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Waugh Chapel Elementary School Safe Routes to School Accessibility Study: Existing Conditions and Recommendations

August 17, 2023

Anne Arundel Safe Routes to School Accessibility Study

Anne Arundel County (AACO) and Anne Arundel County Public Schools (AACPS) recognize that schools are vital community resources. To improve safety and transportation choices for all residents, the County and school district partnered to conduct a Safe Routes to School Accessibility Study at 17 schools identified in *Move Anne Arundel!*, the County's Transportation Functional Master Plan.

The studies were overseen by a Project Management Team consisting of County, State and School District representatives. They focused on infrastructure within the school walk zone but also assessed opportunities within the school attendance area to expand active transportation to school.

Studies were conducted October 24, 2022 through February 8, 2023, and included one-day site visits to observe school arrival and dismissal and to assess existing walking and bicycling infrastructure. Surveys were also conducted to assess travel modes and barriers to walking or bicycling to and from school.

This report summarizes existing conditions and recommendations for added infrastructure, education, or encouragement programs to increase the number of children that could safely walk or ride bikes to school.

Waugh Chapel Elementary Accessibility Study

Report findings are derived from:

School site visits	• Observation of school arrival and dismissal conducted October 27, 2022 • Assessment of pedestrian and bicycling infrastructure within the current school walk zone and roads immediately adjacent (as connectivity allows) conducted October 27, 2022
Parent Survey	• Administered January 26 – February 19, 2023 • Available online in English, Spanish, Chinese, and Korean • Survey link was provided via email

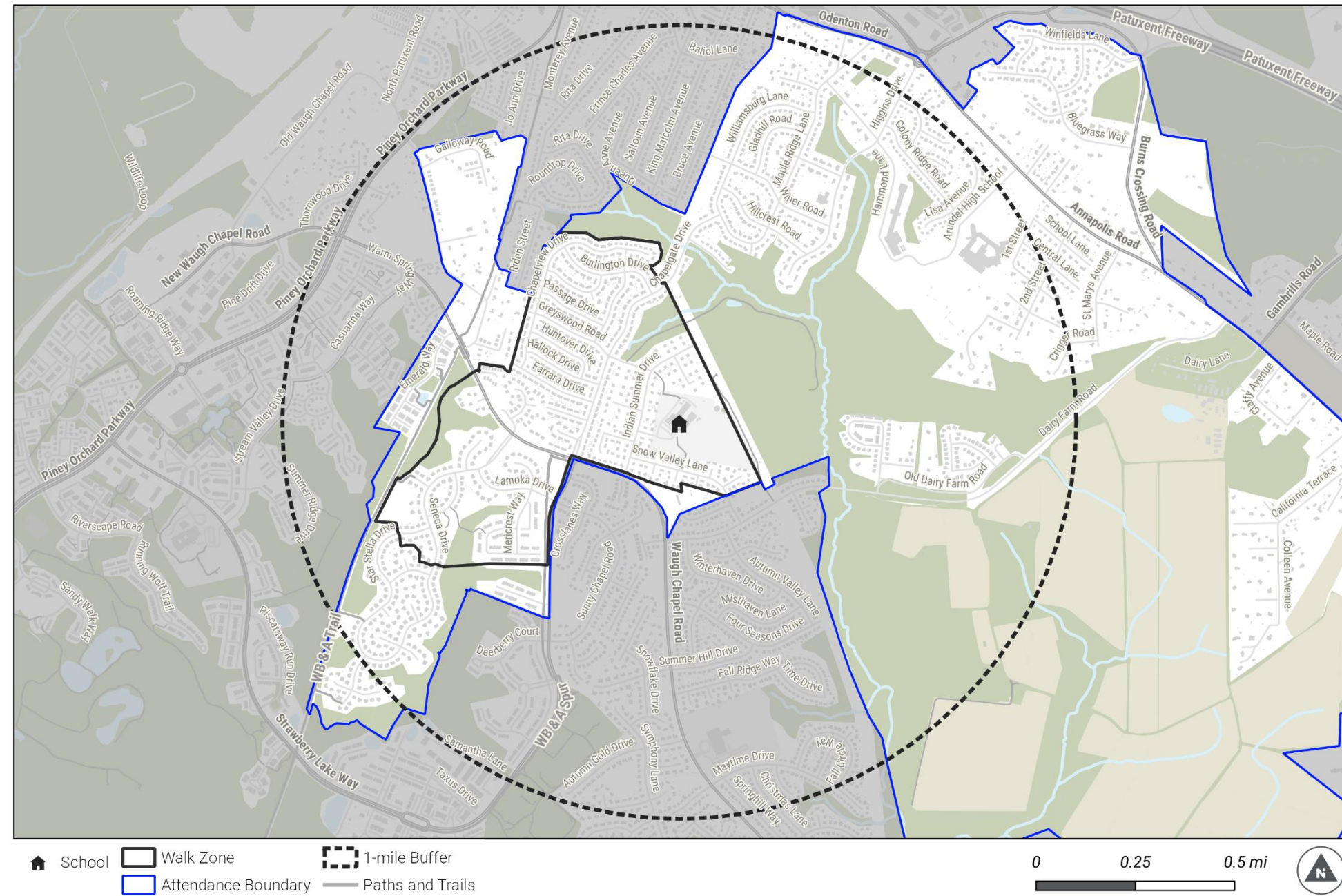
Recommendations were shared with the school community during a virtual open house in October 2023.

SCHOOL OVERVIEW

Study Area

- Field work was conducted on roads within a half mile of the school; desk-level review was conducted on roads within a one-mile radius of the school that fall within the school attendance area.
- Opportunities to expand school connectivity for pedestrians and bicyclists beyond the existing walk zone are limited.
 - Attendance areas to the north and east are separated from the school by Odenton Natural Area.
 - Residential areas to the south are outside of the attendance area.
 - Attendance areas to the west are separated by private property or wooded areas and are approaching a 1-mile walk distance via Waugh Chapel Road.

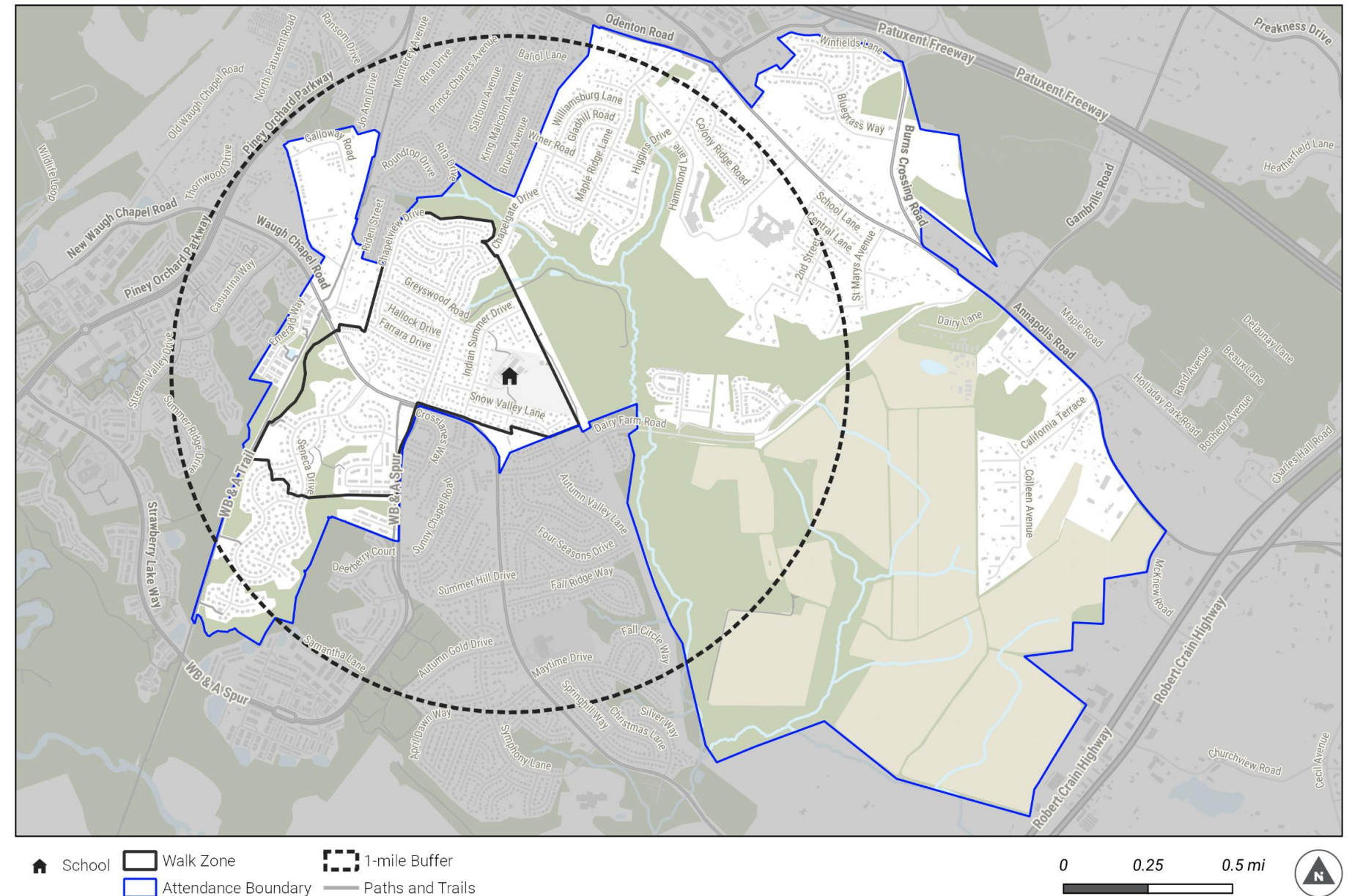
Waugh Chapel Elementary School - 1-mile Radius



Student Attendance Area and Enrollment

- Waugh Chapel Elementary School serves 573 students in grades PreK-5.
- 49.6% of students are registered for bus transportation*

