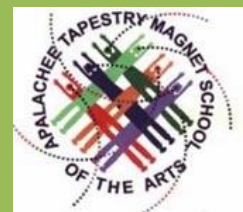


August 2014

# Safe Routes to School Audit Report Apalachee Elementary



Leon County  
Public Schools



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### Capital Region Transportation Planning Agency (CRTPA)



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### Leon County Public Schools (LCS)



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## 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 policies. 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 parent self-reported surveys, on-site meetings with school officials, and field reviews.

### School Overview

Apalachee Elementary School is located at 650 Trojan Trail, Tallahassee, 32311 in Leon County, Florida. It is part of the Leon County Public Schools system. The school's history began around 1969-70. The school became Leon County's first elementary magnet school in 1999. Regular school hours are from 8:25am to 2:50pm. Additionally, a breakfast program at the school runs from 7:45am to 8:25am.

The number of students enrolled at the school, for the 2013 school year, was 566. The school has a current capacity for 764 students. The school includes grade levels Pre-Kindergarten through 5<sup>th</sup> Grade. Apalachee Elementary School is home to Leon County's first elementary magnet school. The program incorporates the art into standardized state-approved core curricula. Examples of arts offered in the program include dance, drama, music, and technology.

Additionally, Apalachee Elementary School offers an after-school Program, STARS (Striving to Achieve Rising Success), for students that have scored a Level 1 or 2 on the FCAT (Florida Comprehensive Achievement Test). The after-school program is funded through the U.S. Department of Education and the Charles Stewart Mott Foundation's competitive grant process. The STARS Program operates from 1:50pm to 4:25pm on Monday, Tuesday, Wednesday and Thursday each week when school is in session and offers students help on their homework.

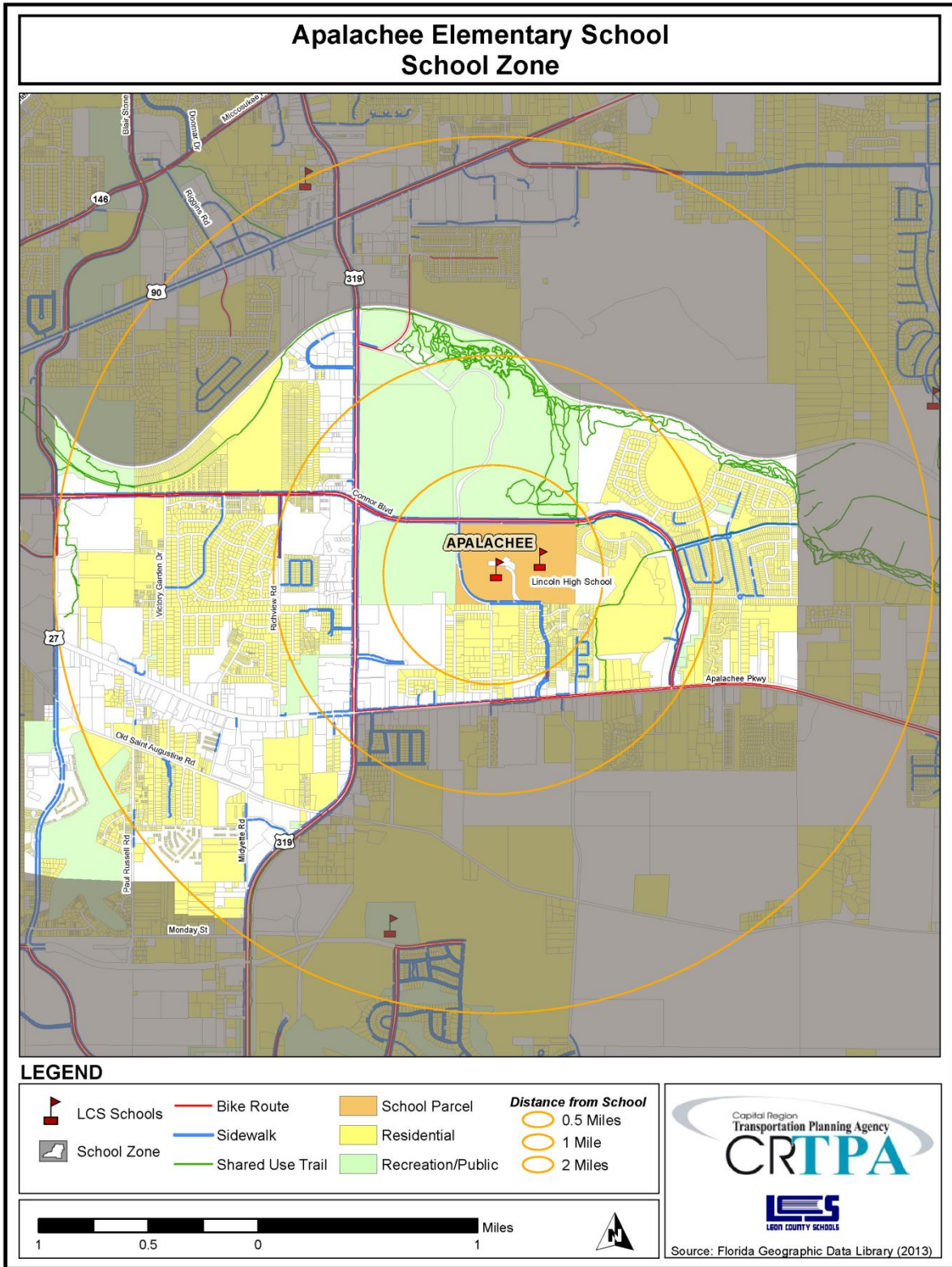
Students attending this school feed into Fairview Middle School and Lincoln and Rickards High Schools.

