August 2014

Safe Routes to School Audit Report
Killearn Lakes Elementary School

Leon County Public Schools

Killearn Lakes Elementary School

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Acknowledgements

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

Capital Region Transportation Planning Agency (CRTPA)

Safe Routes to School (SRTS) National Partnership

Leon County Public Schools (LCS)

Florida Department of Transportation (FDOT)

Leon County Sheriff's Office (LCSO)

Prepared By:

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 polices. This SRTS audit includes an array of considerations formulated from a range of research and analytical tools employed to better understand and comprehend the issues and concerns affecting current walking and bicycling rates of student to and from school. This report highlights a summary of students' school travel patterns through in-class student travel surveys, parent self-reported surveys, on-site meetings with school officials, and field reviews.

School Overview

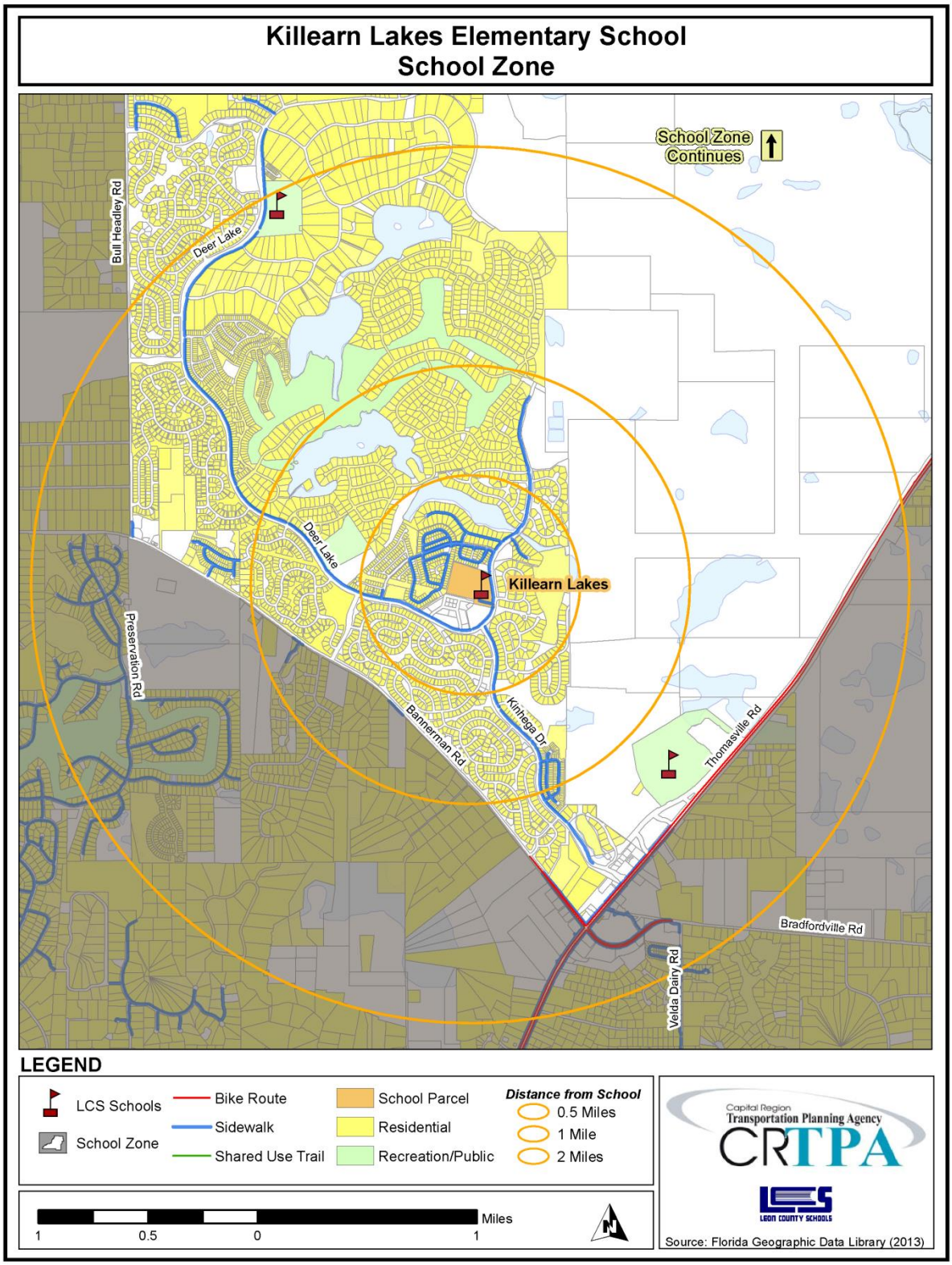
Killearn Lakes Elementary School is located at 8037 Deerlake Drive East, Tallahassee, 32312 in Leon County, Florida. It is part of the Leon County Public Schools system. Regular school hours are from 8:30am to 2:50pm. A before school program is available from 7:00am to 8:30am. Additionally, an after school program is available from the end of the school day until 6:00pm.

The number of students enrolled at the school, for the 2013 school year was 937. The school has a current capacity for 983 students. The school includes grade levels Pre-Kindergarten to 5th grade.

Students attending this school feed into Deerlake Middle School and Chiles High School.

School Zone

The Killearn Lakes Elementary school zone, located in the northern portion of Leon County, encompasses the neighborhoods of Killearn Lakes and Golden Eagle. Lake Iamonia, as well as, several smaller water bodies covers a significant amount of land within the school zone. Land uses within the school zone consist of mostly residential and recreational. The Killearn Lakes school zone includes two major roadways. Thomasville Road runs southwest to northeast along the eastern portion of the zone. Bannerman Road runs northwest to southeast and bisects the zone into north and south. Deerlake Middle School and Chiles High School fall within the Killearn Lakes school zone on Deer Lake West and Lawton Chiles Lane, respectively. A recreational facility within the school zone includes Golden Eagle golf course.


Killearn Lakes Elementary School
School Zone
School Zone Continues
Bull Headley Rd
Deer Lake
Deer Lake
Killearn Lakes
Preservation Rd
Bannerman Rd
Kinhega Dr
Thomasville Rd
Bradfordville Rd
Velda Dairy Rd
LEGEND
LCS Schools
School Zone
Bike Route
Sidewalk
Shared Use Trail
School Parcel
Residential
Recreation/Public
Distance from School
0.5 Miles
1 Mile
2 Miles
Miles
1
0.5
0
1
Capital Region Transportation Planning Agency
CRTPA
LEON COUNTY SCHOOLS
Source: Florida Geographic Data Library (2013)

Chapter 2: On-Site Meeting and Inventory

Date and Weather Conditions

The on-site inventory meeting was conducted on March 29th, 2013 with temperatures in the mid 60 degrees Fahrenheit.

Highlights and Key Observations of On-Site Meeting

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

It was noted that flashing lights (i.e. school zone warning lights) are located along Deer Lake East. Also, there are several speed limit signs along the same roadway to alert drivers of the lower speeds. Students are permitted to arrive to school as early as 7:00am and there are after school programs on campus available until 6:00pm. Only about 5-6 children use the before school program; however, about 200 children participate in the after school program.