Waugh Chapel Elementary School - Attendance Boundary



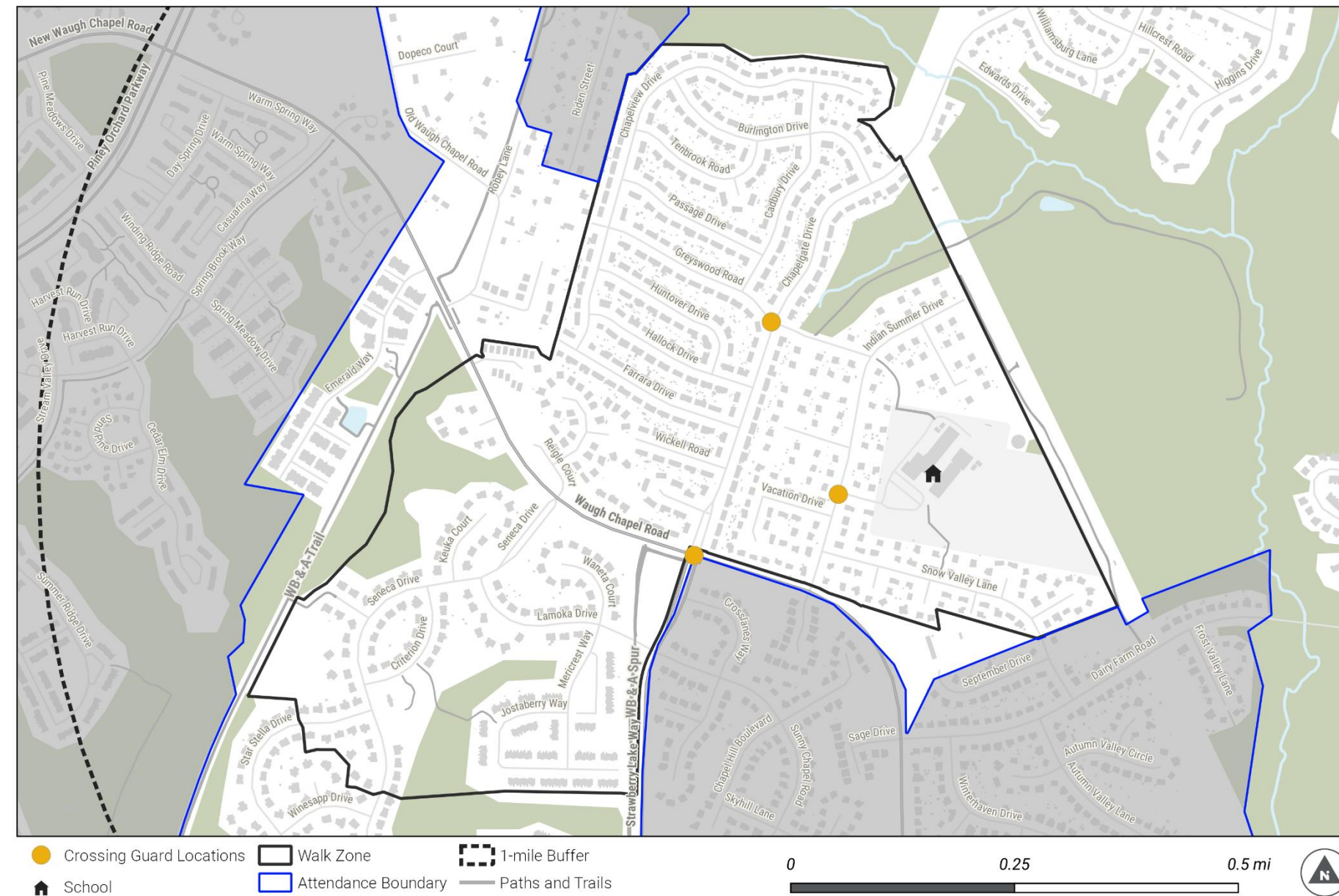
*AACPS provides transportation from designated bus stops for students who reside within the school's attendance area. At elementary schools, transportation is provided for Pre-K students who live more than ½ mile from school, Kindergarten students who live more than ½ mile from school, and students of all other grades who live more than one mile from school.

Source: AACPS 2022-2023 Parent Handbook

School Location and Layout

- Waugh Chapel Elementary School is located at Sunflower Drive and Indian Summer Drive, just off Waugh Chapel Road in Odenton, MD.
- The school is located within a residential neighborhood, surrounded by housing on the North, West, and South. The east side of the school campus abuts a utility ROW and Odenton Natural Area.
- The neighborhood contains a combination of single and multifamily housing, with many interconnected cul-de-sac streets.
- Other neighborhoods within the walk zone are characterized by single family housing.
- Indian Summer Drive is a neighborhood street with a posted speed limit of 25 mph.

Waugh Chapel Elementary School - Walk Zone



School Access

Walkers and Bicyclists:

- Walkers and bicyclists access the school via Sunflower Drive, a path on the north end of the school property connecting to Indian Summer Drive, a path on the southern end of the school property connecting to Snow Valley Lane, and informal paths connecting to both Lea Court and Grand Court.

Buses:

- Buses access the school via Sunflower Drive and deboard/board in the outer driveway loop in front of the school's main entrance.

Parent/Guardian Drop-Off:

- Parents/guardians are to drop-off students via a vehicle drop-off line that runs through the inner driveway loop in front of the school's main entrance. Pavement markings direct drivers.

Staff Vehicles:

- Staff who drive access the school via Sunflower Drive and park in a staff parking lot to the west of the school.



PARENT-REPORTED STUDENT TRAVEL MODES AND BARRIERS

Waugh Chapel Elementary - Parent Survey Response Overview

- 68 total survey responses received*
- 96% of respondents live in the area zoned to the school

Reported Distance from Home to School	
Distance	Number of Respondents
< ¼ mile	10
¼ mile – ½ mile	12
½ mile – 1 mile	11
1 mile – 1 ½ miles	16
>1 ½ miles	19

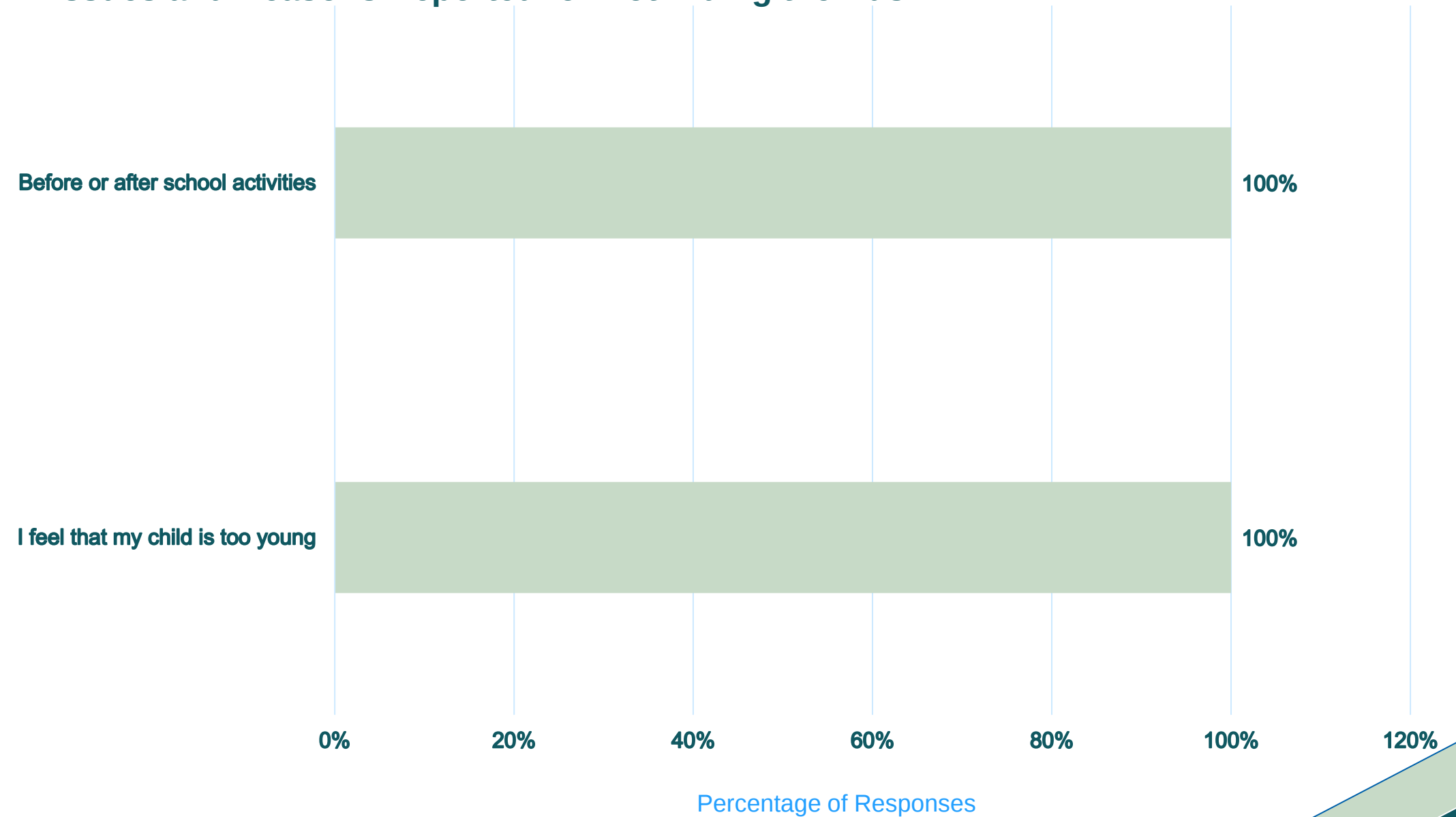
**Note that the survey response rate represents a fraction of the student population and may not reflect the experiences and perspectives of all families.*

Parent Survey Results

School Bus Eligibility and Use

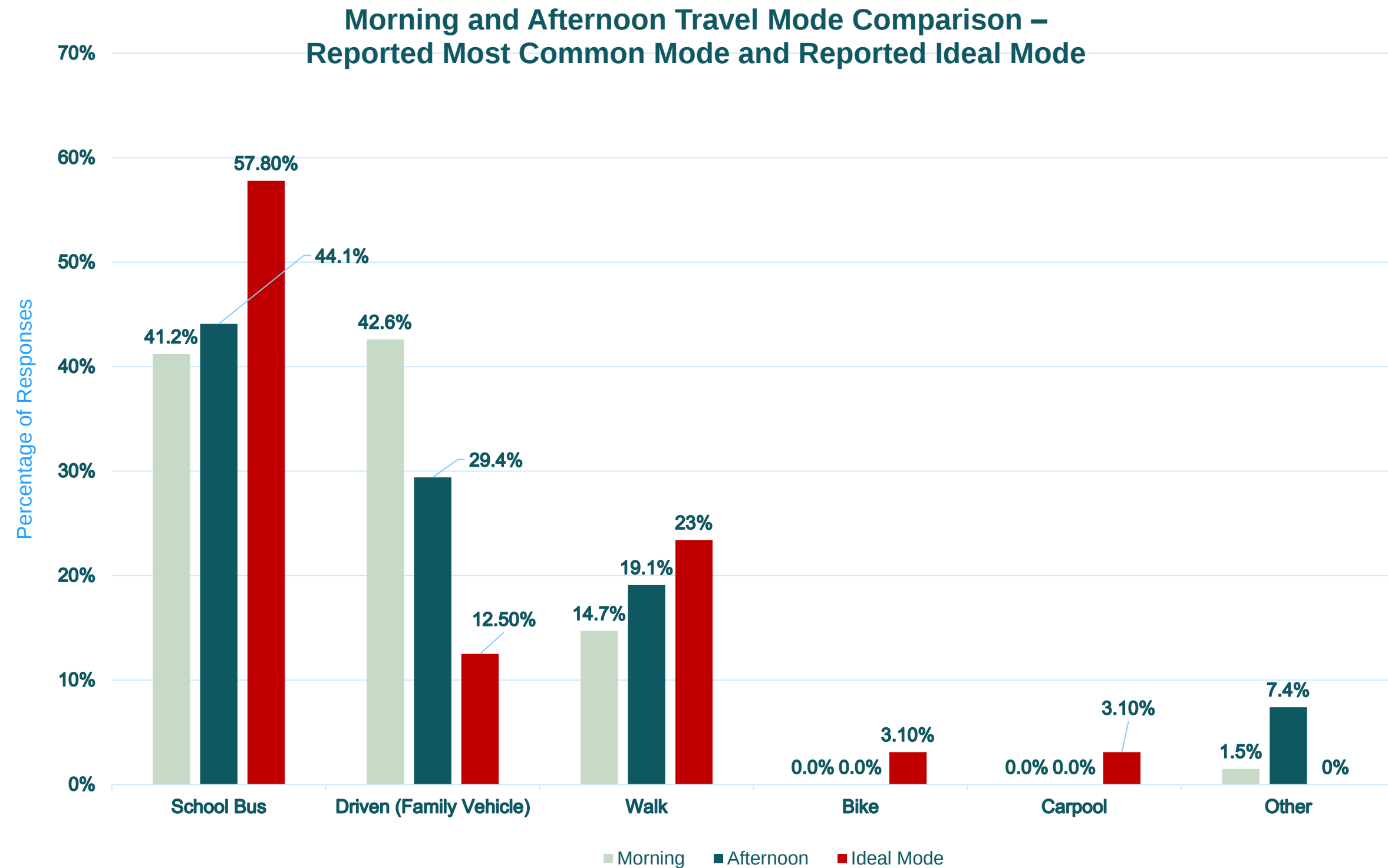
56% of respondents reported being eligible for school bus transportation;
41% reported riding the school bus to school.