### School Zone

The Apalachee Elementary school zone is located in eastern Tallahassee. It encompasses the neighborhoods of Piney Z, Chase Ridge, Copper Creek, Bonaventure, Towne East, Park Brook Circle and Meadowbrook. Tom Brown Park covers a significant amount of land within the school zone. In addition to Tom Brown Park, land uses in the school zone consist of mostly residential, recreational, and commercial uses. The Apalachee school zone includes three major roadways. Capital Circle bisects the zone into east and west. Connor Boulevard, located north of Apalachee Elementary, and Apalachee Parkway, located south of Apalachee Elementary, both run east-west and divide the zone into north and

south. Lincoln High School falls within the Apalachee school zone, just east of the elementary school, on Trojan Trail. There are several important non-motorized off-road transportation amenities that traverse the north side of the school zone in Tom Brown Park including the Lafayette Heritage Trail, Goose Pond Trail, Magnolia Mountain Bike Trail, and West Cadillac Mountain Bike Trail.





## Chapter 2: On-Site Meeting and Inventory

### Date and Weather Conditions

The on-site inventory meeting was conducted on March 26, 2013. The weather was windy with temperatures in the mid 40 degrees Fahrenheit.

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

During this visit, Apalachee 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 there are traffic calming speed humps along Trojan Trail, in front of the school property, near the school bus drop-off and pick-up area. With regard to dropping students off in the afternoon at their stops, it was noted that students will not be released from the bus if there is no one there to pick them up. Students are permitted to arrive to school as early as 7:00am and there is an after school program on campus available until 6:00pm.

There is one designated crossing guard, in front of the school property, along Trojan Trail near the bus entrance. However, students crossing Trojan Trail at Sutor Road, near Lincoln High School, are not supervised. Additionally, it was noted that older children walking to school likely do so unsupervised. School staff and administrators serve as ushers for students at both the automobile drop-off/pick-up and school bus zones. The student safety patrols assist with these functions as well. School representatives also noted that the school does not have a bicycle safety program and "Stanger/Danger" training programs for children are only done on request. School representatives cited that the parent drop-off and pick-up zone functions adequately but that there are issues with parents and students disregarding rules and directions. It was noted that only a relatively small number of students are dropped off/picked-up by parents.

### 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. Overall, the school circulation pattern is well planned out and reduces the amount of conflicts between different modes of transportation.

Walkers mostly come from south of the school, along Trojan Trail, from the Rockbrook Garden Apartments and Idlewild neighborhood. There is a sidewalk that directly connects from Trojan Trail to the main covered entrance of the school. However, students must cross through the school bus drop-off and pick-up zone to reach it. The crossing is supervised. No students are known to commute via bicycle. However, the school does have bicycle racks available located near the cafeteria.



The school bus drop-off and pick-up zone functions adequately with double-stack lanes. There is direct access to a covered walking facility that leads into the main entrance of the school. It was noted that buses are color coded to assist students in identifying their correct bus home.

