August 2014

Safe Routes to School Audit Report
Buck Lake Elementary School

Leon County
Public Schools

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Acknowledgements

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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)

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Chapter 1: Introduction

Project Purpose

The purpose of this Safe Routes to School (SRTS) audit report is to provide recommendations to improve student walking and bicycling rates to and from school. In addition, this report addresses other enhancements to improve the overall travel safety and convenience for students, parents and the school. Improvement recommendations are provided in the following categories: infrastructure, programs, and 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

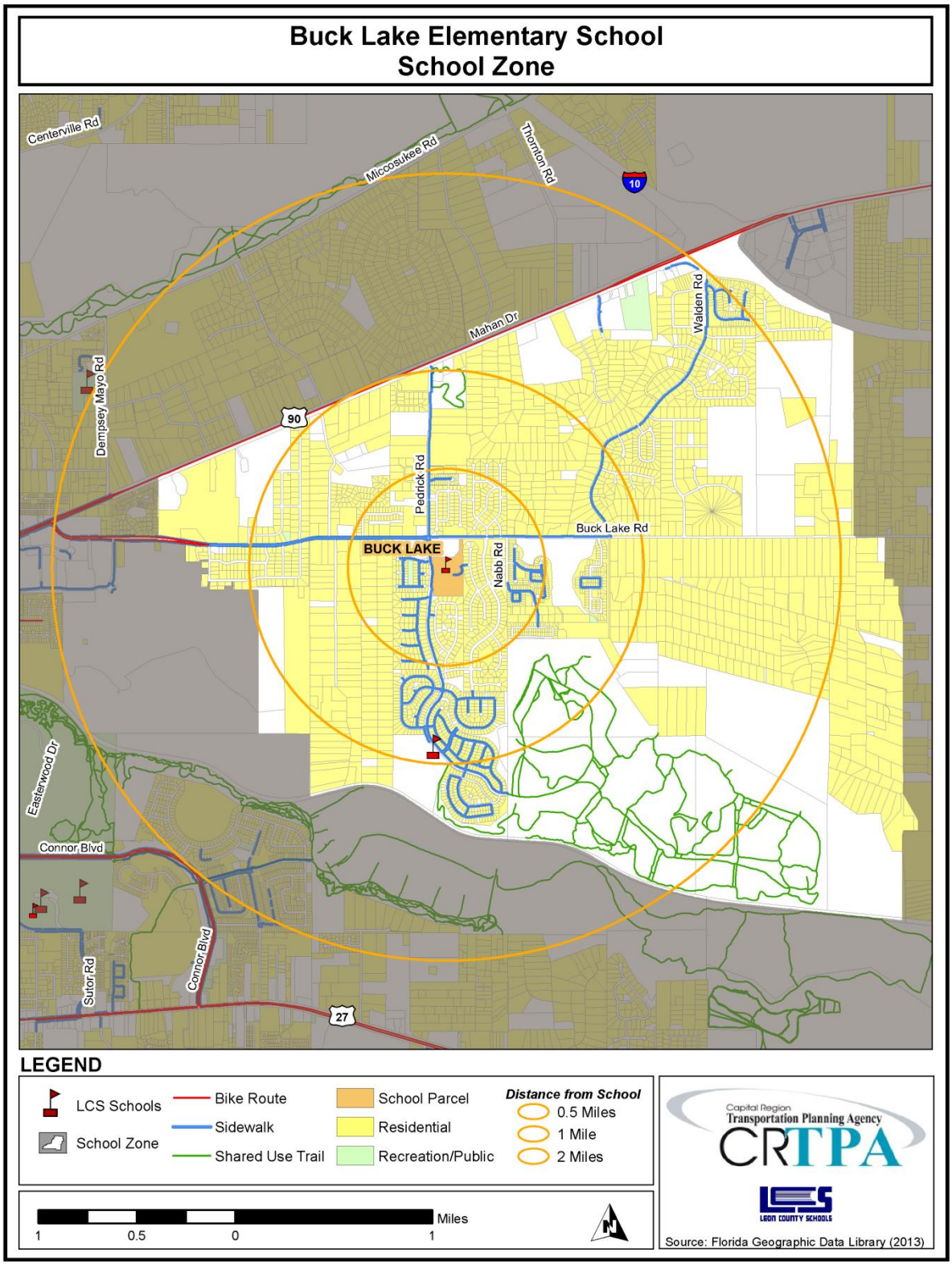
Buck Lake Elementary School is located at 1600 Pedrick Road, Tallahassee, 32317 in Leon County, Florida. It is part of the Leon County Public Schools system. The school was established in the early 2000's. Regular school hours are from 8:30am to 2:50pm. A before school program is also offered at the school from 7:00am to 8:20am. Additionally, an after school program is offered from 2:55pm to 6:00pm.

The number of students enrolled at the school, for the 2013 school year, was 761. The school has a current capacity for 885 students. The school includes grade levels Pre-Kindergarten through 5th Grade.

Students attending this school feed into Swift Creek Middle School and Lincoln High School.

School Zone

The Buck Lake Elementary School zone encompasses the neighborhoods of Lafayette Meadows, Easton, Avondale, Countryside of Tallahassee, Benjamin's Run, Stoney Creek Crossing, Buckwood, and Meadow Hills. Land uses in the school zone consist of mostly residential with a few pockets of recreation. The Buck Lake school zone includes two major roadways. Mahan Drive runs in a southwest to northeast direction and makes up the northern side of the school zone. Additionally, Buck Lake Road runs east to west and divides the school zone into north and south. Important recreational areas near the school zone include the J.R. Alford Greenway Trail, just southeast of the school zone, and Pedrick Pond Trail, just north of the school zone. Both include shared-use trails.