Issues and Reasons Reported for Not Riding the Bus



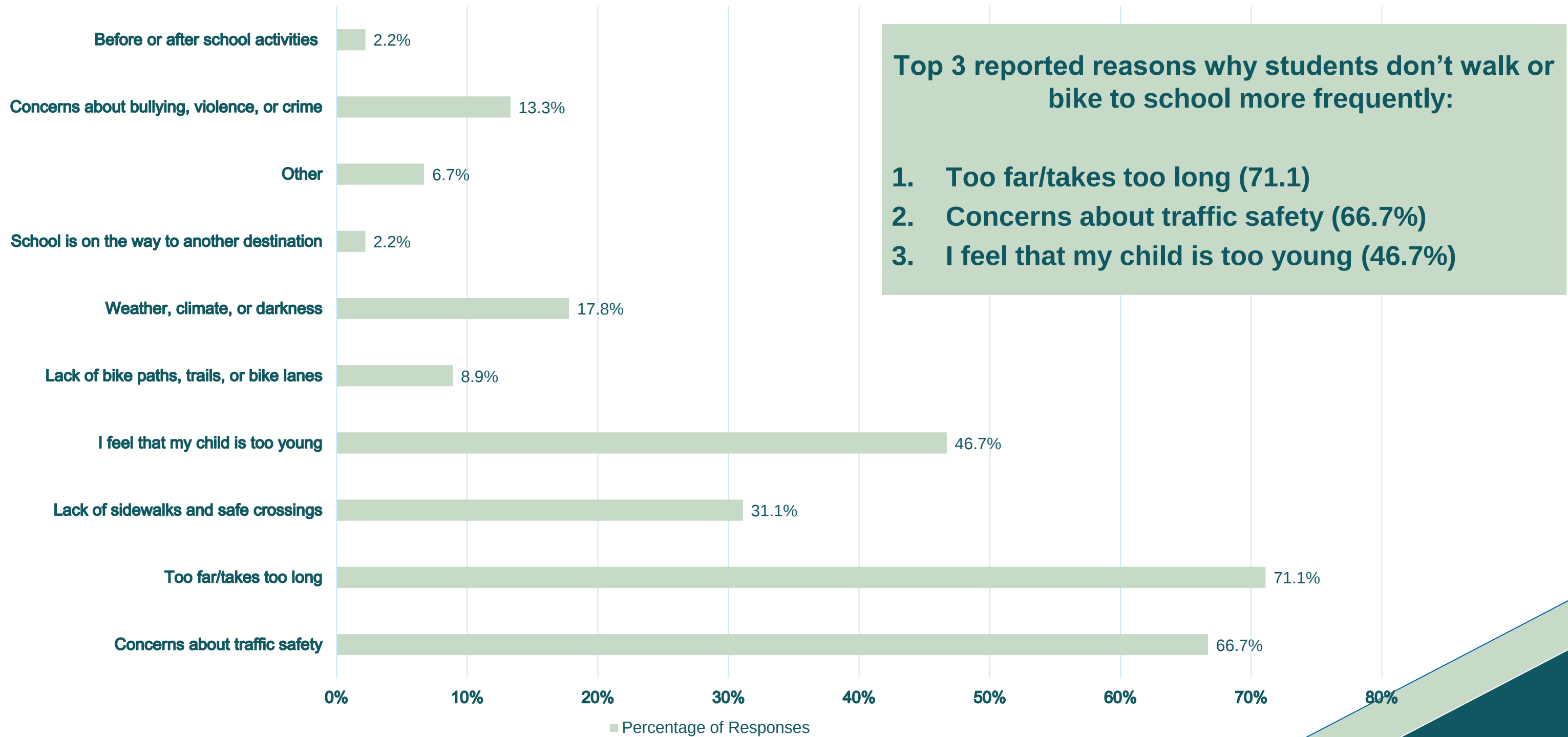
Parent Survey Results

Most Common Travel Mode versus Ideal Travel Mode



Parent Survey Results

Reported Barriers to Walking or Biking to School



Parent Survey Results

Reported Streets Used to Walk or Bike to School

- Indian Summer Drive
- Snow Valley Lane
- Sunflower Drive
- Waugh Chapel Road
- Seneca Drive
- Greyswood Road
- Strawberry Lake Way
- Mericrest Way

ARRIVAL AND DISMISSAL OBSERVATIONS

Arrival and Dismissal Operations

School Hours:

- 8:00 am – 2:25 pm

Observation Times (October 27th):

- Arrival: 7:25 am – 8:15 am
- Dismissal: 2:15 pm – 2:45 pm

Crossing Guard:

- Per AACPS data, three crossing guard locations are assigned to Waugh Chapel Elementary School; one was observed at the intersection of Indian Summer Drive and Sunflower Drive during arrival and dismissal observations.



One crossing guard is stationed in the center of the intersection of Indian Summer Drive and Sunflower Drive.

General Observations

General Observations:

- Sunflower Drive serves as the school driveway and is the singular point of access for staff, buses and vehicular parent drop off/pick up; it contains multiple residences and residential driveways.
- There is a raised crosswalk across Indian Summer Drive at the intersection with Sunflower Drive.
- Do Not Enter signs are posted on the school campus to direct vehicular traffic for student drop off and pick up
- All students enter through one of two entrances at the front of the school building.
- Many cars were seen speeding on Indian Summer Drive.



Arrival Observations

The study team observed arrival from the following locations:

- Indian Summer Drive and Sunflower Drive
- West corner of the school bus loop, near the Lea Court informal path

General Observations:

- School starts at 8:00 AM; most students arrived between 7:45 and 8:00 AM

Walkers and Bicyclists

- Approximately 135 student walkers and three bicyclists were observed during arrival. Most walkers came from Indian Summer Drive, the northern formal path, and the Lea Court informal path.
- Most students who walked were in groups, not many were accompanied by adults.
- A few parents were seen dropping their student off in Lea Court, allowing them to walk along the informal trail.



Walkers are seen coming from the sidewalk and the informal paths.

Arrival Observations

Bus Lane

- Ten buses dropped off students along the outer loop in front of the school.

Parent Drop-off

- Teachers and teacher assistants help students exit cars in the drop-off loop.
- Approximately 40-50 cars came through the drop off loop.



Teachers assisting with the car drop-off line; buses are unloading students.

Dismissal Observations

The study team observed dismissal from the following locations:

- Indian Summer Drive and Sunflower Drive
- West corner of the school bus loop, near the Lea Court informal path

General Observations:

- School ends at 2:25 PM, with most students departing between 2:25 and 2:35.
- Students exit the school through either the main entrance or the primary entrance.

Walkers and Bicyclists:

- Student walkers were dismissed last, at about 2:30 pm.
- There were noticeably more walkers than observed during arrival -approximately over 150 student walkers and 3 bikers were observed during dismissal.
- While walkers were observed on all sidewalks and paths, most (approximately 120) utilized the sidewalks and paths to the west of the school.



Walkers being dismissed for the day, heading towards Indian Summer Drive.

Dismissal Observations

Bus Lane

- Bus riders are dismissed first, and the buses depart before walkers are dismissed.
- Ten buses picked up students along the outer loop in front of the school.
- One bus was full, the rest only had about 5 students each.

Parent Pick-up

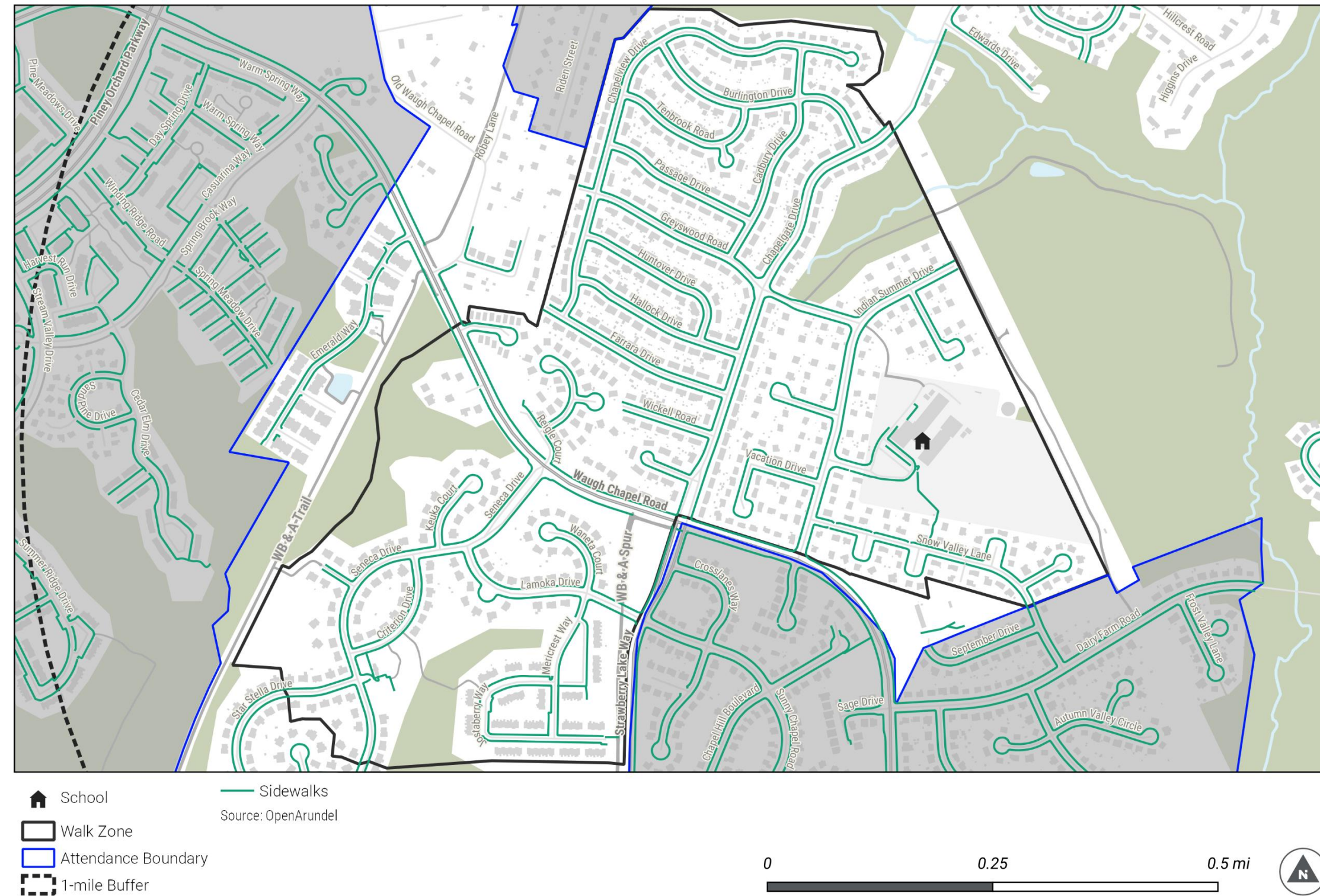
- The pick-up loop was busiest from 2:25-2:30.
- Only about 12-15 cars were observed picking up children.
- Student safety patrol members help students enter cars in the pick-up loop, as well as manage walkers crossing the crosswalk at the teacher parking lot. School staff oversee their work.

EXISTING INFRASTRUCTURE CONDITIONS

Existing Sidewalk Network

There are sidewalks present on all roads within the walk zone, with no observed gaps in the sidewalk network.

