

August 2014

# Safe Routes to School Audit Report Fairview Middle School



Leon County  
Public Schools



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### Capital Region Transportation Planning Agency (CRTPA)



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### Leon County Public Schools (LCS)



### Florida Department of Transportation (FDOT)



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



### Prepared By:



RENAISSANCE PLANNING GROUP

WENDY GREY LAND USE PLANNING LLC



## 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 in-class student travel surveys, parent self-reported surveys, on-site meetings with school officials, and field reviews.

### School Overview

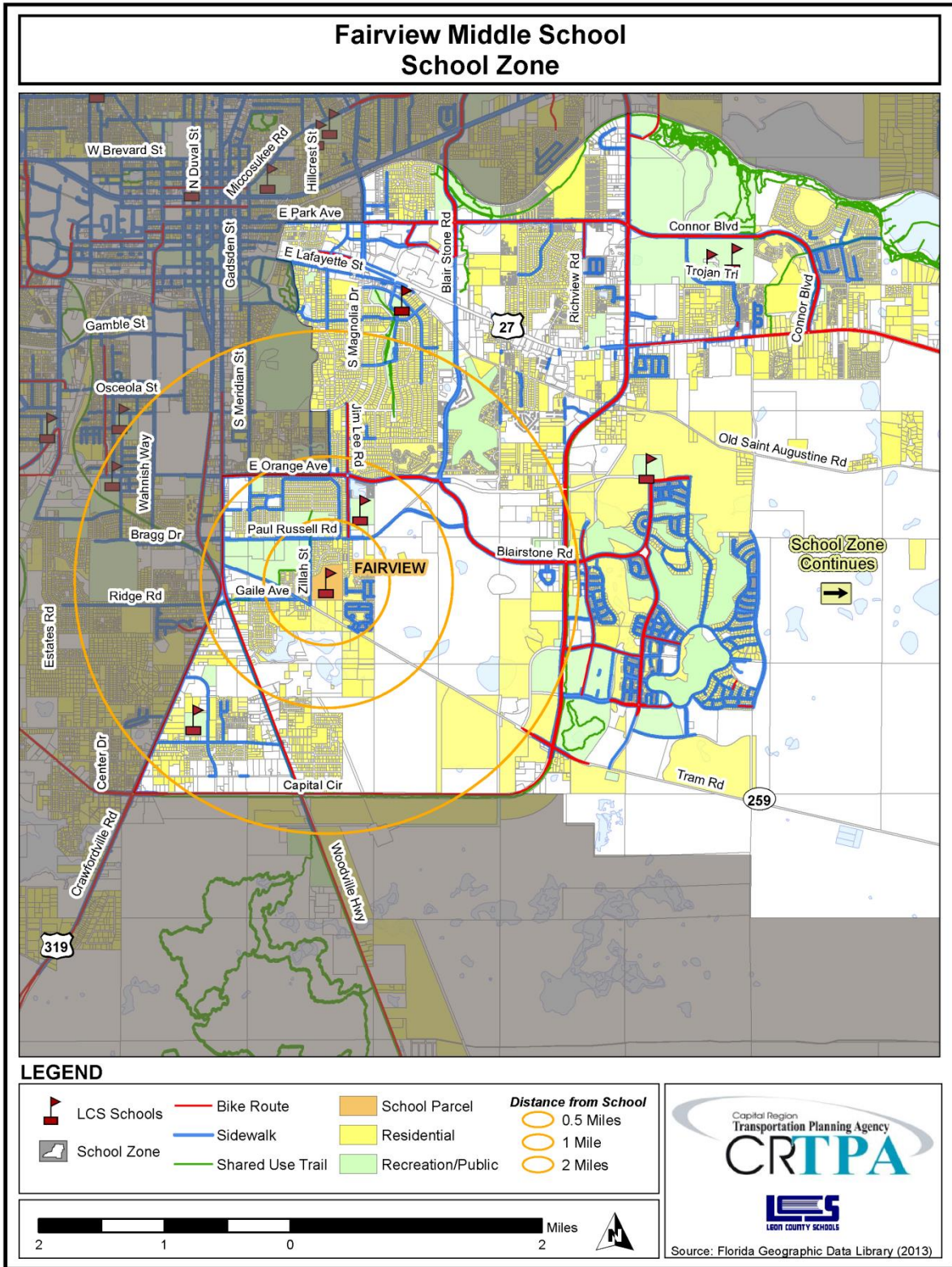
Fairview Middle School is located at 3415 Zillah Street, Tallahassee, 32305 in Leon County, Florida. It is part of the Leon County Public Schools system. The school first opened its doors in 1970. Regular school hours are from 9:30am to 3:50pm. A before school program is available from 7:30am to 9:00am. Additionally, an after school program, 21<sup>st</sup> Century After-School Academy, is available from 3:50pm to 6:20pm.

The number of students enrolled at the school, for the 2013 school year, was 814. The school has a current capacity for 970 students. The school includes grade levels 6<sup>th</sup> to 8<sup>th</sup> grade.

Students attending this school feed from Apalachee, Bond, Chaires, Conley, Hartsfield, and Oak Ridge Elementary Schools and to either Lincoln or Rickards High Schools.

