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Manor View 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. Note: Anne Arundel County does not have jurisdiction to install infrastructure improvements within the Fort Meade. Fort Meade and AACPS are responsible for coordinating to make those decisions.

Manor View Elementary Accessibility Study

Report findings are derived from:

School site visits	• Observation of school arrival and dismissal conducted February 8, 2023 • Assessment of pedestrian and bicycling infrastructure within the current school walk zone and roads immediately adjacent (as connectivity allows) conducted February 8, 2023
Parent Survey	• Administered January 26 – February 19, 2023 • Available online in English, Spanish, Chinese, and Korean • Survey link was provided via email

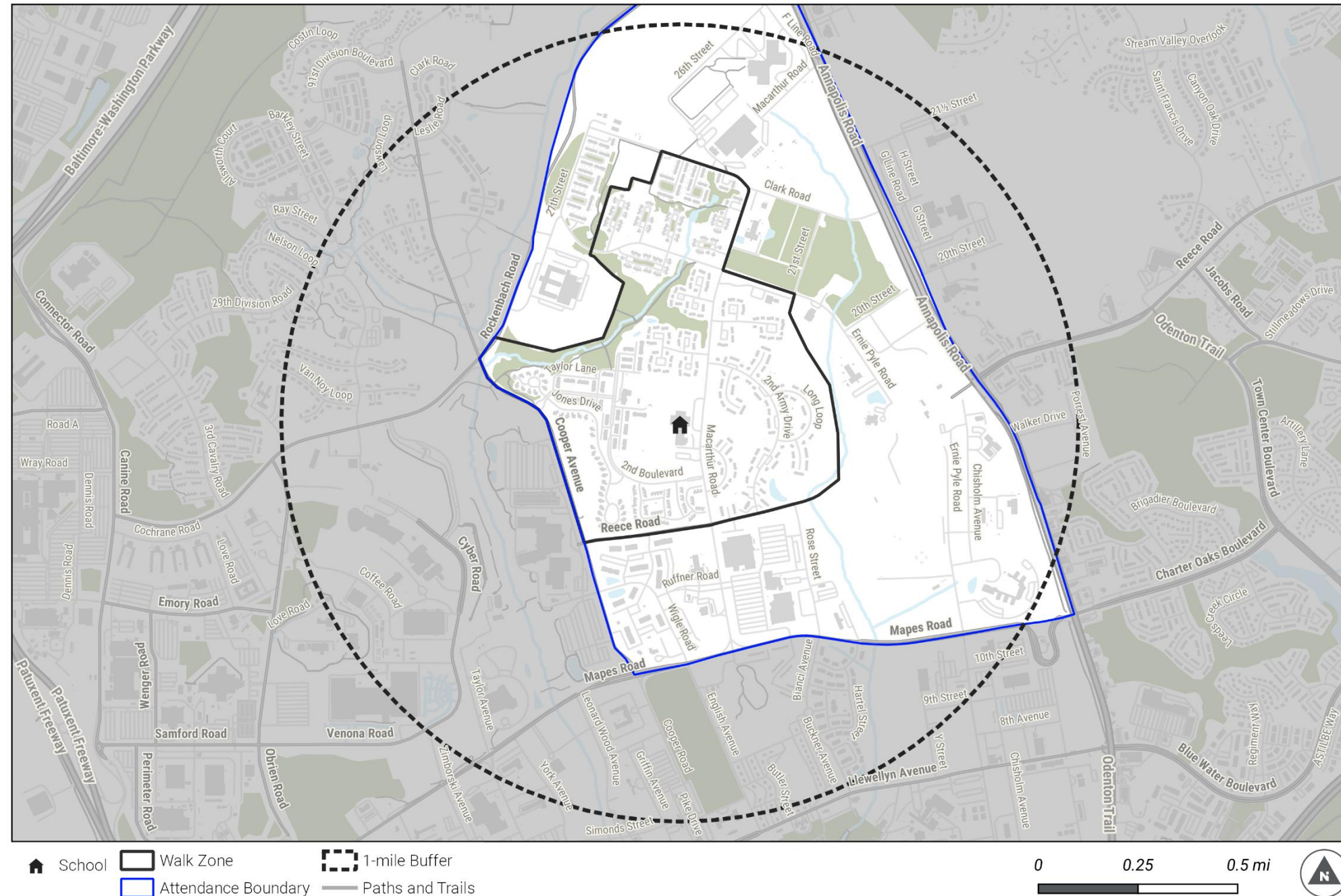
Recommendations were shared with the school community during a virtual open house in October 2023.

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.
 - To the west, the walk zone extends to the attendance boundary.
 - For areas to the northwest, pathway connectivity already exists between housing along 27th Street and McWhorter Court.
 - Areas to the east and southeast lack residential areas.
 - Residential areas south of Reece Road are within walking distance.

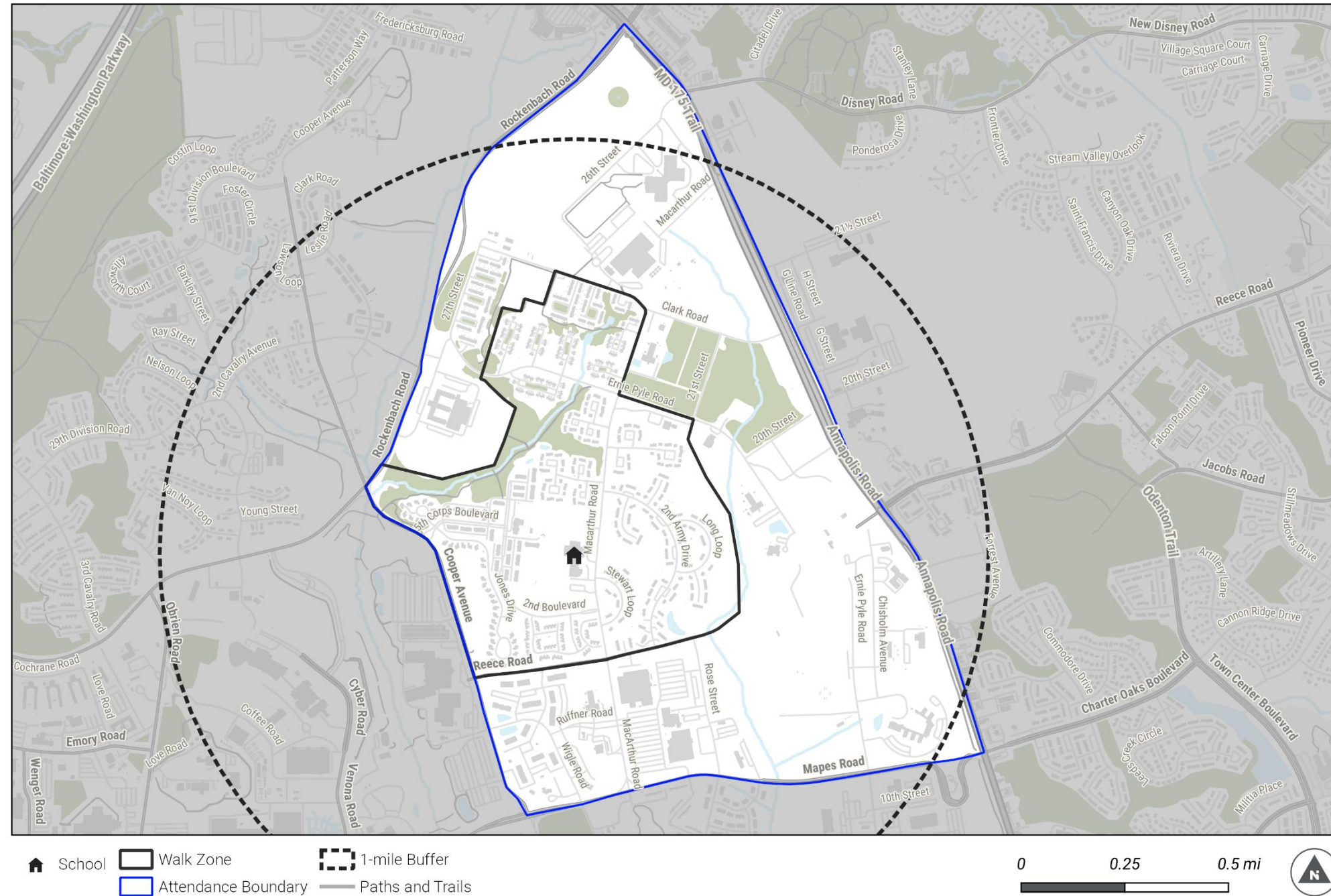
Manor View Elementary School - 1-mile Radius



Student Attendance Area and Enrollment

- Manor View Elementary School serves 240 students in grades 1–5.
- 3% of students are registered for bus transportation*

Manor View Elementary School - Attendance Boundary



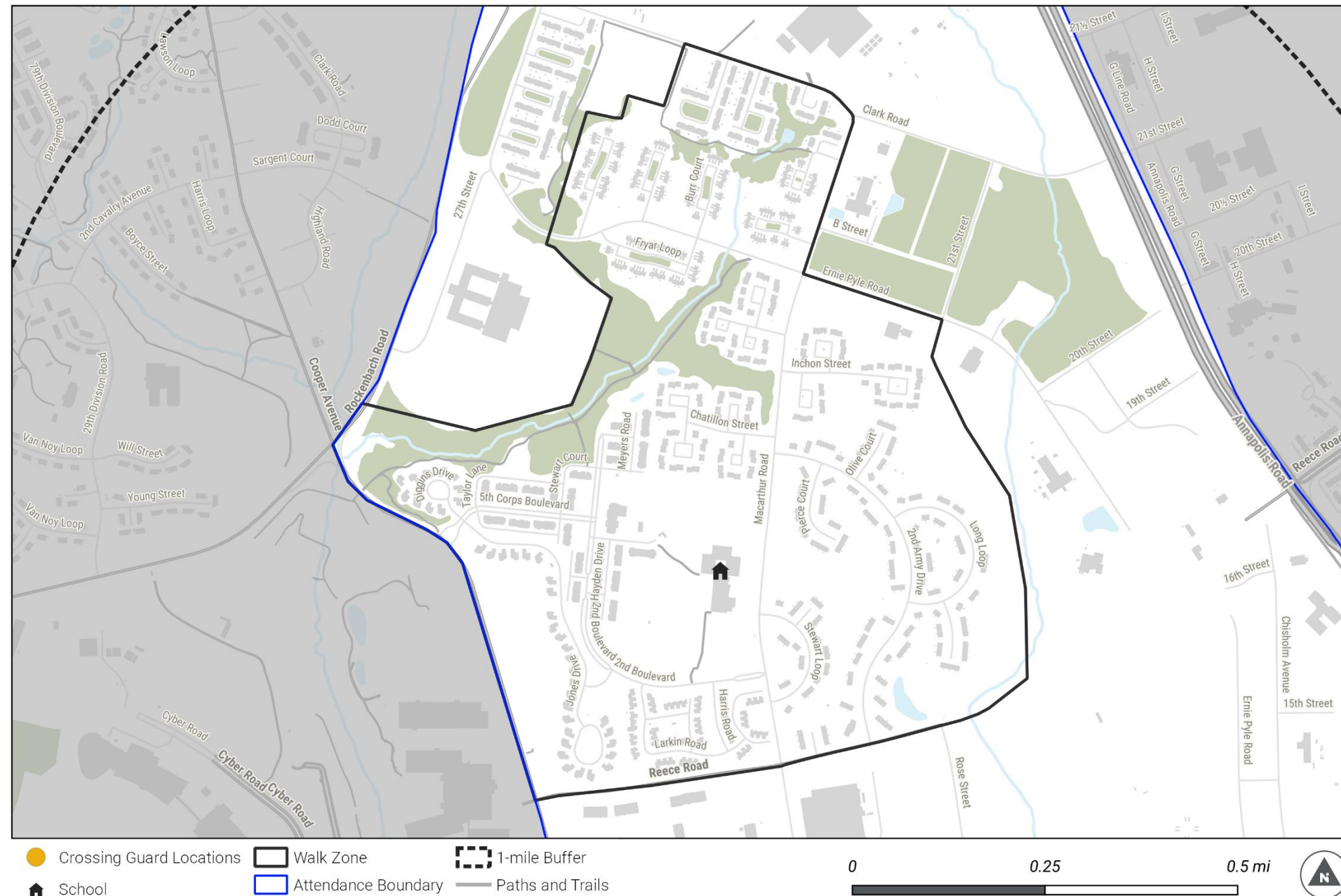
*AACPS provides transportation from designated bus stops for students who reside within the school's attendance area. At elementary schools, transportation is provided for Pre-K students who live more than ½ mile from school, Kindergarten students who live more than ½ mile from school, and students of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

Source: AACPS 2022-2023 Parent Handbook

School Location and Layout

- Manor View Elementary School is located on MacArthur Road, near the center of the US Army's Fort George G Meade. It is in a residential area of the base, surrounded by housing on all sides.
- The area immediately adjacent to the school contains a combination of single- and multi-family housing within a somewhat disconnected street network; multiple paths connect residential areas to the school.
- MacArthur Road is a federally-maintained road and thus is not assigned a functional classification by Anne Arundel County. It has a 25-mph posted speed limit, with a 15-mph school speed limit active during arrival and dismissal.