Buck Lake Elementary School
School Zone
Centerville Rd
Miccosukee Rd
Thornton Rd
10
Mahan Dr
Walden Rd
Dempsey Mayo Rd
90
Pedrick Rd
Buck Lake Rd
BUCK LAKE
Nabb Rd
Easterwood Dr
Connor Blvd
Sutor Rd
Connor Blvd
27
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 May 1st, 2013 with temperatures in the 70 degrees Fahrenheit.

Highlights and Key Observations of On-Site Meeting

During this visit, Buck Lake 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 Buck Lake Road is not a school zone, even though the parent pick-up and drop-off driveway is located on Buck Lake Road. School staff said a traffic study was conducted on Buck Lake Road. However, a designation was not warranted. Parents may begin dropping off student at 7:45am and a large number of children use vans to go to after school programs. There are some conflicts between vans and school buses due to a shared lane queue.

There are three designated crossing guards at the intersection of Pedrick Road & Buck Lake Road, Pedrick Road & Whistler Drive as well as Pedrick Road & Easton Point Way. The school Safety Resource Officer (SRO) noted a problem along Buck Lake Road at Nabb Road, where students cross and there is no signage or crossing guard available. School staff and administrators serve as ushers for students at both the automobile drop-off/pick-up and school bus zones. Additionally, it was noted that the school uses a bus to shuttle students who live within a mile of the school. The shuttle was started when there was construction going on, but was continued with School Board approval as a means of reducing congestion. Students are picked up on Pedrick Road at Sioux Drive and at Devonshire Drive. Approximately 50 students are signed up for the shuttle bus.

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 layout of subdivisions, in the immediate area surrounding the school, precludes students from having a shorter and more direct path to school. As a result, fewer students may be walking or bicycling to/from school than would like to and instead rely heavily on school busing and automobile rides. Walkers and bicyclists can enter campus from two points along Pedrick Road, north and south of the school as well as one point in the rear of the school via Squire Trail. Sidewalks leading up to the school are 4' in width. The school has an uncovered bicycle rack located near the south bicycle/pedestrian entrance as well as in the rear of the school. There were three bicycles parked during the site visit. However, there were an additional nine bicycles parked along a fence near the bicycle racks.

The school bus drop-off and pick-up zone mostly functions adequately and has a covered walkway facility. However, the thru lane for school buses is also used by the after-school program vans which can sometimes create conflicts between them. It was noted that there are only three school buses.

The parent drop-off and pick-up zone functions inadequately to accommodate the volume of automobiles entering and exiting the site. School staff mentioned that the automobile zone congestion is maxed out on any given morning or afternoon and leads to long queues on Buck Lake Road. There are some reports of drivers not obeying the rules and directions for student drop-off, which further aggravates the situation. Some drivers reportedly drop-off students at the crossing guard just north of the school to avoid pulling into the queue. The school website has laid out rules for afternoon student dismissal to try and alleviate the congestion.[1] Parents of younger children are advised to arrive at 2:45P while parents of older children are advised to arrive at 2:55P. Additionally, the school has two designated park-and-walk locations at the Gathering Place (near the basketball court) and the reading statue toward Mahan Drive. Parents may begin gathering at 2:40P at these locations. Finally, the student seating area for drop-off/pick-up is only partially covered, causing additional stress during times of inclement weather.

Inventory Map

An aerial photograph showing Buck Lake Elementary School is located on the following page. As shown in the photo, the school fronts Pedrick Road. Students can access campus from this street near Whistler Drive, just north of Easton Point Way, or in the rear of the school via Squire Trail. Bicycle parking racks are located near the front entrance of the school as well as in the rear near Building 05.

Standard width sidewalks are located along one side of Pedrick Road until just north of Whistler Drive where it transitions to both sides of the street. There are two midblock crosswalks along Pedrick Road that connect directly to sidewalks that enter on campus.

The automobile pick-up and drop-off zone is located behind the school's main entrance. Automobiles both enter and exit the zone from Buck Lake Road. There is some parking available in this area as well. The bus drop-off and pick-up zone is separately located along the main entrance to the school. Buses enter the zone from Pedrick Road and exit onto Pedrick Road. Additional parking is available here as well as north of the main school building.

[1] http://bucklake.weebly.com/


Buck Lake Elementary School
Site Map
Auto Drop-Off/
Pick-Up Zone
Ped/Bike Entrance
PEDRICK ROAD
Cafeteria
School Bus Zone
Bike Racks
Ped/Bike Entrance
Bike Racks
N

Issues and Opportunities

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

Neighborhood layout seems to be the primary issue with the students' ability to walk and bicycle to school. The neighborhood includes streets that do not connect in a gridded manner and thus making direct distances to school longer. This kind of external factor is often difficult to overcome. However, trails might be considered to address the situation and provide shorter, more direct paths to school.

There are opportunities to increase walking and bicycling, amongst those students who currently take the shuttle bus and live within one and a half miles of the school. 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 could also help create walking/bicycling groups so that students are not walking or bicycling to school alone.

These groups can also help get the word out to parents concerning on-campus issues, such as appropriate behavior and protocol within the parent drop-off/pick-up zone as well as the park-and-walk locations. Furthermore, with specific regard to the parent drop-off/pick-up zone, the school should explore new ways to better manage the congestion by promoting a program alternative such as carpooling.

