

# ASPEN HILL VISIONZERO STUDY



Montgomery Planning Area 2

11/14/2019

## Aspen Hill Vision Zero Study

Planning Board Briefing – Safety Toolkit



For the record, Maren Hill, Senior Planner with Area 2 Division. Tonight, I'm here to present a draft of the Aspen Hill Vision Zero Study.



## Aspen Hill Vision Zero Planning Board Briefing

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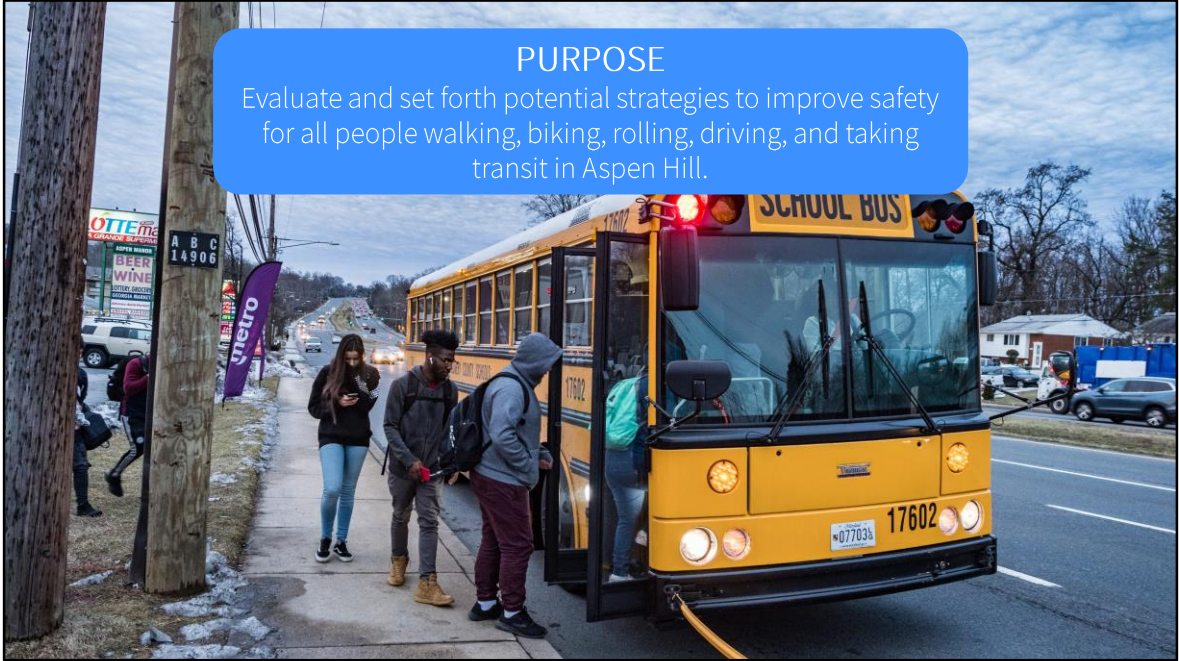
I want to acknowledge the origins of this study. This study came about because people in the Aspen Hill community expressed concern about traffic safety. They were worried that they or their family members or friends could be killed or seriously injured in a crash. The study area has seen far too many of these severe and fatal crashes--23 since 2015.

It is an unacceptable tragedy every time someone dies or is severely injured in a traffic collision. These tragedies affect more than the victims of the crashes, they impact entire communities, altering the fabric of our social networks. People lose friends or a family members, or have to care for a loved one who will never be able to care for themselves again, bystanders are devastated, family economies are damaged. There is a whole network of trauma, loss and burden that comes with each of these deaths and injuries. Many of the community members who have assisted with this study have witnessed horrendous crashes or lost someone important in their lives. It is a powerful and all too common occurrence.

In addition to these losses, crashes create barriers to achieving physically healthy communities. People opt out of walking and biking for recreation or transportation if they perceive them as unsafe.

## PURPOSE

Evaluate and set forth potential strategies to improve safety for all people walking, biking, rolling, driving, and taking transit in Aspen Hill.



