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# Folger McKinsey 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.

# Folger McKinsey Elementary Accessibility Study

Report findings are derived from:

<b>School site visits</b>	<ul style="list-style-type: none"><li>• Observation of school arrival and dismissal conducted February 1, 2023</li><li>• Assessment of pedestrian and bicycling infrastructure within the current school walk zone and roads immediately adjacent (as connectivity allows) conducted February 7, 2023</li></ul>
<b>Parent Survey</b>	<ul style="list-style-type: none"><li>• Administered January 26 – February 19, 2023</li><li>• Available online in English, Spanish, Chinese, and Korean</li><li>• Survey link was provided via email</li></ul>

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

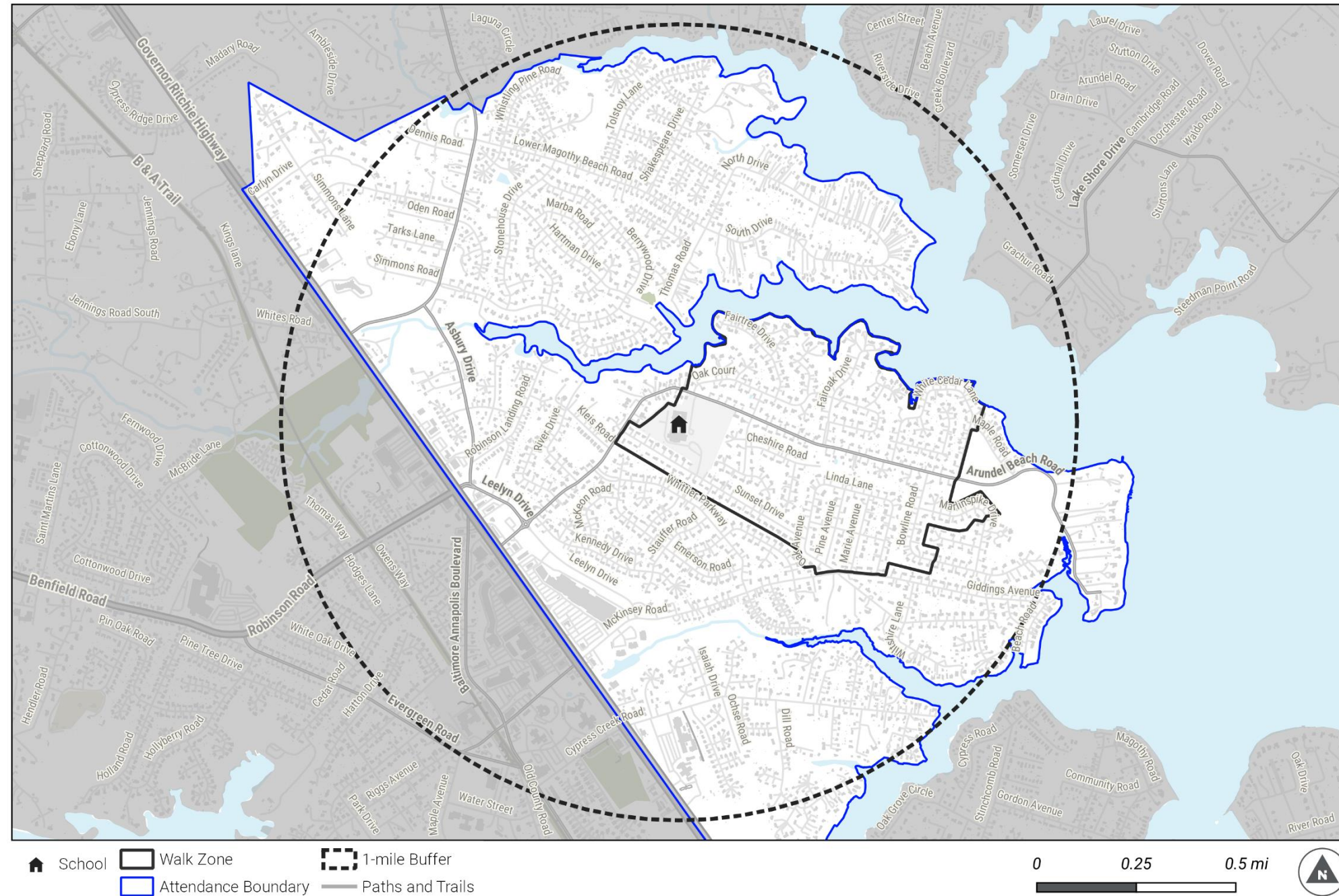
# SCHOOL OVERVIEW



# 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 do exist.
  - Cattail Creek is the northern edge of the walk zone, presenting a significant barrier to connectivity with the northern part of the attendance area, but areas to the west and south are within walking distance if pedestrian facilities were present.

Folger McKinsey Elementary School - 1-mile Radius

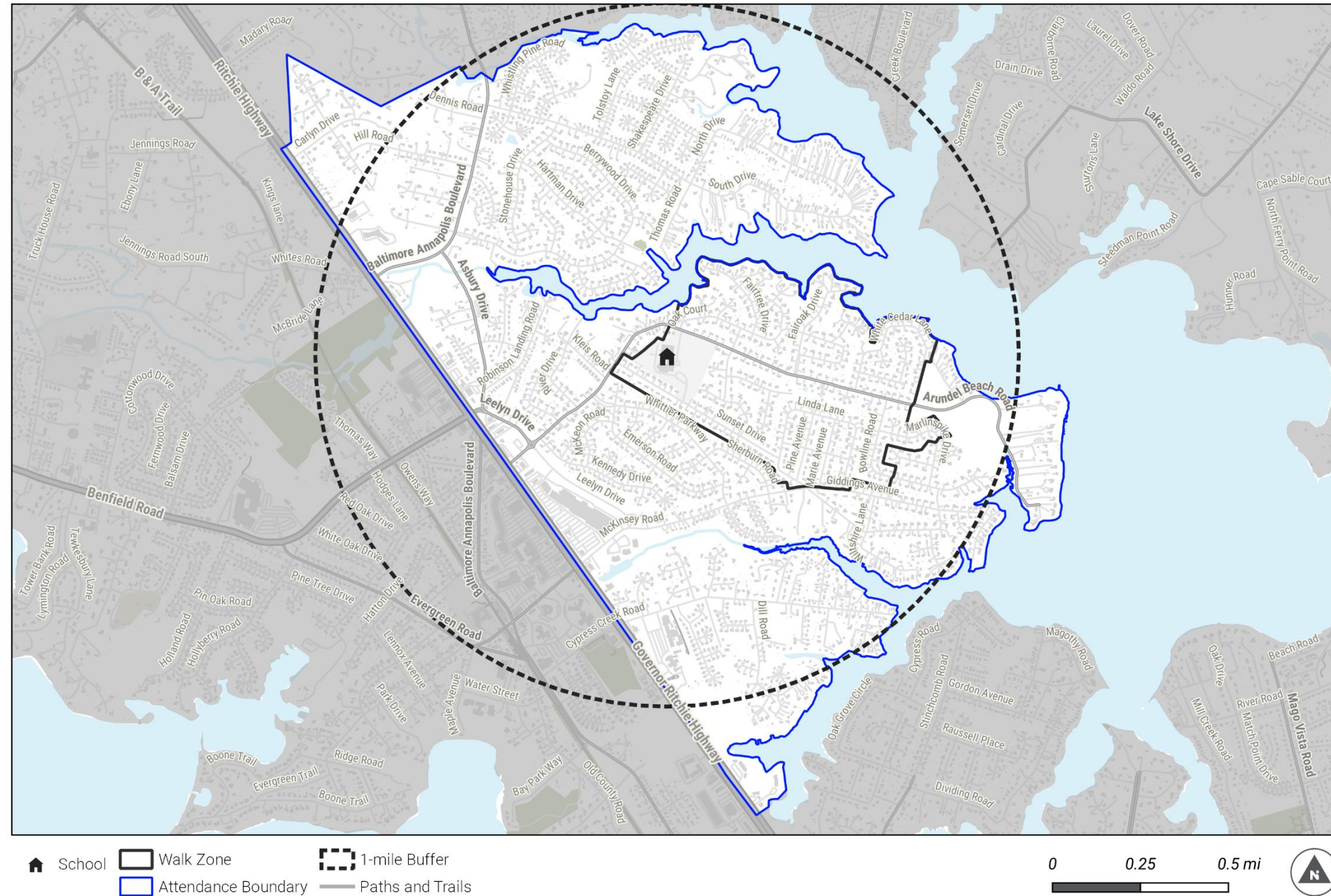




# Student Attendance Area and Enrollment

- Folger McKinsey Elementary School serves 636 students in grades K–5.
- 69% of students are registered for bus transportation\*

Folger McKinsey 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

- Folger McKinsey Elementary School is located on Arundel Beach Road a short distance from Ritchie Highway (MD-2) in Severna Park. A school driveway at the back of the school enters from Sunset Drive.
- Neighboring areas, within and outside of the walk zone, largely consist of single-family homes on disconnected cul-de-sac and loop streets.
- Arundel Beach Road is a collector road with a posted speed limit of 30 mph.
- Sunset Drive is a local neighborhood street with a 25-mph speed limit posted.

Folger McKinsey Elementary School - Walk Zone





# School Access

## Walkers and Bicyclists:

- Walkers and bike riders access the school at both the Arundel Beach Road entrance at the front of the school, and Sunset Drive entrance at the back of the school.

## Buses:

- Buses use the rear driveway off Sunset Drive.