### School Zone

The Fairview Middle school zone, located in southeast Leon County, encompasses the neighborhoods of Campbell Park, Beacon Hill, Lakewood, Apalachee Ridge Estates, Southwood, Blairstone, Copper Creek, as well as, neighborhoods surrounding Governor's Square. Land uses within the school zone consist of mostly residential, recreation, and more natural uses. The Fairview school zone includes five major roadways. Capital Circle Southeast and Blair Stone Road run north to south and bisect the zone into east and west. Woodville Highways runs northwest to southeast along the western portion of the zone. Apalachee Parkway runs east to west along the northern portion of the zone. East Orange Avenue runs east to west and bisects the zone into north and south. Several schools fall within the school zone including Apalachee Elementary and Lincoln High on Trojan Trail, Rickards High on Jim Lee Road, Hartsfield Elementary on Chowkeebin Nene, Oak Ridge Elementary on Shelfer Road, and Conley Elementary on East Orange Avenue. Recreational facilities within the school zone include Jack L. McLean Park, Tom Brown Park, Governor's Park, as well as, golf courses such as Southwood, Capital City, and Hilaman Park.



## Chapter 2: On-Site Meeting and Inventory

### Date and Weather Conditions

The on-site inventory meeting was conducted on May 22<sup>nd</sup>, 2013 with temperatures in the 80's degrees Fahrenheit.

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

During this visit, Fairview Middle 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 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 Zillah Street, as well as student crossing signs. There is no concern from school staff with speeding automobiles on Zillah Street. Students are permitted to arrive to school as early as 7:30am and there are after-school programs available on campus until 6:20pm. North of the school, near the intersection of Paul Russell Road & Zillah Street, is the Jack L. McLean Community Center where many children walk to after school via the Campbell Connector, a multi-use trail that begins at Bahama Drive, two blocks north of the school. It was also noted that PACE Secondary School is located immediately north of Fairview Middle School along Zillah Street.

There are two designated crossing guards available at the school. The first is located in front of the school's main entrance on Zillah Street and the second is located at the intersection of Paul Russell Road & Jim Lee Road. It was noted that students are fairly well-trained to cross at locations with guards. It was noted by school staff that there are concerns for students waiting at bus stops in the dark, it was not specified if these were school bus stops or Star Metro stops.

### 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.

The school is located in a mix of both older and newer neighborhoods. As such, those children living in the newer neighborhoods, immediately east of the school, must commute a further distance because there is no direct path to school. Additionally, sidewalks along Zillah Street and Tram Road have large, open ditches. As a result, these factors may be limiting the number of students that walk or bicycle to/from school. Walkers and bicyclists can enter campus from Zillah Street. No students are known to commute via bicycle. However, some students skateboard to/from school. There are two outdoor, bicycle parking racks located in front of the main school building along Zillah Street.

The school bus drop-off and pick-up zone functions adequately. There are multiple rows for storing buses and the loading/unloading zone is covered. Additionally, there is direct access to a walking facility.

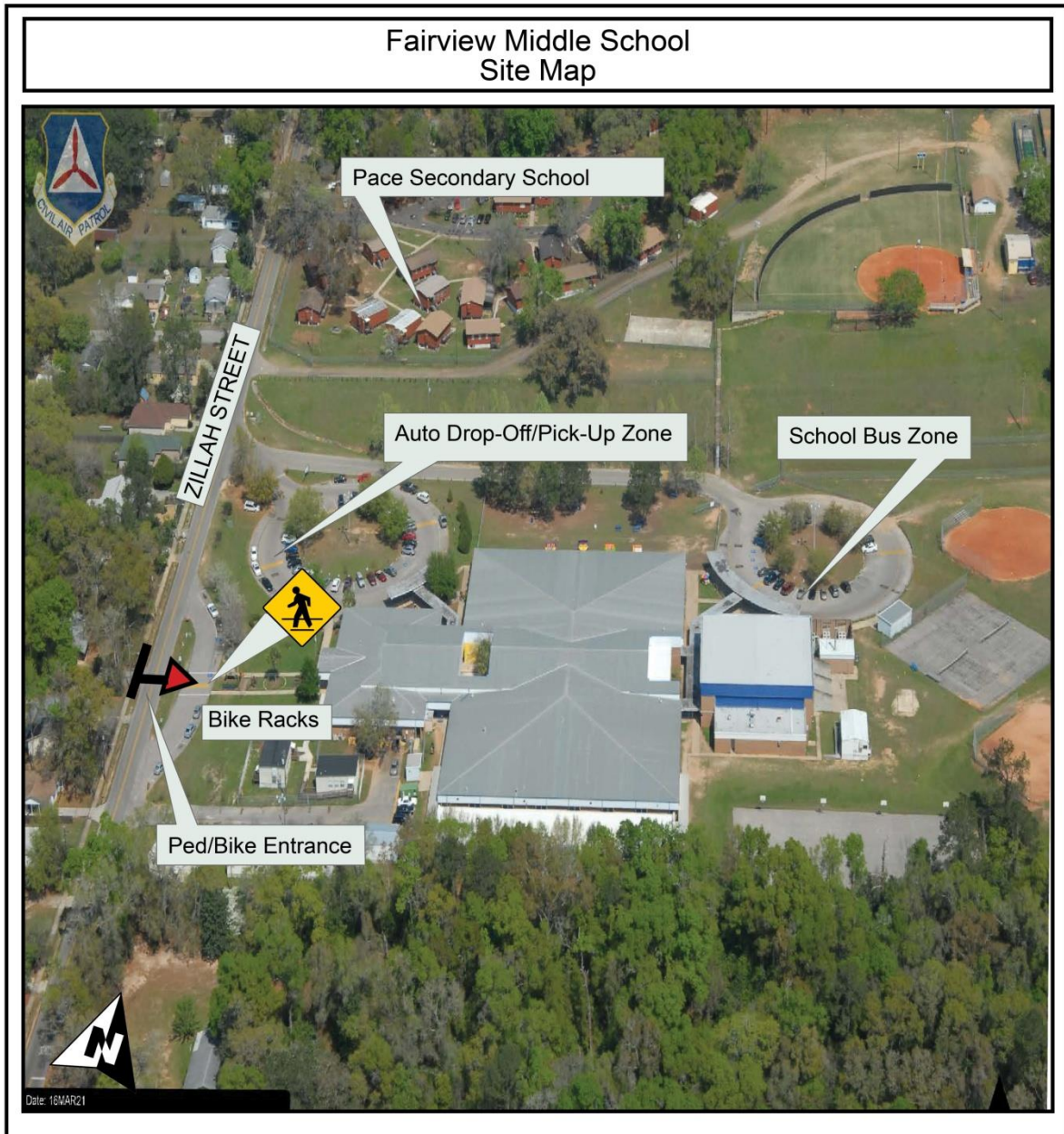
The parent drop-off and pick-up zone functions adequately to accommodate the volume of automobiles entering and exiting the site. School staff reported that there are no congestion problems with regards to the automobile zone. There is direct access to a walking facility from the loading/unloading zone. Additionally, in the afternoons, there is a holding area available for students who are waiting to be picked-up. It was noted that the circle driveway directly in front of the main school building is intended for visitor parking and not for picking-up/dropping-off students.