Waugh Chapel Elementary School - Existing Sidewalk Network



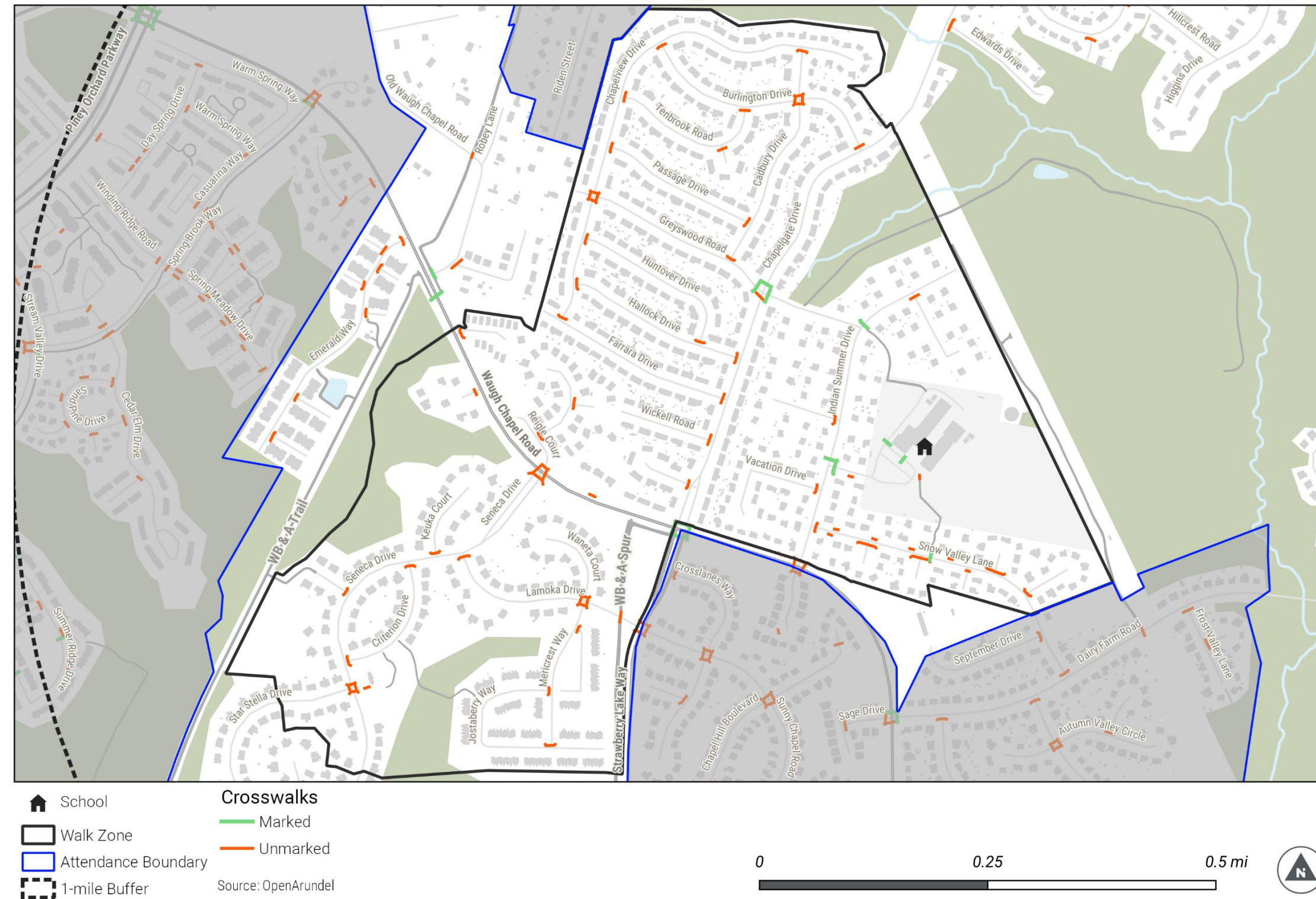
Existing Crosswalks

There are two marked crosswalks on the school campus for walkers and students exiting their cars.

There is one raised crosswalk at the intersection of Indian Summer Drive and Sunflower Drive.

Many crossings at intersections within the school walk zone are unmarked.

Waugh Chapel Elementary School - Existing Crosswalks

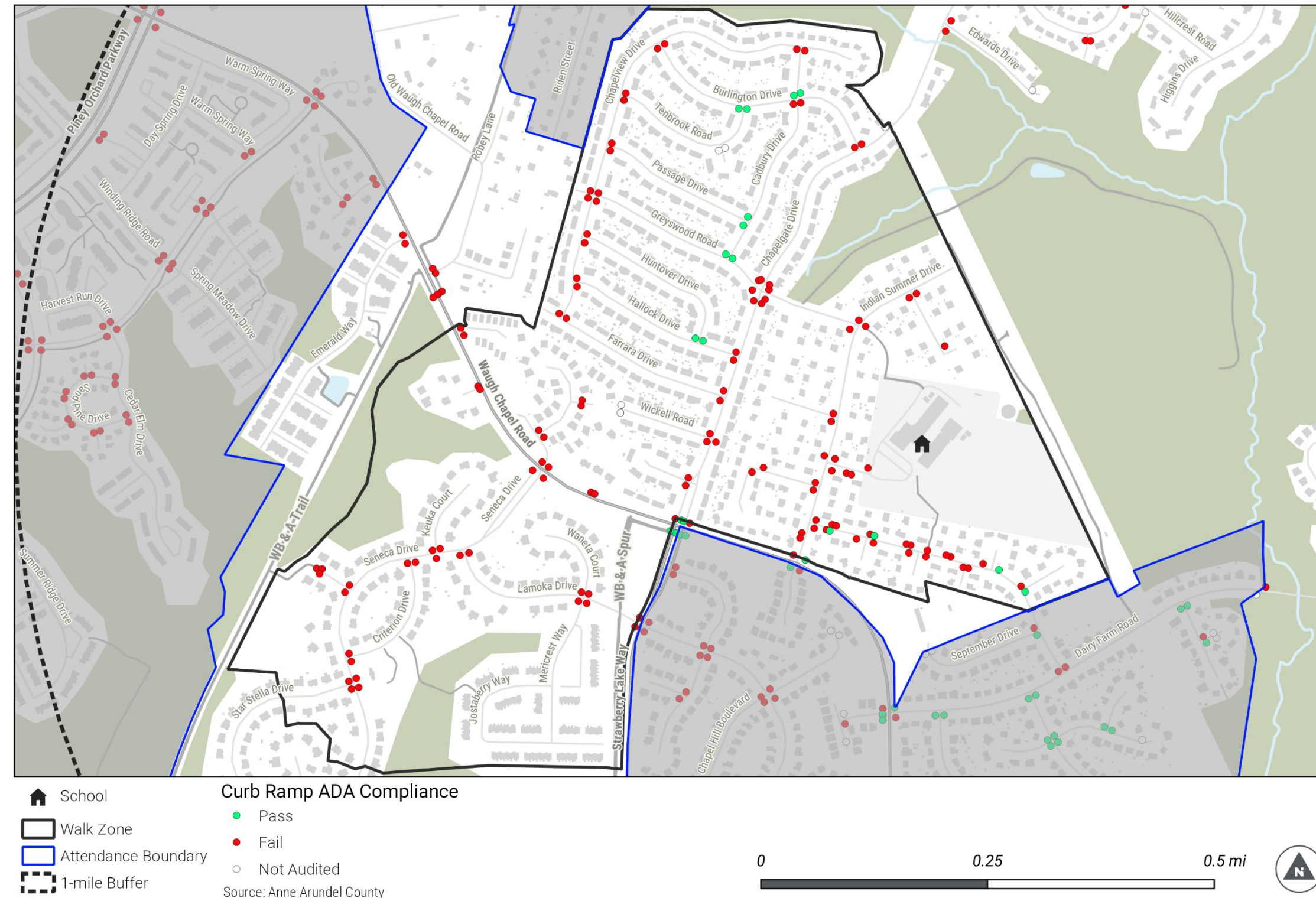


Existing Curb Ramps*

- Curb ramps are located at all intersections that have sidewalks.
- Many curb ramps lack detectable warning surfaces.

*Curb ramp data downloaded 9/14/22

Waugh Chapel Elementary School - Existing Curb Ramps



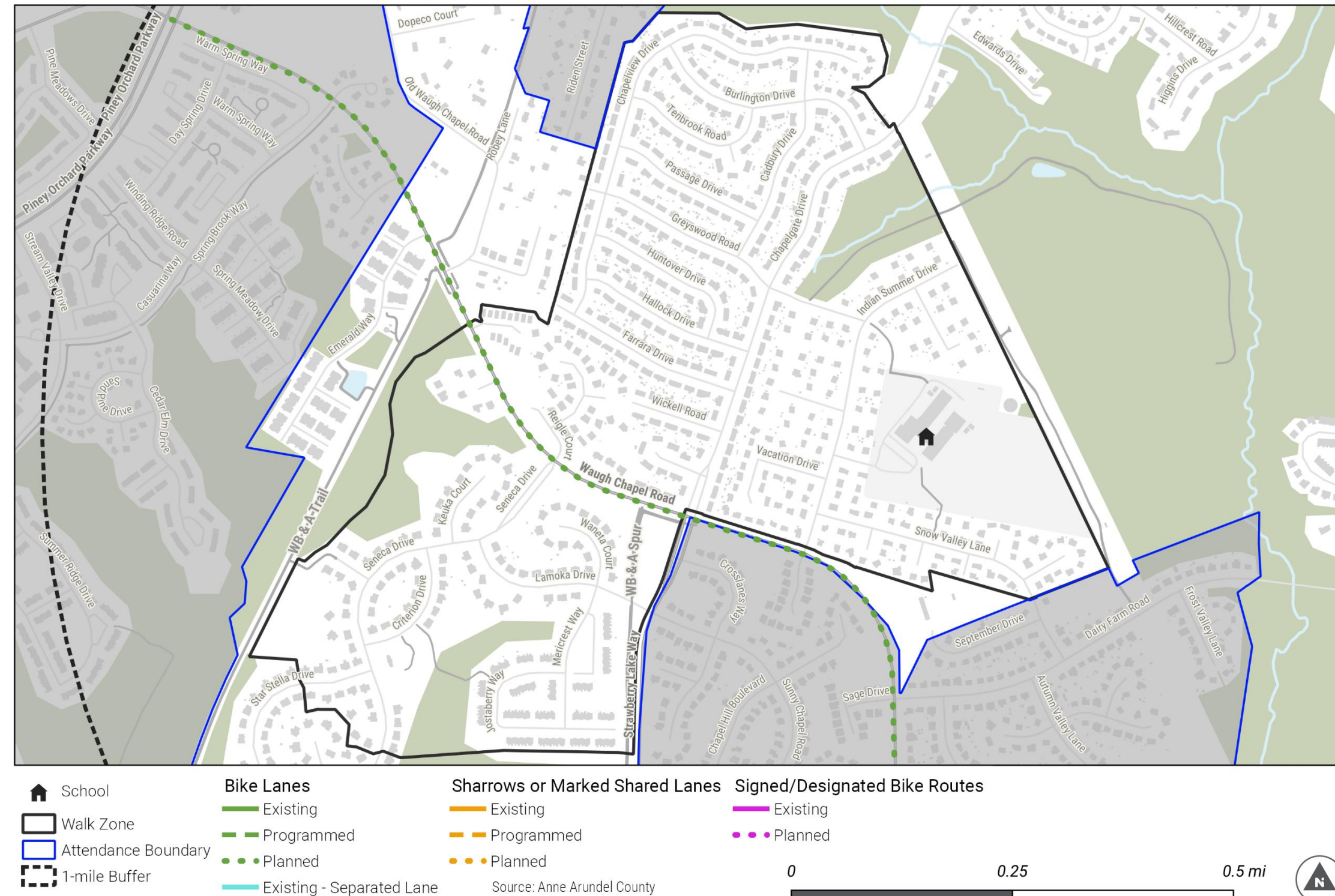
Existing On-Road Bike Facilities

No on-road bike facilities are known to exist on roads near the school.

Bicycle facilities are planned* along Waugh Chapel Road.

