




VISION ZERO



NO TRAFFIC DEATHS BY 2030

Montgomery Planning

11/25/19

How Master Plans Can Help Us Reach Vision Zero

Silver Spring Citizens Advisory Board



Role of the Planning Department

What We Do:

- Master Planning
- Regulatory Review
- Capital Project Review
- Advocate as agent of change
- Collaborate with agency partners

What We Don't Do:

- Construct Roads, Sidewalks or Bikeways
- Install Traffic Signals or Crosswalks
- Enforce Traffic Laws

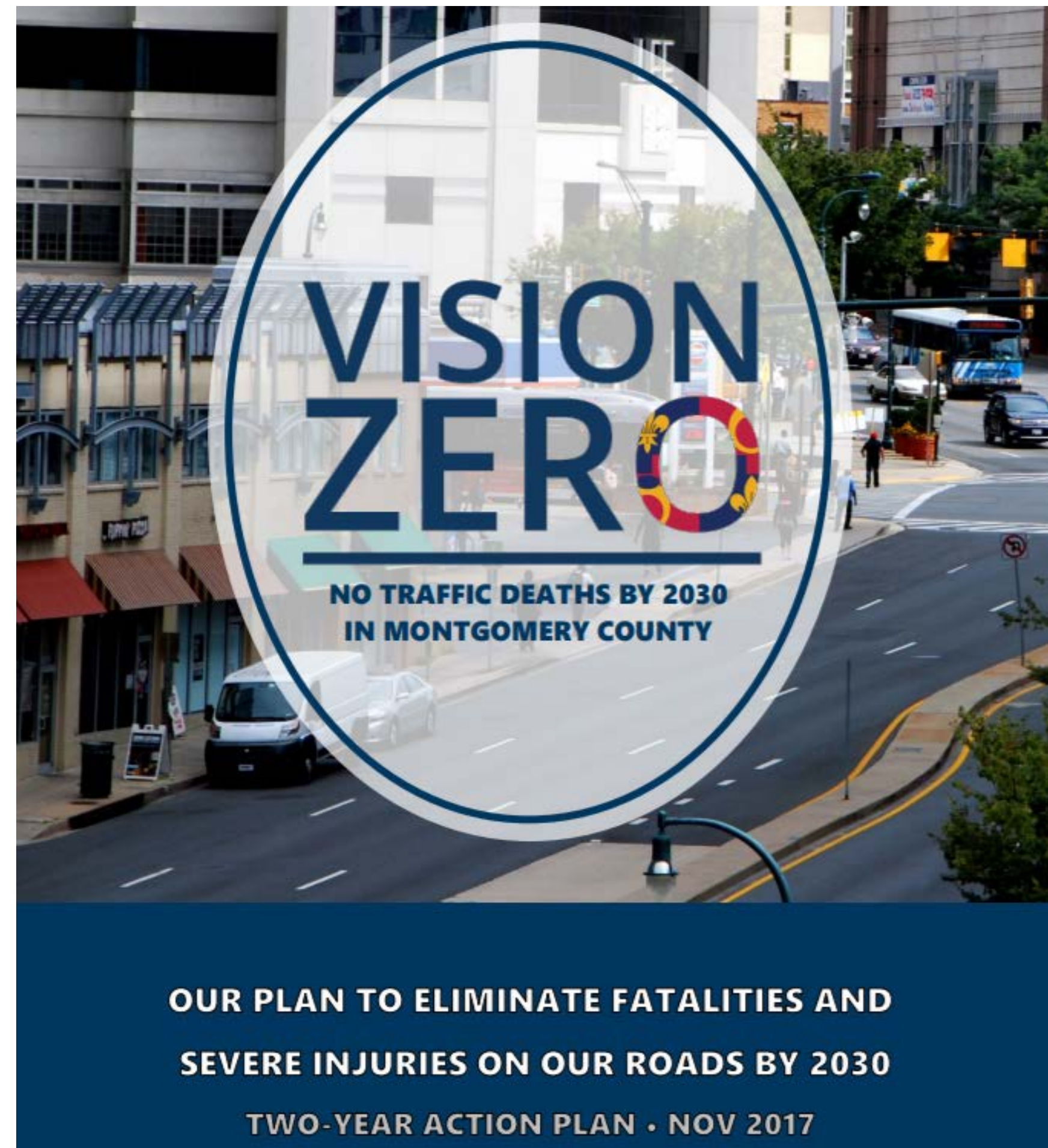


Presentation Overview

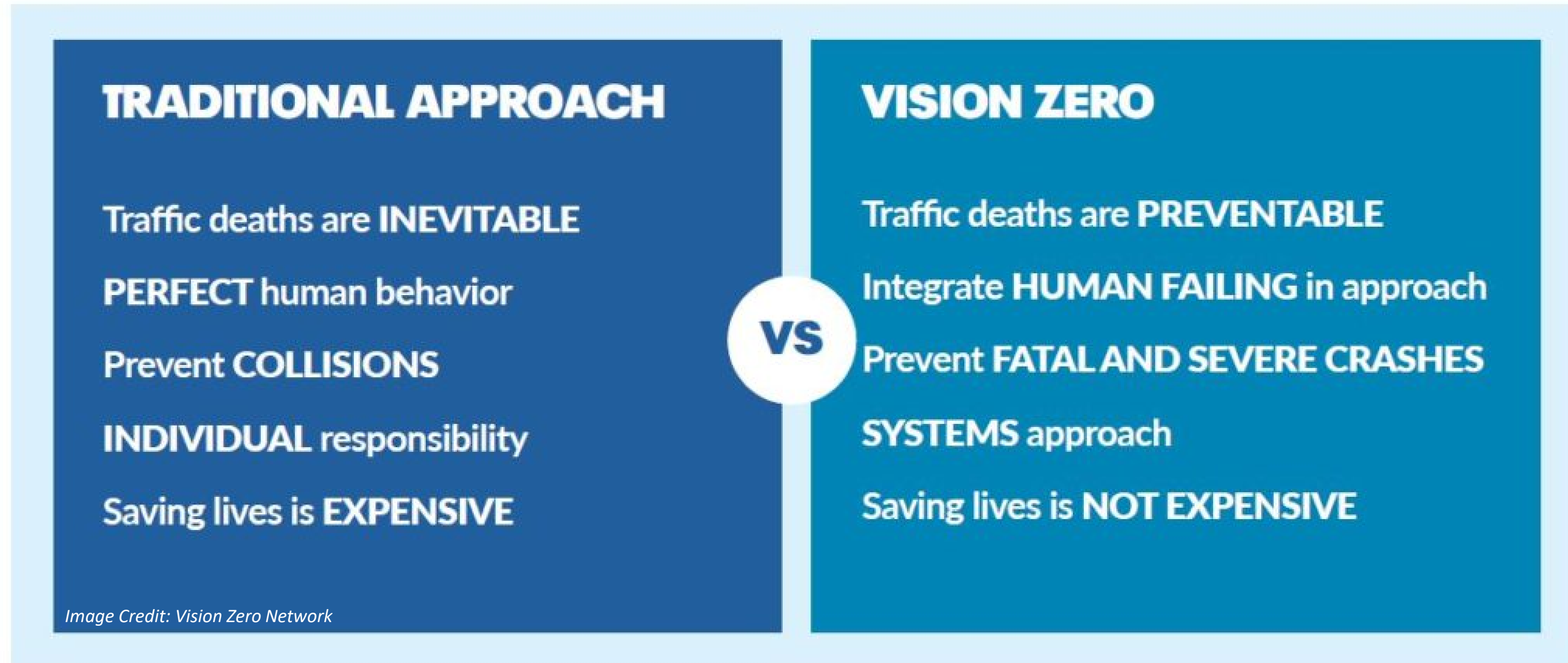
- What is Vision Zero?
- How is Safety Created?
- How Master Plans Can Help Us Reach Vision Zero
- Aspen Hill Vision Zero Study

What is Vision Zero?

- An international effort to achieve ZERO deaths and serious injuries on our roadways due to traffic crashes
- In the United States, it is a response to the approximately 40,000 traffic fatalities annually



What is Vision Zero?



