



DPW & YOU

Making a difference, together



High Point 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.

High Point Elementary Accessibility Study

Report findings are derived from:

School site visits	• Observation of school arrival and dismissal conducted January 10, 2023 • Assessment of pedestrian and bicycling infrastructure within the current school walk zone and roads immediately adjacent (as connectivity allows) conducted January 10, 2023
Parent Survey	• Administered January 26 – February 19, 2023 • Available online in English, Spanish, Chinese, and Korean • Survey link was provided via email

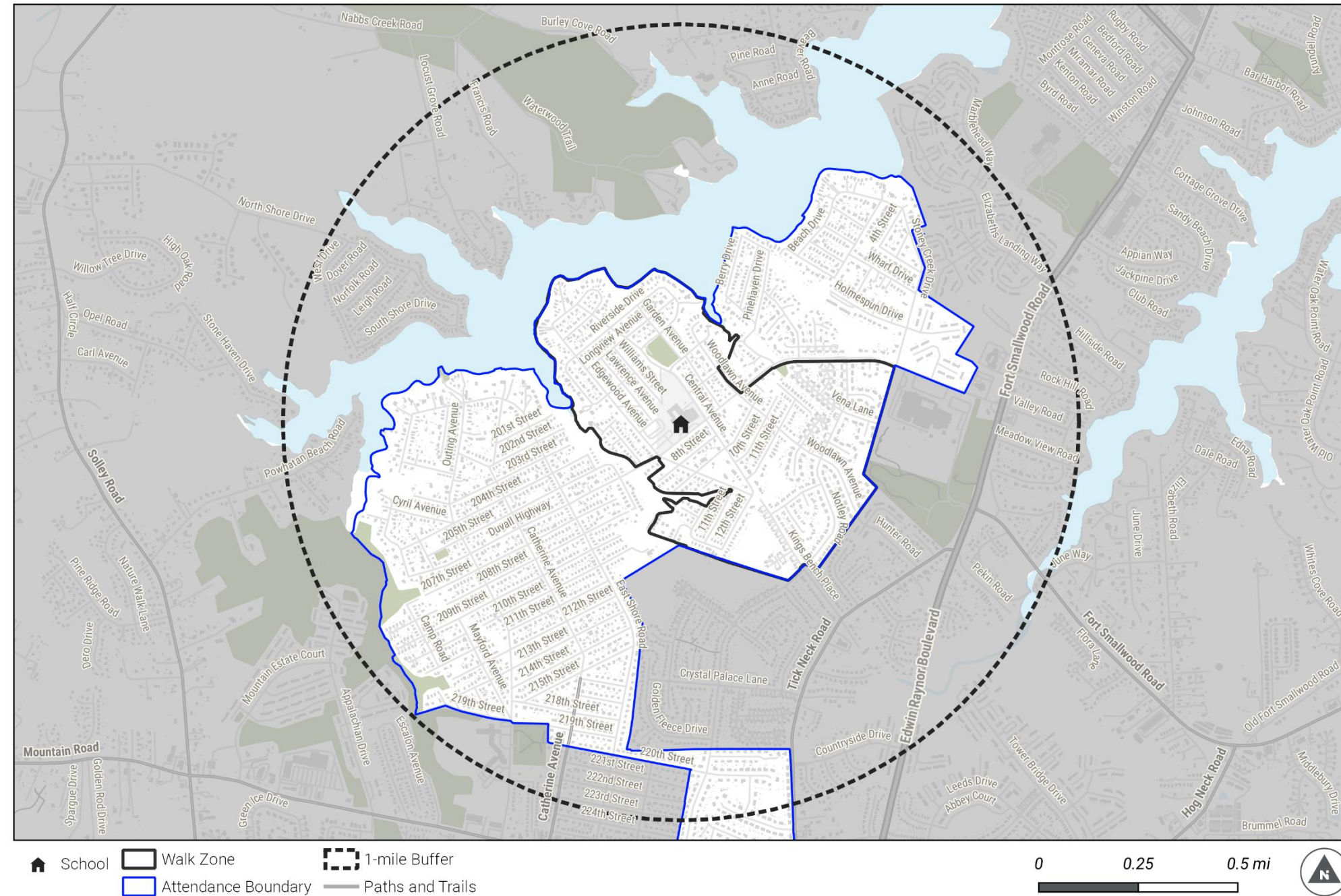
Recommendations were shared with the school community during a virtual open house in October 2023.

SCHOOL OVERVIEW

Study Area

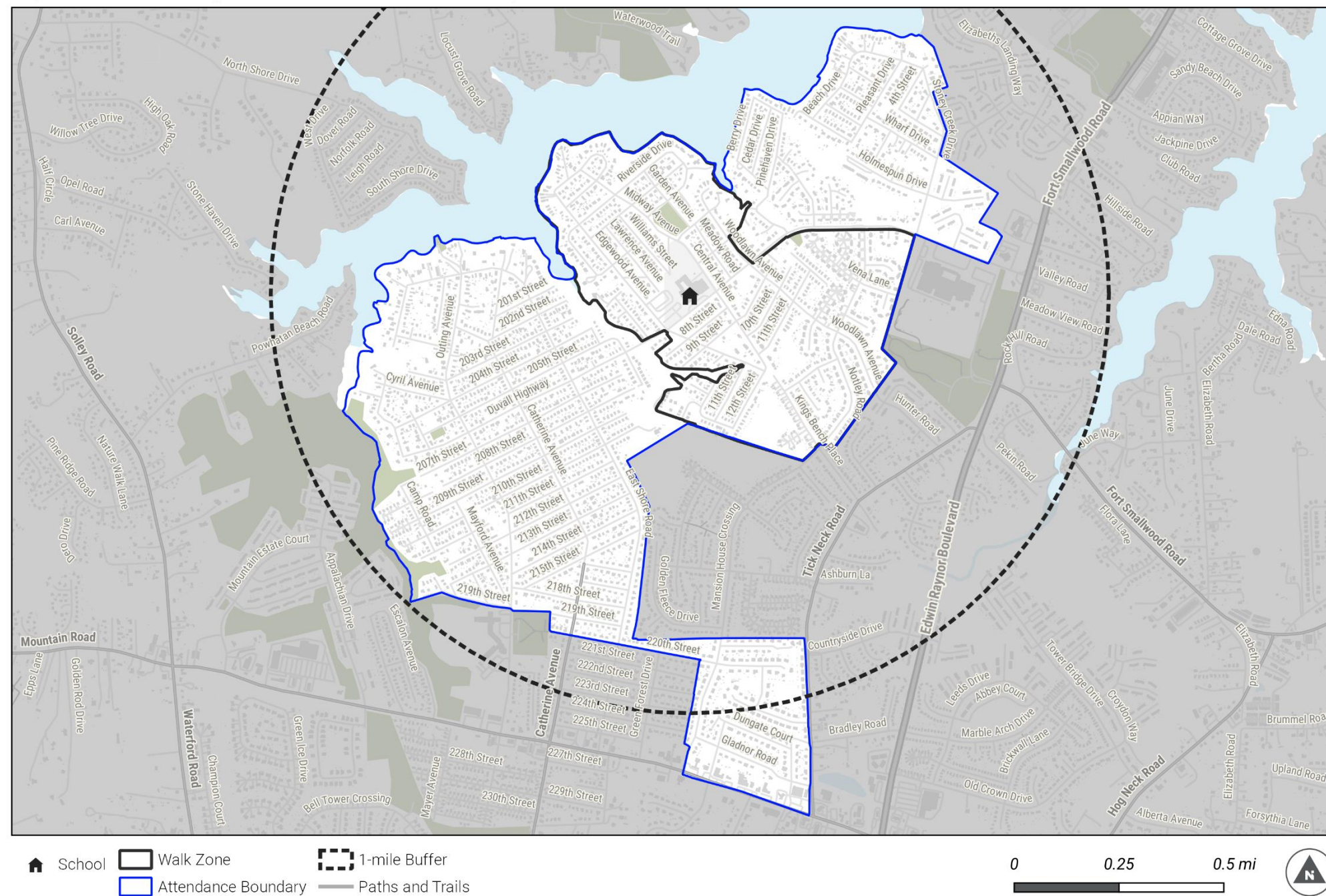
- Field work was conducted on roads within a half mile of the school; desk-level review was conducted on roads within a one-mile radius of the school that fall within the school attendance area.
- The school attendance area extends beyond the walk zone to the northeast and southwest but is only accessible via Duvall Highway which lacks sidewalks.

High Point Elementary School - 1-mile Radius



Student Attendance Area and Enrollment

- High Point Elementary School serves 704 students in grades PreK–5.
- 62% of students are registered for bus transportation*



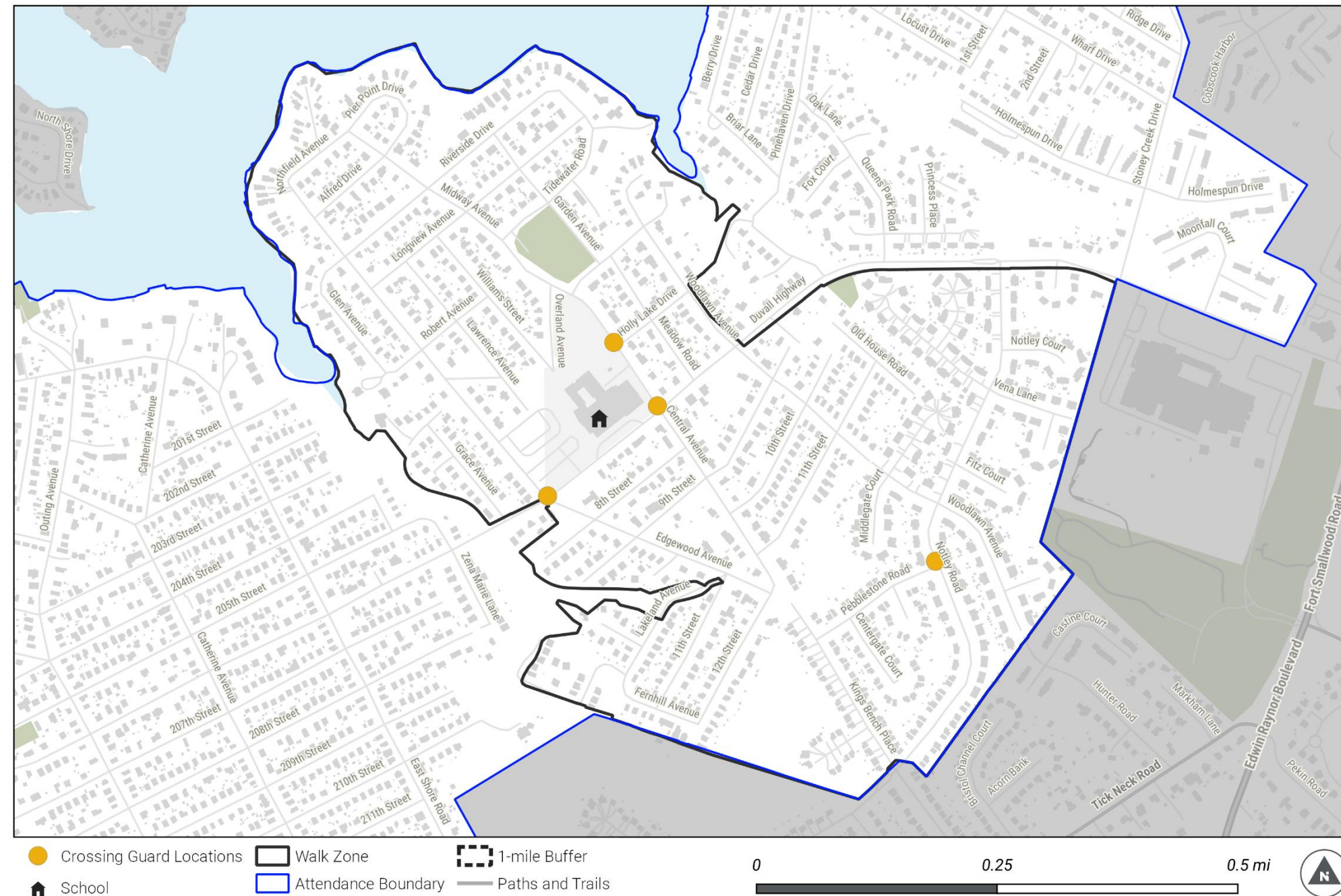
*AACPS provides transportation from designated bus stops for students who reside within the school's attendance area. At elementary schools, transportation is provided for Pre-K students who live more than ½ mile from school, Kindergarten students who live more than ½ mile from school, and students of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

Source: AACPS 2022-2023 Parent Handbook

School Location and Layout

- High Point Elementary School is located on Duvall Highway between Edgewood Avenue and Central Avenue in the Green Haven section of Pasadena, MD.
- The school is located within a residential neighborhood, surrounded by primarily single-family housing on all sides.

