



2021–2025

MARYLAND

STRATEGIC HIGHWAY SAFETY PLAN

DECEMBER 2020



From the Transportation Secretary

The safety of everyone using the state's transportation network is the top priority for the Maryland Department of Transportation (MDOT).

In 2019, Maryland officially enacted a law establishing our ultimate traffic safety goal as zero vehicle-related deaths and serious injuries on Maryland roadways by 2030. The legislation also called for the development of a Vision Zero program within MDOT. The development and implementation of this 2021-2025 Maryland Strategic Highway Safety Plan (SHSP) will utilize the fundamentals of Vision Zero as part of a comprehensive approach to reduce fatalities and serious injuries on roadways across the state.

This SHSP utilizes a data-driven approach to build effective strategies, create action steps and establish performance measures to help achieve these long-term goals. The "Four Es of Safety" – Engineering, Enforcement, Education and Emergency Medical Services – serve as the foundation for these strategies and action steps.

Engaging state and local agencies, along with private partnerships and key safety partners, we have developed an all-encompassing plan to address the multi-faceted issue of traffic safety. This plan exemplifies the importance of collaboration to produce positive results.

A new component to the 2021-2025 SHSP is the role autonomous vehicles will play in traffic safety. Maryland's vision for Connected and Automated Vehicles (CAV) is to uphold and enhance a safe, efficient and equitable transportation future by delivering collaborative and innovative CAV solutions. As we implement this SHSP, we will continue to work with partners interested in researching, testing and implementing CAVs in Maryland.

The Maryland SHSP Executive Council wishes to thank the Maryland Highway Safety Office and SHSP Emphasis Area Teams for their support and guidance in developing the 2021-2025 SHSP. Their work in developing extensive and proactive safety strategies will enable successful implementation during the next five years and beyond.

Safety is everyone's responsibility and MDOT is committed to working with our partners and key stakeholders to implement the projects outlined on the following pages. I am incredibly honored to present a Strategic Highway Safety Plan that will keep Maryland moving toward our goal of zero deaths.

Thank you,

Gregory Slater
Secretary, Maryland Department of Transportation

Executive Summary

Between 2015 and 2019, an annual average of 530 deaths and 3,093 serious injuries occurred on Maryland public roadways. The Maryland Department of Transportation Motor Vehicle Administration's (MDOT MVA) Highway Safety Office (MHSO), Maryland Department of Transportation State Highway Administration (MDOT SHA), and the State of Maryland recognize that these deaths and injuries are preventable. In Maryland, as in the United States, motor vehicle crashes are a leading cause of death and disability. The consequences go beyond the victim and have a significant impact on family, friends, coworkers, and employers.

To prevent these unnecessary deaths and serious injuries, Maryland leaders continue to build partnerships with government agencies, private organizations, traditional safety advocates, and nontraditional partners. Maryland has adopted a comprehensive approach to address highway safety in the State. Under the Zero Deaths Maryland umbrella, these agencies use a data-driven and interdisciplinary strategy that applies education, enforcement, engineering, and emergency medical services to prevent fatal and severe crashes. The Zero Deaths Maryland strategy incorporates principles from Vision Zero and other proven safety programs to provide a broad systems perspective that considers the interaction of the road user with the road design as a necessary component to achieve zero deaths on our roads.

ZERØ DEATHS MARYLAND

To update the current Strategic Highway Safety Plan (SHSP) for the next five years (2021-2025), the SHSP development team convened safety leaders and stakeholder groups from multiple disciplines to participate in a series of meetings and surveys. This process confirmed the final list of Emphasis Areas (EAs), developed strategies in each EA, and created an action plan to meet the new performance targets. The six EAs include: Distracted Driving, Impaired Driving, Infrastructure, Occupant Protection, Pedestrians and Bicyclists, and Speed and Aggressive Driving.

The framework in Figure 1 visually describes Maryland's strategic approach to reduce fatalities and serious injuries in the six EAs. The foundation of the SHSP is data. Data are used throughout the plan's life cycle to develop and implement strategies and to evaluate progress toward the performance targets. The four Es of transportation safety — Enforcement, Engineering, Education, and Emergency Medical Services — serve as the cornerstones of the action plan. Multidisciplinary stakeholder communities are represented on the EA teams that implement the SHSP strategies. Coordination, collaboration, and communication power the engine that drives the six EA teams. Within each EA, special focus is given to the key groups identified at the center of the figure.

Evaluation of the SHSP implementation measures progress toward performance targets to reduce fatalities and serious injuries in each of the established EAs over the next five years. The ultimate goal is zero deaths in Maryland by 2030.

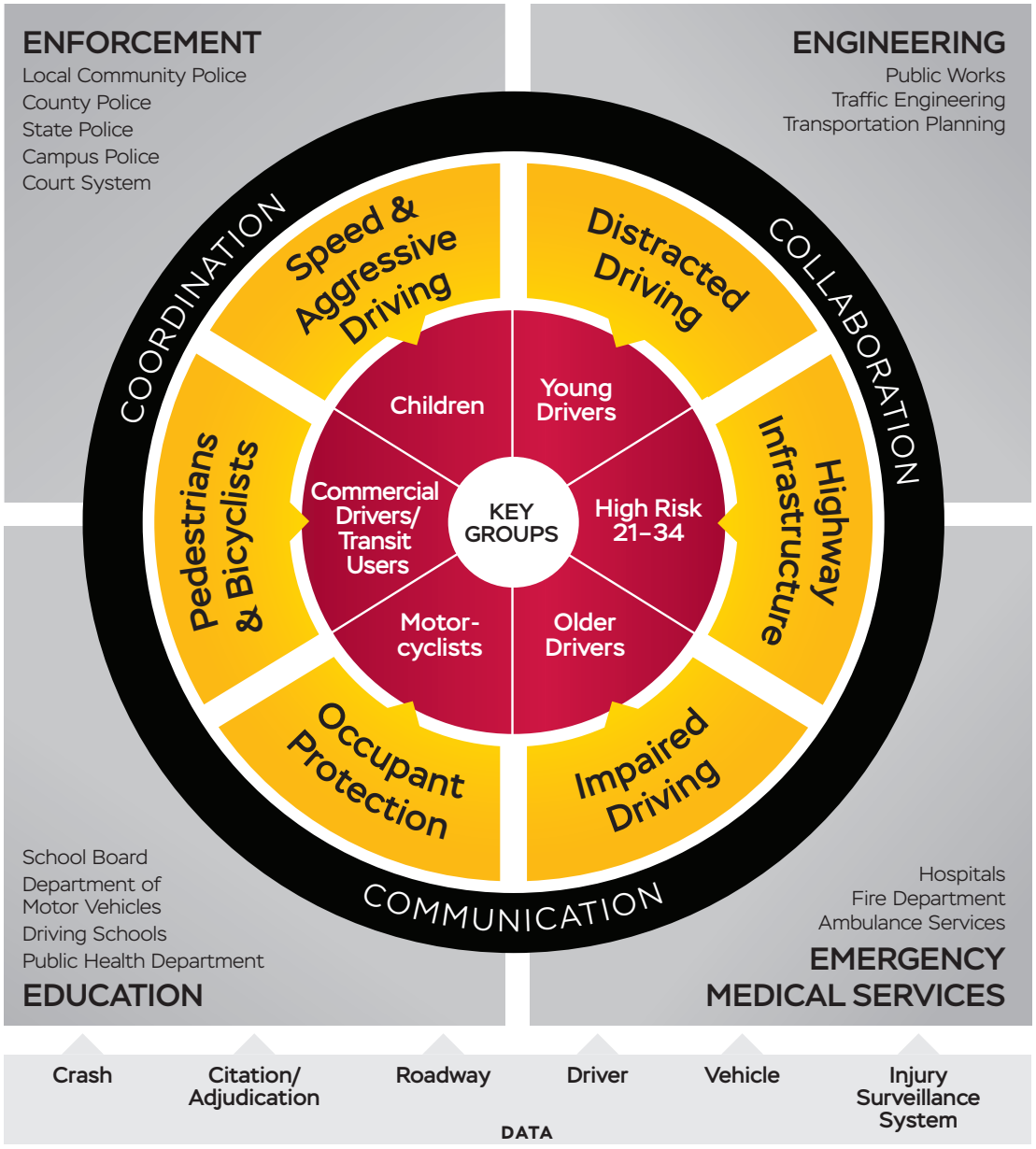

Figure 1. Maryland's Strategic Approach to Reduce Fatalities and Serious Injuries
Data is the foundation for the SHSP's development, implementation of strategies, and progress tracking. The four Es are the cornerstones of the action plan that are driven by coordination, collaboration and communication amongst the six EA teams.

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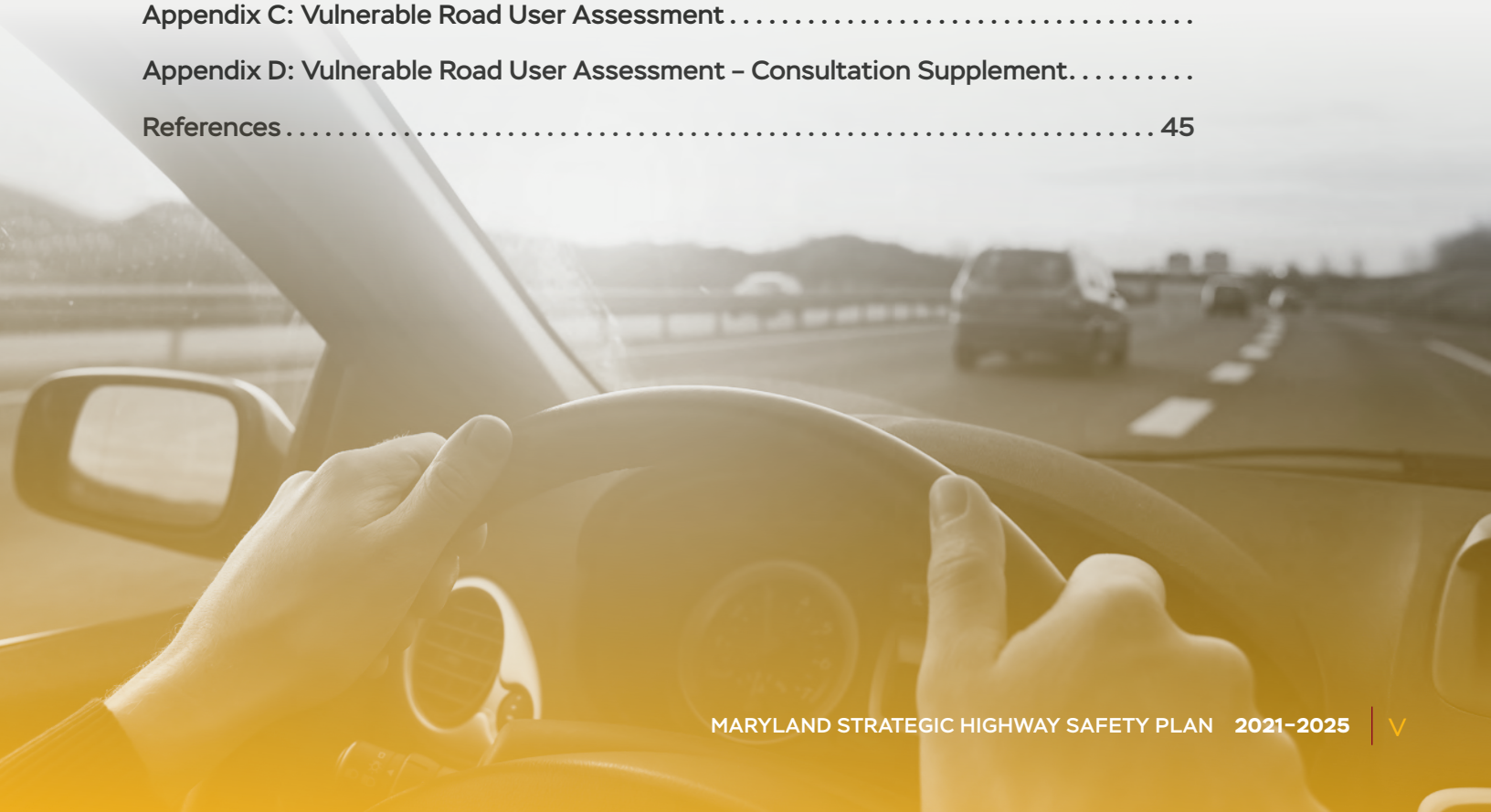


1 Background

History of the SHSP in Maryland

Since 2003, when Maryland adopted the state's first Strategic Highway Safety Plan (SHSP), the plan has been enhanced based on emerging issues, prevailing legislation, federal guidance, and outcomes. Maryland consults with the NHTSA and FHWA to update and affirm the content of each revision. As shown in the adjacent figure, Maryland has sponsored and developed five SHSPs, including the current SHSP, with each iteration built upon previous experiences and results. The SHSPs of the past provide a solid foundation upon which future plans are built and more success is accomplished. Despite recent increases, Maryland has been successful in reducing fatalities and serious injuries on our roadways.

The first Maryland SHSP, which spanned 2003-2005, was modeled after the American Association of State Highway and Transportation Official's (AASHTO) national plan and focused on the State's transportation safety problems in 23 program areas. In 2006, Maryland updated the SHSP based on the process recommended by the 2005 Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) legislation. The result was a statewide, comprehensive safety plan that provided a coordinated framework for establishing statewide goals, targets, and key Emphasis Areas (EAs) developed in consultation with federal, state, local, and private-sector safety stakeholders.

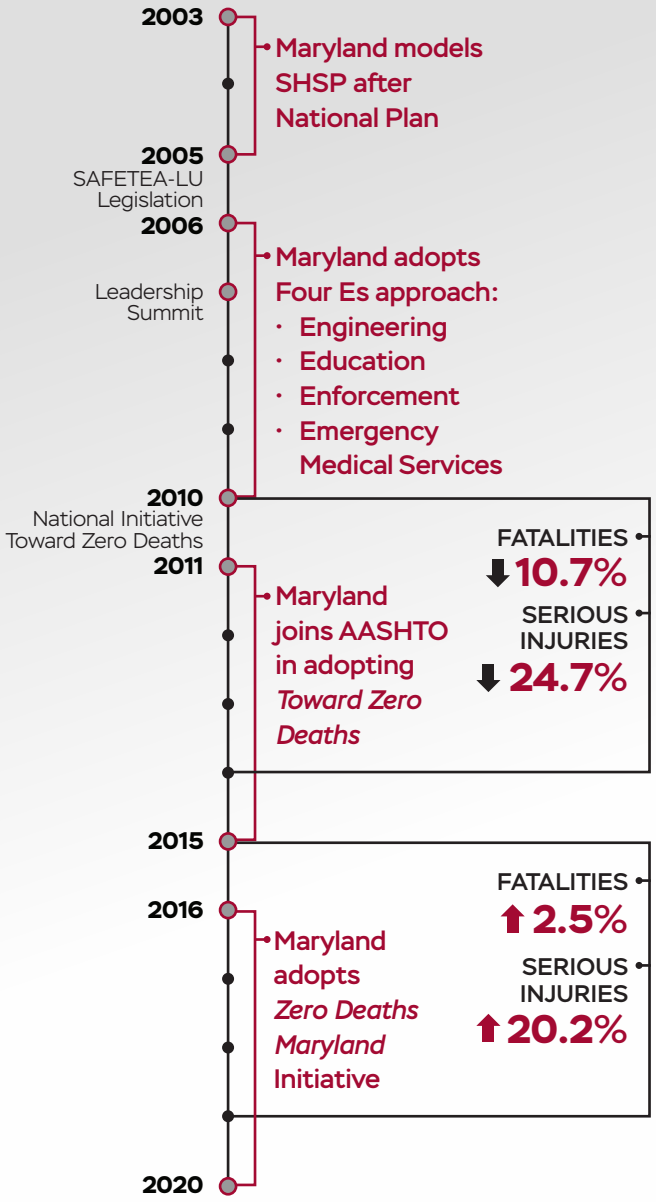


Figure 2. Maryland's SHSP Timeline Overview

In 2010, Maryland joined other states and AASHTO in adopting the Toward Zero Deaths (TZD) national vision. Through a Governor's Proclamation, Maryland's TZD campaign was adopted by the Maryland Chiefs of Police Association, the Maryland Sheriffs' Association, the Maryland EMS Board, and the Maryland Association of County Health Officers. For the 2011-2015 SHSP, Maryland set a goal of reducing motor vehicle related fatalities and injuries by one-half of the 2008 baseline by 2030, with an eventual goal to achieve zero traffic deaths. With that goal in mind, and using a data-driven approach, the 2011-2015 SHSP strategies included the following six Emphasis Areas:

- Distracted Driving
- Impaired Driving
- Infrastructure
- Occupant Protection
- Pedestrians
- Aggressive Driving

These same Emphasis Areas were adopted in the 2016-2020 SHSP with the addition of Bicyclists to the Pedestrian EA. That plan maintained the TZD approach and also took into consideration the Moving Ahead for Progress in the 21st Century Act (MAP-21) of 2012 and the Fixing America's Surface Transportation (FAST) Act of 2015. The goal of reducing motor vehicle related fatalities and injuries by one-half by 2030 remained.

2021-2025 SHSP

While the SHSP has evolved with each new plan, Maryland has always used a multi-disciplinary approach to crash prevention and severity mitigation, including strategies that address roadway design, driving behaviors, technology, and policies. The vast compendium of stakeholders who carry out this work include, but are not limited to, academic institutions and staff, agricultural professionals, engineers, first responders, government officials, law enforcement, policy makers, public health professionals, and traffic planners. Maryland believes that crashes are preventable and views zero as the only acceptable number of motor vehicle deaths.

In 2019, the Maryland legislature passed a Vision Zero bill that was later signed by Governor Hogan. The law set a goal of zero motor vehicle related fatalities or serious injuries by 2030.

Established in October of 2019, Maryland's Vision Zero law provides for an MDOT-designated coordinator to oversee the implementation of the plan, collaboration with other State agencies and local authorities, a State-funded budget, yearly reporting and strategies to achieve the established goals. Such strategies include, but are not limited to, identifying state and local laws, policies and regulations that hinder the development and implementation of Vision Zero; proposing changes to state and local laws to allow for innovative engineering and traffic calming, data collection, safety program effectiveness and development of best practices; proactively engaging community members; developing a long-term plan; prioritizing resources; and investing more resources into construction needs for high-crash intersections and roadways.

Because traffic crashes are predictable and preventable events, any fatality or severe injury on the roads is unacceptable. This is the Zero Deaths Maryland philosophy and is aligned with the Zero Deaths Vision adopted by the U.S. Federal Highway Administration. Like the Toward Zero Deaths approach in previous Maryland Strategic Highway Safety Plans, Zero Deaths Maryland uses a data-driven and interdisciplinary strategy that applies education, enforcement, engineering and emergency medical services strategies to prevent fatal and severe crashes. The Zero Deaths Maryland strategy emphasizes a broad systems perspective that considers the interaction of the road user with the roadway infrastructure as a necessary component to achieve zero deaths.

Using a data-driven approach, this 2021-2025 MD SHSP builds on the experience, efforts, and successes from previous SHSPs. The six Emphasis Areas identified in the 2011-2015 and 2016-2020 SHSPs remain. Interim performance targets are set to mark the progress Maryland makes as we strive for zero fatalities.

The annual performance targets for each of the SHSP's Emphasis Areas are set using an exponential trend line. Historic data starting with 2005-2009 were used to determine these targets. Moving five-year averages are used to calculate projections, and the targets for each individual year are taken from the midpoint of the five-year average (e.g., 2022 annual interim target = midpoint of the 2020-2024 average). The same methodology was used for serious injury targets. Finally, this same method was applied to the five performance measures required by the FHWA: fatalities, fatality rate, serious injuries, serious injury rate, and non-motorized fatalities and serious injuries.

All traffic safety documents in the state of Maryland conform to this methodology, including the SHSP, the MDOT's Transportation Plan (MTP) [1], the MHSO's Highway Safety Plan (HSP) [2], the MDOT SHA's Highway Safety Improvement Plan (HSIP) [3], MDOT SHA's Commercial Vehicle Safety Plan (CVSP) [4], and the Traffic Records Coordinating Committee's (TRCC) [5] Traffic Records Strategic Plan (TRSP) [6]. Additionally, all planning documents developed by the MHSO staff and all State-level reporting to the Governor use the SHSP Emphasis Area fatality and serious injury target-setting methodology.

Crash data reported by MHSO are derived from MDOT SHA, which maintains a database derived from reports submitted to, processed, and approved by the Maryland State Police official crash reporting system. Data are regularly updated and subject to change.

Development of the 2021-2025 SHSP

In early 2020, Maryland contracted the Crash Center for Research and Education (Crash Core) to lead the 2021-2025 SHSP development effort. Crash Core is a Maryland-based, non-profit research organization dedicated to transportation safety. To begin, the development team conducted one-on-one interviews with key traffic safety partners across Maryland. Safety partners included leaders from government agencies, education and outreach professionals, local law enforcement, and emergency services agencies. During the interviews, the team solicited insight into the status of traffic safety initiatives and current and future safety priorities for Maryland roadways. Questions focused on several topics including traffic safety needs in engineering, education, enforcement, and emergency medical services (the four Es of transportation safety); the utility of the current SHSP in the stakeholder's activities; the level of involvement in the ongoing Emphasis Area team meetings and activities; and their view of what should be included in the 2021-2025 SHSP.

Additionally, the development team conducted interviews with each Emphasis Area (EA) team chairperson. These interviews covered the chairperson's personal experience with the EA team — such as operations of the EA team, opinion about the progress and feasibility of existing action steps, potential need for additional resources, and EA evaluation and progress tracking.

The information gleaned from all the interviews aided in the development of an online survey that was distributed to a broader group of safety partners. Information gathered from this safety partner survey helped refine goals, solicit new/updated action steps, identify emerging issues, and examine the progress of each SHSP Emphasis Area.

After collecting information from the safety partner survey, the SHSP development team met with each EA team to present the plan for the development of the 2021-2025 MD SHSP, providing another opportunity to solicit the

group's priorities. The conversation focused on the EA team's vision for the updated SHSP, related goals, emerging traffic safety issues, measuring SHSP progress, and thoughts about how to maintain the relevance of the action plan throughout the 2021-2025 term.

The development team planned a safety partner workshop to further discuss and obtain consensus on strategies and action plans for the 2021-2025 SHSP in late March 2020. The onset of the COVID-19 pandemic – and restrictions placed on Maryland residents by the Governor – resulted in virtual workshops to replace the in-person workshop. A virtual workshop was held for each EA and was attended by the EA team members and representatives from a variety of stakeholder groups including State and local government agencies, non-governmental organizations, private businesses and advocates, and law enforcement, among others.

After the workshops, a second online survey was distributed to attendees to obtain feedback on the proposed Emphasis Area strategies and action steps developed through the previously described interviews, survey and workshops. This feedback survey solicited opinions about priorities within the action plan, performance measure development and potential agencies that could spearhead or collaborate to carry out the EA action plans. Several more virtual meetings with the EA teams refined the strategies and action plans that would later be presented for approval.

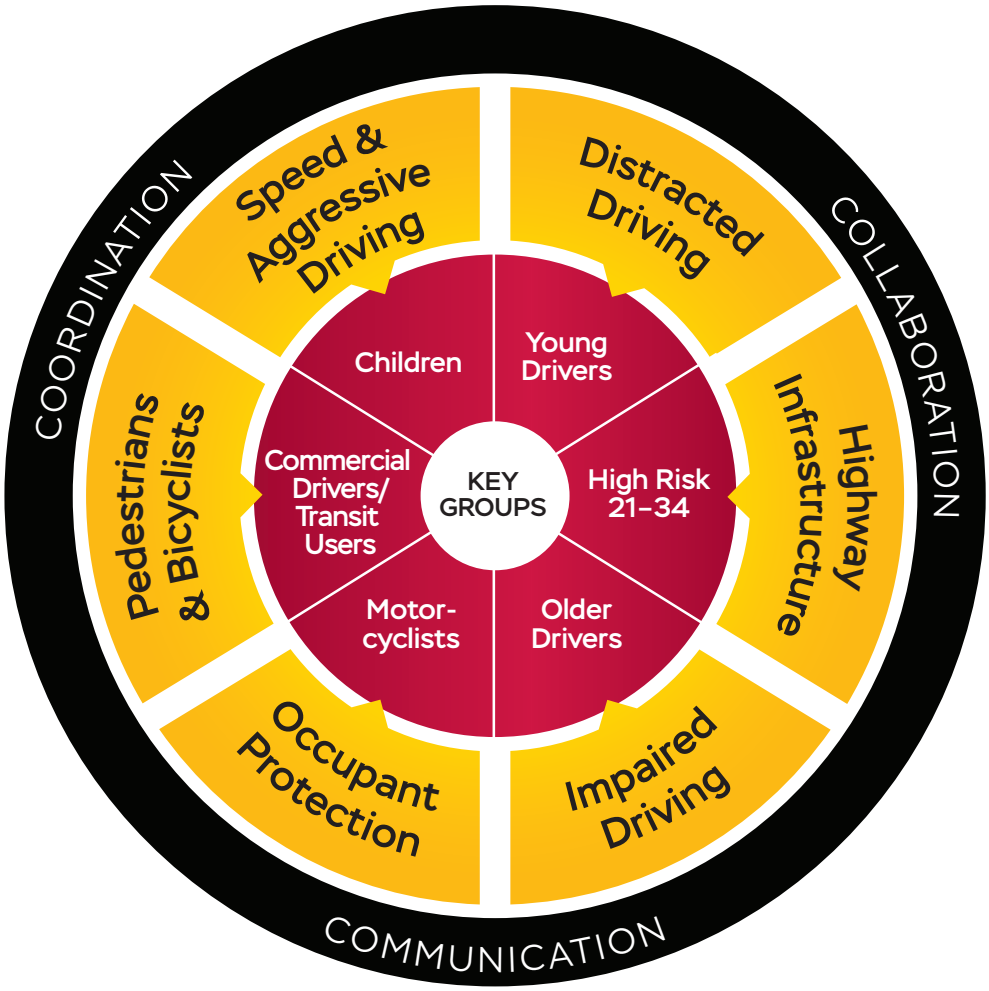


Figure 3. Maryland's Emphasis Areas and Key Groups

The SHSP strategy and action plan development culminated with the delivery of findings from interviews, meetings, and workshops to the SHSP's Steering Committee (MHSO management) for feedback and approval for use in the 2021-2025 SHSP. Subsequently, the Executive Council, Steering Committee, and EA Team Chairpersons met to review the proposed strategies and action steps.