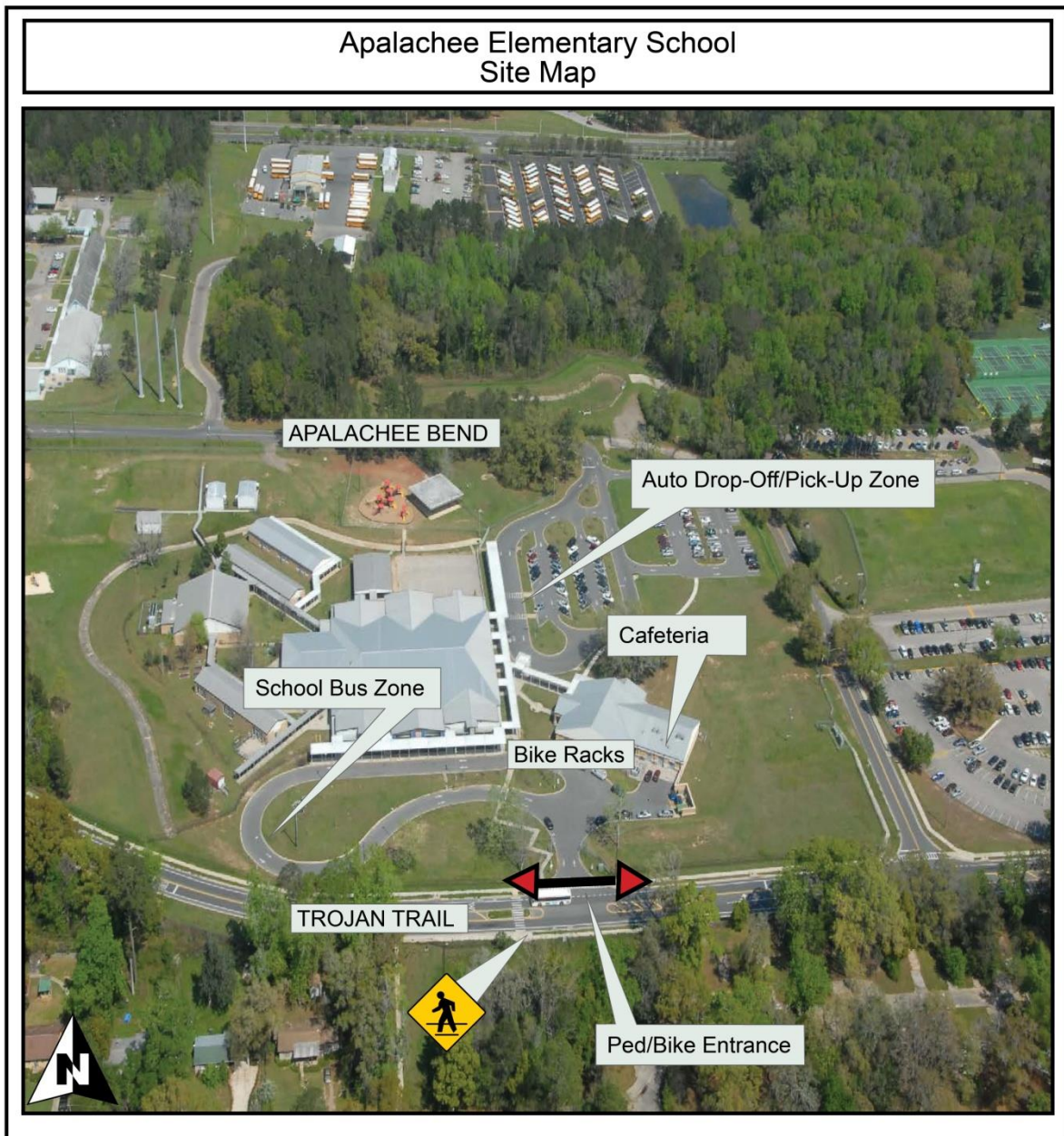
The parent drop-off and pick-up zone parking areas are adequate. However, there are reports of parents and students not obeying the rules and directions for student drop-off/pick-up, which aggravates the zone's circulation and makes the area hectic at times. Some students leave vehicles from the driver's side door while other students walk directly in front of vehicles. Additionally, the school's Safety Resource Officer (SRO) has advised school staff to document parents and students who repeatedly ignores requests to comply with safety rules during drop-off and pick-up. Also, the automobile zone is not well-marked or signed. Design solutions that promote safer behavior should be considered.

### Inventory Map

An aerial photograph showing Apalachee Elementary School is located on the following page. As shown in the photo, the school fronts Trojan Trail. Students can access campus from this street as well. Bicycle parking racks are located near the front entrance of the school.

Standard width sidewalks are located along both sides of Trojan Trail and there is a midblock crosswalk that connects directly to a sidewalk that enters onto campus. There are no sidewalks along Apalachee Bend, north of the school. This roadway is meant to primarily accommodate automobile pick-up and drop-off.

The automobile pick-up and drop-off zone is located on the east side of the school's main entrance. Automobiles both enter and exit the zone from Apalachee Bend. Staff and visitor parking are located in this area as well. The bus drop-off and pick-up zone is separately located along the front of the school. Buses enter the zone from Trojan Trail as well as exit onto Trojan Trail.



### Issues and Opportunities

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

Geography may be the primary issue with students' ability to walk or bicycle to school. Further out from campus there are two wide, busy roadways that may not be appropriate for crossing by elementary school-age children, especially those at lower grade levels. These kind of external factors are often too difficult to overcome, at least in the short term.

With what opportunities that do exist to increase walking and bicycling, including student safety, consideration should be given to Trojan Trail. Additional traffic calming measures could be explored to further reduce automobile speeds and installing flashing lights could increase awareness of children in the area, especially during school commuting times. Also, a second crossing guard at Sutor Road may help ease walking/bicycling concerns. School-related and –supportive committees such as the 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.

There is an opportunity to improve the automobile pick-up and drop-off zone by involving the school related and supportive committees such as the Parent/Teacher Organization (PTO). These groups can help get the word out to parents concerning on-campus issues, such as appropriate behavior and protocol for parents and students within the automobile drop-off/pick-up zone. Documenting non-compliant behavior by both parents and students who ignore safety rules in the zone may help bring awareness to the issues. Continued education and enforcement during the morning and afternoon commuting hours are critical.