High Point Elementary School - Walk Zone



School Access

Pedestrians:

- Pedestrians access the school via on-campus sidewalk connections from Overland Ave and Duvall Highway.

Bicyclists:

- Bicyclists access the school via on-campus sidewalks to a bike rack on the west side of the building.

Buses:

- Buses access the school via Duvall Highway and deboard/board in the driveway loop around the parking lot.

Parent/Guardian Drop-Off:

- Parents/guardians drop off students via a drop-off line that around the parking lot off Edgewood Avenue. Pavement markings direct drivers.

Staff Vehicles:

- Staff who drive use one of two parking lots west of the school.



PARENT-REPORTED STUDENT TRAVEL MODES AND BARRIERS

High Point Elementary - Parent Survey Response Overview

- 48 total survey responses received*
- 100% of respondents live in the area zoned to the school

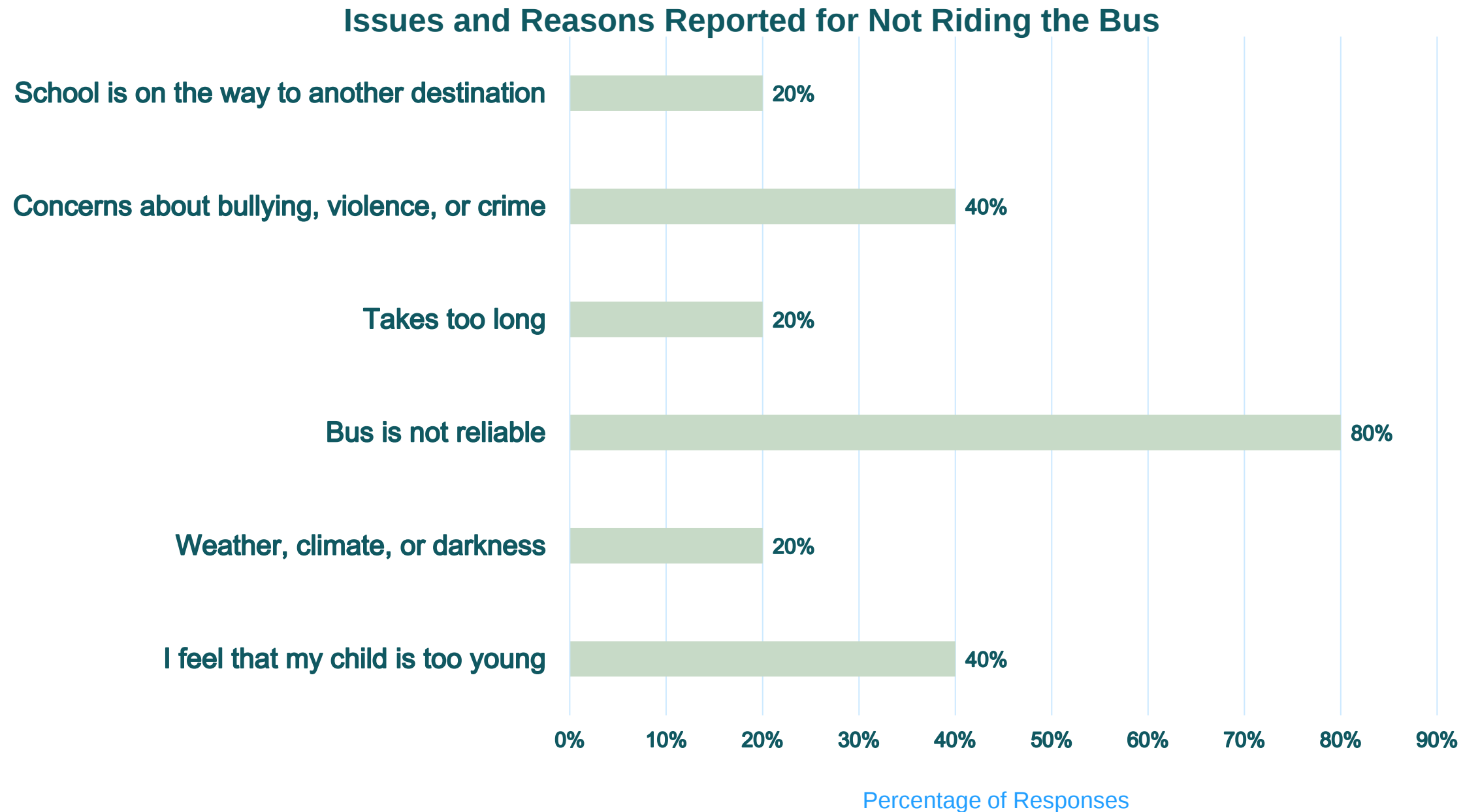
Reported Distance from Home to School	
Distance	Number of Respondents
< ¼ mile	9
¼ mile – ½ mile	13
½ mile – 1 mile	11
1 mile – 1 ½ miles	11
>1 ½ miles	3

**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

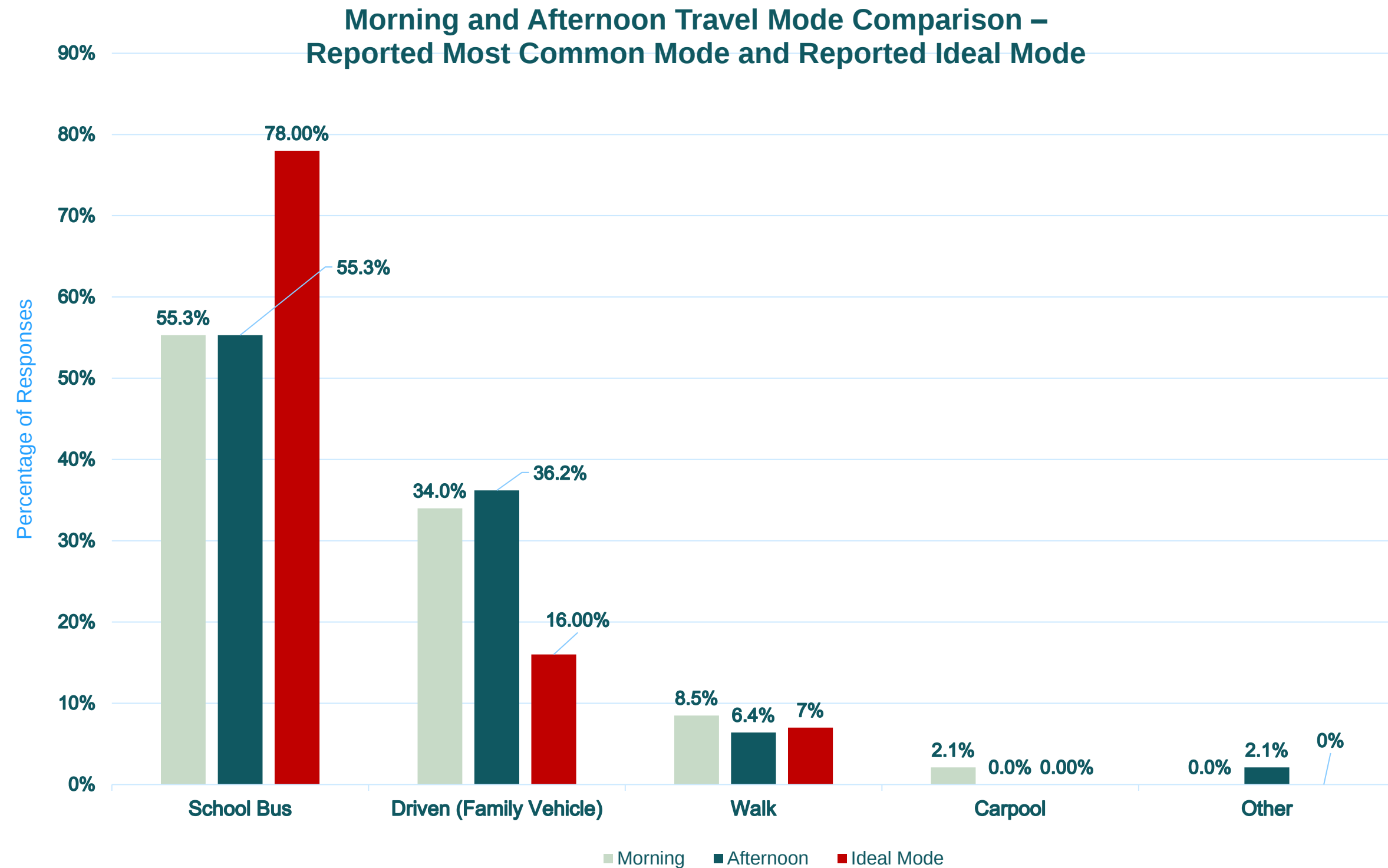
School Bus Eligibility and Use

69% of respondents reported being eligible for school bus transportation;
55% reported riding the school bus to school.