The purpose of this study is to evaluate and set forth potential strategies to improve safety for all people walking, biking, rolling, driving, and taking transit in Aspen Hill.

# Planning Framework: Vision Zero



Vision Zero commitment: to eliminate severe injuries and fatalities from crashes by 2030.

- Prize human life above all else.
- Account for human error in the design of the road network.
- Reduce the severity of collisions. Emphasize a systems approach.
- Identify equitable solutions.

We relied on the Vision Zero approach. The County adopted a Vision Commitment in 2017 to eliminate severe injuries and fatalities from crashes. Vision Zero:

Prize human life above all else.

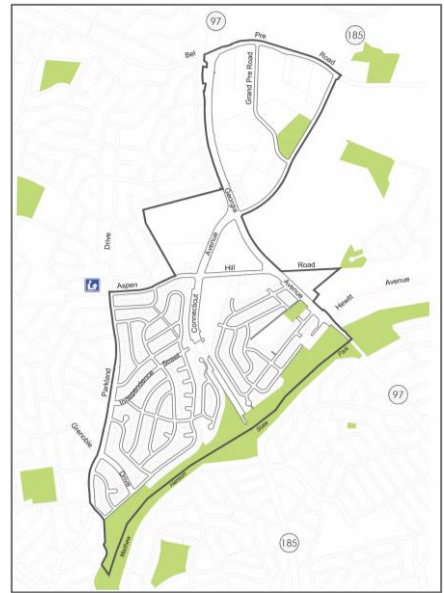
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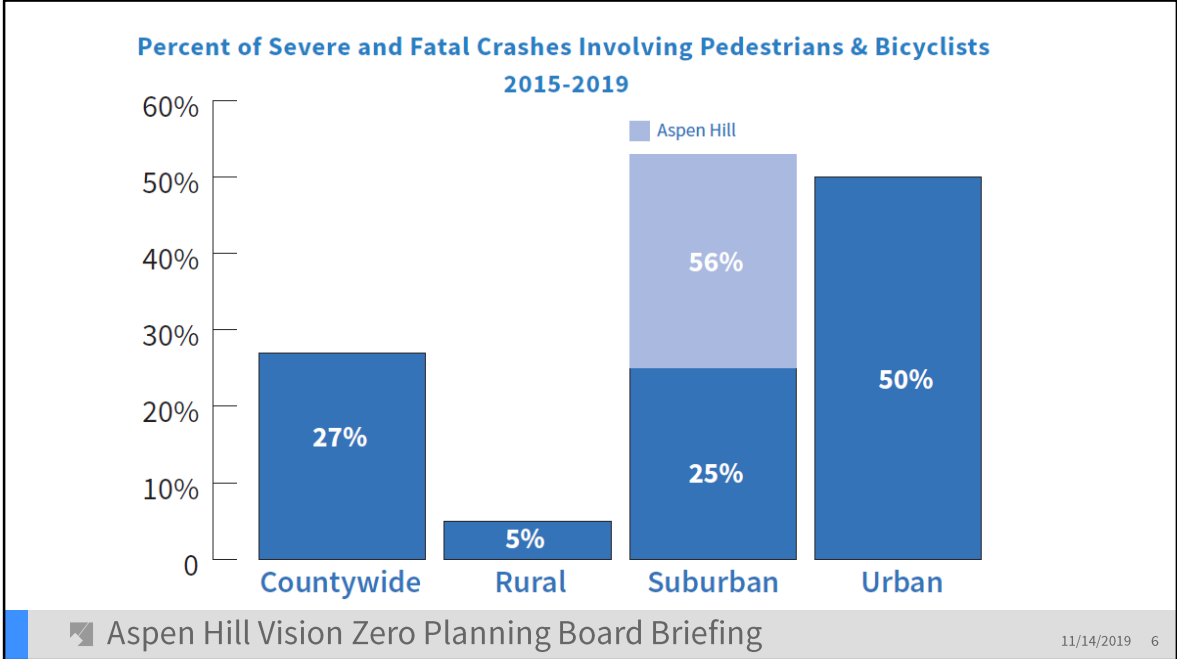
Identify equitable solutions.