### Chapter 3: 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 A.**)

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 B.**)

The surveys of students living within two miles from the school indicate that a greater percentage of Apalachee Elementary School students are dropped off by car or walk to school in the morning, and an equal amount return home by the same modes in the afternoon. Overall, approximately one-quarter of students commute to and from school by walking.

With regard to neighborhood safety, the concerns were an issue with a bus stop location near a major roadway, Apalachee Parkway, and a lack of sidewalks on Carrin Drive.

With regard to factors that might influence their decision to allow their children to walk or bike to school, survey responses indicate that factors such as having a greater adult presence along routes to school, accompanying children (by themselves/other parents), providing more walking and bicycling safety training to students, and providing a secure place for storing bicycles 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 4: Neighborhood Field Review

A neighborhood field review was conducted on April 9<sup>th</sup>, 2013. The review consisted of an assessment of accessibility, connectivity and safety along neighborhood roadways within proximity to Apalachee Elementary School. On the day of the field review, the weather was overcast and temperatures were in the mid 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 Apalachee Elementary School.

### Character of Neighborhood Area

Apalachee Elementary is located in a mix of established and newer neighborhoods primarily comprised of higher density single family homes. Neighborhoods to the south of the school are walkable due to a sidewalk connection from the school. However, the neighborhood street pattern throughout the area includes mostly loops and cul-de-sacs that are not well connected. Bike-ped infrastructure is mostly limited to major roadways in the school zone that have higher speed limits, making this area potentially an uncomfortable place to walk and bike. The north portion of the school zone is bound by Tom Brown Park and includes a shared-use trail system.

Major roadways in the school zone include:

- Capital Circle, a heavily traveled six lane, north-south roadway with a posted speed limit of 40-45mph.
- Apalachee Parkway, an east-west four lane roadway with a 40-45mph speed limit that transitions to 50-55 mph just east of Connor Boulevard.
- Conner Boulevard, a mostly east-west four lane roadway with a posted speed limit of 35mph.

### 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.

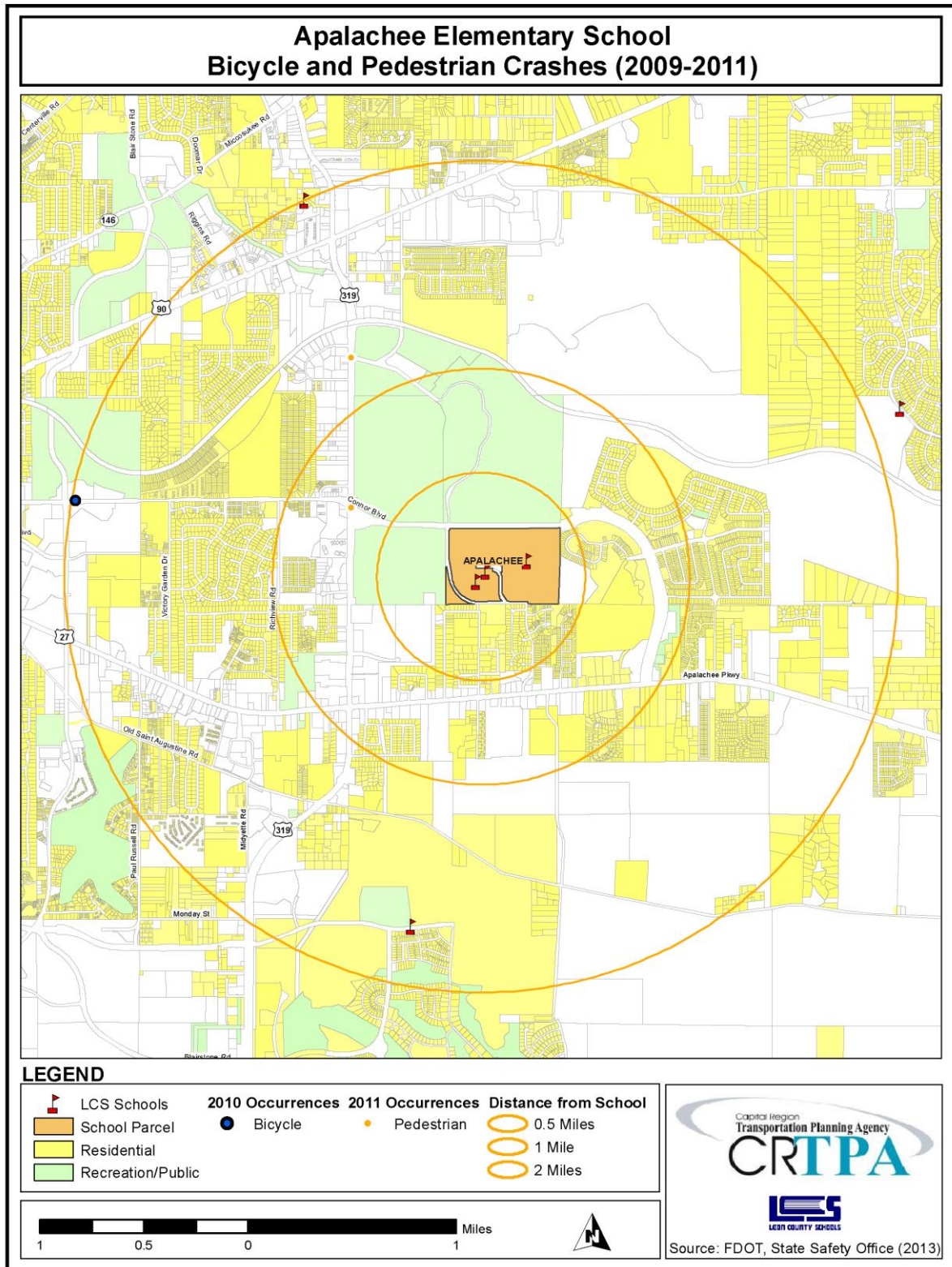
There were a total of one bicycle and two pedestrian crashes that occurred within the theoretical two-mile walk/bike radius of Apalachee Elementary School. All crashes occurred during the morning hours and involved adults. Injuries were reported in all crashes.