The 2021-2025 SHSP encompasses the essence of the previous plan and further incorporates systemic enhancements, innovation and implementation that is data-driven. The result is an evidence-based approach that culminated in the confirmation of the plan's six EAs and six key groups, as illustrated in Figure 3.

Connections to Other Maryland Safety Plans

Specific goals and targeting methodologies of other Maryland agency plans align with the efforts of Maryland's SHSP. Those plans include the Highway Safety Improvement Program (HSIP), Commercial Vehicle Safety Plan (CVSP), Highway Safety Plan (HSP), and the safety components of the Statewide Transportation Improvement Program (STIP) and Maryland Transportation Authority's (MDTA) Strategic Plan for Connected and Automated Vehicles. Integrating the SHSP into statewide and metropolitan long range transportation plans (LRTPs), STIPs, HSIPs, CVSPs, HSPs, etc. advances the State's safety agenda as they incorporate statewide priorities and goals of reducing fatalities, fatality rates, serious injuries and serious injury rates [7].

Additionally, the MDOT MVA addresses motorcycle safety, older and medically at-risk drivers, and young drivers through data evaluation, internal review, enhancement of processes and outreach. Specific action steps related to enforcement, education, roadway infrastructure, public information and program administration for motorcycles, older drivers, and younger drivers will be addressed by action steps across the EA teams as the data indicates.

Other plans, including Maryland local jurisdiction plans and Metropolitan Transportation Plans, have been developed in coordination with the SHSP. While the MHSO urges Maryland jurisdictions to develop a local SHSP that takes on the principles and overall goals of the Maryland SHSP, local jurisdictions are encouraged to develop a plan suited to their specific concerns. As of 2020, six Maryland counties have incorporated an SHSP, seven more counties are in development, and several cities and counties are creating Vision Zero plans. These and other state and local transportation planning documents are valuable complements to the implementation and success of Maryland's SHSP.

Maryland Crash Trends and Traffic Records

2.1 Crash Trends

From 2015 to 2019, 2,647 people were killed in motor vehicle related crashes in Maryland (529 per year), and another 15,467 people were seriously injured (3,093 per year). During this period, on average, 1.5 people were killed and 8.5 were seriously injured every day. A crash was reported every 5 minutes. Since 2015, traffic deaths and serious injuries have increased (see table below). These increases follow declines in fatalities and serious injuries from 2009 through 2014.

Economic, social and demographic factors will affect how much time people drive on the roads and are at risk of crashing. To compare annual trends in fatalities, it is important to adjust for these changes in vehicle miles traveled. In Maryland, vehicle miles traveled (VMT) increased from 57.3 billion miles in 2015 to 60.1 billion miles in 2019. Adjusting for VMT, the fatality rate per 100 million VMT decreased from 0.91 in 2015 to 0.89 in 2019. The fatality rate per VMT continues to be lower than the national fatality rate as it has every year since 1992.

In 2020 vehicle miles traveled declined dramatically. On March 5, 2020, Governor Hogan declared a state of emergency in Maryland due to the coronavirus outbreak. Soon after, the governor issued a stay-at-home order for all nonessential

ONE WEEK IN MARYLAND

10	60	2,229
FATALITIES	SERIOUS INJURIES	POLICE-REPORTED CRASHES

Statewide Fatalities and Serious Injuries

	2015	2016	2017	2018	2019	FIVE-YEAR AVERAGE	% CHANGE FROM 2015 TO 2019
Fatalities	521	522	558	512	535	529.4	2.5%
Serious Injuries	2,598	3,167	3,347	3,233	3,122	3,093.4	20.2%

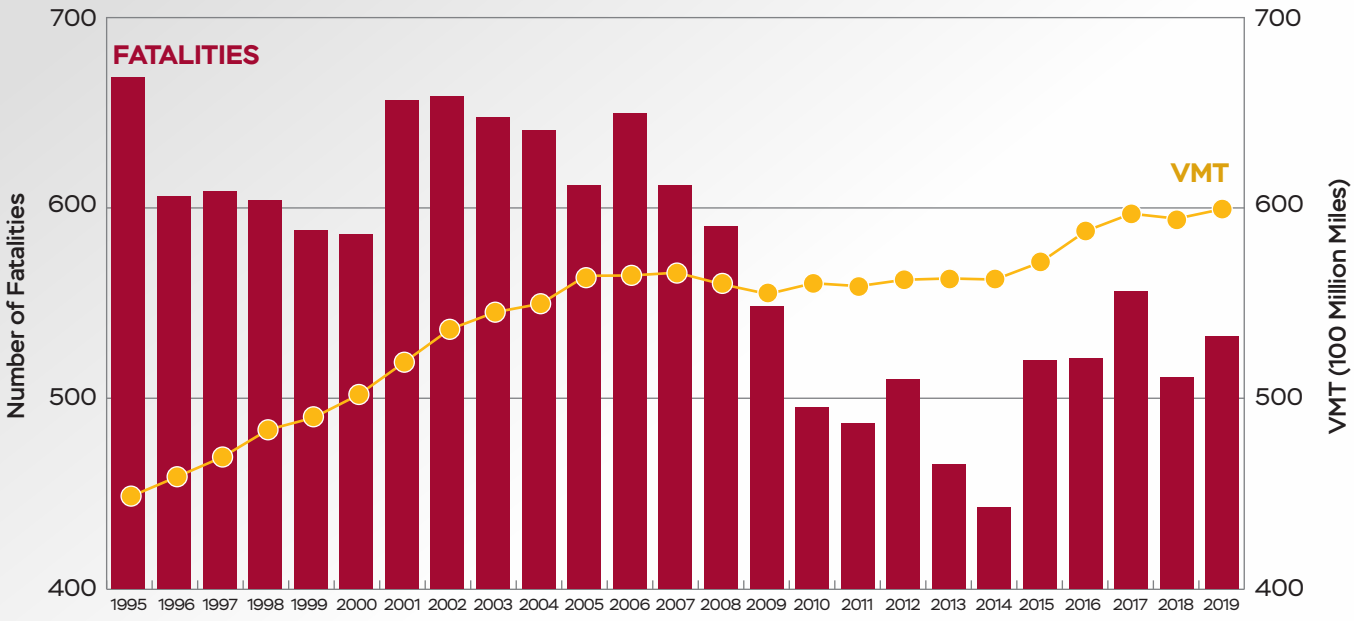
*Source: Maryland Highway Safety Office Benchmark Report

Fatality Rate, Vehicle Miles Traveled, Maryland and National

YEAR	VMT (100 MILLION MILES)	FATALITIES*	FATALITY RATE* (FATALITIES PER 100M VMT)	NATIONAL FATALITY RATE**
2015	573.14	521	0.91	1.15
2016	589.74	522	0.89	1.19
2017	598.92	558	0.93	1.17
2018	596.29	512	0.86	1.13
2019	601.36	535	0.89	1.10

*Source: SHA-SID/eMAARS and ACRS
**Source: NHTSA, Fatality Analysis Reporting (FARS)

Maryland VMT and Traffic Fatality Trends for State and Local Roadways



professions. As a result, there was an immediate and unprecedented decline in traffic volume on Maryland roadways. Early 2020 crash data show a corresponding decline in the number of crashes, but not a corresponding change in the number of fatalities. It is hypothesized that increased speeds and impaired driving have increased crash severity and resulting fatalities. The MHSO is monitoring crash and fatality trends as Maryland enters the different phases of the pandemic recovery.

2.2 Maryland Traffic Records and Information Systems

While working within the data system described in Figure 1, and while using data-driven strategies across all stakeholder agencies, Maryland strives to achieve zero traffic-related fatalities. The Maryland Traffic Records Coordinating Committee (TRCC) supports the data needs of the SHSP and Zero Deaths Maryland. Established in 2007, the TRCC coordinates the traffic records system in Maryland, which includes the following six components:

- Police crash report data
- Roadway information
- Citation and adjudication data
- Driver licensing data
- Vehicle registration data
- Injury surveillance data

The TRCC measures successful coordination through the following six data quality metrics:

- **ACCESSIBILITY:** how easy it is to retrieve and manipulate data in a system component, in particular by the entities that do not own the data system
- **ACCURACY:** how reliable the data are (e.g. how many mistakes do they have), and if the data accurately represent an event
- **COMPLETENESS:** how many variables or data components related to a particular event are available, or what percentage of events are included in the data (e.g. unreported crashes)
- **INTEGRATION:** how well various data systems (e.g., roadway inventory, driver licensing, EMS, etc.) are connected or linked to each other or how easily they can be linked to one another
- **TIMELINESS:** how quickly an event is added to a data system component
- **UNIFORMITY:** how consistently information is coded in the data system, and/or how well it meets accepted data standards

Maryland maintains traffic records information system components in compliance with federal recommendations and State requirements to support stakeholder needs and the management of Maryland's highway safety programs. The

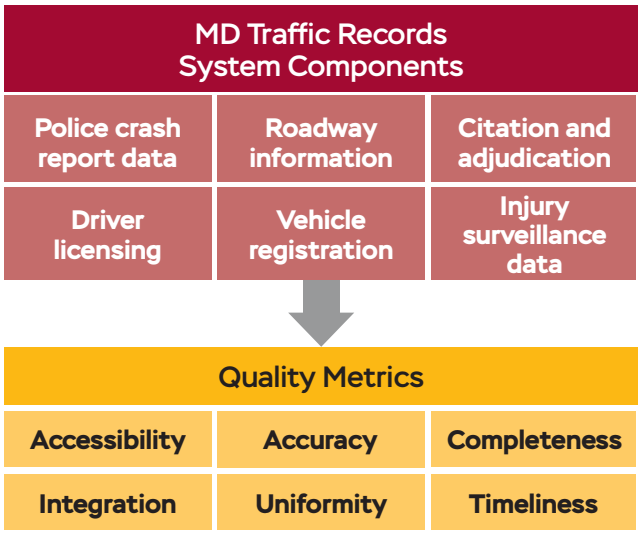


Figure 4. Components of Maryland's Traffic Records System

combined efforts of the policy leaders, decision makers, and technical experts who participate in the TRCC are crucial to improving the Maryland traffic records system.

Moreover, TRCC members participate in EA activities to help ensure consistent and appropriate support of the SHSP. EA teams depend on quality data analysis to properly identify vulnerable groups, adapt and refine prevention strategies, and evaluate the effectiveness of implemented strategies. The 2021-2025 MD SHSP will rely heavily on the TRCC's efforts to improve data quality and accessibility to address the teams' data needs as they evolve over the next five years.

The TRCC has adopted a 2021-2025 Traffic Records Strategic Plan (TRSP) to coincide with the 2021–2025 SHSP. These plans are purposefully written in coordination with one another to further align and strengthen the connection between Maryland's traffic records system and its traffic safety programs. The process of developing strategies in both the TRSP and the SHSP are mutually reinforcing. Each SHSP EA team develops strategies with a vision and understanding of the data needed to carry out and measure the EA-related activities. The TRCC develops strategies in consideration of the end users, such as the EA team members.

3 Emphasis Areas and the Use of Effective Strategies

The Maryland SHSP is led, in different capacities, by several groups of traffic safety professionals from state and local government and private industry: Executive Council, Steering Committee, EA Chairpersons, EA team. The SHSP includes a suite of Emphasis Areas and strategies designed to reduce traffic-related fatalities and serious injuries on all public roads [8] that will be funded and implemented through existing Federal safety programs such as the HSP, CVSP, HSIP, and state safety programs. As described in the following sections, the Maryland SHSP Executive Council considered a variety of key factors to determine the emphasis areas and strategies that will prevent casualties on our roadways. In cooperation with the four Es of transportation safety, these strategies create the blueprint for addressing both behavioral and infrastructure challenges and opportunities in Maryland [9].

SHSP EXECUTIVE COUNCIL
The leaders of the Maryland Agencies tasked with the development and implementation of the SHSP.

STEERING COMMITTEE
Responsible for day-to-day SHSP leadership, administration, and coordination.

EA CHAIRS & CO-CHAIRS
These partners lead the EA team in the administration of the action plan, coordination of efforts and progress assurance.

EA TEAM
The EA teams plan, collaborate and follow through with implementation and evaluation of relevant action steps.

Although they are stand-alone entities, the Emphasis Areas are designed for cross collaboration and mutual reinforcement. To promote further collaboration across the EAs, the Infrastructure EA developed strategies designed to address the other EAs' infrastructure needs. This new framework promotes EA team collaboration, assures that infrastructure needs are prioritized across the SHSP, and reduces redundancy with other Maryland state agencies' efforts.

The following are the 2021-2025 Maryland Strategic Highway Safety Plan Emphasis Areas:

- Distracted Driving
- Infrastructure
- Impaired Driving
- Occupant Protection
- Pedestrians and Bicyclists
- Speed and Aggressive Driving

Focusing on the prevention of fatalities and serious injuries as well as the state's plan of safe, accessible and effective multi-modal transportation systems [10], the SHSP development team and EA teams directed their attention to six core strategies. These core strategies provide the foundation for the SHSP. Maryland's 2021-2025 SHSP strategies to prevent death and injury are as follows:

DATA: Use the collection, analysis, and evaluation of data on all roads in Maryland to identify the Emphasis Area safety issues, key audiences,

and locations of concern, as well as support the improvement of data quality (accessibility, accuracy, completeness, integration, timeliness, uniformity).

ENFORCEMENT: Support the improved enforcement of laws pertaining to the Emphasis Area laws, as well as support enforcement initiatives that promote safe behaviors.

INFRASTRUCTURE: Improve roadway environments related to the Emphasis Area through the support of system-wide prevention strategies, engineering treatments, and land-use planning.

LEGISLATION: Support legislation and adjudication efforts to reduce the problems of the Emphasis Area.

OUTREACH: Promote a systemic safety culture through the support of outreach initiatives including public awareness, education, training, and media campaigns focused on the Emphasis Area.

VEHICLE ENGINEERING AND TECHNOLOGY: Identify, promote, and support the implementation of effective engineering and technological approaches to support the Emphasis Area prevention strategies.

Under the 2021-2025 MD SHSP, the six EA teams created an action plan for each strategy. The action plan lays out steps within each strategy that, when implemented, will move Maryland closer to zero deaths. Designed to establish or expand interventions that improve safety, the steps in the action plan were developed by a consensus among the multi-disciplinary safety partners of the EAs. The action plan is a living document, meant to provide the flexibility to alter the activities as needed. It contains information about agencies, groups, organizations, private industry, or persons whose insight or expertise may help advance the prevention strategies, as well as a measure of performance for each action step. The EA teams can use the action plan to help identify new stakeholders, determine strategies for engaging stakeholders, and comprehensively and effectively make progress toward their goals. The SHSP Action Plans are intended to be living documents that will be updated, reviewed, and referenced on an ongoing basis over the five-year SHSP time frame. Figure 5 describes the framework of the 2021-2025 Maryland SHSP.

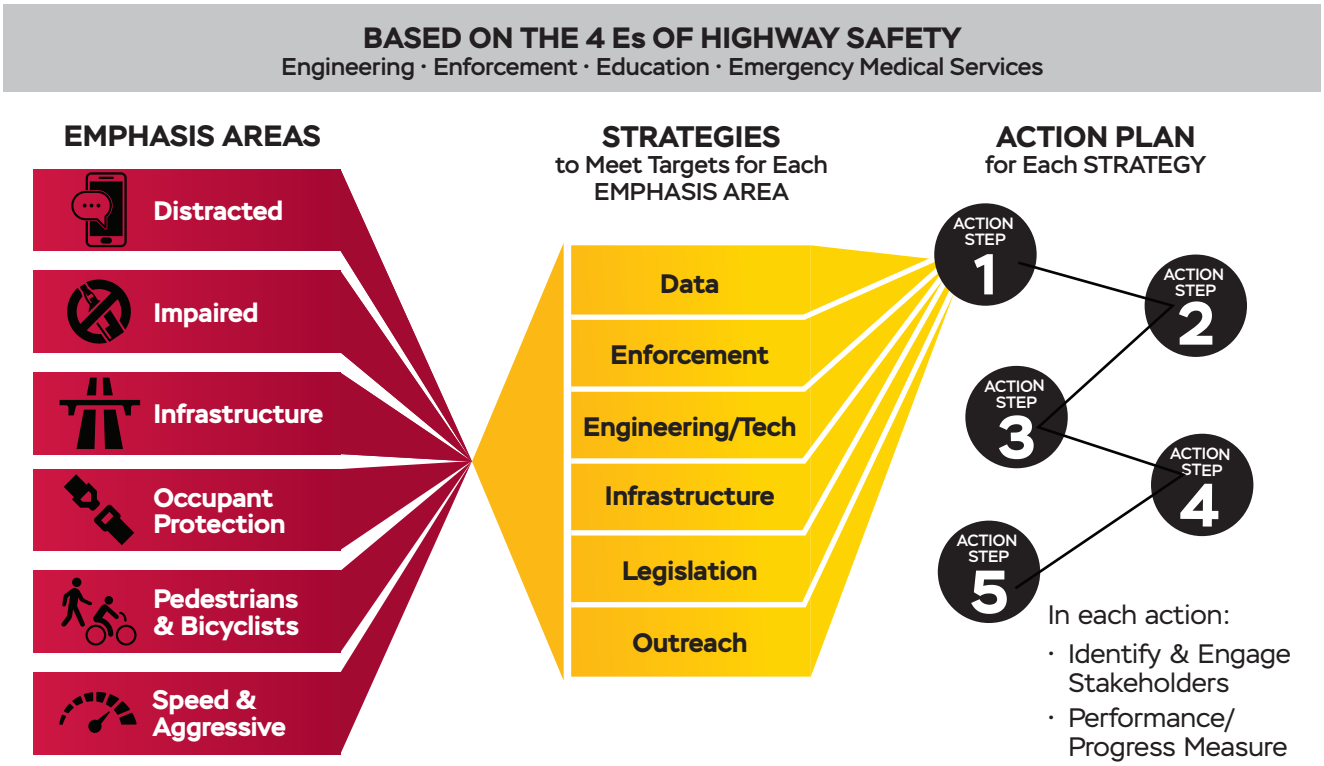


Figure 5. Maryland's Strategic Highway Safety Plan Structure

3.1 Distracted Driving

Each year in Maryland between 2015 and 2019, an average 181 people were killed and 1,507 seriously injured each year in crashes in which distraction was recorded as a contributing factor. A distracted driving crash occurs when a driver shifts attention away from the driving task due to a number of things, including adjusting vehicle console controls, tending to a passenger or child, or using a cell phone (e.g., talking, texting, or other use).

Distracted driving is not a new issue but has moved into the spotlight in the past decade as more drivers own cell phones. While talking and texting are issues in the forefront, research also shows that drivers using voice-based and touch screen features in their vehicles were distracted for more than 40 seconds when performing complex tasks such as programming their navigation system [11].

Crashes involving distracted driving are poorly understood. Reliability of data and underreported distraction crashes are recognized as two of the biggest challenges with regard to fully understanding and preventing distracted driving. A crash report consists of an investigating officer's opinions based on their observations at a crash scene, interviews with witnesses, physical evidence, and other factors. Determining whether a driver was distracted leading up to a crash can be difficult enough; establishing what the distraction was can be just as difficult.

The Distracted Driving EA team coordinates the efforts of State transportation agencies, safety partners, stakeholders, and law enforcement to reduce distracted driving related fatalities and serious injuries.

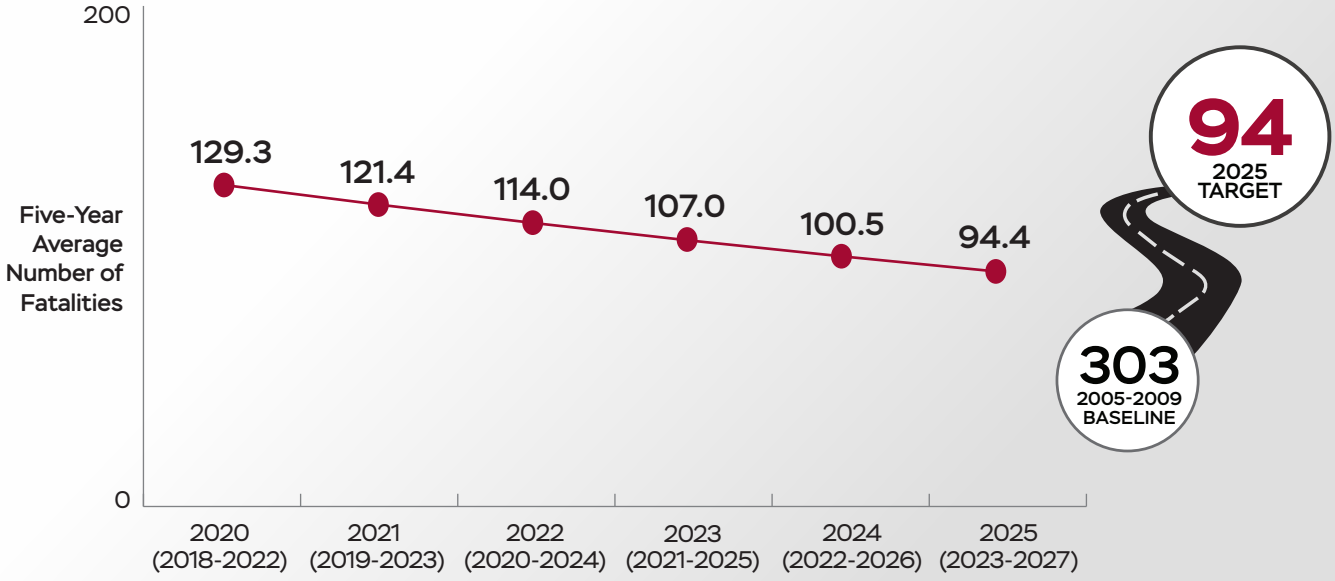
3.1.1 Performance Targets

The Distracted Driving EA team, in cooperation with the SHSP Executive Council, will be responsible for meeting or exceeding the following performance targets:

FATALITY TARGET: Reduce the number of distracted driving related fatalities on all roads in Maryland from the five-year average (2005-2009) of 303 to 94 or fewer by December 31, 2025.

SERIOUS INJURY TARGET: Reduce the number of distracted driving related serious injuries on all roads in Maryland from the five-year average (2005-2009) of 3,648 to 665 or fewer by December 31, 2025.

