



National Transportation Safety Board

Improving traffic safety for vulnerable road users: recent and ongoing NTSB activities and products

Leah Walton

Montgomery County PBTSAC Meeting

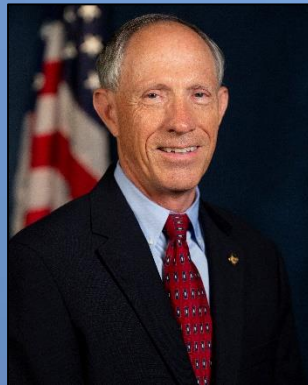
September 17, 2018

Governance

- Independent Federal agency
- Reports directly to Congress
- **No regulatory authority**
- Composed of five Board Members
- ~420 full time staff
- ~ \$110 million budget



Chairman
Robert Sumwalt



Vice Chairman
Bruce Landsberg



Member
Earl Weener



Member
Bella Dinh-Zarr



Member
Jennifer Homendy

AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE



Our Mission

The NTSB is an independent Federal agency charged by Congress with **investigating** every civil aviation accident in the United States and significant accidents in the other modes of transportation – highway, marine, railroad and pipeline – and **issuing safety recommendations** aimed at preventing future accidents.

NTSB

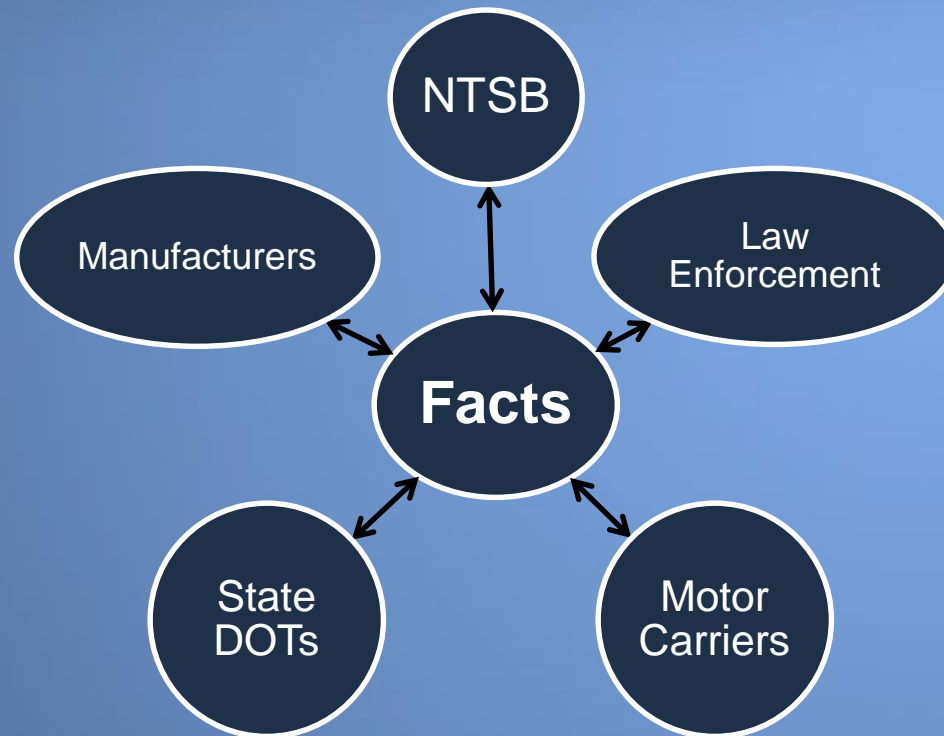


INTEGRITY
TRANSPARENCY
INDEPENDENCE
EXCELLENCE

NTSB

On-scene Highway Investigations

Party Process



- Typically on-scene
 - Within 12 to 24 hrs
 - For 7 to 10 days
- We work with:
 - Law enforcement
 - Motor carriers
 - State highway organizations
 - Vehicle and component manufacturers

NTSB and vulnerable road users

- 1970s – safety studies on pedestrians and bicyclists
- Accident investigations
- 2013 – Safety studies on single unit trucks
- 2016-2017 – Safety studies on speeding
- 2015-2017 – Pedestrian safety
- 2018-2019 – Safety studies on bicyclist safety