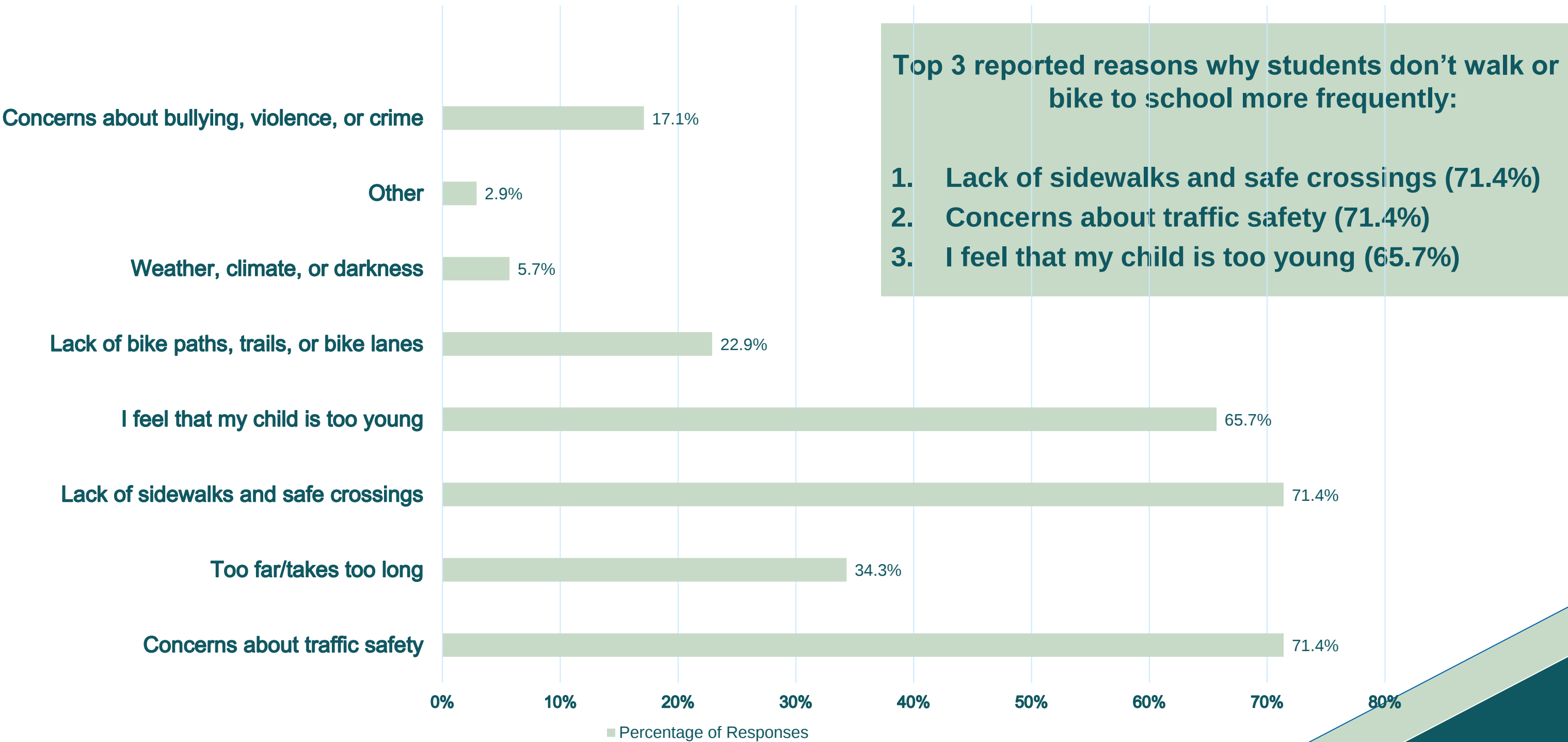
Parent Survey Results

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

- Duvall Highway
- Central Avenue
- Edgewood Avenue
- Overland Avenue
- Lawrence Avenue
- Robert Avenue
- Notley Road
- 11th Street
- Williams Street
- Woodlawn Avenue

ARRIVAL AND DISMISSAL OBSERVATIONS

Arrival and Dismissal Operations

School Hours:

- 8:00 am – 2:25 pm

Observation Times (October 26th):

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

Crossing Guard:

- Four crossing guard locations are assigned to High Point Elementary School.
- Two crossing guards were observed at the intersections of Duvall Highway and Edgewood Avenue, and Duvall Highway and Central Avenue



Crossing guard at Duvall Highway and Edgewood Ave

General Observations

General Observations:

The school has been recently renovated (2019) and has new parking lots with entirely separate loops for school buses and parents' cars. A sidewalk runs between them, allowing students to get to buses, cars, or the corner without having to cross a driveway.



Arrival Observations

The study team observed arrival from the following locations:

- Overland Avenue
- Duvall Highway at Central Avenue

General Observations:

- School starts at 8:00 AM; most students arrive between 7:30 and 8:00 AM
- Students gather at the west side of the building — walkers, bike riders, and car riders — until doors open at 7:40.
- PreK and K students use entrance near their playground; other students use Main doors or 2nd/4th Grade doors; all on the west face of the school building.



Cars start arriving for drop off around 7:30

Arrival Observations

Walkers and Bicyclists

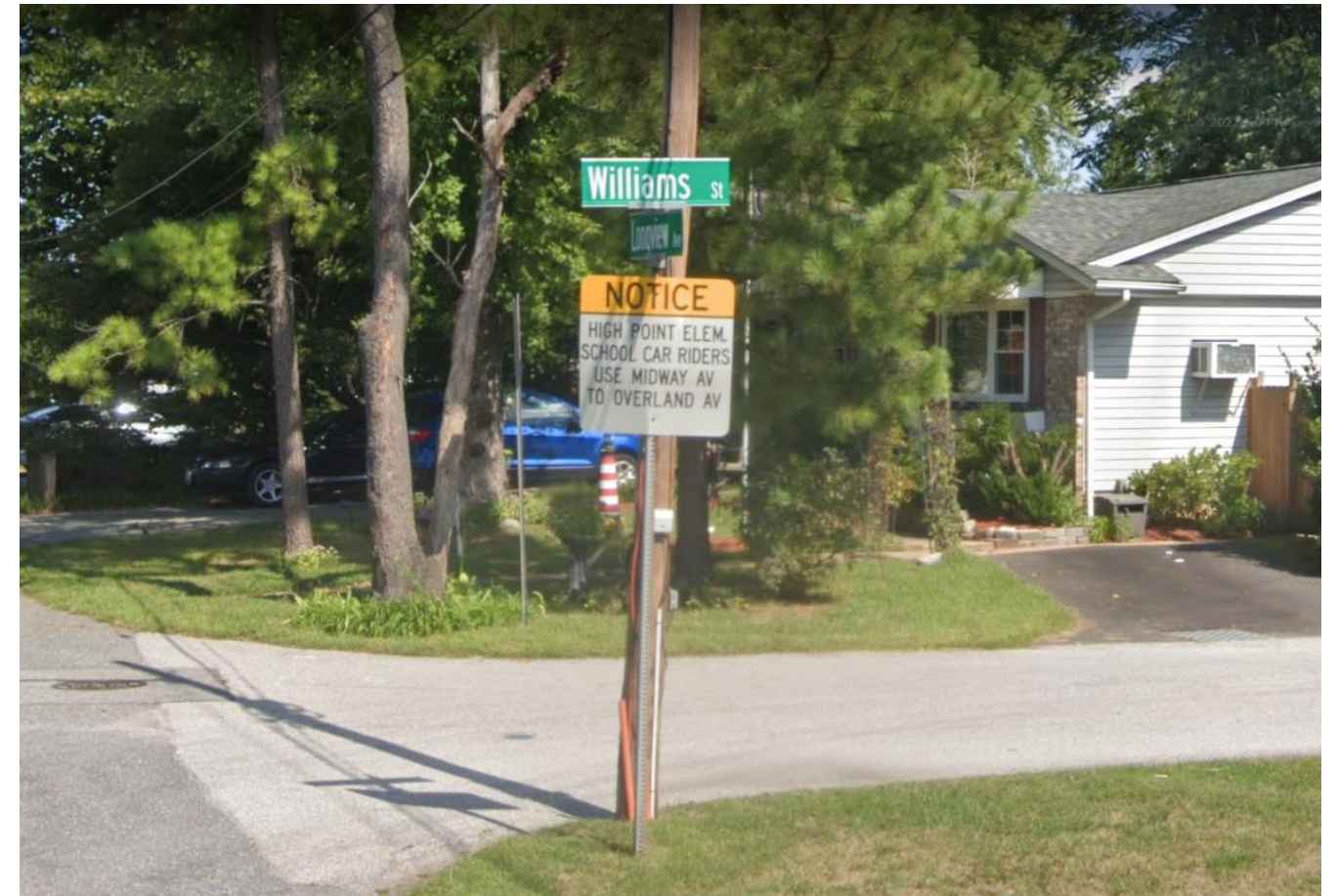
- Approximately 5 walkers observed during arrival, coming from Overland Avenue. They utilized the Overland Avenue entrance.

Bus Lane

- Buses drop off students at the south loop in front of the school, off Duvall Highway.

Parent Drop-off

- Primary parent drop-off is in the loop around the west staff parking lot, accessed from Edgewood Avenue. A sidewalk separates this lot from the bus loop so that students from both cars and buses can walk to the building without having to cross a vehicle path.
- Some parents drop off students along Duvall Highway, or on Overland Avenue behind the school, near the playground. Signage in the neighborhood north of the school directs parents to this location (see photo).



Sign on Longview Avenue at Williams Street that states "HIGH POINT ELEM. SCHOOL CAR RIDERS USE MIDWAY AV TO OVERLAND AV".

Dismissal Observations

The study team observed dismissal from the following locations:

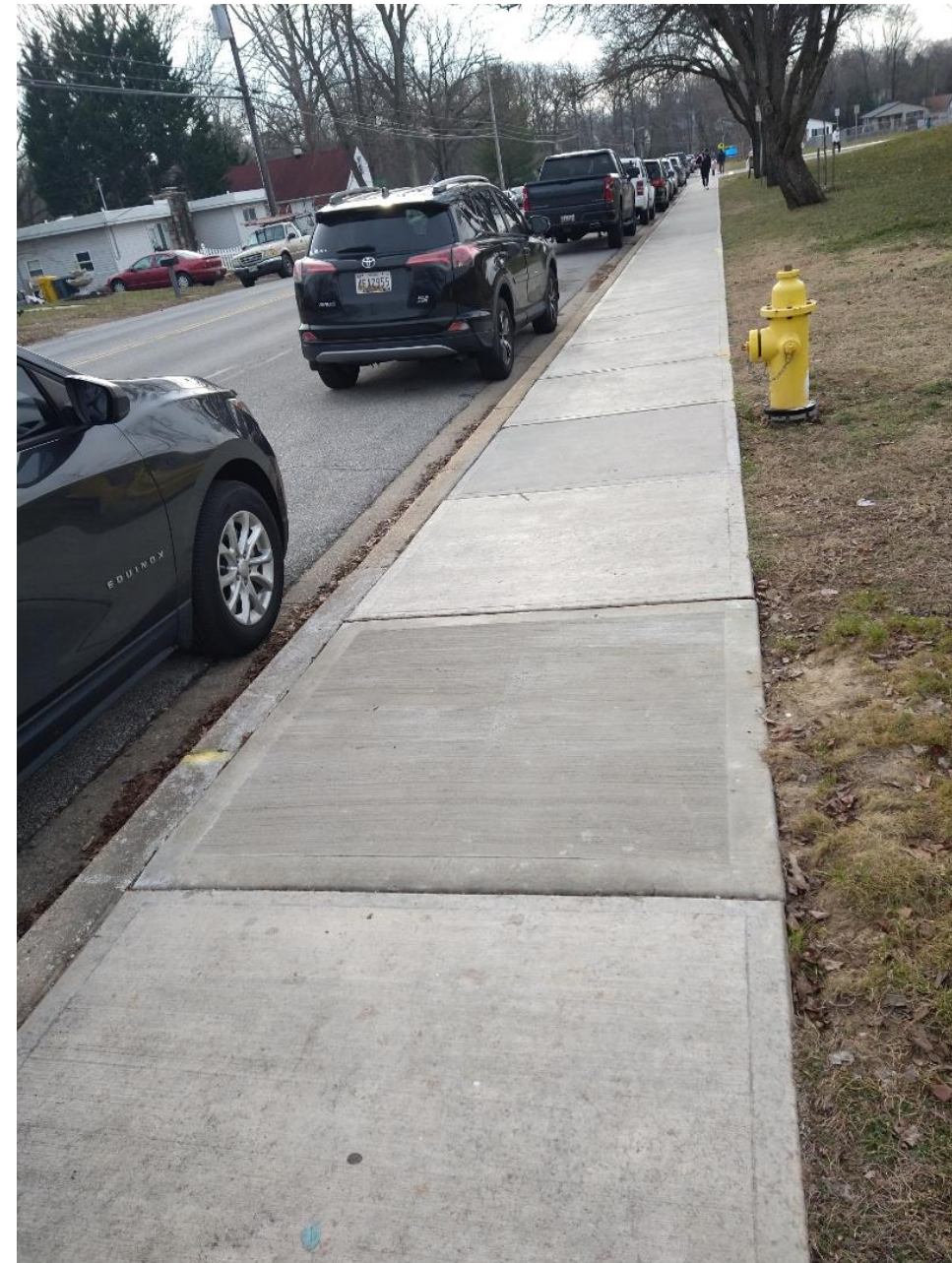
- Central Avenue at Holly Lake Drive
- Duvall Highway at Edgewood Avenue

General Observations:

- School ends at 2:25 PM, with most students departing between 2:25 and 2:35.
- All students exit through the main doors, though some walk around to the back to be picked up on Overland Avenue.