### Inventory Map

An aerial photograph showing Fairview Middle School is located on the following page. As shown in the photo, the school fronts Zillah Street. Students can access campus from this street as well. Bicycle parking racks are located near the front entrance of the school. Additionally, Pace Secondary School, an exceptional student education center, is located north of the school.

Standard width sidewalks are located along the side of the road opposite of the school property on Zillah Street. Additionally, there is a midblock crosswalk available that connects directly to a sidewalk that enters onto campus. There are a few parking spaces located in this area as well. A standard width sidewalk is available on the north side of Tram Road leading up to Zillah Street.

The automobile pick-up and drop-off zone is located just north of the main school entrance. Automobiles both enter and exit the zone along one driveway along Zillah Street. Parking spaces are located in this area as well. The bus drop-off and pick-up zone is separately located along north side of the school but partially shares a driveway with the automobile zone. Buses enter the zone from and exit onto Zillah Street. Additional parking spaces are located in this area.



### Issues and Opportunities

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

Neighborhood disconnects and potentially, unsafe walking conditions appear to be the primary issues with students' ability to walk and bicycle to school. The neighborhood east of the school is fairly high-density, single family homes but there is no direct path from the neighborhood to the school. Additionally, deep ditches along sidewalks may not be appropriate for students walking. These kind of external factors are 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 Tram Road. An additional crossing guard and the creation of new sidewalks should be explored to increase the opportunity of walking and bicycling to school. Also, 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.

### 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 6<sup>th</sup> to 8<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.**)

The survey indicates that close to half of the students at Fairview Middle School – approximately one out of two students – arrived by school bus. Riding in an automobile and walking to school ranked second and third place at approximately 44 percent and nine percent of students, respectively. Less than one percent each of students surveyed reported biking or arriving to school by public bus. (A detailed description of the analysis by mode can be found in **Appendix B.**)

#### SUMMARY OF SCHOOL-WIDE RESULTS

	Walk	Bicycle	Automobile	School Bus	Public Bus
Average Overall	9 %	<1 %	44 %	47 %	<1 %

## 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 6<sup>th</sup>-8<sup>th</sup> Grade. (A detailed description of the results from the parent surveys can be found in **Appendix D.**)

The surveys of students living within two miles from the school indicate that a greater percentage of Fairview Middle School students arrive by car or school bus in the morning, while fewer return home by the same modes in the afternoon. The car-to-school average for a typical week is 52% in the morning and decreases to 46% in the afternoon. In the afternoon, there are a greater percentage of students returning home by walking. Overall, approximately one-fifth of students in the morning and one-fourth of students in the afternoon commute to and from school by walking. The walk-to-school and bike-to-school average for a typical week are 17% and 0% in the morning, and 25% and 0% in the afternoon. The school bus-to-school average for a typical week is 31% in the morning and decreases to 28% in the afternoon. None of the students used an alternative commute mode to school in the morning. However, the alternate commute mode-to-school for a typical week is 1% in the afternoon. None of the students rode a bicycle or a public bus in the morning or afternoon.

Neighborhood safety concerns for parents of middle-school-aged (6<sup>th</sup>-8<sup>th</sup>) children include three main concerns including issues with speeding vehicles, sidewalks/walking, and crime. There were approximately 12 comments of concern regarding issues with speeding vehicles. Specific locations where high-speed vehicles tend to be a problem are Tram Road and Zillah Street. Additionally, there were 12 comments of concern regarding sidewalks and walking. General concerns include the lack of sidewalks, broken sidewalks, and sidewalks with canals on the side. Specific locations where sidewalks/walking tend to be a problem are Tram Road, Zillah Road, Jim Lee Road, Gaile Avenue, and North Paul Russell Road. Lastly, there were approximately five comments of concern regarding issues with crime. General concerns include sex offenders, known high-crime locations, and people hanging around Jack L. McLean, Jr. park/community center.

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 marking school zones with flashing lights and enforcing speed limits, the availability of crossing guards, and having continuous and separated bicycle/pedestrian pathways were agreed upon by parents from 6<sup>th</sup>-8<sup>th</sup> grade.