## Parent/Guardian Drop-Off:

- Parents/guardians who drive use the school's front driveway from Arundel Beach Road to access a drop-off loop at the school's front entrance; signage prohibits parent drop-off in the bus driveway off Sunset Drive.

## Staff Vehicles:

- Staff who drive use the Arundel Beach Road driveway and park in the main lot northeast of the school.
- A small second lot, primarily reserved for custodial staff, is on the south side of the school off the bus loop.





# **PARENT-REPORTED STUDENT TRAVEL MODES AND BARRIERS**

# Folger McKinsey Elementary - Parent Survey Response Overview

- 79 total survey responses received\*
- 98% of respondents live in the area zoned to the school

Reported Distance from Home to School	
Distance	Number of Respondents
< ¼ mile	6
¼ mile – ½ mile	15
½ mile – 1 mile	21
1 mile – 1 ½ miles	16
>1 ½ miles	20

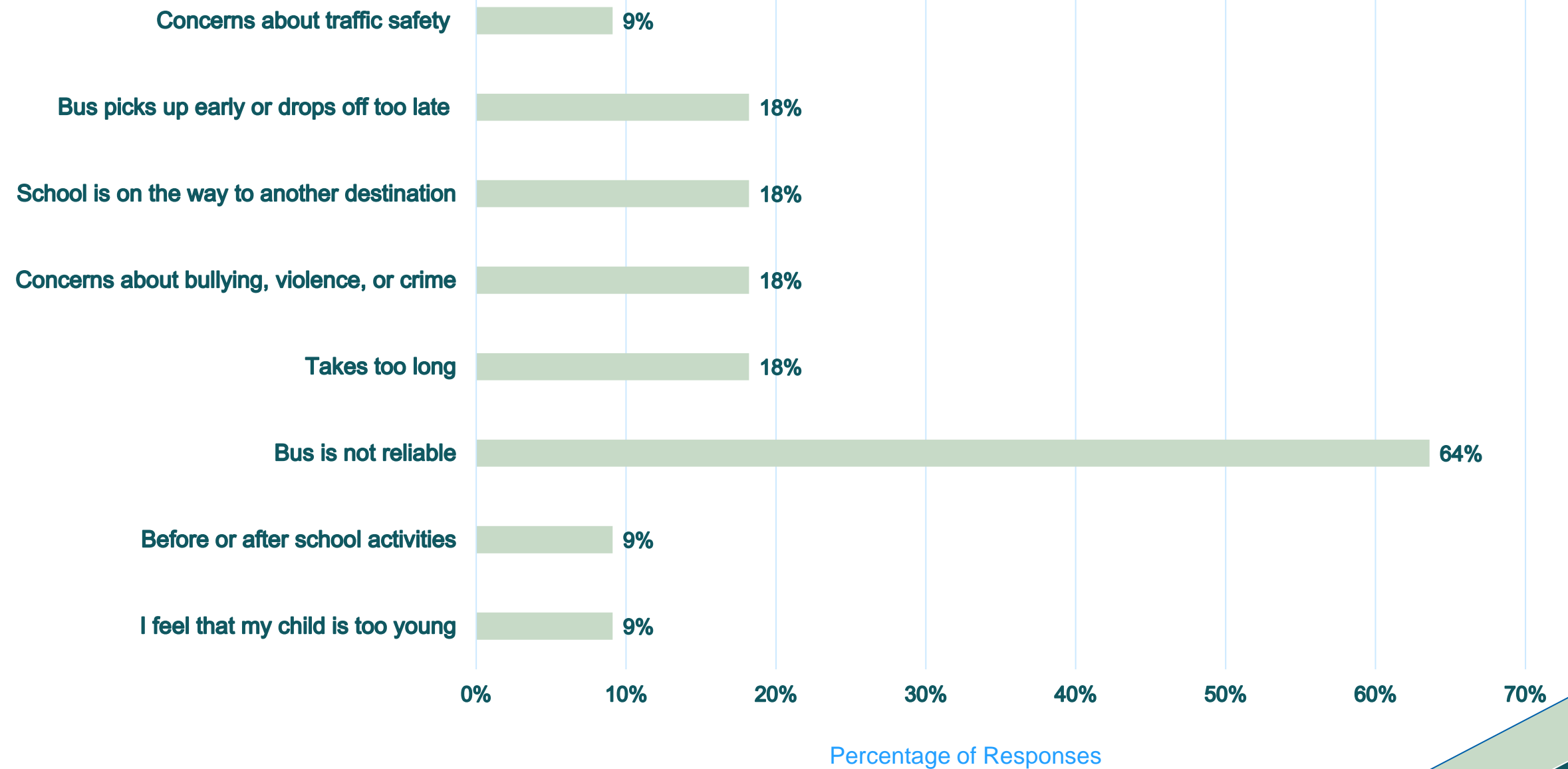
*\* Note that the survey response rate represents a fraction of the student population and may not reflect the experiences and perspectives of all families.*

# Parent Survey Results

## School Bus Eligibility and Use

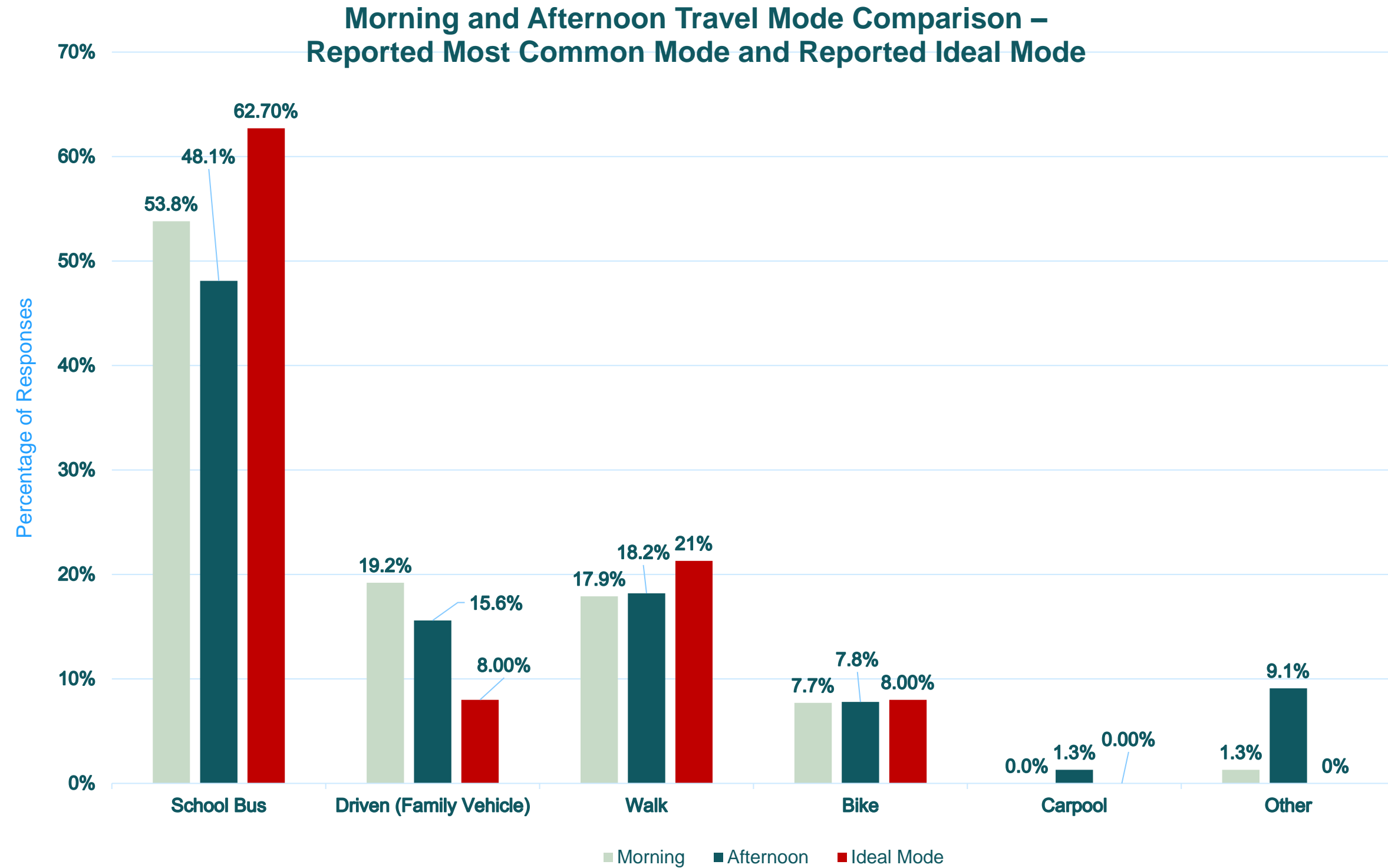
72% of respondents reported being eligible for school bus transportation;  
54% reported riding the school bus to school.

