

Learning to Live • Loving to Learn



# **DOUGLAS MACARTHUR ELEMENTARY WALKABOUT: Existing Conditions, Findings and Recommendations**

April 2017

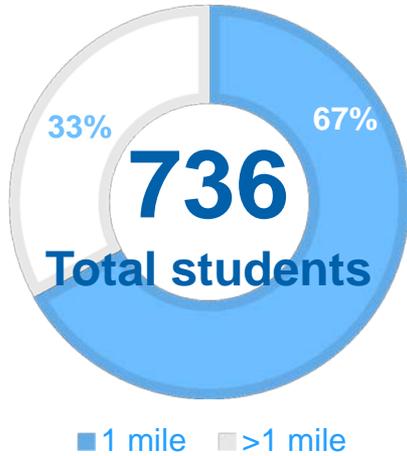
# MACARTHUR ELEMENTARY WALKABOUT DETAILS

- **Date: March 22, 2017**
- **Observation: Arrival**
- **Participants:**
  - **Toole Design Group staff**
  - **City of Alexandria Transportation Planning staff**
  - **Alexandria Bicycle & Pedestrian Advisory Committee members**
  - **MacArthur ES Administrator**
  - **MacArthur ES Parent Teacher Association representatives**
- **Purpose:**
  - **Observe school arrival process**
  - **Evaluate school-zone infrastructure**
  - **Assess existing Safe Routes to School programming**

# OVERVIEW OF MACARTHUR ELEMENTARY SCHOOL

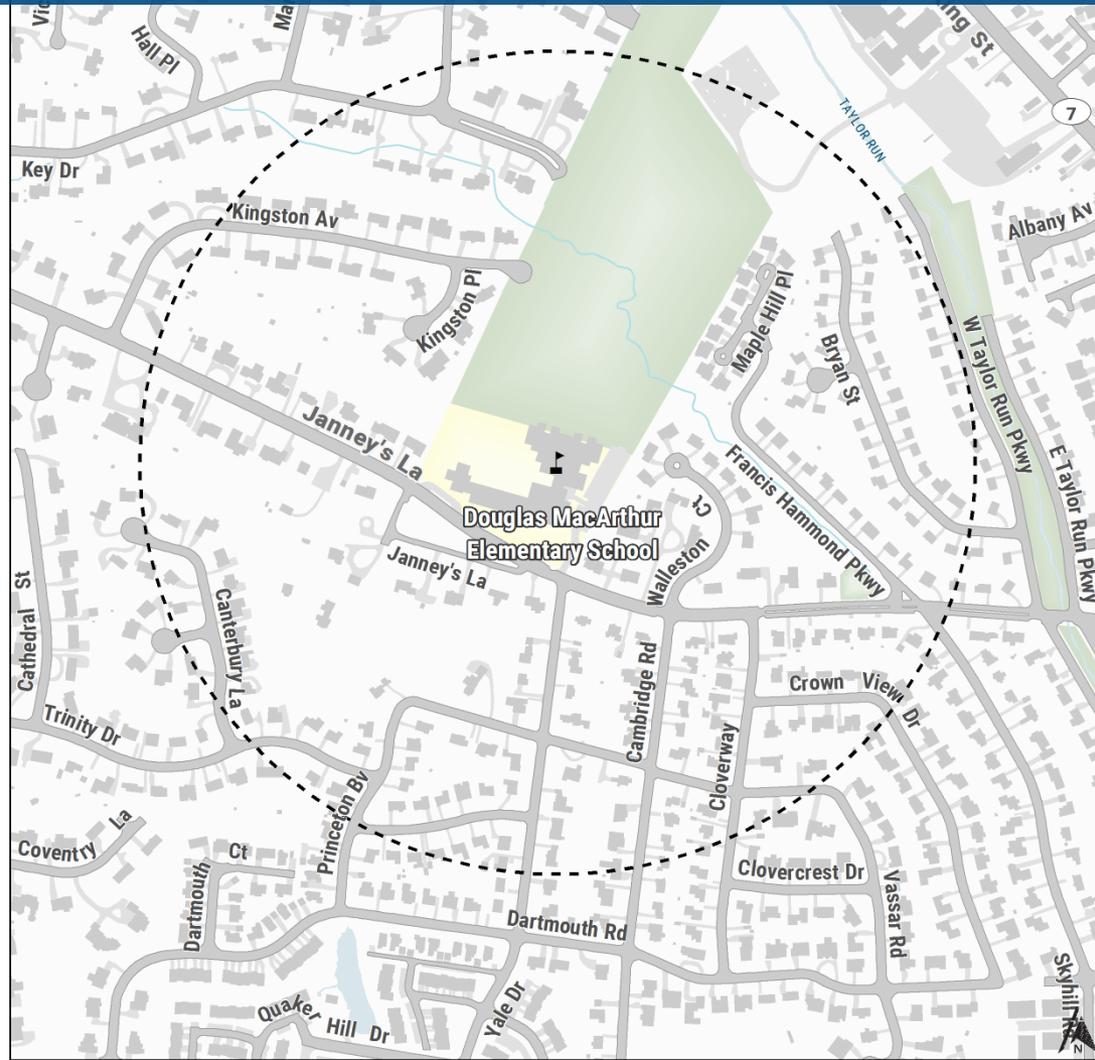
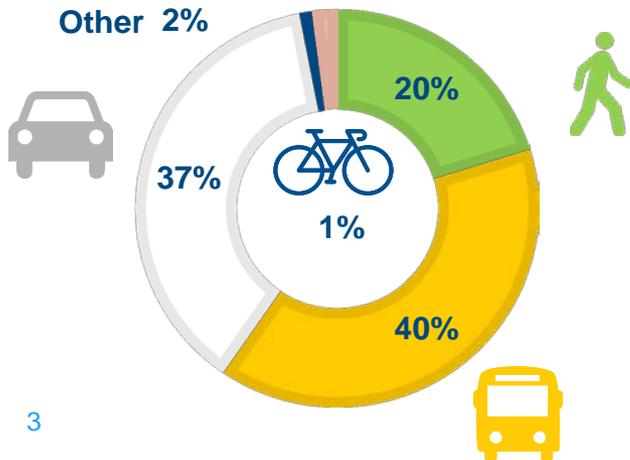
## STUDENT DISTANCE FROM SCHOOL

As reported in 2016 Parent Survey.