## Chapter 5: Neighborhood Field Review

A neighborhood field review was conducted on February 27<sup>th</sup>, 2013. The review consisted of an assessment of accessibility, connectivity and safety along neighborhood roadways within proximity to Fairview Middle School. On the day of the field review, temperatures were in the mid 50 degrees 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 Fairview Middle School.

### Character of Neighborhood Area

Fairview Middle School is located in a mix of established and newer neighborhoods primarily comprised of single family homes and some areas of multifamily homes. Sidewalk and bicycle infrastructure is mostly limited to major roadways in the school zone such as East Orange Avenue, Capital Circle, and Blair Stone Road. Capital Circle could be a major bike-ped barrier due to its width and high traffic volumes. There are sidewalks present in a few neighborhoods north, east, and southwest of the school. Sidewalks in these areas tend to only be present on one side of the streets. For the most part, neighborhood streets are laid out in a grid-like pattern except in the newer residential development to the east. The Campbell Connector is a multi-use trail that begins at Bahama Drive, two blocks north of the school. This takes students to Jack McLean Park where there is after school program. Other multi-use trail systems near the school include the St. Marks Trail, along Woodville Highway, and the Capital Circle Southeast Trail, along Capital Circle.

Major roadways in the school zone include:

- Capital Circle Southwest, a heavily traveled six lane 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.
- Blair Stone Road, a divided four lane roadway with a posted speed limit of 45mph.
- Woodville Highway, a north-south mostly two lane roadway, transitions briefly to a four lane roadway near Capital Circle, with a 40-45mph speed that transitions to 50-55mph south of Capital Circle.
- East Orange Avenue, a divided 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 six bicycle and pedestrian crashes that occurred within the theoretical two-mile walk/bike radius of Fairview Middle School. Of those total crashes, all but one occurred during the

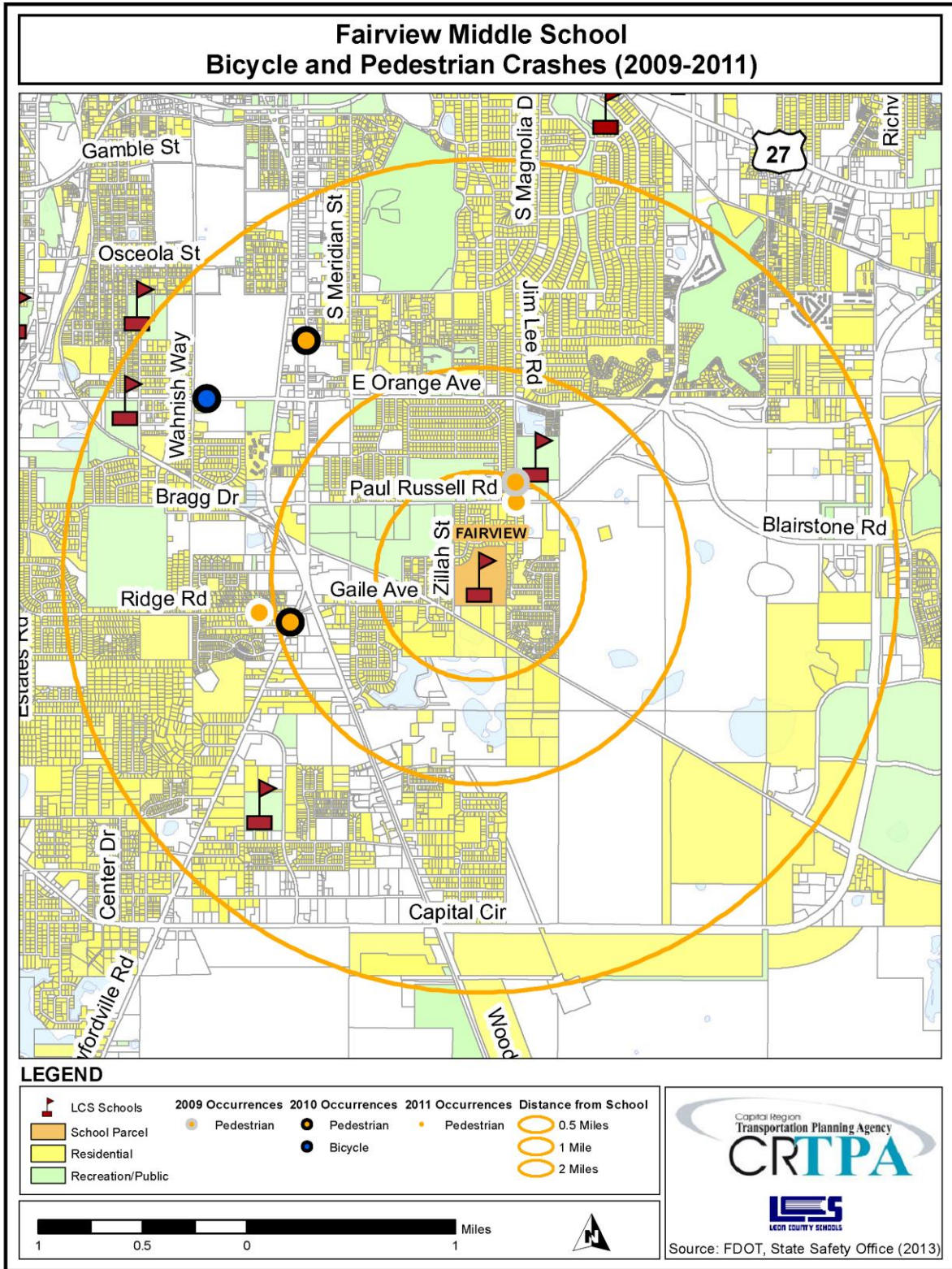
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morning hours. The bicycle and pedestrian crashes were split 50/50 between adults and children. Injuries were reported in all crashes.