There is one designated crossing guard at the intersection of Deer Lake East and the school access drive. It was noted that temporary traffic control devices (i.e. cones and signs) are used in the school bus and automobile zones as well as along Deer Lake East for pedestrians and bicyclists. Bicycle, pedestrian, and school bus education is incorporated into the Physical Education (P.E.) curriculum for all grade levels. Students in Kindergarten – 2nd Grades are taught general rules regarding riding/waiting for the school bus and they are also taught pedestrian safety rules throughout nine weeks of the school year. Also, students in 3rd-5th Grades are taught how to safely navigate out in their neighborhoods as a pedestrian and as a bicyclist throughout nine weeks of the school year. It was also noted that parents have expressed concern to school representatives about their concern with student safety on the campus, due to the unrestrictive and openness of the campus, as well as their desire for a safer school zone.

Circulation

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

While there tends to be bike/ped infrastructure on many roadways surrounding the school, the infrastructure quality is mediocre and the roadway network connecting the neighborhoods to the school are heavily characterized by cul-de-sacs and neighborhoods with only one entrance/exit to a main roadway. As such, many children must walk/bike from a longer distance since there are few direct paths to school, especially from the Golden Eagle Golf and Country Club neighborhood. As a result, there are a limited number of students that walk or bicycle to/from school, as many rely on automobile rides. Those students who do walk or bicycle to school can enter campus from two points along Deer Lake East as well as one point along the school access drive. There are two bicycle parking racks located outdoors

that have space for approximately 20 bicycles each. It was noted that students who ride their bicycles must walk their bicycle to the rack.

The school bus drop-off and pick-up zone functions adequately. The zone is covered and there is direct access to a walking facility. Multiple rows in the school bus zone help to accommodate the five school buses and the eight before/after school program vans that use the zone on a daily basis.

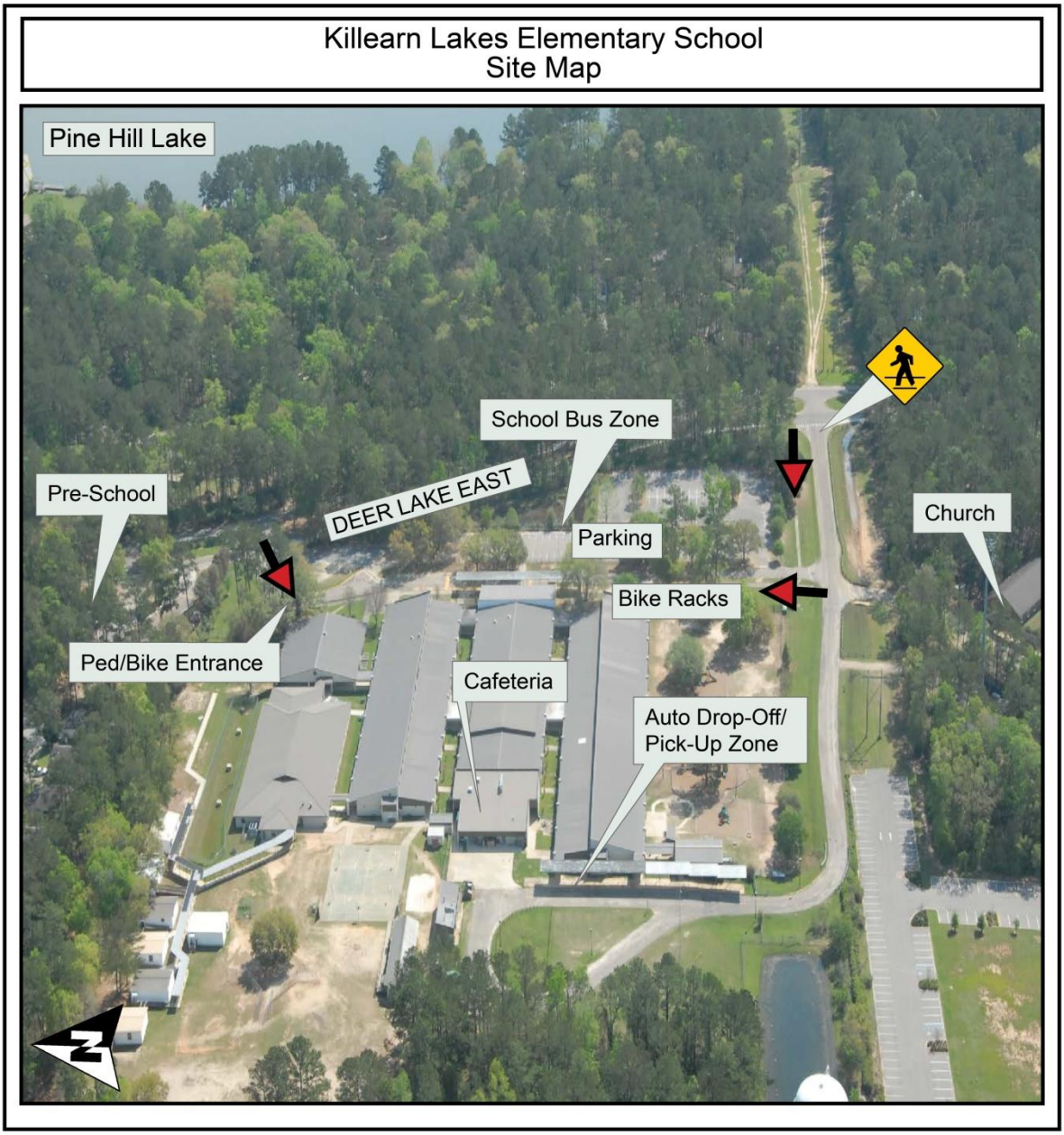
A majority of the students attending Killearn Lakes Elementary School are dropped-off and picked-up by automobile. The parent drop-off and pick-up zone appears to be functioning adequately to accommodate the volume of automobiles entering and exiting the site. The automobile zone is supervised and there are ushers in the mornings and afternoons to assist with students arriving and departing. Additionally, the zone is covered, which helps reduce stress during times of inclement weather, and there is a holding area, with benches, for students waiting to be picked-up in the afternoons. However, there are reports of drivers not obeying the rules and directions for student drop-off/pick-up. Some drivers reportedly park either at Deer Lake United Methodist Church or the east side of Deer Lake East and then walk their students over to the campus. Drivers appear to be exhibiting this behavior due to the fact that there is no short-term parking near the automobile zone. Instead, short-term parking is located near the school bus zone on the other side of the campus.

Inventory Map

An aerial photograph showing Killearn Lakes Elementary School is located on the following page. As shown in the photo, the school fronts Deer Lake East. Students can access campus from this street at several different locations. Bicycle parking racks are located near the front entrance of the school.

Standard width sidewalks are present along the school-side of Deer Lake East from Killearn Lakes Pre-School to towards the northern direction. Additionally, there is a standard width sidewalk along the school-side of the access drive from Deer Lake East to near the church entrance where it then connects directly to a sidewalk that enters onto campus.