### Issues and Reasons Reported for Not Riding the Bus



# Parent Survey Results

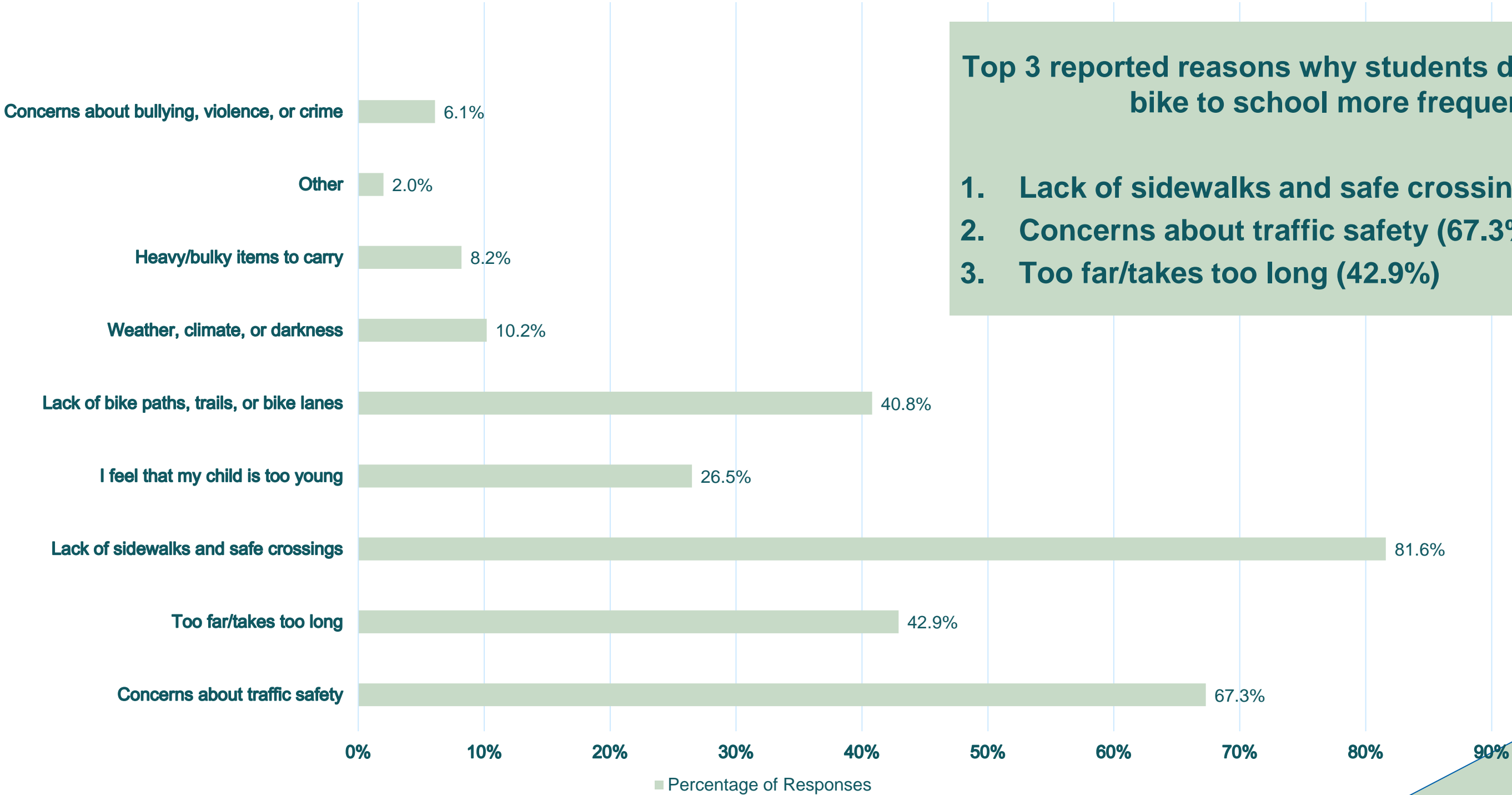
## Most Common Travel Mode versus Ideal Travel Mode





# Parent Survey Results

## Reported Barriers to Walking or Biking to School



**Top 3 reported reasons why students don't walk or bike to school more frequently:**

- 1. Lack of sidewalks and safe crossings (81.6%)**
- 2. Concerns about traffic safety (67.3%)**
- 3. Too far/takes too long (42.9%)**

# Parent Survey Results

## Reported Streets Used to Walk or Bike to School

- Arundel Beach Road
- Oak Court
- Fairoak Drive
- White Cedar Lane
- Chestnut Road
- Bowline Road
- Cheshire Road
- Derussey Drive
- Sunset Drive
- Oak Avenue
- Hilltop Drive
- Pine Avenue
- McKinsey Road

# ARRIVAL AND DISMISSAL OBSERVATIONS

# Arrival and Dismissal Operations

## School Hours:

- 8:00 am – 2:25 pm
- Doors open at 7:45 am

## Observation Times (February 1st):

- Arrival: 7:35 am – 8:15 am
- Dismissal: 2:15 pm – 2:45 pm

## Crossing Guards:

- Per AACPS data, one crossing guard is assigned to Folger McKinsey Elementary School, at the intersection of Arundel Beach Road and Fairtree Drive/Derussy Drive.
- On the day of observation, an Anne Arundel County Police Department officer was serving as crossing guard for the day.



Several speed humps are installed in the parking lot/drop-off loop.



# General Observations

## General Observations:

- The primary access points for walkers - Arundel Beach Road and Sunset Drive – do not have sidewalks, except for a small section west of the school driveway and east of the school driveway to Fairtree Drive/Derussy Drive.
- Both Arundel Beach Road and Sunset Drive have painted areas on both sides which resemble bike lanes, but with signage designating them as “pedestrian walkways”.
- Observation day was trash day in the neighborhood, and the “pedestrian walkways” on both streets were obstructed with garbage and recycling cans at nearly every property.





# Arrival Observations

**The study team observed arrival from the following locations:**

- Sunset Drive at school bus loop driveway
- Arundel Beach Road at Derussey Drive/Fairtree Drive

**General Observations:**

- School starts at 8:00 AM
- Doors open at 7:45 AM; buses hold students until then. Walkers, bike riders, and car riders gather outside the main entrance until doors open.



Buses waiting to drop off students during arrival.

# Arrival Observations

## Walkers and Bicyclists

- Approximately 20 walkers were observed on Arundel Beach Road or entering campus from the north.
- Eight bike riders were observed on Arundel Beach Road. After arrival, there were 18 bikes in the corral near the driveway entrance; 8 bikes were in the bike racks, and ten were leaned against the fence, both inside and outside the corral.
- Student who biked were observed walking from the bike racks to the school across the school lawn rather than using the sidewalk beside the driveway.
- Two students were observed riding to school along Sunset Drive; both left their bikes in the grass near the school building.
- Few drivers were observed parking along Arundel Beach Road to walk students to campus.



Bikes left on ground and against streetlight near the back of the school



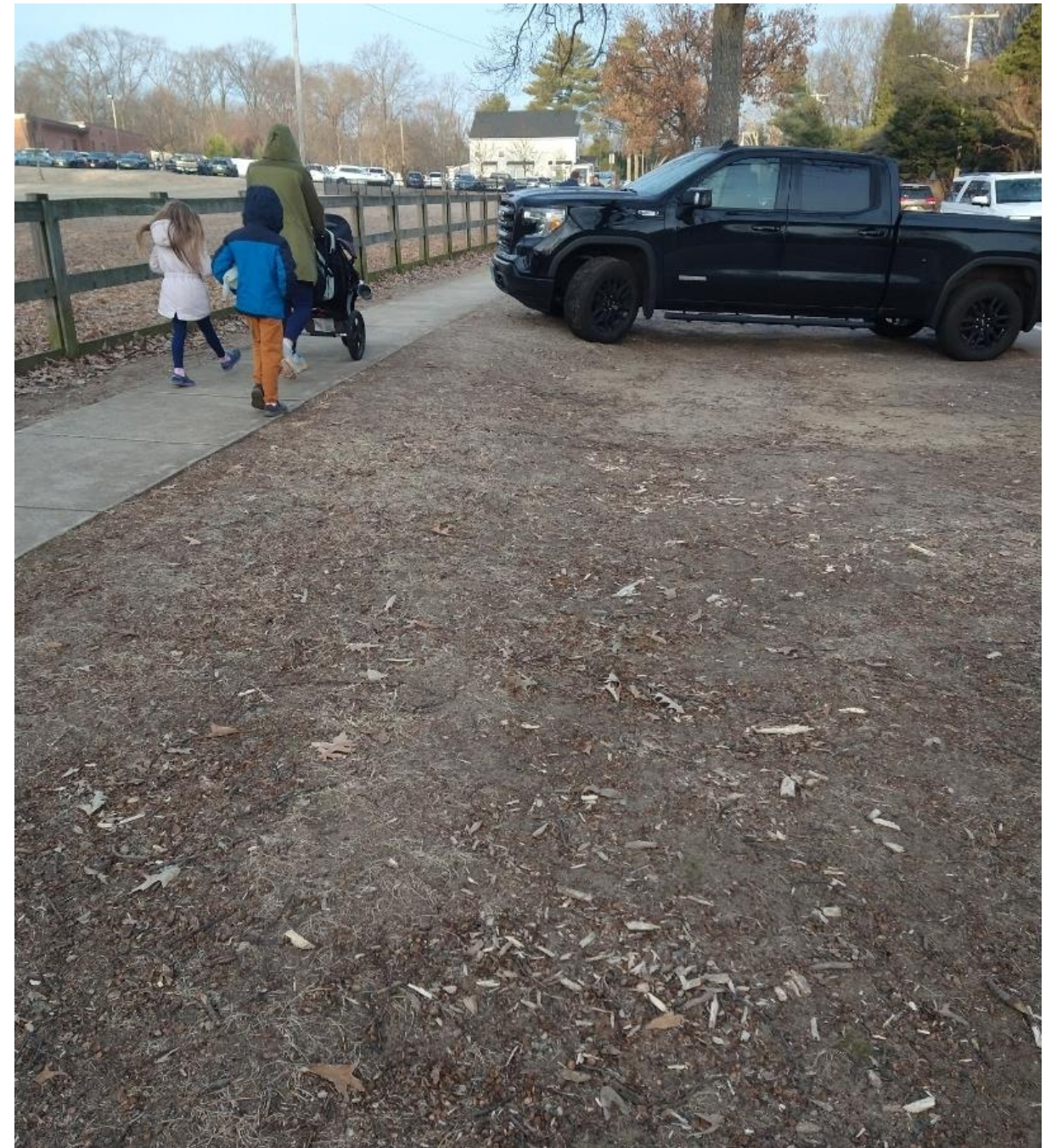
# Arrival Observations

## Bus Lane

- Eight buses were observed at arrival.