Decreasing Crash Frequency

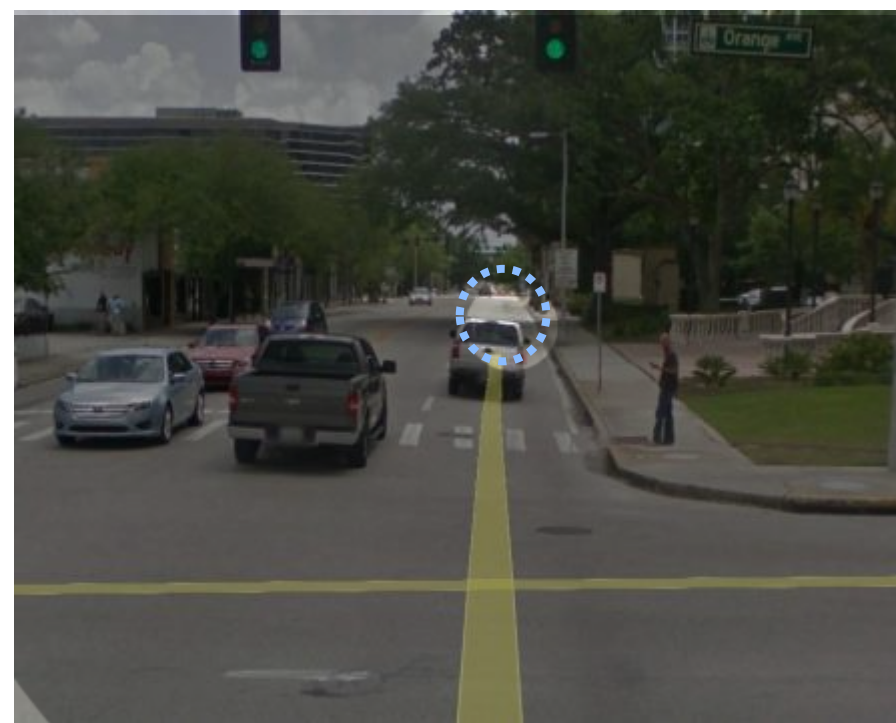
- Reduce conflicts
 - Designate space for different users
 - Provide predictability where users interact