The school bus zone is located along Deer Lake East. Buses enter from Deer Lake East and exit onto a school access drive near the church. Parking spaces are located in this area as well. The automobile pick-up and drop-off zone is separate located along the rear side of the school. Automobiles both enter and exit from a shared driveway along Deer Lake East where they then reach the student loading/unloading zone via a school access drive.


Killearn Lakes Elementary School
Site Map
Pine Hill Lake
School Bus Zone
DEER LAKE EAST
Pre-School
Parking
Church
Bike Racks
Ped/Bike Entrance
Cafeteria
Auto Drop-Off/
Pick-Up Zone
N

Issues and Opportunities

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

Geography appears to be the primary issue with students' ability to walk and bicycle to school. The neighborhood roadways surrounding the school connect in way such that there are not many direct paths to school. As such, children are commuting longer distances that may not be appropriate for elementary school children of all ages, 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 Deer Lake East. Traffic calming measures should be explored to reduce automobile speeds and increase awareness of children in the area, especially during school commuting times. Also, school-related and –supportive committees such as the Parent/Teacher Organization (PTO) can be used to help educate parents on the opportunities and benefits to having their children walk or bicycle to school, where such options are feasible. These groups can also help get the word out to parents concerning on-campus issues, such as appropriate behavior and protocol for dropping-off/picking-up students.

Chapter 3: Student Travel Survey – Summary of Results

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

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

The survey indicates that the vast majority of students at Killearn Lakes Elementary School – approximately six out of seven students – are dropped off at school by car. The percentage rises slightly for younger-aged children, which is not uncommon. Riding a school bus and walking to school ranked a distance second and third place at approximately 11 percent and three percent of students, respectively. Of those commuting by school bus, more than two as many were older students from 3rd, 4th, and 5th grades. Not surprisingly, the percentage of older students walking was slightly higher than that of younger students. A low percentage of students surveyed, only one percent, reported biking to school and no one arrived by public bus. (To note, there are no public buses within a reasonable distance to the school.) Of those biking to school, two times as many were older students from 3rd, 4th, and 5th grades.

SUMMARY OF SCHOOL-WIDE RESULTS

	Walk	Bicycle	Automobile	School Bus	Public Bus
Average Overall	3 %	1 %	85 %	11 %	0 %

Chapter 4: Parent Survey – Summary of Results

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

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

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

With regard to neighborhood safety, the concerns were generally agreed upon by parents from both Kindergarten through 2nd and 3rd through 5th. Survey respondents overall showed concerns for the behavioral patterns of automobile drivers, generally, in terms of excessive driving speeds and issues with transportation outside of the school zone such as the need for more crossing guards. As for speeding complaints, specific problem locations cited include Kinhega Drive and Deer Lake South. The table below includes the top neighborhood safety concerns expressed by survey respondents.

With regard to factors that might influence their decision to allow their child to walk or bike to school, survey responses indicate that factors such as accompanying children (by themselves/other parents), having a greater adult presence along routes to school, and enforcing speed limits in school zones were mutually agreed upon by parents from both Kindergarten through 2nd and 3rd through 5th.

Chapter 5: Neighborhood Field Review

A neighborhood field review was conducted on April 25th, 2013. The review consisted of an assessment of accessibility, connectivity and safety along neighborhood roadways within proximity to Killearn Lakes Elementary School. On the day of the field review, the weather was overcast with some light rain and temperatures in the 70's Fahrenheit. Following the field review, a walk/bike shed area was delineated on a map within the school zone, surrounding the school. This chapter includes a Walk/Bike Shed section describing the approach to defining the area and an associated map for Killearn Lakes Elementary School.

Character of Neighborhood Area

Killearn Lakes Elementary School is located in a suburban residential neighborhood primarily comprised of single-family homes and vacant, forested land east of the school. The neighborhood street pattern throughout the area is mostly cul-de-sacs and curved streets that connect in a semi-gridded manner. For the most part, the area near the school has good bike-ped infrastructure with many streets having sidewalks on at least one side of the road. Streets without sidewalks in the neighborhoods are still very walkable due to low traffic volumes and their strictly residential nature. Thomasville Road serves as a major bike-ped barrier due to its high traffic volumes and width. Additionally, Bannerman Road is a bike-ped barrier due to its complete lack of bike-ped infrastructure. There are no multi-use trails within the immediate area of the school.

Major roadways in the school zone include:

- Thomasville Road, a heavily traveled a southwest-northeast roadway. It transitions from a four lane 60-65mph roadway north of Bannerman Road to a 40-45mph six lane roadway south of Bannerman Road.
- Bannerman Road, a mostly east-west four lane roadway with a post speed limit of 45mph.

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 15th to May 30th. Additionally, only bicycle and pedestrian crashes that occurred during typical school commute hours, 7:00am to 9:30am and 1:50pm to 4:20pm, and school days, Monday to Friday, were examined.

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

Neighborhood Assessment

The overall neighborhood layout surrounding Killearn Lakes Elementary School lends itself well to walkability. The school functions as a neighborhood school with the majority of students coming from the immediately surrounding neighborhoods such as Killearn Lakes and Golden Eagle. There are numerous subdivisions with low-volume traffic streets that empty onto Deer Lake and Kinhega Drive, connecting to the school. While most of these subdivisions do not have pedestrian infrastructure, safety

for pedestrians and bicyclists isn't of serious concern due to the low and slow traffic present. Most of the streets that connect to Deer Lake and Kinhega Drive have designated, marked and signed crosswalks that lead to a sidewalk and/or bike system.

Further east away from Deer Lake and Kinhega Drive, there are few residential land uses and streets; therefore these areas are considered to be outside of a safe walk area. West of the school, Bannerman Road is another barrier to walking and bicycling for students. It is a two-lane roadway with no sidewalks or shoulders. It is not conducive to walking, especially for elementary school-age children; therefore, this area is also considered to be outside of a safe walk area.

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 Killearn Lakes Elementary School walk/bike shed map is included on page 14.