The County adopted a Vision Commitment in 2017 to eliminate severe injuries and fatalities from crashes

## A photograph of a busy street intersection. In the foreground, a dark SUV is moving from left to right. A white van is stopped at the intersection. A red car is also stopped. A white SUV is moving from right to left. A silver car is also moving from right to left. Two pedestrians are crossing the street in the middle of the intersection. In the background, there are trees and a building with a sign that says "CAR WASH". A traffic light is visible in the upper right corner.



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Although vehicle trips represent most person trips in the study area, people walking and biking were involved in 56 percent of the area’s severe and fatal crashes. Despite the auto-centric development pattern of the study area, the crash pattern is more representative of areas of the county within a quarter mile of a Metrorail station, where people traditionally walk and bike at higher rates. This suggests that there infrastructure needs for those who walk, bike, and take transit, that the county is failing to meet.



## Equity Lens



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Through the study process, we have applied an equity lens. We begin with the premise that all people have the right to move around their communities safely, but that certain populations are disproportionately affected by crashes. In the study area, several of the characteristics that distinguish Aspen Hill from other parts of the county correlate with higher incidence of severe and fatal crashes. County statistics show that communities with higher rates of poverty, people of color, people who speak English as a second language and young residents have higher than average collision rates, compared to the rest of the county. We also know that certain populations are more vulnerable to crashes and aimed to address their needs.

# Engagement



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Planning staff embarked on a robust community engagement process. The voices, opinions and experiences of Montgomery County residents are central to the development of this study. To reach a broad audience, Montgomery Planning staff used a variety of engagement strategies. We held events during the day, at night, on weekends and weekdays in different locations throughout Aspen Hill. We always provided a space for children and Spanish translation at all our events, as we are tonight. This allowed us to reach a wider audience who might not normally attend a traditional night meeting.



