal comments from parent surveys, discussions with school administrators and staff, and general research findings were applied to determine the ultimate walk/bike shed area commuting limits for the school. Such additional information evaluated included the following:

- Barriers such as water bodies and high-speed, restricted access highways
- Historic travel accident patterns
- Poor quality pedestrian infrastructure along routes
- Pathways of excessive length through nonresidential areas as well as excessive intersecting vehicular access drives



# **Chapter 6: Findings and Recommendations**

The existing points of access for walkers and bicyclists to Canopy Oaks Elementary School provide efficient access onto campus from all directions. Additionally, automobile and school bus circulation at the school is adequate for the amount of vehicles accessing the school daily so recommendations in this realm are more programmatic and policy-oriented. There is the opportunity to increase safe walking and bicycling to and from school with the addition of new sidewalks and crosswalks in neighborhoods west of the school.

# **Infrastructure Improvements**

The following recommendations supplement the current walk/bike shed area as delineated on the map, addressing infrastructure needs and improvements that would enhance walking and bicycling safety and convenience to and from Canopy Oaks Elementary School. The off-site improvements are as follows:

# **Canopy Oaks Elementary School On- and Off-Site Recommendations**

|    | Improvement: On-Site    | Location                  | From                      | То           | Geography                      | Direction | Length                 | Comments |
|----|-------------------------|---------------------------|---------------------------|--------------|--------------------------------|-----------|------------------------|----------|
| A1 | Widen Existing Sidewalk | Rear Bike/Ped<br>Entrance | Existing<br>Bike/Ped Gate | Perkins Road | East of Old<br>Bainbridge Road | NW-SE     | Approx.<br>767<br>feet |          |

|    | Improvement: Off-Site     | Location               | From                   | То                           | Geography                           | Direction | Length                   | Comments               |
|----|---------------------------|------------------------|------------------------|------------------------------|-------------------------------------|-----------|--------------------------|------------------------|
| B1 | New Sidewalk              | Skyview Drive          | Point View Drive       | Dead End of<br>Skyview Drive | West side of Skyview<br>Drive       | NW-SE     | Approx.<br>884<br>feet   | ROW may be constrained |
| В2 | New Striped Crosswalk     | Perkins Road           | At Point V             | iew Drive                    | Southwest side of intersection      | NW-SE     | Approx.<br>30 feet       |                        |
| В3 | New Sidewalk              | Perkins Road           | Point View Drive       | Roweling Oaks<br>Court       | South side of Perkins<br>Road       | SW-NE     | Approx.<br>92 feet       |                        |
| В4 | Stripe Existing Crosswalk | Old Bainbridge<br>Road | At Perkins Road        |                              | West of Perkins<br>Road             | SW-NE     | Approx.<br>30 feet       |                        |
| В5 | Stripe Existing Crosswalk | Point View Drive       | At Layla               | At Layla Street              |                                     | SW-NE     | Approx.<br>30 feet       |                        |
| В6 | New Sidewalk              | North Monroe<br>Street | Clara Key<br>Boulevard | Harriet Drive                | East side of North<br>Monroe Street | NW-SE     | Approx.<br>2,224<br>feet |                        |
| В7 | New Striped Crosswalks    | North Monroe<br>Street | See Description.       |                              | East side of North<br>Monroe Street | NW-SE     | Approx.<br>30 feet       |                        |
| В8 | New Sidewalk              | Sherborne Road         | Old Bainbridge<br>Road | Rockingham<br>Road           | north side of<br>Sherborne Road     | E-W       | Approx.<br>275<br>feet   |                        |

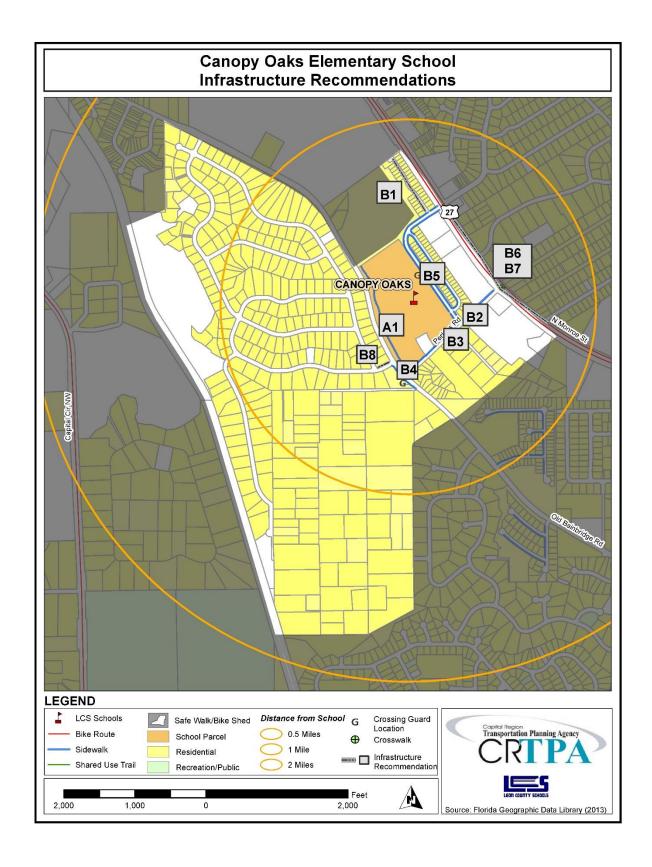
The table, above, corresponds to an infrastructure recommendations map on the following page.