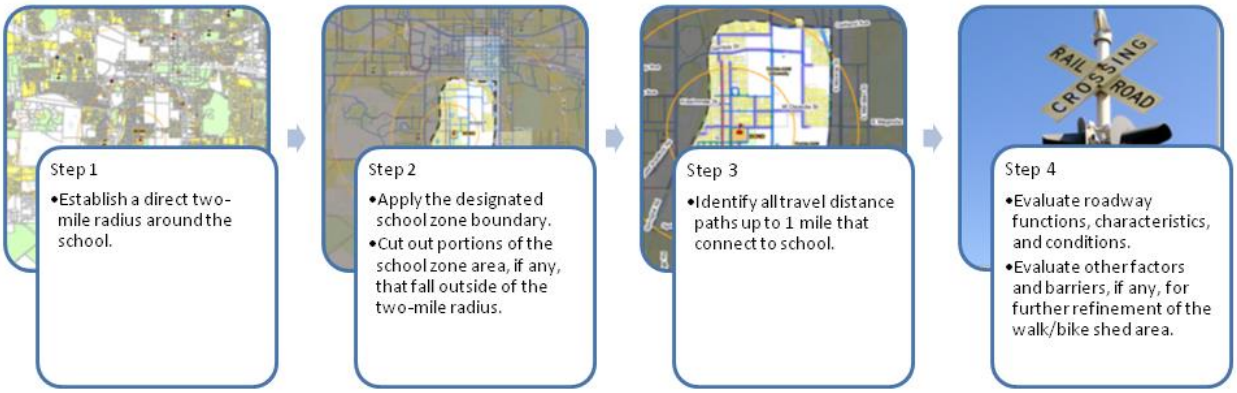
The walk/bike shed area and associated map are not meant to suggest that elementary school students of all ages, maturity level, and experience should commute to and/or from school within the area delineated. Certainly, younger children such as kindergarten students are not expected to walk or bike to school from practically any distance without the accompaniment of either a parent or much older sibling. Also, older children such as 5th 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 Killearn Lakes Elementary School mostly extends northwest and southeast of the school. Thomasville Road with its limited crossing points, high speeds of traffic, and lack of pedestrian accommodations forms the southeastern limits of the walk/bike shed. Also, the lack of residential land uses directly east of the school contributes to the eastern limits of the walk/bike shed. Additionally, because Bannerman Road has high speeds and lacks bicycle/pedestrians facilities, the area directly to the west is not included. Considering the typical distance an elementary-school-aged student can be expected to travel on foot or bike combined with the presence of crosswalks and bicycle/pedestrian accommodations, the northwest limits of the walk/bike shed extends just over one mile into the Killearn Lakes neighborhood.

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.

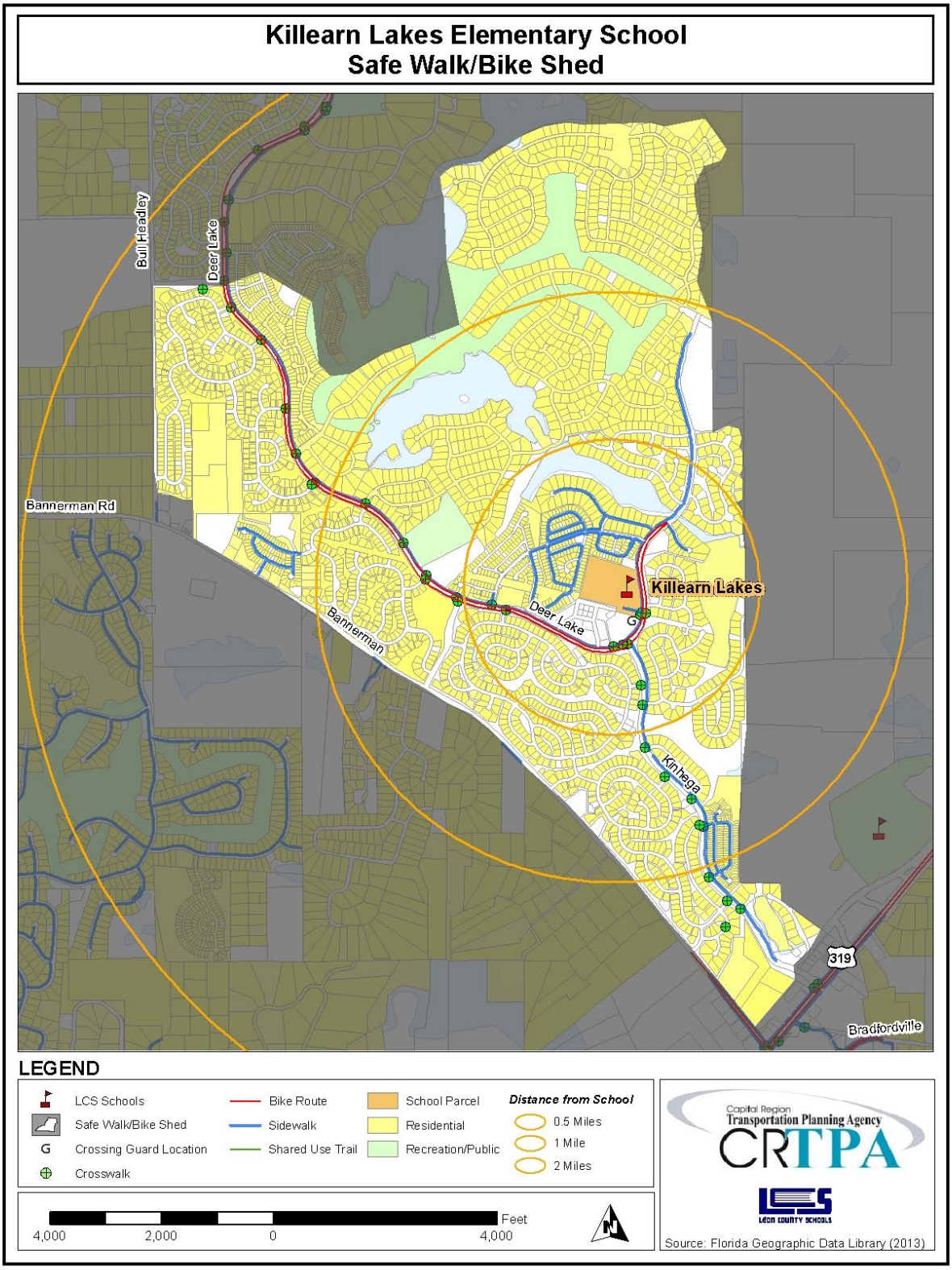
In determining a safe walking and bicycling area, this report applies a methodology and criterion that is more stringent than State standards and more in line with existing studies, research and opinions collected from numerous experts in the fields of pedestrian and bicycle transportation and safe routes 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


Killearn Lakes Elementary School
Safe Walk/Bike Shed
Bull Headley
Deer Lake
Bannerman Rd
Killearn Lakes
Deer Lake
Bannerman
Kinhega
319
Bradfordville
LEGEND
LCS Schools
Safe Walk/Bike Shed
Crossing Guard Location
Crosswalk
Bike Route
Sidewalk
Shared Use Trail
School Parcel
Residential
Recreation/Public
Distance from School
0.5 Miles
1 Mile
2 Miles
Feet
4,000
2,000
0
4,000
Capital Region Transportation Planning Agency
CRTPA
Source: Florida Geographic Data Library (2013)

Chapter 6: Findings and Recommendations

The existing points of access for walkers and bicyclists to Killearn Lakes Elementary School provide efficient access onto campus from Deer Lake East. For those requiring or desiring automobile access as well as short-term parking, there may be potential to improve the situation by switching the automobile and school bus zones; however, the automobile school functions quite well already, and the problem seems to be more related to volume rather than policy or protocol. There are probably more parents transporting their children, by automobile, to school than necessary given the proximity of homes, layout of roadways and the quality of street infrastructure. This chapter includes some policy and programmatic recommendations for the school's consideration that might help to ease concerns of parents regarding speeding vehicles and increase walking and bicycling to and from school (and likewise provide some relief to both the car line and bus zone).