Walkers and Bicyclists:

- Approximately 15 walkers were observed crossing Central Avenue at Holly Lake Drive.
- Approximately 17 walkers, some with an adult but several alone or with siblings, were observed crossing Duvall Highway at Edgewood Avenue.
- Approximately 4 walkers, 3 in a group with adults and one alone, were observed crossing Edgewood and continuing west on Duvall Highway toward East Shore Road.



Cars line up on Duvall Highway for dismissal

Dismissal Observations

Bus Lane

- Bus riders are dismissed first, but walkers are dismissed before buses depart. Parents and students were observed crossing Duvall Highway to cars parked along the south curb as buses were departing campus.
- Buses pick up students in the south parking lot, off Duvall Highway.

Parent Pick-up

- Primary car-rider pickup is in the west parking lot, off Edgewood Avenue.
- Numerous parents park along Duvall Highway, despite 'No Stopping 7:30 AM – 3:30 PM School Days' signs.

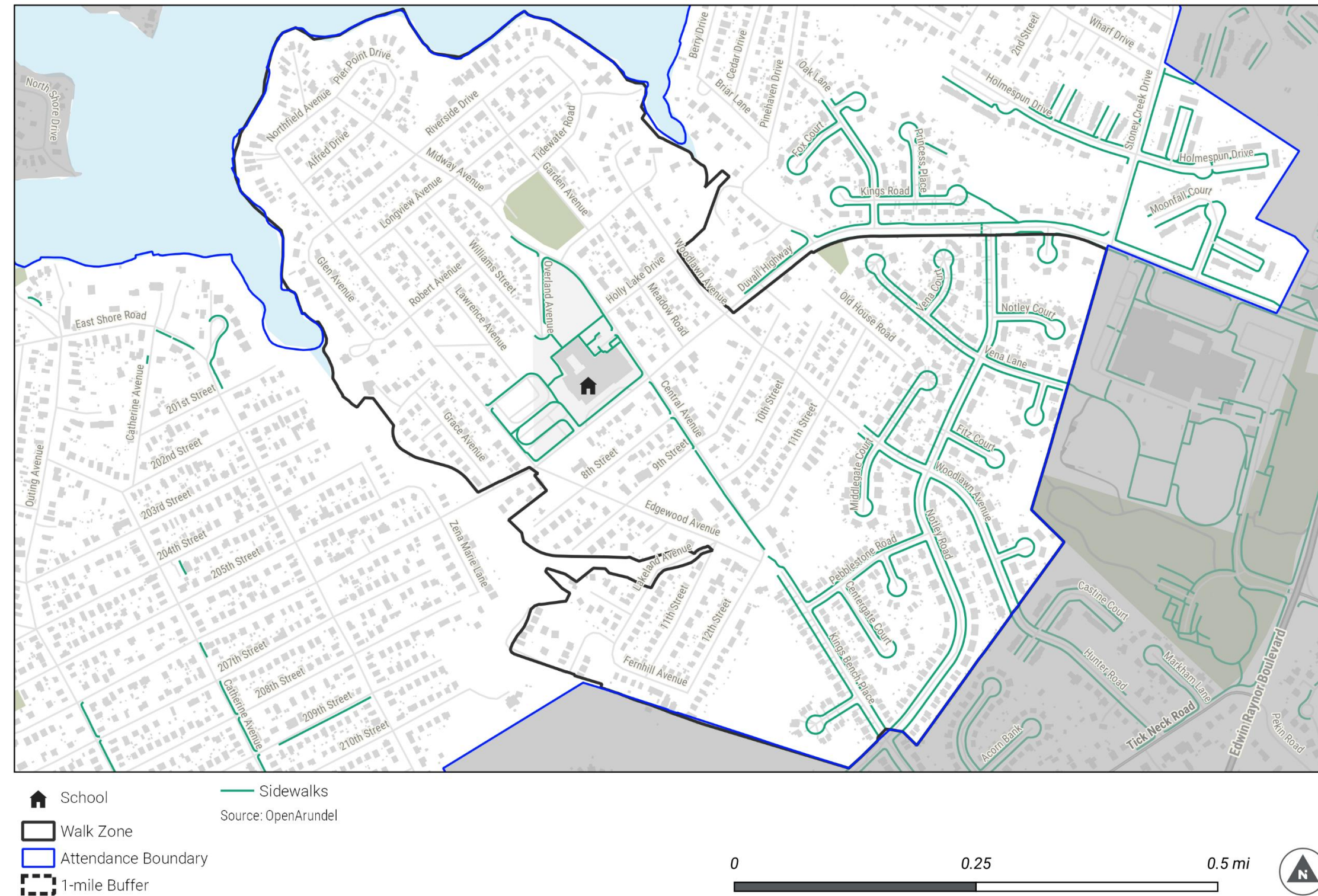
EXISTING INFRASTRUCTURE CONDITIONS

Existing Sidewalk Network

Many areas within and just outside of the current walk zone lack sidewalks.

Many of the streets near the school are quite narrow and do not have shoulders, which limits vehicle speeds but also provides limited space for pedestrians to walk when a car approaches.

High Point Elementary School - Existing Sidewalk Network



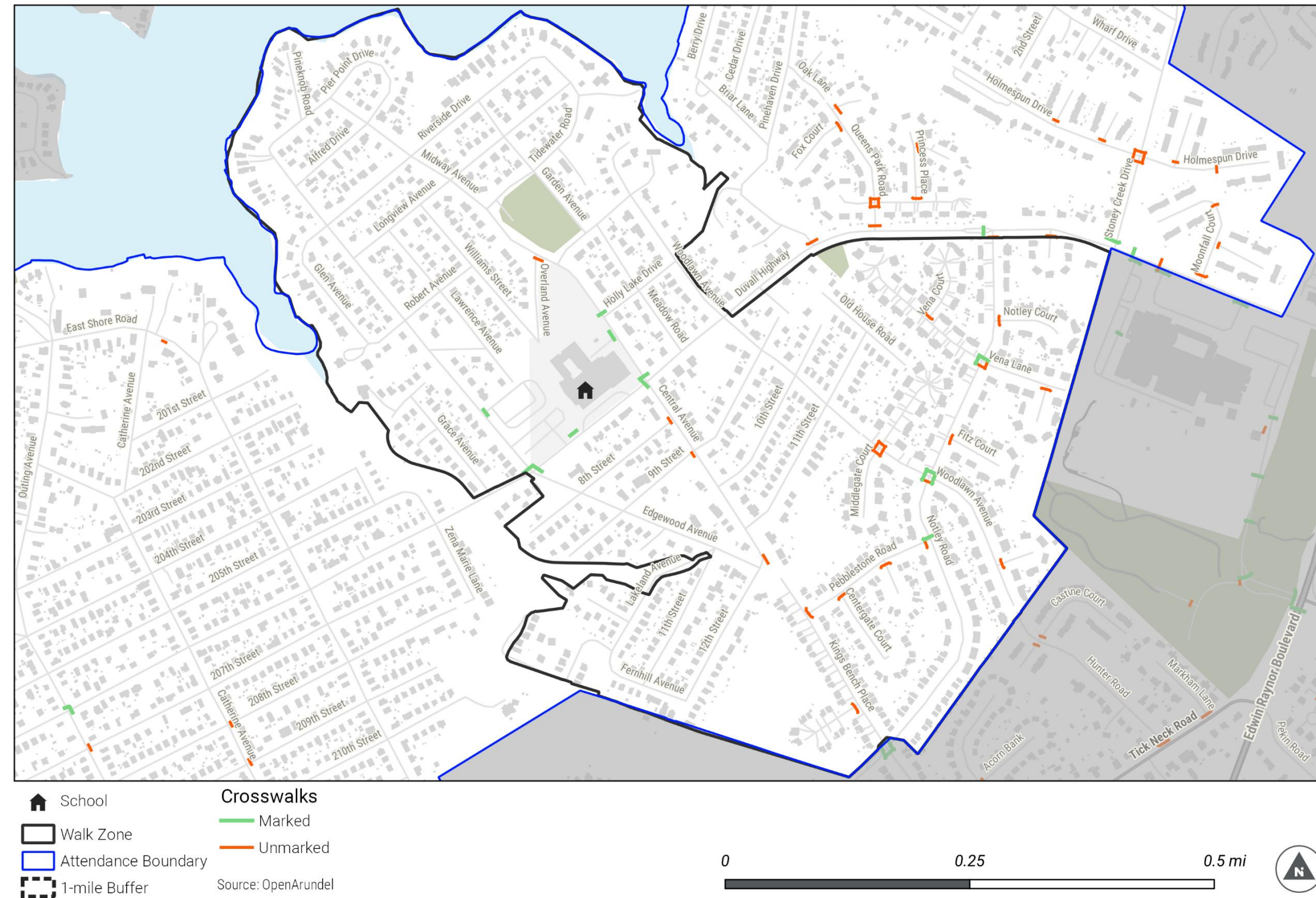
Existing Crosswalks

There are marked crosswalks on the school campus across the parking lot driveways and across drop off loop.

There are high-visibility marked crosswalks across most, but not all legs of the intersections of Duvall Highway with Edgewood and Central Avenues.

Most other crossings at intersections are unmarked.

High Point Elementary School - Existing Crosswalks

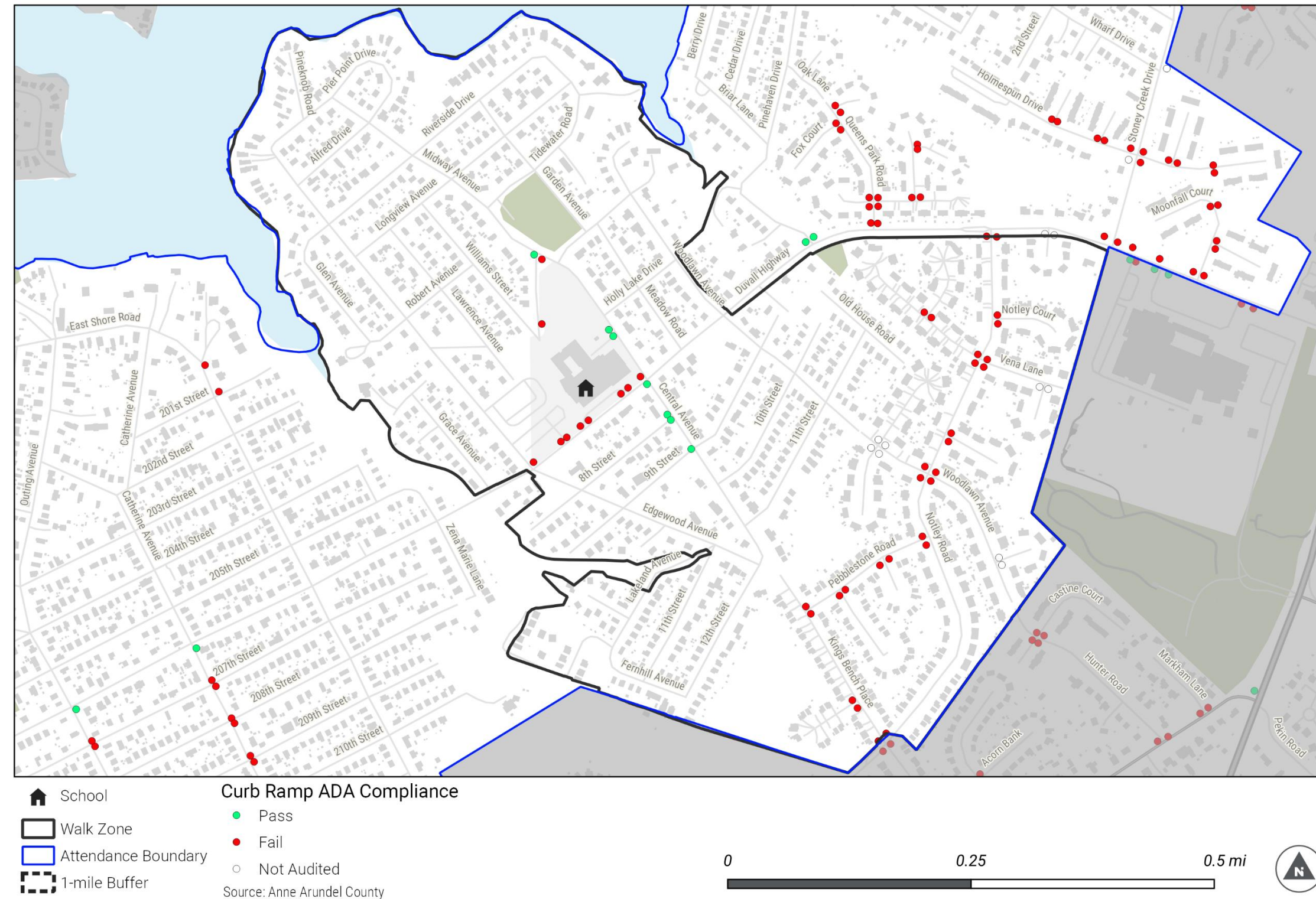


Existing Curb Ramps*

Of the few existing sidewalks, most have curb ramps.