Manor View Elementary School - Walk Zone



School Access

Walkers and Bicyclists:

- Walkers and bicyclists access the school via sidewalks along MacArthur Road and formal and informal paths across the school grounds.

Buses:

- One school bus and daycare/aftercare vans that serve the school access the school via a driveway loop directly in front of the main entrance.

Parent/Guardian Drop-Off:

- Parent/guardian drop-off occurs in a driveway along the northern half of the building
- Parents who need to unbuckle kids from car seats or wish to walk their students to the door are directed to park in the south staff lot to do so.

Staff Vehicles:

- Staff who drive primarily park in the staff lot south of the school, but there are several spaces in a small lot off the bus driveway and a handful of staff park along the parent drop-off loop.



PARENT-REPORTED STUDENT TRAVEL MODES AND BARRIERS

Manor View Elementary - Parent Survey Response Overview

- 11 total survey responses received*
- 91% of respondents live in the area zoned to the school

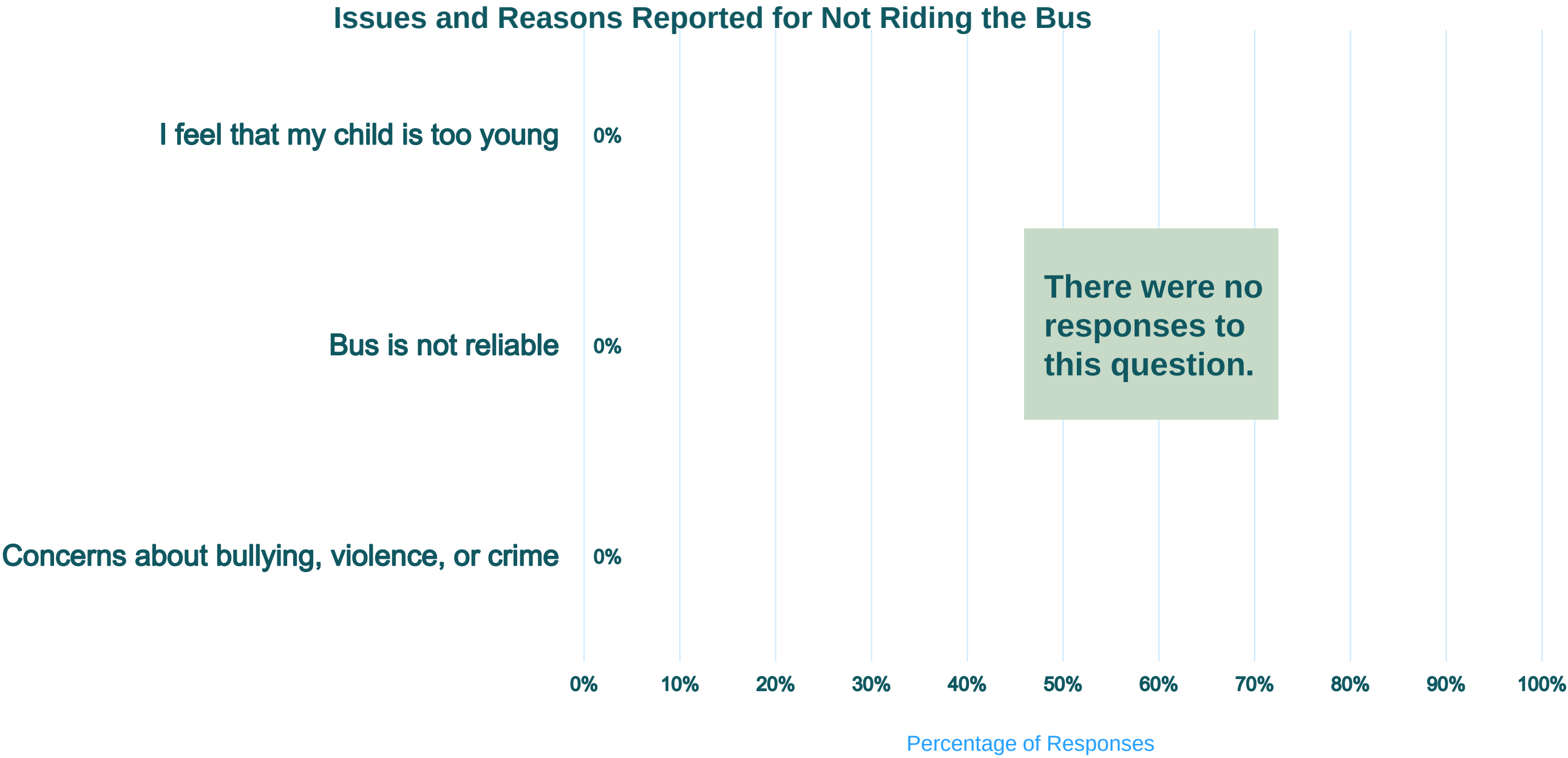
Reported Distance from Home to School	
Distance	Number of Respondents
< ¼ mile	4
¼ mile – ½ mile	3
½ mile – 1 mile	2
1 mile – 1 ½ miles	2
>1 ½ miles	0

** 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

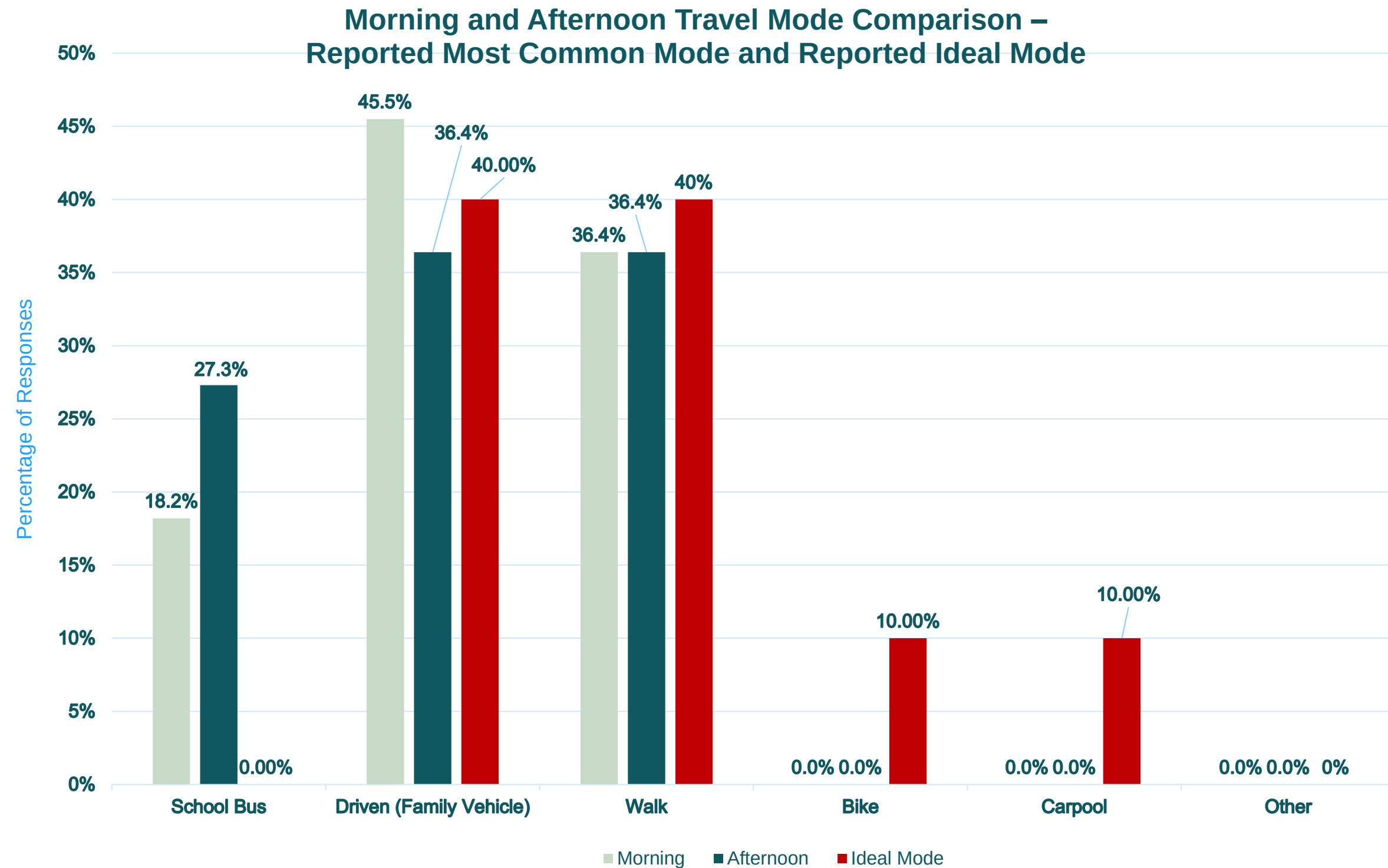
School Bus Eligibility and Use

36% of respondents reported being eligible for school bus transportation;
27.3% reported riding the school bus to school.



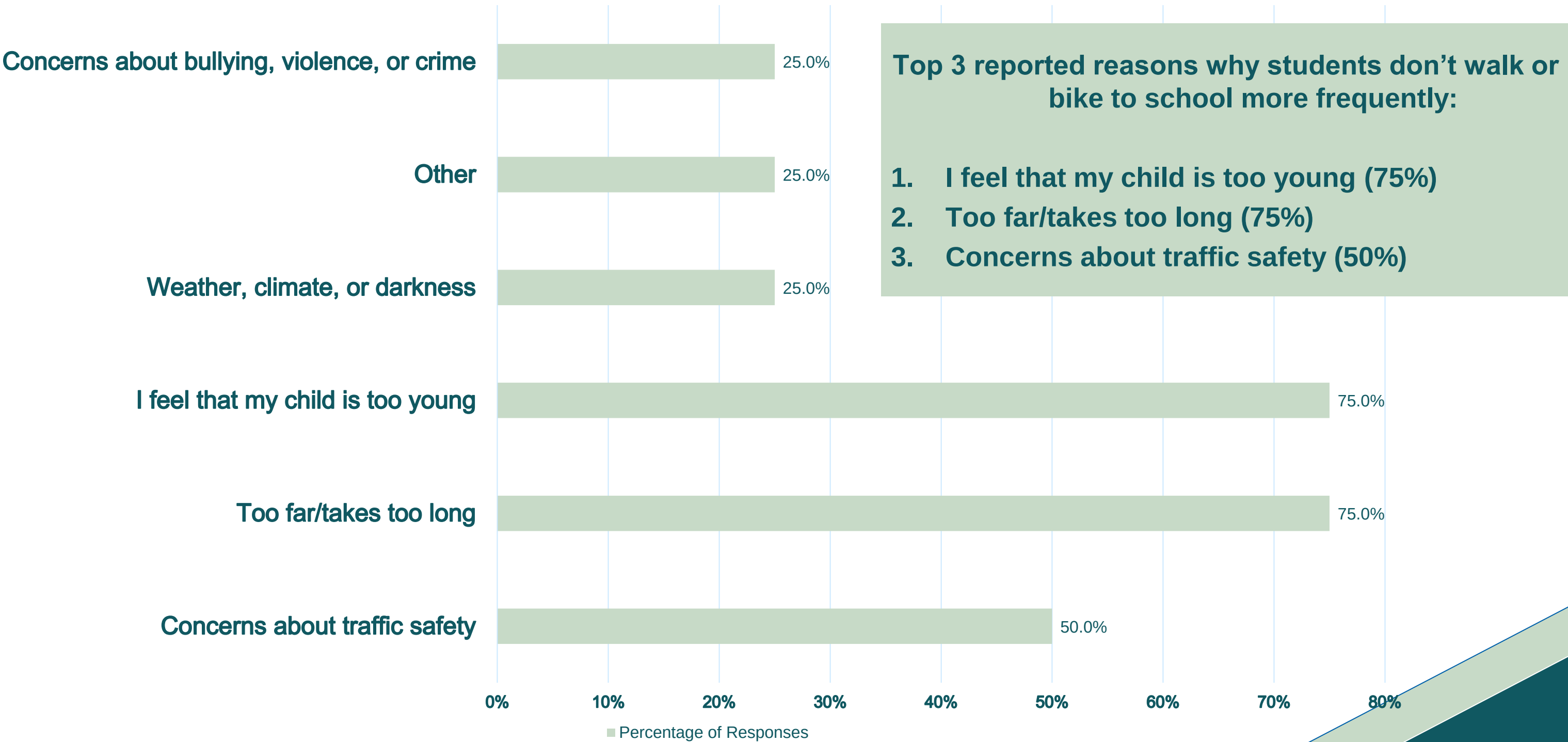
Parent Survey Results

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

- MacArthur Road
- Pathways on school campus
- Jones Drive
- 2nd Corps Boulevard
- Phelps Avenue

ARRIVAL AND DISMISSAL OBSERVATIONS

Arrival and Dismissal Operations

School Hours:

- 8:00 am – 2:25 pm

Note: County schools had a two-hour early dismissal on observation day, so school ended at 12:25 pm.