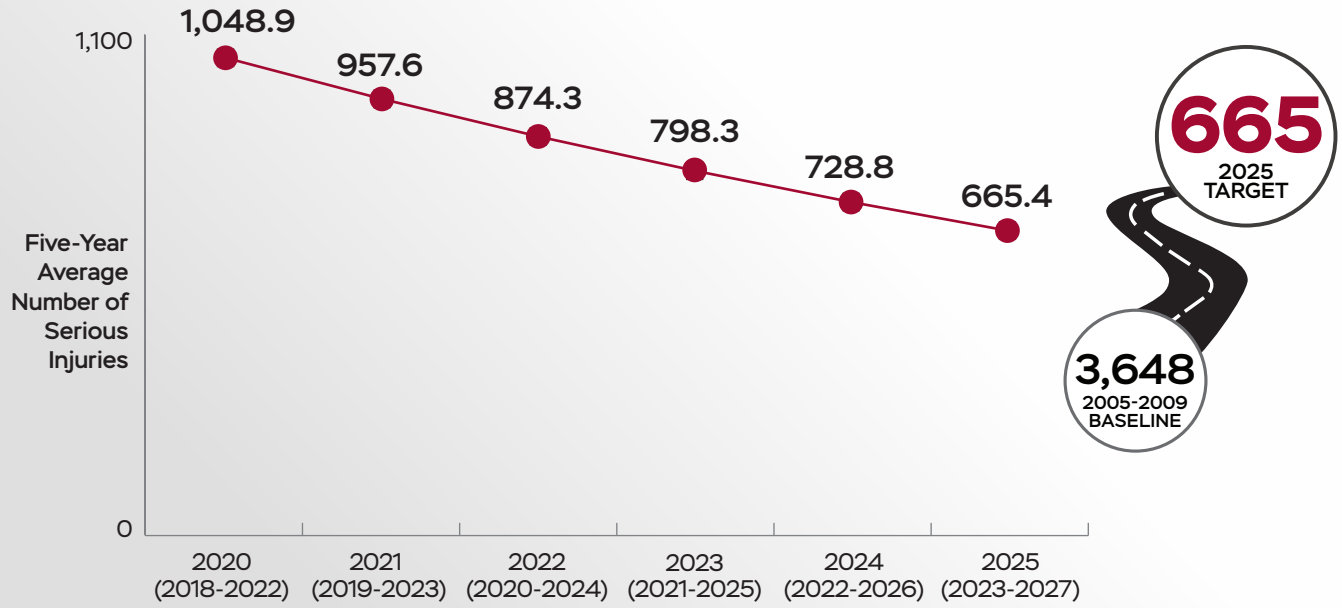
Distracted Driving Fatalities and Interim Targets



Annual Target*

**Note: The annual target represents the mid-year of the five-year average. For example, the 2020 target is the five-year annual average from 2018–2022.*

Distracted Driving Serious Injuries and Interim Targets



Annual Target*

**Note: The annual target represents the mid-year of the five-year average. For example, the 2020 target is the five-year annual average from 2018–2022.*

3.1.2 Strategies to Meet MD SHSP's Distracted Driving Reduction Targets

In accordance with the overall SHSP, the Distracted Driving EA team will implement the following strategies to drive down death and serious injuries on Maryland's roadways. These strategies include the highway safety elements of engineering, education, enforcement, and emergency medical services and address both behavioral and infrastructure issues, as well as incorporating the State's plan for safe, accessible and effective multi-modal transportation systems [12]. Maryland's strategies to meet the goals in reducing distracted driving include the use of:

DATA: Use the collection, analysis, and evaluation of data on all roads in Maryland to identify distracted driving safety issues, key audiences, and locations of concern, as well as support the improvement of the data quality (accessibility, accuracy, completeness, integration, timeliness, uniformity).

ENFORCEMENT: Support the improved enforcement of distracted driving laws, as well as support enforcement initiatives that promote safe behaviors.

INFRASTRUCTURE: Improve roadway environments to reduce distracted driving through the support of system-wide countermeasures, engineering treatments, and land-use planning.

LEGISLATION: Support legislation and adjudication efforts to reduce distracted driving.

OUTREACH: Promote a systemic safety culture through the support of outreach initiatives including public awareness, education, training, and media campaigns focused on reducing distracted driving.

VEHICLE ENGINEERING AND TECHNOLOGY: Identify, promote, and support the implementation of effective engineering and technological approaches to reduce distracted driving.

Maryland understands that eliminating distracted driving will decrease crash occurrence and save lives. The Distracted Driving Emphasis Area calls for a safe system approach to countermeasures and a traffic safety culture intolerant of distracted driving. Associated with these strategies is an action plan designed to reach the goals named for the Distracted Driving EA. The action plan includes steps aimed to improve data collection, enhance enforcement programs, improve roadway environments to prevent distraction, support distraction prevention policy, educate the public on the risks of distracted driving, and utilize new technology to reduce the number of associated fatalities and serious injuries.

3.2 Impaired Driving

Impairment from alcohol or drugs is a well-known risk factor for road traffic injury. These substances impair coordination and the ability to perceive and respond to hazards. In Maryland, 30.8% of traffic-related fatalities between 2015 and 2019 involved alcohol and/or drugs, compared to 6.4% of traffic-related injuries. From 2015 through 2019, an average 163 people died each year and an additional 446 were seriously injured in crashes involving a driver impaired by alcohol or drugs (based on the state impaired definition). Over a quarter (25.6%) of impaired driving fatal crashes occur between midnight and 2:59 am, and Saturday has the highest number of impaired driving fatal crash fatalities (24%).

The Impaired Driving EA team, focused on both alcohol and drug impairment, collaborates with State transportation agencies, safety partners, stakeholders, and law enforcement to reduce impaired driving related fatalities and serious injuries.

3.2.1 Performance Targets

The Maryland crash report includes a blood alcohol concentration (BAC) level and/or drug impairment measure when possible; however, the Maryland criteria for impairment is not dependent upon a BAC or substance threshold. In Maryland, an impaired driving crash is indicated by the investigating officer based on the driver's condition, BAC, and/or any detected substance use. Conversely, FARS data considers a driver alcohol-impaired only when the BAC is greater than 0.08 grams per deciliter (g/dL). Therefore, Maryland SHSP impaired driving targets and those based on NHTSA's Fatality Analysis Reporting System (FARS) data are separate and distinct within this SHSP. Both Federal and State impaired driving targets are included here to maintain continuity with previous Maryland SHSPs and to maintain the link with other State plans that exclusively use State crash data as the source for problem identification and program evaluation.

The Impaired Driving EA team, in cooperation with the SHSP Executive Council, will be responsible for

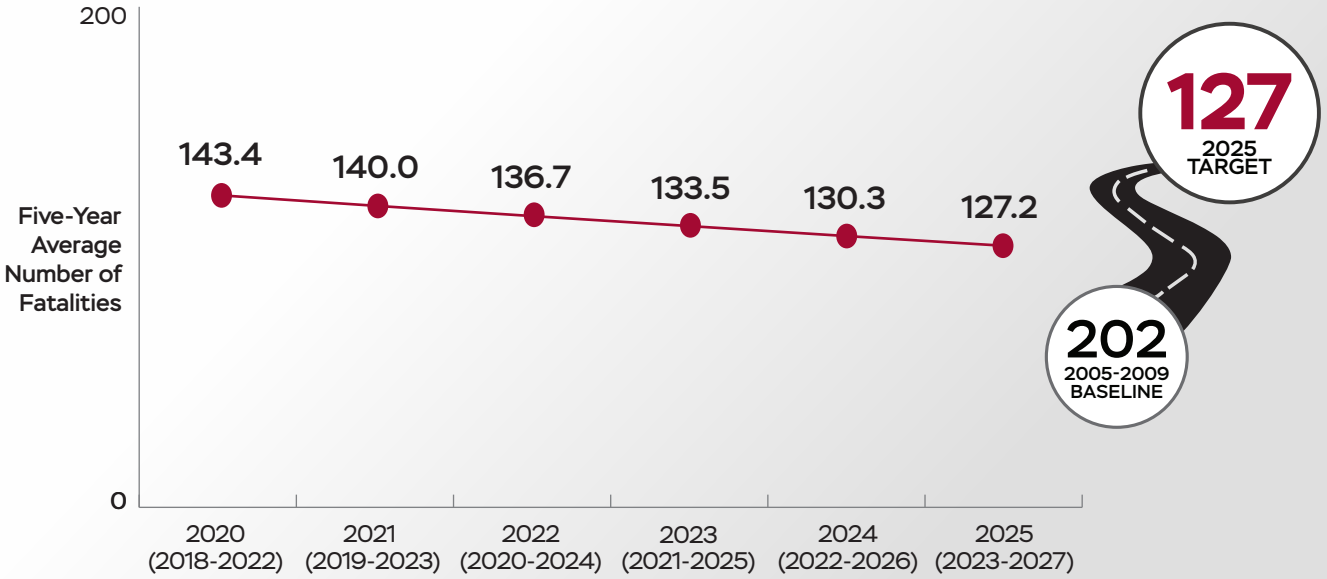
meeting or exceeding the following performance targets:

STATE-DEFINED IMPAIRED DRIVING FATALITY TARGET: Reduce the number of State-defined (alcohol/drug) impaired driving related fatalities on all roads in Maryland from the five-year average (2005-2009) of 202 to 127 or fewer by December 31, 2025.

STATE-DEFINED IMPAIRED DRIVING SERIOUS INJURY TARGET: Reduce the number of impaired (alcohol/drug) driving related serious injuries on all roads in Maryland from the five-year average (2005-2009) of 809 to 223 or fewer by December 31, 2025.

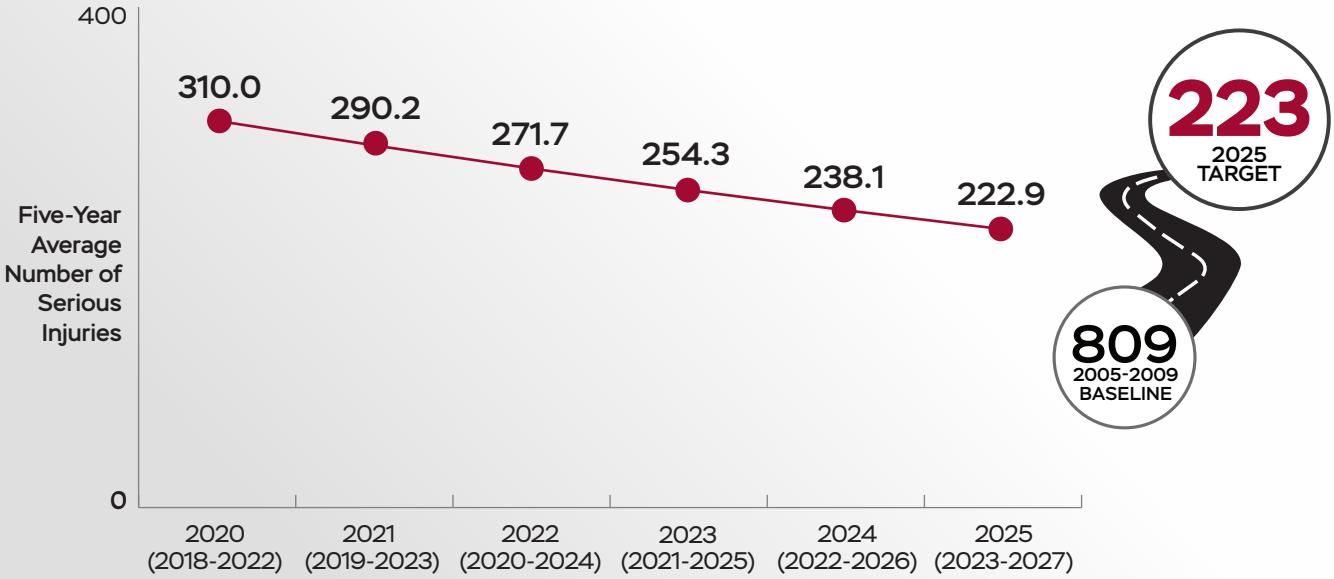
NHTSA-DEFINED IMPAIRED DRIVING FATALITY TARGET: Reduce the number of NHTSA-defined (BAC 0.08) impaired driving related fatalities on all roads in Maryland from the five-year average (2005-2009) of 174 to 124 or fewer by December 31, 2025.

Impaired Driving Fatalities and Interim Targets



*Note: The annual target represents the mid-year of the five-year average.
For example, the 2020 target is the five-year annual average from 2018–2022.

Impaired Driving Serious Injuries and Interim Targets



*Note: The annual target represents the mid-year of the five-year average.
For example, the 2020 target is the five-year annual average from 2018–2022.

3.2.2 Strategies to Meet MD SHSP's Impaired Driving Reduction Targets

In accordance with the overall SHSP, the Impaired Driving EA team will implement the following strategies to drive down death and serious injuries on Maryland's roadways. These strategies include the highway safety elements of engineering, education, enforcement, and emergency medical services and address both behavioral and infrastructure issues, as well as incorporating the State's plan for safe, accessible, and effective multi-modal transportation systems [13]. Maryland's strategies to meet the goals in reducing impaired (by alcohol or drugs) driving include the use of:

DATA: Use the collection, analysis, and evaluation of data on all roads in Maryland to identify impaired driving safety issues, key audiences and locations of concern, as well as support the improvement of data quality (accessibility, accuracy, completeness, integration, timeliness, uniformity) of impaired driving related data.

ENFORCEMENT: Support the enforcement of laws pertaining to the impaired driving Emphasis Area, as well as support enforcement initiatives that promote safe behaviors.

INFRASTRUCTURE: Improve roadway environments for the impaired driving Emphasis Area through the support of system-wide countermeasures, engineering treatments, and land-use planning.

LEGISLATION: Support legislation and adjudication efforts to advance the goals of the impaired driving Emphasis Area .

OUTREACH: Promote a systemic safety culture through the support of outreach initiatives including public awareness, education, training, and media campaigns focused on the concerns of the impaired driving Emphasis Area .

VEHICLE ENGINEERING & TECHNOLOGY: Identify, promote, and support the implementation of effective engineering and technological approaches to support the impaired-by-alcohol or drugged driving emphasis area's countermeasures.

Maryland understands that eliminating impaired driving will decrease crash occurrence and save lives. The Impaired Driving Emphasis Area calls for a safe system approach to countermeasures and a traffic safety culture intolerant of impaired driving. Associated with the above strategies is an action plan designed to reach the goals named for the Impaired Driving EA. The action plan includes steps aimed to improve data collection, enhance enforcement programs, improve roadway environments to prevent impaired driving related crashes, support impaired driving prevention policy, educate the public on the risks of impaired driving, and utilize new technology in an effort to reduce the number of associated fatalities and serious injuries.

3.3 Infrastructure

Roadways and intersections are designed and built based upon certain assumptions and standards including but not limited to traffic volume, design speed, roadway users and built environment.

TRAFFIC VOLUME
The number of vehicles crossing a section of road in a given time period.

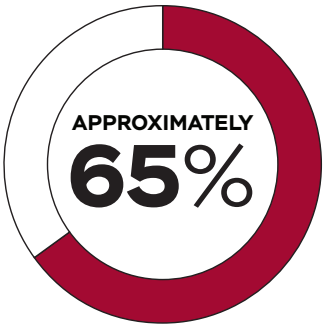
DESIGN SPEED
The geographic and geometric features of a road that influence or are influenced by the speed at which vehicles travel.

ROADWAY USERS
All road users that travel on a given road including vehicle occupants, motorcycles, bicycles, pedestrians, etc.

BUILT ENVIRONMENT
The physical components of a road.

Over time, as neighborhoods and cars change, road use also changes. These changes lead to some roadway designs underperforming in terms of safety and mobility. Engineers and planners continually evaluate traffic system data and look for ways to address safety and mobility needs in a timely and cost efficient manner. An average of 308 fatalities and 1,826 serious injuries occurred in crashes involving infrastructure-related matters each year between 2015 and 2019. The key areas for infrastructure improvement are intersection and intersection-related crashes, run-off-the-road crashes, and work zone crashes.

- Intersection crashes are those that occur in an intersection or are intersection-related. An average of 141 fatalities and 1,130 serious injuries occurred in intersection-related crashes each year from 2015 to 2019.
- Maryland defines run-off-the-road crashes as one where a vehicle strikes a fixed object and leaves the road, or where the location of the crash was reported as off-road or in the median. An average of 166 fatalities and 699 serious injuries occurred in run-off the-road crashes each year from 2015 to 2019
- Work-zone crashes are those crashes occurring in construction, maintenance, and utility work zones. From 2015 to 2019, Maryland has an average of nine fatalities and 46 serious injuries in work-zone related crashes annually



Infrastructure fatalities that occur on the State-owned road system

Approximately 65% of these fatalities occur on the State-owned road system, but this safety problem is spread across both the State and local roadway networks. As a result, approaches to preventing these crashes must include empowering local jurisdictions as well.

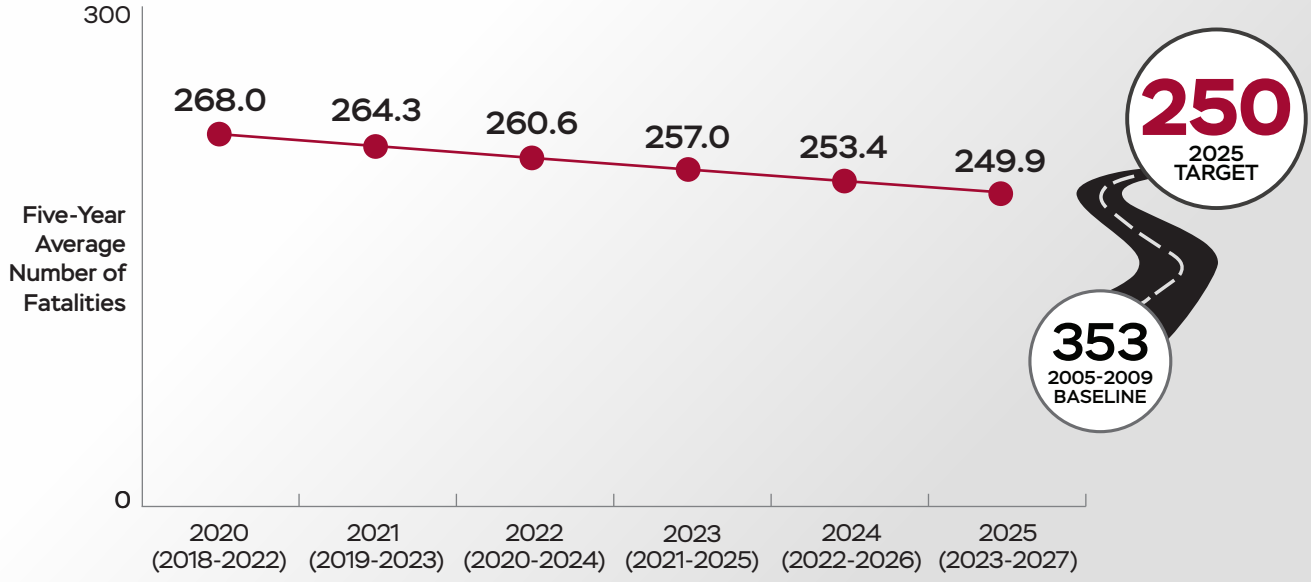
3.3.1 Performance Targets

The Infrastructure EA team, in cooperation with the SHSP Executive Council, will be responsible for meeting or exceeding the following performance targets:

FATALITY TARGET: Reduce the number of infrastructure-related fatalities on all roads in Maryland from the five-year average (2005-2009) of 353 to 250 or fewer by December 31, 2025.

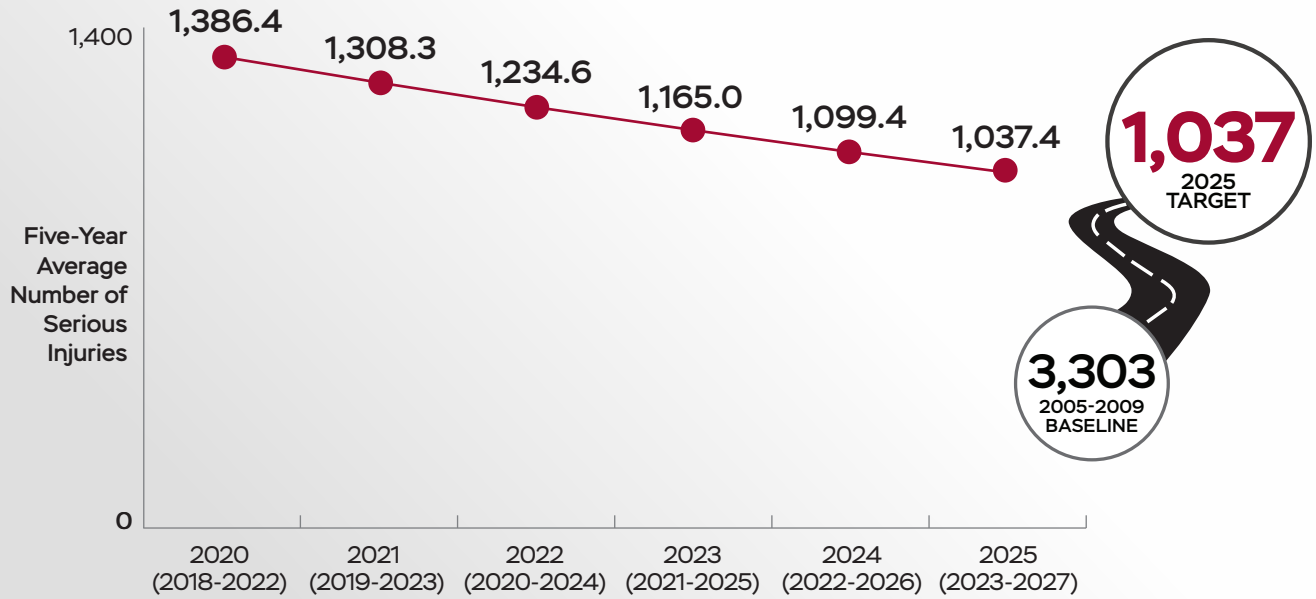
SERIOUS INJURY TARGET: Reduce the number of infrastructure-related serious injuries on all roads in Maryland from the five-year average (2005-2009) of 3,303 to 1,037 or fewer by December 31, 2025.

Highway Infrastructure Fatalities and Interim Targets



**Note: The annual target represents the mid-year of the five-year average. For example, the 2020 target is the five-year annual average from 2018–2022.*

Highway Infrastructure Serious Injuries and Interim Targets



**Note: The annual target represents the mid-year of the five-year average. For example, the 2020 target is the five-year annual average from 2018–2022.*

3.3.2 Infrastructure Strategies to Meet MD SHSP's Targets

In accordance with the overall SHSP, the Infrastructure EA team will implement the following strategies to drive down death and serious injuries on Maryland's roadways. These strategies include the highway safety elements of engineering, education, enforcement, and emergency medical services and address both behavioral and infrastructure issues, as well as incorporating the State's plan for safe, accessible and effective multi-modal transportation systems [14].

As addressed in the Infrastructure EA Action Plan, the Infrastructure strategies will include, but are not limited to, the identification, development and implementation of system-wide improvements to: reduce fatalities and serious injuries at high-risk locations, corridors and with roadway elements (lighting, signage, etc.); reduce the number and severity of infrastructure-related crashes (e.g., intersection-related, run-off-the-road, work-zone related, etc.); and address the safety of vulnerable user groups (e.g., bicyclists, pedestrians, motorcyclists, older and younger drivers, etc.).

To promote cross collaboration between Emphasis Areas with mutual reinforcement, the Infrastructure EA developed strategies designed to address the infrastructure needs of the five other EAs. This new framework assures that significant infrastructure needs are prioritized across the SHSP and reduces redundancy with other MD State agencies' efforts. The overarching Infrastrucutre EA strategy is to improve roadway environments through the support of system-wide countermeasures, engineering treatments, and land-use planning to:

- Reduce distracted driving
- Reduce impaired driving crashes
- Protect occupants by reducing the severity of crashes
- Protect pedestrians and bicyclists
- Reduce speed and aggressive driving behaviors

Associated with these strategies is an action plan designed to reach the goals of the Infrastructure EA. This pertains to the collection of crash data and analysis as part of the State's Highway Safety Improvement Program planning. Additionally, the State will screen Candidate Safety Improvement Locations for spot safety improvements or identification of systemic safety projects. To address the EAs, the screening of collected data will focus on crash types that include intersection, run-off-the road, work zone, and pedestrian- and bicycle-involved. To mitigate for these crash types, Maryland will employ countermeasures such as signing and lighting, geometric improvements, traffic signals, guardrails, line striping and raised pavement markers, sidewalks, and others identified in the annual action plans. This effort addresses the goal to reduce fatal and serious injury crashes at high-risk locations or corridors in Maryland.

3.4 Occupant Protection

Research has clearly defined the benefits of restraint use during a collision. While automotive safety technologies continue to evolve, the restraint system remains a major factor in mitigating injury or preventing death in a collision. If all front seat occupants of a vehicle buckled up, Marylanders would reduce the risk of fatal injury by 45% and moderate-to-serious injury by 50% if in a passenger car; 60% and 65% if in a light truck [15].

In the last five years, the State of Maryland seat belt usage rate varied between 92.9% (2015) and 90.4% (2019). This leaves 10% of our road users vulnerable to increased injury or death at any given time. On a given day in Maryland, 10% of front seat occupants are not fully restrained, which poses a high risk for death or serious injury. In fact, 35% of all traffic fatalities in Maryland include unrestrained vehicle occupants.

The Occupant Protection EA team collaborates with State transportation agencies, safety partners, stakeholders, and law enforcement to increase occupant protection and reduce related fatalities and serious injuries.

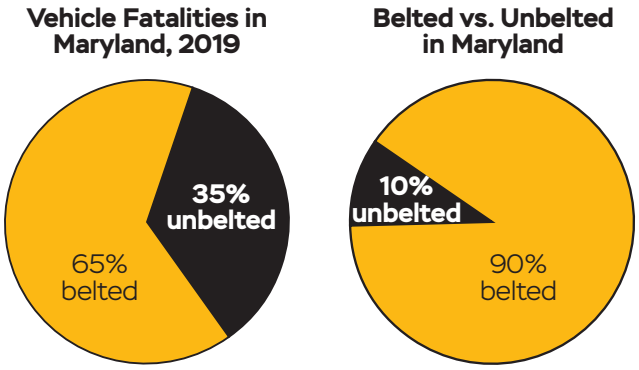


Figure 6. More than 1/3 of occupants who die in MD crashes are from the small 10% of Marylanders who weren't belted.