Pedestrian safety special investigations



2016 Public Forum

https://www.nts.gov/news/events/Pages/2016_pedestrian_FRM.aspx

Understanding
pedestrian safety

Planning safer streets
for pedestrians

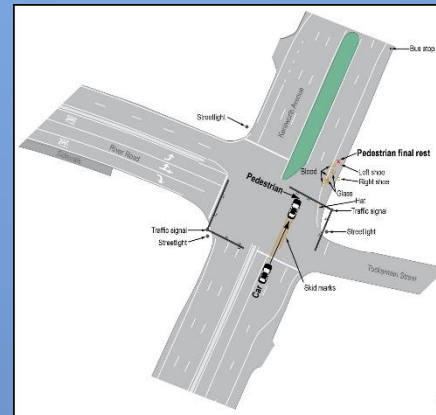
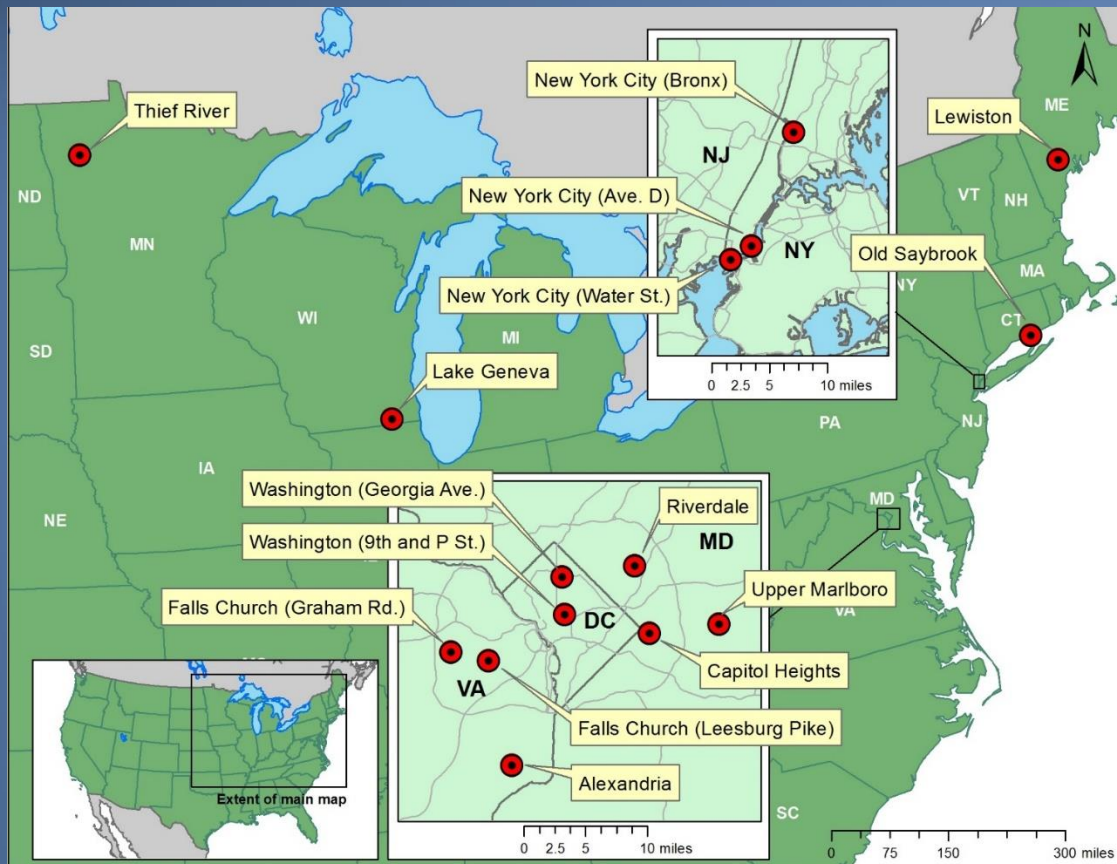
Enhancing pedestrian
safety through design
and countermeasures

Improving pedestrian
safety through vehicle
technology

15 Pedestrian Investigations

- Occurred between April 2016 – November 2016
- 2 Investigators “launched”
 - Documented crash scenes
 - Computational photography, digital processing
 - Completed data collection forms
 - Interviewed witnesses
 - Met w/ local law enforcement