### **On-Site Recommendations**

A1) Widen the existing sidewalk, at the rear bicycle/pedestrian gate, on the school property.

### **Off-Site Recommendations**

- B1) Construct a new sidewalk along Skyview Drive from Point View Drive to the dead end of Skyview Drive.
- B2) Mark a new striped crosswalk along the southwest side of the Perkins Road & Point View Drive intersection.
- B3) (In Conjunction with Off-Site Recommendation B2) Construct a new sidewalk along Perkins Road from Point View Drive to Roweling Oaks Court
- B4) Stripe the exiting crosswalk at the intersection of Old Bainbridge Road & Perkins Road.
- B5) Stripe the existing crosswalk at the intersection of Point View Drive & Layla Street.
- B6) Construct a new sidewalk along North Monroe Street from Clara Key Boulevard to Harriet Street. This will help expand the existing walk/bike shed to the neighborhoods east of the school.
- B7) (In conjunction with Off-Site Recommendations B6) Mark new crosswalks along the east side of North Monroe Street at the following locations: Brentwood Lane, Shady Oaks Drive, Faulk Drive, and Longview Drive.
- B8) Construct a new sidewalk along Sherborne Road from Old Bainbridge Road to Rockingham Road.



### **Programs**

- Malk and bicycle encouragement literature Send home literature to parents, as well as make it available on the school website, about the benefits of children walking and bicycling to school. Information and statistics from the National Safe Routes to School organization can be used to highlight health and safety benefits. The literature provided to parents should highlight some specific examples of how parents and the community can make walking and bicycling to school safe and fun. Examples of programs to promote walking and bicycling include encouraging parents to coordinate with other parents to establish walking and bicycling groups (i.e. buddy programs and walking school buses) to help ease safety concerns; participating in Walk/Bike to School Days; or creating a mileage club where students or entire classrooms keep track of how much they walk or bike to school to compete for prizes or certificates.
- Bicycle safety and accessibility workshop Organize and hold a workshop or a bike rodeo that demonstrates bicycle safety topics, catered to younger children, such as bicycle hand signals, how to properly wear a bicycle helmet, and properly obeying traffic signs/signals. Parents and students should be reminded that under Florida Law, anyone under the age of 16 must wear a bicycle helmet. An on-campus bicycle obstacle course that covers skills such as avoiding obstacles, balancing at slow speeds, turning, and making emergency stops can be very helpful for young riders. Additionally, a group bicycle ride, through the neighborhood surrounding the school, can be a safe and fun way to get children more comfortable with their built environment and any obstacles they may encounter en route to school. Local community groups, as well as, university clubs/organizations, Leon County Sheriff's Office, and Leon County Public Schools may be willing to donate time and/ or supplies such as bikes, helmets, and locks for workshops and rodeos if contacted.
- Parent drop-off/pick-up zone protocol encouragement Send home literature to parents, as well as make it available on the school website, about the proper drop-off and pick-up process for the school, particularly at the start of a new school year or after an extended school break. Maps of the drop-off/pick-up zone, as well as, the traffic flow pattern can be very helpful to parents. Parents should also be advised that while short-term parking is available at the school to walk students to/from class in the morning and afternoons, using the designated parent pick-up/drop-off zone is encouraged because it expedites the movement of vehicles in and out of the school.
- C4) Additional crossing guard(s) While there are currently two crossing guards available along Perkins Road as well as along Point View Drive, it would be beneficial to have one or two crossing guards at the intersection of North Monroe Street and Perkins Road to aid students coming from neighborhoods east of the school.

### **Policies**

D1) <u>Bike check and security</u> – School policies to encourage bicycle riding could include having a school official or parent volunteer at the bike rack in the morning and afternoon to check-in and check-out students parking their bikes. The adult assigned to handle check-in and check-out will

assist with locking the bike in the morning and will unlock the bike for the students in the afternoon. The school should consider investing in basic, school-owned bike locks that can be applied when students check-in. By having locks available at school, students do not need to remember to bring one each day. Basic locks can be purchased fairly cheap. Additionally, students should be advised that bicycles need to be parked at the bicycle racks and not at various points around campus where there is the potential for damage.

D2) <u>Supervision at school pedestrian/bicycle gate</u> – Parents may be more inclined to allow students to walk/bike to school if there is additional supervision at the rear pedestrian/bicycle gate that leads directly on/off campus. Additionally, the school official or parent volunteer supervising the gate can help direct those students who may be new to bicycle riding to the bicycling racks on campus.

# **Planning-Level Cost Estimates**

Planning-level cost estimates are included in the table, below. They are intended to be used as a guide. Specific, detailed cost estimates for individual projects will require closer assessment of project conditions and constructability at the time of improvement.