However, most of those curb ramps lack detectable warning surfaces.

**Curb ramp data downloaded
9/14/22*

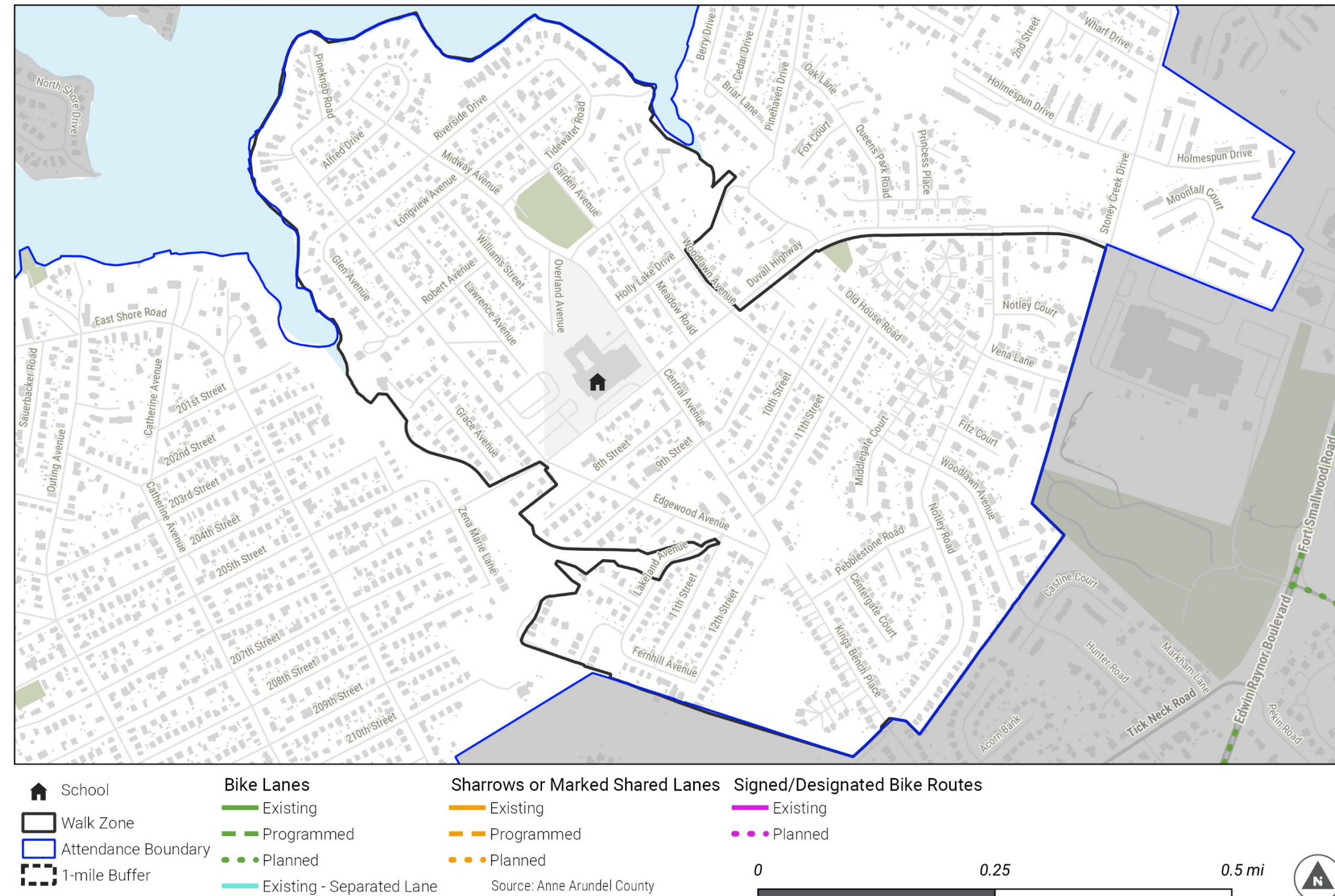


Existing On-Road Bike Facilities

No on-road bike facilities are known to exist or are currently planned* for roads near the school.

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

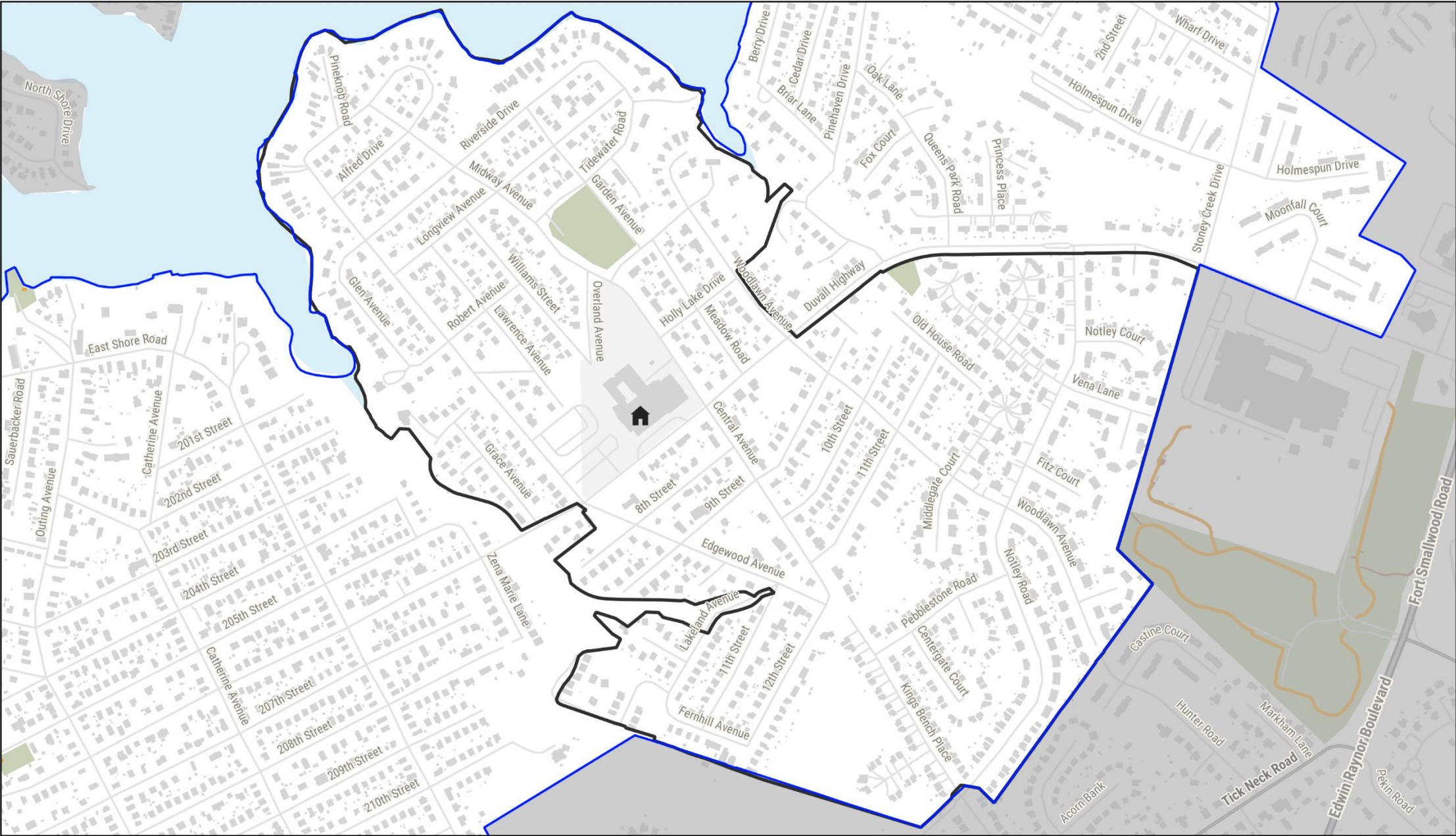
High Point Elementary School - Existing On-Road Bicycle Facilities



Existing Regional Trails, Park Trails, and Paths

Other than park paths surrounding Northeast High School, no off-road bike facilities, shared-use paths, or trails are known to exist or are planned* in or near the school walk zone.

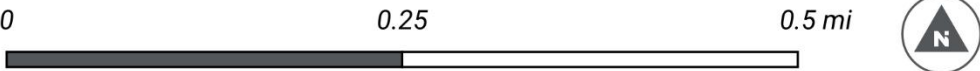
High Point Elementary School - Existing Regional Trails, Park Trails, and Paths



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

- 🏠 School
- 🚶 Walk Zone
- 📐 Attendance Boundary
- 📏 1-mile Buffer
- 🌿 Regional Trails
- 🌳 Park Trails
- 🛤 Paths
- 🚲 Shared Use Paths
 - Existing
 - Programmed
 - Planned

Sources: Anne Arundel County, OpenArundel



CRASH DATA

Crash Data (2017 – 2021)