## STUDENT TRAVEL MODES

Average of "to school" and "from school" modes as reported in 2016 Student Travel Tallies.



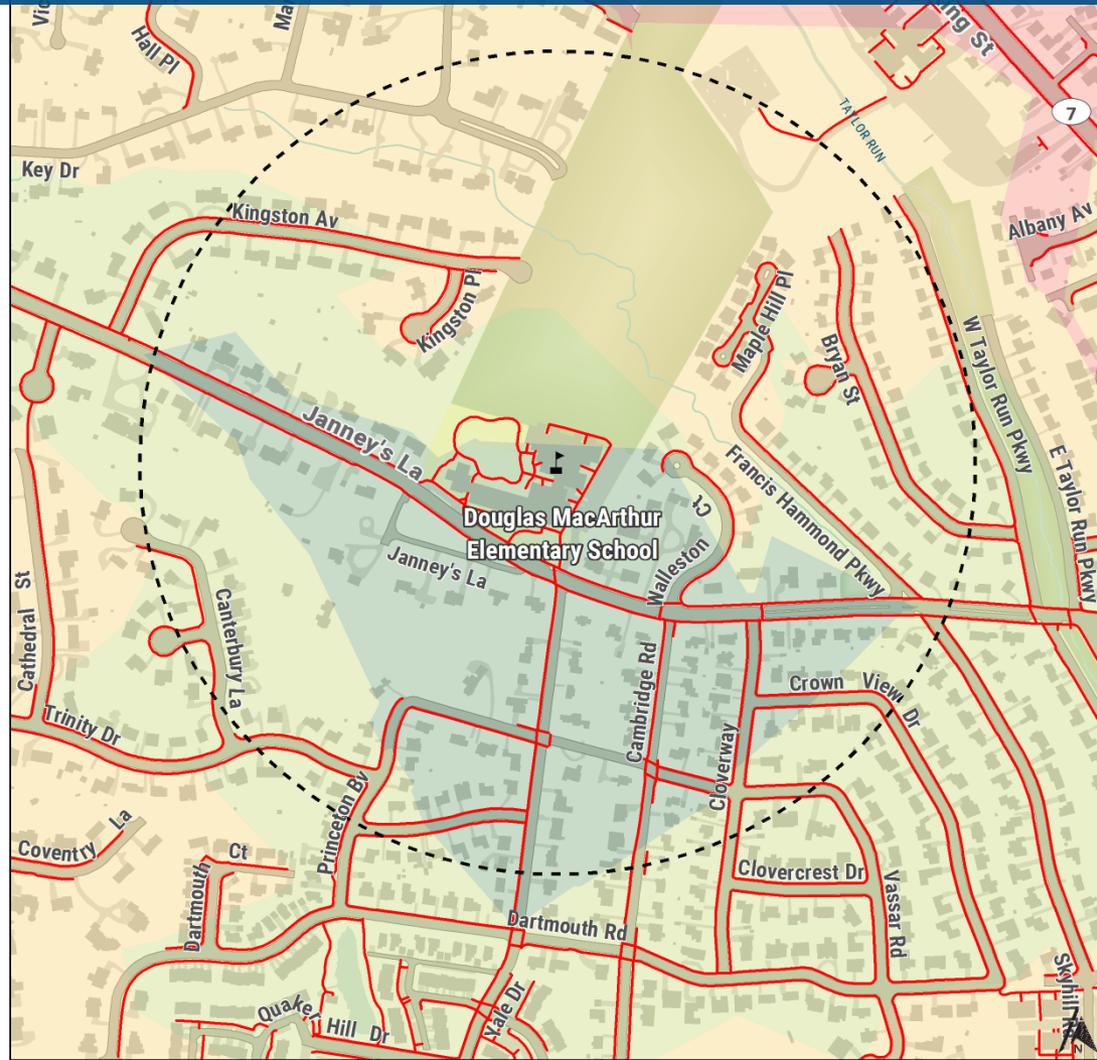
	<p><b>Overview Map</b></p> <p>Douglas MacArthur Elementary School Alexandria, Virginia</p>	<ul style="list-style-type: none"> <li> Schools</li> <li> 1/4 Mile Buffer</li> <li> Parks</li> <li> Roads</li> </ul>
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# STUDENT DISTANCE FROM SCHOOL DETAIL

Distance	Percentage of Students
¼ mile	13%
½ mile	15%
1 mile	39%
2 miles	33%
>2 miles	0%

*As reported in 2016 Parent Survey*

The hollow circle on the map represents the direct distance buffers from the school. The colored polygons shows the distance along the road network.