### **General Unit Cost Estimates**<sup>1</sup>

| Item               | Assumptions  | Unit        | Average<br>Unit Cost (\$) |
|--------------------|--|-------------|---------------------------|
| sidewalk           | concrete sidewalk (5' wide)                                  | linear foot | 32                        |
| sidewalk           | concrete sidewalk + curb (5' wide)                           | linear foot | 150                       |
| shared-use path    | multi-use trail – paved (at least 8' wide)                   | mile        | 481,140                   |
| shared-use path    | multi-use trail – unpaved (at least 8' wide)                 | mile        | 121,390                   |
| pavement symbol    | pedestrian crossing  | Each        | 360                       |
| pavement symbol    | shared lane/bicycle marking                                  | each        | 180                       |
| pavement symbol    | school crossing  | each        | 470                       |
| paved shoulder     | asphalt material   | square foot | 5.56                      |
| crosswalk          | high visibility crosswalk (ladder or zebra striping)         | each        | 2,540                     |
| crosswalk          | standard parallel lines crosswalk                            | each        | 770                       |
| signage            | bike route sign  | each        | 160                       |
| signage            | stop/yield sign  | each        | 300                       |
| signage            | no turn on red (standard metal sign)                         | each        | 220                       |
| signage            | no turn on red (electronic sign)                             | each        | 3,200                     |
| signage            | trail regulation sign  | each        | 160                       |
| flashing beacon    | standard beacon (system + labor/materials)                   | each        | 10,010                    |
| flashing beacon    | rectangular rapid flashing beacon (system + labor/materials) | each        | 22,250                    |
| ped hybrid beacon  | high intensity activated crosswalk (HAWK) signal             | each        | 57,680                    |
| ped/bike detection | push button  | each        | 350                       |
| signal             | audible pedestrian signal                                    | each        | 800                       |
| signal             | countdown timer module                                       | each        | 740                       |

<sup>&</sup>lt;sup>1</sup> Bushell, M. A., Poole, B. W., Zegeer, C. V., & Rodriuez, D. A. (2013). *Costs for Pedestrian and Bicyclist Infrastructure Improvements: A Resource for Researchers, Engineers, Planners, and the General Public.* Federal Highway Administration.

# **Chapter 7: Conclusion**

While Canopy Oaks Elementary School is located in a residential dense neighborhood, it doesn't correlate to high walking and bicycling commuting rates for students. Overall, approximately three percent of students commute to and from school by walking, while less than one percent commutes to and from school by bicycle. There appear to be two primary reasons. The first reason is that the school is bounded by North Monroe Street to the east. This is a wide, busy roadway that may not be suitable for crossing by elementary school children, without proper supervision. Additionally, there is currently no bike/ped infrastructure in neighborhoods east of the roadway.

The second reason was revealed from information garnered from the parent survey results as well as meetings with school representatives. Overall, when it comes to allowing their children to walk or bicycle to and from school, parents primarily expressed concerns with speeding vehicles and the conditions for walking. However, parents indicated that accompanying children (by themselves/other parents), having continuous and separated bicycle/pedestrian pathways, enforcing speed limits in school zones, and the availability of crossing guards were factors that might influence their decision to allow their children to walk or bicycle to school.

Opportunities to improve student walking and bicycling rates are rooted primarily in infrastructural and informational/educational programmatic solutions included in this audit report. For students who will continue to commute by automobile as well as those outside of a safe walking and bicycling distance, policy suggestions are included in this audit report to address better management and enforcement within the parent drop-off/pick-up area. Recommended infrastructure improvements are centered primarily on constructing new sidewalks and marking new crosswalks.

Canopy Oaks Elementary School has a fair amount of students within a reasonable walking and bicycling distance. With the suggested program and infrastructure measures, the school should be able to improve walking and bicycling safety and increase non-motorized commuting rates.

# Appendices

# **Appendix A: Student Travel Survey**

# **Leon County Schools**

#### STUDENT TRAVEL SURVEY

#### Dear Teacher:

Your help is needed to assist with a school-wide survey of how students travel to and from school each day. Beginning Monday, for each day of that week, please record the number of children in your class that came to school by school bus, city bus, car, bicycle, or by walking. Please send the results back to the office on this form, along with your name and class grade, and number of students present each day.

Please follow the script below to gather the information from your students. (The students should only be raising their hands for one mode of travel):

- 1) If you walked to school today, raise your hand.
- 2a) If you rode a bicycle to school today, raise your hand.
  - ) If you used a bicycle helmet today, raise your hand.
- 3a) If you came in a car, with either your parents or with someone else, raise your hand.
  - If you used your seat belt in a car today, raise your hand.
- 4) If you came by school bus, raise your hand.
- 5) If you came by city bus, raise your hand.

| Day of Week |            | Number of Students |               |  |               |  |            |  |
|-------------|------------|--------------------|---------------|--|---------------|--|------------|--|
| Day of Week | Question 1 | Questi             | Question 2a/b |  | Question 3a/b |  | Question 5 |  |
| Day 1       |            |                    |               |  |               |  |            |  |
| Day 2       |            |                    |               |  |               |  |            |  |
| Day 3       |            |                    |               |  |               |  |            |  |
| Day 4       |            |                    |               |  |               |  |            |  |
| Day 5       |            |                    |               |  |               |  |            |  |

| EACHER'S NAME: |                               | _ GRADE: |  |  |
|----------------|-------------------------------|----------|--|--|
|                |                               |          |  |  |
| OATE:          | NUMBER OF STUDENTS IN CLASS T | ODAY:    |  |  |

Please complete and <u>return this form to the principal's office FRIDAY</u>. This information will allow us to better plan ways for our children to get to and from school each day.

### Note to Principals:

Please reproduce and distribute this form to all homeroom or 1st period teachers at your school. It is important that **all classes are surveyed on the same day**. Project consultants will collect all survey forms the following week. THANK YOU.

# Capital Region Transportation Planning Agency

# **Appendix B: Student Travel Survey - Detailed Analysis**

The survey consisted of a one-page sheet with a script of questions for homeroom teachers to read to students as they took morning attendance. Surveys were conducted each morning during a typical week of the school year for a total of five straight days, Monday to Friday. The script prompted teachers to ask and record the number of children in their class that came to school by walking, bicycling, car, school bus, or city bus. The student travel survey was conducted in February, 2013. Thirty-five classrooms participated in the survey for a total of 611 student responses recorded. In a few instances, surveys were conducted within overlapping multiple grade level classrooms. Those instances are noted where relevant to the data results.