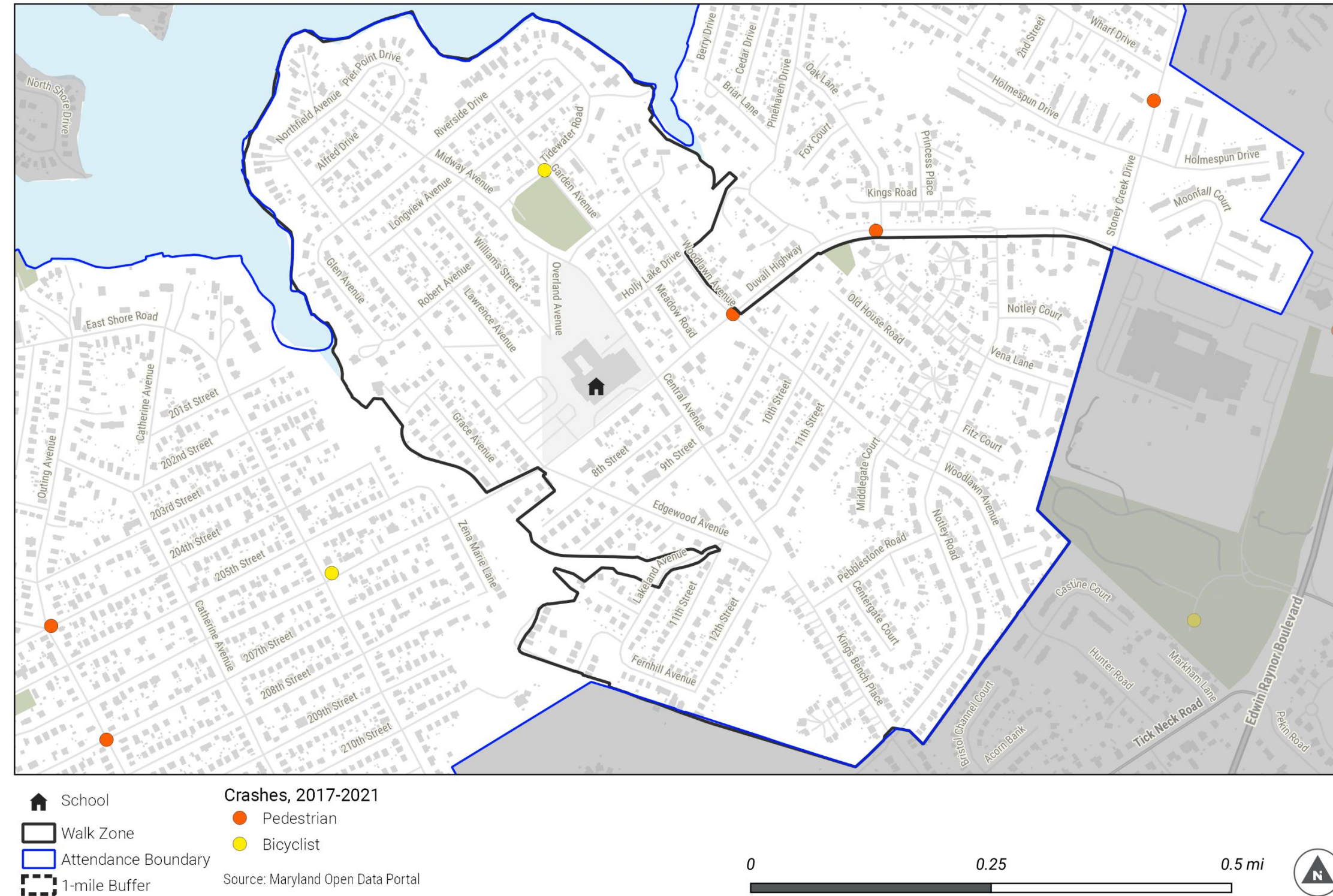
Crashes within 1-mile radius of the school:

- 405 total crashes (all modes)
- Nine pedestrian-involved crashes, seven resulting in injury, one fatality
- Three bicyclist-involved crashes, two resulting in injury

Pedestrian and bicyclist crashes within the walk zone:

- One pedestrian-involved crash and one bicyclist-involved crash occurred in the walk zone.

High Point 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.

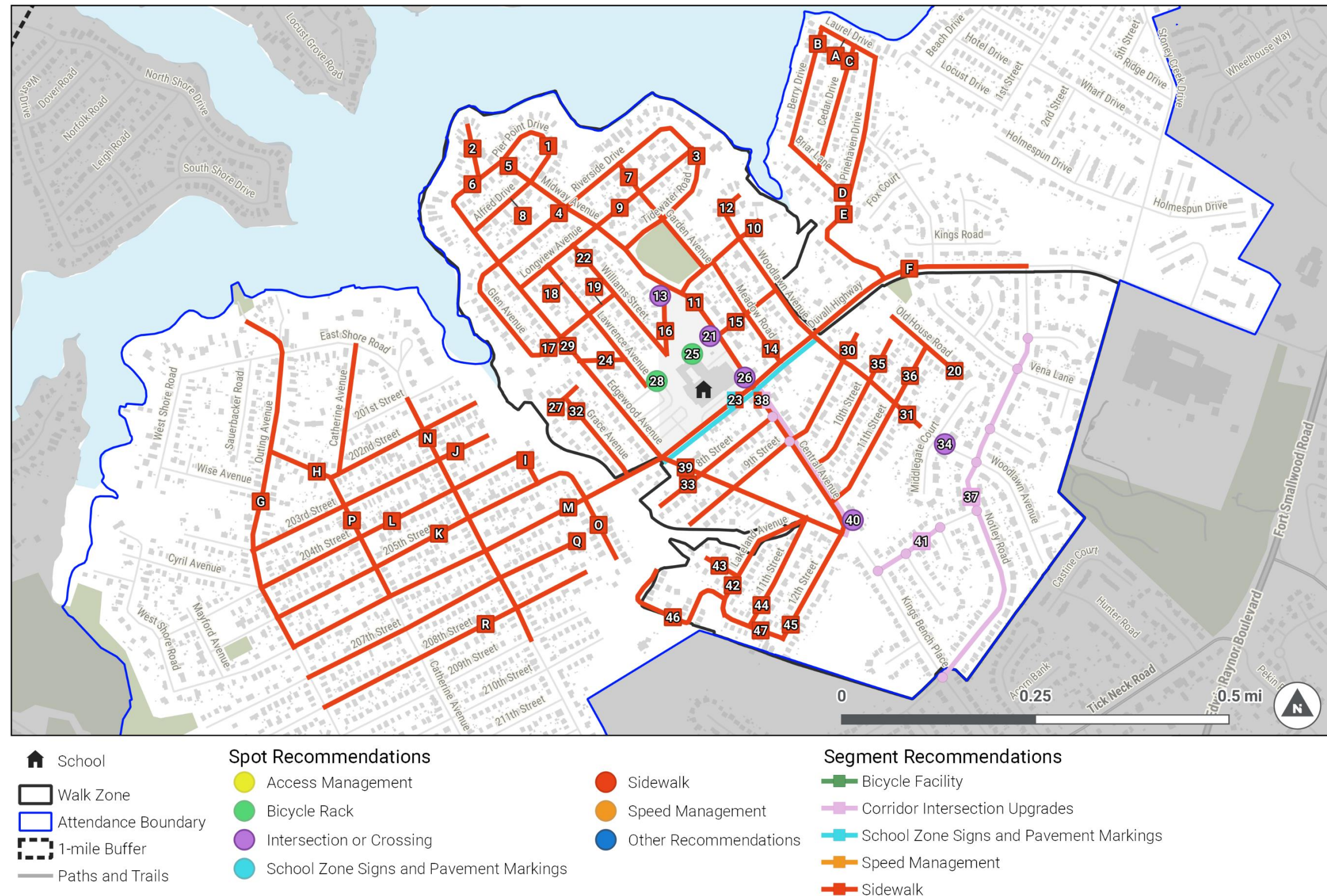
The following tables summarize infrastructure recommendations within and outside of the current school walk zone as relevant. Key student walking or bicycling routes were identified based on information received from school administration, parent surveys, and school observations. Key routes are noted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

The County recently completed a study of the feasibility, costs, and impacts of providing a sidewalk on Duvall Highway between Outing Avenue and Fort Smallwood Road and for Outing Avenue from Duvall Highway to Mountain Road. 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

High Point Elementary School - Recommendations



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*
1	Pierpoint Dr (Northfield Ave to Midway Ave)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$58,284	Long
2	Pine Knob Rd (Northfield Ave to end)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$29,277	Long
3	Tidewater Rd (Riverside Dr to Central Ave)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$72,867	Long
4	Riverside Dr (Edgewood Ave to Tidewater Rd)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$135,916	Long
5	Midway Ave (Northfield Ave to Riverside Dr) (Along key student walking route)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$2,872	Long
6	Northfield Ave (Midway Ave to Edgewood Ave)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$36,384	Long
7	Garden Ave (Beechwood Ave to Riverside Dr)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$73,597	Long
8	Alfred Dr (Midway Ave to Edgewood Ave)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$40,836	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*
9	Longview Ave (Edgewood Ave to Riverside Dr)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$120,785	Long
10	Beechwood Ave (Central Ave to Cul-de-sac)	Sidewalk	Missing sidewalk	Install new sidewalk**	\$58,056	Long
11	Central Ave (Duvall Hwy to Riverside Dr) (Along key student walking route, Inside school zone)	Sidewalk	Missing sidewalk (north) Sidewalk too narrow (south side, from approx. Duvall Hwy to just past Overland Ave)	Install new sidewalk** Widen Sidewalk	\$143,831	Long
12	Woodlawn Ave (Duvall Hwy to end)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$94,873	Long
13	Overland Ave & Central Ave (Along key student walking route, Inside school zone)	13a. Curb ramp	Ramp on the south side lacks detectable warning surface	Install new ramp	\$4,000	Medium
		13b. Crosswalk	Crossing of Overland Ave is unmarked, No stop bar on the south side	Install new standard crosswalk, Mark new stop bar	\$500	Short
14	Meadow Rd (Beechwood Ave to Duvall Hwy)	Sidewalk	Missing sidewalk	Install new sidewalk**	\$65,804	Long
15	Holly Lake Dr (Central Ave to Woodlawn Ave)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$39,977	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*
16	Overland Ave (Williams St to Central Ave) (Along key student walking route, Inside school zone)	Sidewalk	Missing sidewalk on west side Existing sidewalk on east side too narrow	Install new sidewalk**	\$22,452	Long
17	Glen Ave (Robert Ave to Edgewood Ave)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$84,822	Long
18	Lawrence Ave (Longview Ave to end)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$84,295	Long
19	Robert Ave (Williams St to Edgewood Ave)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$37,069	Long
20	Old House Rd (end to end)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$44,715	Long
21	Central Ave & Holly Lake Dr (Along key student walking route, Inside school zone)	Other intersection or crossing issues	Concern about motor vehicle yielding, High motor vehicle volume	Install RRFB	\$15,000	Long
22	Williams St (Overland Ave to Longview Ave)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$78,190	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*
23	Duvall Hwy (Edgewood Ave to Woodlawn Ave)(Along key student walking route, Inside school zone)	23a. Sidewalk	Missing sidewalk both sides from Central Ave to Woodlawn Ave, south side from Edgewood Ave to Central Ave	Install new sidewalk**	\$105,809	Long
		23b. School Zone Signs and Pavement Markings	- Existing school advance warning sign deficient (faded yellow) - Existing school zone sign deficient (faded yellow) - SCHOOL pavement marking missing - School zone speed limit sign missing	Enhance school zone signage per MDMUTCD part 7: - Repair or replace school advance warning sign - Install new school zone sign - Install new SCHOOL pavement marking - Install new school zone speed limit sign. Consider reducing school zone speed limit to 20 mph	\$250 \$250 \$1,000 \$500	Short
24	Cool Spring Ave (Lawrence Ave to Cul-de-sac)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**		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*
25	North end of school, Overland Ave (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
26	Central Ave & Duvall Hwy (Along key student walking route, Inside school zone)	Crosswalk	Crosswalk markings faded (north and west)	Remark existing crosswalks with high-visibility markings	\$1,600	Short
27	Bridge St (end to end)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$19,301	Long
28	Front 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)	
29	Edgewood Ave (Duvall Hwy to Northfield Ave) (Along key student walking route)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$178,315	Long
30	9th St (end to end)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$139,759	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*
31	Woodlawn Ave (southeast of 11th St to Duvall Hwy)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$76,127	Long
32	Grace Ave (Duvall Hwy to Bridge St)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$53,680	Long
33	8th St (Central Ave to end)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$78,350	Long
34	Woodlawn Ave & Middlegate Ct	34a. Curb ramp	Missing ramps on the north and south sides	Install new ramps	\$8,000	Medium
		34b. Crosswalk	Crossings of Middlegate Ct are unmarked, No stop bar on the north and south sides	Install new standard crosswalks, Mark new stop bars	\$1,000	Short
35	10th St (Central Ave to end)	Sidewalk	Missing sidewalk	Install new sidewalk**	\$83,466	Long
36	11th St (Central Ave to Old House Rd)	Sidewalk	Missing sidewalk	Install new sidewalk**	\$100,526	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*
37	Notley Rd (Notley Ct to Kings Bench Pl)	37a. Crosswalk	Crossings of side streets are unmarked No stop bars across side streets	Install new standard crosswalks, Mark new stop bars for side street crossings of Notley Ct, Vena Ln, Fitz Ct, Pebblestone Rd	\$2,000	Short
		37b. Curb ramp	Ramps lack detectable warning surfaces at side street crossings.	Reconstruct or repair existing ramps at side street crossings with Notley Ct, Vena Ln, Fitz Ct, Woodlawn Ave, Pebblestone Rd, Kings Bench Pl	\$56,000	Medium
38	Central Ave (Duvall Hwy to 12th St) (Along key student walking route, Inside school zone)	38a. Crosswalk	Crossings of side streets are unmarked No stop bars across side streets	Install new standard crosswalks, Mark new stop bars for side street crossings of 8th St, 9th St, 12th St	\$1,500	Short
		38b. Sidewalk	Missing sidewalk on the east side Existing sidewalk on the west side too narrow	Install new sidewalk** Widen sidewalk	\$57,136	Long
39	Edgewood Ave (Duvall Hwy to 12th St) (Along key student walking route)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$106,295	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*
40	Central Ave & 12th St & Edgewood Ave	40a. Crosswalk	Crossings are unmarked across 12 th and across Edgewood (only 12 th is stop controlled)	Install high visibility crosswalk across 12 th and standard crosswalk across Edgewood	\$1,200	Short
		40b. Other intersection or crossing issues	Crossing lacks appropriate crossing signage	Install school crossing signs with downward pointing arrows to alert drivers to crossing of Edgewood Ave	\$500	Short
		40c. Other intersection or crossing issues	Concern about motor vehicle yielding, Crossing pedestrians may be difficult for drivers to see or anticipate due to roadway curvature or visual obstructions	Install curb radius reduction with curb ramp at end of existing sidewalk on Central Ave to improve visibility of pedestrians	\$5,000	Long
		40d. Curb ramp	Missing ramp on pathway connecting to Kings Bench Pl	Reconstruct or repair existing ramp	\$4,000	Medium
41	Pebblestone Rd (Kings Bench Pl to Greengate Way)	41a. Crosswalk	Crossings of side streets are unmarked No stop bars across side streets	Install new standard crosswalk, Mark new stop bar at side street crossings of Kings Bench Pl and side street crossings of Centergate Ct and Greengate Way	\$1,500	Short
		41b. Curb ramp	Bottom of ramps not flush to pavement, Ramps lack detectable warning surface	Reconstruct or repair existing ramps	\$24,000	Medium