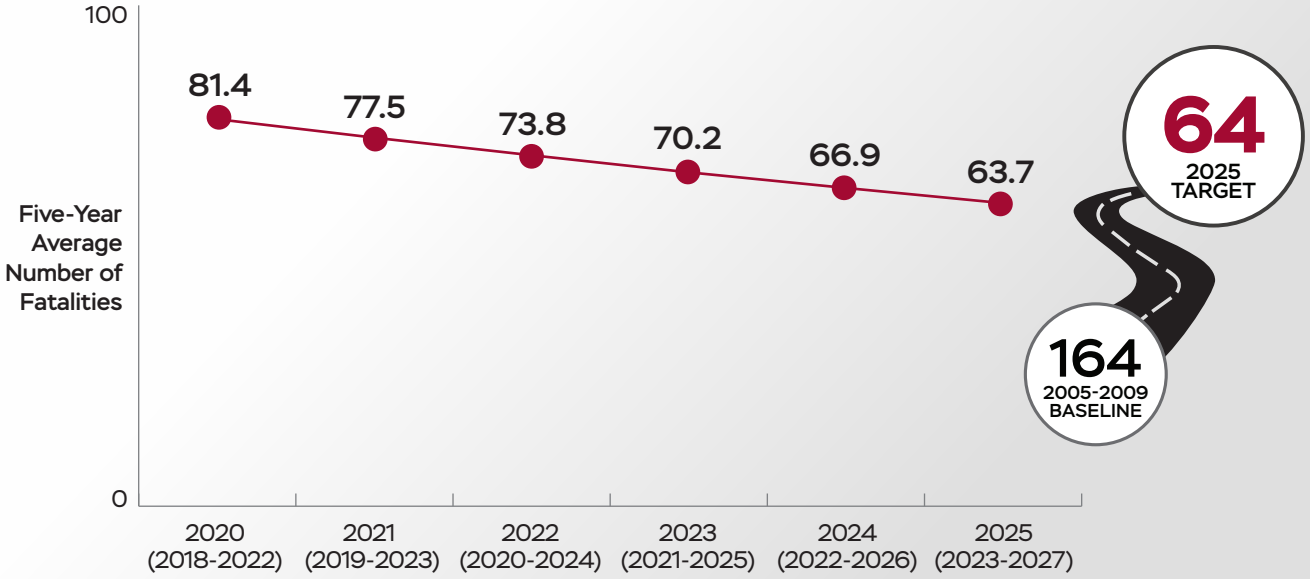
3.4.1 Occupant Protection Performance Targets

The Occupant Protection EA team, in collaboration with the SHSP Executive Council, aims to meet or exceed the following performance targets:

FATALITY TARGET: Reduce the number of unrestrained fatalities on all roadways in Maryland from the five-year average (2005-2009) of 164 to 64 or fewer by December 31, 2025.

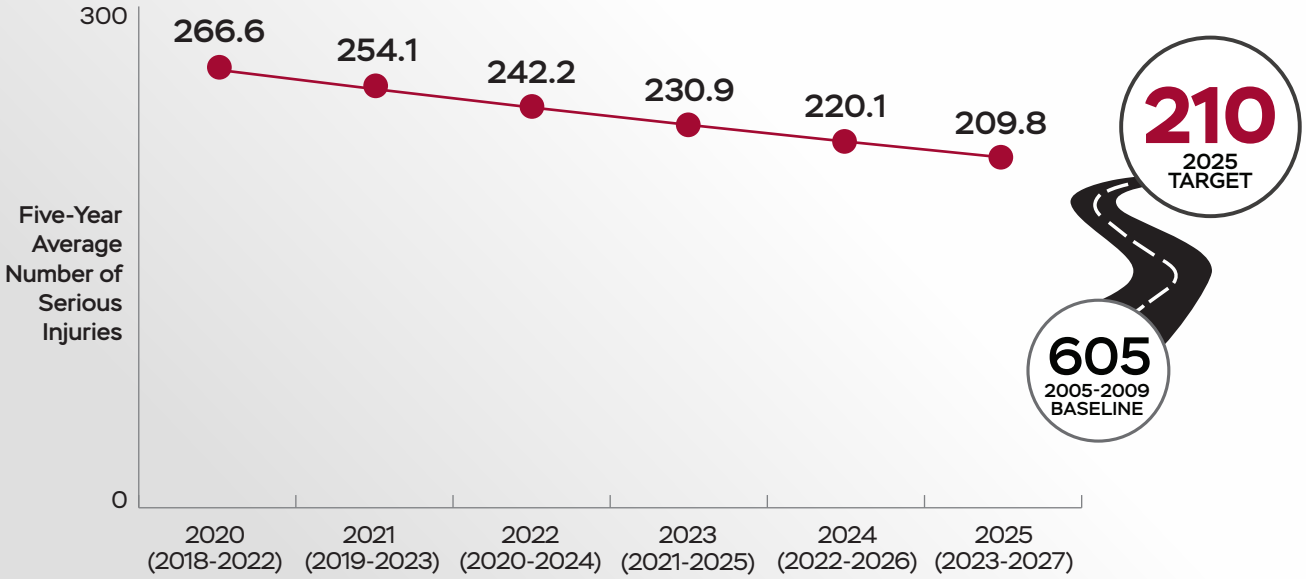
SERIOUS INJURY TARGET: Reduce the number of unrestrained serious injuries on all roadways in Maryland from the five-year average (2005-2009) of 605 to 210 or fewer by December 31, 2025.

Unrestrained Fatalities and Interim Targets



**Note: The annual target represents the mid-year of the five-year average. For example, the 2020 target is the five-year annual average from 2018–2022.*

Unrestrained Serious Injuries and Interim Targets



**Note: The annual target represents the mid-year of the five-year average. For example, the 2020 target is the five-year annual average from 2018–2022.*

3.4.2 Strategies to Meet MD SHSP's Occupant Protection Targets

In accordance with the overall SHSP, the Occupant Protection EA team will implement the following strategies to drive down death and serious injuries on Maryland's roadways. These strategies include the highway safety elements of engineering, education, enforcement, and emergency medical services and address both behavioral and infrastructure issues, as well as incorporating the State's plan for safe, accessible and effective multi-modal transportation systems [16]. Maryland's strategies to meet the goals in the Occupant Protection EA include the use of:

DATA: Use the collection, analysis, and evaluation of data on all roads in Maryland to identify occupant protection safety issues, key audiences and locations of concern, as well as support the improvement of the data quality (accessibility, accuracy, completeness, integration, timeliness, uniformity).

ENFORCEMENT: Support the improved enforcement of occupant protection laws, as well as support enforcement initiatives that promote safe roadway behaviors.

INFRASTRUCTURE: Improve roadway environments related to occupant protection through the support of system-wide countermeasures, engineering treatments, and land-use planning.

LEGISLATION: Support legislation and adjudication efforts to advance occupant protection for all ages.

OUTREACH: Promote a systemic safety culture through the support of outreach initiatives including public awareness, education, training, and media campaigns focused on adult and child occupant protection.

VEHICLE ENGINEERING AND TECHNOLOGY: Identify, promote, and support the implementation of effective engineering and technological approaches to advance occupant protection.

Maryland understands that increasing occupant protection use will decrease the severity of injuries and save lives. The Occupant Protection Emphasis Area calls for a safe system approach to countermeasures and a traffic safety culture that shares attitudes and beliefs in the significance of occupant protection. Associated with the above strategies is an action plan designed to reach the goals named for the Occupant Protection EA. The action plan includes steps aimed to improve data collection, enhance enforcement programs, improve roadway environments to prevent crashes and reduce occupant injury, support occupant protection policy, educate the public on the risks of restraint non-use, and utilize new technology in an effort to reduce the number of associated fatalities and serious injuries.

3.5 Pedestrians and Bicyclists

Pedestrians and bicyclists are our most vulnerable road users, unprotected against thousands of pounds of metal when involved in traffic crashes. The number of pedestrians and bicyclists on Maryland roadways is increasing at a greater rate than vehicular traffic. With the expansion of transit systems in the State, pedestrian traffic can be expected to continue to grow in the future, putting more and more vulnerable road users in conflict with vehicles. In Maryland, pedestrian and bicyclist fatalities have increased. Non-motorist traffic fatalities once comprised one in five of all traffic fatalities; they now comprise one in four.

Pedestrian crashes are defined as crashes involving a person reported as a non-motorist pedestrian type, typically someone not in a mechanized or motorized conveyance device. From 2015 through 2019, an annual average 115 pedestrians were killed and 439 were seriously injured in Maryland traffic crashes, an 11% and 23% increase, respectively, compared to the previous five-year period. Bicycle fatalities, though rare, have increased 38% from an annual average 8 (2005-2009) to 11 (2015-2019). An additional 69 were seriously injured annually from 2015 through 2019.

The Pedestrians and Bicyclists EA team collaborates with State transportation agencies, safety partners, stakeholders, and law enforcement to reduce the number of pedestrian- and bicyclist-related fatalities and serious injuries.

3.5.1 Performance Targets

The Pedestrians and Bicyclists EA team, in cooperation with the SHSP Executive Council, will be responsible for meeting or exceeding the following performance targets:

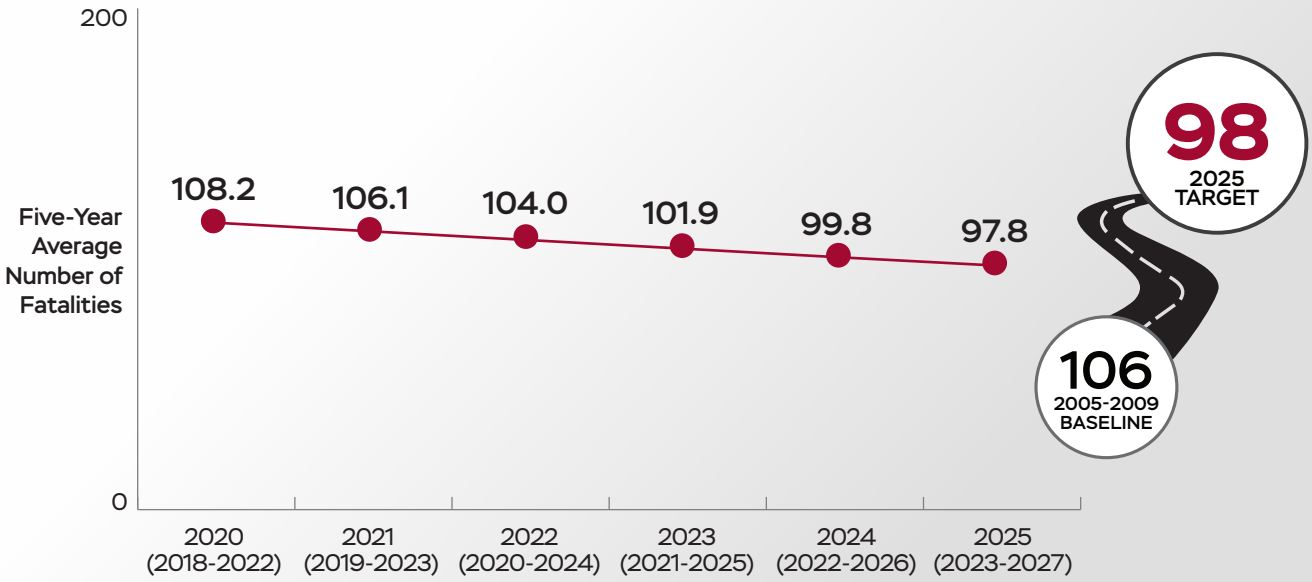
PEDESTRIAN FATALITY TARGET: Reduce the number of pedestrian fatalities on all roads in Maryland from the five-year average (2005-2009) of 106 to 98 or fewer by December 31, 2025.

PEDESTRIAN SERIOUS INJURY TARGET: Reduce the number of pedestrian serious injuries on all roads in Maryland from the five-year average (2005-2009) of 471 to 364 or fewer by December 31, 2025.

BICYCLIST FATALITY TARGET: Reduce the number of bicycle fatalities on all roads in Maryland from the most recent five-year average (2015-2019) of 11 to nine or fewer by December 31, 2025.

BICYCLIST SERIOUS INJURY TARGET: Reduce the number of bicycle serious injuries on all roads in Maryland from the five-year average (2005-2009) of 76 to 57 or fewer by December 31, 2025.

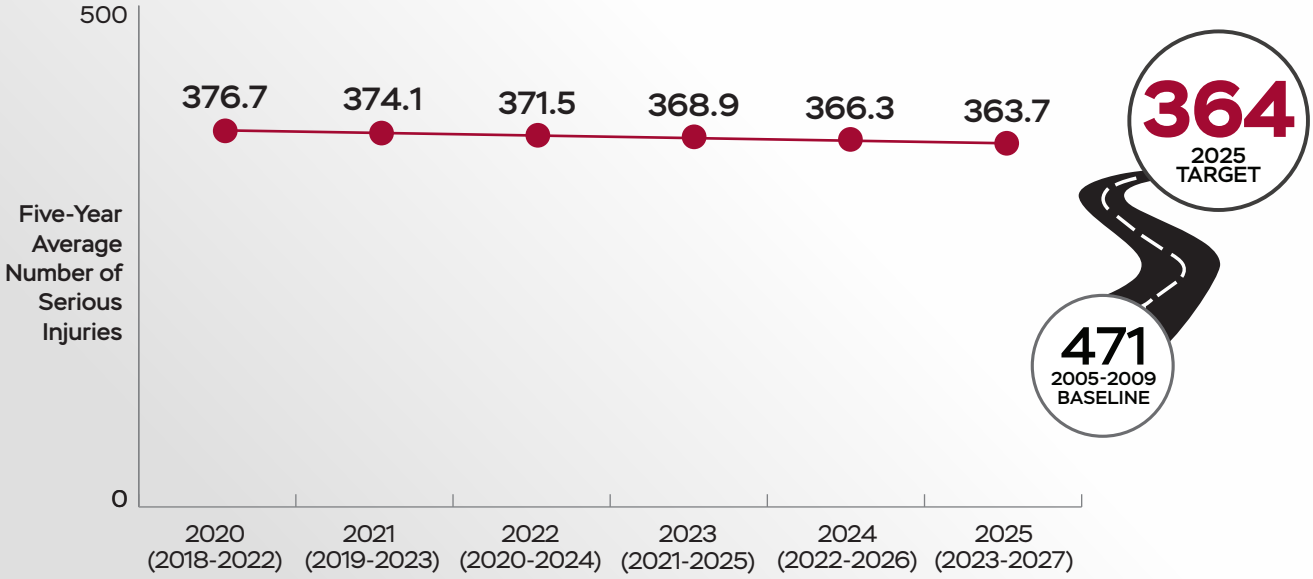
Pedestrian Fatalities and Interim Targets



Annual Target*

**Note: The annual target represents the mid-year of the five-year average. For example, the 2020 target is the five-year annual average from 2018–2022.*

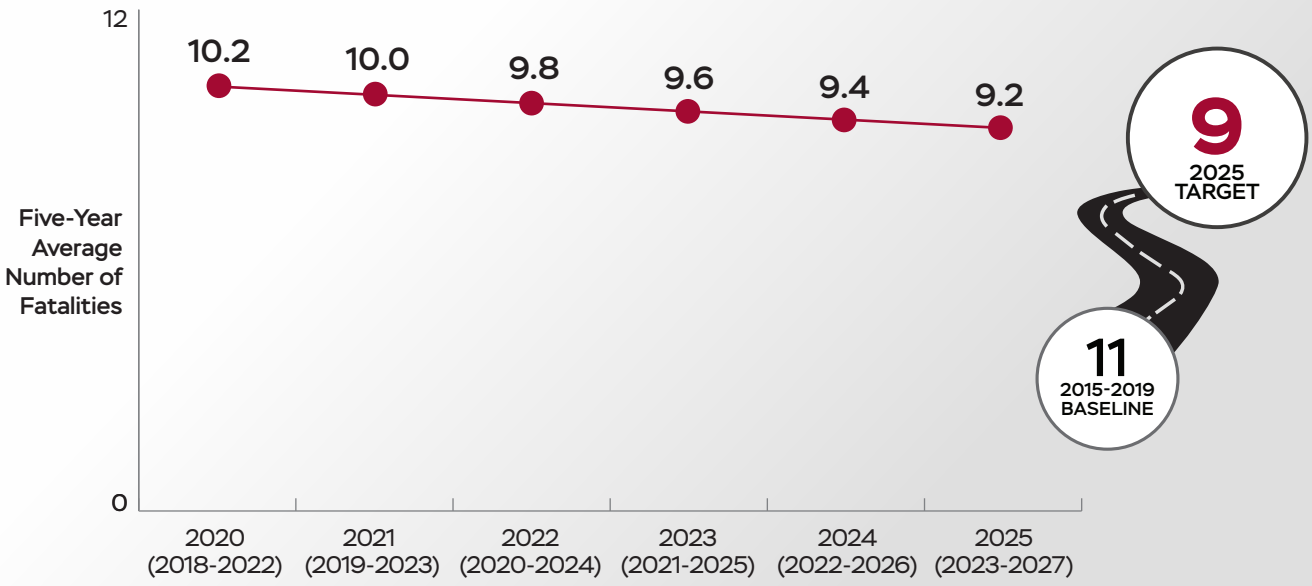
Pedestrian Serious Injuries and Interim Targets



Annual Target*

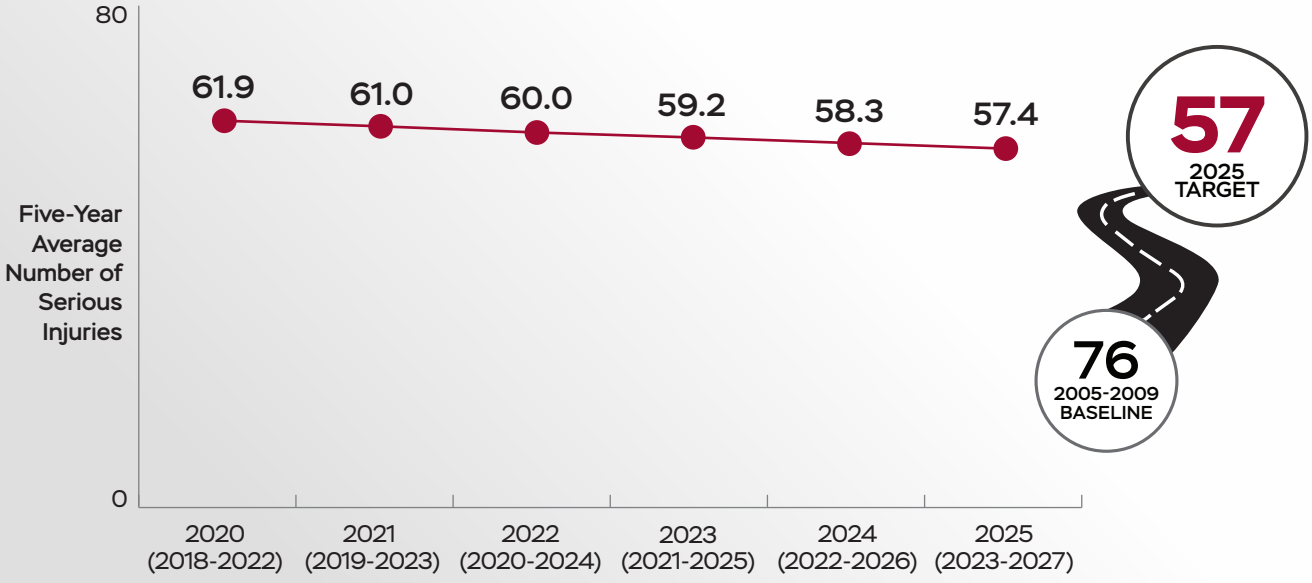
**Note: The annual target represents the mid-year of the five-year average. For example, the 2020 target is the five-year annual average from 2018–2022.*

Bicycle Fatalities and Interim Targets



**Note: The annual target represents the mid-year of the five-year average. For example, the 2020 target is the five-year annual average from 2018–2022.*

Bicycle Serious Injuries and Interim Targets



**Note: The annual target represents the mid-year of the five-year average. For example, the 2020 target is the five-year annual average from 2018–2022.*

3.5.2 Strategies to Meet MD SHSP's Pedestrians and Bicyclists EA Targets

In accordance with the overall SHSP, the Pedestrians and Bicyclists EA team will implement the following strategies to drive down death and serious injuries on Maryland's roadways. These strategies include the highway safety elements of engineering, education, enforcement, and emergency medical services and findings from pedestrian road safety audits, and address both behavioral and infrastructure issues, as well as incorporating the State's plan for safe, accessible and effective multi-modal transportation systems [17]. Maryland's strategies to meet the goals in the Pedestrians and Bicyclists EA include the use of:

DATA: Use the collection, analysis, and evaluation of data on all roads in Maryland to identify pedestrian and bicycle safety issues, key audiences and locations of concern, as well as support the improvement of the data quality (accessibility, accuracy, completeness, integration, timeliness, uniformity).

ENFORCEMENT: Support the improved enforcement of pedestrian- and bicycle-related laws, as well as support enforcement initiatives that promote safe behaviors.

INFRASTRUCTURE: Improve roadway environments related to pedestrians and bicyclists by influencing the implementation of system-wide countermeasures, engineering treatments, and land-use planning.

LEGISLATION: Support policy, legislation, and adjudication efforts to advance pedestrian and bicycle safety.

OUTREACH: Promote a systemic safety culture through the support of outreach initiatives including public awareness, education, training, and media campaigns focused on pedestrian and bicycle safety.

VEHICLE ENGINEERING & TECHNOLOGY: Identify, promote, and support the implementation of effective engineering and technological approaches to support the prevention of collisions involving pedestrians and bicyclists.

Maryland understands that better protecting pedestrians and bicyclists will prevent crashes and save lives. The Pedestrians and Bicyclists Emphasis Area calls for a safe system approach to countermeasures and a traffic safety culture that is forward thinking. Associated with the above strategies is an action plan designed to reach the goals named for the Pedestrians and Bicyclists EA. The action plan includes steps aimed to improve data collection, enhance enforcement programs, improve roadway environments, support pedestrian and bicyclist protection policy, educate the public on pedestrian and bicyclist safety, and utilize new technology in an effort to reduce the number of associated fatalities and serious injuries.

3.6 Speed and Aggressive Driving

In Maryland between 2015 and 2019, crashes that involved a speeding driver accounted for an average 81 fatalities and 347 serious injuries each year, 15% of all motor vehicle fatalities in the State. Speeding violations (not including automated enforcement), make up 12% of the 1.7 million moving violations issued every year in Maryland. Aggressive driving violations, defined as "a combination of moving traffic offenses so as to endanger other persons or property" [18], often include speeding combined with other infractions like following too closely or overtaking and passing vehicles.

Speed and aggressive driving not only increase the number of crashes on our roads but also increase the severity of crash outcomes. Research shows that as driving speed increases on a particular road, so does the number of crashes on that road, as well as the likelihood that the crash will result in a severe injury or fatality [19].

The Speed and Aggressive Driving EA team collaborates with State transportation agencies, safety partners, stakeholders, and law enforcement to reduce the number of speed-related fatalities and serious injuries, and reduce the number of aggressive driving fatalities and serious injuries.

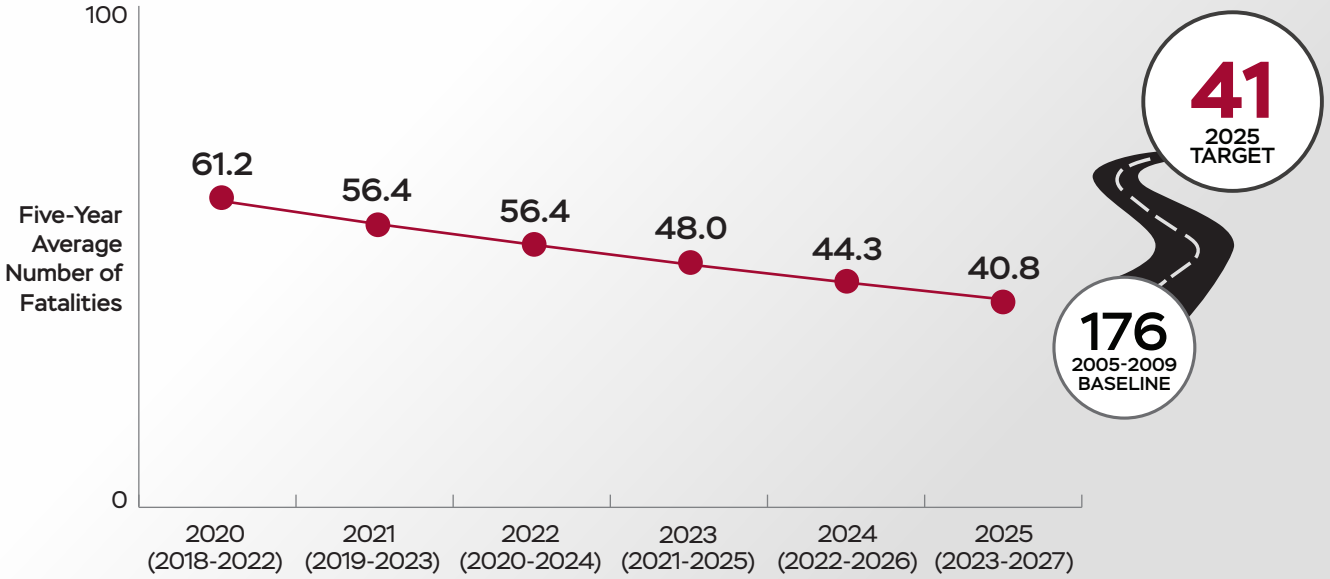
3.6.1 Performance Targets

The Speed and Aggressive Driving EA team, in collaboration with the SHSP Executive Committee, aims to meet or exceed the following performance targets:

FATALITY TARGET: Reduce the number of speed related fatalities on all roads in Maryland from the five-year average (2005-2009) of 176 to 41 or fewer by December 31, 2025.