The crashes occurred in three main areas surrounding the school including: slightly northeast, northwest, and west. Streets in the area where crashes tend to be a problem are the intersection near Jim Lee Road & Paul Russell Road, Orange Avenue, Crawfordville Road, Putnam Road, and Ridge Road.

### **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>
04/27/09	7:48am	Monday	Jim Lee Rd.	Paul Russell Rd.	Injury	Pedestrian	Adult
08/26/10	8:03am	Thursday	Orange Ave.	Wahnish Way	Injury	Bicyclist	Adult
10/20/10	7:10am	Wednesday	Crawfordville Rd.	Gaile Ave.	Injury	Pedestrian	Child
12/03/10	3:32pm	Friday	Putnam Dr.	Monroe St.	Injury	Pedestrian	Adult
03/17/11	7:24am	Thursday	Jim Lee Rd.	Paul Russell Rd.	Injury	Pedestrian	Child
09/09/11	8:07am	Friday	Ridge Rd.	State St.	Injury	Pedestrian	Child



## Neighborhood Assessment

The overall neighborhood layout surrounding Fairview Middle School lends itself somewhat well to walkability. Sidewalk infrastructure is available throughout the different neighborhoods in the area; however, they are not well-connected to one another. For the most part, neighborhood streets are laid out in a somewhat grid-like pattern except in the newer residential development east of the school. Although infrastructure reaches some neighborhoods further away, much of it is along the major roadways and, thus, poses safety concerns for students 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 Fairview Middle School walk/bike shed map is included on page 15.

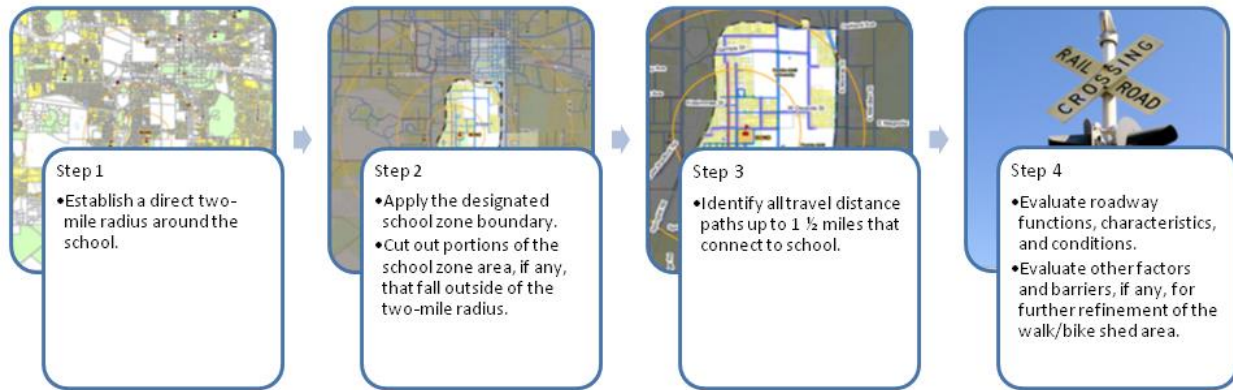
The walk/bike shed area and associated map are not meant to suggest that middle school students of all ages, maturity level, and experience should commute to and/or from school within the area delineated. Certainly, all students are not expected to walk or bike to school from practically any distance without the accompaniment of either a parent or older sibling. Also, students 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 Fairview Middle School mostly extends northeast with a small area included in the southwest and just east of the school. There are few residential land uses east of the one-half mile mark and as such, this area has been excluded from the walk/bike shed. East Orange Avenue with its four lanes and little to no separation from traffic excludes the area northwest of the roadway from the walk/bike shed. The presence of South Monroe Street with its four lanes undivided and lack of separation from traffic combined with the lack of residential land uses near Woodville Highway contribute to 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 middle 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.