All crashes occurred approximately ½ mile to 2 miles northwest of Apalachee Elementary School. The two streets in the area that tend to have problems with bicycle and pedestrian crashes include Capital Circle SE and East Park Avenue.

**SUMMARY OF CRASH REPORTS (2009-2011)**

<b>Date</b>	<b>Time</b>	<b>Day</b>	<b>On Road</b>	<b>Nearest Intersection</b>	<b>Injury or Fatality?</b>	<b>Type of Crash</b>	<b>Person(s) Involved</b>
11/19/10	8:27am	Friday	Park Ave. E	Blair Stone Rd.	Serious Injury	Bicyclist	Adult
08/25/11	7:30am	Thursday	Easterwood Dr.	Capital Circle SE	Injury	Pedestrian	Adult
10/10/11	7:50am	Monday	Capital Circle SE	Conner Blvd.	Injury	Pedestrian	Adult





## Neighborhood Assessment

The immediate neighborhood layout surrounding Apalachee Elementary School lends itself somewhat well to walkability. Sidewalks and bicycle lanes are available along main roads such as Connor Boulevard and Sutor Road. Additionally, crosswalks are abundant along roadways and in neighborhoods to the east of the school. However, street patterns are mostly loop-like, east of the school, and cul-de-sacs, south of the school, leaving few alternative route choices to access the school. Further away from Apalachee Elementary, outside of a half-mile radius of the school, land uses start to become more non-residential, especially in the area north of the school. Although the infrastructure reaches some neighborhoods further away, much of it is along the major roadways and, thus, poses safety concerns for younger children walking and bicycling. 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 Apalachee Elementary School walk/bike shed map is included on page 15.

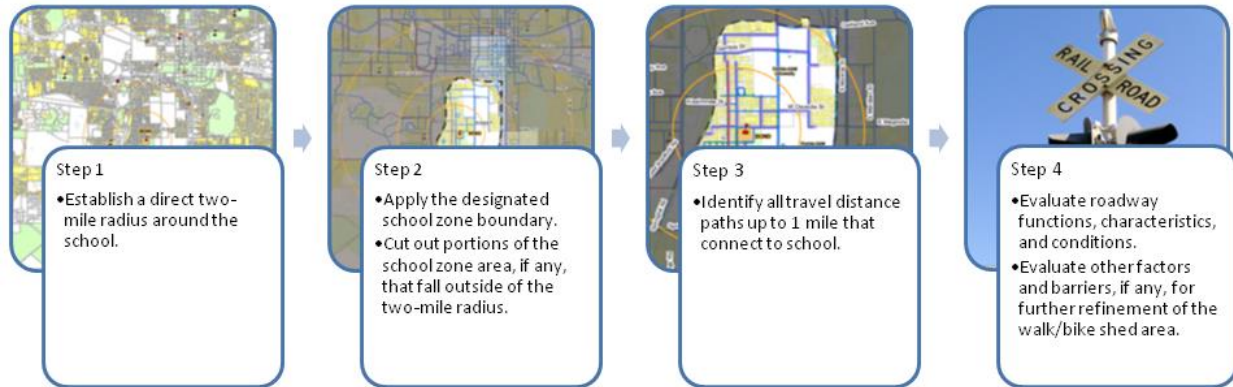
The walk/bike shed area and associated map are not meant to suggest that elementary school students of all ages, maturity level, and experience should commute to and/or from school within the area delineated. Certainly, younger children such as kindergarten students are not expected to walk or bike to 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 Apalachee Elementary School extends south and east of the school. Apalachee Parkway with its four lanes of traffic and lack of pedestrian accommodations forms the southern limits of the walk/bike shed. The presence of a railroad line, about one-half mile north of Connor Boulevard, in combination with the few residential land uses to the north and east contribute to the northern and eastern limits of the walk/bike shed. Also, because there are few residential connections in the area west of Trojan Trail, it forms the western limits of the walk/bike shed.