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 Buck Lake Elementary School – approximately three out of four students – are dropped-off at school by car. The percentage rises slightly for younger-aged children, which is not uncommon. Walking and bicycling to school ranked a distant second place at approximately 15 percent and three percent of students, respectively. Not surprisingly, there were more older-aged than younger-aged children that comprised this cohort, with approximately one-in-five older students either walking or bicycling on average for the week. While this number could potentially be increased with the right combination of programs, policies and infrastructure upgrades, the current rate of students walking and bicycling to school establishes a solid foundation for improvement. A low percentage of students surveyed, only six percent, arrived to school by school bus and no one arrived by public bus. (To note, there are no public buses within a reasonable distance to the school.) Of those commuting by school bus, five 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	15 %	3 %	76 %	6 %	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 Buck Lake Elementary School students are dropped off by car or walk to school in the morning, while fewer return home by the same modes in the afternoon. In the afternoon, there are greater percentages of students returning home by school bus and public bus or another mode not described specifically in the survey such as an after-school program van. Overall, a combined total of approximately one-quarter of students commutes 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 condition and/or lack of sidewalks as well as the behavioral patterns of automobile drivers, generally, in terms of excessive driving speeds and, more specifically, with both the functionality of the parent drop-off/pick-up area and the unsanctioned use of unofficial drop-off/pick-up areas off of school premises, typically along local neighborhood streets. As for speeding complaints, specific problem locations cited include Pedrick Road, Buck Lake Road, and Walden Road.

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, with other parents, or with other children), enforcing speed limits in school zones, and having a greater adult presence along routes to school 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 February 27th, 2013. The review consisted of an assessment of accessibility, connectivity and safety along neighborhood roadways within proximity to Buck Lake Elementary School. On the day of the field review, the weather was overcast with temperatures in the 60'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 Buck Lake Elementary School.

Character of Neighborhood Area

Buck Lake Elementary is located in an established neighborhood primarily comprised of suburban style neighborhoods that are not densely populated. The neighborhood street pattern throughout the area includes mostly loops and cul-de-sacs. However, sidewalks are present on almost all streets in the neighborhoods to the south of the school providing a pretty-well connected system. Bike infrastructure in the area is limited to Mahan Drive. The southern portion of the zone is bound by the J.R. Alford Greenway Trail and includes a shared-used trail system.

Major roadways in the school zone include:

- Mahan Drive, a heavily traveled four lane, southwest to northeast roadway with a posted speed limit between 50-55 mph.
- Buck Lake Road is an east-west two lane roadway with a posted speed limit between 40-45mph.

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 Buck Lake Elementary School between 2009 and 2011.

Neighborhood Assessment

The overall neighborhood layout surrounding Buck Lake Elementary School lends itself fairly well to walkability. Connectivity throughout the neighborhoods is not the best due to the presence of cul-de-sacs; however, a fairly good amount of streets include sidewalk infrastructure on at least one side of the street. Streets without sidewalks tend to be low-volume, residential streets that would not pose a barrier to safe 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 Buck Lake Elementary School walk/bike shed map is included at the end of this chapter.

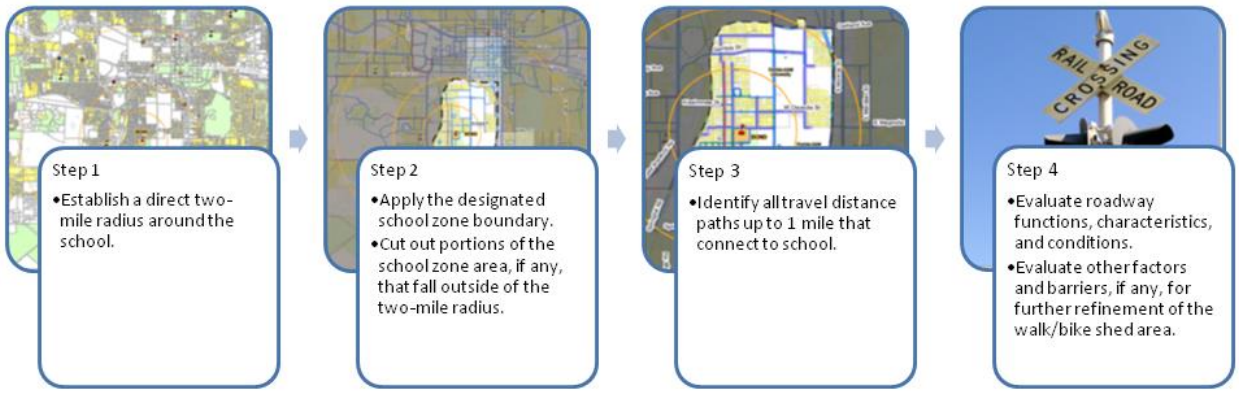
The walk/bike shed area and associated map are not meant to suggest that elementary school students of all ages, maturity level, and experience should commute to and/or from school within the area delineated. Certainly, younger children such as kindergarten students are not expected to walk or bike to school from practically any distance without the accompaniment of either a parent or much older sibling. Also, older children such as 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 Buck Lake Elementary School mostly extends about one mile to the south, northwest, and northeast from the school. Mahan Drive with its four high speed lanes and high volume of traffic forms the northern limits of the walk/bike shed. There is a railroad line located just over one miles south of the school. The associated railroad tracks combined with several large bodies of water to the south contribute to the southern limits of the walk/bike shed. A lack of pedestrian and bicycle accommodations east of Buck Lake Road at Walden Road forms the eastern limits of the walk/bike shed. Also, because of the distance elementary-aged students would be expected to travel on foot or bike, the walk/bike shed extends just one mile west from the school, along Buck Lake Road.