**Existing Conditions**

Douglas MacArthur Elementary School  
Alexandria, Virginia

Schools

1/4 Mile Buffer

Sidewalks

Roads

Parks

**Network Buffers**

1/4 Mile

1/2 Mile

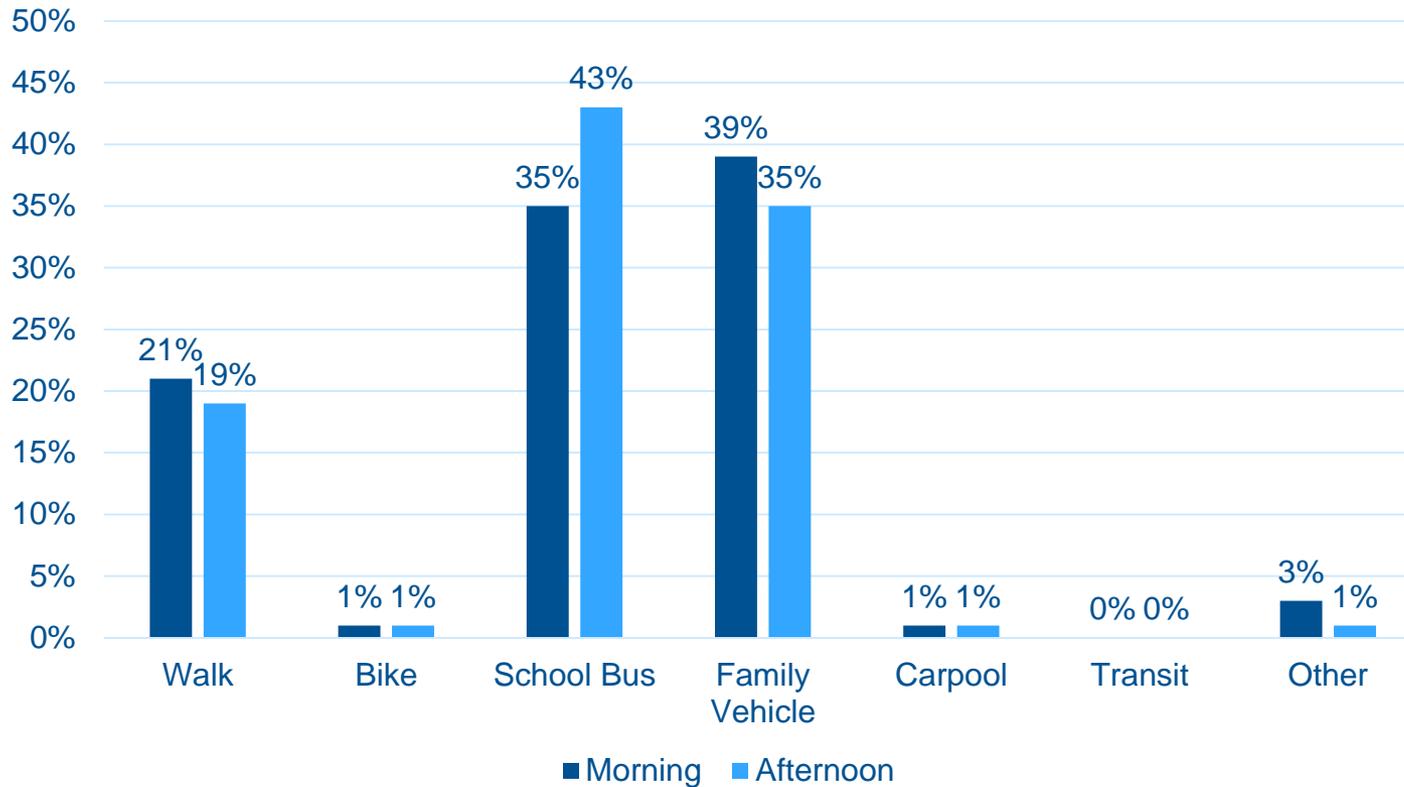
1 Mile

2 Miles

# EXISTING CONDITIONS

# TRAVEL PATTERNS

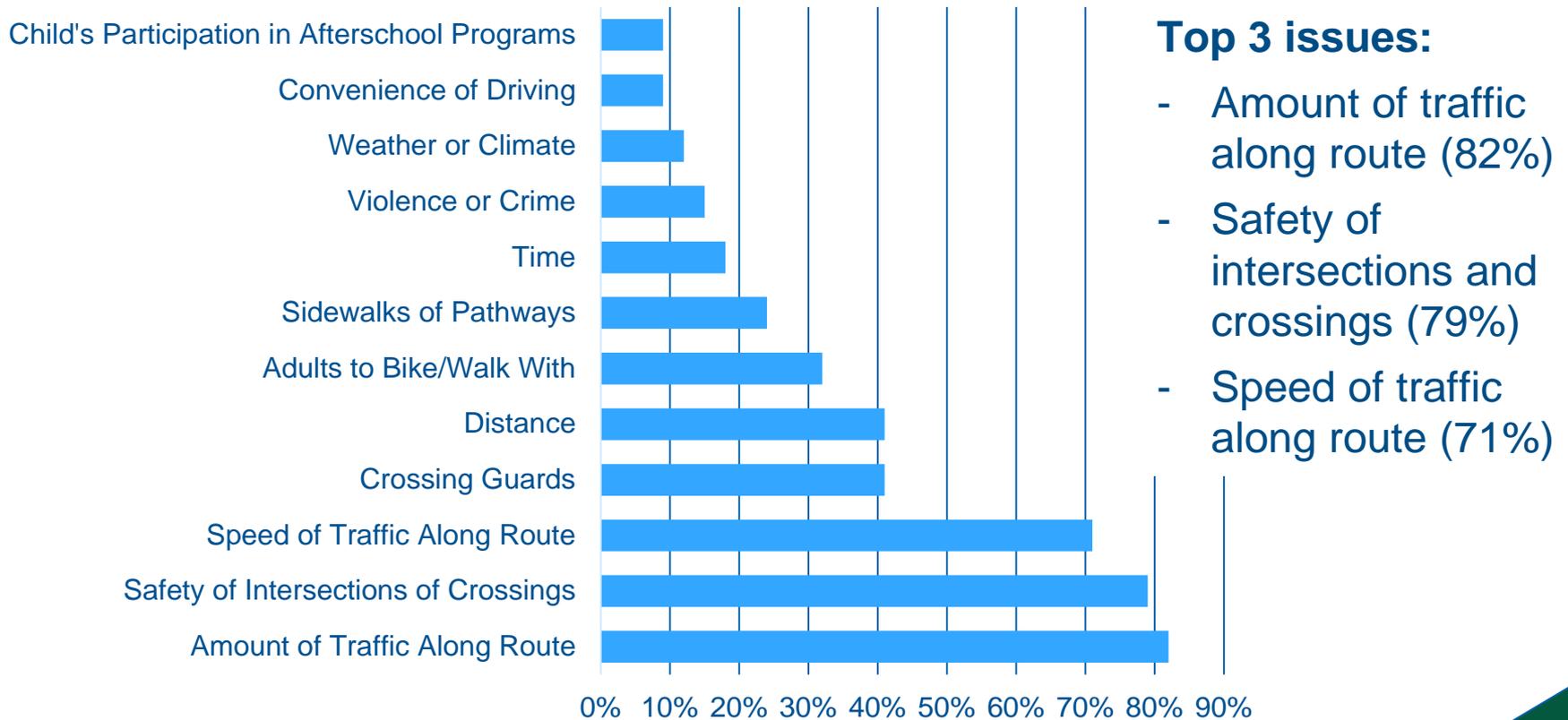
## Morning and Afternoon Travel Mode Comparison



Fall 2016 Student Travel Tallies

# TRAVEL PATTERNS (cont.)

Issues reported to affect the decision to not allow a child to walk or bike to/from school by parents of children who do not walk or bike to/from school