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

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

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

Section 1006.23 of the Florida Statutes defines hazardous walking conditions for elementary school-aged 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 5: Findings and Recommendations**

There are ample points of access for walkers and bicyclists onto the Apalachee Elementary School campus; and there are few issues to note concerning automobile and school bus access and circulation. As such there are few on-campus infrastructure-related recommendations for improvement. The surrounding neighborhoods are fairly well-connected to the school. And while there are many streets without sidewalks, most of these streets are internal residential subdivision streets with low-volume traffic. Most can be navigated by walkers and bicyclists with a fair amount of ease. However, there are some opportunities to improve walking and bicycling opportunities as well as safety throughout the surrounding neighborhoods. In addition, there are some limited policy and programmatic recommendations for the school's consideration.

### **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 Apalachee Elementary School. They include both on- and off-site improvements as follows:

### Apalachee Elementary School On- and Off-Site Recommendations

Improvement: On-Site	Location	From	To	Geography	Direction	Length	Comments
A1 Delineation of Lanes	School Bus and Automobiles Zones	N/A		N/A	N/A	N/A	

Improvement: Off-Site	Location	From	To	Geography	Direction	Length	Comments
B1 Add Signage for Parent Pick-Up/Drop-Off Zone	Trojan Trail	Approx. 350' north and 350' south of Apalachee Bend		Northbound and Southbound along Trojan Trail	N/A	N/A	
B2 Remark Existing Crosswalks	Sutor Road	See Description		N/A	N-S	N/A	Crosswalk markings are faded.
B3 New Crosswalk	Sutor Road	At Aksarben Dive		East side of Sutor Road	NW-SE	N/A	
B4 New Sidewalk	Apalachee Parkway	Sutor Road	Just west of Southwood Plantation Road	North side of Apalachee Parkway	E-W	Approx. 454 feet	Should be constructed by FDOT
B5 New Sidewalk	Apalachee Parkway	Just east of Southwood Plantation Road	Copper Creek Drive	North side of Apalachee Parkway	E-W	Approx. 175 feet	Should be constructed by FDOT
B6 New Crosswalks at Roundabouts	Piney Z Plantation Road	At Planters Ridge Drive; At Heritage Park Boulevard	All four sides of roundabout	N/A	N/A		New Crosswalks at Roundabouts

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

### On-Site Recommendations

- A1) Delineation of lanes in both the school bus and automobile zones – will better facilitate vehicles through the zones with the marking of a thru-lane.

### Off-Site Recommendations

- B1) Signage to make motorists more aware of the Apalachee Elementary parent pick-up/drop off zone should be added along Trojan Trail, approximately 350' north and 350' south of Apalachee Bend. The current signage is small not very noticeable. Signage similar to that along Connor Boulevard for Lincoln High School is recommended.
- B2) Several of the existing crosswalks along Sutor Road need to be remarked. The crosswalks are faded and difficult to see. Crosswalks in need of remarking include:
- At Longstreet Drive
  - At Rock Brook Drive
  - At Hood Court
  - At Pickett Circle
  - At Rockbrook Court
- B3) Mark a new crosswalk at the east side of Sutor Road & Aksarben Drive.
- B4) Construct a new sidewalk along Apalachee Parkway from Sutor Road to just west of Southwood Plantation Road.
- B5) Construct a new sidewalk along Apalachee Parkway from just east of Southwood Plantation Road to Copper Creek Drive.
- B6) Mark new crosswalks at the following roundabout locations in the Piney Z neighborhood:
- Piney Z Plantation Road & Planters Ridge Drive
  - Piney Z Plantation Road & Heritage Park Boulevard



## Programs

- C1) Walk 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.
- C2) 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.
- C3) Parent drop-off/pick-up zone protocol encouragement– During the on-site visit, it was noted by school officials that parents and students alike often disregard rules and directions in the parent drop-off/pick-up zone. It would be beneficial to 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. The literature available to parents should remind them to be patient and courteous to other parent drivers and clearly discourage parents from releasing children on the side of the road. Providing small rewards, such as stickers or pencils, to students whose parents follow the proper drop-off/pick-up process is typically more beneficial than punishing improper behavior.
- C4) Additional crossing guard – While there is a crossing guard currently available at the crosswalk in front of the school, it would be beneficial to have an additional crossing guard at the intersection of Trojan Trail & Sutor Road since many of the children come from the neighborhoods along Sutor Road.

## Policies

- D1) Bike check and security – 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 existing bike rack is in a relatively secure, visible spot; however, theft is still a concern. 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.
- D2) Parent drop-off/pick-up zone protocol – School officials expressed a concern for the disregard of rules and directions from both parents and students within the automobile zone. Setting protocol for the parent drop-off/pick-up process improves the traffic conditions and creates a safer environment for automobiles, as well as, pedestrians and bicyclists.