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 Unsignalized Crosswalk	More than 2 travel lanes	Greater than 25 mph	Greater than 1,500	N/A
Marked Crosswalk Signalized Crosswalk	Greater than 4 travel lanes	Greater than 40 mph	Greater than 2,000	N/A

Hazardous Walking Conditions, as defined per Florida Statute

Section 1006.23 of the Florida Statutes defines hazardous walking conditions for elementary 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.

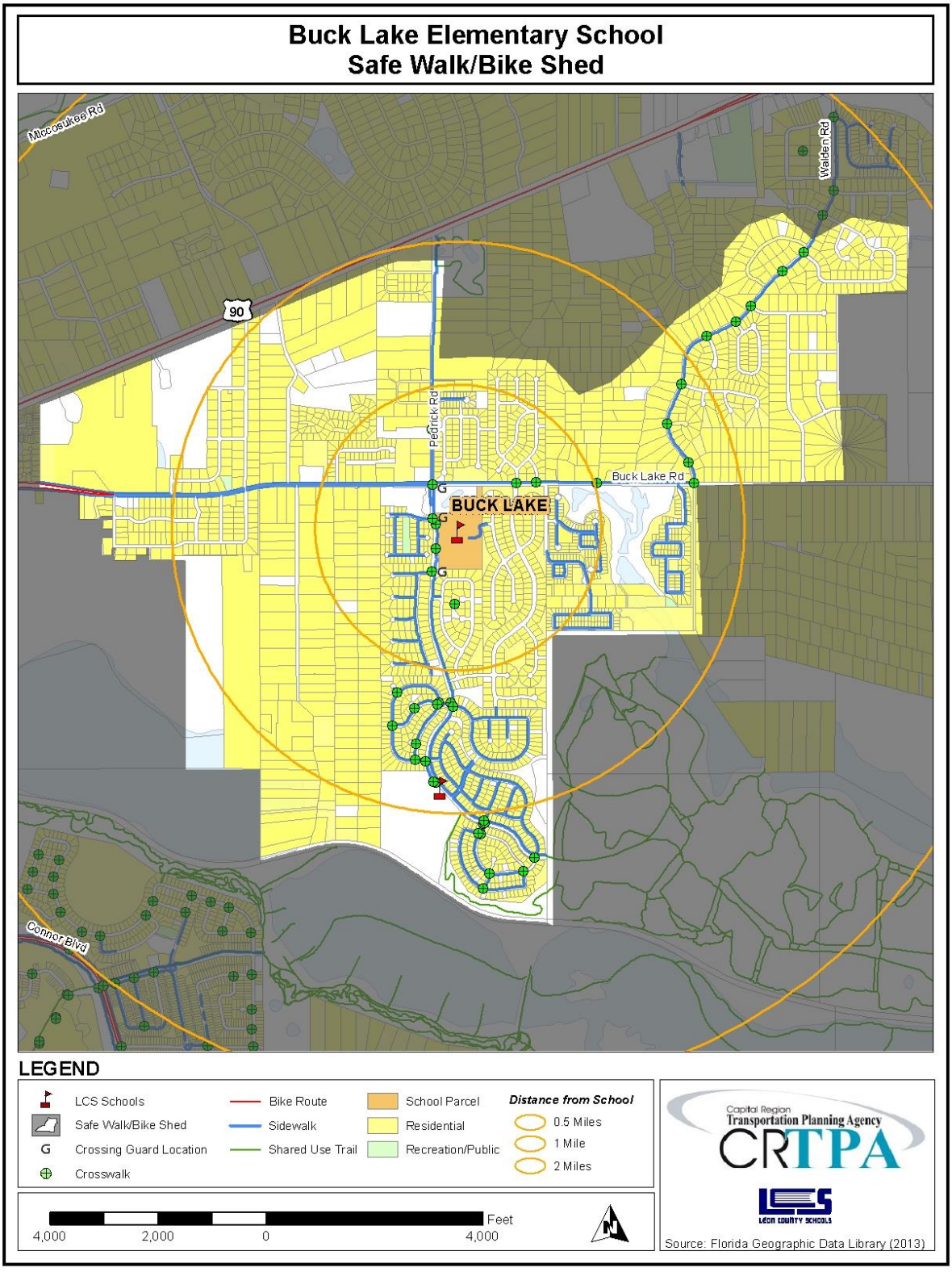
In determining a safe walking and bicycling area, this report applies a methodology and criterion that is more stringent than State standards and more in line with existing studies, research and opinions collected from numerous experts in the fields of pedestrian and bicycle transportation and safe routes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


Buck Lake Elementary School
Safe Walk/Bike Shed
Miccosukee Rd
Walden Rd
90
Pedrick Rd
Buck Lake Rd
BUCK LAKE
Connor Blvd
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
LEON COUNTY SCHOOLS
Source: Florida Geographic Data Library (2013)

Chapter 6: Findings and Recommendations

The existing points of access for walkers and bicyclists to Buck Lake Elementary School provide efficient access onto campus from Pedrick Road as well as Squire Trail. For those requiring or desiring automobile access, there may be potential to improve the current situation with some policy, protocol or enforcement recommendations. The problem appears to be really more related to volume rather than circulation related. Basically, there are probably more parents transporting their children to school than necessary, given the proximity of homes and the available pedestrian 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).