## Parent Drop-off

- Parents drop off in the north parking lot loop.
- Few conflicts or improper drop off locations were observed during arrival, though a few large vehicles were parked along the Arundel Beach Road sidewalk.
- Several parents drop off along both sides of Arundel Beach Road and Sunset Drive.



A few parents parked along the edge of Arundel Beach Road.



# Dismissal Observations

The study team observed dismissal from the following locations:

- Arundel Beach Road at school driveway
- Sunset Drive at school driveway

## General Observations:

- Dismissal begins at 2:20pm; bus riders are dismissed first, then car riders after.

## Walkers and Bicyclists:

- Staff accompany walkers and bicyclists as a group to meet parents at the end of the driveways.
- One group of about 11 students were walked out to Sunset Drive.
- One group of about 11 kindergarteners were walked out to Arundel Beach, followed by a group of approximately 60 older students.



Parents gathered on Arundel Beach Road to wait for dismissal; approximately 20 had driven, but many walked.



# Dismissal Observations

## Bus Lane

- Bus riders are dismissed before car riders depart; separate driveways at opposite sides of campus help to minimize conflicts.

## Parent Pick-up

- The pick-up line nearly reached the street, but few conflicts were observed.
- Several parents were observed parking along both Sunset Drive and Arundel Beach Road in the designated “Pedestrian Walkway” areas (posted “No parking 7 AM–4PM school days”).
- On Arundel Beach Road, they also park, at various head-in or back-in angles, on the dirt between the sidewalk and road, which is posted “No stopping any time”.



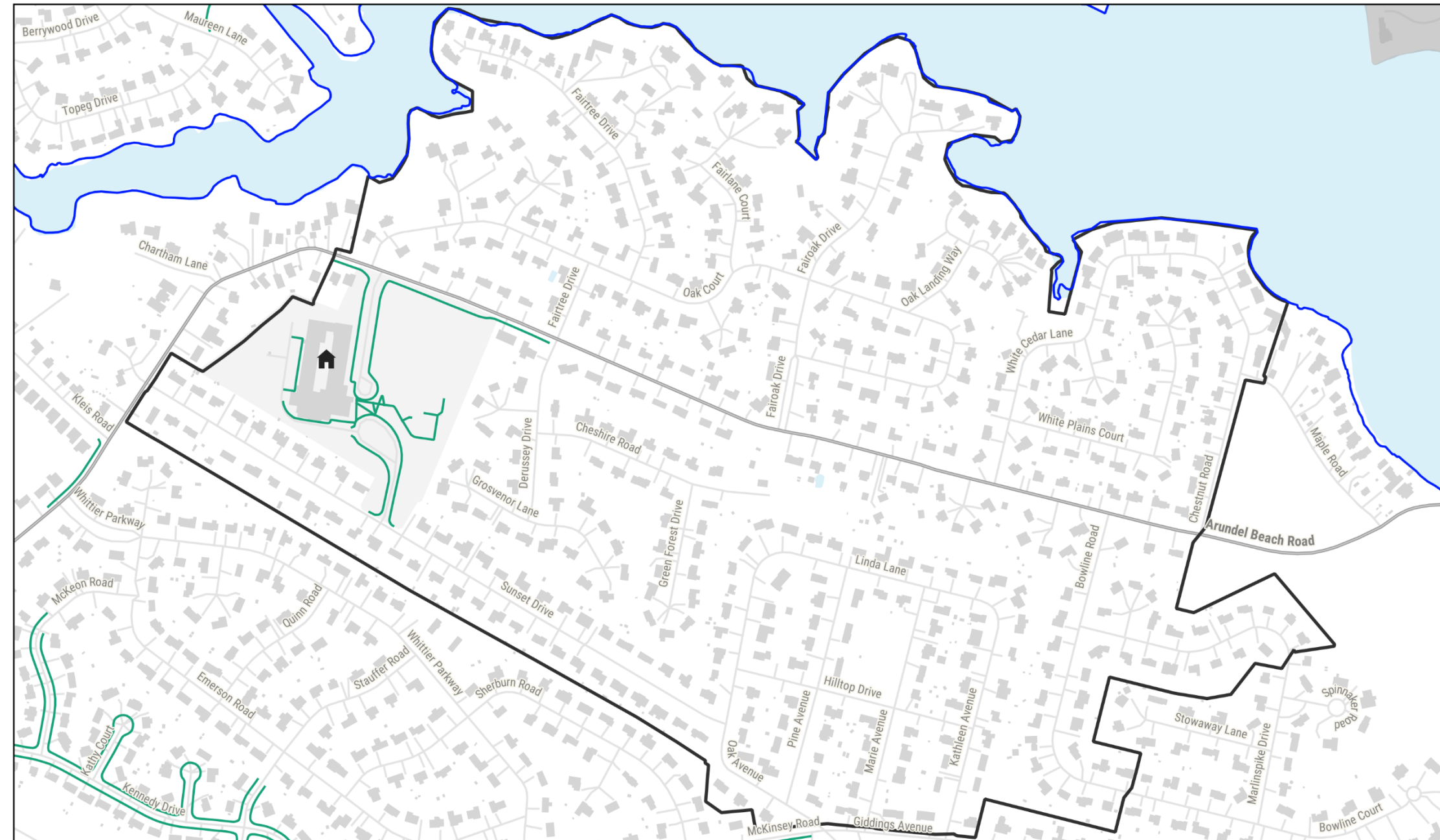
Sunset Drive near the back school driveway

# EXISTING INFRASTRUCTURE CONDITIONS

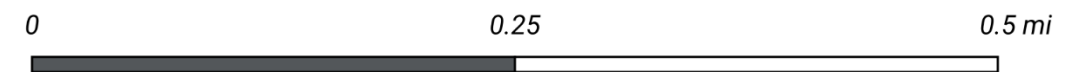
# Existing Sidewalk Network

Most streets in the walk zone lack sidewalks, though most of both Arundel Beach Road and Sunset Drive are painted with shoulder “pedestrian zone” areas.

Folger McKinsey Elementary School - Existing Sidewalk Network



- 🏠 School
  - Sidewalks
  - ▭ Walk Zone
  - ▭ Attendance Boundary
  - ▭ 1-mile Buffer
- Source: OpenArundel





# Existing Crosswalks

On the campus, a crosswalk is marked across the south parking lot entrance and at the south driveway off Sunset Drive (although the map indicates it is unmarked but it was marked at the time of observation). There is no crosswalk marked across the north driveway at Arundel Beach Road.

Crosswalks are marked across Sunset Drive at the school's rear driveway, but not across Arundel Beach Road at the school's front driveway.

There is a raised crossing across Arundel Beach Road at Fairtree Drive / Derussey Drive. Crossings of other intersections within the walk zone are unmarked.

Folger McKinsey Elementary School - Existing Crosswalks





# Existing Curb Ramps

Most intersections in the walk zone do not have curb ramps, and the few that exist fail ADA-compliance.