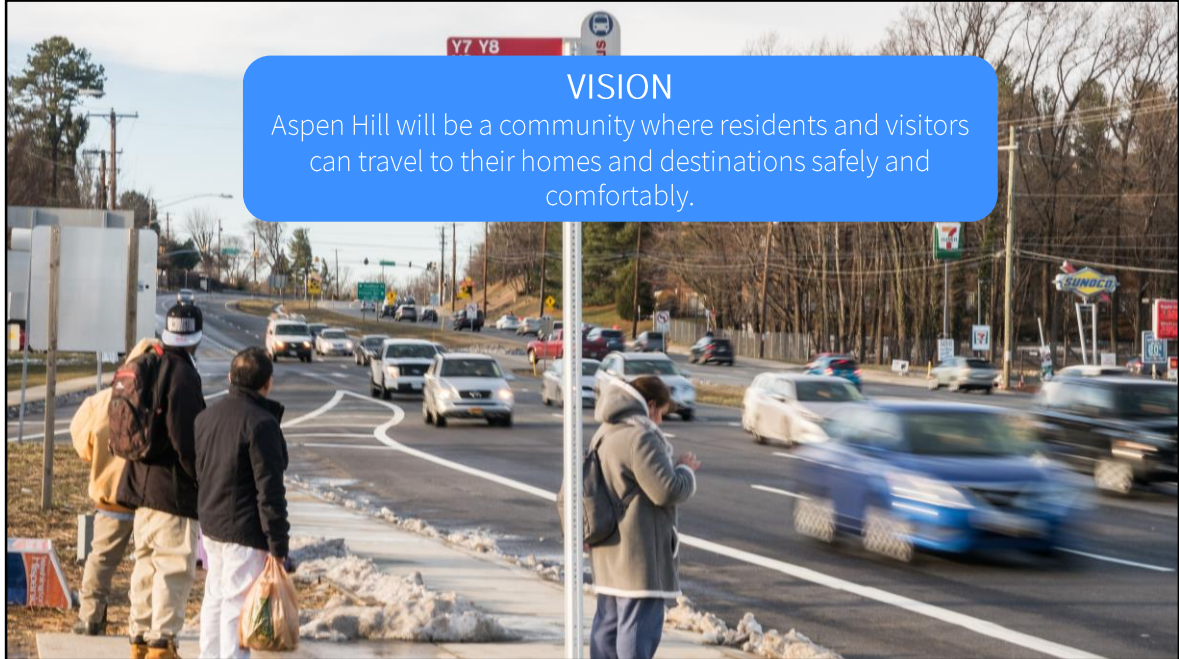
## Engagement – Advisory Group



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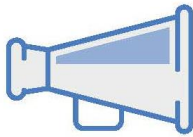
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The Study also benefitted from the knowledge of a 12 member advisory group that volunteered their time starting in January. These community members represented a diverse set of interests and experiences. They advised staff on community outreach, identified key challenges and assisted with recommendations.



The product of this process is a study and safety tool kit which Aspen Hill as a community where residents and visitors can travel to their homes and destinations safely and comfortably.

## What We Heard



“It is very dangerous to walk to the nearby commercial establishments such as the Aspen Hill Shopping Center because of the narrow sidewalks and high-speed limits. When I walk to these establishments with my children, we have to walk single file in order to walk safely and hope that nobody is coming in the opposite direction. It appears that more affluent neighborhoods in the county have more pedestrian-friendly options.”

In the study we included what we heard throughout the engagement process.

# Tool Kit - Elements

### EMPLOY RIGHT TURN ON RED RESTRICTIONS

Reversing right turns on red lights (RTOR) reduces conflicts between turning vehicles, pedestrians and bicycles, and improves safety for all users. "No turn on red" signage is cost effective and flexible; restrictions may be applied where pedestrian activity is highest, such as during the morning and evening peak periods.

**Locations:**

- Connecticut Avenue and Aspen Hill Road
- Georgia Avenue and Aspen Hill Road

**Priority:** High-volume pedestrian streets, streets with bicycle facilities and commercial corridors, intersections with high pedestrian volumes or a history of right-turn collisions, near schools and community facilities.

**Considerations:**

- Vehicles turning right on red are required to fully stop.
- RTOR restrictions may be paired with leading pedestrian intervals (LPI) to reduce conflicts during the LPI phase.
- Should be placed where turning vehicles lack adequate sight distance to approaching vehicles.
- Red light cameras can be used to enforce compliance and address violations.
- Prohibiting RTOR may result in higher right-turn-on-green conflicts.
- Post-time RTOR prohibitions during the busiest times of the day may be sufficient to address the problem.

**Design:**

- Signage is cost effective and easy to install.
- Signage should be installed at intersections with adequate sight distance to unusual geometry.

**Equity and Accessibility:**

- For people with low or no vision who depend on the audible signal to cross, vehicles entering the crosswalk during a weak phase may be more dangerous to pedestrians.

**Resources:**

- Maryland Manual on Uniform Traffic Control Devices 2011, Section 2B.04

**Safety Benefits:**

- Reduces conflicts from people waiting or timing by prohibiting drivers from accelerating on a red light.



← Improvement description

← Location

← Priority characteristics

← Considerations

← Design

← Equity and accessibility

← Resources

← Safety benefits

The last time we came before the Planning board we highlighted a few of the potential improvements from the safety toolkit. Tonight, I'd like to highlight the structure of the tool kit and the supporting components.

In addition to recommending a set of potential safety improvements, the study is intended as an educational document that can be used in other areas of the county.

Each area wide improvement in the tool kit included:

Improvement description

Locations in the area where it should be implemented

Characteristics that made locations a priority for implementation

Considerations such as complimentary infrastructure and unintended outcomes

Design possibilities

How the improvement affects access for vulnerable road users

Links to resources with more information

The most critical safety benefits

## Tool Kit – Regulations



In Maryland, pedestrians have right of way when crossing at a crosswalk. A crosswalk is formed anytime two roads meet; the intersection is still considered a crosswalk even if it is unmarked and does not have traffic controls or signage. In addition to using marked crosswalks and signalized intersections like Connecticut Avenue and Aspen Hill Road, and Georgia and Connecticut Avenues, pedestrians have the legal right and the right of way to cross at intersections of Wendy Lane or Ralph Road with Georgia Avenue.