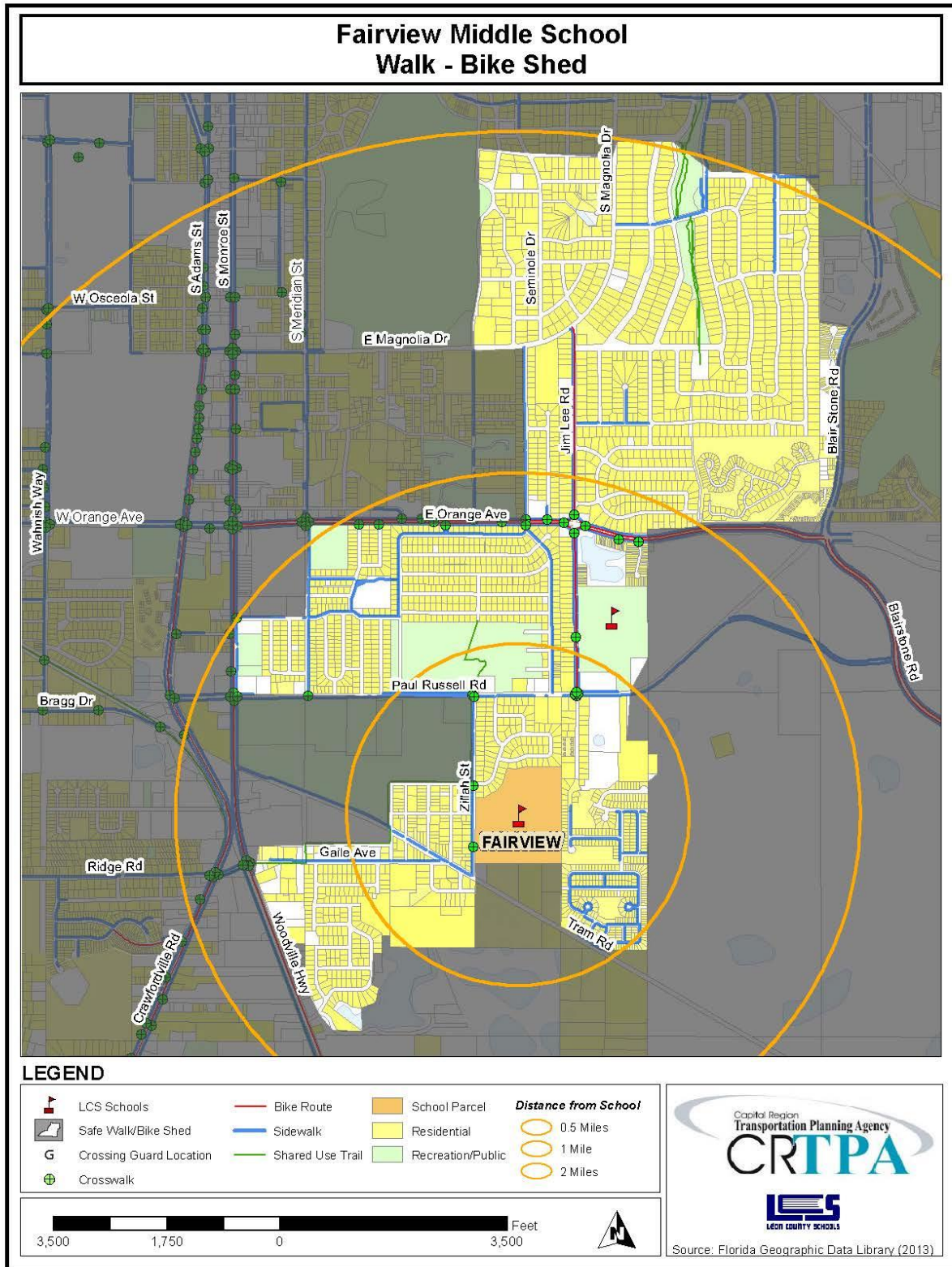
Travel Along Roadways				
Sidewalk Type	Hazardous Conditions			
	Type of Road	Posted Speed Limit	Peak Hour Traffic	Length
< 2' wide sidewalk OR without sidewalk	All roadways other than local, neighborhood streets	N/A	N/A	Exceeding 0.5 miles in length
<= 3' wide sidewalk OR <= 4' separation from traffic	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				

### 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 point of access for walkers and bicyclists to Fairview Middle School provide efficient access onto campus. For those requiring automobile access, the current situation is adequate for the volume of automobiles that access the school on a daily basis. Some policy and programmatic recommendations that might help to increase safe walking and bicycling to and from school are also included for the school's consideration.

The neighborhood surrounding Fairview Middle School has a somewhat well-connected street network. Many of the streets without sidewalks and bicycle lanes are low-volume traffic resident streets that can be navigated by walkers and bicyclists with a fair amount of ease, depending in part on maturity. Still, there are some infrastructure recommendations that would provide much benefit toward improving existing conditions.

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

### Fairview Middle School On- and Off-Site Recommendations

Improvement: On-Site	Location	From	To	Geography	Direction	Length	Comments
A1 Bicycle Rack Concrete Pad	Existing Bicycle Racks	N/A		Front of School	N/A	N/A	

Improvement: Off-Site	Location	From	To	Geography	Direction	Length	Comments
B1 Stripe Existing Crosswalk	Zillah Street	At Main School Entrance		Front of School	E-W	N/A	
B2 Sidewalk Railing	Zillah Street	Tram Road	Bahama Drive	East side of sidewalk	N-S	Approx. 1,412 feet	
B3 New Sidewalk	Tram Road	Crossing Rocks Road	Zillah Road	North side of Tram Road	NW-SE	Approx. 1,860 feet	Included in County's sidewalk list; Issue – large flood plain in constrained ROW
B4 New Sidewalk	Lakewood Drive	Gaile Avenue	Skylark Avenue	East side of Lakewood Drive	N-S	Approx. 944 feet	
B5 New Crosswalk	Gaile Avenue	At Lakewood Drive		East side of intersection	N-S	N/A	
B6 New Sidewalk	Skylark Avenue	Lakewood Drive	Falcon Drive	North side of Skylark Avenue	E-W	Approx. 538 feet	
B7 New Sidewalk	Falcon Drive	Skylark Avenue	Piney Road	West side of Falcon Drive	N-S	Approx. 641 feet	
B8 Bike Sharrow Marking	Atapha Nene	Jim Lee Road	Toochin Nene	On Atapha Nene	N-S	N/A	
B9 Flashing Lights (2)	Tram Road	At School Entrance signs	N/A	N/A	N/A	Flashing Lights (2)	
B10 New Shared-Use Path	Rear of School Property	At Jim Lee Road		West of Pebble Creek Neighborhood	E-W	Approx. 945 feet	Feasibility Study