### SUMMARY OF STUDENT TRAVEL SURVEY POPULATION

| Total Number of Participating Classrooms                 | 35  |
|--|-----|
| Total Students Surveyed (K-5 <sup>th</sup> )             | 611 |
| Total K-2 <sup>nd</sup> Students Surveyed                | 321 |
| Total 3 <sup>rd</sup> -5 <sup>th</sup> Students Surveyed | 290 |

### **Walking and Bicycling**

Students were first asked if they walked to school. Then students were asked if they rode a bicycle to school. Students that rode their bike to school were further asked if they wore a bicycle helmet.

### Walking and Bicycling School-Wide Travel Patterns

The school-wide student travel surveys indicate that the walk-to-school average for a typical week ranges from 3% to 3%, with an overall average of 3%. Overall, the bike-to-school average for the week ranged from 0% to <1%, with an overall average of less than one percent. Of the students that bike to school, an overall average of 29% wore a bicycle helmet. In total, the combined walk-bike average for the week ranged from 3% to 4%, with an overall average of 3%.

### SUMMARY OF WALKING AND BICYCLE SCHOOL-WIDE TRAVEL PATTERNS

|                 | Walk | Bicycle | Helmet Use | Total Walk + Bike |
|-----------------|------|---------|------------|-------------------|
| Average Overall | 3 %  | <1 %    | 29 %       | 3 %               |
| Highest Day     | 3 %  | <1 %    | 50 %       | 4 %               |
| Lowest Day      | 3 %  | 0 %     | 0 %        | 3 %               |

### Walking and Bicycling Travel Patterns of Younger-Aged Children ( $K - 2^{nd}$ Grade)

The younger-aged (K-2<sup>nd</sup>) children student travel surveys indicate that the walk-to-school average for a typical week ranges from 2% to 3%, with an overall average of 2%. None of the students surveyed reported riding a bike to school. In total, the combined walk-bike average for the week ranged from 2% to 3%, with an overall average of 2%.

### SUMMARY OF YOUNGER-AGED CHILDREN WALKING AND BICYCLE TRAVEL PATTERNS (K-2nd)

|                 | Walk | Bicycle | Helmet Use | Total Walk + Bike |
|-----------------|------|---------|------------|-------------------|
| Average Overall | 2 %  | 0 %     | N/A        | 2 %               |
| Highest Day     | 3 %  | 0 %     | N/A        | 3 %               |
| Lowest Day      | 2 %  | 0 %     | N/A        | 2 %               |

### Walking and Bicycling Travel Patterns of Older-Aged Children (3<sup>rd</sup> – 5<sup>th</sup> Grade)

The older-aged (3<sup>rd</sup>-5<sup>th</sup>) children student travel surveys indicate that the walk-to-school average for a typical week ranges from 3% to 4%, with an overall average of 4%. Overall, the bike-to-school average for a typical week ranges from 0% to 1%, with an overall average of 1%. Of the students that bike to school, an overall average of 29% wore a bicycle helmet. In total, the combined walk-bike average for the week ranged from 4% to 5%, with an overall average of 4%.

## SUMMARY OF OLDER-AGED CHILDREN WALKING AND BICYCLE TRAVEL PATTERNS (3<sup>rd</sup>-5<sup>th</sup>)

|                 | Walk | Bicycle | Helmet Use | Total Walk + Bike |
|-----------------|------|---------|------------|-------------------|
| Average Overall | 4 %  | 1 %     | 29 %       | 4 %               |
| Highest Day     | 4 %  | 1 %     | 50 %       | 5 %               |
| Lowest Day      | 3 %  | 0 %     | 0 %        | 4 %               |

### **Bus and Automobile Drop-Off**

Students were asked if they arrived to school by automobile, with either their parents or someone else. Students that arrived by automobile to school were further asked if they had wore their seat belt. Additionally, students were asked if they arrived to school by bus, including either Leon County School buses or Star Metro public transit buses.

### Bus and Automobile School-Wide Travel Patterns

The school-wide travel surveys indicate that the automobile-to-school average for a typical week ranges from 76% to 79%, with an overall average of 77%. Of the students that ride to school in an automobile, an overall average of 87% wore a seatbelt. Overall, the school bus-to-school average for the week

ranged from 18% to 20%, with an overall average of 19%. None of the students surveyed reported riding a public bus to school. (To note, there are no public buses within a reasonable distance to the school.)

### SUMMARY OF BUS AND AUTOMOBILE DROP-OFF SCHOOL-WIDE TRAVEL PATTERNS<sup>2</sup>

|                 | Automobile | Seat Belt | School Bus | Public Bus |
|-----------------|------------|-----------|------------|------------|
| Average Overall | 77 %       | 87 %      | 19 %       | 0 %        |
| Highest Day     | 79 %       | 89 %      | 20 %       | 0 %        |
| Lowest Day      | 76 %       | 83 %      | 18 %       | 0 %        |

# Bus and Automobile Travel Patterns of Younger-Aged Children (K – 2<sup>nd</sup> Grade)

The younger-aged (K-2nd) children student travel surveys indicate that the automobile-to-school average for a typical week ranges from 78% to 81%, with an overall average of 80%. Of the students that ride to school in an automobile, an overall average of 86% wore a seatbelt. Overall, the school bus-to-school average for the week ranged from 17% to 19%, with an overall average of 18%. None of the students surveyed reported riding a public bus to school.