The Maryland Transportation code section 21.101 defines a crosswalk as that part of a roadway that is:

1. Within the prolongation or connection of the lateral lines of sidewalks at any place where two or more roadways of any type meet or join, measured from the curbs or, in the absence of curbs, from the edges of the roadway;
2. Within the prolongation or connection of the lateral lines of a bicycle way where a bicycle way and a roadway of any type meet or join, measured from the curbs or, in the absence of curbs, from the edges of the roadway; or
3. Distinctly indicated for pedestrian crossing by lines or other markings

Aspen Hill at a Glance (Page 19)

Throughout the study we include examples and data that are meant to inform and educate decision makers and community members alike public. For example, we've come across a lot of misunderstanding about the regulations on pedestrian crossings. So, on page 19 of the study, we highlight pedestrian right of way regulations. Pedestrians have the right of way when crossing at a crosswalk, which is formed any time two roads meet. The intersection does not have to be marked to be considered a crosswalk.



## Tool Kit – Mini Case Studies



The District Department of Transportation conducted an engineering study to determine this nexus between traffic safety and speed cameras throughout the District. The study included traffic speed and volume studies, field assessments and speed and crash data analysis for all 295 speed camera locations in DC. The study revealed an overall reduction in the number of crashes by as much as 20 percent in these locations as well as a 20 percent decrease in injury crashes at these locations. The study determined that the speed cameras are a critical tool for improving vehicular and pedestrian safety.

[https://ddot.dc.gov/sites/default/files/dc/sites/ddot/publication/attachments/Safety\\_Nexus\\_Executive\\_Summary.pdf](https://ddot.dc.gov/sites/default/files/dc/sites/ddot/publication/attachments/Safety_Nexus_Executive_Summary.pdf)

Example: Install Speed Cameras to Enforce Speed Limits and Reduce Fatal Crashes (Pages 26-27)

We also employed mini case studies to support and explain the safety improvements in the tool kit. This little case study from the District Department of Transportation illustrates the effectiveness of automated speed enforcement in reducing injuries in traffic collisions.

## Tool Kit – Local Data

### BY THE NUMBERS



Left turns create safety issues for people who drive, walk and bike. Between 2015 and 2019, five out of the nine severe and fatal crashes at the intersection of Hewitt Avenue and Georgia Avenue were caused by turning vehicles. Between 2015 and 2019, there were four severe injuries and one fatality caused by turning vehicles.

Left Turn Protection Measures (Pages 34-35)

We used local data to focus on the critical needs, like this example from page 34 supporting Left Turn Protection Measures, that states that 5 out of 9 of the fatal and severe crashes that occurred at Hewitt Avenue and Georgia Avenue involved turning vehicles.

# Tool Kit – National Best Practices

## SAFE LANE WIDTHS

The American Association of State Highway Transportation Officials recommends between nine to 12-foot lanes on various road types, allowing for 10-foot lanes on roads with posted speed limits of 45 mph or less. Travel lanes of 10 and 11 feet on arterials and collectors do not negatively affect motorist safety or have a measurable effect on capacity. Montgomery County has approved 10-foot interior lanes with 11-foot curb lanes on Veirs Mill Road and implemented 10-foot interior lanes with 11-foot curb lanes on Georgia Avenue between Interstate-495 and New Hampshire Avenue (MD193).