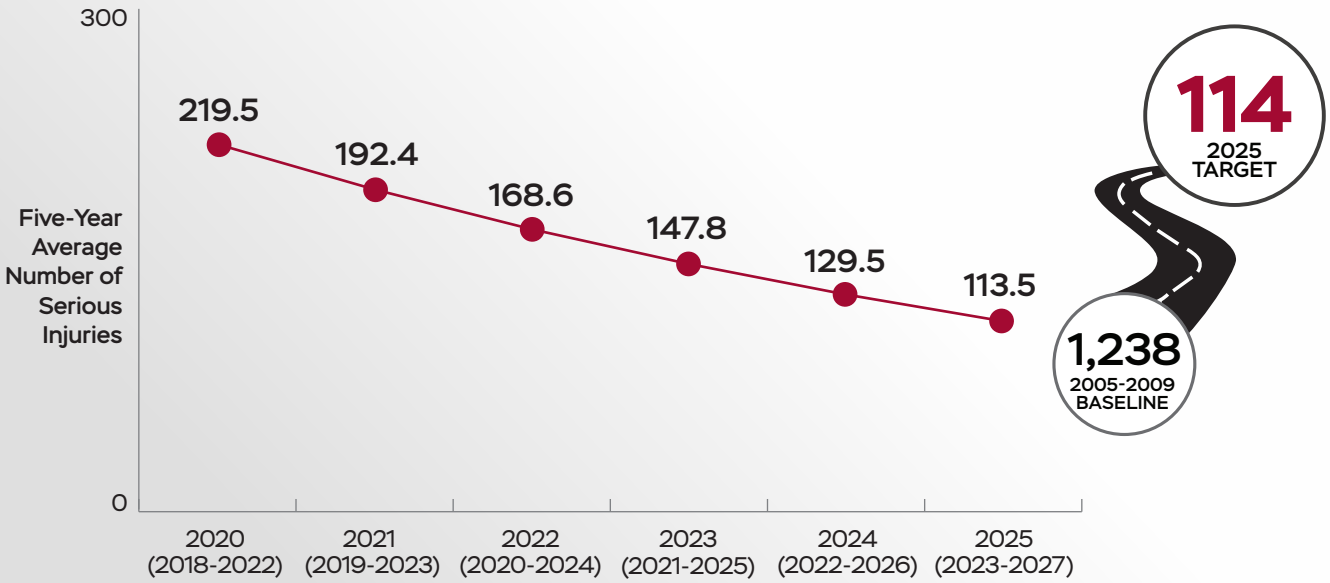
SERIOUS INJURY TARGET: Reduce the number of speed related serious injuries on all roads in Maryland from the five-year average (2005-2009) of 1,238 to 114 or fewer by December 31, 2025.

Speed Related Fatalities and Interim Targets



*Note: The annual target represents the mid-year of the five-year average.
For example, the 2020 target is the five-year annual average from 2018–2022.

Speed Related Serious Injuries and Interim Targets



*Note: The annual target represents the mid-year of the five-year average.
For example, the 2020 target is the five-year annual average from 2018–2022.

3.6.2 Strategies to Meet MD SHSP's Speed and Aggressive Driving Reduction Targets

In accordance with the overall SHSP, the Speed and Aggressive Driving EA team will implement the following strategies to drive down death and serious injuries on Maryland's roadways. These strategies include the highway safety elements of engineering, education, enforcement, and emergency medical services and address both behavioral and infrastructure issues, as well as incorporating the State's plan for safe, accessible, and effective multi-modal transportation systems [20]. Maryland's strategies to meet the goals in reducing speed and aggressive driving include the use of:

DATA: Use the collection, analysis, and evaluation of data on all roads in Maryland to identify speed and aggressive driving related issues, key audiences and locations of concern, as well as support the improvement of the data quality (accessibility, accuracy, completeness, integration, timeliness, uniformity).

ENFORCEMENT: Support the improved enforcement of speed and aggressive driving laws, as well as support enforcement initiatives that promote safe behaviors.

INFRASTRUCTURE: Improve roadway environments to reduce speed and aggressive driving behaviors by supporting the implementation of system-wide countermeasures, engineering treatments, and land-use planning.

LEGISLATION: Support legislation and adjudication efforts to reduce speed and aggressive driving violations.

OUTREACH: Promote a systemic safety culture through the support/solicitation of outreach initiatives including public awareness, education, training, and media campaigns focused on reducing speed and aggressive driving behaviors.

VEHICLE ENGINEERING AND TECHNOLOGY: Identify, promote and support the implementation of effective engineering and technological approaches to support speed and aggressive driving countermeasures.

Maryland understands that eliminating speeding and aggressive driving will prevent crashes, decrease crash severity and save lives. The Speed and Aggressive Driving Emphasis Area calls for a safe system approach to countermeasures and a traffic safety culture that is intolerant of speeding and aggressive driving. Associated with the above strategies is an action plan designed to reach the goals named for the Speed and Aggressive Driving EA. The action plan includes steps aimed to improve data collection, enhance enforcement programs, improve roadway environments, support speed and aggressive driving prevention policy, educate the public on the risks of speeding and aggressive driving, and utilize new technology in an effort to reduce the number of associated fatalities and serious injuries.

FHWA Standardized Performance and Survey Measures

The Maryland SHSP incorporates the five required Safety Performance Measures from the Federal Highway Administration. All federally required performance measures below are set using a five-year average and the exponential trend method described in the Background section. The FHWA Safety Performance Management Final Rules, published on March 15, 2016, established the following performance measures as the five-year rolling averages:

1. Number of Fatalities
2. Rate of Fatalities per 100 Million Vehicle Miles Traveled (VMT)
3. Number of Serious Injuries
4. Rate of Serious Injuries per 100 Million VMT
5. Number of Non-motorized Fatalities and Non-motorized Serious Injuries

The targets for serious injuries and serious injury rate were set in accordance with the Zero Deaths Maryland approach used for the fatalities and fatality rates. This methodology uses the number of serious injuries observed in 2005-2009 and an exponential trend line to set the 2025 goal.

The Maryland SHSP establishes the following reduction targets through December 31, 2025, for all Maryland roads.

Five-year Average (2005-2009) and 2025 Performance Targets

Five-year Average (2005-2009) | 2025 Performance Targets

FATALITIES
597 ▸ 397

FATALITY RATE
1.080 ▸ 0.647

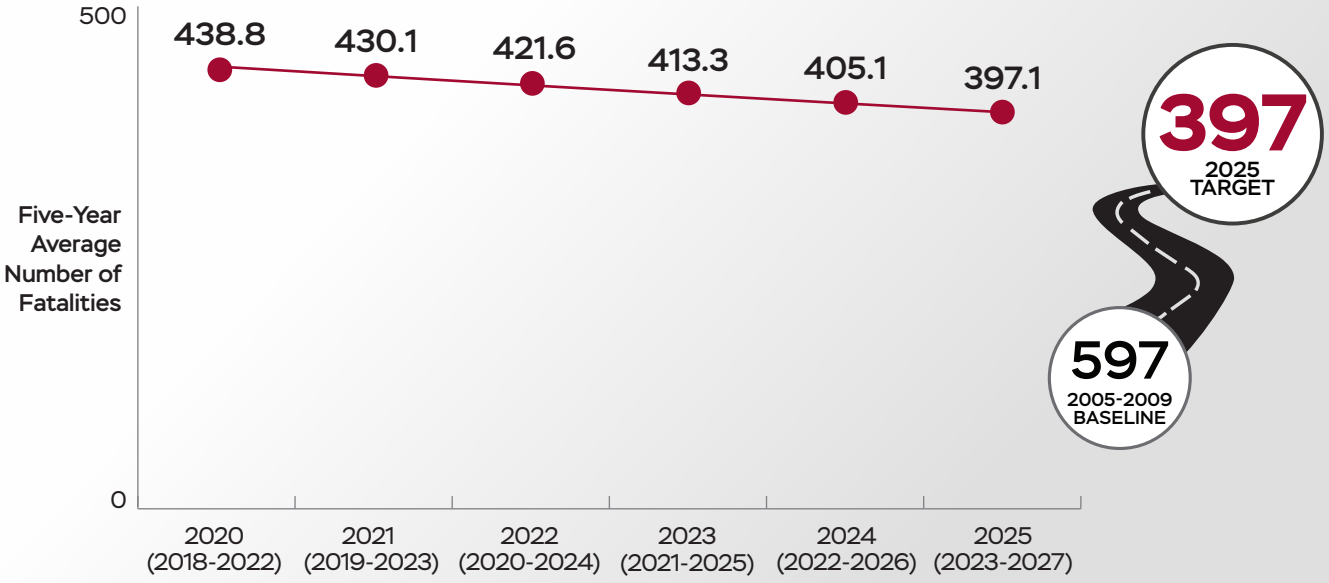
SERIOUS INJURIES
5,571 ▸ 1,668

SERIOUS INJURY RATE
9.876 ▸ 2.741

NON-MOTORIZED FATALITIES AND SERIOUS INJURIES
651 ▸ 489

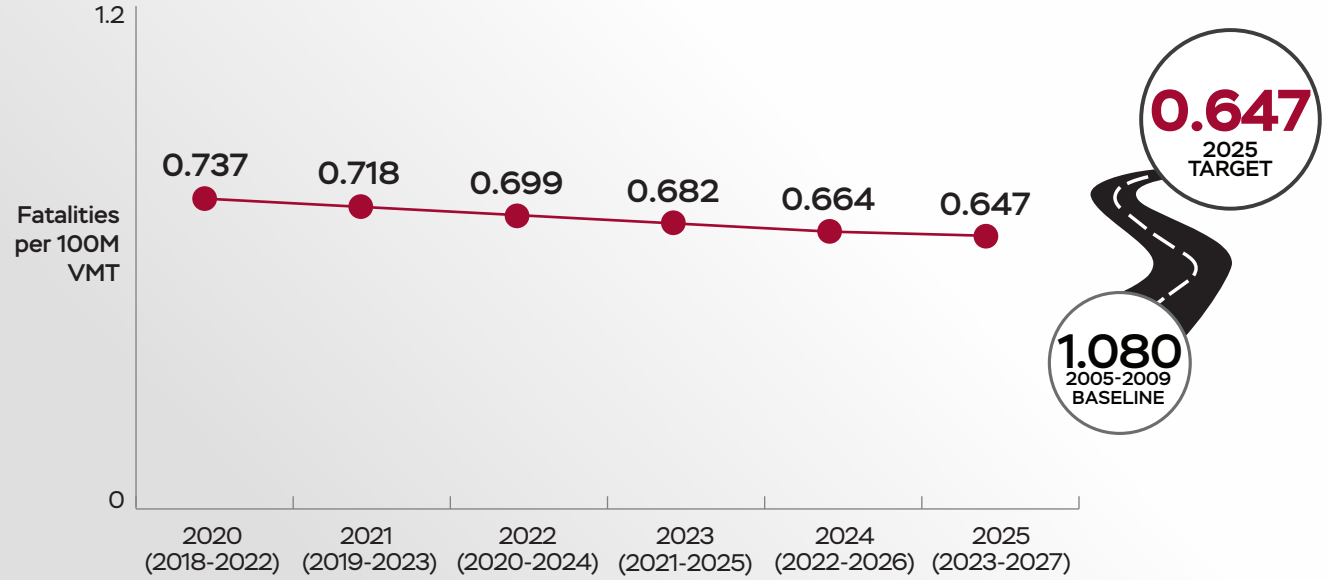
Figure 7. Five-year Average and 2025 Performance Targets

Total Fatalities in Maryland and Interim Targets



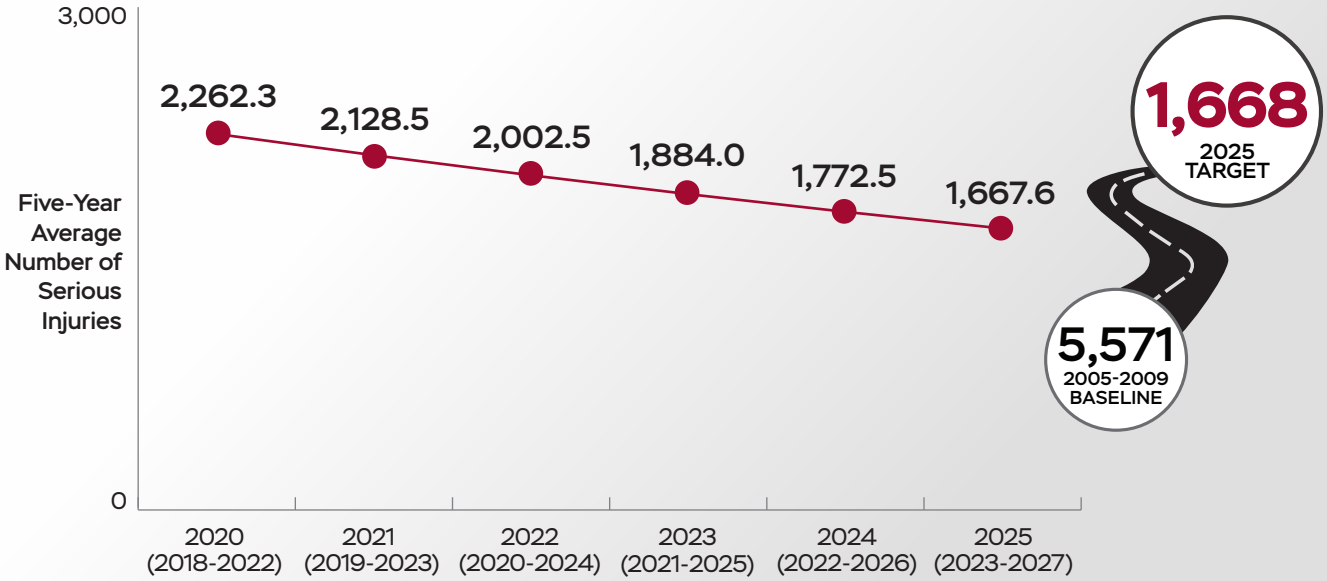
*Note: The annual target represents the mid-year of the five-year average.
For example, the 2020 target is the five-year annual average from 2018–2022.*

Fatality Rate per 100 Million Vehicle Miles Traveled (VMT) in Maryland and Interim Targets



*Note: The annual target represents the mid-year of the five-year average.
For example, the 2020 target is the five-year annual average from 2018–2022.*

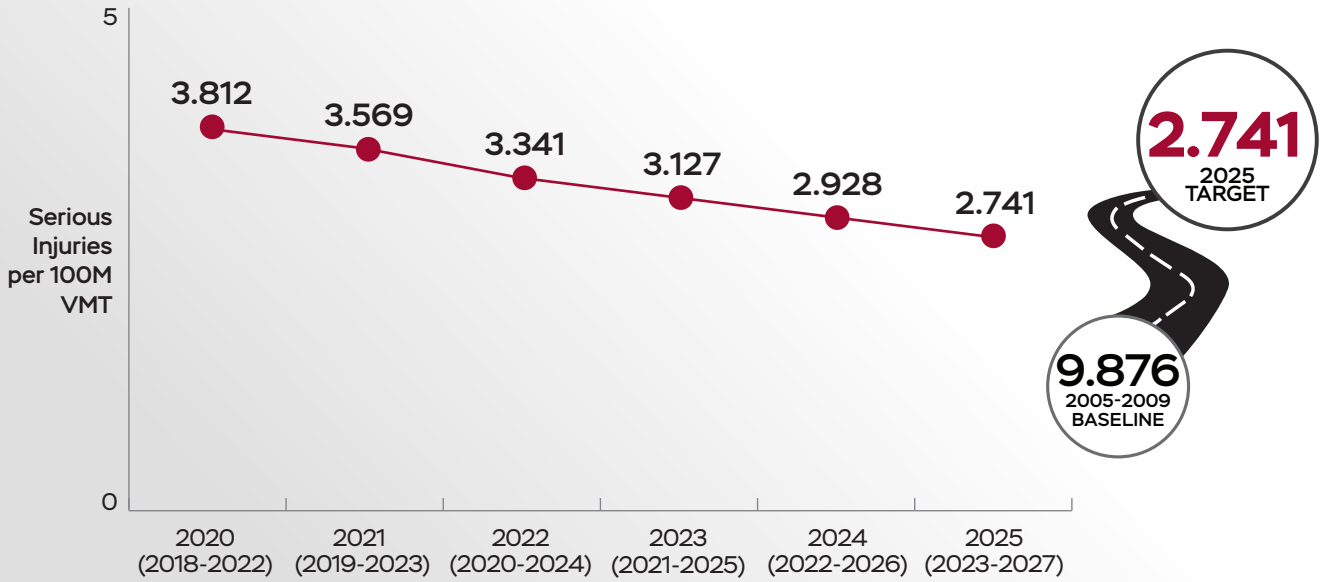
Total Serious Injuries in Maryland and Interim Targets



Annual Target*

**Note: The annual target represents the mid-year of the five-year average. For example, the 2020 target is the five-year annual average from 2018–2022.*

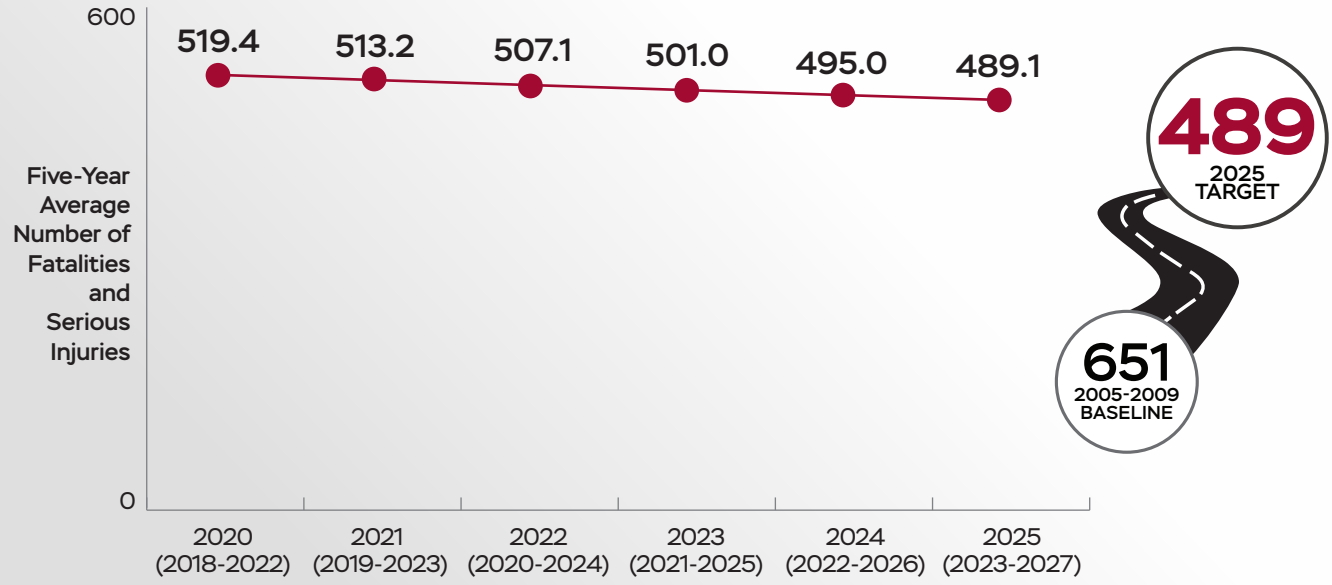
Serious Injuries Rate per 100 Million Vehicle Miles Traveled (VMT) in Maryland and Interim Targets



Annual Target*

**Note: The annual target represents the mid-year of the five-year average. For example, the 2020 target is the five-year annual average from 2018–2022.*

Total Non-Motorized Fatalities and Serious Injuries in Maryland and Interim Targets



Annual Target*

**Note: The annual target represents the mid-year of the five-year average. For example, the 2020 target is the five-year annual average from 2018–2022.*

Special Vehicles and Roadway Environments

In addition to Maryland's six Emphasis Areas, advanced driver assistance systems and autonomous vehicles, commercial motor vehicles, and work zones and traffic incident management are of particular interest to the SHSP Executive Council and Maryland safety partners due to their unique safety needs. Other special vehicles and roadway environments of concern include motorcycles, highway-rail grade crossings, school buses and bus stops, rural communities and farm equipment, and transit buses and bus stops. These concerns are not isolated to one particular EA, but rather are a shared concern amongst EAs.

Advanced Driver Assistance Systems and Automated Vehicles

The SHSP's approach to traffic safety takes into consideration the continued development and enhancement of advanced driver assistance technologies and the introduction of Connected and Automated Vehicles (CAV) on Maryland roads. The State has been advancing CAV initiatives through its Maryland CAV Working Group [21], which includes support from various MDOT Transportation Business Units, Maryland State Police, and over 300 stakeholders ranging from academia, local and other state agencies, and private companies. CAV technologies have the potential to save lives and reduce the severity of injuries, with the possibility of nearly eliminating crashes altogether. The U.S. Department of Transportation's National Highway Traffic Safety Administration has been clear on its belief that "[CAV] have the potential to remove human error from the crash equation, which will help protect drivers and passengers, as well as bicyclists and pedestrians" [22].

The Maryland CAV Strategic Framework, released in December 2020, also demonstrates the ability of all agencies across the State to help advance this life-changing technology. The SHSP Emphasis Areas consider countermeasure technologies such as enhanced sign and pavement marking visibility for human and machine vehicle operators, real-time traffic data sharing, training and enforcement development in an AV environment, in-vehicle technology to enhance the safety of the occupants, opportunities to reduce speed with the use of technology, and identifying the impacts to safety-dependent transportation planning and infrastructure. Maryland will also partner with private industries to ensure that CAV solutions are optimized across public and private facilities or technology.

Commercial Motor Vehicles

The number of commercial motor vehicles (CMVs) is increasing on roadways across Maryland. Between 2015 and 2019, CMVs were involved in 4.7% of all traffic crashes in Maryland, and 11.5% of fatal crashes involved a CMV. On a national level, the following statistics illustrate why CMV traffic safety is a concern across multiple EAs [23]:

- At least 39% of large truck occupants killed in crashes were not wearing a seatbelt
- Speed was a factor in 17% of truck crashes with at least one large truck occupant fatality
- 61% of fatal crashes involving a large truck occurred in rural areas

- 27% of fatal crashes in work zones involved a large truck
- 6% involved distraction of the large truck driver, of which 16% was related to cell phone use

Maryland's Emphasis Areas include strategies to address the risk factors of CMVs in order to reduce fatal and serious injuries on our roadways. By partnering with the Federal Motor Carrier Safety Administration (FMCSA), the SHSP safety partners will continually collaborate to advance efforts to:

- improve CMV safety from a driver and vehicle perspective through Federal and State programs
- educate road users, enforcement officers and motor carriers on CMV regulations and visibility issues
- support the use of appropriate CMV infrastructure modifications to reduce fatal and serious injuries involving CMVs

Work Zones and Traffic Incident Management

Work zones and traffic emergencies present challenging driving conditions like lane shifts, split travel lanes, reduced lane widths, concrete barriers, and uneven pavement. These events pose potential hazards requiring drivers to be prepared, continually focused, reduce speed, and obey emergency responders, road crews and work zone signs [24]. These zones are not only dangerous for the emergency responders and road crews, but also the occupants traveling through these zones. Nationally, in four out of five work zone-related crashes, the motor vehicle occupant is injured or killed [25]. In Maryland in 2018, 11 people – including two highway workers – lost their lives in work zone crashes [26]. From 2015 to 2019 an average of nine fatalities and over 1,500 injuries occurred each year in Maryland work zones. To address emergency responder fatalities, Maryland's "Move Over" law requires motorists to change lanes to give safe clearance to emergency responders and law enforcement officers. Further, the MD SHSP Emphasis Areas focus on reducing risk factors in work and emergency zones including preventing distracted driving, high speeds and aggressive driving, impairment, and unrestrained occupants.

Motorcycles

Between 2015 and 2019, an average of 71 motorcyclists (riders and passengers) were fatally injured and 287 were seriously injured each year. From 2015 through 2019 in Maryland, motorcycles were involved in an average of just under 1% of all traffic-related crashes, 3% of crashes resulting in injury, and 14% of fatal crashes. Motorcycles are significantly over-represented in fatal crashes and are therefore the focus of the Distracted Driving, Impaired Driving, Occupant Protection, Infrastructure, and Speed and Aggressive Driving Emphasis Areas.

Strategies to drive down motorcycle-related fatalities and injuries include public outreach, motorist education and awareness campaigns, and enhanced motorcycle safety training. These objectives also align with the MVA's Motorcycle Safety Action Plan.