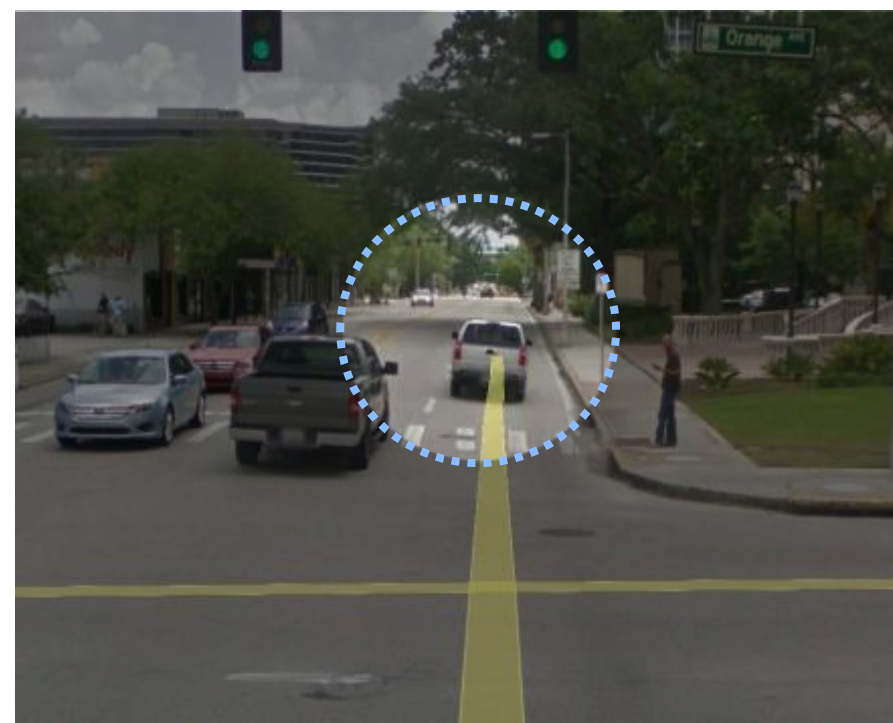
Decreasing Crash Frequency

- Increase the ability to yield

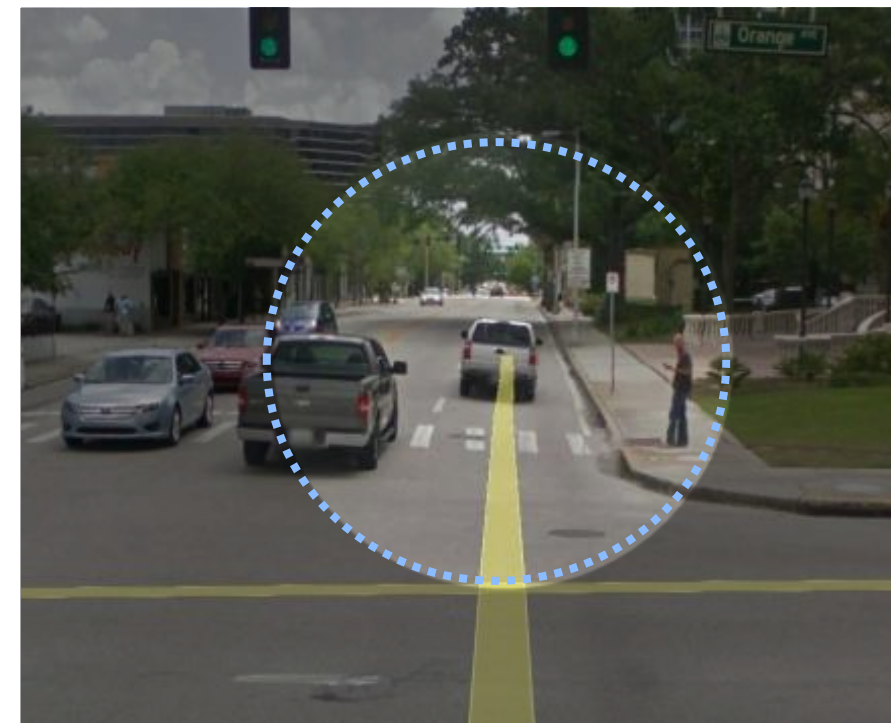
Driver Field of Vision at Various Speeds



40 MPH



30 MPH



20 MPH



15 MPH

Image Credit: Kittelson & Associates, Inc.