*“Planned” means included in the County’s Master Plan

Waugh Chapel Elementary School - Existing On-Road Bicycle Facilities



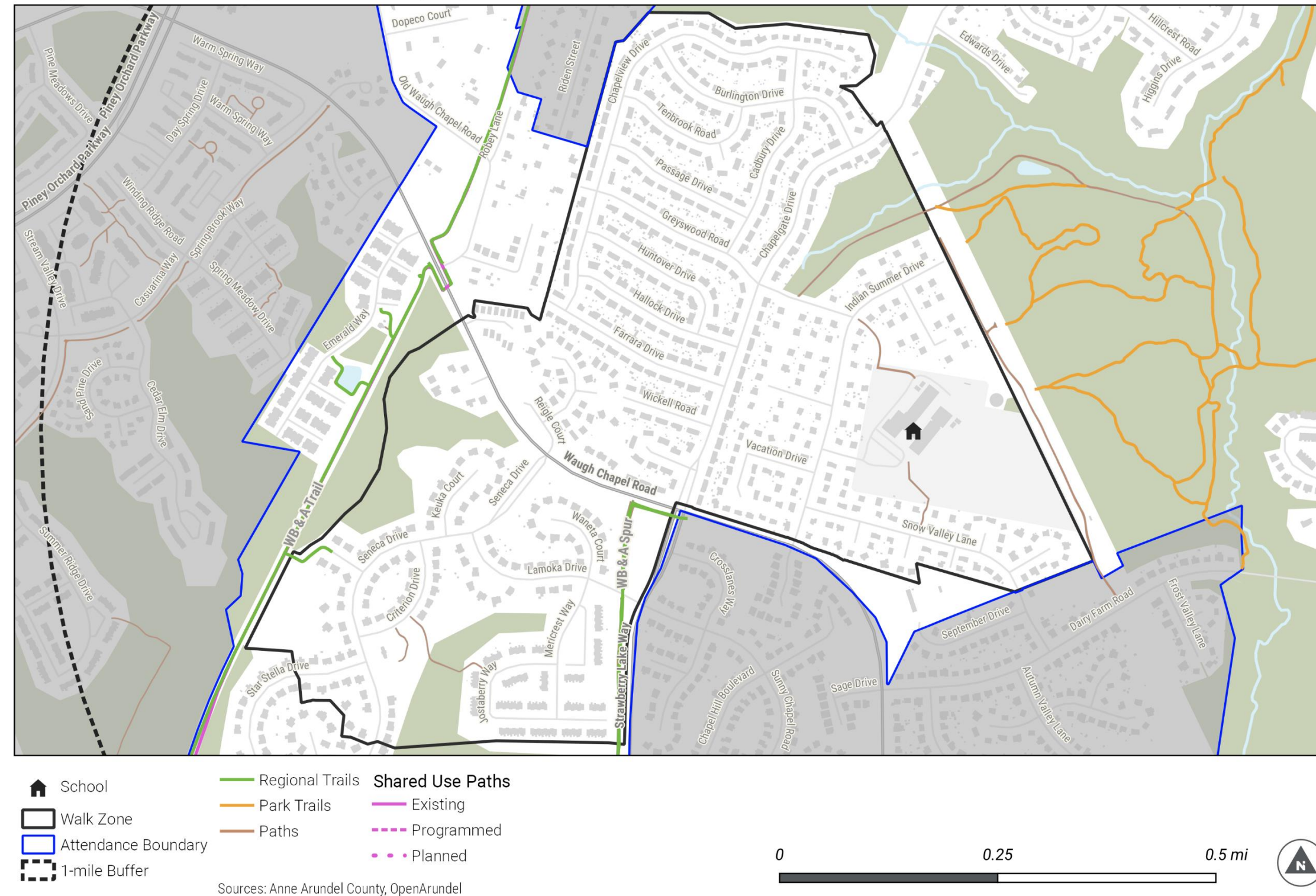
Existing Regional Trails, Park Trails, and Paths

The WB&A Trail is adjacent to the study area.

There are paved and natural park trails in the Odenton Natural Area located east of the school campus, but there is no connectivity to them from the school or nearby neighborhood streets.

There are two formal paths and two informal paths that connect the adjacent neighborhoods to the school campus.

Waugh Chapel Elementary School - Existing Regional Trails, Park Trails, and Paths



CRASH DATA

Crash Data (2017 – 2021)

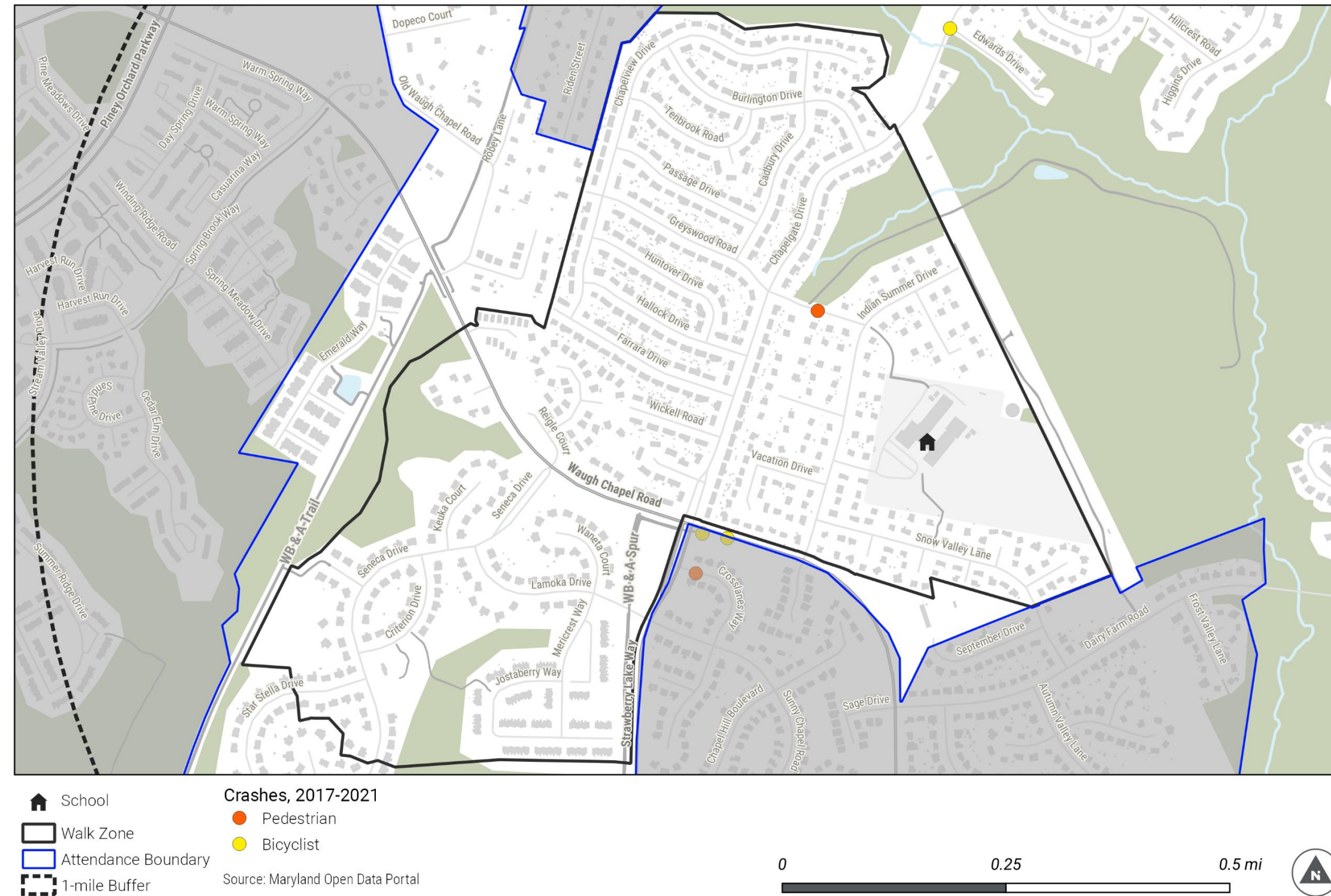
Crashes within 1-mile radius of the school:

- 251 total crashes (all modes)
- Five pedestrian-involved crashes, four resulting in injury
- Six bicyclist-involved crashes, all resulting in injury

Pedestrian and bicyclist crashes within the walk zone:

- One pedestrian-involved crash occurred in the walk zone on Greyswood Drive just west of Indian Summer Drive.

Waugh Chapel Elementary School - Pedestrian and Bicycle Crashes



INFRASTRUCTURE RECOMMENDATIONS

Infrastructure Recommendations

Safe Routes to School (SRTS) infrastructure recommendations aim to improve safety and accessibility for students to walk and bicycle to school. This may include reducing vehicle speeds, addressing conflicts between pedestrians/bicyclists and drivers, and providing fully accessible sidewalks and crossings near schools.

The following tables summarize infrastructure recommendations within and outside of the current school walk zone as relevant. Key student walking or bicycling routes were identified based on information received from school administration, parent surveys, and school observations. Key routes are noted in the recommendation “Location” field.

Other projects within the study area were identified in the County’s Capital Improvement Projects web page at the time of this plan, including the **Waugh Chapel Road Improvement Phases 1 and 2**. Note that other projects or planning/feasibility studies may be planned or ongoing within the study area. Anne Arundel County will confirm the approach to implementing recommendations from this SRTS Accessibility Study to ensure they align with other projects as necessary.

Potential costs do not include items calculated based on percent of construction items, such as mobilization, MOT, surveying, ROW/easements, design, CMI and administrative costs, and contingencies. These cannot be determined since the method of implementation for proposed improvements has not yet been confirmed.

Infrastructure Recommendations Map

Waugh Chapel Elementary School - Recommendations



- | | | | |
|---------------------|---|-----------------------|---|
| School | Spot Recommendations | Sidewalk | Segment Recommendations |
| Walk Zone | Access Management | Speed Management | Bicycle Facility |
| Attendance Boundary | Bicycle Rack | Other Recommendations | Corridor Intersection Upgrades |
| 1-mile Buffer | Intersection or Crossing | | School Zone Signs and Pavement Markings |
| Paths and Trails | School Zone Signs and Pavement Markings | | Speed Management |
| | | | Sidewalk |

Infrastructure Recommendations within the School Walk Zone

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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
1	Indian Summer Dr & Greyswood Rd (Along key student walking route, Inside the school zone)	1a. Curb ramp	All curb ramps lack detectable warning surface.	Reconstruct or repair existing ramps.	\$12,000	Medium
		1b. Crosswalk	Crossing of Greyswood Rd is unmarked, No stop bar	Mark new stop bar and install new standard crosswalk on Greyswood Rd.	\$500	Short
			Existing crosswalk across Indian Summer Dr is narrow.	Remark existing crosswalk to 10ft wide with high-visibility markings.	\$800	
		1c. Other intersection or crossing issues	Concern about motor vehicle turning speeds (turning onto Greyswood Rd).	Install curb extensions or curb radius reduction.	\$8,000	Long
			School crossing signs exist but are bent and/or hidden and not aligned with crossing.	Relocate/reinstall school crossing signs.	\$500	Short
2	Trail from school property to Knob Ct (Along key student walking route)	Sidewalk	90-degree corner raised above surrounding ground; exposed edge presents a tripping hazard.	Fill in curve or raise surrounding ground.	\$23,470	Long

**Short (1 year), medium (2-3 years) or long term (3+ years)*

Infrastructure Recommendations within the School Walk Zone

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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
3	Trail from school property to Knob Ct (Along key student walking route)	Other	No lighting.	Install lighting.	\$5,000 each (quantity TBD)	Medium to Long
4	Indian Summer Dr (Greyswood Rd to Waugh Chapel Rd) (Along key student walking route, Inside the school zone)	Speed Management	Observed motor vehicle speeds appear to exceed speed limit.	Conduct a speed study to consider speed management measures or other modifications.	N/A	Long
5	School driveway at entrance to north staff parking area (Along key student walking and bicycling route, On school campus)	Curb ramp	East ramp lacks detectable warning surface.	Reconstruct or repair existing ramp.	\$4,000	Medium