Folger McKinsey Elementary School - Existing Curb Ramps

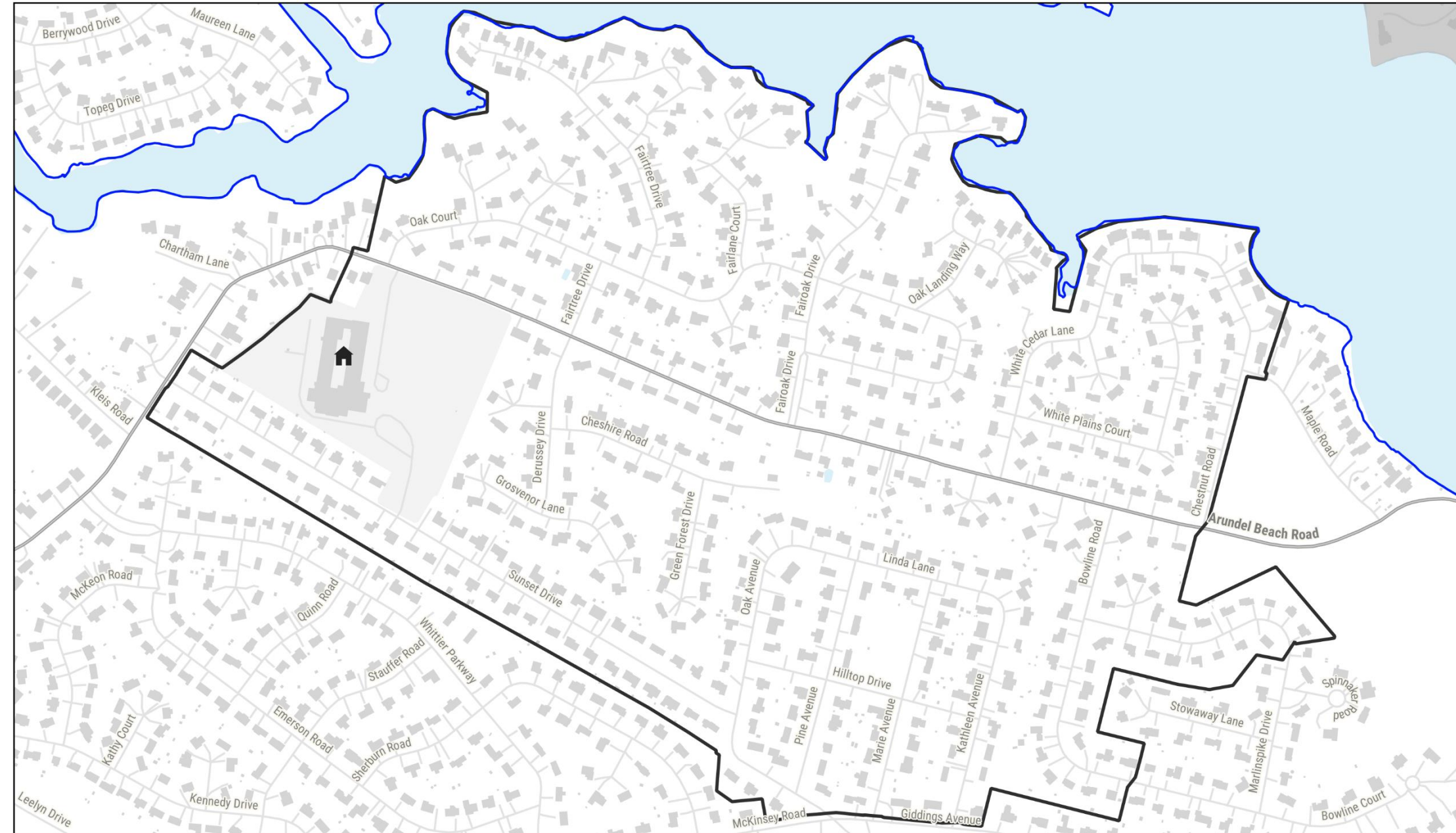


\*Curb ramp data downloaded 9/14/22

# Existing On-Road Bike Facilities

There are no known existing or planned\* on-road bicycle facilities within the school walk zone.

Folger McKinsey Elementary School - Existing On-Road Bicycle Facilities



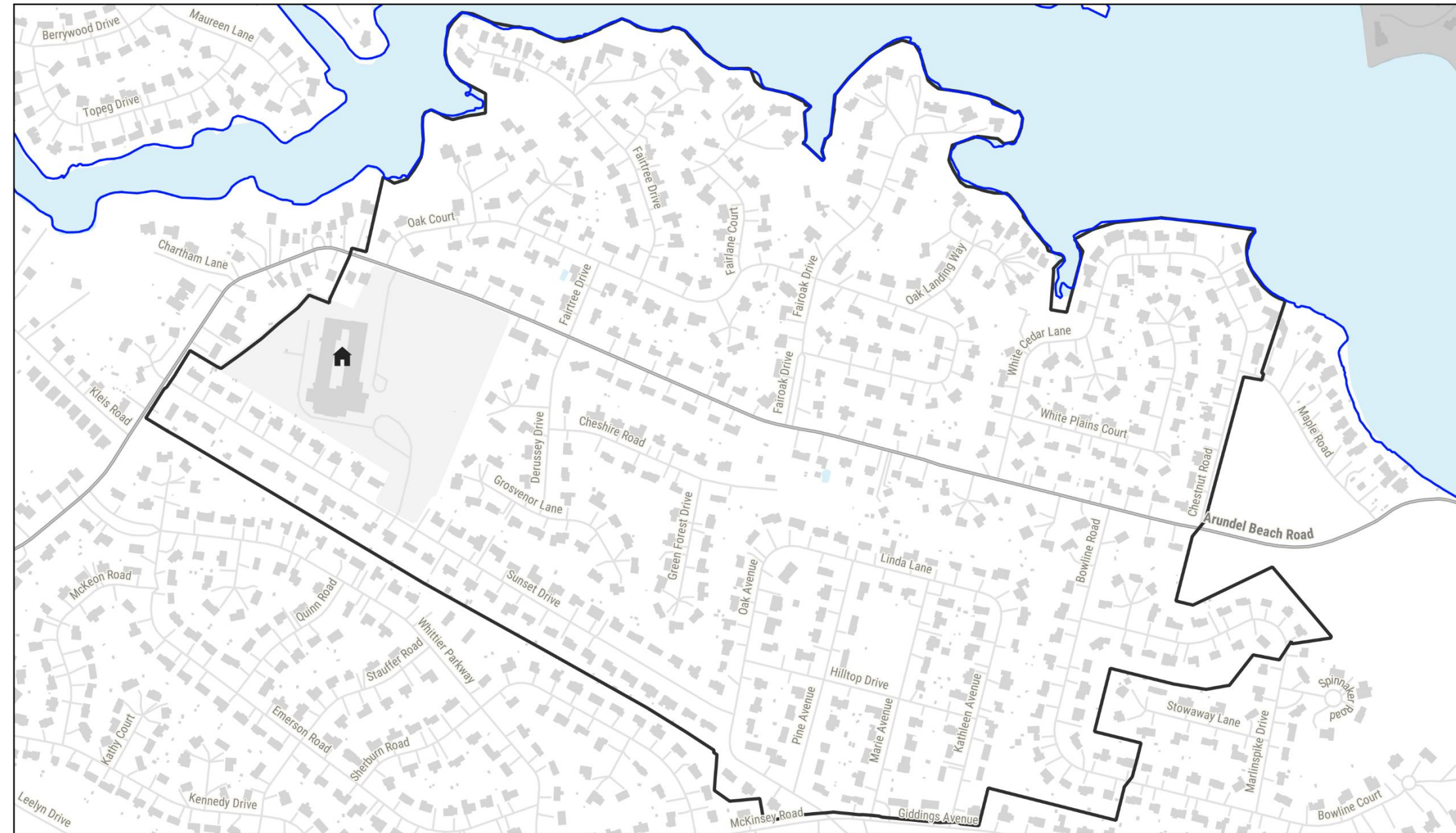
\* "Planned" means included in the County's Master Plan



# Existing Regional Trails, Park Trails, and Paths

There are no known existing or planned\* regional or park trails within the walk zone.

Folger McKinsey Elementary School - Existing Regional Trails, Park Trails, and Paths



- School
- Walk Zone
- Attendance Boundary
- 1-mile Buffer
- Regional Trails
- Park Trails
- Paths
- Shared Use Paths
  - Existing
  - Programmed
  - Planned

Sources: Anne Arundel County, OpenArundel



\* "Planned" means included in the County's Master Plan



# CRASH DATA

# Crash Data (2017 – 2021)

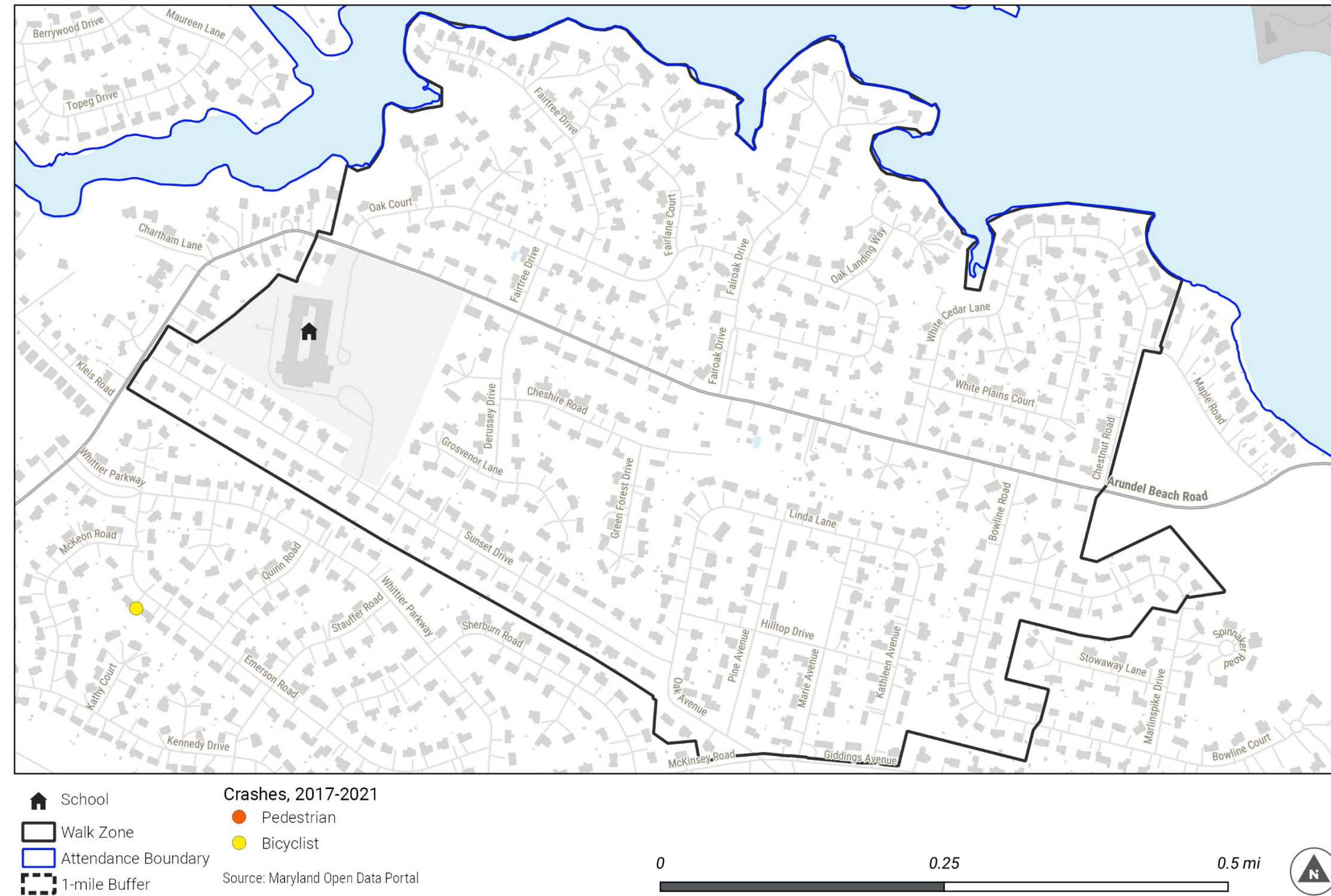
Crashes within 1-mile radius of the school:

- 752 total crashes (all modes), 2 fatal
- 18 pedestrian-involved crashes, 17 resulting in injury, 1 fatal
- 14 bicyclist-involved crashes, 10 resulting in injury, 0 fatal

Pedestrian and bicyclist crashes within the walk zone:

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

Folger McKinsey 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.