Decreasing Crash Severity

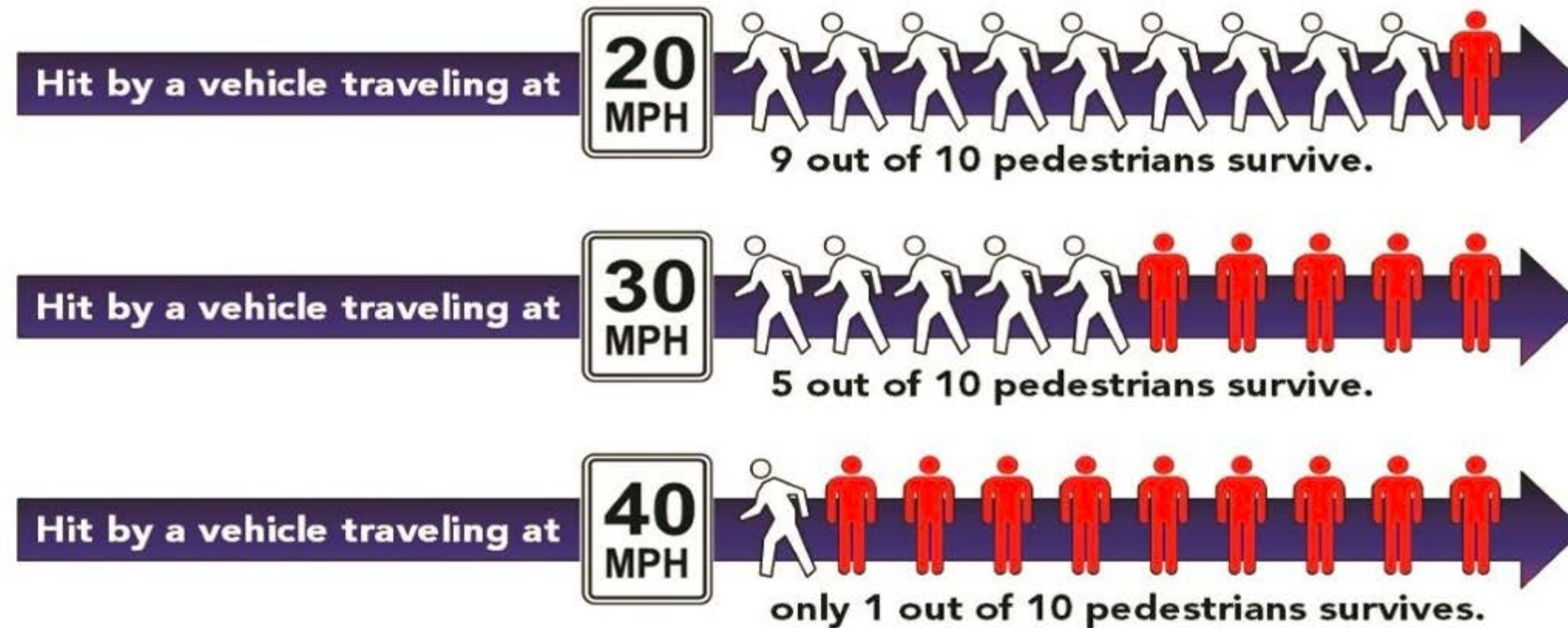