Accident investigations and data analysis



NATIONAL TRANSPORTATION SAFETY BOARD
Safety Research Division
Washington, DC 20594

August 8, 2018

SUPPLEMENTAL DATA REPORT: Fatal and nonfatal crashes involving pedestrians (2007-2016)

By Ivan Cheung, PhD

1. DATA REQUEST

1.1. Objective

- This data report supplements the Pedestrian Safety Special Investigative Report by providing the following discussions: (1) 10-year trend of pedestrian fatalities and nonfatal injuries in the US (2007-2016) and (2) select characteristics of fatal pedestrian crashes with comparison to overall motor vehicle crashes focusing on FARS 2016 data.

2. DATA SOURCES AND LIMITATIONS

2.1. Fatality Analysis Reporting System (FARS)

- FARS is a census of fatal motor vehicle crashes on traffic way customarily open to the public. These crashes and must have resulted in the death of a motorist or a non-motorist within 30 days of the crash.
 - All FARS data can be downloaded directly from <http://ftp.nhtsa.dot.gov/fars/1975-2016>
 - FARS Analytical User's Manual 1975-2016 can be obtained from <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812447>

1.2. National Automotive Sampling System (NASS) General Estimate System (GES)

- Data for GES come from a nationally representative sample of police reported motor vehicle crashes of all types, from minor to fatal.
- One often cited criticism of GES is that about half the motor vehicle crashes in the country are not reported to the police. According to NHTSA, "the majority of these unreported crashes involve only minor property damage and no significant personal injury. By restricting attention to police-reported crashes, GES concentrates on those crashes of greatest concern to the highway safety community and the general public."¹
- Each week, GES data collectors visit approximately 400 police jurisdictions in 60 areas across the US that reflect the geography, roadway mileage, population, and traffic density of the country. Annually, about 50,000 police accident reports (PAR) were randomly selected. Each sampled PAR involves at least one motor vehicle traveling on a traffic way, resulting in property damage, injury, or death and the report must be complete.

¹ See <https://www.nhtsa.gov/national-automotive-sampling-system-nass-general-estimate-system>

Safety Issues focused in the Special Investigative Report

- Vehicle-based improvements
 - Vehicle headlight performance
 - Vehicle physical design
 - Collision Avoidance Technologies
- Infrastructure Improvements
 - Pedestrian Safety Action Plans
 - Expanding Local Site-Specific Planning Activities

Safety Issues focused in the Special Investigative Report

- Data design and collection
 - Pedestrian Exposure Data
 - Crash data for system development and research
 - Improved Aggregated Event Data

Other Elements of Special Investigative Report

- Short summary of each crash investigation
- Pedestrian Crash Investigation Form
- Pedestrian Safety Forum Participants
- Directions for accessing the Docket for full investigative reports

Pedestrian Safety Special Investigative Report

This companion site provides interactive access to summary information of the 15 investigations and select observations in the supplemental data report.

[Investigation summaries](#) | [Data exploration](#)

Fatal pedestrian crash locations (2007-2016)

This map is used to display all fatal pedestrian crashes (with known locations, expressed in latitude and longitude coordinates) for the 10-year period (2007-2016). There were a total of 46,678 crash locations (99% of all fatal pedestrian crash locations were included in this map).

Click the search icon (upper left corner, magnifying glass symbol) then enter a place name, such as a city (e.g. Washington DC). The map will then zoom to the area and the locations will be revealed.

The map is set to show locations by light condition categories. Click legend (upper right hand corner) to see the categories. You can click on each symbol then click the accident report link (More info) to see the NHTSA FARS crash level details.

NTSB Pedestrian Safety Special Investigation Report Process



In May 2016, the National Transportation Safety Board (NTSB) hosted a forum intended to begin a public conversation about pedestrian safety. After the forum, the NTSB began investigating a series of 15 fatal crashes in which highway vehicles killed pedestrians. In 2016, during the project design phase, the set of 15 investigative cases represented the average number of pedestrian fatalities every day. By the time the project was complete, the average had increased to 16 a day.