### Drop-Off Procedures

- Please stay in vehicle and pull forward to the front of the parent drop-off/pick-up zone.
- Please be prepared to promptly help your child(ren) exit the vehicle with their belongings upon arriving at the drop-off point. Children should exit from the passenger side of the vehicle. Someone will be outside to assist and direct children into school each morning.
- If you must enter the school, please park your vehicle in the available parking lot. Do not park in the parent drop-off/pick-up zone as this will delay others trying to drop-off their children.

### Pick-Up Procedures

- Please stay in vehicle and pull forward to the front of the parent drop-off/pick-up zone.
- It is suggested that parents clearly and boldly write their child's name, classroom teacher, and grade level on a letter-sized sheet of paper and place it on the dash of their vehicle to assist staff and others in the parent pick-up zone. Please be prepared to promptly assist your child(ren) entering your vehicle at the pick-up point.
- As soon as your child(ren) are securely in the car with their belongings, pull forward and exit the drop-off/pick-up zone so that other cars may pull forward and pick up their children.
- If you must enter the school, please park your vehicle in the available parking lot. Do not park in the parent drop-off/pick-up zone as this will delay others trying to pick-up their children.



## 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 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>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 6: Conclusion

While the neighborhood immediately surrounding Apalachee Elementary School enjoys a somewhat well-connected roadway network consisting mostly of low-volume residential streets, it doesn't correlate to high walking and bicycling commuting rates for students. School representatives stated that there are few students who walk to/from school and no students are known to bicycle. There appear to be two primary reasons. First, a sizeable cohort of students attending Apalachee Elementary School lives far from the school, outside of a safe, reasonable walking and bicycling distance. The school zone expands westward, all the way to Monroe Street. While housing in the area west of the school are within the hypothetical two-mile radius, getting to these neighborhoods would require crossing Capital Circle and traveling along roadways with limited bicycle and pedestrian infrastructure. This is more of a system-wide transportation and geography issue outside the purview of this analysis. However, the issue could be further explored during any future school district boundary change considerations.

The second reason for low walking and bicycling rates to school 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 school, parents feel that there needs to be a greater adult presence along routes to school, children should be accompanied (by themselves/other parents), children need more walking and bicycling safety training, and there needs to be a secure place for storing bicycles.

For those students within a relatively safe walking and bicycling distance to school, opportunities to improve student walking and bicycling rates are rooted primarily in infrastructure recommendation improvements including but not limited to new sidewalks and improved crosswalks. Additionally, informational and educational programmatic solutions as well as policies that encourage bicycle commuting have been provided.

While Apalachee Elementary School has a sizeable student population outside of a safe, reasonable walking and bicycling distance, due to major roadways in the school zone, there are measures for which the school can take that will help to improve walking and bicycling safety and increase non-motorized commuting rates.

# Appendices

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## Appendix A: Parent Survey

### ***Leon County Schools***

#### **PARENT SURVEY**

**Dear Parents:** In an effort to improve traffic safety in and around our schools, we are looking for ways to reduce the amount and speed of cars, improve walking and bicycling conditions and encourage enforcement and safety education programs. Please help us by providing your opinions to the following questions. **The name of my child's school is:** \_\_\_\_\_.

1. Please provide the sex, age and grade of your child:

**Sex:** Male      Female

**Age:** \_\_\_\_\_

**Grade:** \_\_\_\_\_

2. Approximately how far do you live from your child's school? (*circle closest answer*):

- 1. 1/2 mile or less
- 2. 1/2 mile to 1 mile
- 3. between 1 and 2 miles
- 4. over 2 miles

**If you live over two miles from the school, please stop here and turn in your survey. Thank you for participating.** If you live within two miles of the school, please help us by completing the questions on the following pages.

3. How does your child usually go to and from school: (*place a check on the appropriate line*)

	In the morning?	In the afternoon?
a. School bus	_____	_____
b. Car	_____	_____
c. Walk	_____	_____
d. Bicycle	_____	_____
e. City bus	_____	_____
f. Other (please explain)	_____	_____

4. Please identify specific safety problems of concern to you in your neighborhood or around your child's school (*i.e. broken sidewalks, crime areas, high-speed vehicles, etc.*) and indicate the street locations:

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***Capital Region Transportation Planning Agency***

## ***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 bicycle to school more often if:	Not Important			Very Important		Not 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
l) 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:						

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***Capital Region Transportation Planning Agency***

## Appendix B – 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. Only nine parent surveys were returned. Of those, four (44%) 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 two students representing Kindergarten through 2<sup>nd</sup> Grade, and two students representing 3<sup>rd</sup> Grade through 5<sup>th</sup> Grade.