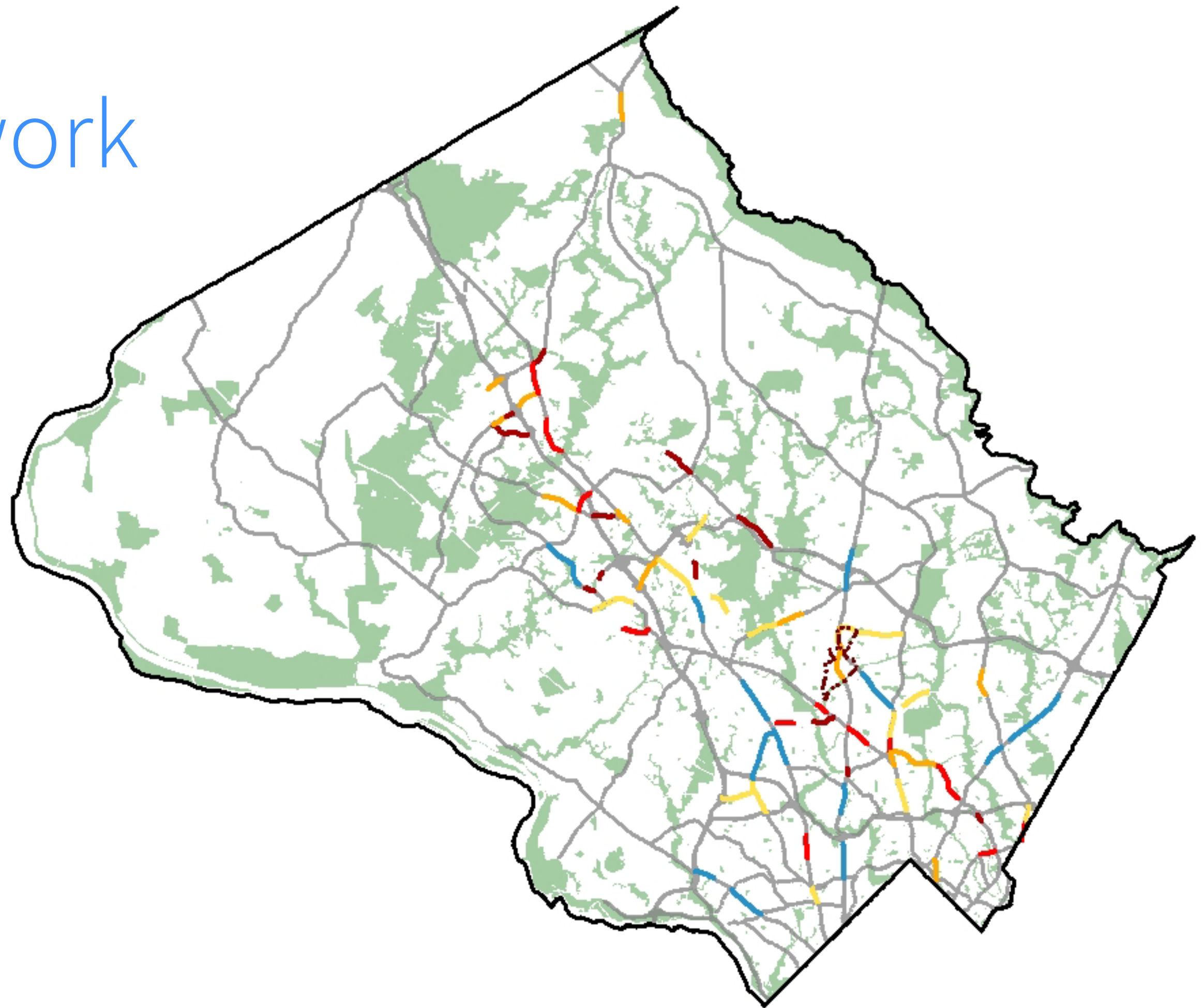
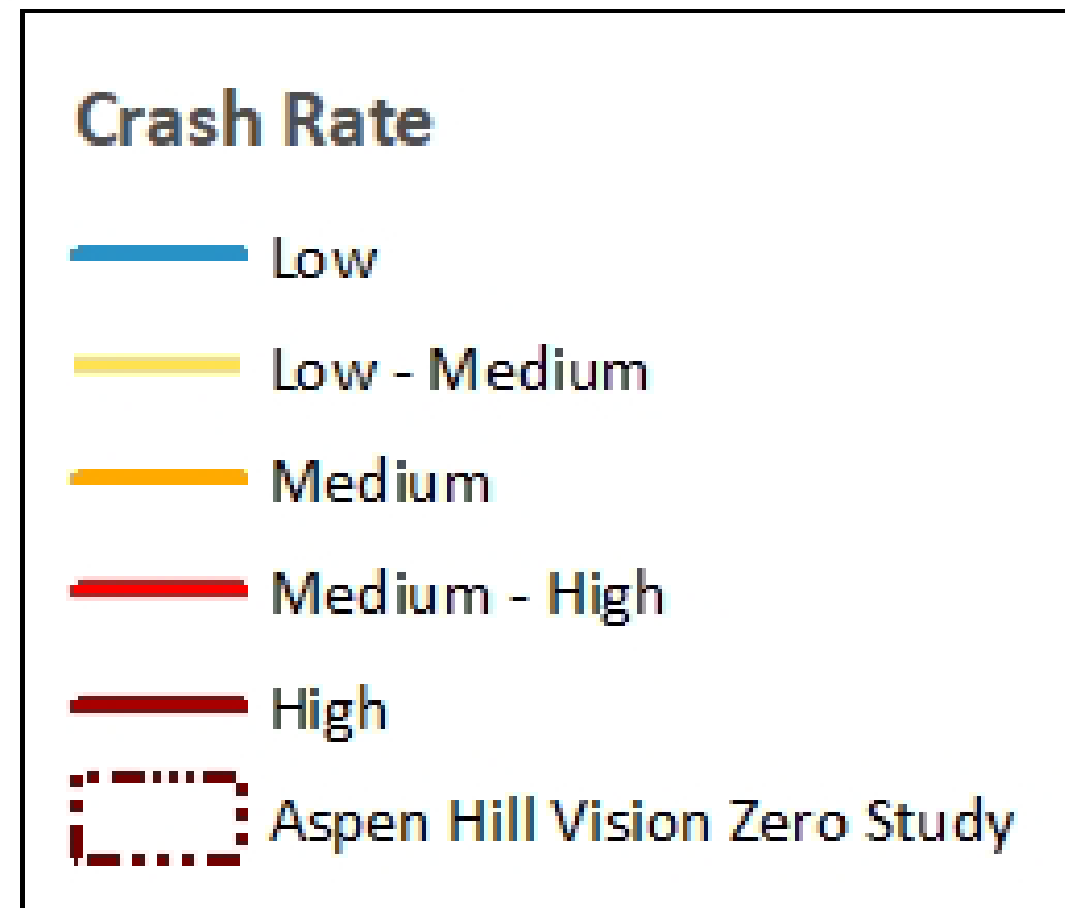