This special investigation report discusses the public forum and previous NTSB investigations related to pedestrian safety, including the 15 fatal pedestrian crashes, and makes recommendations to improve pedestrian safety. The report addresses vehicle-based changes, infrastructure improvements, and data needs for improving pedestrian safety. Given that the poor visibility of people walking in and around moving vehicles is a serious problem, the report considers improvements to vehicle lighting systems that are being developed but are not yet in place. The report also considers other vehicle safety systems that can improve pedestrian safety and recognizes the needs of local transportation planning work to improve pedestrian safety. Several recommendations target data needs to better guide the implementation of countermeasures and to gauge the effectiveness of programmatic efforts. The report makes recommendations to the National Highway Traffic Safety Administration, the Federal Highway Administration, and the Centers for Disease Control and Prevention.



Pedestrian Safety Special Investigative Report

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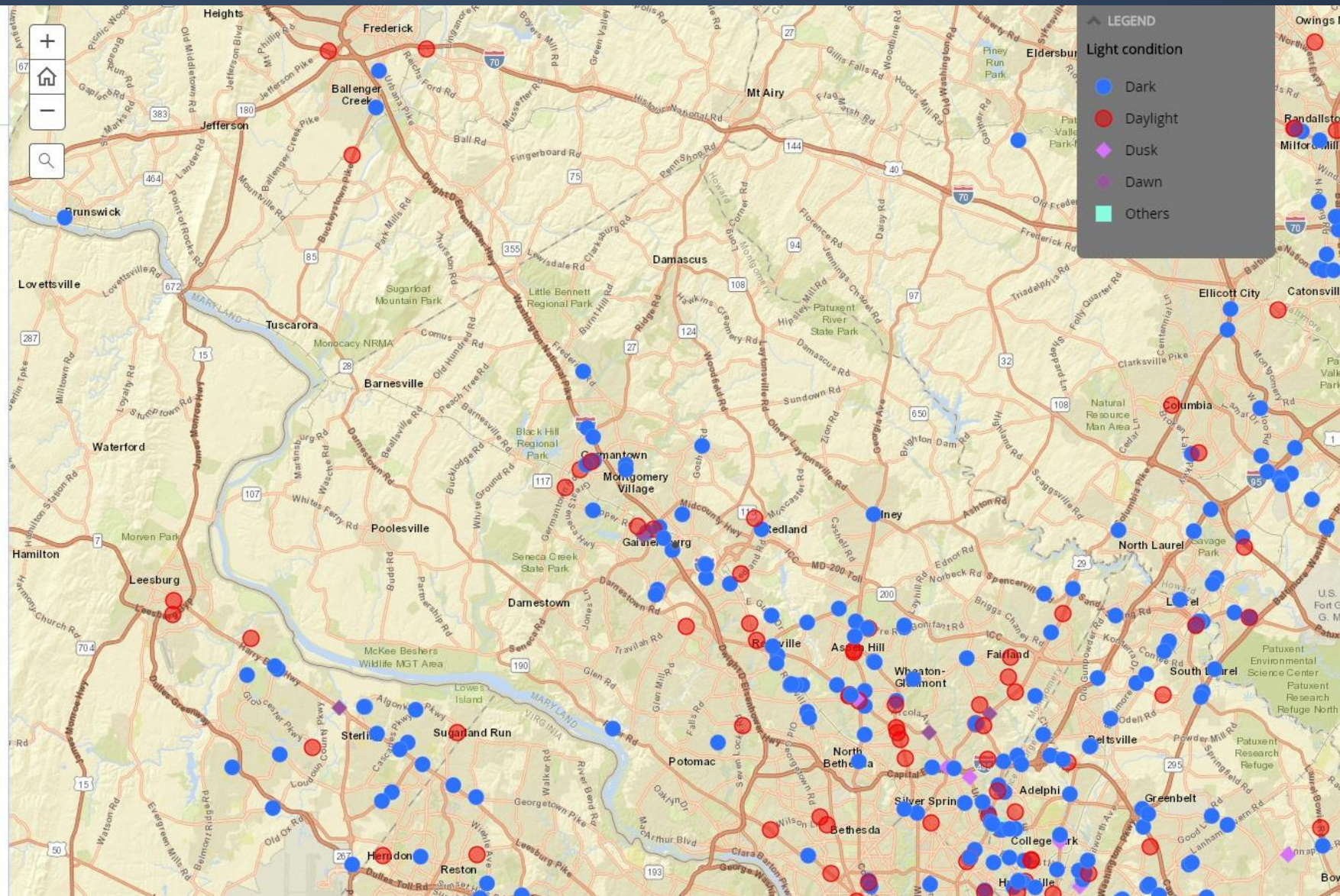
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State pedestrian fatality rates

This map shows pedestrian deaths per 100,000 persons by state in 2016 (using FARS 2016 preliminary data). Click on each state to look at year-to-year death rates (2010-2016) along with trend visualization using bar charts.