Given the small size of the school zone, there are many opportunities to connect neighborhoods to Buck Lake Elementary School. And while there are many streets without sidewalks, most of these streets are internal residential subdivision streets with low-volume traffic. Most can be navigated by walkers and bicyclists with a fair amount of ease. Still, parents are apprehensive primarily with regard to potentially speeding vehicles along Buck Lake Road and Pedrick Road. There are 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 Buck Lake Elementary School. They include both on- and off-site improvements as follows:

Buck Lake Elementary School On- and Off-Site Recommendations

	Improvement: On-Site	Location	From	To	Geography	Direction	Length	Comments
A1	Extend Canopy	Parent Pick-Up/Drop-Off	N/A		N/A	N/A	N/A	
A2	Paint Lane Divider	School Bus Zone	N/A		N/A	N/A	N/A	

	Improvement: Off-Site	Location	From	To	Geography	Direction	Length	Comments
B1	New sidewalk	Nabb Road	Approx. 500' South of Rich Farm Road	Buck Lake Road	East side of Nabb Road	N-S	Approx. 1,235 feet	County programmed for construction FY 15
B2	New Striped Crosswalk (with signage)	Buck Lake Road	At Nabb Road		East side of Nabb Road	N-S	N/A	In conjunction with B1

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

On-Site Recommendations

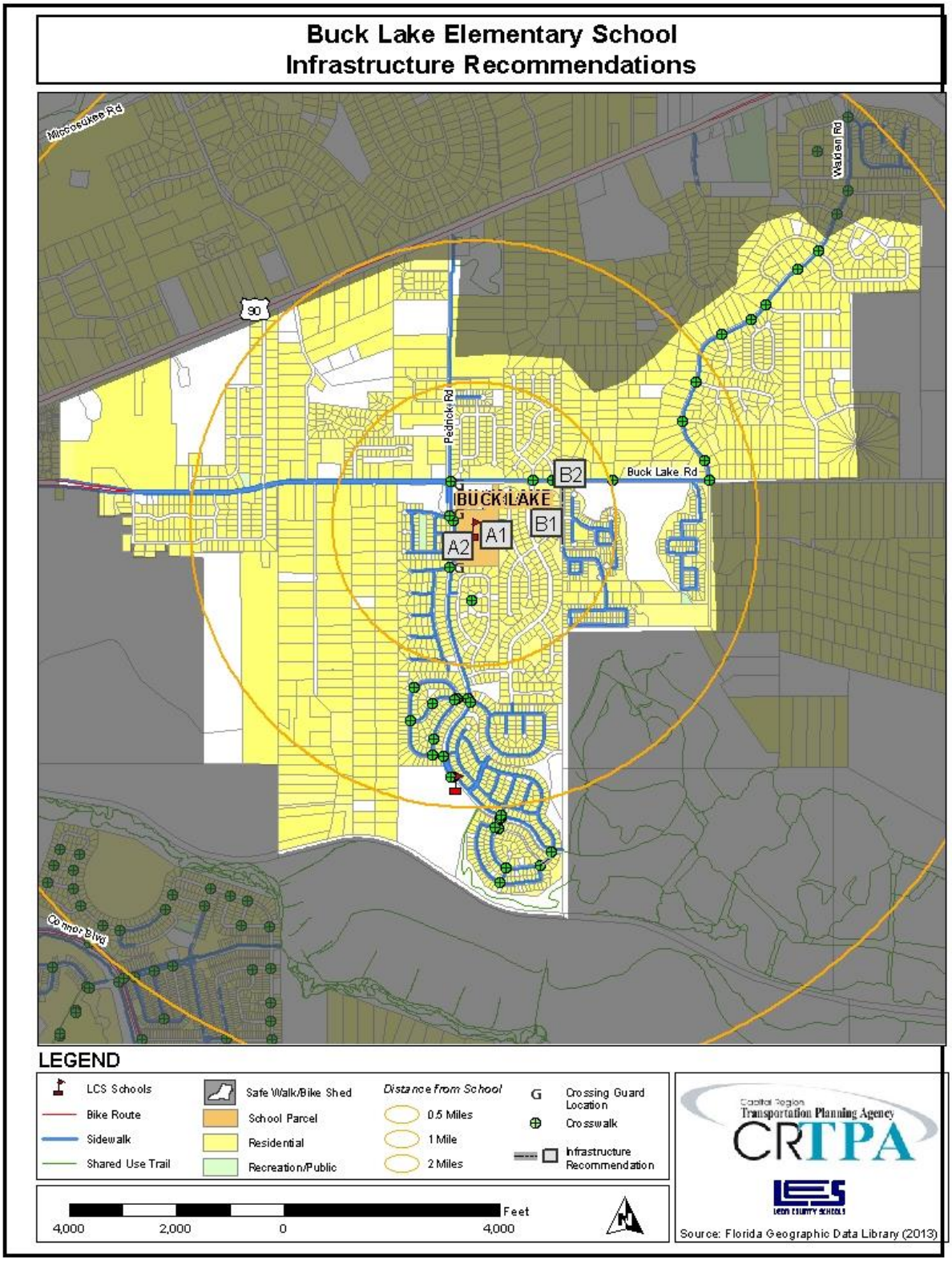
A1) Extend Canopy – There are two available lanes for automobile pick-ups/drop-offs. Currently, the canopy only partially extends over the inner lane. The canopy should be extended out to cover the second lane to help facilitate quicker arrivals/dismissals during times of inclement weather.

A2) Paint Lane Divider – To reduce conflicts between school buses and after-school day care vans, a divider line should be painted in the school bus zone to create two travel lanes.