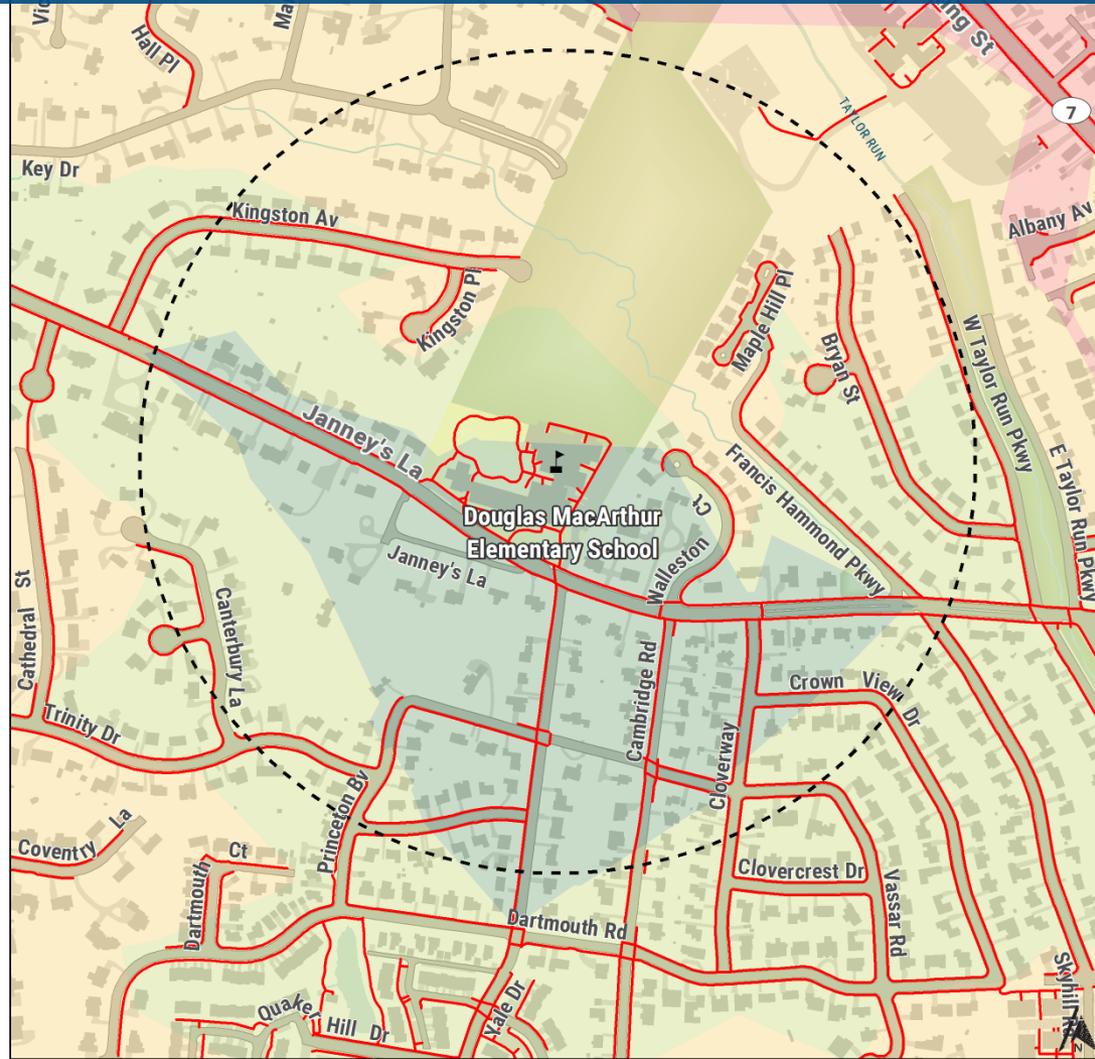
Fall 2014 Parent Survey

# PEDESTRIAN NETWORK

**Sidewalks** – There are sidewalks on at least one side of most streets in the neighborhoods around the school.

**Crosswalks** – There are marked crosswalks directly in front of the school and at the intersections to the east, but it is 4/10 of a mile to the next marked crosswalk west of the school.

**Curb ramps** – Curb ramps are present on all corners, but several do not meet ADA requirements



	<p><b>Existing Conditions</b></p> <p>Douglas MacArthur Elementary School Alexandria, Virginia</p>	<table border="0"> <tr> <td> <p><b>Schools</b></p> <p>1/4 Mile Buffer</p> <p>Sidewalks</p> <p>Roads</p> <p>Parks</p> </td> <td> <p><b>Network Buffers</b></p> <p>1/4 Mile</p> <p>1/2 Mile</p> <p>1 Mile</p> <p>2 Miles</p> </td> </tr> </table>	<p><b>Schools</b></p> <p>1/4 Mile Buffer</p> <p>Sidewalks</p> <p>Roads</p> <p>Parks</p>	<p><b>Network Buffers</b></p> <p>1/4 Mile</p> <p>1/2 Mile</p> <p>1 Mile</p> <p>2 Miles</p>
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# BICYCLING NETWORK

**Janney's Lane** – East-west connection with bike lanes. Has varied topography, and high traffic volumes and speeds. Students that bicycle to school use the sidewalks

**Cambridge Road** – North-south connection, proposed as a shared roadway

**Residential Streets** – Some residential streets near the school with low traffic volumes and speeds may be suitable for older students to bicycle



	<h2>Bicycling Infrastructure</h2> <p>Douglas MacArthur Elementary School Alexandria, Virginia</p>	<table border="0"> <tr> <td><b>Existing Facilities</b></td> <td><b>Proposed Facilities</b></td> </tr> <tr> <td> <ul style="list-style-type: none"> <li><span style="color: brown;">—</span> Trail</li> <li><span style="color: blue;">—</span> Advisory Bike Lane;</li> <li><span style="color: orange;">—</span> Climbing Lane</li> <li><span style="color: red;">—</span> Shared Lane Markings</li> <li><span style="color: green;">—</span> Unpaved Nature Trail</li> </ul> </td> <td> <ul style="list-style-type: none"> <li><span style="color: brown;">⋯</span> Trail</li> <li><span style="color: orange;">⋯</span> Shared Roadway</li> <li><span style="color: blue;">⋯</span> Enhanced Bicycle Corridor</li> </ul> </td> </tr> </table>	<b>Existing Facilities</b>	<b>Proposed Facilities</b>	<ul style="list-style-type: none"> <li><span style="color: brown;">—</span> Trail</li> <li><span style="color: blue;">—</span> Advisory Bike Lane;</li> <li><span style="color: orange;">—</span> Climbing Lane</li> <li><span style="color: red;">—</span> Shared Lane Markings</li> <li><span style="color: green;">—</span> Unpaved Nature Trail</li> </ul>	<ul style="list-style-type: none"> <li><span style="color: brown;">⋯</span> Trail</li> <li><span style="color: orange;">⋯</span> Shared Roadway</li> <li><span style="color: blue;">⋯</span> Enhanced Bicycle Corridor</li> </ul>
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# ARRIVAL OBSERVATIONS