Pedestrian fatalities in large cities (2016)





Pedestrian Safety Special Investigative Report

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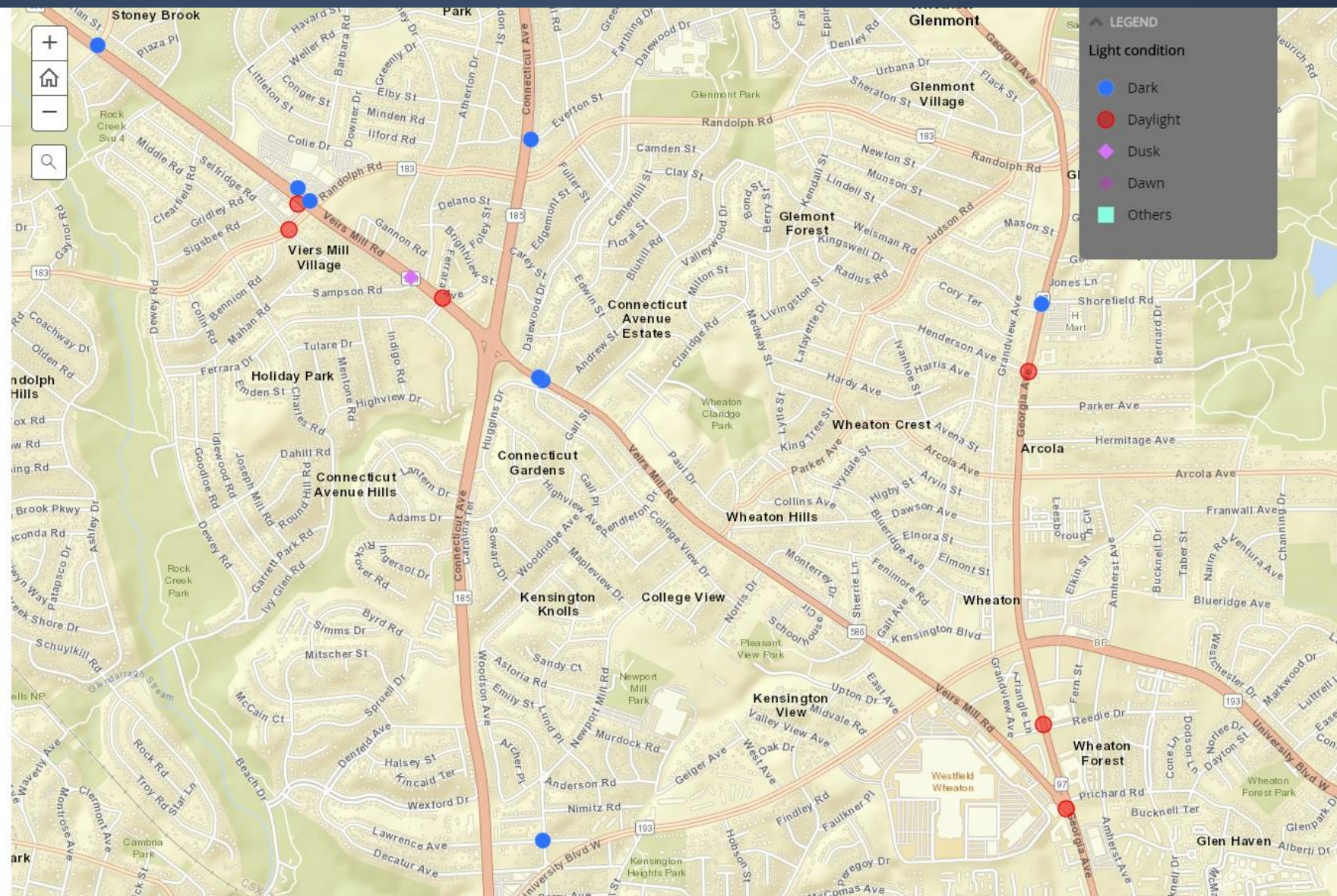
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Pedestrian Safety Special Investigative Report