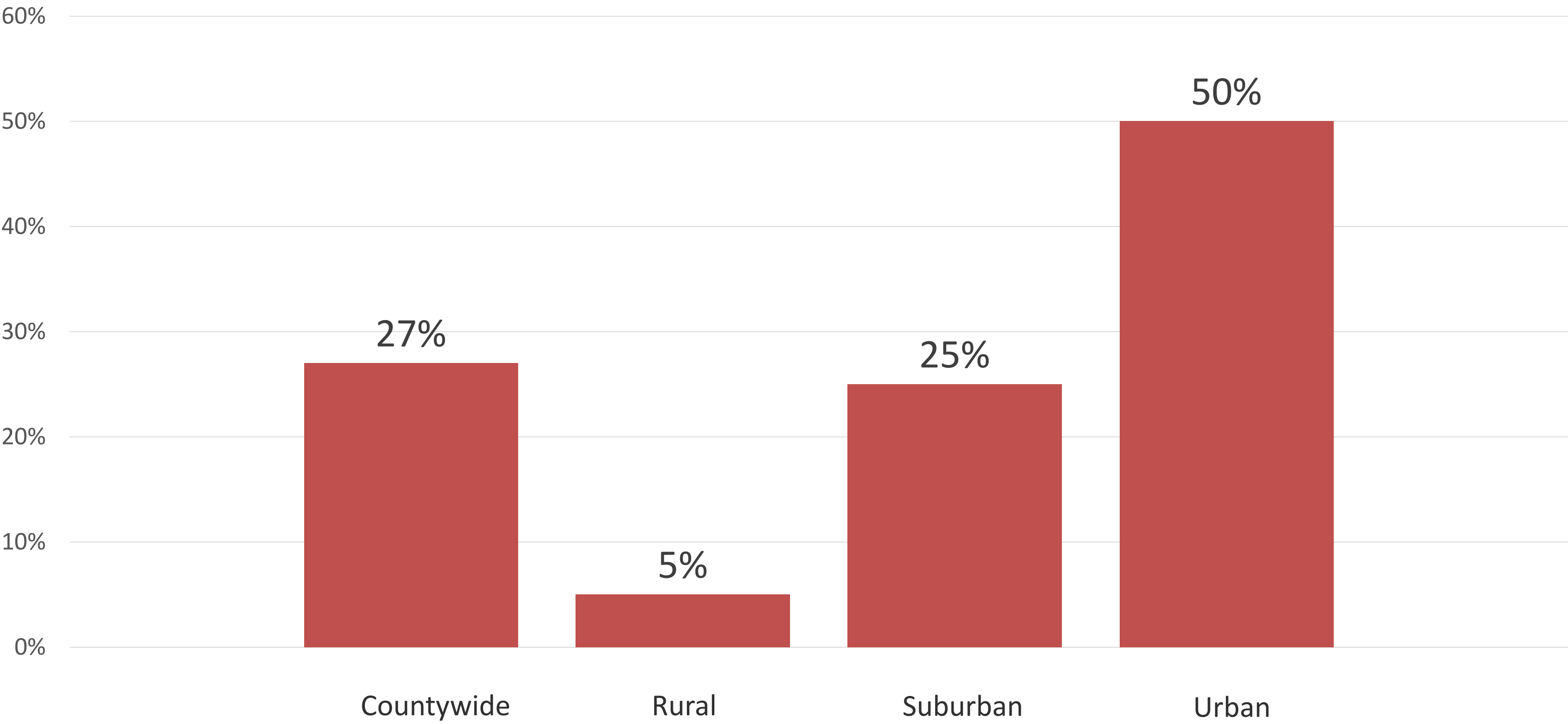
Image Credit: World Resources Institute

High Injury Network



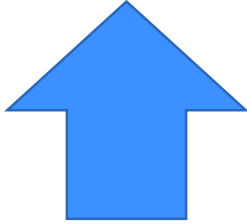
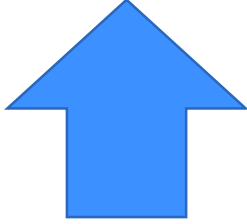

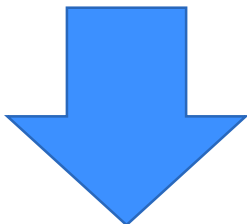
Source: Montgomery County Vision Zero Action Plan

Percent of Severe/Fatal Crashes that are Pedestrians/Bicyclists



Source: County Stat, Montgomery County Planning

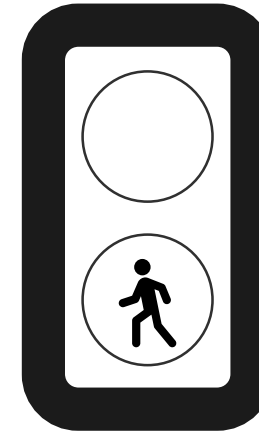
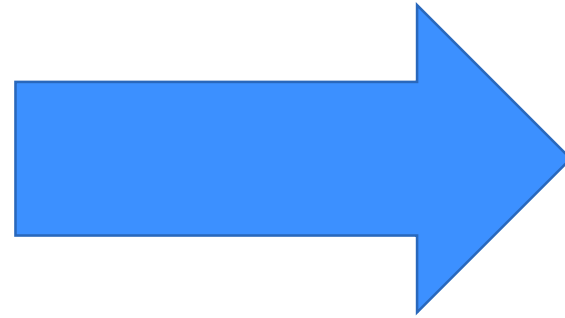
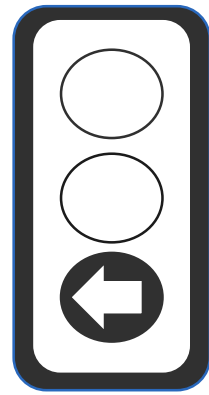
Greater Crash Density in neighborhoods with:

Higher 	Percentage of house holds that speak English less than very well
Higher 	Percentage of population that is Hispanic/Latino
Higher 	Percentage of households below the poverty level
Lower 	Median Age

Source: Montgomery County 2-Year Action Plan

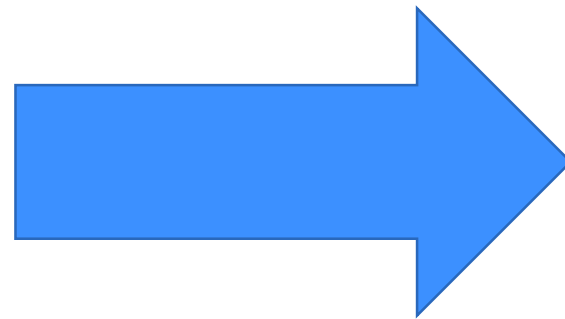
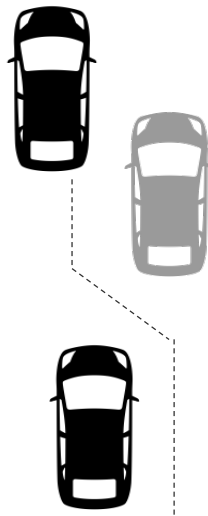
Profile-Countermeasure Pairings

Left turn conflicts
at signals



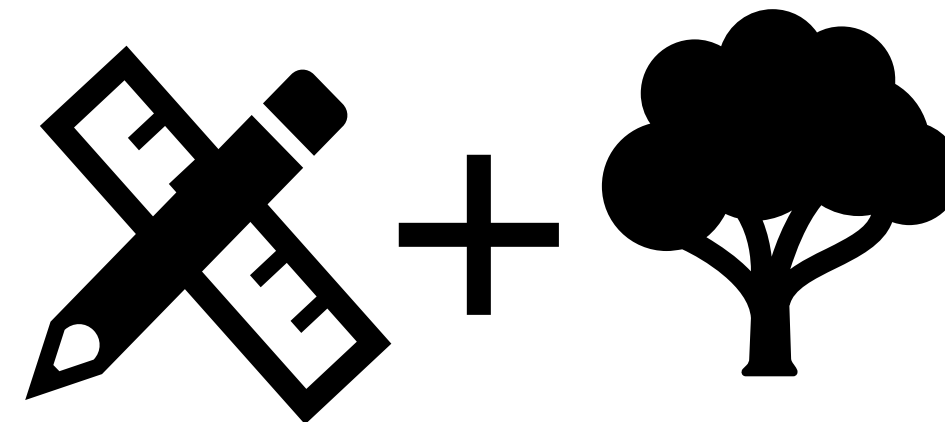
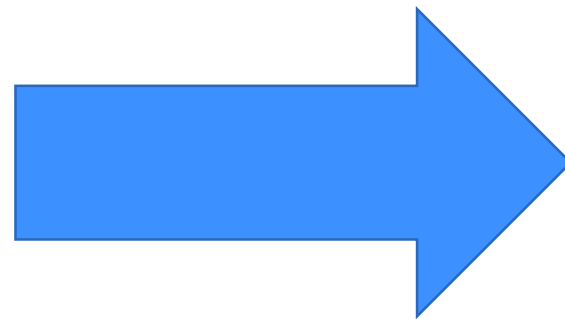
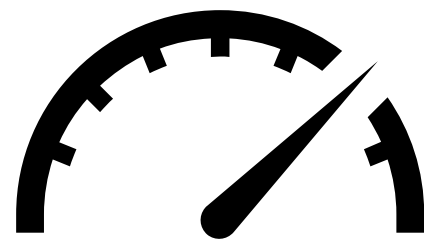
Leading
pedestrian interval

Weaving in and
out of traffic



Street redesign

Excessive
Speeding



Street redesign
and streetscape
improvements



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.

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.

Tool Kit – Mini Case Studies, Data, Regulations, and National Best Practices



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

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

Questions | Comments | Connect

Website: montgomeryplanning.org/visionzero

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VISIONZERO



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 ¹
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 ²	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

¹ Assuming one-foot clearance on both of vehicle

² 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)