## Arrival

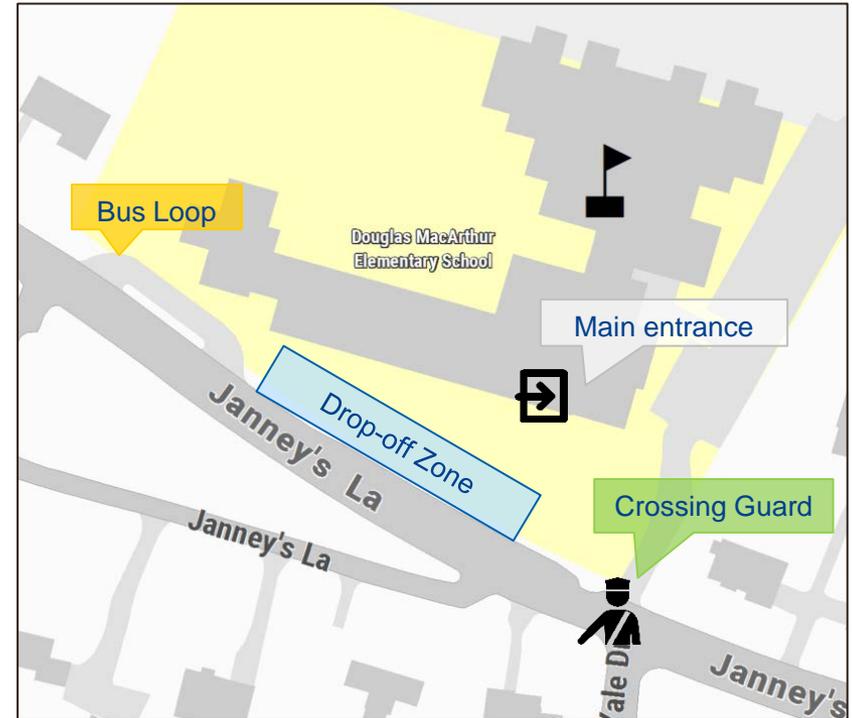
- All students enter the building through the front door off of Janney's Lane
- School starts at 8:00 AM, with most students arriving between 7:45 and 8:00 AM

## Bus Loop

- There is a small bus loop off of Janney's Lane at the western edge of the school property

## Parent Drop-off

- The designated parent drop-off zone is on the north side of Janney's Lane in front of the school



# ARRIVAL OBSERVATIONS

## Bus Loop

- There are 6 buses that drop off in two waves of three buses in the morning
- If the first bus does not pull all the way forward in the bus loop, the back of the last bus sticks out in the westbound travel lane on Janney's Lane.



# ARRIVAL OBSERVATIONS

## Parent Drop-off

- The designated drop-off zone is on the north side of Janney's Lane in front of the school. It is 215-feet long, and holds approximately 12 cars
- There are several staff members supervising to keep the line moving, and cones to keep students from exiting cars before they have reached the drop-off zone
- Drop-offs were also observed:
  - On the south side of Janney's Lane opposite the school, which resulted in a few mid-block crossings
  - On Walleston Court. Parents usually park here to avoid the drop-off line and walk with their students to school.



# ARRIVAL OBSERVATIONS

## Janney's Lane and Yale Drive

- This is a signalized intersection directly in front of the school, with the school driveway parking lot forming the leg of the intersection across from Yale Drive.
- There are “No Right Turn on Red” restrictions on all intersection approaches.
- This intersection experiences heavy volumes of motor vehicle traffic and pedestrian traffic from 7:30 to 8:00 AM.
- Traffic often backs up into the intersection and cars block the crosswalks. The crossing guard stationed at this intersection helps pedestrians cross safely when this occurs.