Observation Times (February 8):

- Arrival: 7:25 am – 8:15 am
- Dismissal: 12:15 pm – 12:45 pm

Crossing Guards:

- Provided data did not include crossing guards assigned to Manor View Elementary School; one crossing guard was observed on MacArthur Road at the drop-off loop exit.



The MacArthur Road crossing guard stationed at the crosswalk near the school driveway

General Observations

General Observations:

- There are multiple vehicle access points to the school from MacArthur Road.
- There are multiple pedestrian access points to the school; students access the school from all directions, often across the grass fields as well as on the paved paths.
- Vehicle traffic on MacArthur Road during arrival was constant but calm, rarely appearing to exceed the posted 15-mph school speed limit.



Arrival Observations

The study team observed arrival from the following locations:

- MacArthur Road at the school driveway
- Phelps Avenue at the cul-de-sac

General Observations:

- School starts at 8:00 AM; most students arrived between 7:35 and 7:50 AM
- Doors open at 7:45.

Walkers and Bicyclists

- Approximately five students crossed MacArthur Road at the school crosswalk; one student came from the south along the west side of MacArthur Road.
- Approximately 30 students approached from the north. Several walked across the grass; others used the sidewalk along MacArthur Road.
- Approximately 30 students walked and 20 biked via the path from Phelps Avenue.
- About half of the walkers came with adults.



Many walkers and bike riders used this path to the school from Phelps Avenue.

Arrival Observations

Bus Lane

- The bus drops off students at a loop directly in front of the main entrance.

Parent Drop-off

- Teachers help students exit cars in the drop-off loop. Most dropped-off students gather at the northeast entrance to the school
- Students needing further assistance and parents who wish to park and walk students to the door use the south parking lot. However, most of these students were observed bypassing the main doors to enter at the northeast entrance.
- A handful of students were dropped off at the cul-de-sac at the end of Phelps Avenue and walked from there.



The bus in front of the main entrance of the school, as a student (far right) heads to the northeast entry.

Dismissal Observations

The study team observed dismissal from the following locations:

- MacArthur Road at school driveway
- Phelps Avenue at end

General Observations:

- Early dismissal began at 12:20pm; walkers and car riders are dismissed first, before bus riders.

Walkers and Bicyclists:

- Many students walking north did not use the sidewalk but walked across the grass field toward the apartment complex.
- Many walkers and bicyclists left with friends or by themselves.



Students walk and bike toward Phelps Avenue after dismissal.



The path from Second Corps Boulevard (left);
The path from Phelps Avenue (right).

Dismissal Observations

Bus Lane

- The single school bus loaded students in the bus loop directly in front of the main doors.

Parent Pick-up

- Relatively few cars were lined up prior to dismissal.
- Vehicles maneuvered between parking on the left and pick-up activity on the right, but minimal conflicts were observed.



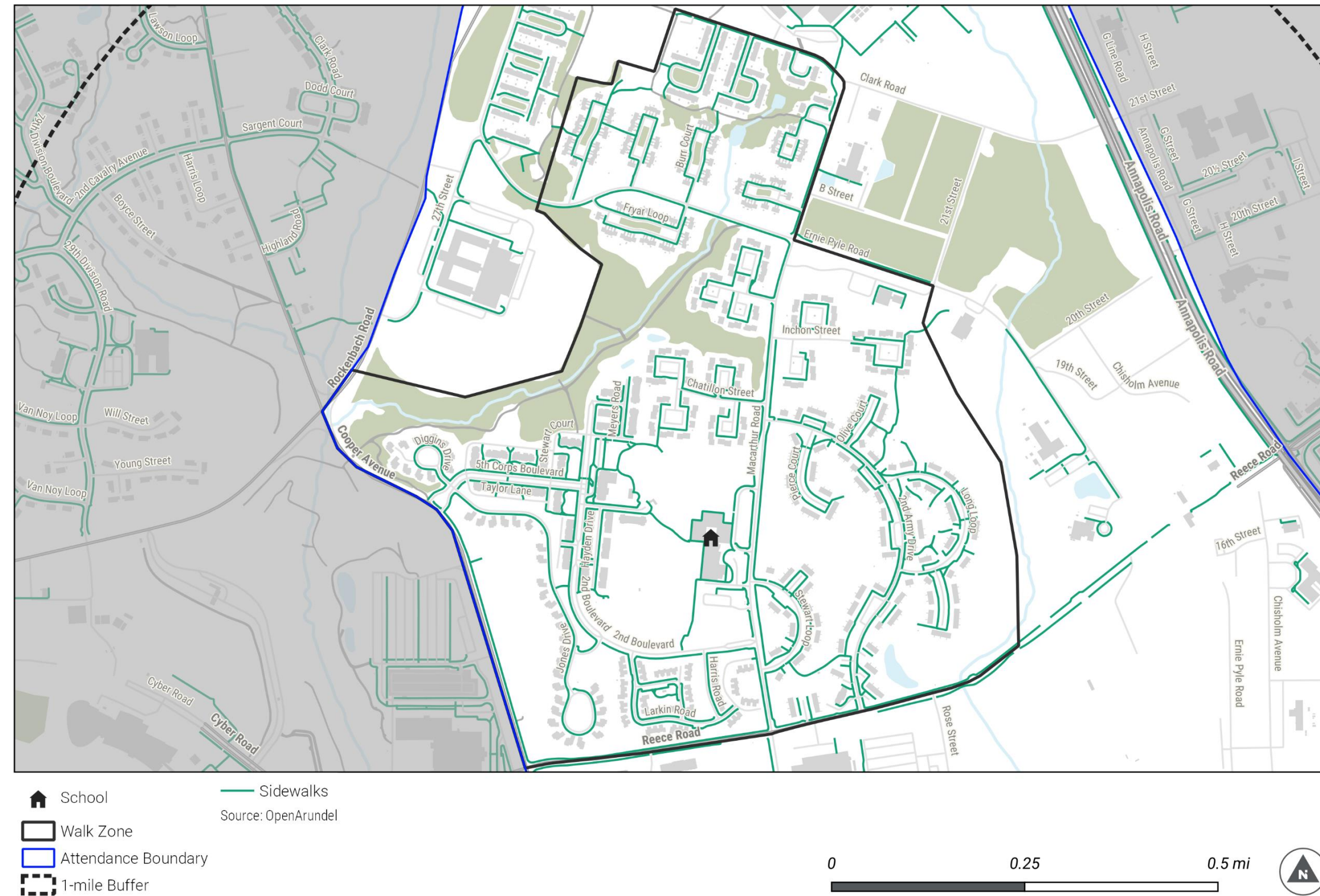
Parked cars and parents in the pick-up loop before dismissal

EXISTING INFRASTRUCTURE CONDITIONS

Existing Sidewalk Network

There are sidewalks present on nearly all roads within the walk zone, but several sidewalks are only on one side of the road.

Manor View Elementary School - Existing Sidewalk Network

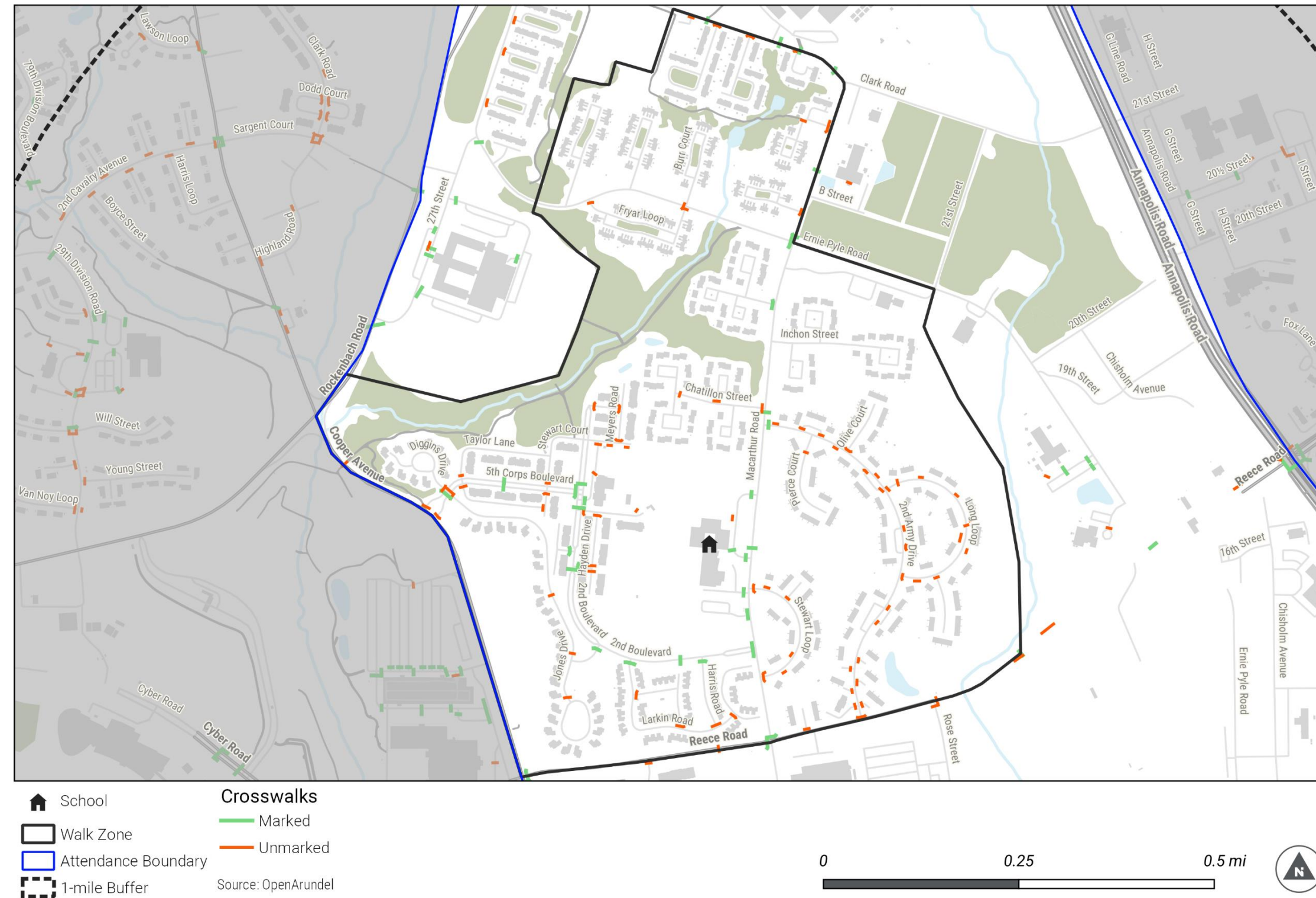


Existing Crosswalks

There are marked crosswalks over all school driveways and multiple marked crosswalks on the school campus. However, several are faded and/or are not high-visibility.

The crossings at many intersections in the walk zone are unmarked.