*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	Lakeland Ave (Edgewood Ave to Fernhill Ave)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$ 74,643	Long
43	Lake Cir (Lakeland Ave to Cul-de-sac)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$19,502	Long
44	11th St (Fernhill Ave to Edgewood Ave)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$66,346	Long
45	12th St (Edgewood Ave to Fernhill Ave)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$65,591	Long
46	Boundary Ave (Lakeland Ave to end)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$80,995	Long
47	Fernhill Ave (Boundary Ave to 12th St)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$43,405	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

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	Laurel Dr (Berry Dr to Pine Haven Dr)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$ 33,316	Long
B	Berry Dr (Laurel Dr to Briar Ln)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$65,717	Long
C	Cedar Dr (Laurel Dr to Briar Ln)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$70,078	Long
D	Briar Ln (Pine Haven Dr to Berry Dr) (Approximately ½ mile from school campus)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk** (Potential to extend walk zone if sidewalks also added on Duvall Hwy)	\$42,636	Long
E	Pine Haven Dr (Duvall Hwy to Laurel Dr)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$143,122	Long
F	Duvall Hwy (Woodlawn Ave to Notley Rd)	Sidewalk	Sidewalk narrow or overgrown from Pine Haven Dr to Notley Rd (both sides).	Widen Sidewalk	\$127,736	Long
			Sidewalk missing one or both sides from Woodlawn Ave to Pine Haven Dr.	Install new sidewalk**		

*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*
G	Outing Ave (Duvall Hwy to end)	Sidewalk	Missing sidewalk (both sides) Two pedestrian involved crashes have occurred on Outing Ave, one at 204th Street, the other at 207th Street.	Install new sidewalk**	\$193,684	Long
H	202nd St (Outing Ave to end)	Sidewalk	Missing sidewalk	Install new sidewalk**	\$124,193	Long
I	Everd Ave (205th St to 204th St)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$18,062	Long
J	203rd St (Outing Ave to end)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$142,049	Long
K	205th St (Duvall Hwy to Outing Ave)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$194,044	Long
L	204th St (Everd Ave to Outing Ave)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$160,037	Long
M	Duvall Hwy (Edgewood Ave to Outing Ave)	Sidewalk	Missing sidewalk	Install new sidewalk**	\$225,314	Long
N	E Shore Rd (201st St to Outing Ave)	Sidewalk	Missing sidewalk	Install new sidewalk**	\$147,163	Long
O	Zena Marie Ln (Duvall Hwy to end)	Sidewalk	Missing sidewalk	Install new sidewalk**	\$36,189	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

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*
P	Catherine Ave (E Shore Rd to Duvall Hwy)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$148,098	Long
Q	207th St (Outing Ave to end)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$163,948	Long
R	208th St (Outing Ave to end)	Sidewalk	Missing sidewalk (both sides)	Install new sidewalk**	\$159,548	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.

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.

Establish 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



Pierpoint Drive



Pine Knob Drive

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Tidewater Road



Midway Avenue



Riverside Drive



Northfield Avenue

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Garden Avenue



Alfred Drive

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Longview Avenue



Beechwood Avenue



Central Avenue

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Woodlawn Avenue



Overland Avenue & Central Avenue



Meadow Road

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Holly Lake Drive

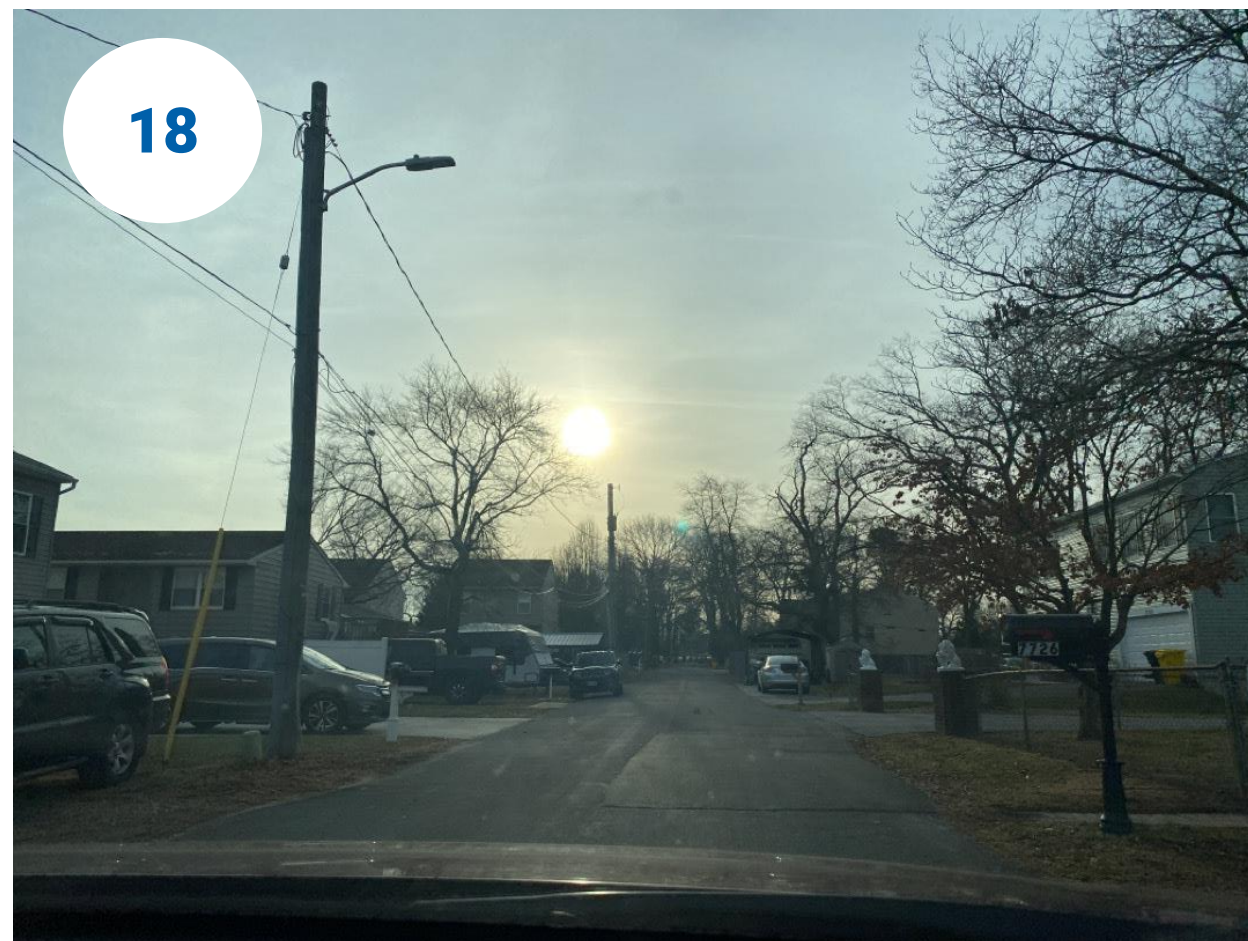


Overland Avenue

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Glen Avenue



Lawrence Avenue

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Robert Avenue

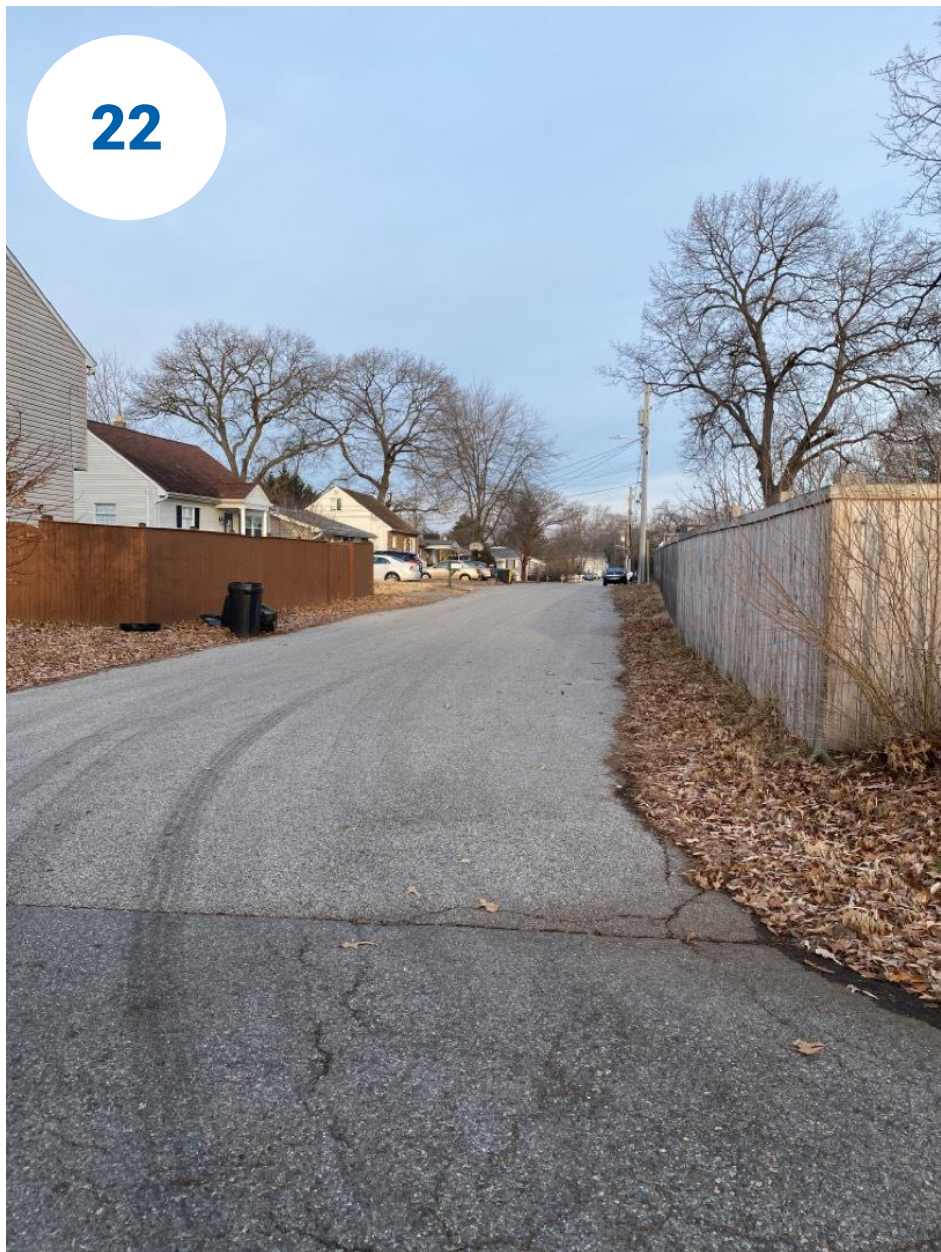


Old House Road

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Central Avenue & Holly Lake Drive