# ARRIVAL OBSERVATIONS

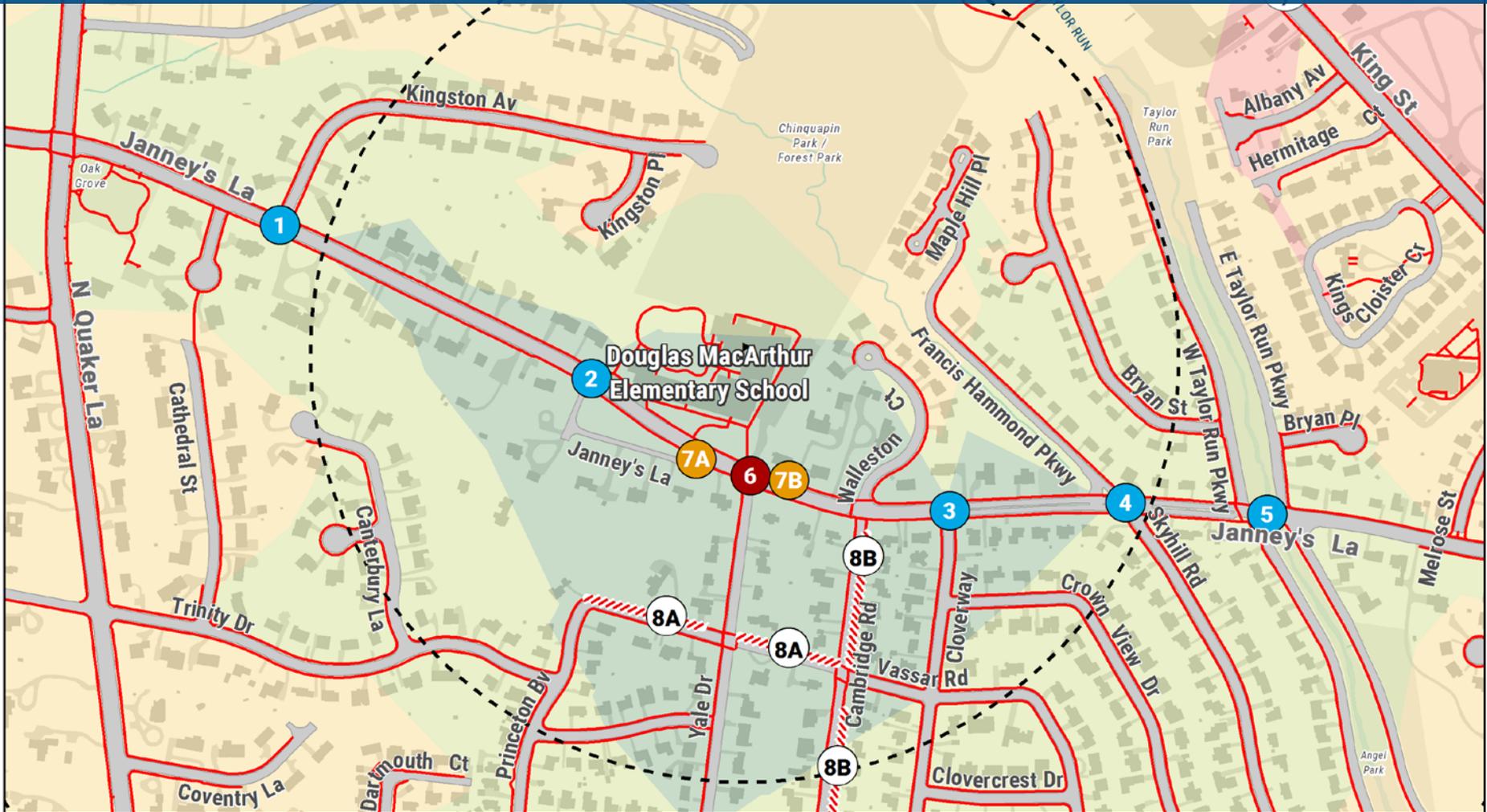
## Janney's Lane and Taylor Run Parkway

- This is a challenging six-leg intersection about 1/3 of a mile east of the school.
- Traffic on Janney's Lane does not have to stop, and was observed traveling above the posted 25 mph speed limit.
- Traffic on East and West Taylor Run Parkway is stop-controlled.
- There is a relatively high volume of vehicles turning left from W Taylor Run that must wait for a gap in traffic in both directions on Janney's Lane.
- There is a DASH bus stop located between East and West Taylor Run Parkway on the south side of Janney's Lane. When the bus stops, the queue of eastbound traffic on Janney's Lane blocks the W Taylor Run intersection.



# ENGINEERING RECOMMENDATIONS

# INFRASTRUCTURE RECOMMENDATIONS MAP



## Infrastructure Recommendations

Douglas MacArthur Elementary School  
Alexandria, Virginia

- Intersection Recommendations
- Mid-Block Recommendations
- School Zone Signage Recommendations
- Signalized Intersection Recommendations
- Sidewalk Recommendations
- Sidewalks
- Schools
- 1/4 Mile Buffer
- Network Buffers**
- 1/4 Mile
- 1/2 Mile
- 1 Mile
- 2 Miles