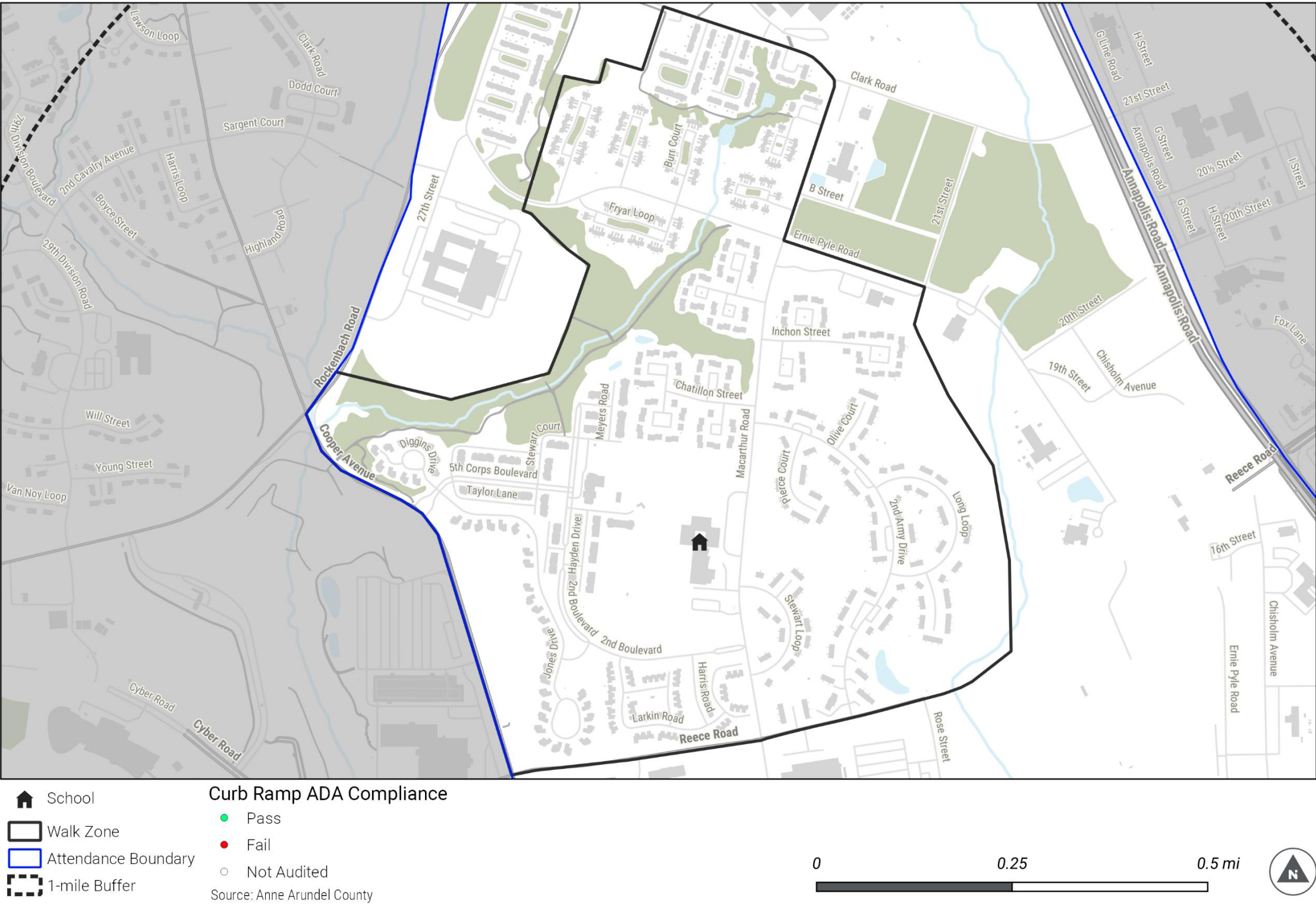
Manor View Elementary School - Existing Crosswalks



Existing Curb Ramps

- No curb ramp data was available.

Manor View Elementary School - Existing Curb Ramps

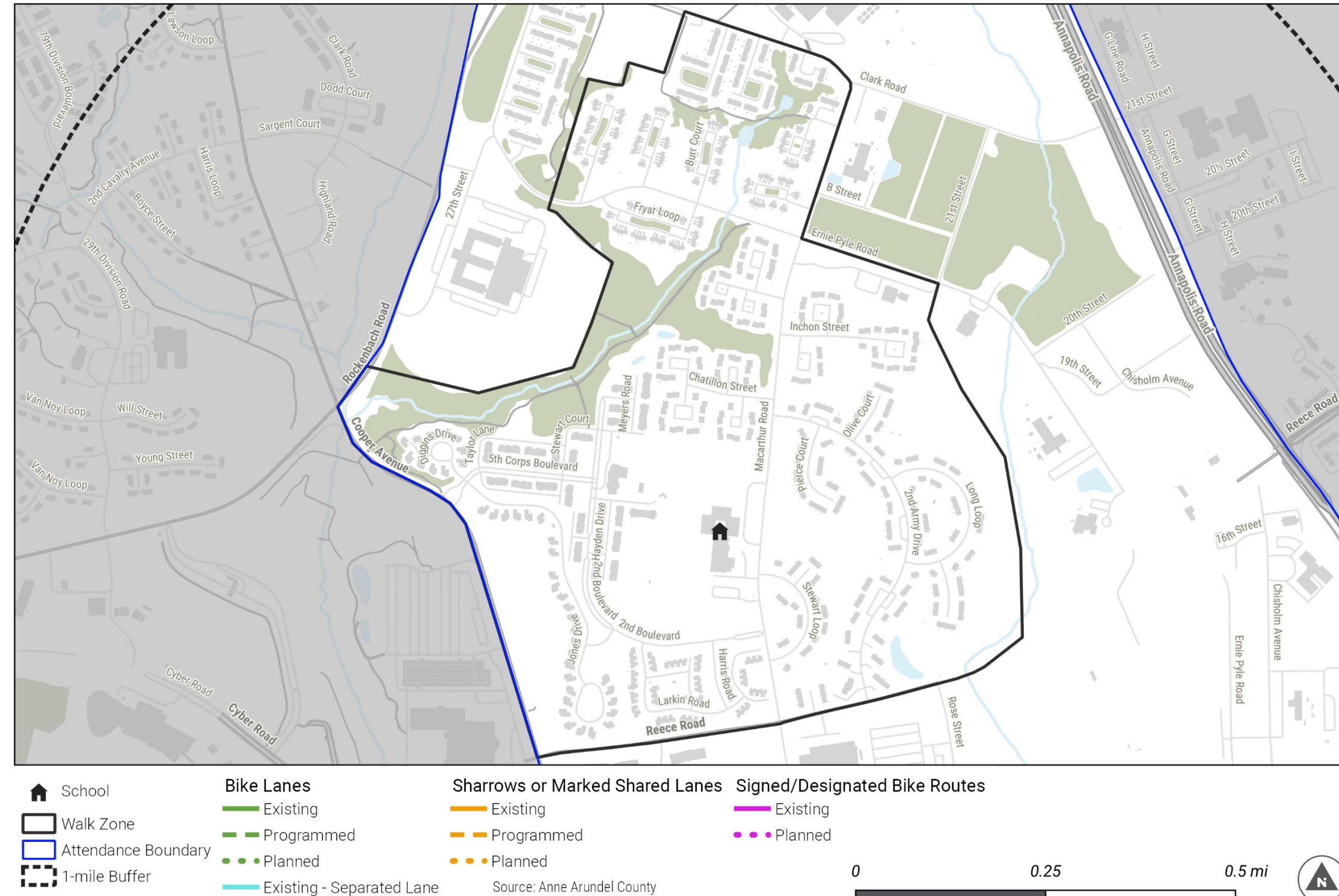


**Curb ramp data downloaded 9/14/22 but is incomplete. Data is not available within Fort Meade.*

Existing On-Road Bike Facilities

No on-road bike facilities exist or are known to be planned* within the school walk zone.

Manor View Elementary School - Existing On-Road Bicycle Facilities



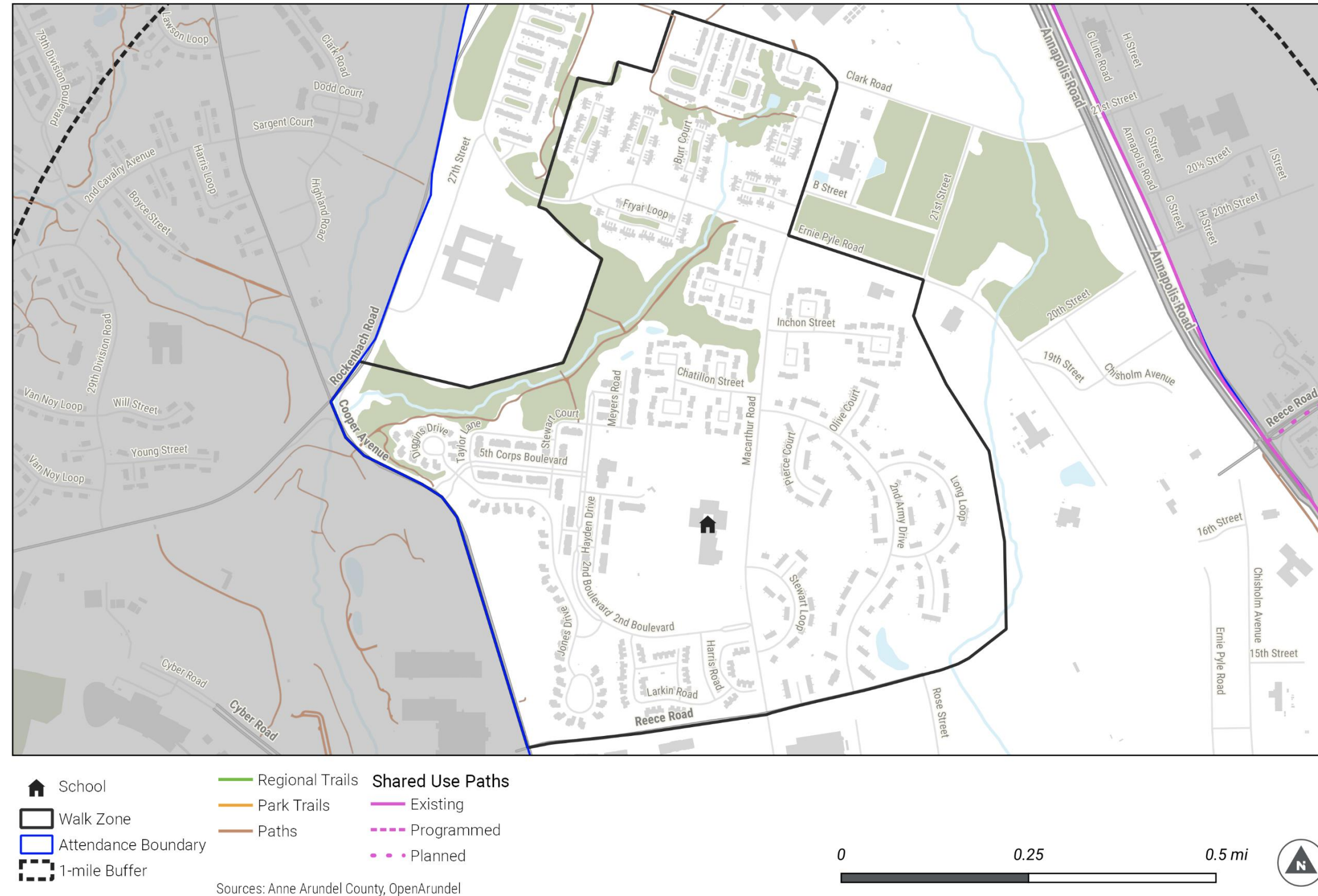
* “Planned” means included in the County’s Master Plan

Existing Regional Trails, Park Trails, and Paths

- There are two park trails within the walk zone, both located north of the school.
- Multiple formal paths connect nearby residential areas to the school, which appear on the [sidewalks map](#).
- No additional trails are currently planned* for areas near the school.

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

Manor View Elementary School - Existing Regional Trails, Park Trails, and Paths



CRASH DATA

Crash Data (2017 – 2021)

Crashes within 1-mile radius of the school:

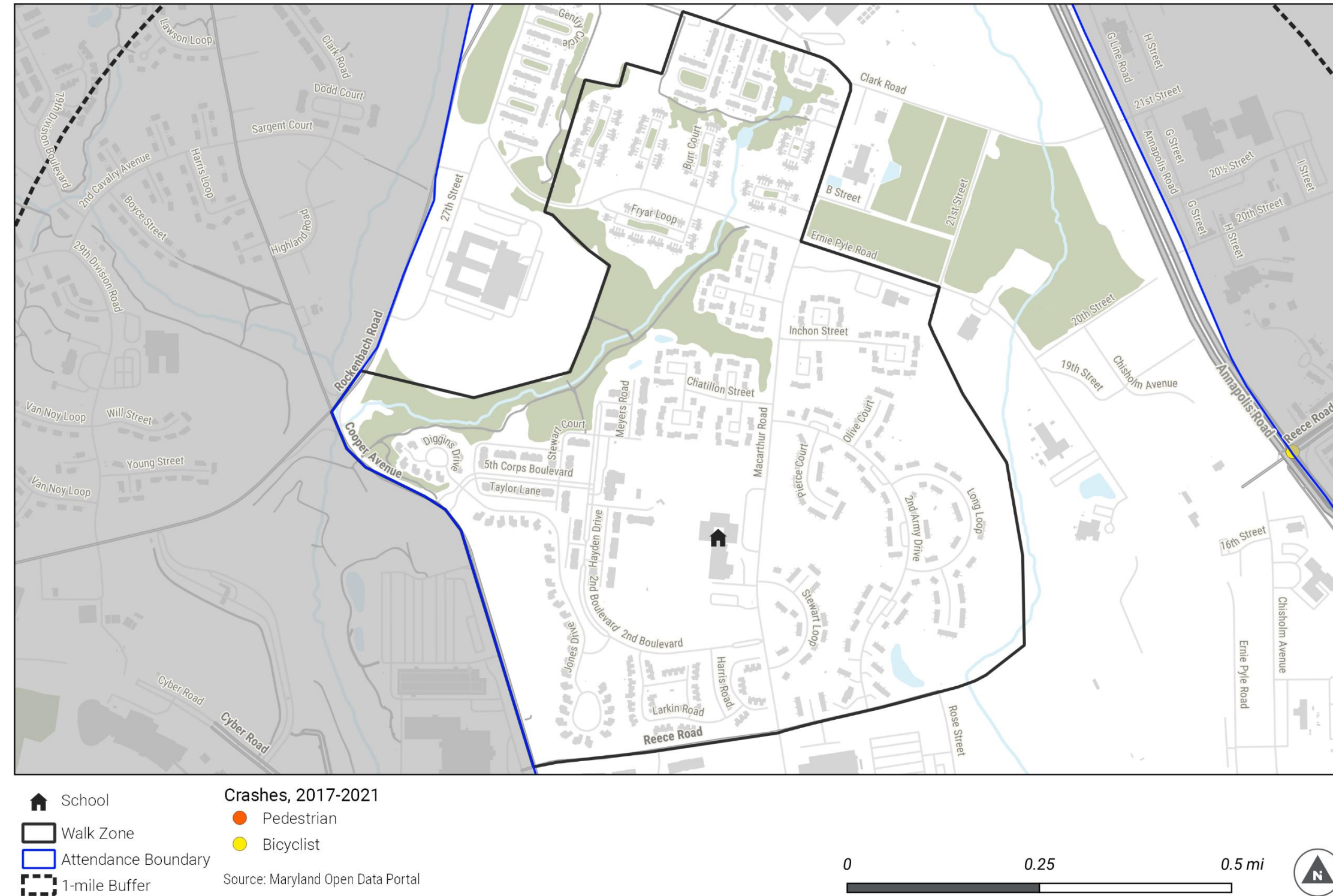
- 136 total crashes (all modes), 2 fatal
- 1 pedestrian-involved crash, 1 fatal
- 1 bicyclist-involved crash, 0 resulting in injury, 0 fatal

Pedestrian and bicyclist crashes within the walk zone*:

- 0 pedestrian-involved and 0 bicyclist-involved crashes known to have occurred in the walk zone.

**Crash data was downloaded from Maryland Open Data Portal but may contain data for Fort Meade.*

Manor View 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.

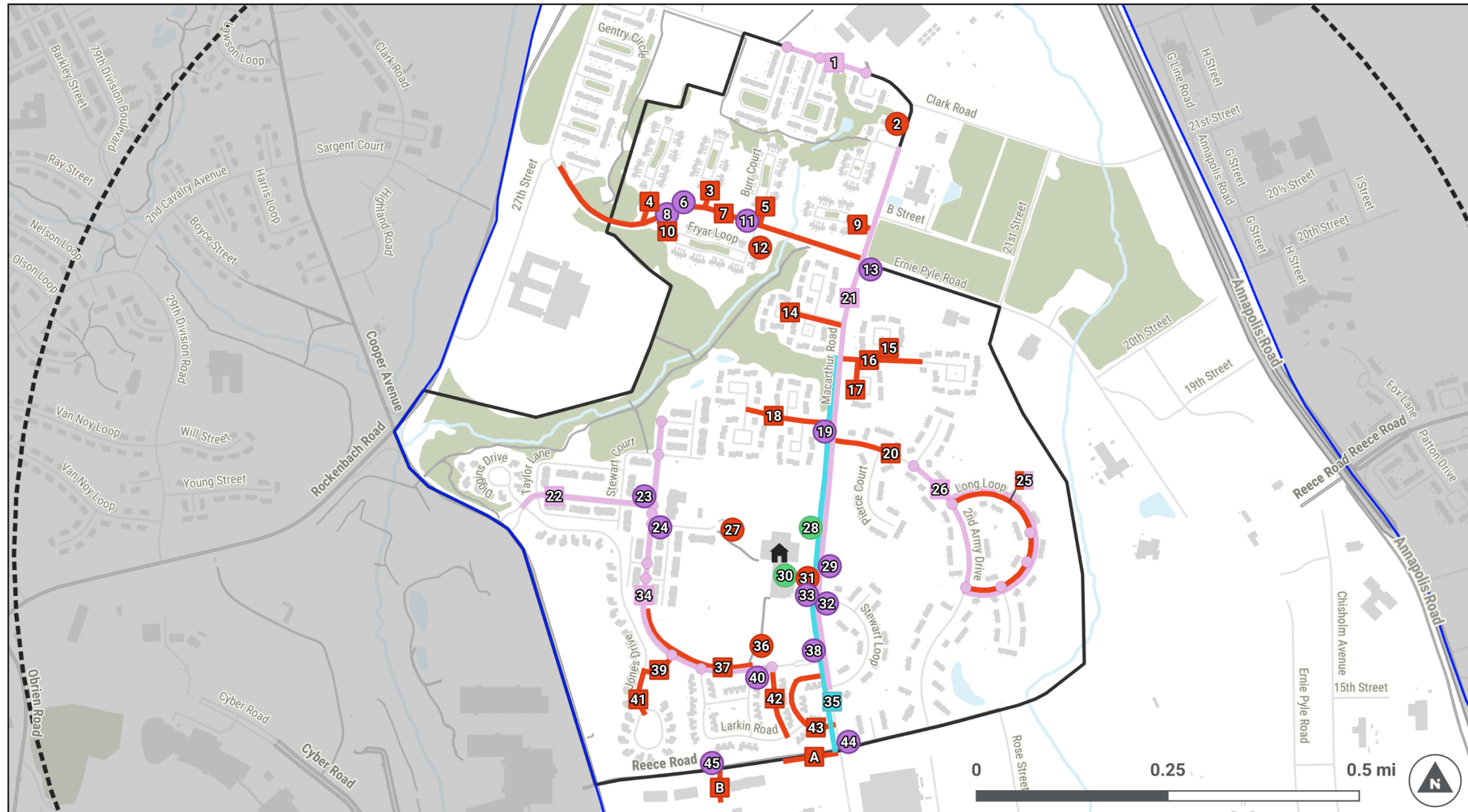
Other projects or planning/feasibility studies may be planned or ongoing within the study area.

Note: Anne Arundel County does not have jurisdiction to install infrastructure improvements within the Fort Meade. Fort Meade and AACPS are responsible for coordinating to make those decisions. Fort Meade, in coordination with the 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

Manor View Elementary School - Recommendations



- | | | | |
|--|--|--|---|
| <ul style="list-style-type: none"> School Walk Zone Attendance Boundary 1-mile Buffer Paths and Trails | Spot Recommendations <ul style="list-style-type: none"> Access Management Bicycle Rack Intersection or Crossing School Zone Signs and Pavement Markings | <ul style="list-style-type: none"> Sidewalk Speed Management Other Recommendations | Segment Recommendations <ul style="list-style-type: none"> Bicycle Facility Corridor Intersection Upgrades 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	Clark Rd (Terry Ct to Oliver Ct)	1a. Curb ramp	Ramp lacks detectable warning surface	Reconstruct or repair existing ramps	\$24,000	Medium
		1b. Crosswalk	Side street crossings of Oliver Ct, Amoroso Ct, and Terry Ct are unmarked, Stop bar faded	Install new standard crosswalk, Mark new stop bar	\$1,500	Short
2	Gorcas Ct (at end)	Sidewalk	Missing sidewalk	Install new sidewalk to fill sidewalk gap**	\$1,200	Long
3	Thorson Ct (Thorson Ct to Ernie Pyle St)	Sidewalk	Missing sidewalk on east side	Install new sidewalk**	\$6,526	Long
4	McWhorter Ct & McWhorter Ct	Sidewalk	Missing sidewalk on east side	Install new sidewalk**	\$8,199	Long
5	Burr Ct (Ernie Pyle St to Burr Ct)	Sidewalk	Missing sidewalk on east side	Install new sidewalk**	\$7,031	Long
6	Ernie Pyle St & West of Thorson Ct	Other intersection or crossing issues	There is an existing mid-block crossing, but only sidewalk on one side of Ernie Pyle St. This crossing is marked as a school crossing.	Remove crosswalk and school crossing signage.	N/A	Short
7	Ernie Pyle St (East of 27th St to MacArthur Rd)	Sidewalk	Missing sidewalk on north side	Install new sidewalk**	\$92,703	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.

Infrastructure Recommendations within the School Walk Zone

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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
8	Ernie Pyle St & Fryar Loop (West)	8a. Curb Ramp	South ramps lacks detectable warning surface	Reconstruct or repair existing ramps	\$4,000	Medium
		8b. Crosswalk	South crossing of Fryar Loop is unmarked, No stop bar	Install new standard crosswalk, Mark new stop bar	\$400	Short
9	Red Cloud Ct	Sidewalk	Missing sidewalk on north side	Install new sidewalk**	\$6,585	Long
10	Fryar Loop (West)	Sidewalk	Missing sidewalk on west side	Install new sidewalk**	\$6,158	Long
11	Ernye Pyle St & Fryar Loop (East)	11a. Curb ramp	South ramps lacks detectable warning surface	Reconstruct or repair existing ramps	\$4,000	Medium
		11b. Crosswalk	South crossing of Fryar Loop is unmarked	Install new standard crosswalk	\$400	Short
12	Fryar Loop (East)	Sidewalk	Missing sidewalk on east side	Install new sidewalk**	\$2,840	Long
13	Ernie Pyle St & MacArthur Rd	Curb ramp	North and southwest ramps lack detectable warning surface	Reconstruct or repair existing ramps	\$12,000	Medium
14	Leyte St (Benjamin Ct to MacArthur Rd)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$15,400	Long

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

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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
15	Thompson Ct	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$6,400	Long
16	Inchon St (MacArthur Rd to Hopkins Ct)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$42,147	Long
17	Baxter Ct	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$18,692	Long
18	Chatillon St (Richards Ct to MacArthur Dr)	Sidewalk	Missing sidewalk on south side	Install new sidewalk**	\$23,870	Long
19	2nd Army Dr & MacArthur Rd	19a. Other intersection or crossing issues	Concern about motor vehicle yielding on MacArthur Rd	Install RRFB	\$15,000	Long
				Install school crossing signs with downward pointing arrows	\$500	Short
		19b. Curb ramp	South ramps missing	Install new ramps	\$8,000	Medium
		19c. Crosswalk	South crossing of MacArthur Rd is unmarked	Install new high-visibility crosswalk	\$800	Short
20	2nd Army Dr (west of Olive Ct to MacArthur Dr)	Sidewalk	Missing sidewalk on south side	Install new sidewalk**	\$17,384	Long

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

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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
21	MacArthur Rd (C St to Stewart Loop (south)) (Inside school zone)	21a. Curb ramp	Ramps lacks detectable warning surface	Reconstruct or repair existing ramps	\$72,000	Medium
		21b. Crosswalk	Side street crossings of C St, Red Clout Ct, Leyte St, Inchon St, Chatillon St, 2 nd Army Dr, and Stewart Loop (N/S) are unmarked	Install new standard crosswalks	\$3,200	Short
22	5th Corps Rd (2nd Corps Blvd to Jones Dr)	22a. Crosswalk	Side street crossings of Stewart Ct, Taylor Ln, and Jones Dr/Diggins Dr are unmarked, No stop bar	Install new standard crosswalks, Mark new stop bars	\$2,400	Short
		22b. Curb ramp	Ramps lacks detectable warning surface	Reconstruct or repair existing ramps	\$48,000	Medium
23	5th Corps Rd & 2nd Crops Blvd (Along key student bicycling and walking route)	23a. Other intersection or crossing issues	North crossing lacks appropriate crossing signage	Install pedestrian crossing signs with downward pointing arrows	\$500	Short
		23b. Crosswalk	North crosswalk markings faded	Remark existing crosswalk with high-visibility markings	\$800	Short
		23c. Curb ramp	North ramps lacks detectable warning surface	Reconstruct or repair existing ramps	\$8,000	Medium

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

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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
24	Phelps Ave & 2nd Corps Blvd (Along key student bicycling and walking route)	24a. Curb ramp	North ramps missing	Install new ramps	\$8,000	Medium
		24b. Crosswalk	North crosswalk markings faded	Remark existing crosswalk with high-visibility markings	\$800	Short
				Relocate crossing to align with south sidewalk for direct access to path at end of Phelps Ave		
		24c. Other intersection or crossing issues	Crosswalk lacks appropriate crossing signage	Install pedestrian crossing signs with downward pointing arrows	\$500	Short
			Crosswalk long	Install median crossing island	\$3,000	Long
25	Long Loop (2nd Army Dr to 2nd Army Dr)	25a. Sidewalk	Missing sidewalk on west side	Install new sidewalk**	\$55,724	Long
		25b. Curb ramp	Ramps lacks detectable warning surface	Reconstruct or repair existing ramps	\$40,000	Medium
		25c. Crosswalk	Crossings of parking lots are unmarked	Install new standard crosswalks	\$2,000	Short