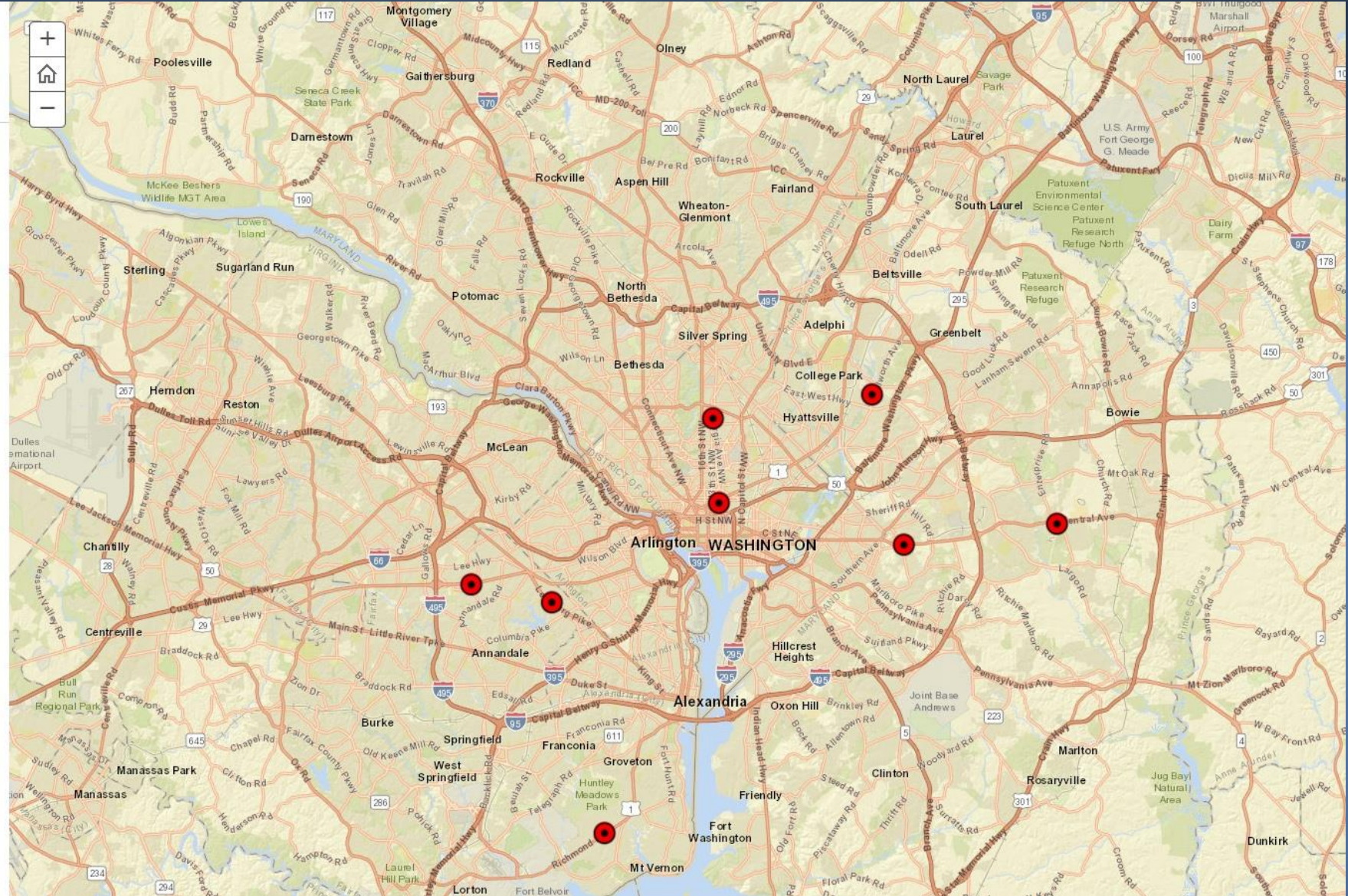
NTSB Field Investigations (2016)

The fatal pedestrian crashes investigated in support of the pedestrian safety project and this special investigation report are summarized below. They span an approximately 6-month period from April to November 2016 and are given in order of occurrence.