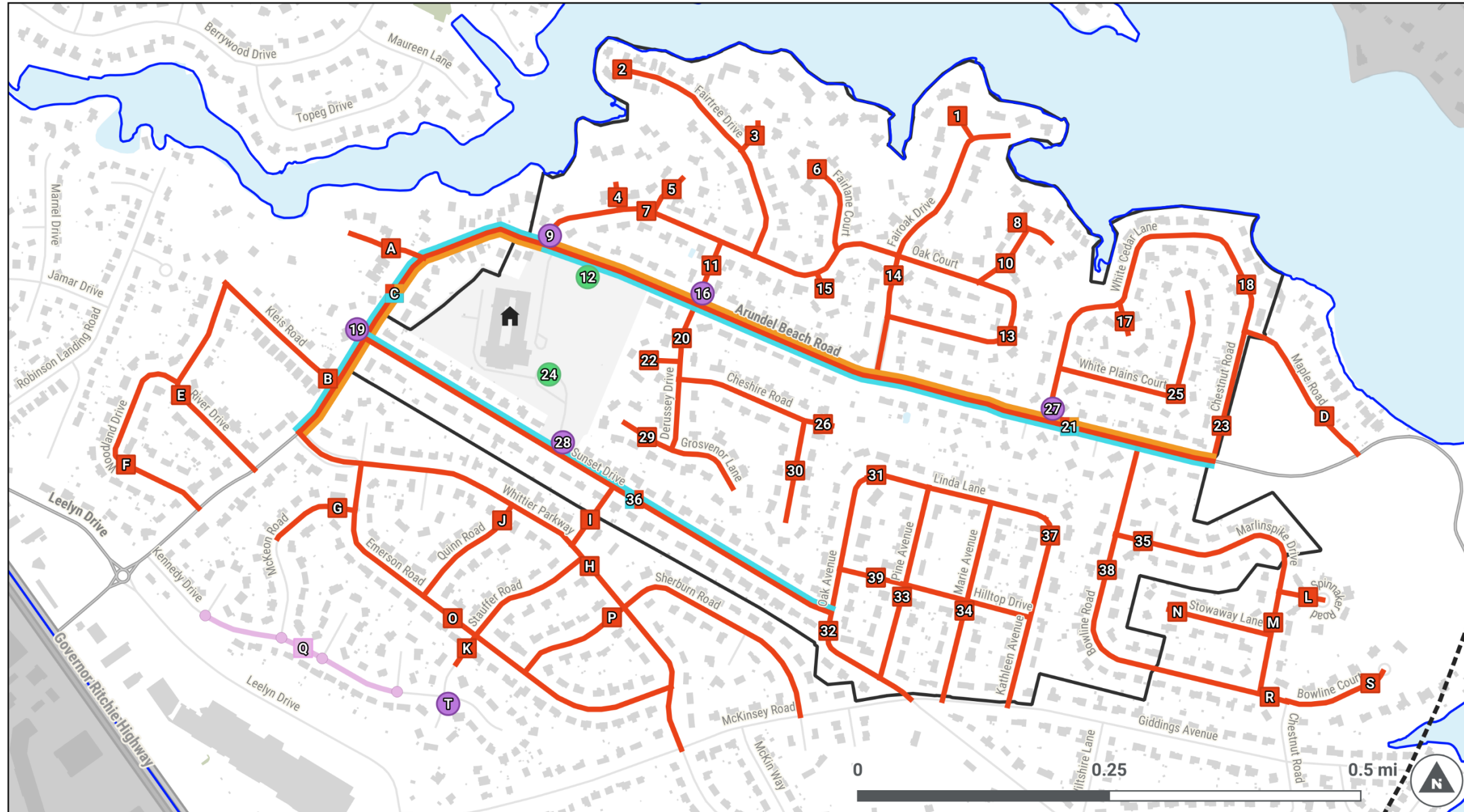
The County is currently designing a sidewalk project requested by AACPS on the southern side of Arundel Beach Road from Kennedy Drive to Folger McKinsey Elementary School. Other projects within the study area were identified in the County’s Capital Improvement Projects web page at the time of this plan, including the **Highway Safety Improvement – McKinsey Road project**. 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

Folger McKinsey Elementary School - Recommendations



- |                                                                                                                                                                |                                                                                                                                                                                                                     |                                                                                                                        |                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li> School</li> <li> Walk Zone</li> <li> Attendance Boundary</li> <li> 1-mile Buffer</li> <li> Paths and Trails</li> </ul> | <p><b>Spot Recommendations</b></p> <ul style="list-style-type: none"> <li> Access Management</li> <li> Bicycle Rack</li> <li> Intersection or Crossing</li> <li> School Zone Signs and Pavement Markings</li> </ul> | <ul style="list-style-type: none"> <li> Sidewalk</li> <li> Speed Management</li> <li> Other Recommendations</li> </ul> | <p><b>Segment Recommendations</b></p> <ul style="list-style-type: none"> <li> Bicycle Facility</li> <li> Corridor Intersection Upgrades</li> <li> School Zone Signs and Pavement Markings</li> <li> Speed Management</li> <li> Sidewalk</li> </ul> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

# Infrastructure Recommendations within the School Walk Zone

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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
1	Oak Cir (Fairoak Dr to cul-de-sac)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$11,606	Long
2	Fairtree Dr (Oak Ct to end)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$109,944	Long
3	Fairtree Plaza (Fairtree Dr to end)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$14,221	Long
4	Winter Crest Ln (Oak Ct to end)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$10,846	Long
5	Fairway Ct (Oak Ct to cul-de-sac)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$19,039	Long
6	Fairlane Ct (Oak Ct to cul-de-sac)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$41,366	Long
7	Oak Ct (Arundel Beach Rd to Fairoak Dr) (Along key student walking route, Inside school zone)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$165,937	Long
8	Oak Landing Ct (end to end)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$19,849	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*
9	Oak Ct & Arundel Beach Rd (Along key student walking route, Inside school zone)	9a. Crosswalk	Missing crosswalk markings across Arundel Beach Road	Install new high-visibility crosswalk	\$800	Short
		9b. Other intersection or crossing issues	Concern about motor vehicle yielding, Crossing lacks appropriate crossing signage	Install school advance crossing assembly signs, Install school crossing signs with downward pointing arrows	\$1,000	Short
		9c. Curb ramp	Missing ramp	Install new ramp  Note - there is no existing connection (sidewalk/curb ramp/crosswalk) across the school driveway. Not necessary for school access but noting for community connectivity.	\$4,000	Medium
10	Oak Landing Way (Oak Ct to Oak Landing Ct)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$31,450	Long
11	Fairtree Dr (Oak Ct to Arundel Beach Rd)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$28,242	Long
12	Arundel Beach Rd (East of School Driveway)(On school campus)	Bicycle rack	Existing rack does not allow locking of frame, New rack location needed	Replace existing rack with inverted U rack. Relocate bike rack near main entrance.	\$175/per (quantity TBD)	Short

\*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*
13	Oak Ct (Fairoak Dr to Fairoak Dr)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$120,629	Long
14	Fairoak Dr (Arundel Beach Rd to end)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$126,459	Long
15	Leaf Ct (Oak Ct to cul-de-sac)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$9,559	Long
16	Fairtree Dr/Derussey Dr & Arundel Beach Rd (Along key student walking route, Inside school zone)	Other intersection or crossing issues	Concern about motor vehicle yielding	Install RRFB	\$15,000	Long
17	White Haven Ct (White Cedar Ln to end)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$13,168	Long
18	White Cedar Ln (Arundel Beach Rd to Maple Rd)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$169,420	Long
19	Arundel Beach Rd & Sunset Dr (Along key student walking route, Inside school zone)	19a. Crosswalk	Missing crosswalk markings	Install new high-visibility crosswalk	\$800	Short
		19b. Other intersection or crossing issues	Concern about motor vehicle yielding	Install school advance crossing assembly signs  Install pedestrian crossing signs with downward pointing arrows	\$1,000	Short

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

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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*
20	Derussey Dr (Arundel Beach Rd to Grosvenor Ln)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$62,613	Long
21	Arundel Beach Rd (Chestnut Rd to Oak Ct)(Inside school zone)	21a. Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$295,508	Long
		21b. 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
		21c. School Zone Signs and Pavement Markings	SCHOOL pavement marking missing, School advance warning sign missing, School zone sign missing, School zone speed limit sign missing	Expand school zone and enhance signage per MdMUTCD part 7: - Install new SCHOOL pavement marking - Install new school advance warning sign - Install new school zone sign (begin/end) - Install new school zone speed limit sign	\$1,000 \$500 \$1,000 \$500	Short
22	Fulbright Ct (Derussey Dr to cul-de-sac)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$12,965	Long