Off-Site Recommendations

B1) New sidewalk along the east side of Nabb Road from approximately 500' south of Rich Farm Road to Buck Lake Road. There is existing sidewalk infrastructure available along the southern portion of Nabb Road. This new sidewalk will help provide an uninterrupted connection from the Nabb Road residences to the school.

B2) New striped crosswalk **(In conjunction with B1)** with signage on Buck Lake Road at the intersection of Nabb Road to assist those commuting to/from the Nabb Road residences.


Buck Lake Elementary School
Infrastructure Recommendations
Mossy Oak Rd
Warren Rd
90
Pedrick Rd
Buck Lake Rd
BUCK LAKE
B2
B1
A1
A2
Conner Blvd
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
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, such as the two currently designated Park-and Walks, then walk to school from the lots.

C2) Bicycle safety and accessibility workshop – Organize and hold a workshop or a bike rodeo that demonstrates bicycle safety topics, catered to younger children, such as bicycle hand signals, how to properly wear a bicycle helmet, and properly obeying traffic signs/signals. Parents and students should be reminded that under Florida Law, anyone under the age of 16 must wear a bicycle helmet. An on-campus bicycle obstacle course that covers skills such as avoiding obstacles, balancing at slow speeds, turning, and making emergency stops can be very helpful for young riders. Additionally, a group bicycle ride, through the neighborhoods 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.

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 in the parking lot, releasing them 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.

C4) Additional Crossing Guard – (**In conjunction with B1 and B2)** While the school has three existing crossing guard locations, an additional crossing guard at the intersection of Buck Lake Road & Nabb Road would assist those traveling to/from the Nabb Road residences. Buck Lake Road is a fairly well-traveled roadway and with a speed limit of 45mph it can be extremely difficult and intimidating for students to cross without assistance.

Policies

D1) Bike check and security – School policies to encourage bicycle riding could include having a school official or parent volunteer at the bike racks 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. Additionally, the school should remind students not to park their bicycles along school fences but instead use the provided bicycle racks which will be more secure and deter theft or damage to the bicycles.

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 Buck Lake Road, but please do not block street intersections.
- 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.

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 Buck Lake Road, but please do not block street intersections.
- 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 out front. Do not park in the parent drop-off/pick-up zone as this will delay others trying to pick-up their children.

D3) Reevaluate existing shuttle bus policy – Due to construction reasons, a shuttle bus was created for students living south of the school. Students are currently picked up along Pedrick Road at Devonshire Drive as well as at Sioux Drive. While construction was completed, students are still

being shuttled to/from school. Parents and students may enjoy the convenience of the shuttle bus but given the distance (less than one mile) and the available pedestrian infrastructure along Pedrick Road this policy should be reevaluated to see if it is indeed still necessary. If not, there is an opportunity for more student, approximately 50 use the shuttle, to walk or bike to school.

D4) Reevaluate Buck Lake Road School Zone Designation (**In conjunction with B1 and B2) –** Currently, the school zone in place along Buck Lake Road extends approximately 350' east of the Buck Lake Road & Pedrick Road intersection. It does not include the parent pick-up/drop-off driveway even though it is located along Buck Lake Road. With the Recommendations B1 and B2, there is the potential for more students walking and bicycling along Buck Lake Road to and from school. Thus, with the construction of the suggested new sidewalk and crosswalk, there should be some consideration in extending the current designated school zone further east along Buck Lake Road.

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

[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

It is fairly easy to walk or bicycle to and from Buck Lake Elementary School within a relative distance. The school is located along and accessible from Pedrick Road. Additionally, there is bike/ped access available via Squire Trail. Residences near the school include low volume streets that allow safe, convenient non-motorized travel. While approximately 15% of students commute to and from school by walking, and another 3% commute by bicycle, these percentages are fairly low considering the small size of the school zone and the proximity of residences.

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 along Buck Lake Road as well as Pedrick Road. Parents indicated that factors such as accompanying children (by themselves, with other parents, or with other children), enforcing speed limits in school zones, and having a greater adult presence along routes to school would influence their decision to allow their child to walk or bike to school.

More complicated are methods of convenience. A shuttle bus, started for construction reasons, is still transporting students to and from school despite the completion of construction. The pick-up/drop-off locations are less than one mile from the school and there is pedestrian infrastructure available along Pedrick Road directly to the school. With parents naturally concerned with their children's safety, perhaps larger groups of children/parents walking and or biking together would increase non-motorized commute rates for those students currently using the shuttle bus.

Finally, there are proven health benefits to children riding and bicycling to school. Besides the obvious physical fitness benefits, it has been shown that children who walk and bike to school are more alert and comprehensive in their daily learning. This is another point of education that is beneficial for parents and educators to know.

Buck Lake Elementary School has most of the physical elements to improve non-motorized commutes to and from school such as pedestrian infrastructure and crosswalks throughout the school zone. There are, however, a few opportunities to improve walking and bicycling as well as expediting school bus/automobile pick-ups and drop-offs, as laid out in the recommendations.

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.

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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-nine classrooms participated in the survey for a total of 636 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	29
Total Students Surveyed (K-5th)	636
Total K-2nd Students Surveyed	278
Total 3rd-5th Students Surveyed	358

Walking and Bicycling

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

Walking and Bicycling School-Wide Travel Patterns

The school-wide student travel surveys indicate that the walk-to-school average for a typical week ranges from 13% to 17%, with an overall average of 15%. Overall, the bike-to-school average for a typical week ranges from 2% to 3%, with an overall average of 3%. Of the students that bike to school, an overall average of 89% wore a bicycle helmet. The survey indicates that, in total, close to one-in-five students either walk or bike to school in an average week. The combined walk-bike average for the week ranged from 15% to 20%, with an overall average of 18%.