The cases were selected on the basis of investigative staff availability and consideration for the opportunity to identify and coordinate a timely investigative response. The set does not reflect the distribution of national pedestrian fatalities (FARS) data. Nor does it include hit-and-run crashes, although historically, as many as one in five pedestrian fatalities are caused by hit-and-run vehicles (NHTSA 2018). Hit-and-run drivers do not stop to render aid. Because the movement of the crash vehicles was of primary investigative interest, no hit-and-run crashes were among the cases selected for the project.

The NTSB determined the probable cause for each of the pedestrian crashes investigated. Local law enforcement officials were responsible for determining violations of state laws and for filing criminal charges, as appropriate. In cases involving criminal prosecution, a determination of the court's decision might not have been available at the time of the NTSB's investigation. However, information about law enforcement actions such as issuing citations or filing other criminal charges is included in the NTSB public docket if available.

Washington Metropolitan Area





Pedestrian Safety Special Investigative Report

Riverdale, MD

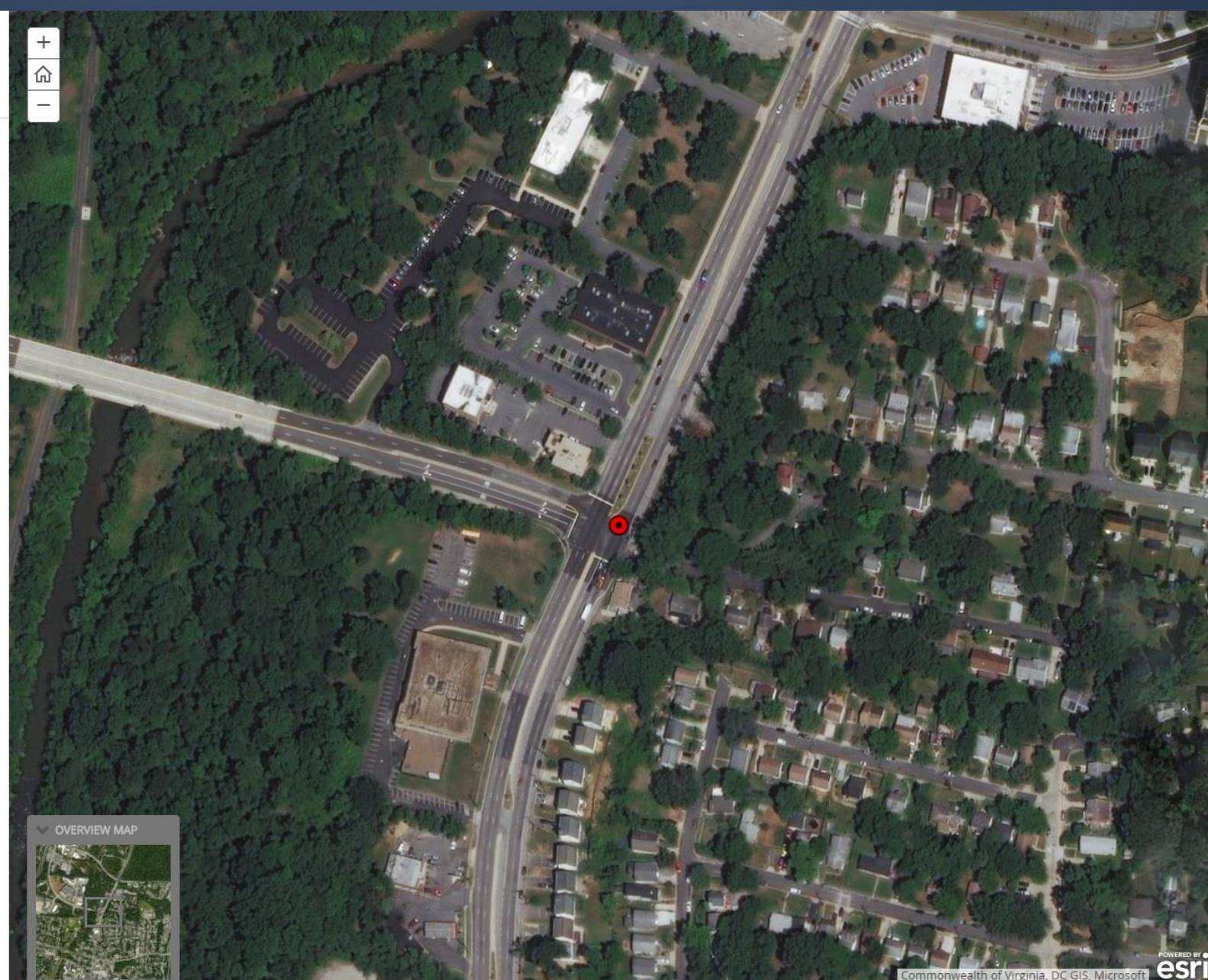
NTSB Case No. HWY16SH009

[Public Docket](#) | [Accident Brief](#) | [Google Street View](#)

Description: About 9:16 p.m. on Sunday, April 24, 2016, a 1998 Toyota Corolla four-door sedan was traveling north on Kenilworth Avenue (State Route 201) in Riverdale Park, Prince George's County, Maryland. As the 50-year-old female driver approached the intersection of Kenilworth Avenue and Tuckerman Street, the traffic signal for northbound vehicles was green. The driver observed a male pedestrian walking east in the middle of the intersection, trying to cross Kenilworth Avenue. The driver applied the brakes and attempted to steer left, away from the pedestrian, but the car struck him in the left northbound through lane of the intersection.

Because of the impact, the 55-year-old pedestrian rode up onto the vehicle's hood and collided with the passenger side of the windshield before rolling off the right side of the car. After sliding along the pavement, the pedestrian came to rest 52 feet from the point of impact. The driver stopped at the scene, then left the area to seek assistance, calling 911 at 9:21 p.m. After the driver left the scene, a Riverdale Park police officer, on routine patrol, encountered the pedestrian lying facedown on the right shoulder of the road. The officer requested medical assistance for the pedestrian. The pedestrian was transported to Prince George's Hospital Center, where he died of his injuries.