SUMMARY OF YOUNGER-AGED CHILDREN BUS & AUTOMOBILE DROP-OFF TRAVEL PATTERNS (K-2<sup>nd</sup>)<sup>3</sup>

|                 | Automobile | Seat Belt | School Bus | Public Bus |
|-----------------|------------|-----------|------------|------------|
| Average Overall | 80 %       | 86 %      | 18 %       | 0 %        |
| Highest Day     | 81 %       | 89 %      | 19 %       | 0 %        |
| Lowest Day      | 78 %       | 80 %      | 17 %       | 0 %        |

### Bus and Automobile Travel Patterns Of Older Children (3<sup>rd</sup> – 5<sup>th</sup> Grade)

The older-aged (3<sup>rd</sup>-5<sup>th</sup>) children student surveys indicate that the automobile-to-school average for a typical week ranges from 73% to 77%, with an overall average of 75%. Of the students that ride to school in an automobile, an overall average of 88% wore a seatbelt. Overall, the school bus-to-school average for the week ranges from 19% to 23%, with an overall average of 21%. None of the students surveyed reported riding a public bus to school.

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<sup>&</sup>lt;sup>2</sup> Based upon survey comments from teachers, 3% of all students came to school by daycare van. This was not counted in the total for automobiles.

<sup>&</sup>lt;sup>3</sup> Based upon survey comments from teachers, 4% of younger-aged students came to school by daycare van. This was not counted in the total for automobiles.

# SUMMARY OF OLDER-AGED CHILDREN BUS & AUTOMOBILE DROP-OFF TRAVEL PATTERNS (3<sup>rd</sup>-5<sup>th</sup>)<sup>4</sup>

|                 | Automobile | Seat Belt | School Bus | Public Bus |
|-----------------|------------|-----------|------------|------------|
| Average Overall | 75 %       | 88 %      | 21 %       | 0 %        |
| Highest Day     | 77 %       | 91 %      | 23 %       | 0 %        |
| Lowest Day      | 73 %       | 87 %      | 19 %       | 0 %        |

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<sup>&</sup>lt;sup>4</sup> Based upon survey comments from teachers, 3% of students came to school by daycare van. This was not counted in the total for automobiles.

# **Appendix C: Parent Survey**

| PARENT SURVEY   |   |  |
|---|---|--|
| Dear Parents: In an effort to improve<br>to reduce the amount and speed of<br>enforcement and safety education pro<br>questions. The name of my child's scl   | f cars, improve walking and ograms. Please help us by pro | bicycling conditions and encourage viding your opinions to the following |
| 1. Please provide the sex, age and grad   | de of your child:   |  |
| Sex:         Male         Female           Age:            Grade:   |   |  |
|   |   | and a continuo consoli   |
| 2. Approximately how far do you live f  | rom your child's school? ( <i>circi</i>                   | e closest answerj:   |
|   |   |  |
| <ol> <li>1. 1/2 mile or less</li> <li>1/2 mile to 1 mile</li> <li>between 1 and 2 miles</li> <li>over 2 miles</li> </ol>  |   |  |
| <ul><li>2. 1/2 mile to 1 mile</li><li>3. between 1 and 2 miles</li></ul>  |   |  |
| <ol> <li>2. 1/2 mile to 1 mile</li> <li>3. between 1 and 2 miles</li> <li>4. over 2 miles</li> <li>If you live over two miles from the sparticipating. If you live within two remains the second of the second of</li></ol> | niles of the school, please hel                           | p us by completing the questions on                                      |
| <ul> <li>2. 1/2 mile to 1 mile</li> <li>3. between 1 and 2 miles</li> <li>4. over 2 miles</li> <li>If you live over two miles from the sparticipating. If you live within two rathe following pages.</li> </ul>   | niles of the school, please hel                           | p us by completing the questions on                                      |
| <ul> <li>2. 1/2 mile to 1 mile</li> <li>3. between 1 and 2 miles</li> <li>4. over 2 miles</li> <li>If you live over two miles from the sparticipating. If you live within two rathe following pages.</li> </ul>   | niles of the school, please hel                           | p us by completing the questions on on the appropriate line)             |

# **Leon County Schools**

5. Which of the following factors would influence your decision to allow your child to walk or bicycle to school. On a scale of 1 to 5 (1= not important to 5= very important), please rate each statement's importance as it applies to your child. If the statement does not apply, circle "NA".