Highway-Rail Grade Crossings

According to the U.S. Department of Transportation and the Federal Railroad Administration (FRA), the number of crashes at Highway-Rail Grade Crossings (HRGC) has consistently increased over the past 10 years. Nationally, in 2018, 2,205 crashes at HRGCs were reported to FRA showing a 4% increase relative to 2017 and 14% increase relative to 2009. Maryland has made a continuous effort to improve safety for the traveling public at highway-rail crossings, including flashing light signals, gates, and outdated component replacement. Strategies for preventing these crashes also address driver inattentiveness and speed as contributing factors.

Rural Communities and Farm Equipment Concerns

Roadway use changes when horse-drawn vehicles or farm equipment are present with other vehicles. In alignment with the Maryland State Highway Administration, the Maryland SHSP highlights the importance of safety for rural communities and farm equipment on the roadway. Studies show that three significant contributing factors are at play when a rural crash turns deadly: speed, alcohol, and unrestrained occupants [27, 28].

Rural crash prevention measures include well-lit and marked horse-drawn vehicles and farm equipment, fixed and mobile rural road signs warning of slow-moving vehicles, roadway maintenance, tree trimming to improve visibility, and outreach to increase recognition of these safety concerns. These measures can help bring awareness to the unique needs of rural communities and farm equipment operation on Maryland's roads [29]. Maryland's Emphasis Areas share the effort to prevent these fatal and serious injury crashes.

School Buses and Bus Stops

School bus crashes are relatively rare compared to other vehicle crashes. Between 2015 and 2019 in Maryland, 8,165 crashes involved a school bus. These crashes resulted in 14 fatalities (about 2.8 per year), including one school bus driver. No school bus passengers were killed during this period. Nationally, of the 264 school-age children killed in a school transportation-related crash between 2008 and 2017, 61 were occupants of the school transportation vehicle, 97 were pedestrians, five were pedal cyclists [30]. It is more likely for a student to be fatally injured as a pedestrian while waiting for or getting on or off the school bus.

More than half (56%) of the pedestrians were struck by school buses or vehicles functioning as school buses, while 44% were struck by vehicles of other body types. Strategies for preventing these tragic fatalities include educating bus drivers, students and roadway users about bus safety, informing parents and children of school bus laws and regulations, using enforcement technologies like cameras on buses, promoting enforcement of school bus-related violations, and considering infrastructure countermeasures for safe stops.

Transit Buses and Bus Stops

Transit buses and bus stops have unique safety needs that may conflict with the safety needs of other vehicles and pedestrians. To promote a safe system for all road users, our SHSP partners collaborate with other agencies in this effort, including the Maryland Transit Administration, the Federal Transit Administration and the Federal Motor Carrier Safety Administration. In alignment with the Commercial Vehicle Safety Plan, strategies across multiple Emphasis Areas include support for safe transit stops and the enforcement of laws and regulations on carriers that pose the highest future crash risk [31].

6 SHSP Implementation

Implementation of the 2021-2025 SHSP will involve the cross-collaboration of professionals representing the four Es of transportation safety including planning, engineering and operations, public outreach and education, law enforcement, and emergency medical services. Each of these disciplines plays a critical role in identifying, defining, and implementing optimal strategies that will reduce the number and severity of traffic crashes. Zero Deaths Maryland can only be achieved with the support and hard work of our Maryland safety partners. The following describes the MD SHSP's organizational structure.

GOVERNOR'S HIGHWAY SAFETY REPRESENTATIVE

Maryland's Governor has designated the Administrator of the Motor Vehicle Administration as the State's Highway Safety Representative to coordinate efforts with NHTSA, the Maryland Department of Transportation, Maryland State Police, Maryland Department of Health, Maryland Institute for Emergency Medical Services Systems, and other State agencies.

SHSP EXECUTIVE COUNCIL

The leaders of the Maryland Agencies tasked with the development and implementation of the SHSP. The Council includes leaders from Maryland's MVA, MSP, DOT, MDTA, SHA, DOH, MHSO, FHWA, and NHTSA.

STEERING COMMITTEE

Alongside the Executive Council, the Maryland Highway Safety Office is the SHSP steering committee responsible for day-to-day SHSP leadership, administration, and coordination.

EA CHAIRS & CO-CHAIRS

The Emphasis Area teams are chaired by a Program Manager from the MHSO. The co-chairs for each EA are safety professionals from various agencies and organizations around the State. These partners lead the EA team with the administration of the action plan, coordination of efforts and the responsibility to assure progress of the action plan.

EA TEAM

The EA teams consist of safety partners from all aspects of the SHSP: planners, engineers, medical, behavioral, public health, law, advocacy, and other professionals. Using a framework of strategies to improve Maryland traffic safety, the EAs consider all aspects of transportation safety and are well equipped to confront the traffic safety issues facing Maryland today. The EA teams plan, collaborate, and follow through with implementation and evaluation of relevant action steps. These strategies and action steps are enumerated in an action plan, which lays out short term, long term, or possibly ongoing activities. The EA teams meet at least quarterly and update these action plans as needed.

SHSP Evaluation and Plan Update

Maryland's SHSP Executive Council will conduct an annual review of the SHSP to monitor implementation, prioritize or re-prioritize strategies and action steps, and ensure the timeliness, accuracy, completeness, uniformity, integration and accessibility of traffic data. The annual review will monitor progress toward FHWA's Safety Performance Measures which include the number of fatalities, fatality rates, serious injury counts, serious injury rates, and non-motorized fatalities and serious injury counts in Maryland.

The MHSO management is the Steering Committee for Maryland's SHSP and will act as the liaison between the EAs and the Executive Council. On a regular basis, the MHSO will review EA team strategy implementation, performance targets, and progress made on their action plans. Based on available data and reports from EA teams, the MHSO management will recommend and assign actions to ensure implementation success as needed. Results from Maryland safety program evaluations will be used to modify strategies and their implementation through new or revised action steps.

Guided by the MHSO management, the Emphasis Area chairs have an established evaluation process, action steps, assigned roles and responsibilities, performance measures, data collection, analysis, and progress tracking. Every year, the Emphasis Area teams report on the following FHWA defined measures:

- **OUTPUT MEASURES:** The extent to which SHSP strategies and actions are implemented
- **OUTCOME MEASURES:** The degree to which SHSP strategies and activities contribute to reducing fatalities and serious injuries, improve road user safety attitudes and behaviors, etc.

The SHSP Executive Council and the MHSO management monitor and track these measures. These measures are also reported to agency leaders, safety stakeholders, and policy makers to gauge the level of SHSP implementation and impact on fatalities and serious injuries on our roadways. If the EAs do not make progress or meet goals, the Executive Council will examine the process and reconsider the EA action plan. Equipped with these measures, Maryland can direct resources and efforts to the most critical issues and strengthen the most effective prevention strategies.

Maryland 1-95 Travel Plaza

The following elements from our evaluation process guide EA leadership in the ongoing development, integration and evaluation of the SHSP:

- Determine data requirements and resources for action plans
- Document measureable objectives and performance measures
- Implement progress tracking
- Integrate with other transportation safety plans
- Conduct a comprehensive program evaluation to assess the SHSP's process and performance
- Share evaluation results to engage SHSP partnerships, take strategic action and sustain momentum

SCHEDULE FOR THE NEXT ITERATION OF THE SHSP

This SHSP will cover the time period from January 1, 2021, through December 31, 2025. The SHSP Executive Council will solicit support to produce the next iteration of the SHSP (2026-2030) in late 2024.

APPENDIX A

ACKNOWLEDGEMENTS

The Maryland Department of Transportation led the development of this update of the Strategic Highway Safety Plan in coordination with representatives from safety stakeholders across the State. MDOT would like to acknowledge the contributions of the following safety partner organizations who will continue to work together to implement the strategies in this plan:

Advocates for Highway and Auto Safety
AAA Mid-Atlantic
AAA Foundation for Traffic Safety
Baltimore County Police Department
Baltimore Metropolitan Council
BWI Airport
Calvert County Police Department
Carroll County Department of Health
Carroll County Department of Public Works
Cecil County Department of Public Works
Chesapeake Region Safety Council-NSC
Crash Center for Research and Education
Federal Highway Administration
Federal Motor Carrier Safety Administration
Harford County Sheriff's Office
Howard County Fire & Rescue
Howard County Government
Johns Hopkins University
MADD
Maryland Department of Agriculture
Maryland Department of Health
Maryland Department of Transportation
Maryland Farm Bureau
Maryland Highway Safety Office
MD Institute for Emergency Medical Services
Maryland Motor Vehicle Administration
Maryland State's Attorneys' Association
Maryland State Police
Maryland State Highway Administration
Maryland Transportation Authority Police
Montgomery County Engineering and Planning
Montgomery County Police Department
Morgan State University
National Highway Traffic Safety Administration
Prime Engineering
Prince George's County Dept. of Public Works
Prince George's County Fire & Rescue
University of MD Medical Center
University of Maryland National Study Center
Washington College
Washington Regional Alcohol Program

APPENDIX B
GLOSSARY

5-year Rolling Average: The average of five individual, consecutive annual points of data.

Aggressive Driving: Maryland law states that a person is guilty of aggressive driving if the person commits three or more of the following offenses at the same time or during a single and continuous period of driving in violation of:

- failure to obey traffic lights with steady indication
- overtaking and passing vehicles
- passing on right
- failing to obey traffic control device
- following too closely
- failure to yield right-of-way
- exceeding a maximum speed limit or posted maximum speed limit

Aggressive Driving Related Crash: A crash in which a driver has one of the following values in both the primary and secondary contributing circumstance fields of the Maryland crash report:

- failed to yield right of way
- failed to obey stop sign
- failed to obey traffic signal
- failed to obey other traffic control device
- failed to keep right of center
- failed to stop for school bus
- exceeded speed limit
- too fast for conditions
- followed too closely
- improper lane change
- improper passing
- failure to obey traffic signs, signals, or officer
- disregarded other road markings
- other improper action
- operated motor vehicle in erratic/reckless manner

Autonomous/Automated Vehicle: A vehicle that is capable of sensing its environment and moving safely with little or no human input.

Bicyclist: A person on any type of pedal cycle, including bicycles, tricycles, unicycles, and any trailers or sidecars attached to these cycles.

Citation and Adjudication Data: From the Maryland District Court, these data provide information about citations, arrests, and dispositions for all motor vehicle violations.

Commercial Motor Vehicle (CMV): Any self-propelled or towed motor vehicle used on a highway in interstate commerce to transport passengers or property when the vehicle:

1. Has a gross vehicle weight rating or gross combination weight rating, or gross vehicle weight or gross combination weight, of 4,536 kg (10,001 pounds) or more, whichever is greater; or
2. Is designed or used to transport more than eight passengers (including the driver) for compensation; or
3. Is designed or used to transport more than 15 passengers, including the driver, and is not used to transport passengers for compensation; or
4. Is used in transporting hazardous material

Commercial Vehicle Safety Plan (CVSP): Outlines the State's CMV safety objectives, strategies, activities and performance measures.

Complete Streets: Complete Streets are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work. They allow buses to run on time and make it safe for people to walk to and from train stations.

Contributing Factor: Conditions of the environment (such as lighting, weather), vehicle (brakes, lights), road (debris, obstructions), or driver behavior (inattentiveness, driving under the influence of alcohol or drugs) that contribute to the occurrence of a crash or its severity.

Crash: A set of events that results in injury or property damage due to the collision of at least one motorized vehicle and may involve collision with another motorized vehicle, a bicyclist, a pedestrian, or a fixed object.

Distracted Driving Related Crash: A crash where at least one driver in the crash was reported to be distracted. Distracted is defined by having values of either "failure to give full time and attention" or "cell phone in use" in any of the first four available contributing circumstance fields, or any of the following values in the driver distracted by field: looked but did not see; other electronic device (tablet, GPS, MP3 player, etc.); by other occupants; by moving object in vehicle; talking or listening on cellular phone; dialing cellular phone; adjusting audio and/or climate controls; using other device controls integral to vehicle; using device/object

brought into vehicle (non-electronic); distracted by outside person, object, or event; eating or drinking; smoking related; other cellular phone related; lost in thought; or texting from a cellular phone.

Driver: Operator of a motor vehicle.

Driver Licensing Data: Collected and administered by the Maryland Motor Vehicle Administration.

Emphasis Area: An area that has been identified as a safety concern for which resources within the jurisdictions and the State are allocated to develop and implement action plans forming a Strategic Highway Safety Plan.

Emphasis Area Strategy: A strategy intended to reduce the crash frequency or severity, or both, at a specific site or for several similar locations.

Executive Council (of SHSP): Maryland's SHSP Executive Council governs the SHSP and is comprised of the Deputy Secretary of the MDOT, the MDOT MVA Administrator, the MDOT SHA Administrator, the Secretary of the Maryland Department of State Police (Superintendent), the Executive Director of the Maryland Institute for EMS Systems, the Chief of Police of the Maryland Transportation Authority, and the Deputy Secretary of Maryland's Department of Health and Mental Hygiene.

Farm Equipment: Equipment used in agricultural operations.

Federal Motor Carrier Safety Administration (FMCSA): Lead federal government agency responsible for regulating and providing safety oversight of commercial motor vehicles (CMVs); FMCSA's mission is to reduce crashes, injuries, and fatalities involving large trucks and buses.

Federal Highway Administration (FHWA): An agency within the U.S. Department of Transportation that supports State and local governments in the design, construction, and maintenance of the Nation's highway system (Federal Aid Highway Program) and various federally and tribal owned lands (Federal Lands Highway Program).

Four Es: Engineering, education, enforcement, and emergency medical services. Generally, the four Es of transportation safety define the broad stakeholder communities who address safety issues and are responsible for making the roads safe for all users:

- Engineering: highway design, traffic, maintenance, operations, planning, etc.
- Enforcement: State and local law enforcement agencies
- Education: for example, driver education, citizen advocacy groups, educators, prevention specialists, etc.
- Emergency Response: first responders, paramedics, fire and rescue, etc.

Highway Infrastructure Related Crash: A crash in which any of the following were a factor:

road surface, road type, road environment (weather, visibility), work zone, road segments (curves, grade, tunnels, number of lanes, shoulder condition, width of lanes), junction type (gradient, length, sight distance, conflict points), junctions.

High Risk Rural Road: A statewide listing of all roads, including non-state highways inventoried as SHA functional class 7 (Rural Major Collector), 8 (Rural Minor Collector) or 9 (Rural Local) with fatal and/or incapacitating injury crash frequency of four or more police reported crashes within a one-half mile section during a three-year period.

Highway Safety Improvement Program (HSIP): The purpose of the HSIP is to achieve a significant reduction in traffic fatalities and serious injuries on public roads. To obligate "core" safety funds MDOT SHA must have in effect an HSIP under which the State: 1) develops and implements a Strategic Highway Safety Plan (SHSP) that identifies and analyzes highway safety problems and opportunities to reduce fatalities and serious injuries, 2) produces a program of projects or strategies to reduce identified safety problems, 3) evaluates the plan on a regular basis to ensure the accuracy of the data and priority of proposed improvements, 4) submits an annual report to the FHWA Division.

Highway Safety Plan (HSP): A state document, coordinated with the State strategic highway safety plan as defined in 23 U.S.C. 148(a), that the State submits each fiscal year as its application for highway safety grants, which describes the strategies and projects that State plans to implement and the resources from all sources it plans to use to achieve its highway safety performance targets. Reference 23 CFR 1200. Subpart B.

Impaired Driving Related Crash: The Maryland definition of an impaired driving crash is: At least one driver in the crash is determined to be impaired by the investigating officer as indicated through the driver condition, blood alcohol content, substance use detected, and contributing factor fields on the Maryland crash report:

- person condition of "had been drinking," "using drugs," or "influenced by medications and/or drugs and/or alcohol" or
- blood alcohol concentration (BAC) between 0.01 and 0.50 or
- substance use of '"alcohol contributed," "illegal drugs contributed," "medication contributed," or "combination contributed" or
- contributing circumstance of "under the influence of drugs," "under the influence of alcohol," "under the influence of medication," or "under combined influence."

Note: This definition includes drug impairment as well as alcohol impairment, and will not match alcohol-impaired

fatality figures provided by NHTSA's Fatal Accident Reporting System (FARS), which measures only drivers with a recorded Blood Alcohol Content (BAC) greater than 0.08. Objectives for both State and federally defined impaired driving are included to maintain continuity with previous Maryland SHSP and HSPs, and to maintain a link with other State plans that exclusively use State crash data as the source for problem identification and program evaluation.

Injury Categories: Injuries reported by the investigating officer on the Maryland crash report are categorized by the injury severity code according to federal guidelines. The categories are:

Fatal Injury: Any injury that results in death within 30 days after the motor vehicle crash in which the injury occurred. If the person did not die at the scene but died within 30 days of the motor vehicle crash in which the injury occurred, the injury classification is changed from the attribute previously assigned to the attribute "fatal injury."

Suspected Serious Injury: A suspected serious injury is any injury other than fatal which results in one or more of the following:

- Severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood
- Broken or distorted extremity (arm or leg)
- Crush injuries
- Suspected skull, chest or abdominal injury other than bruises or minor lacerations
- Significant burns (second and third degree burns over 10% or more of the body)
- Unconsciousness when taken from the crash scene
- Paralysis

Suspected Minor Injury: A minor injury is any injury that is evident at the scene of the crash, other than fatal or serious injuries. Examples include lump on the head, abrasions, bruises, minor lacerations (cuts on the skin surface with minimal bleeding and no exposure of deeper tissue/muscle).

Possible Injury: Any injury reported or claimed which is not a fatal, suspected serious, or suspected minor injury. Examples include momentary loss of consciousness, claim of injury, limping, or complaint of pain or nausea. Possible injuries are those that are reported by the person or are indicated by his/her behavior, but no wounds or injuries are readily evident.

No Apparent Injury: A situation where there is no reason to believe that the person received any bodily harm from the motor vehicle crash. There is no physical evidence of injury and the person does not report any change in normal function.

Injury Surveillance System: The injury surveillance system tracks the frequency, severity, and nature of injuries sustained in motor vehicle crashes. The system includes: pre-hospital emergency medical services (EMS), trauma registry, emergency department, hospital discharge, and mortality data.

Intersection: The general area where two or more roadways or highways meet, including the roadway, and roadside facilities for pedestrian and bicycle movements within the area.

Intersection Crash: A crash that occurs within the limits of an intersection.

Intersection Related Crash: Crashes reported as occurring in an intersection or being intersection related. "Intersection related" is not a location type but a judgment about the effects of intersections and their traffic controls upon traffic and crash causation. If the crash is deemed to have occurred as a result of backed-up traffic from an intersection (presumably at a non-intersection location) the junction relationship is "intersection related."

Long-Range Transportation Plan: A 20-year planning horizon vision document that reflects the application of programmatic transportation goals to project prioritization.

Maryland Highway Safety Office (MHSO): The MDOT MVA's Highway Safety Office is dedicated to saving lives and preventing injuries by reducing motor vehicle crashes through the administration of a comprehensive network of traffic safety programs. The MDOT MVA's Highway Safety Office endeavors to provide expert highway safety leadership through quality programs, ethical grants management, professional and accountable staff, and exemplary customer service.

Metropolitan Planning Organization (MPO): A federally mandated and federally funded transportation policy-making organization that is made up of representatives from local government and governmental transportation authorities. MPOs conduct planning and programming for federal transportation funds within a "3C" process (continuing, comprehensive, and cooperative).

Motor Carrier: A vehicle that transports passengers or property for compensation.

Motorcycle Crash: A crash involving at least one motorcycle, defined as a "motorcycle" body type.

Motorist: Driver or passenger of a vehicle or motorcycle.

National Highway Traffic Safety Administration (NHTSA): An agency of the U.S. DOT whose mission is to promote safer vehicles and safer driving practices to reduce deaths, injuries, medical costs and other economic losses resulting from motor vehicle crashes.

Older Driver Related Crash: A crash where at least one driver in the crash was reported to be between the ages of 65 and 110.

Pedestrian: Person on foot (using the 'pedestrian' person type and 'pedestrian on foot' pedestrian type), including a motorist who has exited a vehicle.

Pedestrian Crash: A crash where at least one involved person is reported as a pedestrian.

Performance Measures: Indicators that enable decision-makers and other stakeholders to monitor changes in road system condition and performance against established visions, goals, and objectives.

Performance Target: Goals of an SHSP EA.

Police Crash Report Data: Reported, collected and administered by the Maryland State Police.

Road System: All of the roads (local and/or highway) that are under the jurisdiction of a single agency (such as state, county, or municipality).

Roadway: The portion of a highway, including shoulders, for vehicular use.

Run-off-the-Road Crash: A crash where the first event was recorded as "striking a fixed object" or "running off the road" or the location of the crash was reported as "off-road" or "in the median."

Safe System Approach: Under the Safe System approach, road safety is a shared responsibility among everyone, including those that design, build, operate and use the road system. It takes a holistic view of the road transport system and the interactions among roads and roadsides, travel speeds, vehicles and road users.

Safety Culture: "The implicit shared values and beliefs that determine the way in which the society organizes and acts" in matters that affect safety (AAA Foundation for Traffic Safety, 2007).

Serious Injury: Generally defined as an incapacitating injury or any injury, other than a fatal injury, that prevents the injured person from walking, driving, or normally continuing the activities the person was capable of performing before the injury occurred.

Sign: An official traffic control device placed or erected by authority of a public body or official having jurisdiction for the purpose of regulating, warning, or guiding traffic.

Speed Related Crash: A crash where at least one driver in the crash was reported to be speeding, defined by having values of either "exceeded speed limit" or "too fast for conditions" in the first or second contributing circumstance fields.

State Highway Administration (SHA): The State transportation business unit responsible for maintaining Maryland's numbered highways outside Baltimore City.

Strategic Transportation Improvement Plan (STIP): A four-year, fiscally constrained, and prioritized set of transportation projects, compiled from statewide, local, and regional plans.

Strategic Highway Safety Plan (SHSP): A data-driven, comprehensive, multidisciplinary plan integrating the four Es of transportation safety – engineering, education, enforcement, and emergency medical services. It establishes statewide performance measures, goals, objectives, and Emphasis Areas and describes a program of strategies to reduce or eliminate safety hazards. It is developed by the State Department of Transportation (DOT) in consultation with federal, State, local, and tribal safety stakeholders, in accordance with 23 U.S.C. § 148.

Traffic Records Coordinating Committee (TRCC): A committee whose purpose is to continually review and assess the status of Maryland's Traffic Safety Information System and its components. It is responsible for updates to the Traffic Records Strategic Plan (TRSP); learning about technologies to improve the information system; promote, support and assist in the coordination and implementation of desired system improvements; and provide a forum for the exchange of information.

Traffic Records Strategic Plan (TRSP): A plan that incorporates all traffic records system components as identified in NHTSA's Traffic Records Program Assessment Advisory and identifies and prioritizes performance measures as the focus to help Maryland use a systems approach to proactively identify the resources needed (legislative, organizational, or budgetary) to efficiently and effectively reach these goals.

Unrestrained Occupant: A passenger-vehicle (automobile, station wagon, van, SUV, pickup truck) occupant who is: less than eight years of age recorded as not using a "child/youth restraint," eight years of age or older recorded as not using a "lap and shoulder belt" or "air bag and belt," or where restraint use was recorded as using "none" or "air bag only."

Vehicle: A device in, upon, or by which a person or property is or may be transported upon a highway, except devices moved by human power or used exclusively on stationary rails or tracks.

Vehicle Registration Data: Collected and administered by the Maryland Motor Vehicle Administration. The registration data are an inventory of data that enables the titling and registration of each vehicle under the State's jurisdiction to ensure that a descriptive record is maintained and made accessible for each vehicle and vehicle owner operating on public roadways.

Work-Zone Crash: Crashes occurring in a construction/maintenance zone.

Young Driver: Drivers aged 16-20.

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

Maryland State Highway Administration

Vulnerable Road User Safety Assessment

November 2023

Contents and Acknowledgements

A Note from the SHA Administrator

Following shortly after the successful publication of SHA's Pedestrian Safety Action Plan (PSAP) in May 2023, and in partnership with the Federal Highway Administration, I am pleased to share this Vulnerable Road User (VRU) Safety Assessment. The VRU Safety Assessment expands upon the PSAP and addresses Infrastructure Investment and Jobs Act provisions for people walking and bicycling. This assessment includes additional years of crash data, guidance for our local agency partners, and another round of consultation with interested parties to further align our approach with public interests.

The VRU Safety Assessment lends further support to our efforts to apply the Context Driven philosophy to make Vision Zero a reality. By ramping up our implementation efforts and continuing to foster relationships with local partners, SHA marches forward toward achieving its mission and vision, to safely connect Marylanders to life's opportunities.

William Pines, PE
Administrator

A Note from the MVA Administrator

The 2021-2025 Maryland Strategic Highway Safety Plan (SHSP) utilized the fundamentals of Vision Zero as part of a comprehensive approach to reduce fatalities and serious injuries on roadways across the state. This approach is consistent with Maryland's ultimate traffic safety goal of zero transportation deaths and serious injuries on the state's roadways by 2030.

This Vulnerable Road User (VRU) Safety Assessment forms an appendix to the SHSP. Like the SHSP, it utilizes a data-driven approach to build effective strategies, create action steps, and establish performance measures to help achieve these long-term goals.