Probable cause: The NTSB determined that the probable cause of the crash was the pedestrian's decision to cross a multilane arterial highway in the middle of the intersection. Contributing to his poor decision-making was impairment from alcohol. Also contributing to the crash was the intersection design, which failed to consider pedestrian traffic.



Reducing Speeding-Related Crashes Involving Passenger Vehicles



Safety Study

NTSB/SS-17/01
PB2017-102341



**National
Transportation
Safety Board**

To the 15 states with automated speed enforcement restrictions:

Amend current laws to remove operational and location restrictions on the use of automated speed enforcement, except where such restrictions are necessary to align with best practices. (H-17-33)

Tuesday, August 15, 2017

The Honorable Larry Hogan
Governor
State of Maryland

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to provide assistance to victims and their family members affected by major transportation disasters.

On July 25, 2017, the NTSB adopted its report *Safety Study: Reducing Speeding-Related Crashes Involving Passenger Vehicles*, SS-17/01. The details of this Safety Study and the resulting safety recommendations may be found in the attached report, which can also be accessed at <http://www.nts.gov>.

Among the Safety Recommendations is one issued to the State of Maryland, which can be found on page 57 of the report.

The NTSB is vitally interested in this recommendation because it is designed to prevent accidents and save lives. We would appreciate a response within 90 days, detailing the actions you have taken or intend to take to implement this recommendation. When replying, please refer to the safety recommendation by number. We encourage you to submit your response to correspondence@nts.gov. If it exceeds 10 megabytes, including attachments, please e-mail us at the same address for instructions. Please do not submit both an electronic copy and a hard copy of the same response.



Current Status: Open, Await Response

So what does this mean for Montgomery County?

- MoCo can adopt any NTSB recommendation and implement it locally, even if the Feds or State have not moved on the recommendation
- MoCo PBTSAC can use NTSB findings and recommendations to bolster justification in resource requests
- PBTSAC can advocate for recommended legislation, or educate law makers on recommendations

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