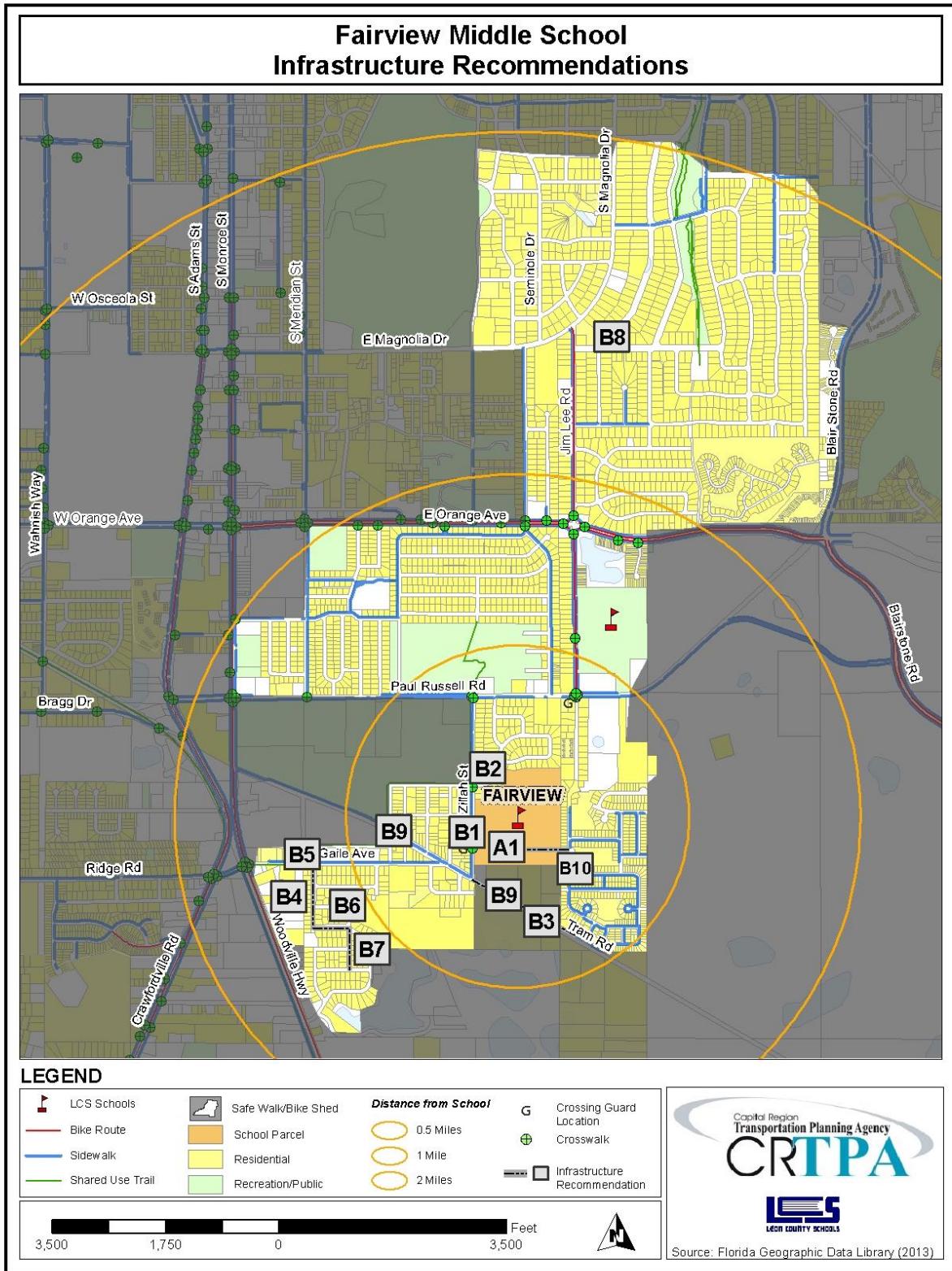
The table, above, corresponds to an infrastructure recommendations map on the following page.

### On-Site Recommendations

- A1) Bicycle rack concrete pad – There are two existing bicycle racks located in front of the school. Creating a concrete pad for the existing bicycle racks will help make the bicycle parking area more noticeable as well as provide a more secure spot for the bicycles.

### Off-Site Recommendations

- B1) Stripe the existing crosswalk on Zillah Street, in front of the school, to help make motorists more aware of pedestrians and bicyclists who may be traveling to/from school.
- B2) Install a sidewalk railing along the existing Zillah Street sidewalk from Tram Road to Bahama Drive. Large ditches next to the sidewalk make it uncomfortable for students walking/bicycling to/from school.
- B3) Construct a new sidewalk along Tram Road from Crossing Rocks Road to Zillah Street to create a better connection between the Pebble Creek Neighborhood and the school.
- B4) Construct a new sidewalk along Lakewood Drive from Gaile Avenue to Skylark Avenue.
- B5) Mark a new crosswalk on the east side of the Gaile Avenue & Lakewood Drive intersection.
- B6) Construct a new sidewalk along Skylark Avenue from Lakewood Drive to Falcon Drive.
- B7) Construct a new sidewalk along Falcon Drive from Skylark Avenue to Piney Road.
- B8) Consider marking Atapha Nene from Jim Lee Road to Toochni Nene as a bike sharrow to provide an additional north-south route for bicyclists.
- B9) Install two flashing lights along Tram Road at both of the existing “School Entrance Signs.” Parents expressed concern for speeding vehicles along Tram Road. Flashing lights should help make motorists more aware of students who may be walking /bicycling in the area.
- B10) Consider creating a new shared-use path from the rear of the school to the Pebble Creek neighborhood, just east of the school, via Jim Lee Road. There are a number of residences well within a half-mile of the school. However, due to the layout of the neighborhood and lack of direct connection to the school, students must travel out of the neighborhood to either Tram Road or Paul Russell Road in order to access the school, creating trips that are over one mile in length for students walking or bicycling.