# GENERAL RECOMMENDATIONS WITHIN ½ MILE OF SCHOOL

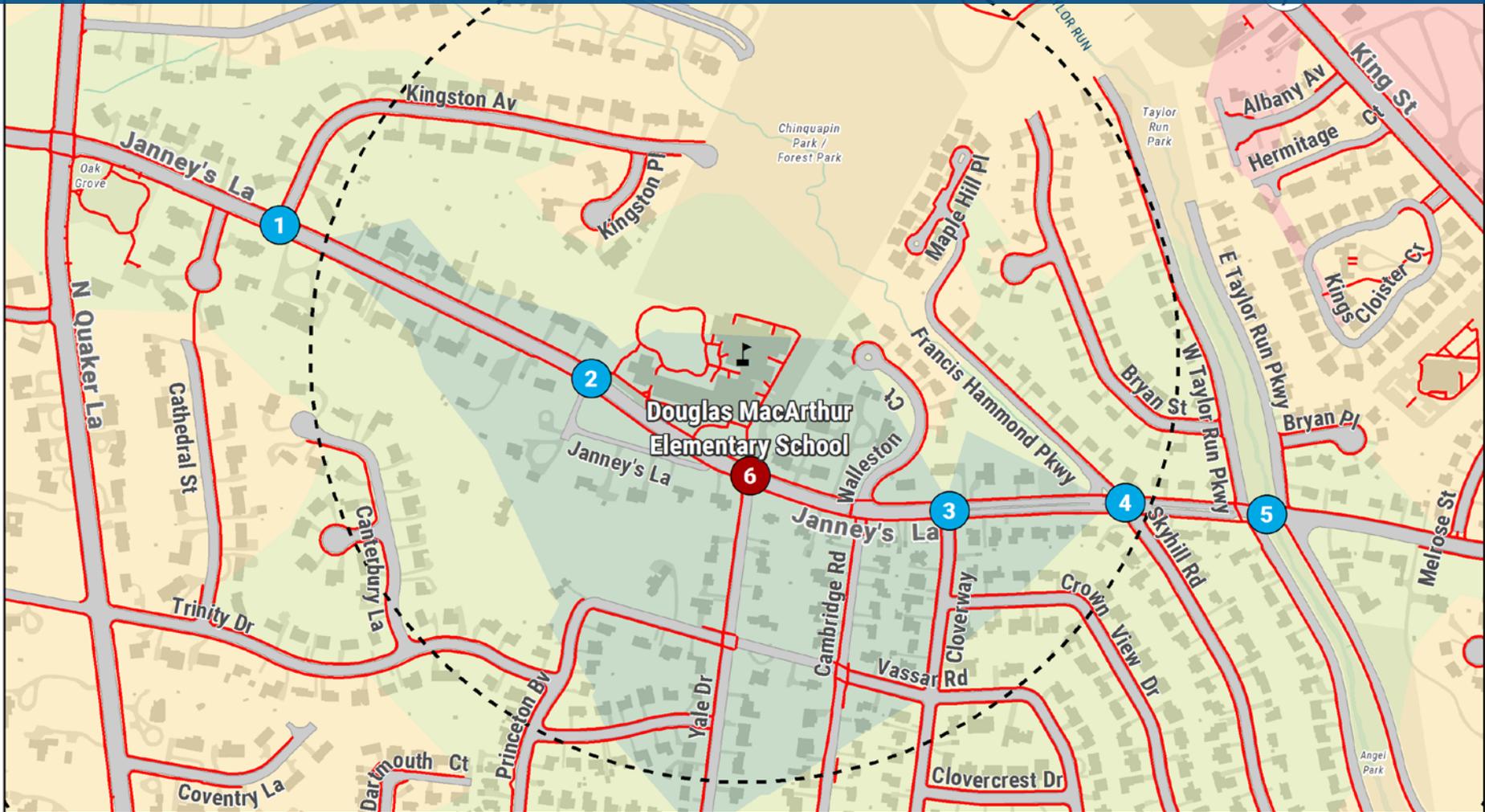


## Recommendation

Update curb ramps to meet current ADA guidelines

These curb ramps on the south side of Janey's Lane do not have detectable warning strips.

# INTERSECTION RECOMMENDATIONS



## Infrastructure Recommendations

Douglas MacArthur Elementary School  
Alexandria, Virginia

- Intersection Recommendations
  - Mid-Block Recommendations
  - School Zone Signage Recommendations
  - Signalized Intersection Recommendations
  - //// Sidewalk Recommendations
  - Sidewalks
- Network Buffers**
- 1/4 Mile
  - 1/2 Mile
  - 1 Mile
  - 2 Miles
- Schools
  - 1/4 Mile Buffer

# INTERSECTION RECOMMENDATIONS

Map ID	Issue	Recommendation	Timeframe*
1	No marked crosswalk across Janney's Lane between N Quaker Lane and Yale Drive (2,300 feet)	Mark high visibility crosswalk across Janney's Lane on east side of Janney's Lane/Kingston Avenue intersection. Reconstruct/add curb ramps. Add coordinated pedestrian crossing signage.	Long
2	No marked crosswalk across Janney's Lane between N Quaker Lane and Yale Drive (2,300 feet).  Drivers are not aware of school zone.	Mark high visibility crosswalk across Janney's Lane just east of Janney's Lane and west of the bus loop exit. Reconstruct ramps. Add coordinated school crossing signage.	Medium

\* Short = within 1 year, Medium = within 3 years, Long = 3 or more years



Photo rendering of high visibility crosswalk on Janney's Lane just west of the school.

# INTERSECTION RECOMMENDATIONS

Map ID	Issue	Recommendation	Timeframe*
3	Northbound drivers on Cloverway do not come to a complete stop before entering the crosswalk.	Align stop bar and stop sign.	Short
		Trim vegetation to ensure adequate sight lines on SE corner of intersection.	Short
3	Westbound bike lane on Janney's Lane is offset, requiring slower, uphill bicyclists to merge with faster motor vehicle traffic in a constrained area.	Reinforce bicyclists' presence in travel lane through "Bikes May Use Full Lane" sign and shared lane markings.	Short
		Remove 75-ft. of brick median and shift westbound travel lane south to create sufficient space for a continuous bike lane through the intersection.	Long

\* Short = within 1 year, Medium = within 3 years, Long = 3 or more years

# INTERSECTION RECOMMENDATIONS



The curb extension and brick median at Janney's Lane and Cloverway Drive force bicyclists to share the narrow travel lane with motor vehicles while traveling uphill.



The stop sign on Cloverway Drive is set back from the intersection and vegetation interferes with sight lines.

# INTERSECTION RECOMMENDATIONS

Map ID	Issue	Recommendation	Timeframe*
4	Confusing signs for southbound traffic on Francis Hammond Parkway.	Reinstall yield sign so that it faces drivers turning right from westbound Janney's Ln onto Francis Hammond Pkwy.	Short
	Curb ramps are not ADA-compliant.	Update curb ramps to meet current ADA guidelines.	Medium/Long
	Wide curb radii allow drivers to complete turns at higher speeds.	Close slip lane for northbound traffic to slow turning speeds and reduce the number of potential conflicts between drivers and pedestrians.	Long

\* Short = within 1 year, Medium = within 3 years, Long = 3 or more years



Looking south towards Janney's Lane from Francis Hammond Pkwy. Note the confusing signage and wide slip lane to the left of the photo.