While there are many streets without sidewalks near Killearn Lakes Elementary School, most of these streets are internal residential subdivision streets with low-volume traffic that empty onto Deer Lake East and Kinhega Drive. Most can be navigated by walkers and bicyclists with a fair amount of ease. Still, parents are apprehensive primarily with regard to potentially speeding vehicles along Deer Lake. There are a number of infrastructure recommendations that would provide some 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 Killearn Lakes Elementary School. They include both on- and off-site improvements as follows:

Killearn Lakes Elementary School On- and Off-Site Recommendations

	Improvement: On-Site	Location	From	To	Geography	Direction	Length	Comments
A1	Switch the locations of the parent pick-up/drop-off and school bus zones	N/A	N/A	N/A	N/A	N/A	N/A	This potential improvement should be studied further for feasibility before attempting to implement.
A2	Install a bicycle helmet rack	Bicycle Rack	N/A	N/A	West side of bicycle rack	N/A	N/A	

	Improvement: Off-Site	Location	From	To	Geography	Direction	Length	Comments
B1	Extend sidewalk and add a new striped crosswalk	School Access Drive	Existing sidewalk	Church Entrance/Exit Driveway	N/A	N-S	approx. 25’	
B2	Add new striped crosswalk	School Bus Exit Driveway	N/A	N/A	North of School Access Drive	E-W	approx. 23’	
B3	Repair sidewalk turn radii	Deer Lake East	At School Bus Entrance Driveway		North of School Bus Entrance Driveway	N/A	N/A	
B4	Add new striped crosswalk	Deer Lake East	At Greenland Drive		West of Deer Lake East	N-S	approx. 63’	
B5	Add new striped crosswalk	Deer Lake East	At Killearn Point Court		West of Deer Lake East	NE-SW	approx. 54’	
B6	Install Additional Lighting Fixtures	Kinhega Drive	Beech Ridge Trail	Deer Lake South	West Side of Kinhega Drive	SE-NW	approx. 5,500’	Every 100’ or wherever deemed appropriate

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

On-Site Recommendations

A1) Switch the locations of the parent pick-up/drop-off and school bus zones – Currently, the area designated for automobile pick-ups/drop-offs does not have a short-term parking lot. As such, many parents are either parking in front of the school along Deer Lake East or at the adjacent church property and walking to/from the church. The suggested improvement should be studied to see if it will have any significant impacts to traffic along Deer Lake East due to automobiles queuing during school commuting hours.

A2) Install a bicycle helmet rack – Currently, there are two bicycle racks with space for approximately 20 bicycles. During the on-site visit, bicycle helmets were hooked to the bicycle rack and laying on the ground. A bicycle helmet rack will give students a safe place to put their helmets during the school day.

Off-Site Recommendations

B1) Extend sidewalk and add a new striped crosswalk – On School Access Drive from existing sidewalk to the church entrance/exit driveway. Many parents and students travel to and from the church property and currently there is no marked crossing to warn motorists of pedestrians.

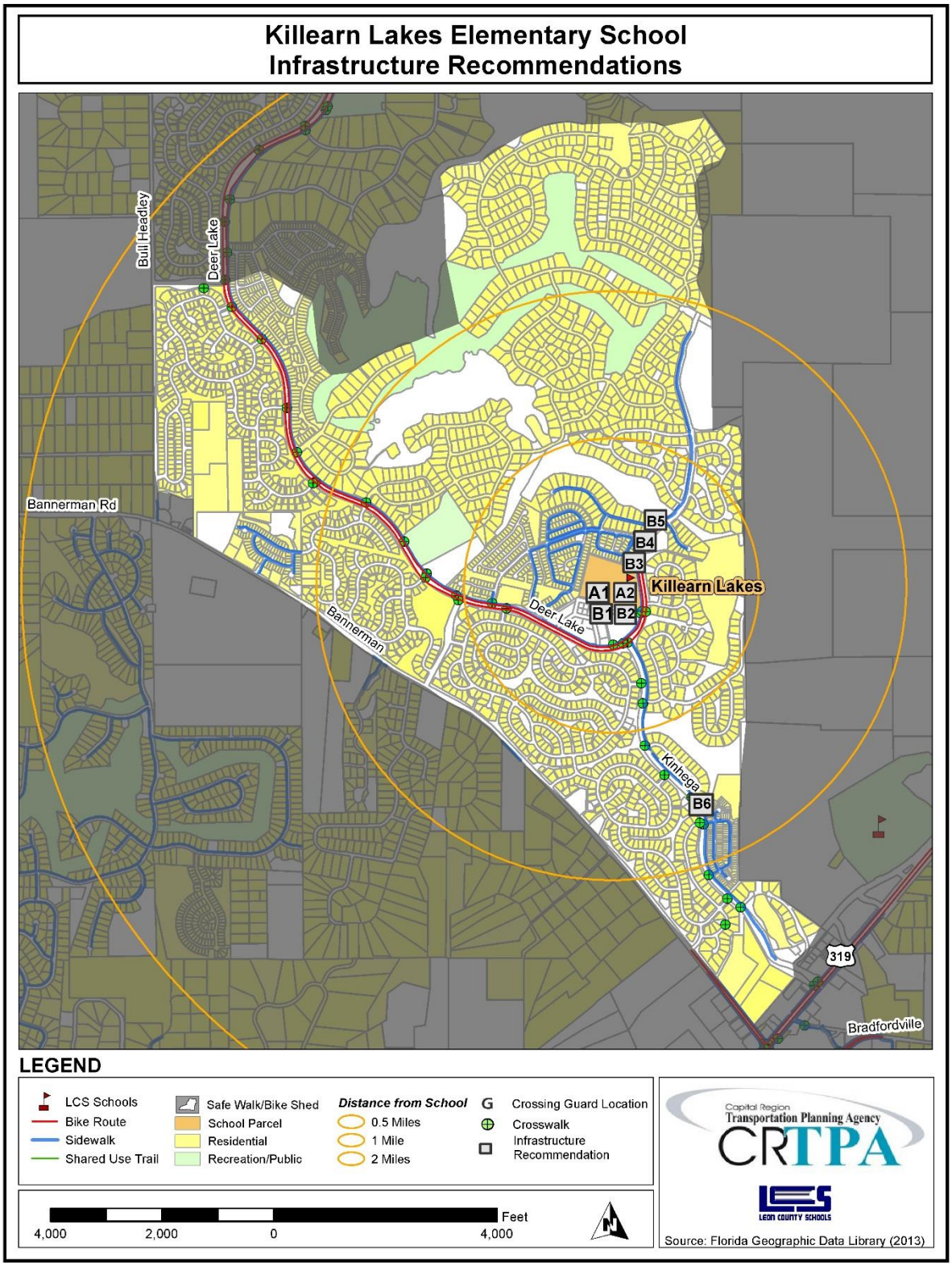
B2) Add new striped crosswalk - On the School Bus Exit Driveway; there is an existing sidewalk that leads directly to the bicycle racks from Deer Lake East. A striped crosswalk on the exit driveway will help remind bus drivers to be cautious of students crossing the driveway.

B3) Repair sidewalk turn radii – On Deer Lake East at the School Bus Entrance Driveway; currently, the sidewalk turn radii is non-existent. As such, there is visible evidence that motorists are taking the right-hand turn very close to the sidewalk that leads directly onto the school campus.