Williams Street

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Duvall Highway



Cool Spring Avenue



Bike racks on north end of school campus

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone

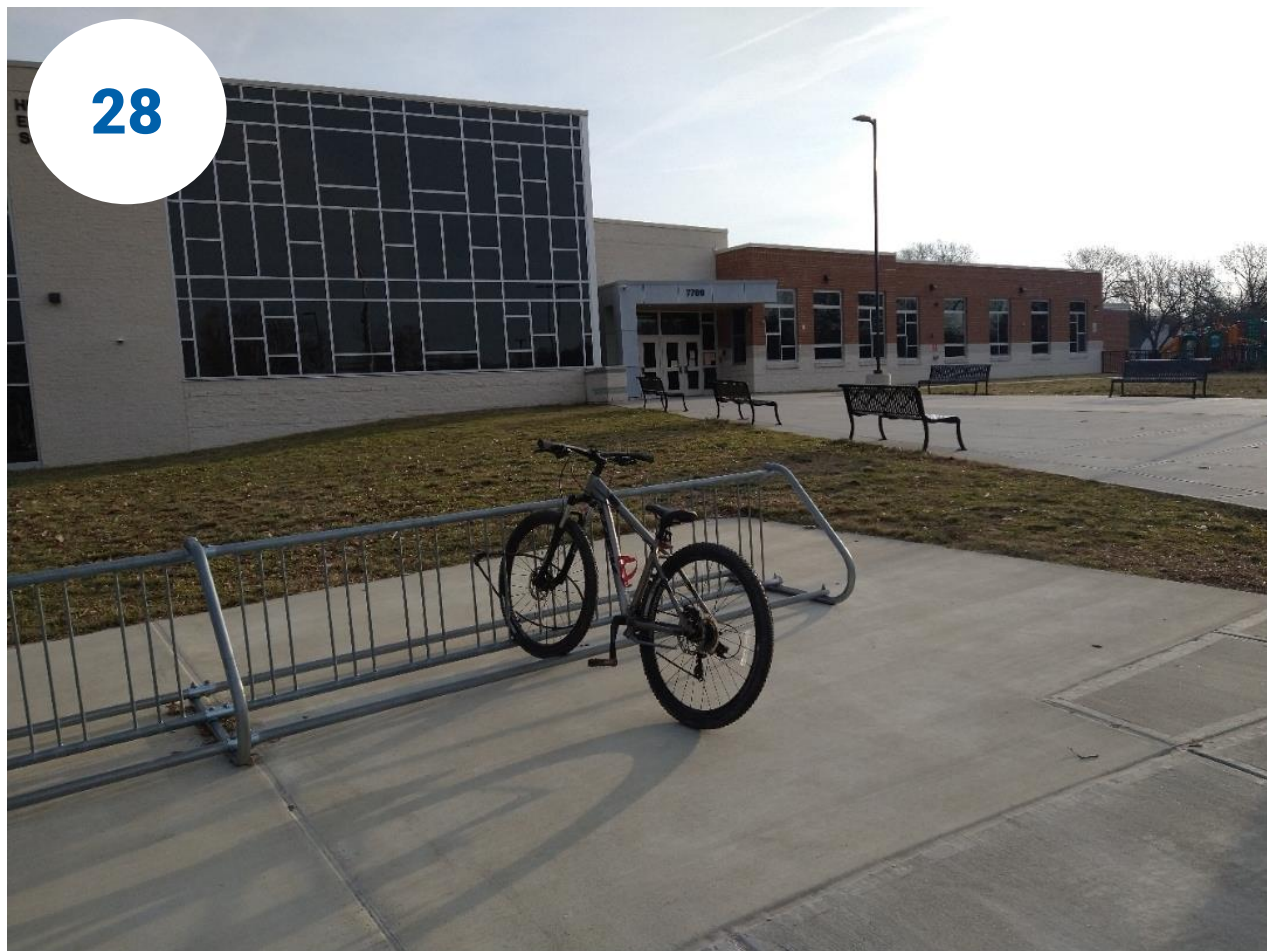


Duvall Highway & Central Avenue



Bridge Street

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Bike racks at front of the school



Edgewood Avenue

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



9th Street



Woodlawn Avenue

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Grace Avenue



Woodlawn Avenue and Middlegate Court



8th Street



10th Street

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



11th Street



Notley Road

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Central Avenue



Central Avenue & Edgewood Avenue/12th



Edgewood Avenue

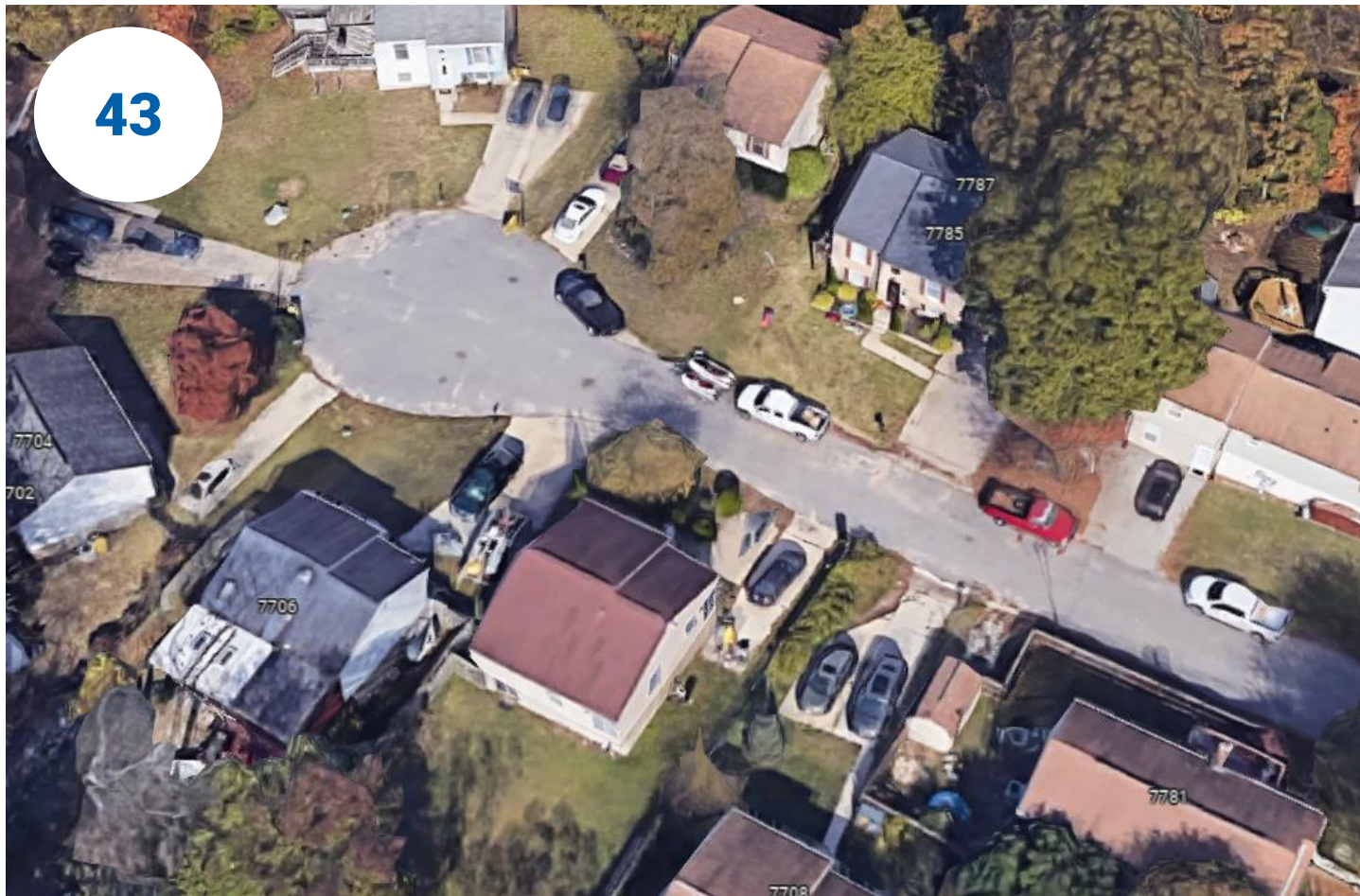


Pebblestone Road

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



Lakeland Avenue



Lake Circle

INFRASTRUCTURE RECOMMENDATIONS within the School Walk Zone



11th Street



Boundary Avenue



12th Street



Fernhill Avenue

INFRASTRUCTURE RECOMMENDATIONS – outside the School Walk Zone



Laurel Drive



Cedar Drive



Berry Drive



Briar Lane

INFRASTRUCTURE RECOMMENDATIONS – outside the School Walk Zone



Pinehaven Drive



Duvall Highway

INFRASTRUCTURE RECOMMENDATIONS – outside the School Walk Zone



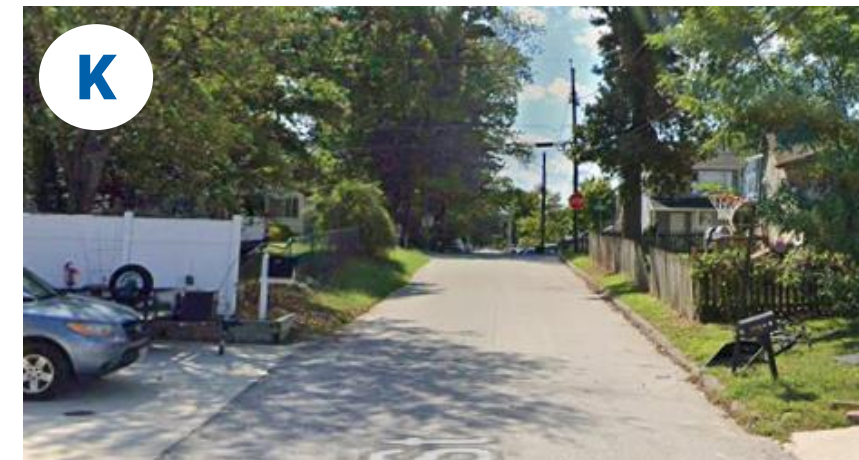
Outing Avenue



203rd Street



202nd Street



205th Street



Everd Avenue



204th Street

INFRASTRUCTURE RECOMMENDATIONS – outside the School Walk Zone



Duvall Highway



Zena Marie Lane



Catherine Avenue



E Shore Road



207th Street



208th Street