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

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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*
23	Chestnut Rd (Maple Rd to Arundel Beach Rd)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$55,895	Long
24	South School Driveway Loop (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
25	White Plains Ct (White Cedar Ln to Cul-de-sac)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$94,905	Long
26	Cheshire Rd (Derussey Rd to end)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$67,887	Long
27	Arundel Beach Rd & White Cedar Ln (Inside school zone)	Other intersection or crossing issues	Concern about motor vehicle yielding	Install school advance crossing assembly signs	\$500	Short
28	Sunset Dr & School Driveway (Along key student walking route, Inside school zone, Reported school concern)	Other intersection or crossing issues	Concern about motor vehicle yielding, High motor vehicle speeds	Install raised crosswalk	\$10,000	Medium
29	Grosvenor Ln (end to end)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$55,764	Long
30	Green Forest Dr (Cheshire Dr to end)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$42,559	Long
31	Linda Ln (Oak Ave to Kathleen Ave)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$77,448	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*
32	Oak Ave (Linda Ln to Giddings Ave)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$114,472	Long
33	Pine Ave (Linda Ln to Oak Ave)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$82,768	Long
34	Marie Ave (Linda Ln to Giddings Ave)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$85,398	Long
35	Marlinspike Rd (Bowline Rd to Walk Zone Boundary)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$79,680	Long
36	Sunset Dr (Arundel Beach Rd to Oak Ave)	36a. Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$227,215	Long
		36b.	SCHOOL pavement marking missing, School advance warning sign missing, School zone sign missing, School zone speed limit sign missing	Expand school zone and enhance signage per MdMUTCD part 7: - Install new SCHOOL pavement marking - Install new school advance warning sign - Install new school zone sign (begin/end) - Install new school zone speed limit sign Consider reducing school zone speed limit to 20 mph	\$1,000 \$500 \$1,000 \$500	Short

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

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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*
37	Kathleen Ave (Linda Ln to Giddings Ave)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$81,427	Long
38	Bowline Rd (Arundel Beach Rd to Walk zone boundary)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$113,590	Long
39	Hilltop Dr (Oak Ave to Kathleen Ave)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$82,356	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 outside the School Walk Zone

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Map ID	Location	Facility Type	Issue	Recommendation	Potential Cost	Timeframe*
A	Chartham Ln (Arundel Beach Rd to end)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$32,489	Long
B	Kleis Rd (Arundel Beach Rd to end)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$62,803	Long
C	Arundel Beach Rd (Whittier Pkwy to Oak Ct)	C1. Sidewalk	Missing sidewalk on both sides	Install new sidewalk** (There is a small patch of sidewalk on the west side from Whittier Pkwy to Kleis Rd)	\$145,241	Long
		C2. 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
		C3. School Zone Signs and Pavement Markings	Existing school advance warning sign deficient, Existing school zone sign deficient, Existing school zone speed limit sign deficient	Enhance signage per MdMUTCD part 7: <ul style="list-style-type: none"> <li>- Repair or replace existing school zone sign (begin/end) \$1,000</li> <li>- Repair or replace existing school zone speed limit sign \$500</li> <li>- Repair or replace school advance warning sign \$500</li> </ul>		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*
D	Maple Rd (Chestnut Rd to Arundel Beach Rd)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$72,119	Long
E	River Dr (Arundel Beach Rd to Kleis Rd)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$96,007	Long
F	Woodland Dr (Arundel Beach Rd to River Dr)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$92,034	Long
G	McKeon Rd (Emerson Rd to midblock)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$37,363	Long
H	Whittier Pkwy (Arundel Beach Rd to McKinsey Rd)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$229,604	Long
I	Between Sunset Dr & Whittier Pkwy	Sidewalk	Missing sidewalk	Explore path connection between Whittier Pkwy & Sunset Dr near the Oakleigh Forest pool	\$14,935	Long
J	Quinn Rd (Whittier Pkwy to Emerson Rd)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$54,086	Long
K	Stauffer Rd (Whittier Pkwy to south of Emerson Rd)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$71,179	Long
L	Spinnaker Rd (Marlinespike Rd to Cul-de-sac)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$18,725	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*
M	Marlinspike Dr (Walk zone boundary to Bowline Rd)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$57,299	Long
N	Stowaway Ln (Marlinspike Dr to Cul-de-sac)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$44,081	Long
O	Emerson Rd (Whittier Pkwy to Whittier Pkwy)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$190,556	Long
P	Sherburn Rd (Emerson Rd to Giddings Ave)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$153,614	Long
Q	Kennedy Dr (Wisler Ct to Kennedy Ct)	Crosswalk	Missing crosswalk markings, No stop bar	Install new standard crosswalks at side street crossings of Wisler Ct, McKeon Rd, Kathy Ct, Kennedy Ct	\$1,600	Short
R	Bowline Rd (Walk zone boundary to Bowline Ct)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$57,367	Long
S	Bowline Ct (Chestnut Rd to Cul-de-sac)	Sidewalk	Missing sidewalk on both sides	Install new sidewalk**	\$44,295	Long
T	Kennedy Dr & Stauffer Rd	Crosswalk	Missing crosswalk markings on east and west	Install new standard crosswalks	\$800	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.

# 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, not parking on Sunset Drive/obstructing pedestrian pathways, 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.

# 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](#).

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# 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



Oak Circle



Fairtree Drive



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Fairtree Plaza



Winter Crest



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Fairway Court



Fairlane Court



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Oak Court



Oak Landing Court



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Oak Court and Arundel Beach Road



Oak Landing Way



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



11

Fairtree Drive



12

Bike rack on school property near Arundel Beach Road



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Oak Court



Fairoak Drive



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Leaf Court



Fairtree Drive/Derussey Drive and Arundel Beach Road



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



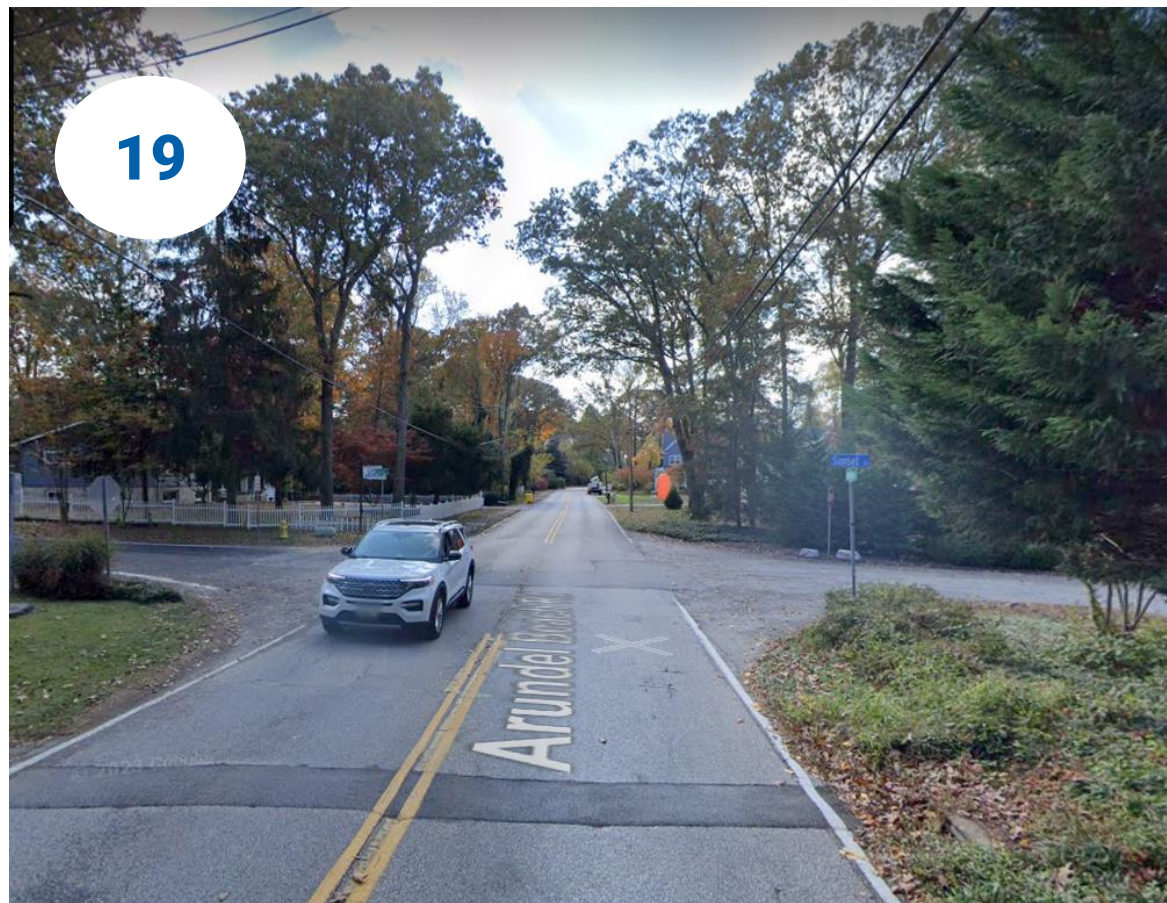
White Haven Court



White Cedar Lane



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Arundel Beach Road and Sunset Drive