# INTERSECTION RECOMMENDATIONS

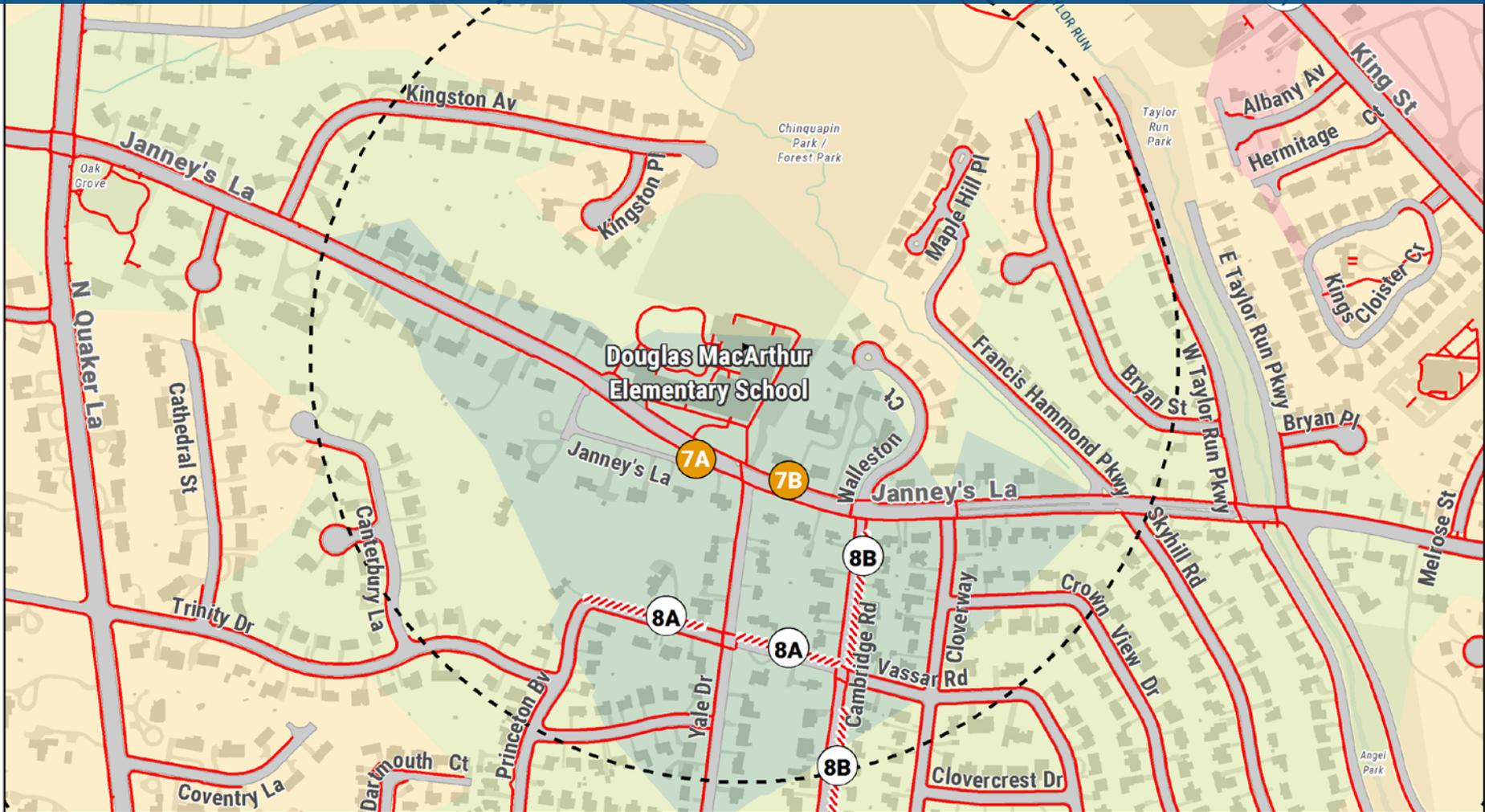
Map ID	Issue	Recommendation	Timeframe*
5	Confusing traffic patterns and multiple conflict points at the six-leg intersection of Janney's Lane and Taylor Run Parkway.	Relocate crosswalk on east leg 60-ft. further east to align with desired pedestrian route. This will also set up the intersection for the following longer term recommendations.	Short / Medium
		Option A – Continue to study intersection to see if an all way stop or traffic signal is warranted.	Medium / Long
		Option B – Study intersection to determine feasibility of redesigning intersection with 2 neighborhood traffic circles.	Medium / Long

\* Short = within 1 year, Medium = within 3 years, Long = 3 or more years



Looking east on Janney's Lane towards the 6-leg intersection with E and W Taylor Run Pkwy.

# NON-INTERSECTION RECOMMENDATIONS



## Infrastructure Recommendations

Douglas MacArthur Elementary School  
Alexandria, Virginia

- Intersection Recommendations
- Mid-Block Recommendations
- School Zone Signange Recommendations
- Signalized Intersection Recommendations
- Sidewalk Recommendations
- Sidewalks
- Schools
- 1/4 Mile Buffer
- Network Buffers**
- 1/4 Mile
- 1/2 Mile
- 1 Mile
- 2 Miles

# NON-INTERSECTION RECOMMENDATIONS

Map ID	Issue	Recommendation	Timeframe*
7A	25 MPH speed limit sign within 15 MPH school zone	Relocate 25 MPH sign outside of school zone	Short
7B	25 MPH speed limit sign within 15 MPH school zone	Relocate 25 MPH sign outside of school zone	Short
8A	Sidewalk on one side of the street only, as noted in Fall 2016 Parent Survey	Complete sidewalk network on both sides of the street as funding allows	Long
8B	Sidewalk on one side of the street only, as noted in Fall 2016 Parent Survey	Complete sidewalk network on both sides of the street as funding allows	Long

\* Short = within 1 year, Medium = within 3 years, Long = 3 or more years



25 MPH speed limit sign within 15 MPH school zone for westbound traffic on Janney's Lane with the Janney's Lane and Yale Drive intersection visible in the background.

# PROGRAMMATIC RECOMMENDATIONS

# EDUCATION

Recommendation	Continue Existing	Start New
Integrate pedestrian and bicycle safety education into the school curriculum.		●
Conduct a bicycle rodeo to teach the skills and precautions to ride a bike safely.		●
Incorporate information about walking and bicycling to school in communications with parents.	●	
Provide parents and guardians with safe driving information that stresses the importance of driving safely in school zones and being alert for pedestrians and bicyclists during arrival and dismissal.		●



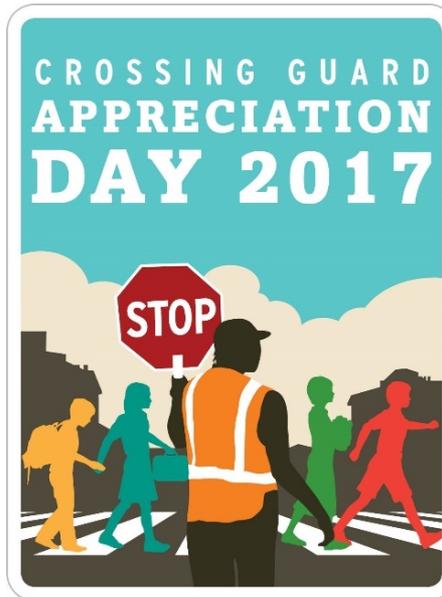
# ENCOURAGEMENT

Recommendation	Continue Existing	Start New
Participate in International Walk to School Day and Bike to School Day.		●
Help organize and support walking schools buses.		●
Help organize and support bike trains.		●
Establish a frequent walker / bicyclist program.		●



# ENFORCEMENT

Recommendation	Continue Existing	Start New
Establish a driver pledge program.		●
Celebrate Virginia Crossing Guard Appreciation Day.		●
Work with the police department to provide periodic parking and traffic enforcement near the school.	●	



# EVALUATION

Recommendation	Continue Existing	Start New*
Conduct Student Travel Tallies to get baseline data for student travel patterns.	●	
Administer Parent Surveys to collect information on parents' attitudes towards walking and bicycling and reasons why they may or may not allow their children to walk or bike to school.	●	

*\* Travel Tallies and Parent Surveys were last collected in the fall of 2016 at MacArthur Elementary School. Up to date information is required to monitor program success and apply for federal SRTS funding.*