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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
26	2nd Army Dr (Olive Ct to Long Loop south) (Along key student walking route)	26a. Crosswalk	Side street crossings of Olive Ct, Long Loop (north) and Long Loop (south) are unmarked	Install new standard crosswalks	\$2,400	Short
		26b. Curb ramp	Ramps lacks detectable waring surface	Reconstruct or repair existing ramps	\$48,000	Medium
27	End of Phelps Ave (Along key student bicycling and walking route)	Sidewalk	Missing sidewalk Path to the school ends about 10 yards short of the existing sidewalk. Several parents were observed struggling to get strollers up and down the incline.	Install new sidewalk**	\$1,200	Long
28	Northeast entrance to school (On school campus)	Bicycle rack	Existing rack does not allow locking of frame	Replace existing rack with inverted U rack	\$175/per (quantity TBD)	Short
29	MacArthur Rd at School crossing (Inside school zone)	Other intersection or crossing issues	Mid-block crossing location is uncontrolled and does not serve students as a safe, convenient crossing.	Remove crossing (recommendation #32 relocates it to Stewart Loop)	N/A	Short
30	Blacktop entrance of school (On school campus)	Bicycle rack	Existing rack does not allow locking of frame	Replace existing rack with inverted U rack	\$175/per (quantity TBD)	Short

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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
31	School Driveway (middle)	Sidewalk	Missing sidewalk on south side	Install new sidewalk**	\$2,720	Long
32	Stewart Loop (north) & MacArthur Rd (Along key student walking route, Inside school zone)	32a. Crosswalk	North crossing of MacArthur Rd is unmarked	Install new high-visibility crosswalk	\$800	Short
		32b. Other intersection or crossing issues	Concern about motor vehicle yielding on MacArthur Rd	Install RRFB	\$15,000	Long
		32c. Curb ramp	North ramps missing	Install new ramps	\$8,000	Medium
33	Bus loop & MacArthur Rd (Along key student walking route, Inside school zone, On school campus)	Crosswalk	Crosswalk markings faded	Remark existing crosswalk with existing, high-visibility marking style	\$800	Short

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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
34	2nd Corps Blvd (Harris Rd to Brown St) (Along key student bicycling and walking route)	34a. Crosswalk	Crosswalk markings of Harris Rd, Larking Rd, Buffington St, Hart Rd, Thompson Ln, 5th Corps Rd, 2nd Corps Blvd are faded	Remark existing crosswalks with existing, standard marking style;	\$4,400	Short
			Crossings of Stewart Ct and Phelps Ave are unmarked	Install new standard crosswalks		
			Stop bars faded	Remark existing stop bars		
		34b. Curb ramp	Ramps lacks detectable warning surface	Reconstruct or repair existing ramps	\$88,000	Medium
35	MacArthur Rd (Inchon Rd to Reece Rd) (Along key student bicycling and walking route, Inside school zone)	School Zone Signs and Pavement Markings	SCHOOL pavement marking missing	Expand school zone and enhance signage per MdMUTCD part 7: - Install new SCHOOL pavement marking	\$1,000	Short
			School advance warning sign missing	- Install new school advance waring sign	\$500	
36	School Trail to 2nd Corps Blvd (Along key student walking route, On school campus)	Sidewalk	Main access is via stairs with inaccessible paving to the right-hand side	Reconstruct or repair sidewalk	\$1,000	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*
37	2nd Corps Blvd (south of Hart Rd to School Trail)	Sidewalk	Sidewalk missing on north side	Install new sidewalk**	\$35,641	Long
38	2nd Corps Blvd & MacArthur Rd (Along key student walking route, Inside school zone)	Other intersection or crossing issues	Concern about motor vehicle turning movements and speeds	Install curb radius reduction on northwest and southwest corners	\$8,000	Long
			Crosswalk long	Install median crossing island for west crossing of 2nd Corps Blvd		Long
39	Buffington St (Jones Dr to 2nd Corps Blvd)	Sidewalk	Missing sidewalk on south side	Install new sidewalk**	\$8,220	Long
40	2nd Corps Blvd & School trail (Along key student bicycling and walking route, Inside school zone)	40a. Curb ramp	Missing ramp	Install new ramp	\$4,000	Medium
		40b. Crosswalk	Crosswalk markings faded	Remark existing crosswalk with high-visibility markings Widen crosswalk	\$800	Short
			Crosswalk narrow			
		40c. Other intersection or crossing issues	Crossing lacks appropriate signage	Install school crossing signs with downward pointing arrows	\$500	Short
41	Jones Dr (Buffington St to Traffic Island)	Sidewalk	Missing sidewalk on east side	Install new sidewalk**	\$12,081	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.

Infrastructure Recommendations within the School Walk Zone

Information contained in this document is for planning purposes and should not be used for final design of any project. All results, recommendations, concept drawings, cost opinions, and commentary contained herein are based on limited data and information and on existing conditions that are subject to change. Further analysis and engineering design are necessary prior to implementing any of the recommendations contained herein.

Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
42	Harris Rd (2nd Corps Blvd to end)	Sidewalk	Missing sidewalk on west side	Install new sidewalk**	\$19,453	Long
43	Sterling Ln (end to end)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$57,619	Long
44	Reece Rd & MacArthur Rd	Other intersection or crossing issues	Concern about motor vehicle turning movements and speeds	Install curb radius reduction on southwest corner	\$5,000	Long
45	Reece Rd & Wigle Rd	45a. Curb ramp	Crosswalk long South ramps lack detectable warning surface	Reconstruct or repair existing ramp	\$8,000	Medium
		45b. Crosswalk	South crossing of Wigle Rd 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 outside the School Walk Zone

Information contained in this document is for planning purposes and should not be used for final design of any project. All results, recommendations, concept drawings, cost opinions, and commentary contained herein are based on limited data and information and on existing conditions that are subject to change. Further analysis and engineering design are necessary prior to implementing any of the recommendations contained herein.

Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
A	Reece Rd (MacArthur Rd to existing sidewalk)	Sidewalk	Missing sidewalk on south side	Install new sidewalk**	\$13,915	Long
B	Wigle Rd (Parking lot to Reece Rd)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$17,131	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.*

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.

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.

Encourage walking by creating a walking school bus. Many students walk from Phelps Ave & 2nd Corps Blvd, which has direct access to the school. Creating a walking school bus can encourage students to walk to school, while also making it fun!

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).