Safety is everyone's responsibility. MVA is committed to working with our partners and other interested parties to implement the recommendations in this assessment. Only by working together will we keep Maryland moving toward our goal of zero deaths.

Christine Nizer
MVA Administrator

Contents

1 Introduction

While the number of vehicle miles traveled (VMT) across the United States (U.S.) has fluctuated over the past two decades due to various social and economic factors, the number of pedestrians and cyclists involved in fatalities and serious injuries on U.S. roadways has steadily risen. Given the inherent, unprotected nature of these vulnerable road users (VRU) outside of motor vehicles, even an event deemed minor for a motor vehicle can lead to catastrophic results for those walking, cycling, or rolling along or across the roadway. As such, understanding the risk factors and underlying causes of crashes involving VRUs plays a key role in creating a safer roadway environment for all users. The purpose of this VRU Safety Assessment is to evaluate safety performance along Maryland roadways with respect to VRUs and to develop a plan for improving the safety for these users through both targeted and systemic improvements on Maryland's transportation network. Ultimately, this assessment is intended to improve VRU safety by identifying specific improvement strategies and prioritizing corridors through a process that is guided and supported by quantitative and qualitative data, land use context, and community input.

Vulnerable Road Users

A VRU is a non-motorist with a fatality analysis reporting system (FARS) person attribute code for pedestrian, bicyclist, other cyclist, and person on personal conveyance or an injured person that is, or is equivalent to, a pedestrian or pedalcyclist as defined in the ANSI D16.1-2007. (See 23 U.S.C. 148(a)(15) and 23 CFR 490.205). A VRU may be someone who is walking, biking, rolling, or using a mobility device, such as a wheelchair. For the sake of brevity in this report, however, VRUs will be referred to primarily as pedestrians and cyclists. VRUs are particularly susceptible to being killed or injured in a crash, and they account for a growing share of all transportation fatalities, both in Maryland and throughout the U.S.

VRU Safety Assessment and the Pedestrian Safety Action Plan

A VRU Safety Assessment is a comprehensive statewide examination aimed at understanding the transportation safety challenges faced by VRUs. The assessment first evaluates the safety performance for pedestrians and cyclists, then develops a plan to improve safety for those travelers at specific locations or throughout the entire system. Thus, it provides a structured approach for transportation authorities, planners, and engineers to identify potential hazards, assess risks, and develop strategies to enhance the safety and accessibility of roadways for all users.

For planning purposes in the state of Maryland, the VRU Safety Assessment built on the Pedestrian Safety Action Plan (PSAP), which was developed by the Maryland State Highway Administration (SHA) and published in May 2023. The PSAP provides a framework for addressing VRU safety concerns across the SHA transportation system, not including local roads. The plan identifies areas of need and prioritizes corridors within the areas of need for infrastructure improvements. By targeting these areas, the PSAP aims to advance the goals of Maryland's Strategic Highway Safety Plan (SHSP) by prioritizing roadway design that enhances the safety of all Marylanders.

While the scope of the PSAP is similar to that of the VRU Safety Assessment, the VRU Safety Assessment differs in three primary ways. This assessment:

- Analyzes crash data over a six-year period as compared to four years for the PSAP,
- Includes the evaluation of local roads in addition to state roads, and
- Includes additional consultation with interested parties through online meetings and surveys.

Safe System Approach

The United States Department of Transportation (USDOT) uses a Safe System Approach as the guiding paradigm to address roadway safety. The Safe System Approach has been embraced by the transportation community as an effective way to address and mitigate the risks inherent in our enormous and complex transportation system. It works by building and reinforcing multiple layers of protection to both prevent crashes from happening in the first place and minimize the harm caused to those involved when crashes do occur. It is a holistic and comprehensive approach that provides a guiding framework to make places safer for people.

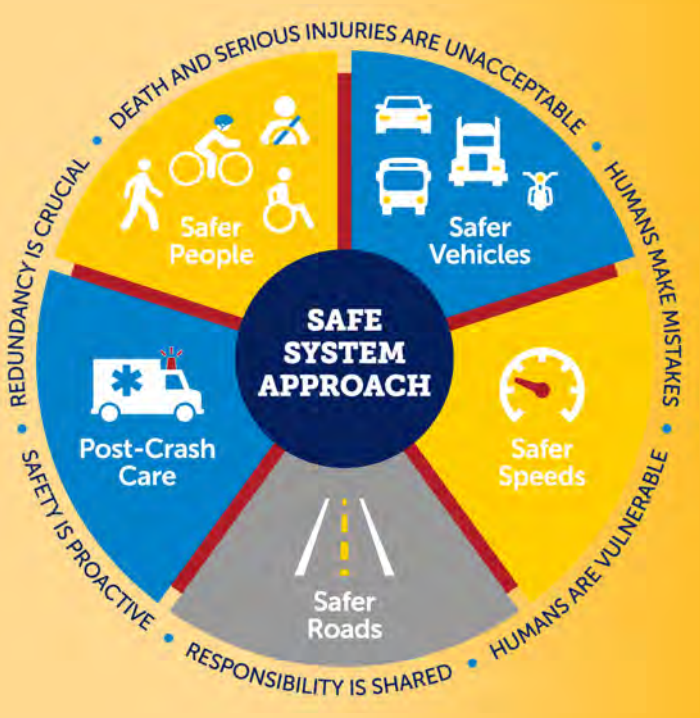
This is a shift from a conventional safety approach because it focuses on both human mistakes AND human vulnerability and designs a system with many redundancies in place to protect everyone.

The Safe System Approach forms the cornerstone of this VRU Safety Assessment. The approach is incorporated into the assessment in five key ways corresponding to the five elements of the Safe System Approach, described in more detail on page 4:

- **Humans are Vulnerable**: VRUs are, by definition, the most vulnerable travelers in our transportation network. This assessment is focused on their safety.
- **Death and Serious Injuries are Unacceptable**: Fatalities and serious injuries received special consideration in the identification and prioritization of high-risk areas described in chapter 3.
- **Responsibility is Shared**: This assessment includes state, county, and municipal roads. The recommendations in chapter 5 include coordination between the state and local jurisdictions to improve safety in all high-risk areas.
- **Safer Roads** and **Safer Speeds**: Safer roads and safer speeds benefit not just VRUs, but everyone using the transportation system. The recommendations in chapter 5 are centered on implementing proven safety countermeasures, including approaches to manage speeding, that create safer roads in Maryland.

More About the Safe System Approach

USDOT's National Roadway Safety Strategy and the Department's ongoing safety programs are working towards a future with zero roadway fatalities and serious injuries. In support of this approach, the Safe System Approach is focused on infrastructure, human behavior, responsible oversight of the vehicle and transportation industry, and emergency response.



Principles of a Safe System Approach

A Safe System Approach incorporates the following principles:

Death and Serious Injuries are Unacceptable: A Safe System Approach prioritizes the elimination of crashes that result in death and serious injuries.

Humans Make Mistakes: People will inevitably make mistakes and decisions that can lead or contribute to crashes, but the transportation system can be retrofitted, designed, and operated to help mitigate certain types and levels of human mistakes, and to reduce the likelihood of death and serious injuries when a crash occurs.

Humans Are Vulnerable: Human bodies have physical limits for tolerating crash forces before death or serious injury occurs; therefore, it is critical to design and operate a transportation system that is human-centric and accommodates physical human vulnerabilities.

Responsibility is Shared: All stakeholders—including government at all levels, industry, non-profit/advocacy, researchers, and the general public—are vital to preventing fatalities and serious injuries on our roadways.

Safety is Proactive: Proactive tools should be used to identify and address safety issues in the transportation system, rather than waiting for crashes to occur and reacting afterwards.

Redundancy is Crucial: Reducing risks requires that all parts of the transportation system be strengthened, so that if one part fails, the other parts still protect people.

Objectives of a Safe System Approach

Implementation of the National Roadway Safety Strategy will be arranged around five complementary objectives corresponding to the Safe System Approach elements:

Safer People: Encourage safe, responsible driving and behavior by people who use our roads and create conditions that prioritize their ability to reach their destination unharmed.

Safer Roads: Design roadway environments to mitigate human mistakes and account for injury tolerances, to encourage safer behaviors, and to facilitate safe travel by the most vulnerable users.

Safer Vehicles: Expand the availability of vehicle systems and features that help to prevent crashes and minimize the impact of crashes on both occupants and non-occupants.

Safer Speeds: Promote safer speeds in all roadway environments through a combination of thoughtful, equitable, context-appropriate roadway design, appropriate speed-limit setting, targeted education, outreach campaigns, and enforcement.

Post-Crash Care: Enhance the survivability of crashes through expedient access to emergency medical care, while creating a safe working environment for vital first responders and preventing secondary crashes through robust traffic incident management practices.

Source for information on pages 6-7: FHWA

Federal Guidance

All states are required to develop a VRU Safety Assessment as described in 23 U.S.C. 148(l), as amended by the Infrastructure Investment and Jobs Acts (IIJA) (Pub. L. 117-58, also known as the "Bipartisan Infrastructure Law" (BIL)). Federal guidance was outlined in a Federal Highway Administration (FHWA) memorandum dated October 21, 2022. The memo states that the initial assessment must be completed by November 15, 2023, and included in the state's SHSP. The guidance emphasizes data-driven decision-making, consulting key stakeholders, and incorporating effective safety measures to protect VRUs. States must use a minimum of five years of crash data to identify high-risk areas for VRUs, with data analysis including location, roadway functional classification, design speed, speed limit, and time of day. Consultations with local governments, metropolitan planning organizations (MPOs), regional transportation planning organizations (RPOs), and other stakeholders are required, as well as a program of projects or strategies to reduce safety risks for VRUs in the determined high-risk areas. States are encouraged to continuously improve their VRU Safety Assessment and related strategies to enhance safety outcomes over time. All requirements can be found in 23 U.S.C. 148 (l) and at

https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-10/VRU%20Safety%20Assessment%20Guidance%20FINAL_508.pdf.

Methodology for Evaluating Maryland VRU Crash Data

To ensure the success and continuous improvement of VRU safety implementation, it is important to evaluate Maryland's recent VRU crash data. By analyzing and understanding the patterns, causes, and locations of VRU crashes, SHA and other agencies can identify areas of concern and develop targeted interventions. Evaluating VRU crash data provides valuable insights into the circumstances surrounding these incidents and helps prioritize efforts to enhance safety.

As with the PSAP process illustrated on the following page, evaluating VRU crash data requires a systematic data-driven approach that consists of the following steps:

1. *Data Collection* – Gather comprehensive non-motorist data.
2. *Data Analysis* – Employ statistical analysis to identify trends and contributing factors associated with VRU crashes.
3. *Collaboration* – Engage with required entities and stakeholders, including transportation agencies, to gain a comprehensive understanding of VRU crash data and develop effective interventions. Consultations focused on high-risk areas, providing more information about safety concerns and potential solutions for each.
4. *Recommendations and Action* – Based on the analysis of non-motorist crash data and feedback, provide recommendations to enhance the existing PSAP. These recommendations address the high-risk areas, identify contributing factors, and propose strategies for improved infrastructure, education, and enforcement.

This data-driven approach presents a valuable opportunity to strengthen the PSAP and promote VRU safety throughout the state. By identifying high-risk areas, understanding contributing factors, and assessing the effectiveness of interventions, SHA can work to reduce VRU crashes, enhance infrastructure, and improve public awareness. Through analysis and collaboration, Maryland can contribute to prioritizing pedestrian and cyclist safety and create a safer environment for all road users.

Pedestrian Safety Action Plan Process

What ARE THE STEPS

Data Collection & Analysis

Data collection and analysis focuses on understanding patterns in Maryland's pedestrian and bicycle crash data that illustrate existing conditions and help identify areas of need.

Existing Conditions

Documenting **existing conditions** involves visualizing VRU crash patterns as well as identifying where and how pedestrian and bicycle crashes are occurring throughout Maryland to inform subsequent work.

Beyond crash data, existing conditions also show what programs, policies, and initiatives are already in place to combat Maryland's pedestrian and bicycle safety challenges.

Survey Map & Virtual Public Meetings

Areas of Need

Areas of need are determined by mapping and layering crash density, public input, equity analysis, and Short Trip Opportunity Areas (STOAs) to reveal areas in highest need of pedestrian and bicycle improvements.

Prioritization

Prioritization identifies priority corridors within the identified areas of need. This requires an effective methodology, which is shaped by various data sources and public input.

Survey Map & Virtual Public Meetings

Actions & Strategies

Actions and strategies puts the areas of need and prioritization stages to work by recommending pedestrian and bicycle safety countermeasures. The Context Driven Toolkit will be a major component of the recommendations in this section.

2 Overview of VRU Safety Performance

In 2021, Maryland saw 137 VRU deaths. That total bookended over a decade-long trend of increasing risk to both pedestrians and cyclists, with a high of 153 deaths in 2020. Although, statistically, pedestrians account for more traffic related fatalities than cyclists, both are experiencing similar increases in annual fatalities. These increasing fatality numbers for both pedestrians and cyclists emphasize the broader concern for all VRUs on Maryland roadways.

VRU Fatalities

Maryland's VRU fatalities have been slowly but steadily increasing since 2010. The increase in VRU fatalities mirrors the slight increase in VMT since 2010. Despite an occasional decrease in annual totals, Maryland has experienced a nearly 25% increase in VRU traffic fatalities from 2010 to 2021. In 2020, despite a drop in VMT associated with the COVID-19 pandemic, VRU fatalities were the highest over the 12-year period observed. When comparing five-year averages (2012-2016 vs 2017-2021), VRU fatalities increased by almost 24%.

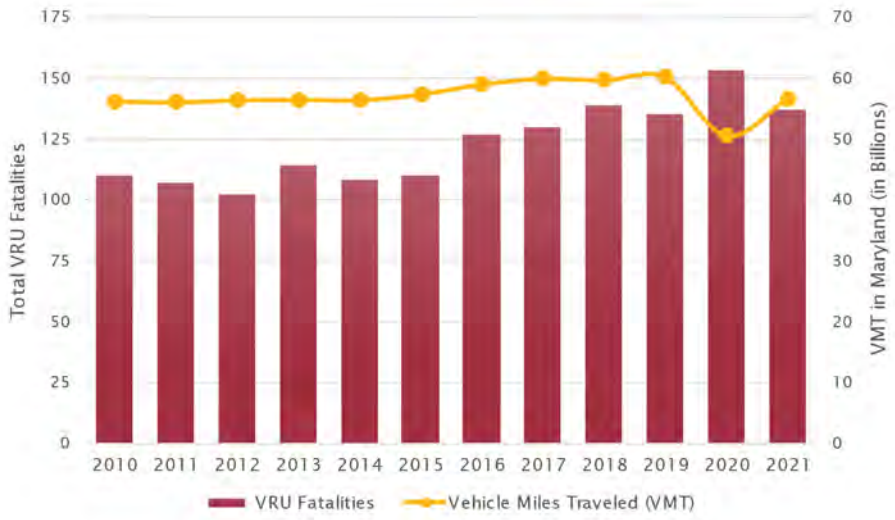


Figure 1 Maryland VMT and VRU Fatality Trends

VRU Serious Injuries

The number of non-fatal VRU serious injuries decreased over a four-year span from 2017 to 2020. However, when comparing five-year averages (2012-2016 vs. 2017-2021), VRU serious injuries increased by 23%. In the context of fatality data, the injury data suggests that crashes are becoming more likely to result in fatalities. The year 2020 saw Maryland's lowest number of VRU serious injuries over a six-year period, but this corresponded to the state's highest number of VRU fatalities during that period. In addition, VMT reached a 12-year low, suggesting there are other contributing factors affecting VRU crashes.

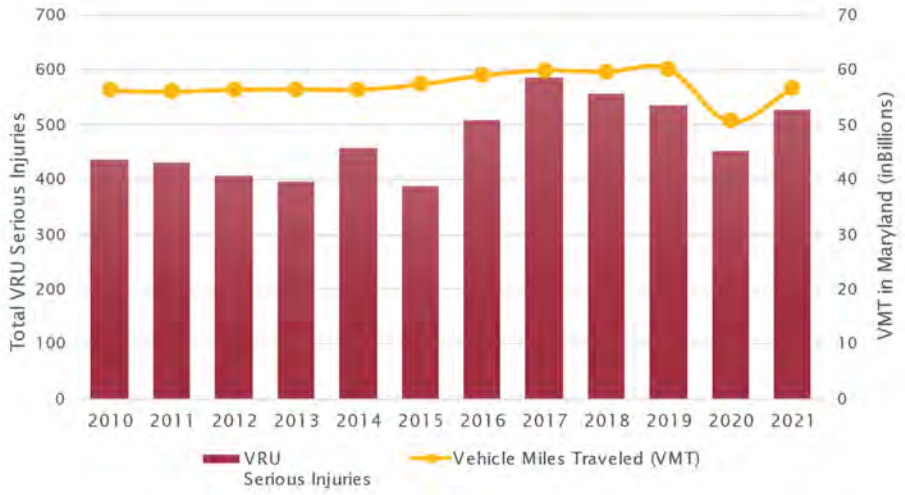


Figure 2 Maryland VMT and VRU Injury Trends

Safety Performance

Over the five-year period from 2017 to 2021, VRUs were involved in 3% of all crashes in Maryland. In contrast, VRUs were significantly overrepresented in fatal crashes, accounting for 25% of all fatalities. This comparison highlights a concerning disparity: while VRU crashes make up a relatively small percentage of crashes, they disproportionately contribute to a much larger percentage of fatal crashes. The disparity underscores the heightened vulnerability of pedestrians and cyclists on the road, indicating the need for targeted safety measures and interventions to reduce the risk and severity of crashes involving VRUs.

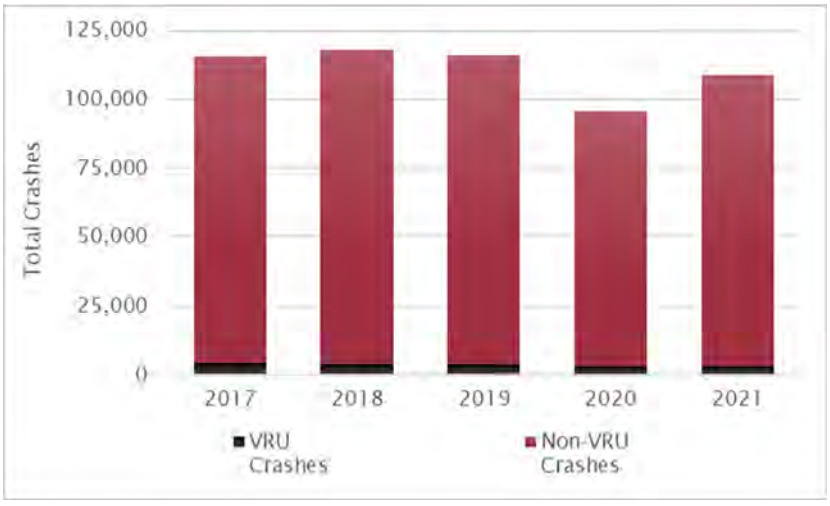


Figure 3 Maryland Total Crashes

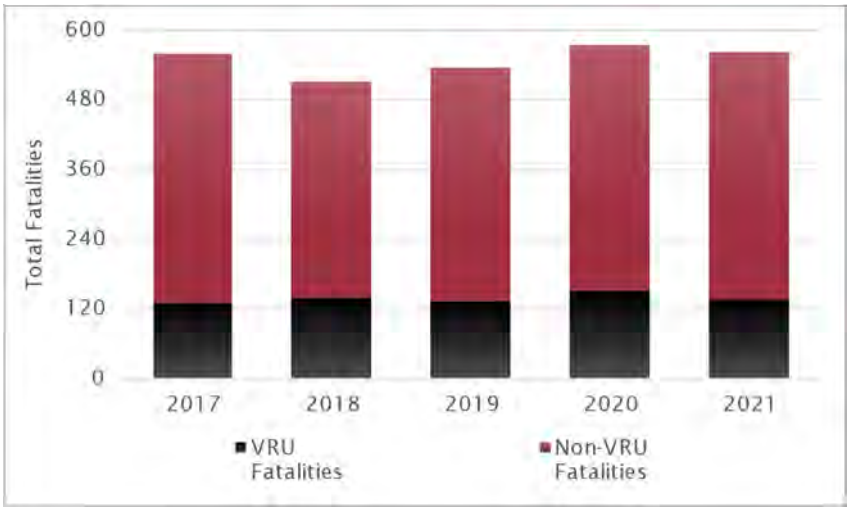


Figure 4 Maryland Total Fatalities

Trends by User Type

In recent years, VRU crashes have become a growing concern in Maryland. With a commitment to ensuring the safety and well-being of the state's residents, SHA has implemented various initiatives, including the *Context Driven* PSAP, to address this issue. In order to effectively mitigate these crashes and develop targeted interventions, it is crucial to disaggregate trends observed from recent years (2016-2021). By examining the specific factors contributing to VRU crashes and identifying any notable patterns or changes over time, SHA and local agencies can tailor their strategies to enhance VRU safety and reduce crashes on Maryland roads.

SHA is responsible for all numbered, non-tolled highways and interstates that are owned and operated by the state of Maryland. As the policymaker for *Context Driven* and the PSAP, SHA must work closely with other jurisdictions to prioritize resources to reduce VRU crashes statewide. Analyzing recent VRU crash data between 2016 and 2021 is crucial for identifying potential risk factors and developing VRU safety improvements. During that time, 6,897 crashes occurred on SHA-maintained roadways compared to 18,796 crashes on non-SHA-maintained roadways.

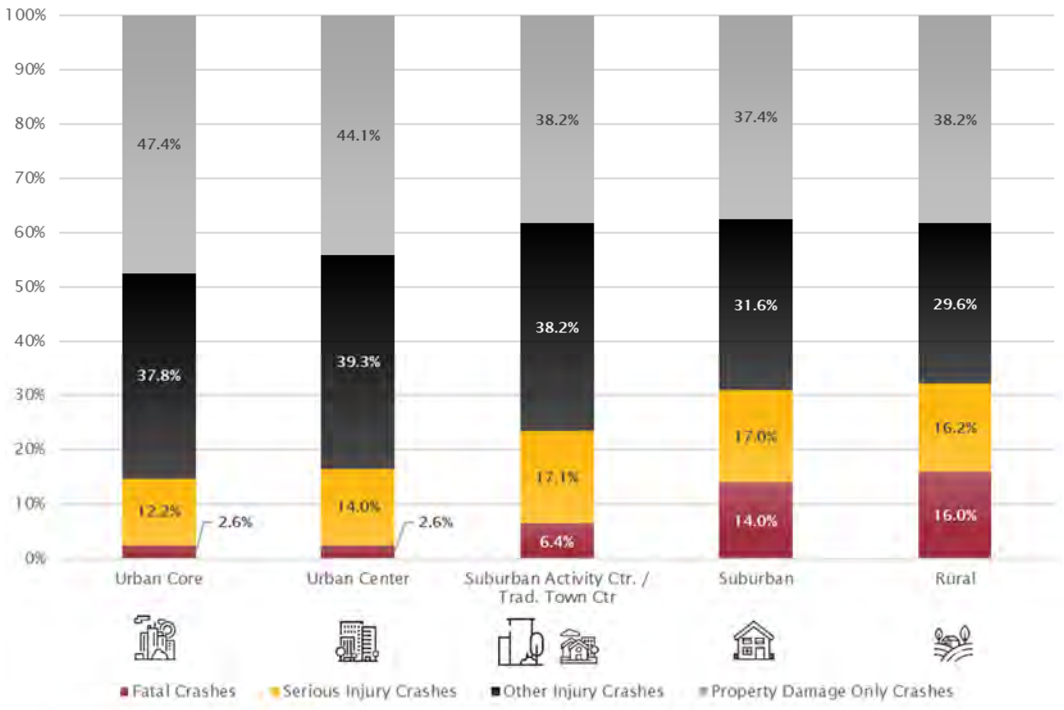


Figure 5 VRU Crash Severity, SHA-Maintained Roadways

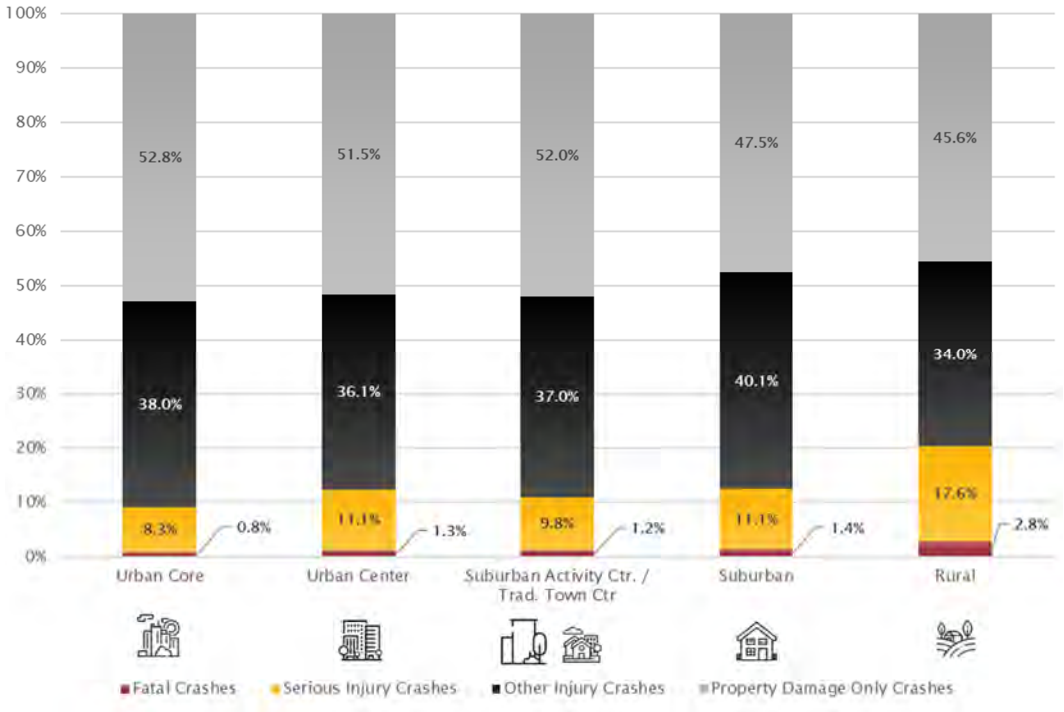


Figure 6 VRU Crash Severity, Non-SHA-Maintained Roadways

Despite that there are fewer overall VRU crashes on state vs local roadways, VRUs are at a higher risk of fatalities and serious injuries on SHA roadways across all contexts. This is not surprising, as SHA roadways tend to carry more traffic at higher speeds than most of their local counterparts. Suburban and rural areas exhibit the most risk, with fatality rates of 14% and 16%, respectively. The chance of a crash resulting in a fatality or serious injury ranges from 15% to 32% on SHA-maintained roads and 9% to 20% on non-SHA-maintained roads. Overall, the data suggests that non-SHA-maintained roadways have lower rates of fatalities and serious injuries when compared to SHA-maintained roadways. However, crash severity varies across different contexts. Contributing factors may include speed limit, lane widths, traffic volumes, and driver and VRU actions.