**Short (1 year), medium (2-3 years) or long term (3+ years)*

Infrastructure Recommendations within the School Walk Zone

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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
6	Indian Summer Dr & Sunflower Dr (Along key student walking and bicycling route, Inside school zone, Existing crossing guard location)	6a. Other intersection or crossing issues	Concern about motor vehicle volumes and turning speeds. Currently no stop control on Indian Summer Dr. Sunflower Dr is stop controlled.	Consider evaluating for STOP control with stop bars on north and south legs of Indian Summer Dr.	N/A	Long
				Install curb extensions at all crossings.	\$20,000	Long
			Parked cars obstruct sight lines.	Install school crossing signs with downward pointing arrows.	\$500	Short
			Crossing lacks appropriate signage.			
		6b. Crosswalk	South crossing of Indian Summer Dr is unmarked	Install new high-visibility crosswalk Consider installing raised crosswalk similar to north leg.	\$800 for crosswalk, \$10,000 for raised crosswalk	Short Medium
			Existing crosswalks across Indian Summer Drive (north) and Sunflower Dr appear narrow.	Remark existing crosswalk to 10ft wide with high-visibility markings; ensure the curb ramps are within the extension of the crosswalk markings.	\$1,600	Short

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Infrastructure Recommendations within the School Walk Zone

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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
7	South school path, near east apex of driveway loop (On school campus)	Bicycle Rack	Existing rack does not allow locking of frame.	Replace existing rack with inverted U rack. Consider moving rack closer to school entrance.	\$175/per (quantity TBD)	Short
8	Snow Valley Ln & Indian Summer Dr (Along key student walking route, Inside the school zone)	8a. Crosswalk	Crossing of Snow Valley Ln in unmarked, No stop bar.	Mark new stop bar and install new standard crosswalk across Snow Valley Ln.	\$500	Short
		8b. Curb ramp	Northeast and southeast ramps lack detectable warning surface.	Reconstruct or repair existing ramps.	\$8,000	Medium
9	Waugh Chapel Rd & Chapelgate Dr / Strawberry Lake Way (Along key student walking route)	9a. Crosswalk	Crosswalk markings across Waugh Chapel Rd not high visibility.	Remark existing crosswalk with high-visibility markings	\$800	Short
		9b. Other intersection or crossing issues	Crosswalks across Waugh Chapel Road long.	Implement LPI, Increase pedestrian crossing time	\$2,000	Medium
			Concern about right turn movements.	Install curb extensions or curb radius reduction.	\$10,000	Long
				Implement No Right Turn on Red.	\$500	Short
			East and west crossing lacks appropriate crossing signage.	Install school crossing signs with downward pointing arrows.	\$500	Short

**Short (1 year), medium (2-3 years) or long term (3+ years)*

Infrastructure Recommendations within the School Walk Zone

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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
10	Snow Valley Ln & Summer Ct	10a. Other intersection or crossing issues	Southern crossing of Summer Ct is long. Concern about motor vehicle turning speeds	Install curb extensions or curb radius reduction.	\$10,000	Long
			Parked cars obstruct sight lines.	Restrict parking in advance of crosswalk.	\$500	Short
		10b. Crosswalk	Crossing of Summer Ct is unmarked, No stop bar.	Install new standard crosswalk. Mark new stop bar.	\$500	Short
11	Waugh Chapel Rd (Strawberry Lake Way to Chapel Hill Blvd path) (Along key student walking route)	11a. School Zone Signs and Pavement Markings	Existing school zone sign deficient, SCHOOL pavement marking missing, School advance warning sign missing, School zone speed limit sign missing.	Expand school zone and enhance signage per MdMUTCD part 7.		Short
				- Install new school zone sign (begin/end)	\$1,000	
				- Install new SCHOOL pavement marking	\$1,000	
				- Install new school advance warning sign	\$500	
		11b. Speed Management	Observed motor vehicle speeds appear to exceed speed limit.	Conduct a speed study to consider speed management measures or other modifications	N/A	Long

*Short (1 year), medium (2-3 years) or long term (3+ years)

Infrastructure Recommendations within the School Walk Zone

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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
12	Snow Valley Ln & Raindrop Ct (Along key student walking route)	12a. Crosswalk	Crossing of Raindrop Ct is unmarked, No stop bar	Install new standard crosswalk, Mark new stop bar	\$500	Short
		12b. Other intersection or crossing issues	Crossing of Raindrop Ct is long. Parked cars obstruct sight lines.	Install curb extensions	\$10,000	Long
			East crossing of Snow Valley Ln lacks appropriate crossing signage	Install school crossing signs with downward pointing arrows on both sides of the crosswalk for both east and westbound traffic.	\$500	Short
13	Waugh Chapel Rd & Indian Summer Dr (Along key student walking route)	Other intersection or crossing issues	Currently no stop controls or pedestrian crossing facilities exist at any leg of this intersection.	Consider evaluating for traffic signal. If installed: - Install curb extensions or curb radius reduction and ramps with detectable warning surface (all corners) - Install high-visibility crosswalks and mark new stop bars (all legs) - Install school crossing signs with downward pointing arrows (all legs) - Install school advance warning sign on Waugh Chapel Rd.	N/A \$20,000 \$3,600 \$1,000 \$500	Long Long Short Short Short
			<i>Neighborhood immediately to the south is zoned for Four Seasons Elementary but if attendance boundaries change this would be a critical school crossing.</i>			

*Short (1 year), medium (2-3 years) or long term (3+ years).

Infrastructure Recommendations within the School Walk Zone

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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
14	Snow Valley Ln & Autumn Ct	14a. Other intersection or crossing issues	Crossing of Autumn Ct is long. Concern about motor vehicle speeds turning into Autumn Ct.	Install curb extensions.	\$10,000	Long
			Concern about motor vehicle yielding. Currently there is no stop control.	Consider evaluating for STOP control.	N/A	Medium
		14b. Crosswalk	Crossing of Autumn Ct is unmarked, No stop bar.	Install new standard crosswalk, Mark new stop bar.	\$500	Short
15	Snow Valley Ln & Snowfall Ct	Crosswalk	Crossing of Snowfall Ct is unmarked	Install new standard crosswalk	\$400	Short

**Short (1 year), medium (2-3 years) or long term (3+ years)*
***Note that at locations where installation of new sidewalks is recommended, high-visibility crosswalks, ADA compliant curb ramps, and stop bars should be installed at intersecting streets to facilitate crossings and encourage motor vehicle yielding.*

Infrastructure Recommendations within the School Walk Zone

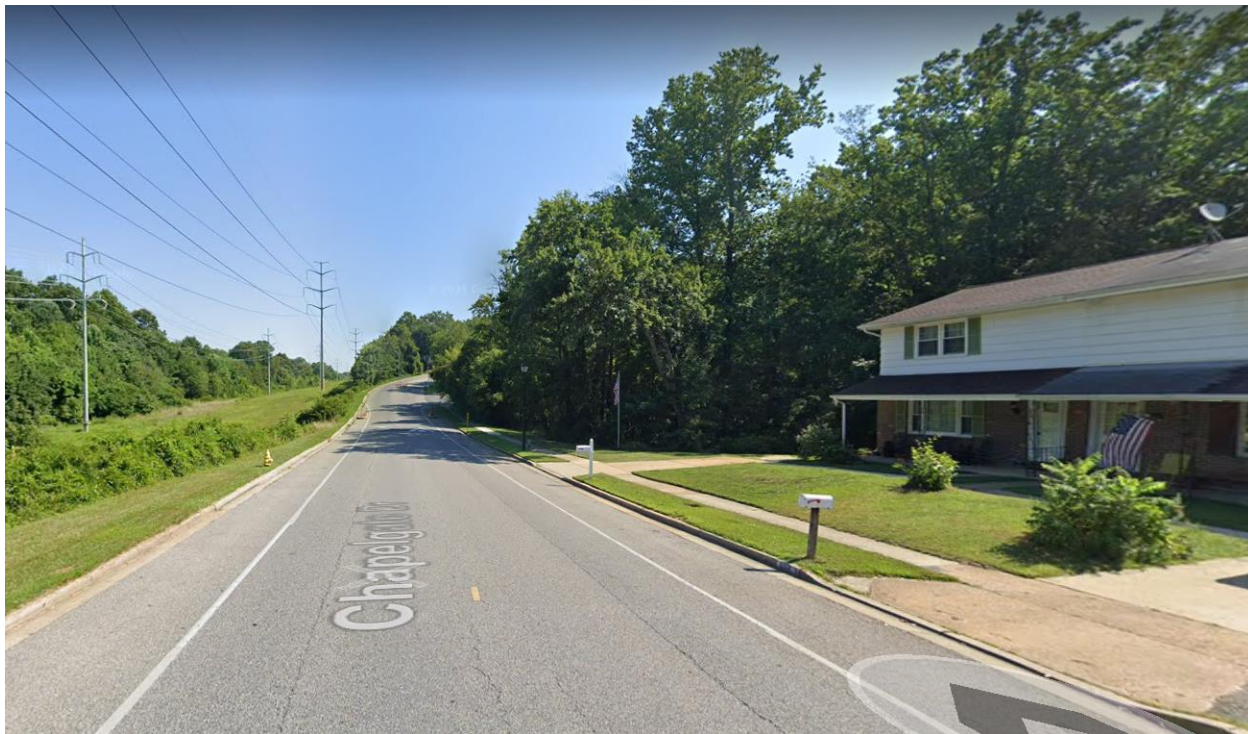
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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
16	Strawberry Lake Way & Lamoka Dr (Along key student walking route)	16a. Crosswalk	Crossing of Lamoka Dr is unmarked.	Install new standard crosswalk	\$400	Short
			Stop bar located too close to crossing	Remark existing stop bar a minimum of 4 feet in advance of nearest crosswalk line	\$100	
		16b. Curb ramp	Ramps lack detectable warning surface, Ramps not aligned with crossing	Reconstruct or repair existing ramps	\$8,000	Medium
		16c. Other intersection or crossing issues	Concern about motor vehicle turning movements and speeds	Install curb extensions	\$10,000	Long

**Short (1 year), medium (2-3 years) or long term (3+ years)*
***Note that at locations where installation of new sidewalks is recommended, high-visibility crosswalks, ADA compliant curb ramps, and stop bars should be installed at intersecting streets to facilitate crossings and encourage motor vehicle yielding.*

Additional Considerations

While Chapelgate Drive north of Burlington Drive contains a sidewalk on the east side, the walking distance to Waugh Chapel Elementary from houses along Edwards Drive are approaching one mile. This distance may be bikeable, but vehicles speeds and lack of separated bicycle facilities may present a barrier to active travel to school. For long-term planning, the County could explore separated bike lanes or a shared use path on Chapelgate Drive north of Burlington Drive. Additionally, there is a shared use path recommended for Waugh Chapel Road in Walk and Roll Anne Arundel. Construction of this shared use path could increase bicycle connectivity to the school for students living off Waugh Chapel Road.



View of Chapelgate Drive north of Burlington Drive
via Google Maps

Potential Sources of Funding for Safe Routes to School Projects

Funding for SRTS infrastructure improvements may come from a variety of sources, including the County's Capital Improvement Program, Operations and Maintenance Funds, and Multimodal Improvement Fund. Funding is also available via grants from the State of Maryland or the federal government, or efforts by local jurisdictions and private developers through the required Bicycle, Pedestrian, and Transit Assessment. Details on potential sources of funding for pedestrian and bicycle projects are described in Walk & Roll Anne Arundel! (page 73).