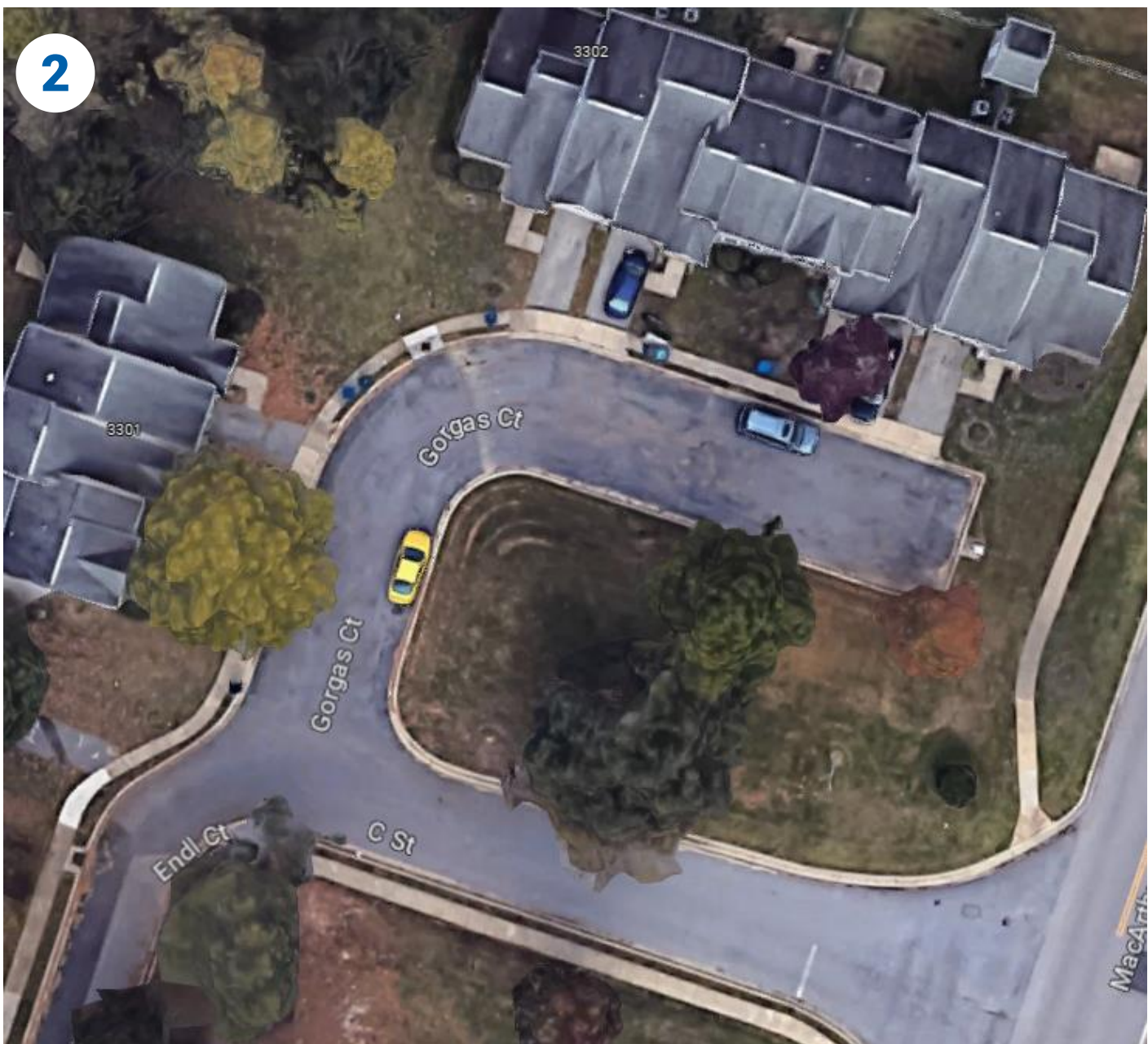
APPENDIX: INFRASTRUCTURE RECOMMENDATION PHOTOS

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone

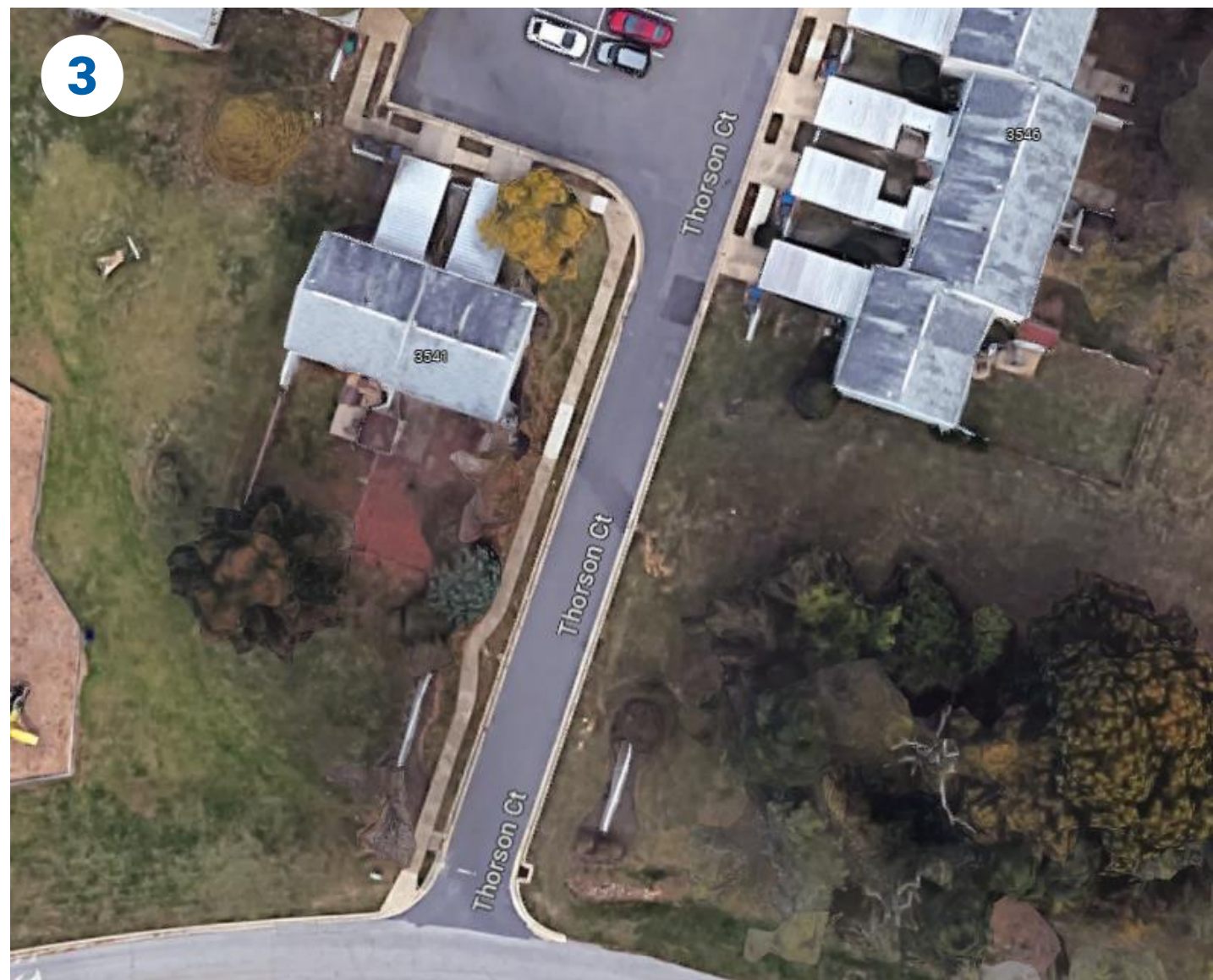


Clark Road

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Gorgas Court



Thorson Court

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



McWhorter Court & McWhorter Court

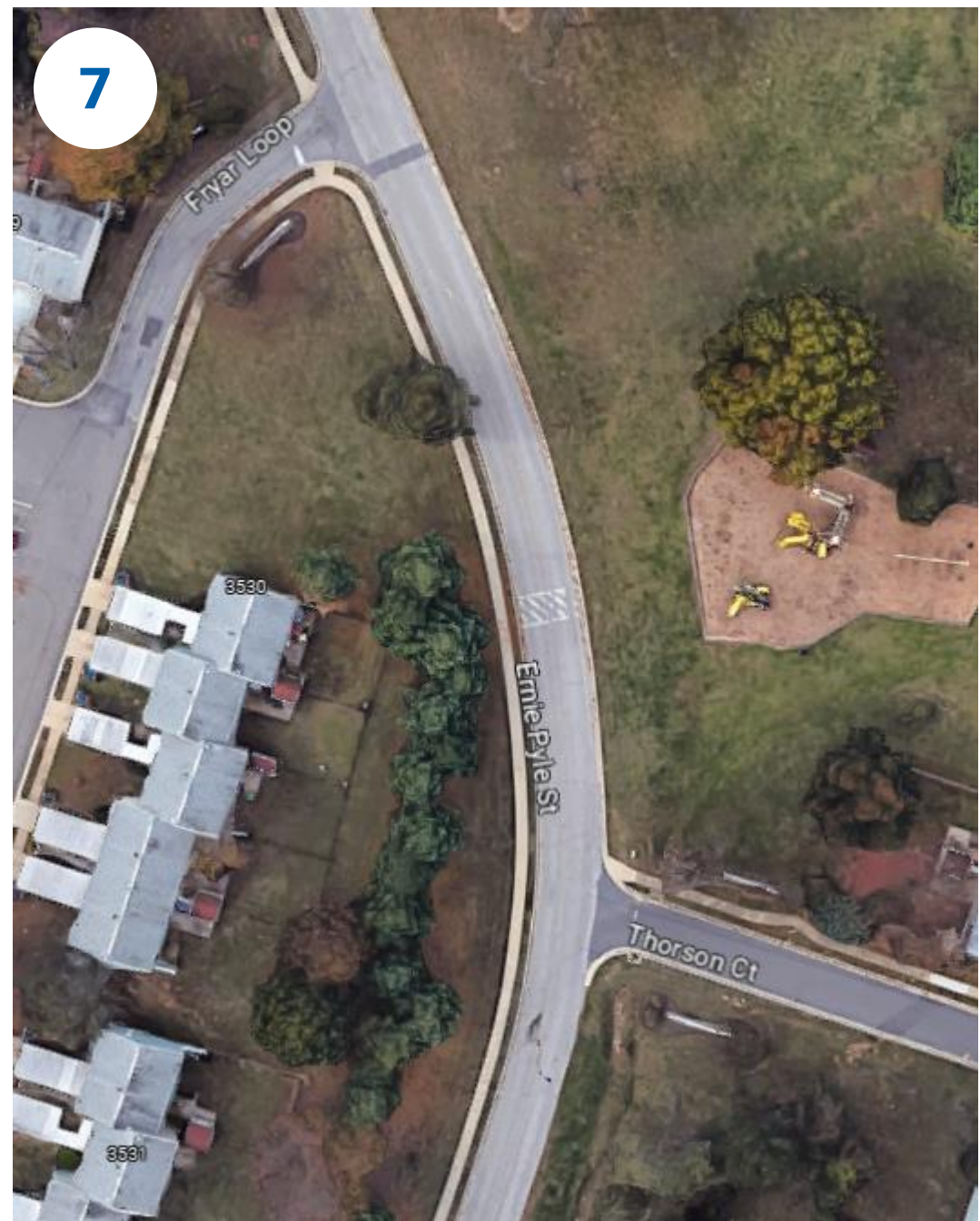


Burr Court

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Ernie Pyle Street & West of Thorson Court



Ernie Pyle Street

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Ernie Pyle Street & Fryar Loop (West)

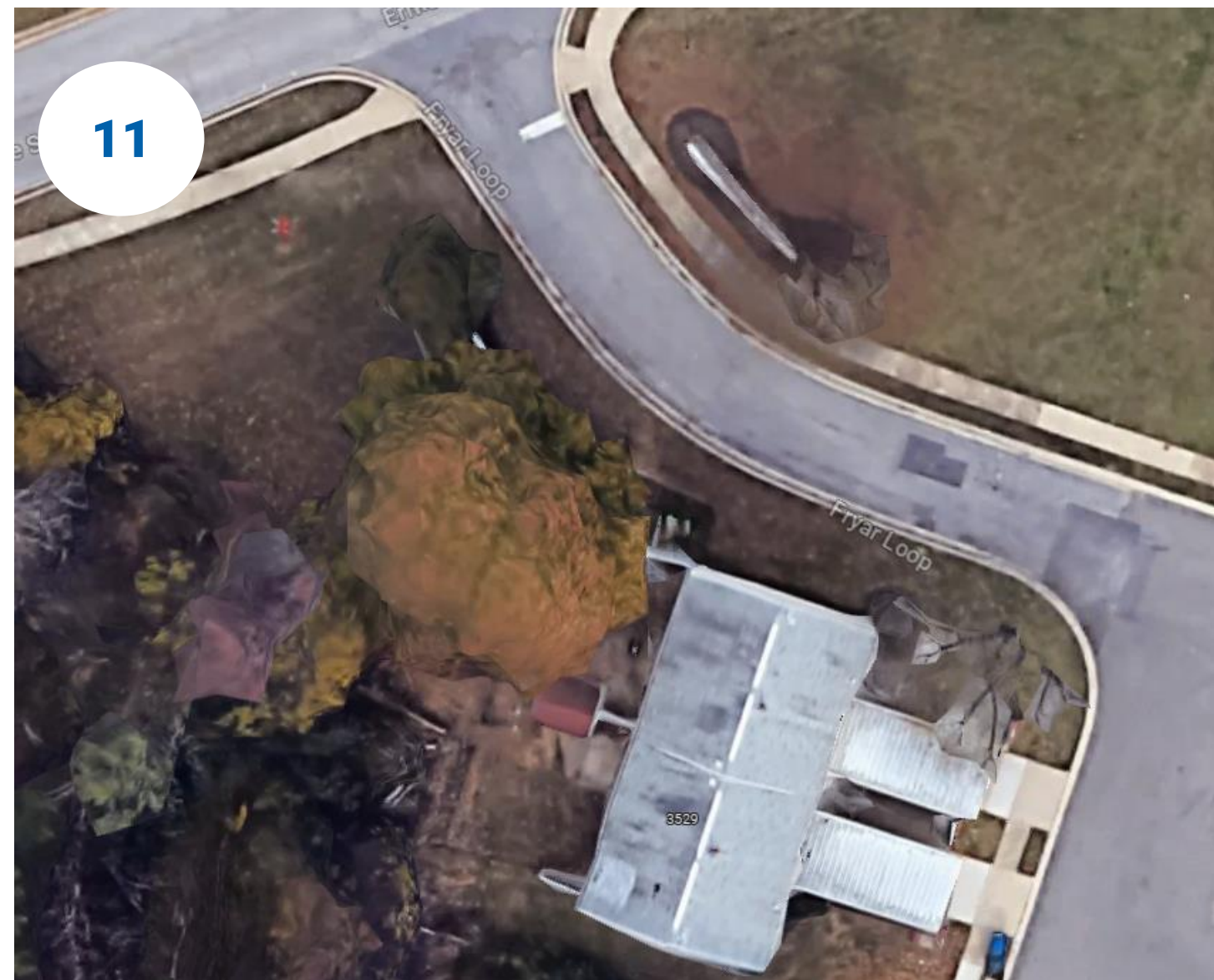


Red Cloud Ct

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone

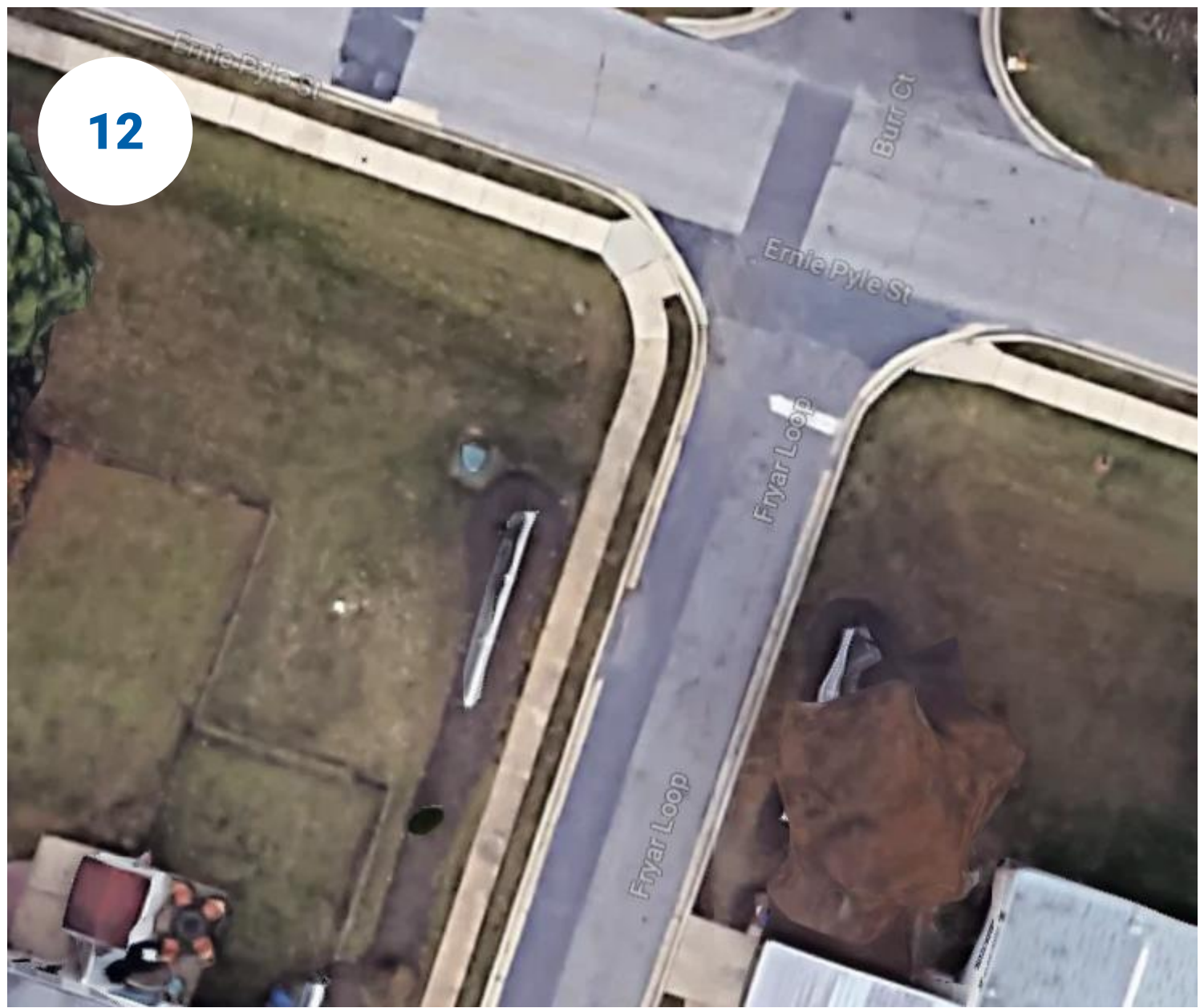


Fryar Loop (West)