Vehicle	Vehicle Length	Vehicle Width	Operating Width <sup>1</sup>
Passenger Cars and Light Trucks	19.0 ft	7.0 ft	9.0 ft
School Bus	36.0 ft	8.0 ft	10.0 ft
Transit Bus	40.0 ft	8.5 ft	10.5 ft
Single Unit Truck <sup>2</sup>	30.0 ft	8.0 ft	10.0 ft
Tractor-Trailer	55.0 ft	8.5 ft	10.5 ft

Source: a Policy on the Geometric Design of Streets and Highways, AASHTO, 2004. Chapter 2 Design Controls and Criteria

<sup>1</sup> Assuming one-foot clearance on both of vehicle

<sup>2</sup> The SU-30 design vehicle is commonly used to model emergency response vehicle operations

Example: Narrow Interior Travel Lanes to 10 Feet and Curb Lanes to 11 Feet on Georgia Avenue and Connecticut Avenue (Pages 46-47)

We also relied on national and regional best practices, to support the tool kit improvements. This table from the American Association for State Highway and Transportation Officials (AASHTO) illustrates the acceptable range of lane widths. Showing that our recommendation to narrow interior lanes to 10 feet and curb lanes to 12 feet on Georgia Avenue and Connecticut Avenue will accommodate vehicles of all sizes. We hope the educational call outs throughout the study, like the examples I shared, can educate community members and decision makers alike and can be used to support safety recommendations in other areas of the county as well.

Traffic Signal

HAWK Signal

35-40 MPH Speed Limit  
Georgia Avenue

Aspen Hill  
Neighborhood Greenway

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I wanted to acknowledge that over the course of the study process, several safety improvements have been installed in the study area, some long planned and others the direct result of tragic events and community pressure. I highlight this because it demonstrates that when there is consensus that there is an issue, change can occur relatively rapidly. It also shows that initiatives, like this study, have the power to bring attention to safety issues in our County and advocate for change.

## Next Steps

- Implementation requires proactive coordination with MCDOT and SHA
- Frontages are improved through private development, but redevelopment opportunities in Aspen Hill are limited
- Capital Improvements Program and Bicycle Pedestrian Priority Areas are the county's primary funding mechanisms for Vision Zero projects
- Small-scale funding for bike/ped improvements is available through multiple MDOT-administered programs

MCDOT has been a great partner throughout the study and the development of the safety tool kit. The future of the study and the toolkit contained within will require continued collaboration with MCDOT as well as proactive coordination between MCDOT and the Maryland State Highway Administration. Aspen Hill is a stable area with few short-term redevelopment opportunities, implementation will require public investment to bring about improved safety for all road users. We have outlined some next steps in the study and will include additional information about funding sources in the Appendix.



## Safety Toolkit – Short term

- Relocate school bus stops from high-volume, high-speed roads.
- Reduce speed limits.
- Employ right turn on red restrictions.
- Narrow interior travel lanes to 10 feet and curb lanes to 11 feet on Georgia Avenue and Connecticut Avenue.

We're often asked what can we do now we wanted to highlight some changes that can be implemented through low cost interventions:

Relocate school bus stops from high-volume, high-speed roads.

Reduce speed limits.

Employ right turn on red restrictions.

Narrow interior travel lanes to 10 feet and curb lanes to 11 feet on Georgia Avenue and Connecticut Avenue.

## Safety Toolkit – Long term

- Implement left turn protection measures.
- Install intersection lighting to enhance visibility at crosswalks.
- Reconfigure or remove channelized right turn lanes to improve safety at Georgia Avenue and Connecticut Avenue.
- Install permanent buffers along the sidewalk by moving the curb on Georgia Avenue and Connecticut Avenue.

### Long term

Implement left turn protection measures.

Install intersection lighting to enhance visibility at crosswalks.

Reconfigure or remove channelized right turn lanes to improve safety at Georgia Avenue and Connecticut Avenue.

Install permanent buffers along the sidewalk by moving the curb on Georgia Avenue and Connecticut Avenue

## Questions | Comments | Connect

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Facebook: [Facebook.com/montgomeryplanning](https://www.facebook.com/montgomeryplanning)

Instagram: @montgomeryplanning



Staff will make a few formatting changes and grammatical edits to the study, and then as a next step we ask for the Board to approve the study and submit it to the County Council for a briefing on the work the Planning Department has completed. Thank you.