## 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 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 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 students more comfortable with their built environment and any obstacles they may encounter en route to school. Local community groups, as well as, university 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.

## 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 can assist with locking the bike in the morning and unlocking 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.

## 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
railing	pedestrian railing	linear foot	100

<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

The neighborhood immediately surrounding Fairview Middle School enjoys a somewhat well-connected roadway network consisting mostly of low-volume residential streets, but it doesn't correlate to high walking and bicycling commuting rates for students. Overall, approximately nine percent of students commute to and from school by walking, while there are only a few (if any) bicycle commuters. There appear to be two primary reasons. First, a sizeable cohort of students attending Fairview Middle School likely live too far from the school, outside of a safe, reasonable walking and bicycling distance due to the large size of the school zone. 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 primarily expressed concerns with speeding vehicles, lack of and condition of sidewalks, as well as crime in the area. However, parents indicated that marking school zones with flashing lights and enforcing speed limits, the availability of crossing guards, and having continuous and separated bicycle/pedestrian pathways were factors that might influence their decision to allow their children to walk or bicycle to school.

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 improved, crosswalks, and pedestrian railings. Additionally, informational and educational programmatic solutions as well as policies that encourage bicycle commuting have been provided. While Fairview Middle School has a sizeable student population outside of a safe, reasonable walking and bicycling distance, 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: Student Travel Survey

### Leon County Schools

#### STUDENT TRAVEL SURVEY

NAME OF SCHOOL: \_\_\_\_\_

**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.
  - b) 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.
  - b) 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					
	Question 1	Question 2a/b		Question 3a/b		Question 4
Day 1						
Day 2						
Day 3						
Day 4						
Day 5						

TEACHER'S NAME: \_\_\_\_\_ GRADE: \_\_\_\_\_

DATE: \_\_\_\_\_ NUMBER OF STUDENTS IN CLASS TODAY: \_\_\_\_\_

*Please complete and return this form to the principal's office FRIDAY. 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. Twenty-seven classrooms participated in the surveys for a total of 467 student responses recorded. Student travel survey results were counted and analyzed for the school as a whole.

### SUMMARY OF STUDENT TRAVEL SURVEY POPULATION

<b>Total Number of Participating Classrooms</b>	27
<b>Total Students Surveyed (6<sup>th</sup> – 8<sup>th</sup>)</b>	467

### 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 the week ranged from 8% to 10%, with an overall average of 9%. Overall, the bike-to-school average for the week ranged from 0% to 1%, with an overall average of 0%. Only 4 students reported biking to school, making up less than 1% of the students surveyed. Of the students that bike to school, an overall average of 25% wore a bicycle helmet. In total, the combined walk-bike average for the week ranged from 8% to 11%, with an overall average of 9%.

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

	<b>Walk</b>	<b>Bicycle</b>	<b>Helmet Use</b>	<b>Total Walk + Bike</b>
<b>Average Overall</b>	9 %	<1 %	25 %	9 %
<b>Highest Day</b>	10 %	1 %	25 %	11 %
<b>Lowest Day</b>	8 %	0 %	0 %	8 %

### 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 student travel surveys indicate that the automobile-to-school average for the week ranged from 40% to 47%, with an overall average of 44%. Of the students that ride to school in an automobile, an overall average of 73% wore a seatbelt. Overall, the school bus-to-school average for the week ranged from 44% to 50%, with an overall average of 47%. The public bus-to-school average for the week ranged from 0% to <1%, with an overall average of less than one percent.

#### SUMMARY OF BUS AND AUTOMOBILE DROP-OFF SCHOOL-WIDE TRAVEL PATTERNS

	Automobile	Seat Belt	School Bus	Public Bus
<b>Average Overall</b>	44 %	73 %	47 %	<1 %
<b>Highest Day</b>	47 %	78 %	50 %	<1 %
<b>Lowest Day</b>	40 %	69 %	44 %	0 %

## Appendix C: 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 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 207 parent surveys returned. Of those, 65 (31%) claimed to reside within the theoretical two-mile walk/bike radius of the school.

### SUMMARY OF PARENT SURVEY PARTICIPATION

<b>Total Enrollment</b>	814
<b>Total Number of Parent Surveys</b>	207
<b>Total Number within 2 Miles</b>	65
<b>Percentage of Surveys within 2 Miles</b>	31 %

### Commuting to/from School

Parents living within two miles from the school 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	52 %
School Bus	31 %
Walk	17 %
Bicycle	0 %
Public Bus	0 %
Other	0 %
<b>Afternoon</b>	
Car	46 %
School Bus	28 %
Walk	25 %
Other	2 %
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.

**SUMMARY OF TOP NEIGHBORHOOD SAFETY CONCERNS**

<b>Neighborhood Safety Concern</b>	<b>Number of Comments</b>
Speeding Vehicles	12
Issues with Sidewalks/Walking	12
Issues with Crime	8

**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).

**TOP RANKING INFLUENTIAL FACTORS FOR MIDDLE-SCHOOL-AGED CHILDREN**

	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	1	4	7	33	9
<i>#2 Speed limits were strictly enforced in school speed zones</i>		1	1	6	4	32	10
<i>#3 Additional crossing guards were provided at busy intersections</i>		2	3	3	7	28	13
<i>#3 There were continuous sidewalks or bike paths from my neighborhood to school</i>		0	2	9	6	28	10
<i>#3 There were bicycle/pedestrian pathways separated from traffic from the neighborhood to the school</i>		1	3	6	6	28	10