| I would allow my child to walk or                     | Not  |        |   |      | Very   | Not        |
|---|------|--------|---|------|--------|------------|
| bicycle to school more often if:                      | Impo | ortant |   | Impo | ortant | Applicable |
| a) Accompanied by other children                      | 1    | 2      | 3 | 4    | 5      | NA         |
| b) Accompanied by myself or other parents             | 1    | 2      | 3 | 4    | 5      | NA         |
| c) Schools provided more walking and bicycling        |      |        |   |      |        |            |
| safety training for students                          | 1    | 2      | 3 | 4    | 5      | NA         |
| d) Additional crossing guards were provided at        |      |        |   |      |        |            |
| busy intersections                                    | 1    | 2      | 3 | 4    | 5      | NA         |
| e) Crossing guards were more effective                | 1    | 2      | 3 | 4    | 5      | NA         |
| f) There were continuous sidewalks or bike paths      |      |        |   |      |        |            |
| from my neighborhood to school                        | 1    | 2      | 3 | 4    | 5      | NA         |
| g) There were bicycle/pedestrian pathways             |      |        |   |      |        |            |
| separated from traffic from the neighborhood          |      |        |   |      |        |            |
| to the school   | 1    | 2      | 3 | 4    | 5      | NA         |
| h) We lived closer to school                          | 1    | 2      | 3 | 4    | 5      | NA         |
| i) Speed limits were strictly enforced in school      |      |        |   |      |        |            |
| speed zones   | 1    | 2      | 3 | 4    | 5      | NA         |
| j) School speed zones were marked with flashing       |      |        |   |      |        |            |
| signs   | 1    | 2      | 3 | 4    | 5      | NA         |
| k) School speed zones were a greater distance         |      |        |   |      |        |            |
| surrounding school                                    | 1    | 2      | 3 | 4    | 5      | NA         |
| I) The school provided a secure place for storing     |      |        |   |      |        |            |
| bicycles  | 1    | 2      | 3 | 4    | 5      | NA         |
| m) There was a greater adult presence of parent       |      |        |   |      |        |            |
| volunteers or police officers along walk routes       |      |        |   |      |        |            |
| to school   | 1    | 2      | 3 | 4    | 5      | NA         |
| n) There was better street lighting along walk        |      |        |   |      |        |            |
| routes to school                                      | 1    | 2      | 3 | 4    | 5      | NA         |
| o) Please write below any additional factors that     |      |        |   |      |        |            |
| might influence you to let your child walk or bicycle |      |        |   |      |        |            |
| to school more often:                                 |      |        |   |      |        |            |
|   |      |        |   |      |        |            |
|   |      |        |   |      |        |            |
|   |      |        |   |      |        |            |
|   |      |        |   |      |        |            |
|   |      |        |   |      |        |            |

# Capital Region Transportation Planning Agency

# **Appendix D: Parent Survey - Detailed Analysis**

The survey consisted of a one-page double-sided sheet of paper with five questions for parents to answer. Survey copies were sent home with students early in the week. They were instructed to deliver the survey to their parents (or guardians), asking them to complete the survey and send it back with their children by the end of the week.

Parents were first asked general demographic questions pertaining to the sex and age of their child, as well as grade level. Then, parents were asked approximately how far they lived from their child's school. Families living over two miles from school were instructed to return the survey without completing the remainder of questions pertaining to walking and bicycling to school. Those claiming to reside within two miles were asked, next, how their child typically gets to and from school (for morning and afternoon, respectively). Then, they were asked to identify any safety problems of concern in their neighborhood. Finally, parents were asked to consider a range of safety and convenience factors, and how each factor might influence their decision to allow their child to walk or bike to school.

The parent surveys were conducted during the winter/spring semester of 2013. There were 215 parent surveys returned. Of those, 125 (58%) claimed to reside within the theoretical two-mile walk/bike radius of the school. Surveys from families residing within the theoretical two-mile walk/bike radius were split nearly 50/50 by grade level grouping, with 60 students representing Kindergarten through 2<sup>nd</sup> Grade, and 65 students representing 3<sup>rd</sup> Grade through 5<sup>th</sup> Grade.

### **SUMMARY OF PARENT SURVEY PARTICIPATION**

| Total Enrollment  | 638 |
|---|-----|
| Total Number of Parent Surveys  | 215 |
| Total Number within 2 Miles (K-2 <sup>nd</sup> Grade)                 | 60  |
| Total Number within 2 Miles (3 <sup>rd</sup> -5 <sup>th</sup> Grades) | 65  |
| Percentage of Surveys within 2 Miles                                  | 58% |

### **Commuting to/from School**

Parents were asked how their child usually traveled to and from school, in the morning and afternoon. Choices of travel modes included: school bus, car, walk, bicycle, public bus, and other (where they were asked to explain).

#### **SUMMARY OF SCHOOL-WIDE COMMUTING RESULTS**

| Morning    | Average<br>Overall |
|------------|--------------------|
| Car        | 68 %               |
| School Bus | 20 %               |
| Other      | 8 %                |
| Walk       | 4 %                |
| Bicycle    | 0 %                |
| Public Bus | 0 %                |
| Afternoon  |                    |
| Car        | 50 %               |
| School Bus | 29 %               |
| Other      | 17 %               |
| Walk       | 5 %                |
| Bicycle    | 0 %                |
| Public Bus | 0 %                |

## Commuting Patterns of Younger-Aged Children (K – 2<sup>nd</sup> Grade)

The surveys of parents of younger-aged (K-2<sup>nd</sup> grade) indicate that the car-to-school average for a typical week is 73% in the morning and decreases to 55% in the afternoon. The school bus-to-school average for a typical week is 17% in the morning and increases to 22% in the afternoon. The alternative commute mode-to school average for a typical week is 7% in the morning and increases to 17% in the afternoon. The walk-to-school average for a typical week is 3% in the morning and increases to 7% in the afternoon. None of the students ride a bicycle or a public bus in the morning or afternoon.