Ernie Pyle Street & Fryar Loop (East)

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Fryar Loop (East)



Ernie Pyle Street & MacArthur Road

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Leyte Street

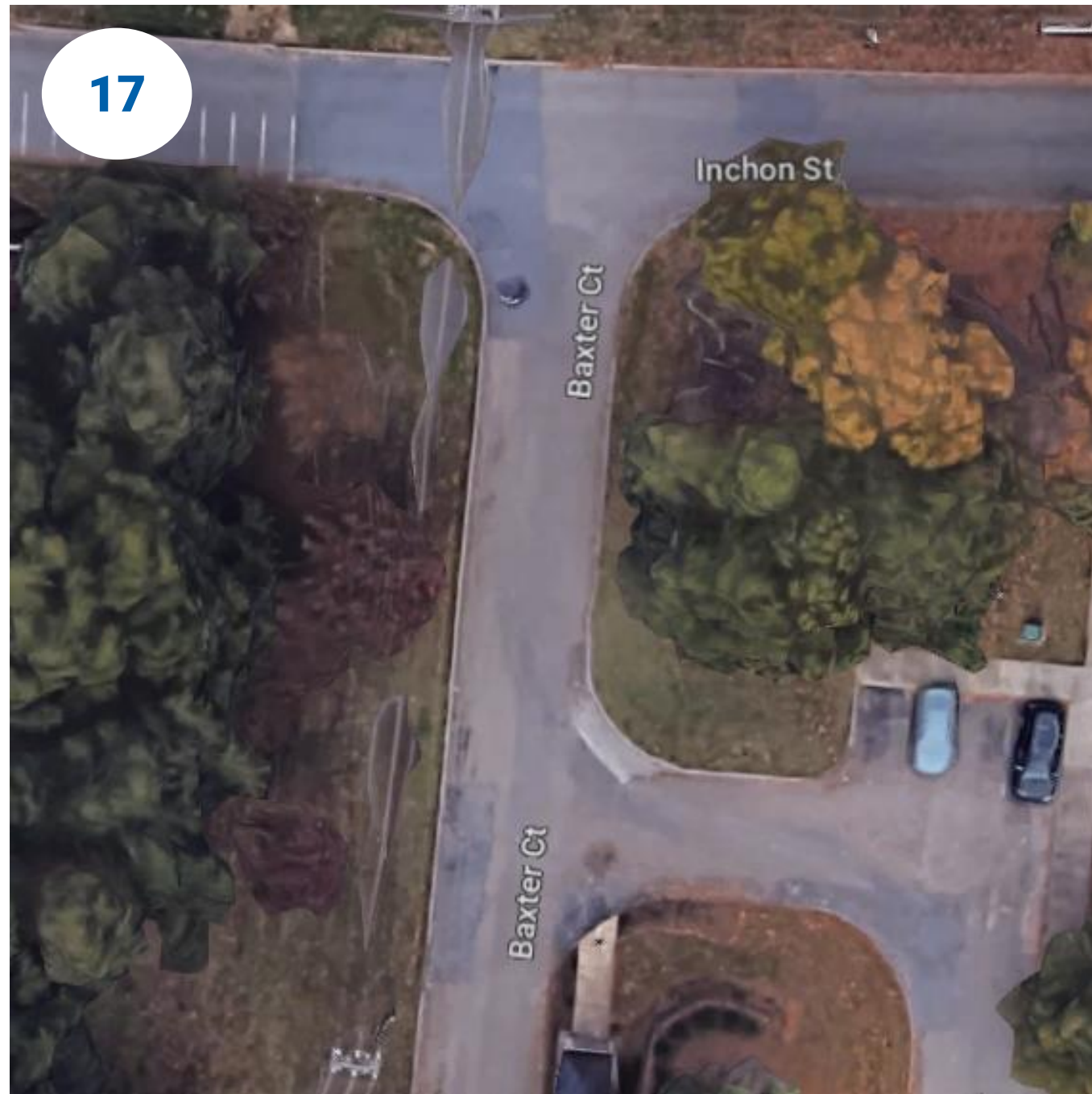


Thompson Court

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Inchon Street

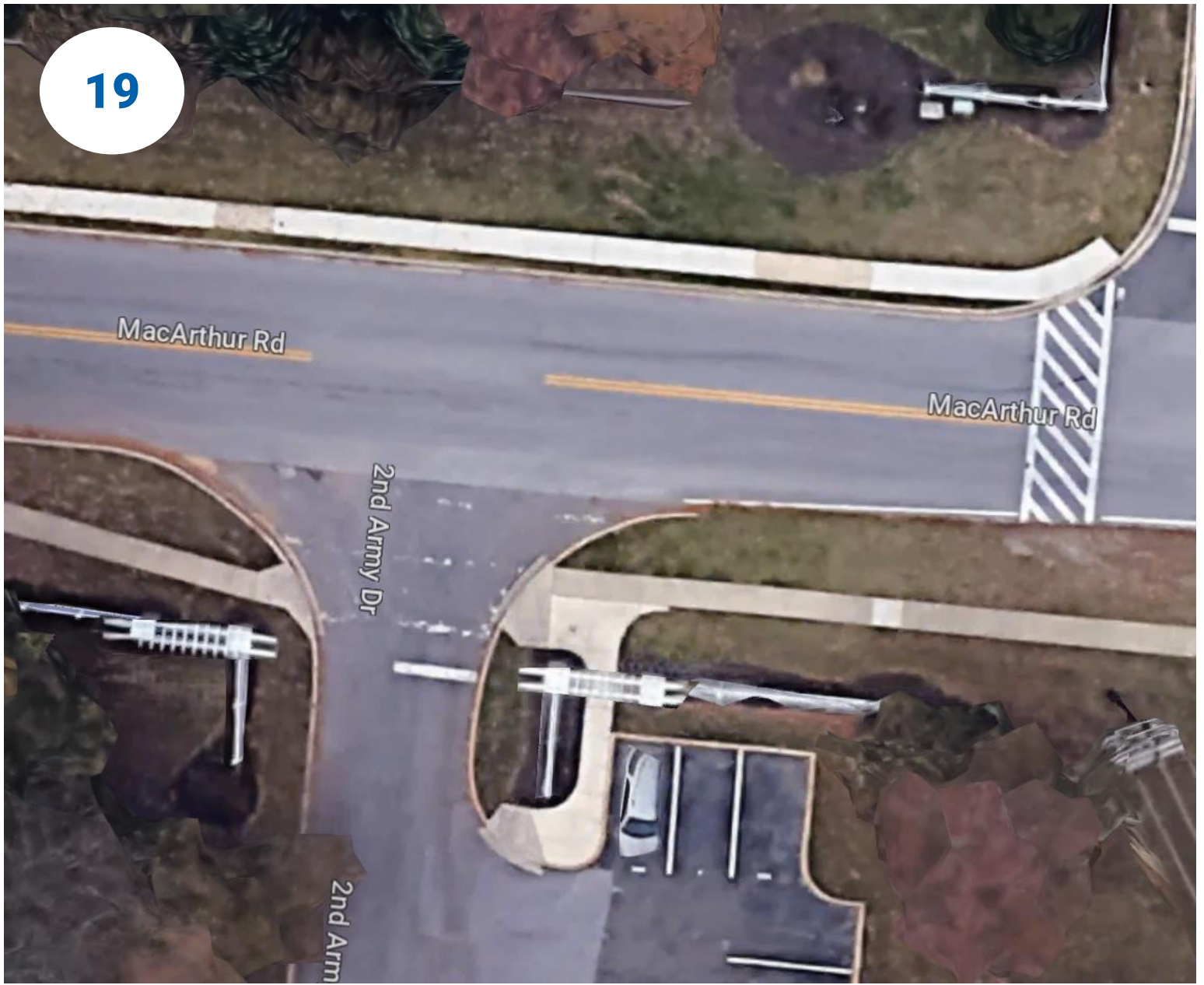


Baxter Court

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Chatillon Street



2nd Army Drive & MacArthur Road

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



2nd Army Drive



MacArthur Road

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



5th Corps Road & Taylor Lane



5th Corps Road & 2nd Corps Boulevard

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Phelps Avenue & 2nd Corps Blvd



Long Loop

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



2nd Army Drive

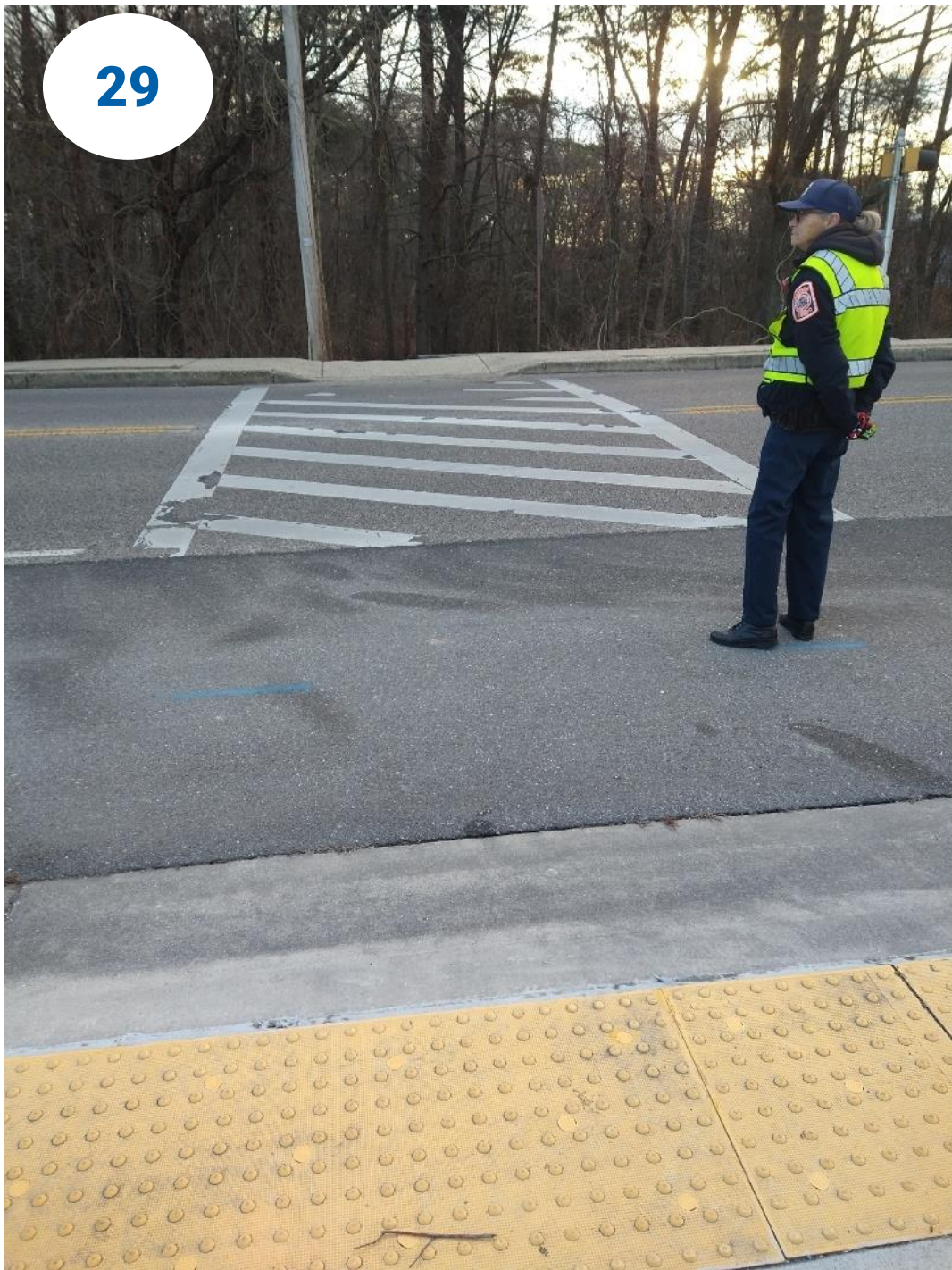


End of Phelps Avenue

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Northeast entrance to the school



MacArthur Road & School Crossing

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Blacktop Entrance to School



School Driveway (Middle)

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Stewart Loop (north) & MacArthur Road



Bus Loop & MacArthur Road

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



2nd Corps Boulevard



MacArthur Road

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



School Trail to 2nd Corps Boulevard



2nd Corps Boulevard (south of Hart Road)

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



2nd Corps Boulevard & MacArthur Road



Buffington Street

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



40

2nd Corps Boulevard & School Trail



41

Jones Drive

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Sterling Lane



Harris Road

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Reece Road & MacArthur Road



Reece Road & Wigle Road

INFRASTRUCTURE RECOMMENDATIONS – Opportunities Outside the School Walk Zone



Reece Road



Wigle Road