### SUMMARY OF PARENT SURVEY PARTICIPATION

<b>Total Enrollment</b>	566
<b>Total Number of Parent Surveys</b>	9
<b>Total Number within 2 Miles (K-2<sup>nd</sup> Grade)</b>	2
<b>Total Number within 2 Miles (3<sup>rd</sup>-5<sup>th</sup> Grades)</b>	2
<b>Percentage of Surveys within 2 Miles</b>	44 %

### 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**

<b>Morning</b>	<b>Average Overall</b>
Car	75 %
Walk	25 %
Bicycle	0 %
School Bus	0 %
Public Bus	0 %
Other	0 %
<b>Afternoon</b>	
Car	75 %
Walk	25 %
Bicycle	0 %
School Bus	0 %
Public Bus	0 %
Other	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 100%, in both the morning and afternoon. None of the parents reported that their children walked, rode a bicycle, school bus, public bus or took another mode in the morning or afternoon.

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

<b>Morning</b>	<b>Average Overall</b>
Car	100 %
Walk	0 %
Bicycle	0 %
School Bus	0 %
Public Bus	0 %
Other	0 %
<b>Afternoon</b>	
Car	100 %
Walk	0 %
Bicycle	0 %
School Bus	0 %
Public Bus	0 %
Other	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 50%, in both the morning and afternoon. The walk-to-school and bike-to-school average for a typical week is 50%, in both the morning and afternoon. None of the parents reported that their children rode a bicycle, school bus, public bus or took another mode in the morning or afternoon.

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

<b>Morning</b>	<b>Average Overall</b>
Car	50 %
Walk	50 %
Bicycle	0 %
School Bus	0 %
Public Bus	0 %
Other	0 %
<b>Afternoon</b>	
Car	50 %
Walk	50 %
Bicycle	0 %
School Bus	0 %
Public Bus	0 %
Other	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

<b>Neighborhood Safety Concern</b>	<b>Number of Comments</b>
Bus Stop Location	1
No Sidewalks	1

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

A neighborhood safety concern for parents of younger-aged (K-2<sup>nd</sup>) children includes issues with a bus stop location. Specifically, one comment expressed concern for the location of a bus stop near a major road, Apalachee Parkway.

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

Neighborhood Safety Concern	Number of Comments
Bus Stop Location	1

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

A neighborhood safety concern for parents of older-aged (3<sup>rd</sup>-5<sup>th</sup>) children included issues with sidewalks. Specifically, one comment expressed concern for the lack of sidewalks on Carrin Drive.

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

Neighborhood Safety Concern	Number of Comments
No Sidewalks	1

### 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
<b>I would allow my child to walk or bicycle to school more often if:</b>							
<i>#1 There was a greater adult presence of parent volunteers or police officers along walk routes to school</i>		0	0	0	0	3	1
<i>#2 Accompanied by myself or other parents</i>		0	0	0	0	2	2
<i>#2 Schools provided more walking and bicycling safety training for students</i>		0	0	0	0	2	2
<i>#2 The school provided a secure place for storing bicycles</i>		0	0	0	0	2	2

### 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 seven influential factors to allow their child to walk or bicycle to school more often included factors related to marking school zones with flashing lights, as well as, enforcing speed limits in the zones, having a greater adult presence along routes to school, accompanying children (by themselves/other parents), providing more walking and bicycling safety training for students, more crossing guard, and having a secure place for storing bicycles.

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

	SCALE	1	2	3	4	5	N/A
<b>I would allow my child to walk or bicycle to school more often if:</b>							
<i>#1 School speed zones were marked with flashing signs</i>		0	0	0	0	2	0
<i>#1 There was a greater adult presence of parent volunteers or police officers along walk routes to school.</i>		0	0	0	0	2	0
<i>#2 Accompanied by myself or other parents</i>		0	0	0	0	1	1
<i>#2 Schools provided more walking and bicycling safety training for students</i>		0	0	0	0	1	1
<i>#2 Additional crossing guards were provided at busy intersections</i>		0	0	0	1	1	0
<i>#2 Speed limits were strictly enforced in school speed zones</i>		0	0	0	0	1	1
<i>#2 The school provided a secure place for storing bicycles</i>		0	0	0	0	1	1

### 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 seven influential factors to allow their child to walk or bicycle to school more often included factors related to accompanying children (by themselves/other parents, or other children), providing more walking and bicycling safety training for students, continuous sidewalks or bike paths, as well as, pathways separated from traffic, having a secure place for storing bicycles, and a greater adult presence along walk routes to school.

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

	SCALE	1	2	3	4	5	N/A
<b>I would allow my child to walk or bicycle to school more often if:</b>							
<i>#1 Accompanied by other children</i>		0	0	0	0	1	1
<i>#1 Accompanied by myself or other parents</i>		0	0	0	0	1	1
<i>#1 Schools provided more walking and bicycling safety training for students</i>		0	0	0	0	1	1
<i>#1 There were continuous sidewalks or bike paths from my neighborhood to school</i>		0	0	0	0	1	1
<i>#1 There were bicycle/pedestrian pathways separated from traffic from the neighborhood to the school</i>		0	0	0	0	1	1
<i>#1 The school provided a secure place for storing bicycles</i>		0	0	0	0	1	1
<i>#1 There was a greater adult presence of parent volunteers or police officers along walk routes to school</i>		0	0	0	0	1	1