B4) Add new striped crosswalk – On Deer Lake East at Greenland Drive; sidewalks are available on either side of the intersection but there is no visible warning for motorists to be cautious of pedestrians and/or bicyclists.

B5) Add new striped crosswalk – On Deer Lake East at Killearn Point Court; sidewalks are available on either side of the intersection but there is no visible warning for motorists to be cautious of pedestrians and/or bicyclists.

B6) Install Additional Lighting Fixtures – along Kinhega Drive from Beech Ridge Trail to Deer Lake South every 100’ or where determined is appropriate; Commuting times for elementary school students are during the early morning hours when it is often still dark outside. Providing lighting will help provide a better sense of security for students walking/bicycling along Kinhega Drive.


Killearn Lakes Elementary School
Infrastructure Recommendations
Bull Headley
Deer Lake
Bannerman Rd
Bannerman
Deer Lake
B5
B4
B3
A1
A2
B1
B2
Killearn Lakes
Kmhega
B6
319
Bradfordville
LEGEND
LCS Schools
Bike Route
Sidewalk
Shared Use Trail
Safe Walk/Bike Shed
School Parcel
Residential
Recreation/Public
Distance from School
0.5 Miles
1 Mile
2 Miles
Crossing Guard Location
Crosswalk
Infrastructure Recommendation
Feet
4,000
2,000
0
4,000
N
Capital Region Transportation Planning Agency
CRTPA
LEON COUNTY SCHOOLS
Source: Florida Geographic Data Library (2013)

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; 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; and encouraging families who normally drive to school to look for ways to safely and legally park in a parking lot away from school, but within walking distance, and then walk to school from the lot. Parents should note that parking along Deer Lake East is prohibited.

C2) Bicycle safety and accessibility workshop – Currently, Killearn Lakes Elementary School incorporates bicycle and pedestrian education into their physical education curriculum. However, the curriculums slightly differ for students in Kindergarten -2nd grades and 3rd-5th grades. The focus for children in lower grade levels is related to school bus and pedestrian safety. Extending the bicycle curriculum, which is taught to those in 3rd-5th grades, to those in Kindergarten-2nd grades would be highly beneficial. A workshop or bicycle rodeo could be organized to demonstrate 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, 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, Florida Agricultural & Mechanical University, 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. Additionally, there is the opportunity for older students who are more experienced with bicycling to partner with younger students as part of a buddy-system to ease parent's concerns with safety.

C3) Parent drop-off/pick-up zone protocol encouragement– Send home literature to parents, as well as make it available on the school website, about the proper drop-off and pick-up process for the school, particularly at the start of a new school year or after an extended school break. Maps of the drop-off/pick-up zone, as well as, the traffic flow pattern can be very helpful to parents. The literature available to parents should remind them to be patient and courteous to other parent drivers and clearly discourage parents from letting children out on the side of the road or parking on the side of the road (to wait for their child). 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. If necessary, educational flyers could be placed on the windshields of vehicles illegally parked to remind parents of the proper rules and procedures.

C4) Car seat restraints (e.g. seat belts, booster seats, etc.) – Send home literature to parents, as well as make it available on the school website, about the proper use and type of car seat restraints needed by children of different ages and weights. Remind parents that car crashes are the leading cause of death for children 1 to 13 years old in the United States.[1] Ideally, children should remain in the back seat at least until age 12. Periodically, send out reminders on this important issue and possibly get the Parent-Teacher Organization (PTO) involved to further spread the message to parents.

C5) Additional Crossing Guards – Currently, there is an existing crossing guard location at the intersection of Deer Lake East & the school access drive. Parent surveys expressed the desire for additional crossing guards on routes to school. Additional suggested crossing guard locations include: Deer Lake East & Kinhega Drive and Deer Lake East & Tekesta Drive.

Policies

D1) Bike check and security – While the existing bike rack is in a secure location , school policies to discourage theft and 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.

D2) Parent drop-off/pick-up zone protocol – 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 continue to queue the line for parent drop-off along the school access drive, but please do not block driveways.
- Please be prepared to promptly help your child(ren) exit the vehicle with their belongings upon arriving at the drop-off point. 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 parking lot out front. Do not park in the parent drop-off/pick-up zone as this will delay others trying to drop-off their children.

[1] http://www.nhtsa.gov/Safety/CPS

Pick-Up Procedures

- Please stay in vehicle and pull forward to the front of the parent drop-off/pick-up zone.
- Please continue to queue the line for parent pick-off along the school access drive, but please do not block driveways.
- 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 parking lot near the school bus zone. Do not park in the parent drop-off/pick-up zone or along Deer Lake East as this will delay others trying to pick-up their children.

D3) Increased enforcement during drop-off/pick-up times – School staff and others such as parent volunteers or safety patrols should continue to be available to help open curb-side doors for students in both the mornings and afternoon. This helps ensure that parents do not need to get out of their vehicles to assist students with their belongings. Ideally, it is best to have three or four assistants at a time to speed up the drop-off/pick-up process in a safe manner. Additionally, assistants should consider wearing bright vests or belts to help identify themselves to parents and assistants should also make sure they are at the drop-off/pick-up zone at their assigned times.

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[2]

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
lighting	streetlight	each	4,880

[2] 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 setup for Killearn Lakes Elementary School and surrounding neighborhoods makes it fairly easy to walk or bicycle to school within relative distance. The school is located along and accessible from Deer Lake East, which is a divided residential collector roadway equipped with six-foot wide sidewalks, bicycle lanes and adequately spaced signed and marked crosswalks. Residential subdivisions near the school include low volume streets that mostly empty onto Deer Lake East, allowing safe, convenient non-motorized travel. Regardless, the school doesn't show a correlation between such convenience and walking/bicycling rates of students. Overall, approximately three percent of students within a relative safe distance commute to and from school by walking, while approximately one percent of students commute by bicycle. These percentages appear very low, considering that Killearn Lakes is a neighborhood-oriented school.

Some reasons for such low rates are clear while others are more complicated. One thing made clear by parents is that there are concerns with speeding vehicles, which obviously correlates with Deer Lake East and Kinhega Drive, as they are busier streets around. The roadways are well designed, divided, and includes many bicycle and pedestrian elements to encourage walking and bicycling. Regardless, they are residential collectors that encourages higher than posted speeds for motorists connecting to major roadways that lead to primary destinations as well as specific subdivision streets that lead to home. Goals that involve increasing walking and bicycling to school must consider the need to maintain tolerable speeds along Deer Lake East and Kinhega Drive.

More complicated are perceptions and methods of convenience. The surrounding neighborhoods are relatively safe with low crime rates; however, the perception of crime is real and pervasive most everywhere, with parents naturally concerned with their children's safety. To this regard, greater education and understanding of reality verses perception regarding crime can help put matters into better perspective and potentially and hopefully increase walking and bicycling rates. Besides, the more people participating in such commuting, especially in groups, also lend eyes, ears and an overall presence that criminal behavior typically avoids. Efforts made to make parents better informed of both the realities of crime in the neighborhoods and the benefits of a larger cohort of people on the street are important.