### COMMUTING PATTERNS OF YOUNGER-AGED CHILDREN (K-2<sup>nd</sup>)

| Morning   |            | Average<br>Overall |
|-----------|------------|--------------------|
|           | Car        | 73 %               |
|           | School Bus | 17 %               |
|           | Other      | 7 %                |
|           | Walk       | 3 %                |
|           | Bicycle    | 0 %                |
|           | Public Bus | 0 %                |
| Afternoon |            |                    |
|           | Car        | 55 %               |
|           | School Bus | 22 %               |
|           | Other      | 17 %               |
|           | Walk       | 7 %                |
|           | Bicycle    | 0 %                |
|           | Public Bus | 0 %                |

# Commuting Patterns of Older-Aged Children (3<sup>rd</sup> – 5<sup>th</sup> Grade)

The surveys of parents of older-aged (3<sup>rd</sup>-5<sup>th</sup> grade) indicate that the car-to-school average for a typical week is 63% in the morning and decreases to 45% in the afternoon. The school bus-to-school average for a typical week is 23% in the morning and rises to 35% in the afternoon. The alternative commute mode-to school average for a typical week is 9% in the morning and rises to 17% in the afternoon. The walk-to-school average for a typical week is 5% in the morning and decreases to 3% in the afternoon. None of the students ride a bicycle or a public bus in the morning or afternoon.

# COMMUTING PATTERNS OF OLDER-AGED CHILDREN (3<sup>rd</sup>-5<sup>th</sup>)

| Morning   |            | Average<br>Overall |
|-----------|------------|--------------------|
|           | Car        | 63 %               |
|           | School Bus | 23 %               |
|           | Other      | 9 %                |
|           | Walk       | 5 %                |
|           | Bicycle    | 0 %                |
|           | Public Bus | 0 %                |
| Afternoon |            |                    |
|           | Car        | 45 %               |
|           | School Bus | 35 %               |
|           | Other      | 17 %               |
|           | Walk       | 3 %                |
|           | Bicycle    | 0 %                |
|           | Public Bus | 0 %                |

### **Neighborhood Safety Concerns**

Parents were asked to identify specific safety problems of concern in their neighborhood or around their child's school including problems such as broken sidewalks, crime areas, high speed vehicles, etc.). They were also asked to indicate specific street locations, where possible. Parents provided answers anecdotally. Summaries of the top neighborhood safety concerns are provided. The table below includes the top neighborhood safety concerns expressed by survey respondents.

### SUMMARY OF TOP RANKING NEIGHBORHOOD SAFETY CONCERNS

| Neighborhood Safety Concern                       | Number of Comments |
|---|--------------------|
| Speeding Vehicles                                 | 41                 |
| Issues with Sidewalks/Walking                     | 23                 |
| Issues with Transportation Outside of School Zone | 19                 |

### Neighborhood Safety Concerns For Younger-Aged Children (K – 2<sup>nd</sup> Grade)

Neighborhood safety concerns for parents of younger-aged (K-2<sup>nd</sup>) children include three main concerns including issues with speeding vehicles, sidewalks/walking, and issues with transportation outside of the school zone. There were approximately 22 comments of concern regarding issues with speeding vehicles. Specific locations where high-speed vehicles tend to be a problem are Old Bainbridge Road, Perkins Road, Highway 27/N. Monroe Street, and Clara Kee Boulevard. Parents also mentioned speeding near the entrances of neighborhoods, in the school zone, and sometimes people speeding in the school parking lot and/or student drop-off line. Additionally, there were approximately 12 comments of concern regarding issues with sidewalks and walking. General concerns include the lack of sidewalks, streetlights, and crosswalks in some areas. Specific locations where sidewalks and crosswalks tend to be a problem are Highway 27/N. Monroe Street, and Shady Oaks, Sageway, Wildridge, Cynthia, and Faulk Drive. Lastly, there were eight comments of concerns regarding issues with transportation outside of the school zone. General concerns include the availability of crossing guards, inattentive drivers, major roads with high traffic, and driveways/vehicles obscuring the view of children walking or biking.

### SUMMARY OF TOP NEIGHBORHOOD SAFETY CONCERNS (K-2<sup>nd</sup> Grade)

| Neighborhood Safety Concern                       | Number of Comments |
|---|--------------------|
| Speeding Vehicles                                 | 22                 |
| Issues with Sidewalks/Walking                     | 12                 |
| Issues with Transportation Outside of School Zone | 8                  |

### Neighborhood Safety Concerns For Older-Aged Children (3<sup>rd</sup> – 5<sup>th</sup> Grade)

Neighborhood safety concerns for parents of older-aged (3<sup>rd</sup>-5<sup>th</sup>) children also include issues with speeding vehicles, sidewalks/walking, and issues with transportation outside of the school zone. There were approximately 19 comments of concern regarding speeding vehicles. Specific locations where high-speed vehicles tend to be a problem are Highway 27/N. Monroe Street, Old Bainbridge Road, Harriet Drive, Perkins Road, and Clara Kee Boulevard. Parents also mention speeding in neighborhoods by teenagers. Additionally, there were approximately 11 comments of concern regarding issues with sidewalks and walking. General concerns include the lack of sidewalks, broken/incomplete sidewalks, and the lack of crosswalks. Specific locations where sidewalks and crosswalks tend to be a problem are Highway 27/N. Monroe Street, Old Bainbridge Road; and Sageway, Wildridge, Cynthia, and Faulk Drive. Lastly, there were 11 comments of concern regarding issues with transportation outside of the school zone. General concerns include the number of crossing guards available, major roads with high traffic, and needing a red light at the intersection of Clara Kee Boulevard and Highway 27/N. Monroe Street.