PROGRAMMATIC RECOMMENDATIONS

Safe Routes to School (SRTS) Program Recommendations

Safe Routes to School program recommendations may include Education, Encouragement, Enforcement and Evaluation strategies to improve safety awareness and knowledge, reinforce safe behaviors, encourage travel mode changes, and establish a culture of walking and bicycling to school.



SRTS Education

SRTS education can foster life-long skills for safe walking and bicycling. Education messages directed at the broader school community can help create safety role models and encourage safe driving.

Recommendations

Provide pedestrian and bicycle safety education to students. Students should receive age-appropriate pedestrian and bicycle education that is regularly reinforced (e.g., annually) and provides opportunities for skills practice. School-based education works best when integrated into the PE or Health curriculum.

Conduct a bicycle rodeo. Bike rodeos teach children skills related to walking and bicycling safely, which can increase their and their parent's confidence for biking or walking to school.

Conduct parent and staff safety education campaign. Information packets should be prepared and distributed to parents and school staff at the beginning of the school year containing school arrival and dismissal maps, a written description of the rules and procedures for arrival and dismissal, and general safety information. Procedures should emphasize driving safely, being alert for pedestrians and bicyclists, and respecting the school crossing guard/s.

Provide walking and bicycling maps. Walking and bicycling route maps can show the location of pedestrian and bicycle infrastructure and estimated walk/bike times.

SRTS Encouragement

SRTS encouragement programs can establish a culture supportive of active transportation and foster life-long habits for active transportation.

Recommendations



Participate in International Walk to School Day and Bike to School Day. Walk and Bike to School Days encourage families to try out walking in a supportive environment. Consider incorporating competitions between schools in the same area or district-wide. Once established, they can lead to monthly walking/bicycling events to maintain momentum and enthusiasm.

Encourage and support walking school buses and bike trains. Walking school buses and bike trains are groups of children who walk or bicycle to school together with adult supervision. Organize parent or community volunteers to "pick up" students on their walk or bike ride to and from school.

Establish a frequent walker / bicyclist program. Frequent walker and biker programs provide small rewards or incentives to students who regularly walk and bicycle to school. Frequent walker and biker programs require a system for tracking student trips. For example, students can be assigned a punch card that volunteers or teachers can punch each time a trip is completed.

Give away bicycle helmets and bike locks. Schools might partner with another community organization to acquire and fit the helmets for students who do not have them. Helmet and bike lock giveaways should be coordinated with bicycle safety education or skills practice and should include instruction on helmet safety.

Reward and encourage active transportation by releasing walkers and bicyclists first. Staggering student dismissal times by travel mode reduces conflicts between the modes. Dismissing walkers and bicyclists first may be seen as a reward and encourage walking and bicycling to school.

SRTS Enforcement

SRTS enforcement efforts aim to increase the safety of children walking and bicycling to school by helping to change unsafe behaviors of all roadway users (drivers, pedestrians, bicyclists). While SRTS enforcement strategies may include law enforcement, it is important to discuss enforcement strategies with the school community and be sensitive to any concerns regarding their role.

Recommendations

Establish school drop off and pick up monitors to reinforce school procedures on and around the school campus.

Continue student safety patrols to provide on-going reinforcement of safe pedestrian and bicyclist behavior. Resources are available through [AAA School Safety Patrol](#).

SRTS Evaluation

SRTS evaluation efforts aim to identify issues and opportunities and monitor the impact of comprehensive SRTS activities over time, such as infrastructure improvements and encouragement activities.

Recommendations

Conduct annual Student Travel Tallies to monitor student travel patterns.

Administer biennial Parent Surveys to monitor parent attitudes towards walking and bicycling and reasons why they may or may not allow their children to walk or bike to school.

Conduct biennial infrastructure assessments and observation of school arrival and dismissal to track improvements, monitor the condition of key school crossings and signage, and identify needed education or enforcement measures. Assess more frequently if any changes to travel patterns (such as new school or road construction).

APPENDIX: INFRASTRUCTURE RECOMMENDATION PHOTOS

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone

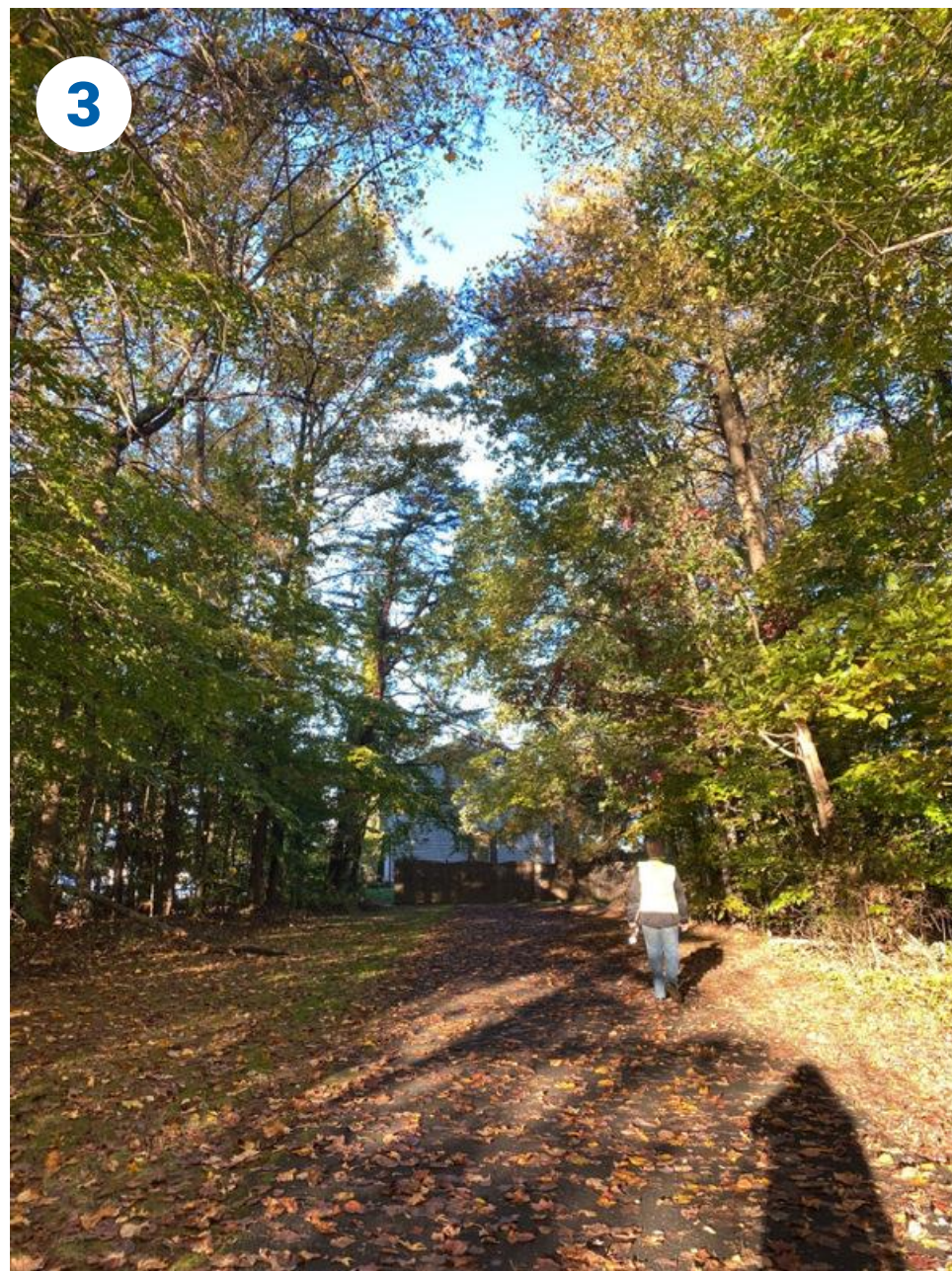


Indian Summer Drive, looking North. Greyswood Rd to the left.



The paved formal path on the north end of the school campus, connecting to Indian Summer Drive.

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



The paved formal pathway connecting the north end of the school property to Indian Summer Drive.



Indian Summer Drive.

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



The crossing at the west end of the school loop, intersecting with the staff parking lot.

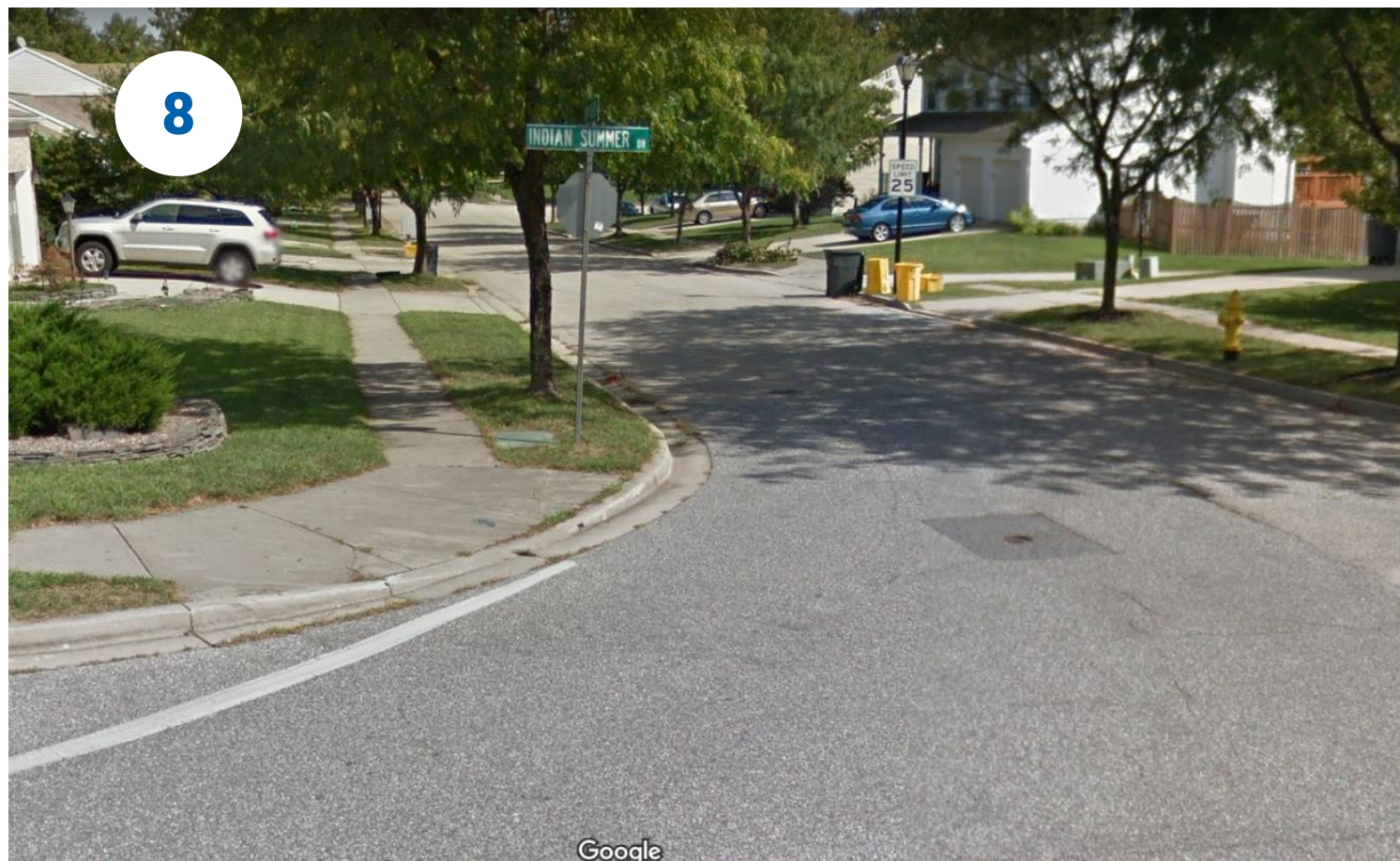


The raised crosswalk at the intersection of Indian Summer Drive and Sunflower Drive.