SUMMARY OF WALKING AND BICYCLE SCHOOL-WIDE TRAVEL PATTERNS

	Walk	Bicycle	Helmet Use	Total Walk + Bike
Average Overall	15 %	3 %	89 %	18 %
Highest Day	17 %	3 %	95%	20 %
Lowest Day	13 %	2 %	79 %	15 %

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

The younger-aged (K-2nd) student travel surveys indicate that the walk-to-school average for a typical week ranges from 10 % to 13%, with an overall average of 12%. Overall, the bike-to-school average for a typical week ranges from 1% to 3%, with an overall average of 2%. Of the students that bike to school, an overall average of 96% wore a bicycle helmet. In total, the combined walk-bike average for the week ranged from 13% to 15%, with an overall average of 14%.

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

	Walk	Bicycle	Helmet Use	Total Walk + Bike
Average Overall	12 %	2 %	96 %	14 %
Highest Day	13 %	3 %	100%	15 %
Lowest Day	10 %	1 %	80%	13 %

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

The older-aged (3rd-5th) student travel surveys indicate that the walk-to-school average for a typical week ranges from 15 % to 21%, with an overall average of 17%. Overall, the bike-to-school average for a typical week ranges from 3% to 5%, with an overall average of 3%. Of the students that bike to school, an overall average of 86% wore a bicycle helmet. In total, the combined walk-bike average for the week ranged from 18% to 24%, with an overall average of 21%.

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

	Walk	Bicycle	Helmet Use	Total Walk + Bike
Average Overall	17 %	3 %	86 %	21 %
Highest Day	21 %	5 %	91 %	24 %
Lowest Day	15 %	3 %	73 %	18 %

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.

[3] Includes one K-3rd class and one K-5th class

Bus and Automobile School-Wide Travel Patterns

The school-wide travel surveys indicate that the automobile-to-school average for a typical week ranges from 73% to 79%, with an overall average of 76%. 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 6% to 7%, with an overall average of 6%. None of the students surveyed reported riding a public bus to school. (To note, there are no public buses or bus stops 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	76 %	92 %	6 %	0 %
Highest Day	79 %	93 %	7 %	0 %
Lowest Day	73 %	90 %	6 %	0 %

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

The younger-aged (K-2nd) student travel surveys indicate that the automobile-to-school average for a typical week ranges from 82% to 86%, with an overall average of 84%. 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 1% to 3%, with an overall average of 2%. None of the younger-aged students surveyed reported 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	84 %	92 %	2 %	0 %
Highest Day	86 %	94 %	3 %	0 %
Lowest Day	82 %	89 %	1 %	0 %

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

The older-aged (3rd-5th) student travel surveys indicate that the automobile-to-school average for a typical week ranges from 65% to 73%, with an overall average of 70%. 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 9% to 10%, with an overall average of 10%. None of the older-aged students surveyed reported riding a public bus to school.

SUMMARY OF OLDER-AGED CHILDREN BUS & AUTOMOBILE DROP-OFF TRAVEL PATTERNS (3rd-5th)[4]

	Automobile	Seat Belt	School Bus	Public Bus
Average Overall	70 %	92 %	10 %	0 %
Highest Day	73 %	93 %	10 %	0 %
Lowest Day	65 %	90 %	9 %	0 %

[4] Includes one K-3rd class and one K-5th class

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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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 247 parent surveys returned. Of those, 190 (77%) claimed to reside within the theoretical two-mile walk/bike radius of the school. Surveys from families residing within the theoretical two-mile walk/bike radius were split nearly 50/50 by grade level grouping, with 94 students representing Kindergarten through 2nd Grade, and 96 students representing 3rd Grade through 5th Grade.

SUMMARY OF PARENT SURVEY PARTICIPATION

Total Enrollment	761
Total Number of Parent Surveys	247
Total Number within 2 Miles (K-2nd Grade)	94
Total Number within 2 Miles (3rd-5th Grades)	96
Percentage of Surveys within 2 Miles	77 %

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	71 %
Walk	18 %
Bicycle	7 %
School Bus	4 %
Public Bus	0 %
Other	0 %
Afternoon	
Car	56 %
Walk	16 %
School Bus	12 %
Other	8 %
Bicycle	7 %
Public Bus	1 %

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

The surveys of parents of younger-aged (K-2nd grade) indicate that the school bus-to-school average for a typical week is 1% in the morning and 12% in the afternoon. The car-to-school average for a typical week is 79% in the morning and decreases to 61% in the afternoon. The walk-to-school and bike-to-school averages for a typical week are 14% and 6% in the morning and 11% and 4% in the afternoon, respectively. None of the students ride a public bus in the morning. However, approximately 1% rides a public bus in the afternoon. Also, none of the students use an alternative commute mode in the morning, while 11% use an alternative commute mode in the afternoon.

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

Morning	Average Overall
Car	79 %
Walk	14 %
Bicycle	6 %
School Bus	1 %
Public Bus	0 %
Other	0 %
Afternoon	
Car	61 %
School Bus	12 %
Walk	11 %
Other	11 %
Bicycle	4 %
Public Bus	1 %

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

The surveys of parents of older-aged (3rd-5th grade) indicate that the school bus-to-school average for a typical week is 6% in the morning and increases to 11% in the afternoon. The car-to-school average for a typical week is 63% in the morning and decreases to 52% in the afternoon. The walk-to-school and bike-to-school averages for a typical week are 22% and 8% in the morning and 22% and 9% in the afternoon, respectively. None of the students ride a public bus in the morning or afternoon. Also, none of the students use an alternative commute mode in the morning. However, 4% use an alternative commute mode in the afternoon.