Derussey Drive



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Arundel Beach Road



Fulbright Court



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Chestnut Road



South School Driveway Loop



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



White Plains Court



Cheshire Road



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Arundel Beach Road and White Cedar Lane



Sunset Drive and School Driveway



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Grosvenor Lane



Green Forest Drive



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



31

Linda Lane



32

Oak Avenue



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Pine Avenue



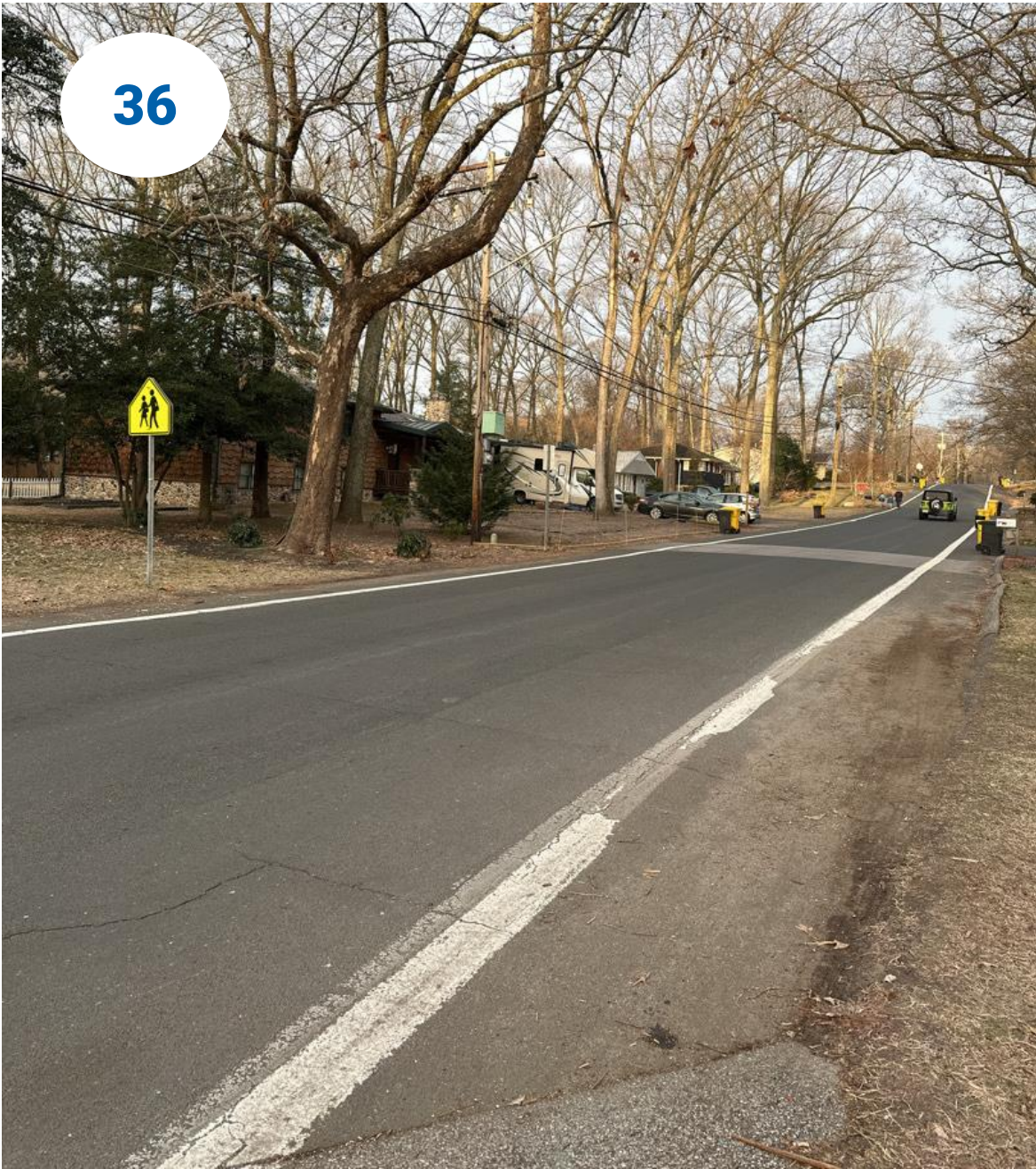
Marie Avenue



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Marlinspike Road



Sunset Drive



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Kathleen Avenue



Bowline Road



# INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Hilltop Drive



# INFRASTRUCTURE RECOMMENDATIONS – Opportunities Outside the School Walk Zone



Chartham Lane



Kleis Road



# INFRASTRUCTURE RECOMMENDATIONS – Opportunities Outside the School Walk Zone



Arundel Beach Road



Maple Road



# INFRASTRUCTURE RECOMMENDATIONS – Opportunities Outside the School Walk Zone



River Drive



Woodland Drive



# INFRASTRUCTURE RECOMMENDATIONS – Opportunities Outside the School Walk Zone



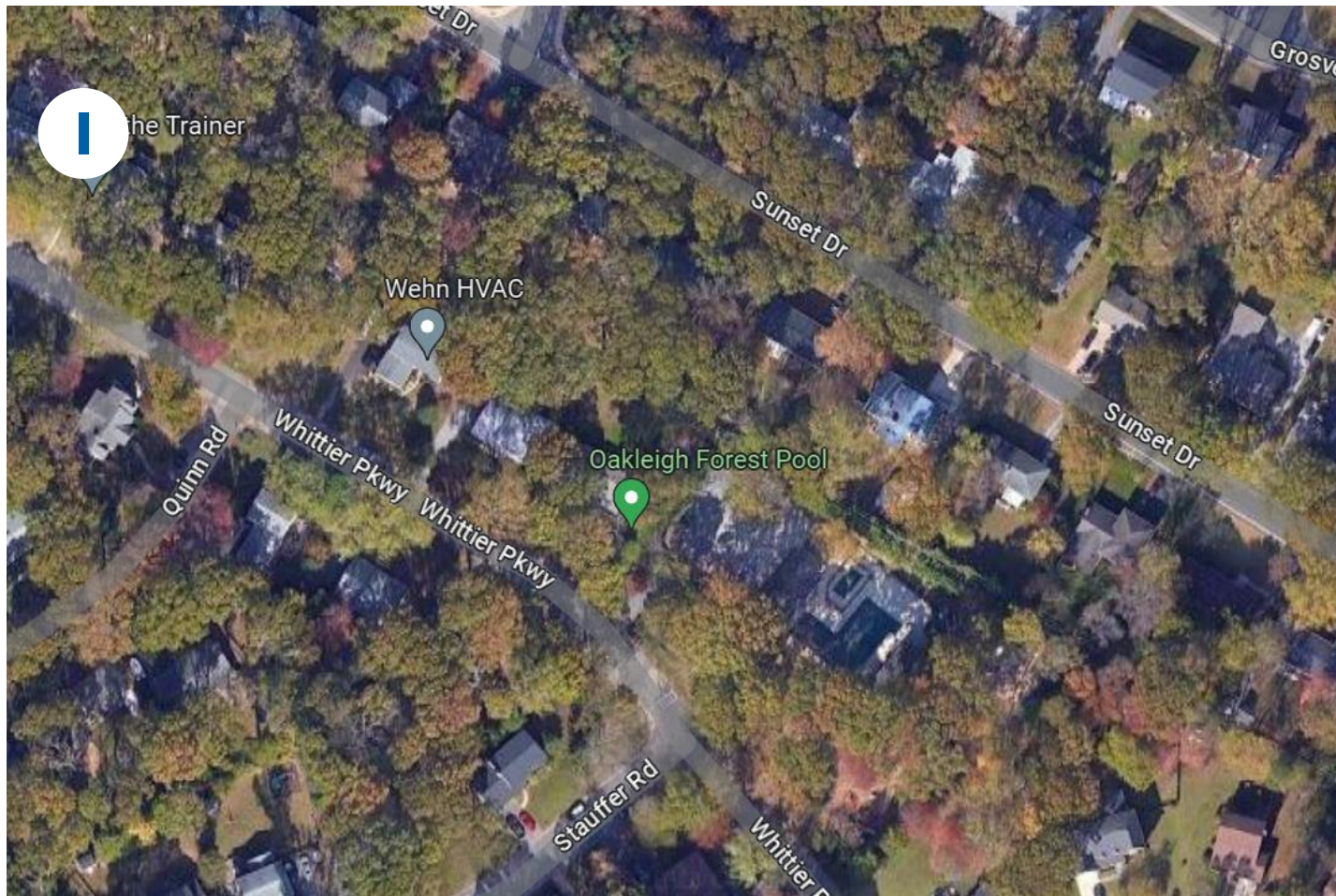
McKeon Road



Whittier Parkway



# INFRASTRUCTURE RECOMMENDATIONS – Opportunities Outside the School Walk Zone



Between Sunset Drive and Whittier Parkway



Quinn Road



# INFRASTRUCTURE RECOMMENDATIONS – Opportunities Outside the School Walk Zone



Stauffer Road



Spinnaker Road



# INFRASTRUCTURE RECOMMENDATIONS – Opportunities Outside the School Walk Zone



Marlinspike Drive



Stowaway Lane



# INFRASTRUCTURE RECOMMENDATIONS – Opportunities Outside the School Walk Zone



Emerson Road



Sherburn Road



# INFRASTRUCTURE RECOMMENDATIONS – Opportunities Outside the School Walk Zone



Kennedy Drive



Bowline Road



# INFRASTRUCTURE RECOMMENDATIONS – Opportunities Outside the School Walk Zone



Bowline Court



Kennedy Drive and Stauffer Road