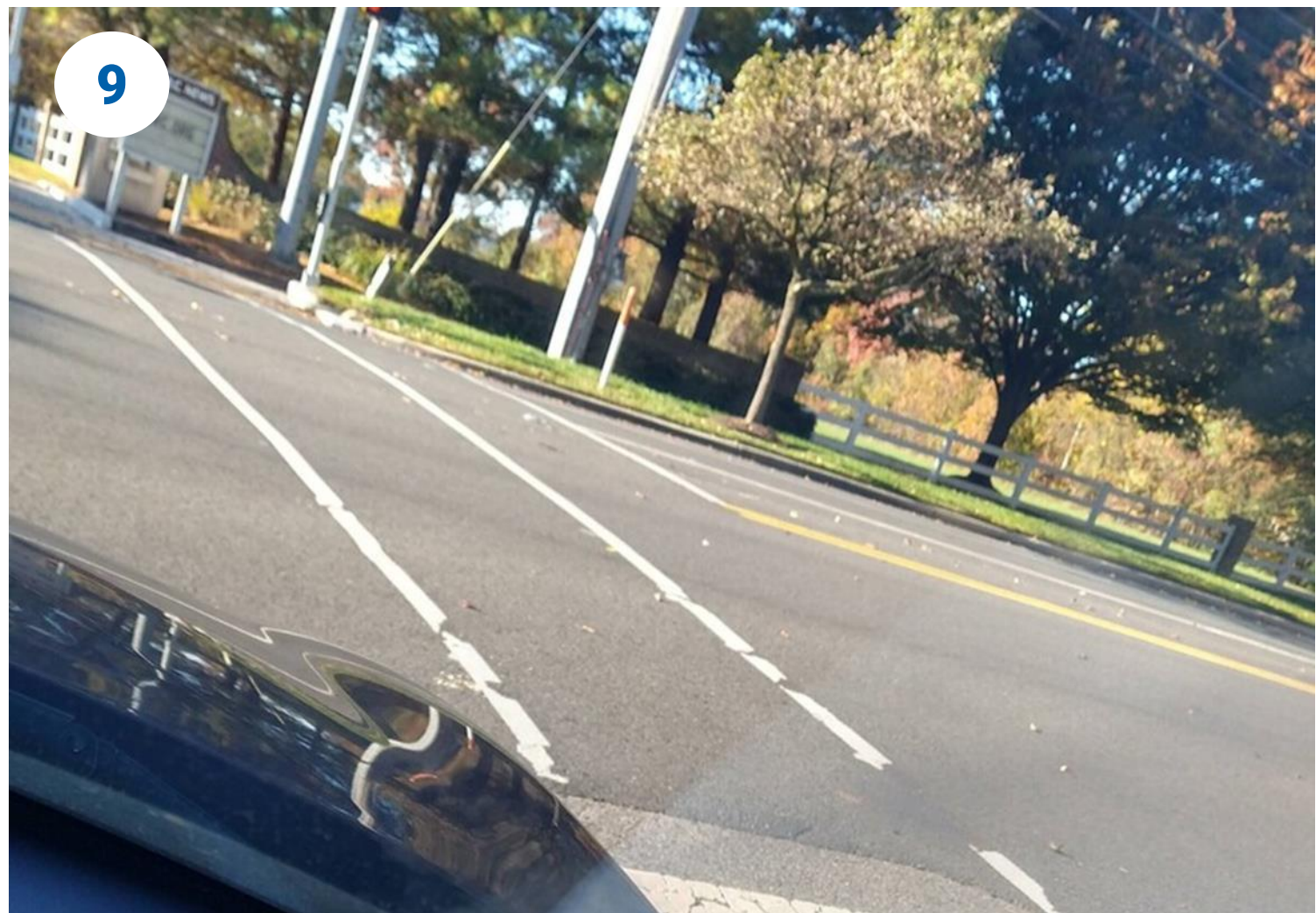


Bike racks on the east side of campus.

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone

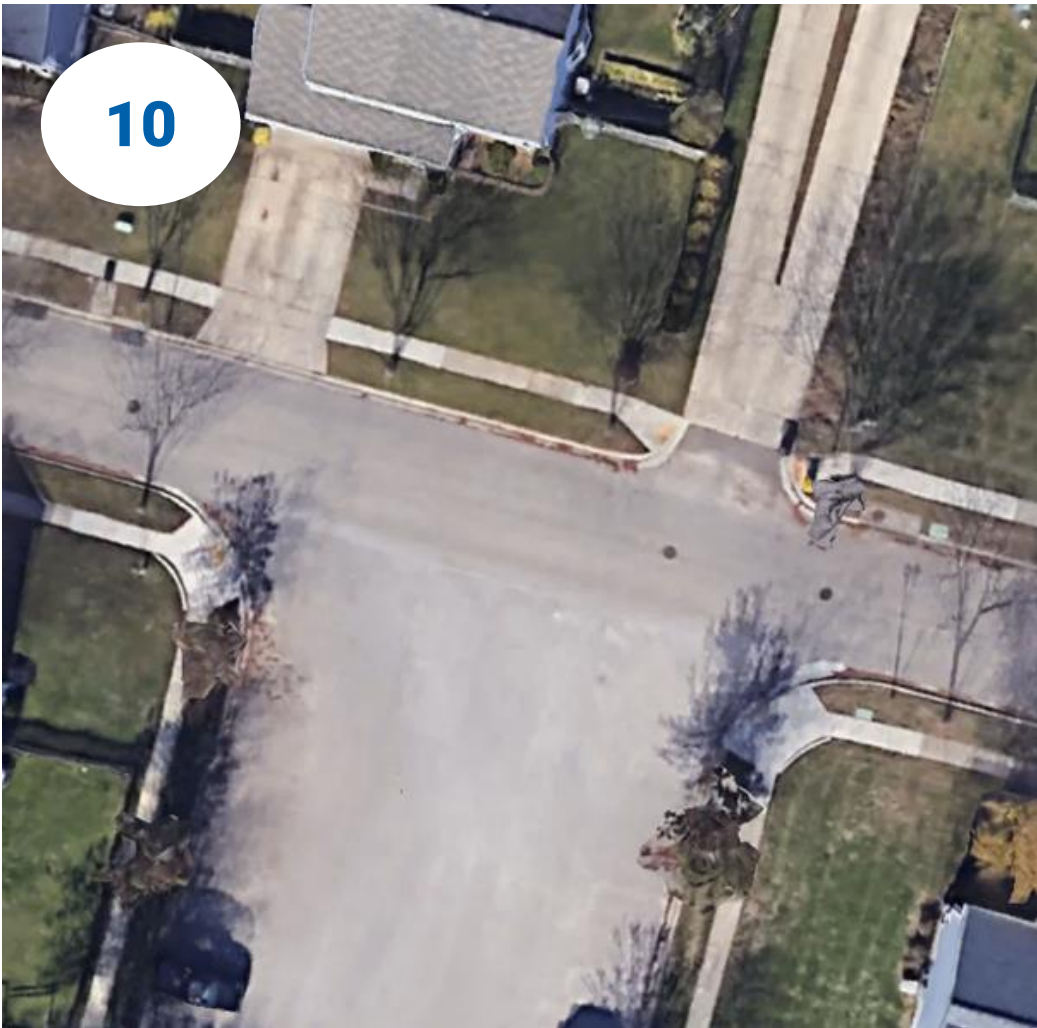


The corner of Indian Summer Dr and Snow Valley Ln



The crossing of Chapelgate Drive/Strawberry Lake Way and Waugh Chapel Road.

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Aerial view of the crossing of Snow Valley Lane and Summer Court.

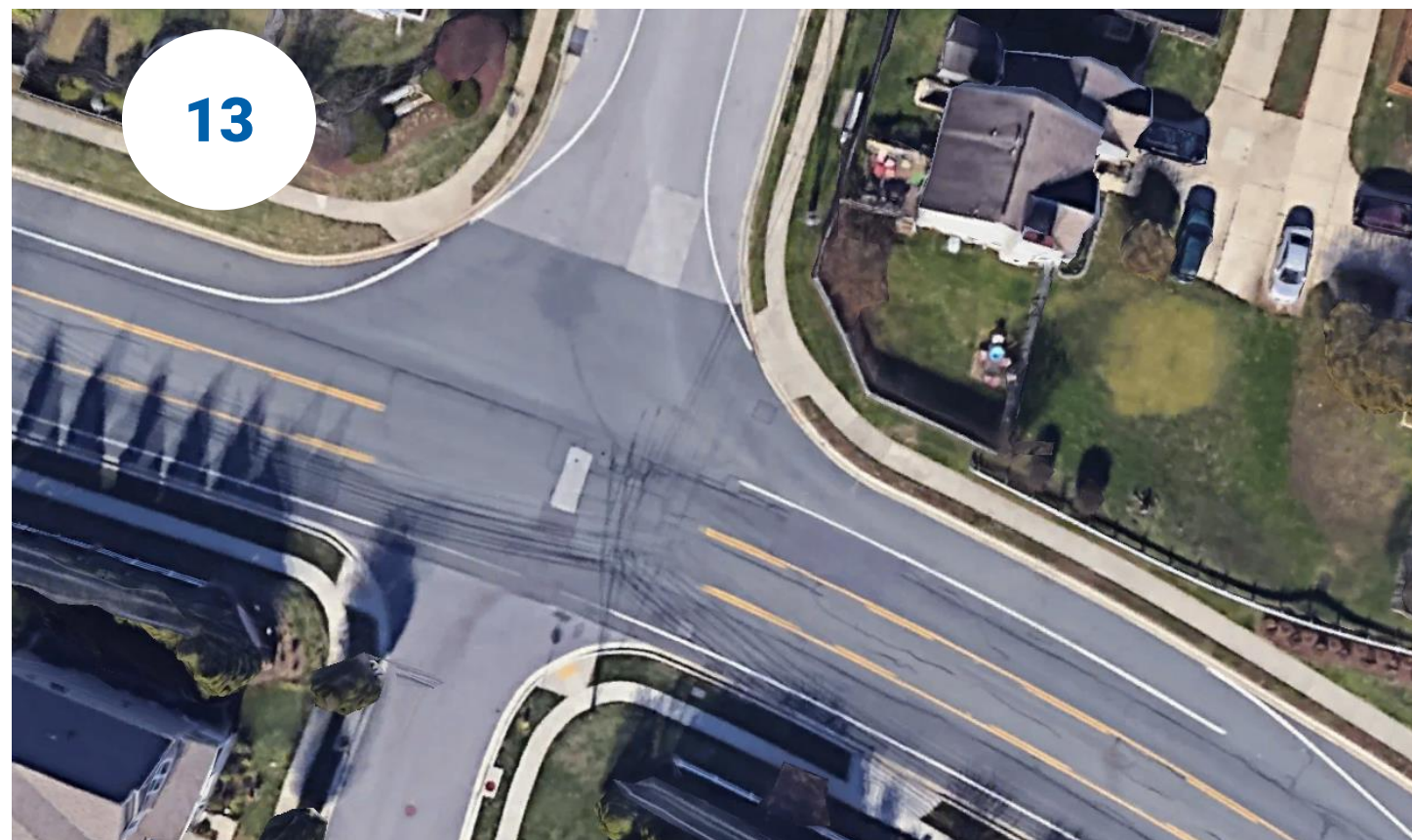


Waugh Chapel Road.

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



The crossing at Snow Valley Lane and Raindrop Court.



Waugh Chapel Road and Indian Summer Drive.

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



The crossing at Snow Valley Lane and Autumn Court.



The crossing of Snow Valley Lane and Snowfall Court

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



The intersection of Strawberry Lake Way and Lamoka Drive/Sunny Chapel Road