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

Morning	Average Overall
Car	63 %
Walk	22 %
Bicycle	8 %
School Bus	6 %
Public Bus	0 %
Other	0 %
Afternoon	
Car	52 %
Walk	22 %
School Bus	11 %
Bicycle	9 %
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 neighborhood safety concerns expressed by survey respondents.

SUMMARY OF TOP RANKING NEIGHBORHOOD SAFETY CONCERNS

Neighborhood Safety Concern	Number of Comments
Issues with sidewalks	53
Speeding Vehicles	44
Issues with parent pick-up/drop-off area of school	24

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 sidewalks, speeding vehicles, and issues with the parent pick-up/drop off area of the school. There were approximately 27 comments of concern regarding issues with sidewalks. General concerns include the lack of sidewalks on both sides of streets, broken/uneven sidewalks, and that sidewalks are too narrow and too close to traffic. Additionally, parents noted that some of the sidewalks flood during bad storms and on other sidewalks shrubbery interferes with the sidewalk. Specific

locations where sidewalks tend to be a problem are near the intersection of Buck Lake Road and Pedrick Road, Avondale Way, and Nabb Road. Additionally, there were approximately 22 comments of concern regarding speeding vehicles. Specific locations where high-speed vehicles tend to be a problem are Pedrick Road, Buck Lake Road, and Walden Road. Parents mention vehicles speeding in school zones and that traffic moves too fast along paths with sidewalks. Lastly, there were 13 comments of concern regarding the parent pick-up/drop-off area of the school. General concerns include the congestion of cars creating long lines and blocking traffic and parents using the nearby neighborhoods as unofficial pick-up/drop-off areas. Some parents also mentioned needing more supervision of students being dropped-off to keep the line moving and that children should be dropped off in the front of school instead of the back.

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

Neighborhood Safety Concern	Number of Comments
Issues with sidewalks	27
Speeding Vehicles	22
Issues with parent pick-up/drop-off area of school	13

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 sidewalks, speeding vehicles, and issues with the parent pick-up/drop off area of the school. There were approximately 26 comments of concern regarding issues with sidewalks. General concerns include the lack of sidewalks on both sides of streets, broken/uneven sidewalks, and that sidewalks are too narrow and too close to traffic. Additionally, some parents noted that shrubbery interferes with some sidewalks and that some sidewalks need curbs. Additionally, there were approximately 22 comments of concern regarding speeding vehicles. Specific locations where high-speed vehicles tend to be a problem are Pedrick Road, Buck Lake Road, and Nabb Road. Parents also mention vehicles speeding in school zones, drop-off areas, and the school parking lot. Lastly, there were 11 comments of concern regarding the parent pick-up/drop-off area of the school. General concerns include unofficial pick-up/drop-off areas and the difficulty of turning left onto Buck Lake Road after a student drop-off. Parents also mentioned that children should be dropped off in the front of school instead of the back.

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

Neighborhood Safety Concern	Number of Comments
Issues with sidewalks	26
Speeding Vehicles	22
Issues with parent pick-up/drop-off area of school	11

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

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

Summary of Influential Factors

Influential factors such as accompanying children (by themselves, with other parents, or with other children), enforcing speed limits in school zones, and having a greater adult presence along routes to school were mutually agreed upon by parents from both Kindergarten through 2nd and 3rd through 5th. However, parents of younger-aged children showed more concern with bicycle/pedestrian pathways that were separated from traffic while parents of older-aged children showed more concern with bicycle/pedestrian pathways that were continuous from their neighborhood to school.

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		*5*	*5*	*15*	*18*	*119*	10
#2 Speed limits were strictly enforced in school speed zones		*10*	*6*	*20*	*20*	*88*	21
#3 There was a greater adult presence of parent volunteers or police officers along walk routes to school.		*9*	*3*	*16*	*33*	*83*	21
#4 Accompanied by other children		*14*	*4*	*24*	*25*	*81*	17
#5There were continuous sidewalks or bike paths from my neighborhood to school.		*5*	*1*	*8*	*9*	*44*	20
#6There were bicycle/pedestrian pathways separated from traffic from the neighborhood to the school		*3*	*4*	*6*	*8*	*41*	16

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, or other children), enforcing speed limits in school zones, having separate bicycle/pedestrian pathways from traffic, 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*	*1*	*4*	*8*	*63*	3
#2 Speed limits were strictly enforced in school speed zones		*5*	*5*	*11*	*8*	*42*	7
#3 There were bicycle/pedestrian pathways separated from traffic from the neighborhood to the school		*3*	*4*	*6*	*8*	*41*	16
#4 There was a greater adult presence of parent volunteers or police officers along walk routes to school.		*4*	*2*	*5*	*17*	*39*	10
#5 Accompanied by other children		*6*	*1*	*16*	*7*	*39*	7

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), enforcing speed limits in school zones, having continuous bicycle/pedestrian pathways, and having a greater adult presence along routes to school.

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		*3*	*4*	*11*	*10*	*56*	7
#2 Speed limits were strictly enforced in school speed zones		*5*	*1*	*9*	*12*	*46*	14
#3 There were continuous sidewalks or bike paths from my neighborhood to school.		*5*	*1*	*8*	*9*	*44*	20
#3 There was a greater adult presence of parent volunteers or police officers along walk routes to school.		*5*	*1*	*11*	*16*	*44*	11
#4 Accompanied by other children		*8*	*3*	*8*	*18*	*42*	10