### SUMMARY OF TOP NEIGHBORHOOD SAFETY CONCERNS (3<sup>rd</sup>-5<sup>th</sup> Grade)

| Neighborhood Safety Concern                       | Number of Comments |  |  |  |  |  |
|---|--------------------|--|--|--|--|--|
| Speeding Vehicles                                 | 19                 |  |  |  |  |  |
| Issues with Sidewalks/Walking                     | 11                 |  |  |  |  |  |
| Issues with Transportation Outside of School Zone | 11                 |  |  |  |  |  |

### Factors Influencing Decisions to Allow Students to Walk or Bicycle to School

Parents were asked about 15 different factors related to their children walking or biking to school. Parents rated each statement's importance on a scale of 1 to 5 (1=Not Important to 5=Very Important), as it applied to their child, to determine what influenced their decision to allow their child to walk or bike to school. If statements did not apply, parents marked N/A (Not Applicable). The table below includes the top ranking responses to the influential factors question from the survey.

### SUMMARY OF TOP RANKING SCHOOL-WIDE INFLUENTIAL FACTORS RESULTS

|   | SCALE | 1 | 2 | 3 | 4  | 5  | N/A |
|---|-------|---|---|---|----|----|-----|
| I would allow my child to walk or bicycle |       |   |   |   |    |    |     |
| to school more often if:                  |       |   |   |   |    |    |     |
| #1 Accompanied by myself or other         |       | 1 | 0 | 8 | 5  | 56 | 31  |
| parents                                   |       |   |   |   |    |    |     |
| #2 There were bicycle/pedestrian          |       |   |   |   |    |    |     |
| pathways separated from traffic from the  |       | 3 | 1 | 3 | 3  | 55 | 34  |
| neighborhood to the school                |       |   |   |   |    |    |     |
| #3 Speed limits were strictly enforced in |       | 2 | 2 | 0 | 12 | 51 | 34  |
| school speed zones                        |       |   |   |   |    |    |     |
| #3 Additional crossing guards were        |       | 3 | 1 | 2 | 7  | 51 | 37  |
| provided at busy intersections            |       |   |   |   |    |    |     |
| #3 There were continuous sidewalks or     |       |   |   |   |    |    |     |
| bike paths from my neighborhood to        |       | 2 | 0 | 1 | 6  | 51 | 41  |
| school                                    |       |   |   |   |    |    |     |

### Influential Factors for Younger-Aged Children (K – 2<sup>nd</sup> Grade)

Parents of children in Kindergarten through 2<sup>nd</sup> grade agreed that the top six influential factors to allow their child to walk or bicycle to school more often included factors related to enforcing speed limits in school zones, having continuous and separated bicycle/pedestrian pathways, accompanying children (by themselves/other parents), availability of crossing guards, and having a greater adult presence along walk routes to school.

TOP RANKING INFLUENTIAL FACTORS FOR YOUNGER-AGED CHILDREN (K-2<sup>nd</sup>)

|   | SCALE | 1 | 2 | 3 | 4 | 5  | N/A |
|---|-------|---|---|---|---|----|-----|
| I would allow my child to walk or bicycle to school more often if:  |       |   |   |   |   |    |     |
| #1 Speed limits were strictly enforced in school speed zones  |       | 1 | 2 | 0 | 3 | 26 | 15  |
| #1 There were bicycle/pedestrian pathways separated from traffic from the neighborhood to the school      |       | 2 | 0 | 2 | 0 | 26 | 16  |
| #2 Accompanied by myself or other parents   |       | 0 | 0 | 5 | 1 | 24 | 17  |
| #3 Additional crossing guards were provided at busy intersections   |       | 2 | 0 | 0 | 3 | 22 | 20  |
| #3 There was a greater adult presence of parent volunteers or police officers along walk routes to school |       | 2 | 0 | 6 | 2 | 22 | 14  |
| #3 There were continuous sidewalks or bike paths from my neighborhood to school                           |       | 1 | 0 | 1 | 2 | 22 | 21  |

# Influential Factors for Older-Aged Children (3<sup>rd</sup> – 5<sup>th</sup> Grade)

Parents of children in 3<sup>rd</sup> through 5<sup>th</sup> grade agreed that the top five influential factors to allow their child to walk or bicycle to school more often included factors related to accompanying children (by themselves/other parents), availability of crossing guards, having continuous and separated bicycle/pedestrian pathways, and enforcing speed limits in school zones.

TOP RANKING INFLUENTIAL FACTORS FOR OLDER-AGED CHILDREN (3<sup>rd</sup>-5<sup>th</sup>)

|   | SCALE | 1 | 2 | 3 | 4 | 5  | N/A |
|---|-------|---|---|---|---|----|-----|
| I would allow my child to walk or bicycle |       |   |   |   |   |    |     |
| to school more often if:                  |       |   |   |   |   |    |     |
| #1 Accompanied by myself or other         |       | 1 | 0 | 3 | 4 | 32 | 14  |
| parents                                   |       |   |   |   |   |    |     |
| #2 Additional crossing guards were        |       | 1 | 1 | 2 | 4 | 29 | 17  |
| provided at busy intersections            |       |   |   |   |   |    |     |
| #2 There were continuous sidewalks or     |       |   |   |   |   |    |     |
| bike paths from my neighborhood to        |       | 1 | 0 | 0 | 4 | 29 | 20  |
| school                                    |       |   |   |   |   |    |     |
| #2 There were bicycle/pedestrian          |       |   |   |   |   |    |     |
| pathways separated from traffic from the  |       | 1 | 1 | 1 | 3 | 29 | 18  |
| neighborhood to the school                |       |   |   |   |   |    |     |
| #3 Speed limits were strictly enforced in |       | 1 | 0 | 0 | 9 | 25 | 19  |
| school speed zones                        |       |   |   |   |   |    |     |