Killearn Lakes Elementary School has most of the physical elements to improve walking and bicycling to school. Not to mention, the school is well organized when it comes to procedure and assistance in getting kids on and off campus safely and efficiently. There are, however, a few measures that should be explored to help improve overall walking and bicycling rates to and from school, as laid out in the previous recommendations chapter. These measures along with what is already occurring in and around Killearn Lakes Elementary School will no doubt help to improve walking and bicycling safety and increase non-motorized commuting rates.

Appendices

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	Question 5
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. Forty-seven classrooms participated in the survey for a total of 856 student responses recorded. In a few instances, surveys were conducted within overlapping multiple grade level classrooms. Those instances are noted where relevant to the data results.

SUMMARY OF STUDENT TRAVEL SURVEY POPULATION

Total Number of Participating Classrooms	47
Total Students Surveyed (K-5th)	856
Total K-2nd Students Surveyed	401
Total 3rd-5th Students Surveyed	455

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 2% to 3%, with an overall average of 3%. Overall, the bike-to-school average for the week ranged from 1% to 2%, with an overall average of 1%. Of the students that bike to school, an overall average of 75% wore a bicycle helmet. In total, the combined walk-bike average for the week ranged from 4% to 5%, with an overall average of 4%.

SUMMARY OF WALKING AND BICYCLE SCHOOL-WIDE TRAVEL PATTERNS

	Walk	Bicycle	Helmet Use	Total Walk + Bike
Average Overall	3 %	1 %	75 %	4 %
Highest Day	3 %	2 %	81 %	5 %
Lowest Day	2 %	1 %	67 %	4 %

Walking and Bicycling Travel Patterns of Younger-Aged Children (K – 2nd Grade)

The younger-aged (K-2nd) children student travel surveys indicate that the walk-to-school average for the week ranged from 2% to 2%, with an overall average of 2%. Overall, the bike-to-school average for the week ranged from 1% to 1%, with an overall average of 1%. Of the students that bike to school, an overall average of 88% wore a bicycle helmet. In total, the combined walk-bike average for the week ranged from 3% to 3%, with an overall average of 3%.

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

	Walk	Bicycle	Helmet Use	Total Walk + Bike
Average Overall	2 %	1 %	88 %	3 %
Highest Day	2 %	1 %	100 %	3 %
Lowest Day	2 %	1 %	50 %	3 %

Walking and Bicycling Travel Patterns of Older-Aged Children (3rd – 5th Grade)

The older-aged (3rd-5th) children student travel surveys indicate that the walk-to-school average for the week ranged from 3% to 3%, with an overall average of 3%. Overall, the bike-to-school average for the week ranged from 1% to 3%, with an overall average of 2%. Of the students that bike to school, an overall average of 70% wore a bicycle helmet. In total, the combined walk-bike average for the week ranged from 4% to 6%, with an overall average of 5%.

SUMMARY OF OLDER-AGED CHILDREN WALKING AND BICYCLE TRAVEL PATTERNS (3rd-5th)

	Walk	Bicycle	Helmet Use	Total Walk + Bike
Average Overall	3 %	2 %	70 %	5 %
Highest Day	3 %	3 %	75 %	6 %
Lowest Day	3 %	1 %	50 %	4 %

Bus and Automobile Drop-Off

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

Bus and Automobile School-Wide Travel Patterns

The school-wide travel surveys indicate that the automobile-to-school average for the week ranged from 84% to 86%, with an overall average of 85%. Of the students that ride to school in an automobile,

an overall average of 92% wore a seatbelt. Overall, the school bus-to-school average for the week ranged from 10% to 11%, with an overall average of 11%. None of the students surveyed reported riding a public bus to school. (To note, there are no public buses within a reasonable distance to the school.)

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

	Automobile	Seat Belt	School Bus	Public Bus
Average Overall	85 %	92 %	11 %	0 %
Highest Day	86 %	93 %	11 %	0 %
Lowest Day	84 %	91 %	10 %	0 %

Bus and Automobile Travel Patterns of Younger-Aged Children (K – 2nd Grade)

The younger-aged (K-2nd) children student travel surveys indicate that the automobile-to-school average for the week ranged from 89% to 92%, with an overall average of 91%. Of the students that ride to school in an automobile, an overall average of 93% wore a seatbelt. Overall, the school bus-to-school average for the week ranged from 5% to 7%, with an overall average of 6%. None of the students surveyed reporting riding a public bus to school.

SUMMARY OF YOUNGER-AGED CHILDREN BUS & AUTOMOBILE DROP-OFF TRAVEL PATTERNS (K-2nd)

	Automobile	Seat Belt	School Bus	Public Bus
Average Overall	91 %	93 %	6 %	0 %
Highest Day	92 %	94 %	7 %	0 %
Lowest Day	89 %	92 %	5 %	0 %

Bus and Automobile Travel Patterns of Older Children (3rd – 5th Grade)

The older-aged (3rd-5th) children student travel surveys indicate that the automobile-to-school average for the week ranged from 79% to 82%, with an overall average of 81%. Of the students that ride to school in an automobile, an overall average of 90% wore a seatbelt. Overall, the school bus-to-school average for the week ranged from 13% to 15%, with an overall average of 14%. None of the students surveyed reported riding a public bus to school.

SUMMARY OF OLDER-AGED CHILDREN BUS & AUTOMOBILE DROP-OFF TRAVEL PATTERNS (3rd-5th)

	Automobile	Seat Belt	School Bus	Public Bus
Average Overall	81 %	90 %	14 %	0 %
Highest Day	82 %	93 %	15 %	0 %
Lowest Day	79 %	89 %	13 %	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:

_____
_____
_____

Capital Region Transportation Planning Agency

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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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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 303 parent surveys returned. Of those, 170 (56%) 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 60/40 by grade level grouping, with 98 students representing Kindergarten through 2nd Grade, and 72 students representing 3rd Grade through 5th Grade.

SUMMARY OF PARENT SURVEY PARTICIPATION

Total Enrollment	937
Total Number of Parent Surveys	303
Total Number within 2 Miles (K-2nd Grade)	98
Total Number within 2 Miles (3rd-5th Grades)	72
Percentage of Surveys within 2 Miles	56 %

Commuting to/from School

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

SUMMARY OF SCHOOL-WIDE COMMUTING RESULTS

Morning	Average Overall
Car	82 %
Walk	8 %
Bicycle	4 %
School Bus	4 %
Other	1 %
Public Bus	0 %
Afternoon	
Car	66 %
School Bus	12 %
Walk	9 %
Other	6 %
Bicycle	4 %
Public Bus	0 %

Commuting Patterns of Younger-Aged Children (K – 2nd Grade)

The surveys of parents of younger-aged (K-2nd grade) indicate that the car-to-school average for a typical week is 87% in the morning and decreases to 71% in the afternoon. The school bus-to-school average for a typical week is 1% in the morning and 8% in the afternoon. The walk-to-school and bike-to-school averages for a typical week are 7% and 2% in the morning and 8% and 1% in the afternoon, respectively. None of the students use an alternative commute mode in the morning, while 8% use an alternative commute mode in the afternoon. None of the students rode a public bus in the morning or afternoon.

COMMUTING PATTERNS OF YOUNGER-AGED CHILDREN (K-2nd)

Morning	Average Overall
Car	87 %
Walk	7 %
Bicycle	2 %
School Bus	1 %
Public Bus	0 %
Other	0 %
Afternoon	
Car	71 %
School Bus	8 %
Walk	8 %
Other	8 %
Bicycle	1 %
Public Bus	0 %

Commuting Patterns of Older-Aged Children (3rd – 5th Grade)

The surveys of parents of older-aged (3rd-5th grade) indicate that the car-to-school average for a typical week is 75% in the morning and decreases to 58% in the afternoon. The school bus-to-school average for a typical week is 8% in the morning and increases to 18% in the afternoon. The walk-to-school and bike-to-school averages for a typical week are 8% and 6% in the morning and 11% and 7% in the afternoon, respectively. The alternative commute mode-to-school average for a typical week is 1% in the morning and increases to 4% in the afternoon. None of the students rode a public bus in the morning or afternoon.

COMMUTING PATTERNS OF OLDER-AGED CHILDREN (3rd-5th)

Morning	**Average Overall**
Car	75 %
School Bus	8 %
Walk	8 %
Bicycle	6 %
Other	1 %
Public Bus	0 %
Afternoon	
Car	58 %
School Bus	18 %
Walk	11 %
Bicycle	7 %
Other	4 %
Public Bus	0 %

Neighborhood Safety Concerns

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

SUMMARY OF TOP RANKING NEIGHBORHOOD SAFETY CONCERNS

Neighborhood Safety Concern	**Number of Comments**
Speeding Vehicles	48
Issues with Transportation Outside of School Zone	23

Neighborhood Safety Concerns For Younger-Aged Children (K – 2nd Grade)

Neighborhood safety concerns for parents of younger-aged (K-2nd) children include three main concerns including issues with speeding vehicles, issues with transportation outside of the school zone, and sidewalks/walking. There were approximately 31 comments of concern regarding issues with speeding vehicles. Specific locations where high-speed vehicles tend to be a problem are Briarcreek Road South, Kinhega Drive, and Deer Lake South. Parents also mention vehicles speeding in residential neighborhoods, near crosswalks, and the school entrance. Additionally, there were approximately 13 comments of concern regarding issues with transportation outside of the school zone. General concerns include lack of crossing guards, high volumes of traffic, and distracted drivers not paying attention to children in crosswalks. Specific locations where there tend to be problems are Deer Lake South and Kinhega Drive. Lastly, there were 12 comments of concern regarding issues with sidewalks and walking. General concerns include the lack of sidewalks, broken sidewalks, poor lighting, and the distance from home to school. Parents also mentioned vehicles driving in the bicycle lanes and the need to extend the sidewalk to Deer Lake Methodist Church. Specific locations where sidewalks and walking tend to be a problem are Briarcreek Road and Oak Hill Trail.

SUMMARY OF TOP NEIGHBORHOOD SAFETY CONCERNS (K-2nd Grade)

Neighborhood Safety Concern	Number of Comments
Speeding Vehicles	31
Issues with Transportation Outside of School Zone	13
Issues with Sidewalks/Walking	12

Neighborhood Safety Concerns For Older-Aged Children (3rd – 5th Grade)

Neighborhood safety concerns for parents of older-aged (3rd-5th) children also include issues with speeding vehicles, transportation outside of the school zone, and the parent pick-up/drop-off areas of school. There were approximately 17 comments of concern regarding issues with speeding vehicles. Specific locations where high-speed vehicles tend to be a problem are Kinhega Drive, Deer Lake South, and Cherokee Ridge Trail. Additionally, there were 10 comments of concern regarding issues with transportation outside of the school zone. General concerns include drivers not obeying stop signs, lack of crossing guards, and the need for flashing signs at crosswalks. Specific locations where there tend to be problems are Deer Lake South and Kinhega Drive. Lastly, there eight comments of concern regarding the parent pick-up/drop-off area of the school. General concerns include large potholes in the road, aggressive driving behavior from parents, the length of time it takes to drop-off students, and cars cutting over sidewalks/crosswalks.

SUMMARY OF TOP NEIGHBORHOOD SAFETY CONCERNS (3rd-5th Grade)

Neighborhood Safety Concern	Number of Comments
Speeding Vehicles	17
Issues with Transportation Outside of School Zone	10
Issues with Parent Pick-Up/Drop-Off Areas	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).

SUMMARY OF TOP RANKING SCHOOL-WIDE INFLUENTIAL FACTORS RESULTS

	SCALE	1	2	3	4	5	N/A
I would allow my child to walk or bicycle to school more often if:							
#1 Accompanied by myself or other parents		*4*	*0*	*8*	*21*	*96*	16
#2 There was a greater adult presence of parent volunteers or police officers along walk routes to school		*4*	*5*	*14*	*23*	*74*	22
#2 Speed limits were strictly enforced in school speed zones		*6*	*4*	*17*	*19*	*74*	22

Influential Factors for Younger-Aged Children (K – 2nd Grade)

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

TOP RANKING INFLUENTIAL FACTORS FOR YOUNGER-AGED CHILDREN (K-2nd)

	SCALE	1	2	3	4	5	N/A
I would allow my child to walk or bicycle to school more often if:							
#1 Accompanied by myself or other parents		*2*	*0*	*3*	*8*	*57*	10
#2 There were bicycle/pedestrian pathways separated from traffic from the neighborhood to the school		*3*	*3*	*4*	*8*	*43*	18
#3 Speed limits were strictly enforced in school speed zones		*3*	*4*	*6*	*9*	*41*	16
#4 There was a greater adult presence of parent volunteers or police officers along walk routes to school		*2*	*3*	*8*	*11*	*40*	16
#5 There were continuous sidewalks or bike paths from my neighborhood to school		*3*	*4*	*4*	*9*	*32*	27

Influential Factors for Older-Aged Children (3rd – 5th Grade)

Parents of children in 3rd through 5th grade agreed that the top five influential factors to allow their child to walk or bicycle to school more often included factors related to accompanying children (by themselves/other parents, or other children), having a greater adult presence along routes to school, enforcing speed limits in school zones, and the availability of crossing guards.

TOP RANKING INFLUENTIAL FACTORS FOR OLDER-AGED CHILDREN (3rd-5th)

	SCALE	1	2	3	4	5	N/A
I would allow my child to walk or bicycle to school more often if:							
#1 Accompanied by myself or other parents		*2*	*0*	*5*	*13*	*39*	6
#2 There was a greater adult presence of parent volunteers or police officers along walk routes to school		*2*	*2*	*6*	*12*	*34*	6
#3 Speed limits were strictly enforced in school speed zones		*3*	*0*	*11*	*10*	*33*	6
#4 Additional crossing guards were provided at busy intersections		*3*	*0*	*13*	*9*	*31*	8
#5 Accompanied by other children		*4*	*3*	*6*	*13*	*30*	7