Figure 7 shows that most VRU crashes happen at speeds of 25 mph. This reflects the fact that most VRU activity happens on lower-speed roads. VRU volume data is not available to normalize this approach by calculating crash rate rather than total crashes.

That said, previous research has identified that the chances of a fatality or serious injury increases with the speed of the vehicle. The number of crashes increases substantially above 20 miles per hour (mph); VRUs experience a significant risk with vehicles traveling 25 mph or faster. As can be seen in Figures 8 and 9, lower speed limits can contribute to reducing VRU crashes. As speed limits increase beyond 25 mph, the number of crashes generally decreases, but the severity risk to VRUs persists. Higher rates of fatality and serious injury exist at high speeds.

Figure 8 and Figure 9 illustrate the clear relationship between speed and VRU crash severity. As the posted speed limit increases, there is an upward trend in both fatal and serious crashes. Rural contexts consistently exhibit higher percentages of fatal crashes, while serious injury crashes are more evenly distributed across context zones. Property damage only crashes are more prevalent in the urban core context, regardless of posted speed limit. These findings underscore the importance of considering posted speed limits and actual operating speeds, as well as implementing appropriate safety measures in different context zones to reduce the risk of fatalities and serious injuries in VRU crashes.

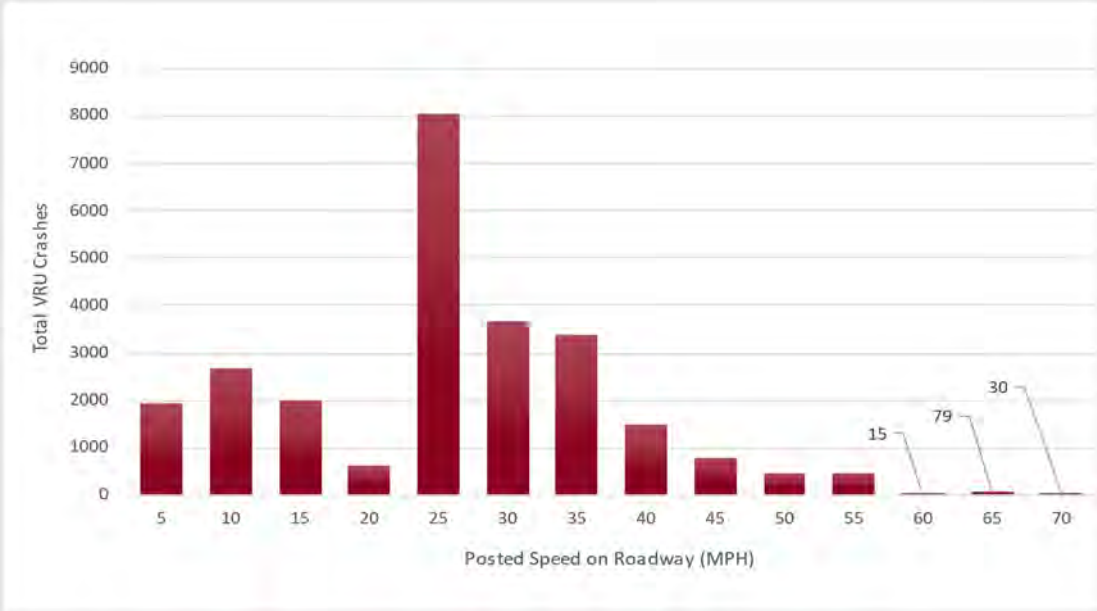


Figure 7 Speed Limit at Location of VRU Crash

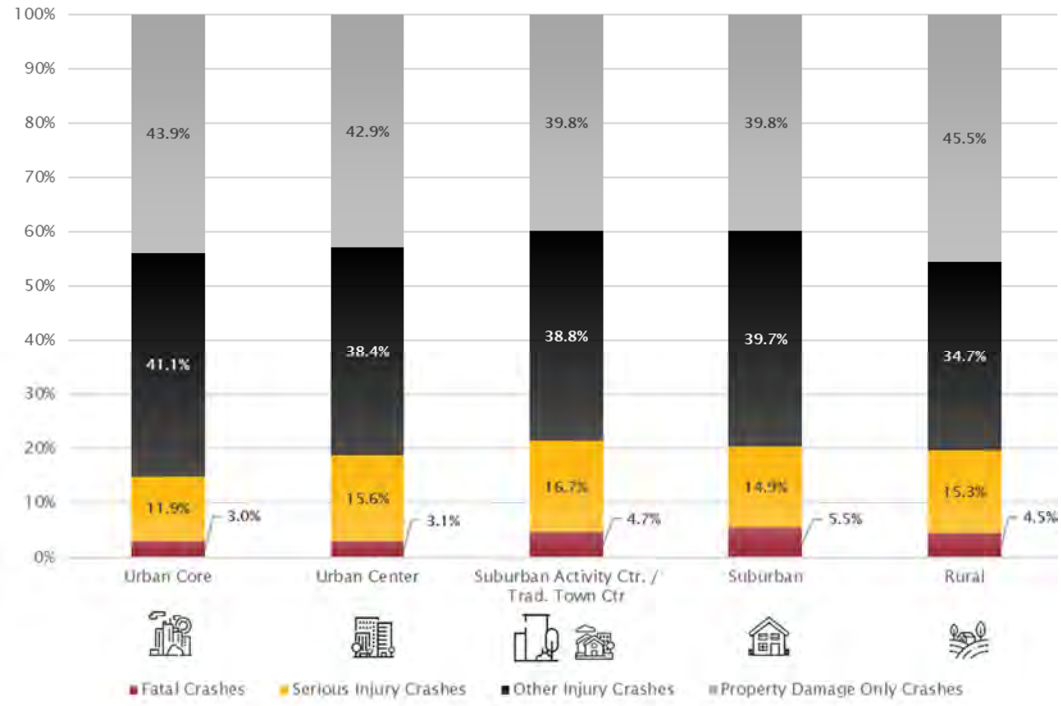


Figure 8 VRU Crash Severity, Posted Speed 30-40 mph

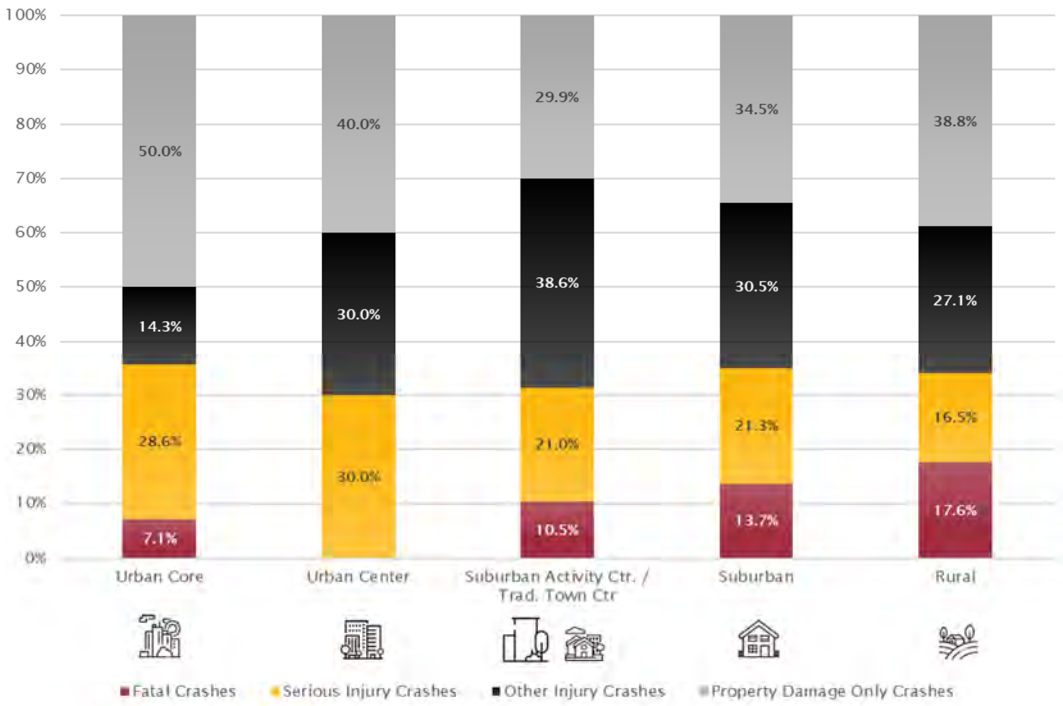


Figure 9 VRU Crash Severity, Posted Speed 45-50 mph

Reviewing crash data collected between 2016 and 2021 also highlights trends in location occurrences. Identifying these locations can help prioritize and evaluate roadway improvements. The data in Table 1 shows that the highest number of crashes occurred on the roadway at crosswalks, with a total of 6,693 cases, which constitutes approximately 26% of the total crashes. This indicates that VRUs are particularly vulnerable at crosswalks when they are forced to interact with motor vehicles. Moreover, the second-highest number of crashes took place on roadways but not at crosswalks, with 6,324 cases, accounting for around 26% of the total crashes. This statistic further highlights the risks faced by VRUs when crossing roadways at uncontrolled locations. Overall, crashes in the roadway accounted for 52% of all VRU related crashes, reinforcing the importance of reevaluating pedestrian infrastructure. Other notable locations where crashes occurred include the sidewalk, shoulder, and curbs, although the numbers are comparatively lower. Nonetheless, these figures warrant attention to ensure the safety of VRUs in these areas as well.

Crash junction analysis provides further context in evaluating crash location and roadway improvement priority. From Table 2, the highest concern for VRUs lies within intersection-related incidents, which accounted for 7,830 cases or 38% of the total. This trend, along with crosswalk crash rates, indicates that VRUs face significant risks when crossing roadways. By focusing efforts on reducing crashes and increasing awareness at these locations, the risk experiences by VRUs can be mitigated and a safer environment can be created.

Based on the data in Table 3, both motorists and VRUs were responsible for a significant number of crashes, 13,243 and 9,015 respectively. Ultimately, roadway improvements that balance safety, access, and mobility need to be made for all users. While it is essential to address the specific behaviors and actions of both VRUs and drivers, it is equally crucial to recognize that the overall infrastructure should be enhanced to create a safer environment for everyone. Investing in traffic control devices, roadway lighting, and dedicated facilities for VRUs, all users can contribute to reducing the occurrence of crashes and fostering a more harmonious coexistence on Maryland roadways.

Table 1 VRU Crash Location

Non-Motorist Location	Crashes
On Roadway, at Crosswalk	6693
On Roadway, not at Crosswalk	6324
Shoulder	1381
Sidewalk	1360
Outside Right-Of-Way	607
Curb	492
Bikeway	249
School Bus Zone	33
N/A, Other, Unknown	8554

Table 2 VRU Crash Junction Type

Junction Type	Crashes
Intersection	7830
Non-Intersection	6943
Intersection Related	1994
Commercial Driveway	375
Residential Driveway	140
Crossover Related	89
Interchange Related	86
Other Driveway	73
Alley	70
Railway Grade Crossing	11
N/A, Other, Unknown	8082

Table 3 VRU Crash At-Fault Party

At-Fault Party	Crashes
Driver	13243
Non-motorist	9015
Unknown	3435

Pedestrian Safety Action Plan

The Pedestrian Safety Action Plan (PSAP) was published in May 2023 as a part of SHA's *Context Driven* initiative. The plan applies the Zero Deaths Maryland approach to eliminate traffic-related fatalities and serious injuries, while the broader initiative considers how land use interacts with the state's transportation systems. Ultimately, the PSAP's purpose is to increase safety for VRUs through a data-driven process. It aims to achieve improved safety by addressing SHA policies and strategies related to VRUs and by making physical improvements to SHA roadways. The PSAP provides context for crash data regarding pedestrians and cyclists, identifies contributing factors, prioritizes corridors, and determines actions and strategies for the future.

As noted earlier, when comparing five-year averages (2012-2016 vs 2017-2021), both pedestrian and cyclist fatalities have increased. The PSAP provides insight regarding these VRU crashes by considering crash circumstances. Contributing factors identified include driver action, crash location, weather, lighting, non-motorist location, non-motorist action, and speed. Speed, in particular, matters. **Crash data from 2016 to 2019 shows that Maryland VRU crashes are twice as likely to result in death or serious injury when the speed limit increases from 25 mph to 30-40 mph.**

The PSAP also classifies Maryland's landscape, defining areas based on land use and development. These areas, called "contexts," ranging from urban to rural as follows:

- Urban Core
- Urban Center
- Traditional Town Center
- Suburban Activity Center
- Suburban
- Rural

From a transportation perspective, the contexts differ in types of trips, variety of destinations, and the presence of pedestrians, cyclists, and motorists. More crashes occur in denser areas, such as urban cores. However, average crash severity may be higher in more suburban areas where motor vehicle travel speeds are higher. By contextualizing land use, MDOT can balance access and mobility across Maryland roadways when considering improvements geared toward VRU safety.

Defining the contributing factors and contexts creates the basis for the PSAP's data-driven approach to determine improvements. The PSAP utilizes five data inputs, described in more detail in Chapter 3:

- Non-fatal, non-serious injury crash density
- Fatal and serious injury crash density
- Public comment density
- Equity analysis
- Short trip opportunity areas

These inputs are mapped, with overlapping regions signifying areas of need for further analysis. SHA-maintained roadways within the areas of need are further prioritized based on five categories (crash data, equity, destinations and connections, Highway Safety Improvement Program, and activity density) to determine which specific roadways would benefit most from countermeasures to improve safety.

Table 4 PSAP Highest Priority Corridors

HIGHEST PRIORITY CORRIDORS					
District	**County**	**Location**	**Roadway**	**From**	**To**
3	Prince George's	Hyattsville	MD 410 (East-West Hwy)	MD 500 (Queens Chapel Rd)	MD 212 (Riggs Rd)
4	Baltimore	Randallstown	MD 26 (Liberty Rd)	Washington Ave	Owings Mills Blvd
4	Baltimore	Owings	MD 140 (Reisterstown Rd)	Rosewood Ln	MD 140 (Westminster Pike)
5	Anne Arundel	Glen Burnie	MD 2 (Governor Ritchie Hwy)	MD 177 (Mountain Rd)	MD 648 (Baltimore Annapolis Blvd)
3	Montgomery	Gaithersburg	MD 124 (Montgomery Village Ave)	MD 124 (Woodfield Rd)	MD 355 (North Frederick Ave)
3	Prince George's	Hyattsville	MD 193 (University Blvd)	Campus Dr	MD 212 (Riggs Rd)
3	Montgomery	Silver Spring	MD 320 (Piney Branch Rd)	MD 193 (University Blvd East)	Flower Ave
3	Prince George's	Oxon Hill	MD 414 (St. Barnabas Rd)	Pohanka Place	Virginia Ln
3	Montgomery / Prince George's	Silver Spring	MD 650 (New Hampshire Ave)	I-495 (Capital Beltway)	MD 193 (University Blvd East)
4	Baltimore	Middle River	MD 150 (Eastern Blvd)	MD 700 (Martin Blvd)	MD 702 (Southeast Blvd)
4	Baltimore	Middle River	MD 700 (Martin Blvd)	MD 150 (Eastern Blvd)	US 40 (Pulaski Hwy)
3	Prince George's	Bladensburg	MD 201 (Kenilworth Ave)	52nd Ave	MD 410 (East-West Hwy)
3	Prince George's	Riverdale	MD 201 (Kenilworth Ave)	Good Luck Rd	MD 410 (East-West Hwy)
3	Montgomery	Gaithersburg	MD 355 (South Frederick Ave)	MD 124 (Montgomery Village Ave)	Central Ave
4	Baltimore	Catonsville	US 40 (Pulaski Hwy)	I-695 (Baltimore Beltway)	Nuwood Dr
4	Baltimore	Catonsville	US 40 (Pulaski Hwy)	Charing Cross Rd	I-695 (Baltimore Beltway)
3	Montgomery	Silver Spring	MD 193 (University Blvd)	US 29 (Colesville Rd)	MD 97 (Georgia Ave)
3	Prince	Hyattsville	MD 500 (Queens Chapel Rd)	MD 208 (Hamilton St)	Eastern Ave
5	Anne Arundel	Brooklyn Park	MD 2 (Governor Ritchie Hwy)	MD 170 (Belle Grove Rd)	MD 171 (Church St)
5	Anne Arundel	Glen Burnie	MD 3 (Crain Hwy)	MD 100	I-97 (Glen Burnie Bypass)
5	Anne Arundel	Linthicum Heights	MD 170 (Belle Grove Rd)	I-895	MD 648 (Baltimore Annapolis Blvd)
5	St. Mary's	California	MD 235 (Three Notch Rd)	MD 246 (Great Mills Rd)	MD 237 (Chancellors Run Rd)
7	Howard	Laurel	US 1 (Washington Blvd)	MD 32 (Patuxent Freeway)	Patuxent River

The PSAP's priority corridors are listed by the SHA district number. Ultimately, SHA will use the PSAP's prioritization to make physical improvements to roadways and address policies and strategies that make travel safer for all users. This data-driven approach prioritizes the statewide corridors where safety and access needs are most prevalent. The timing of enhancement implementation along the PSAP corridors will depend on many factors, such as funding, project difficulty – right-of-way, utilities, etc. – and equity.

Actions Taken to Date

Although the PSAP identifies 23 priority corridors for consideration for safety improvements, VRU safety design implementation has been ongoing. Since 2019, more than 350 context-driven cycling and pedestrian safety projects have been completed throughout Maryland. In addition, SHA has programmed $97.5 million for pedestrian safety improvements and is actively developing projects to begin design activities for the top-scoring corridors referenced in the PSAP. This PSAP funding is part of more than $473 million in bicycle and pedestrian related project funding in the Fiscal Year 2024-2029 Capital Transportation Program.

Since 2020, SHA has introduced incremental changes to intersections and pedestrian and cycling facilities, with completed projects now in 20 counties. Figure 10 illustrates work completed to date.

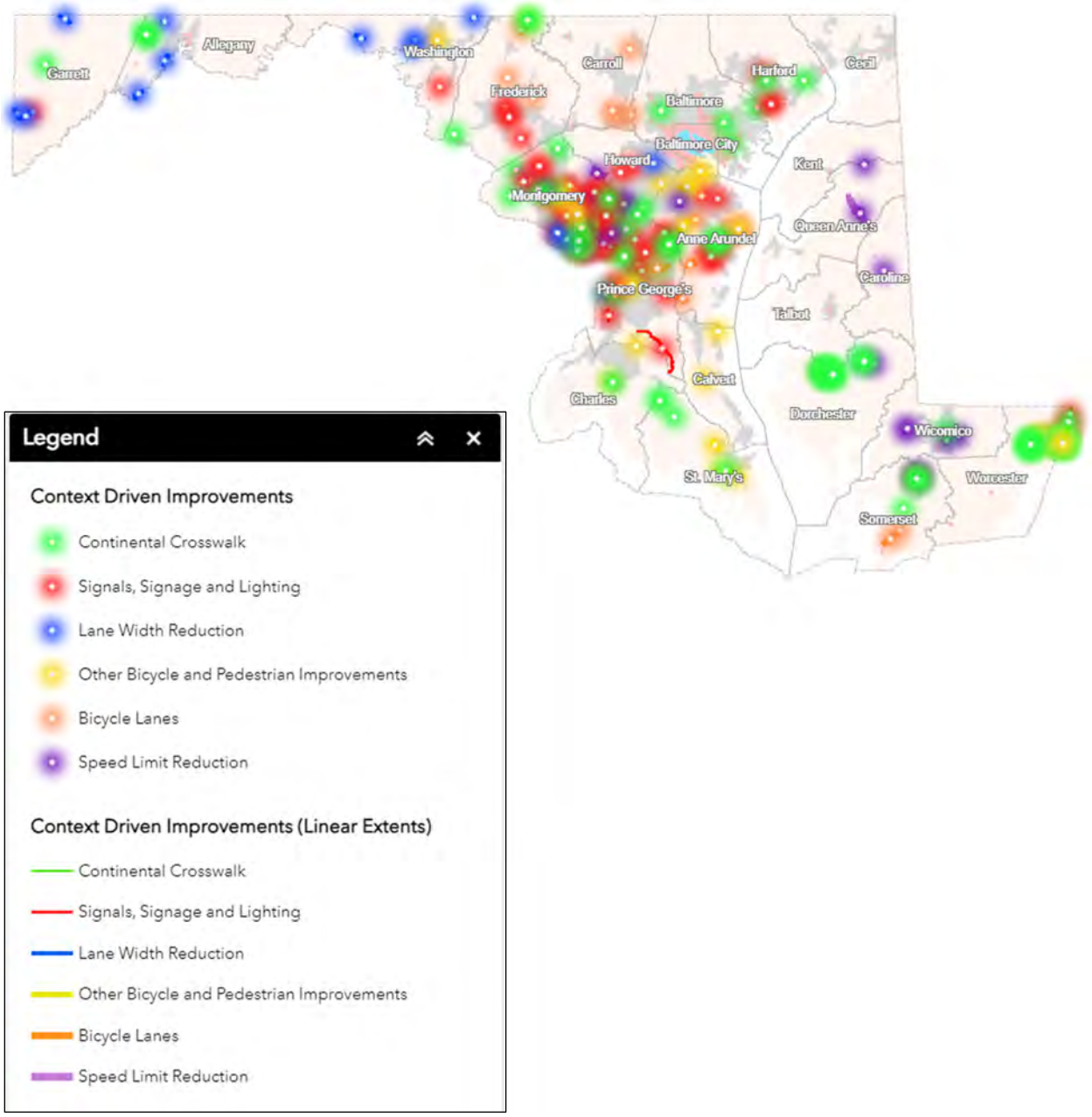


Figure 10 Completed Context Driven Improvements (July 2023)

The *Context Driven* initiative, now in conjunction with the PSAP, has increased the scope of these VRU safety improvement projects to target broader corridors. For example, SHA has implemented or initiated more than 100 improvements or studies on 20 corridors in Montgomery County. Another 15 corridors were the focus of pedestrian improvements in Prince George's County. The work completed in these counties supports Maryland's Vision Zero goals. To date, VRU-oriented improvements have included speed limit reductions, roadway lane width reductions, crosswalk installation and refreshing, traffic signal and safety improvements, and Americans with Disabilities Act (ADA) accessibility improvements. *Context*

Driven treatments completed to date also include bike lane additions, striping upgrades, and lighting improvements.

A particular goal of the work in Montgomery and Prince George's counties was the inclusion of new accessible pedestrian signals, countdown pedestrian signals, and intersection control beacon signal installation. These improvements increased awareness between VRUs and motor vehicles at intersections and trail crossings. SHA automated pedestrian crossing signal activation and widened crosswalk striping to increase safety for pedestrians and cyclists. In addition, full color signals replaced flashing beacons to better control motor vehicle traffic flow and alert drivers that a crossing is present.

This corridor-focused approach is exemplified by the ongoing urban reconstruction project on MD 212A, Powder Mill Road, in Prince George's County. The project, although not analyzed in the PSAP, is a corridor redesign "to establish a consistent roadway typical section for motor vehicles, bicyclists, and pedestrians." Spanning 1.3 miles, the project aims to resurface the roadway, improve drainage, upgrade sidewalks and crosswalks to ADA-compliance, provide street lighting, add bike lanes, and improve traffic signals.

Figure 11 Powder Mill Road Proposed Section

The MD 212A reconstruction project, which began in 2020, includes all aspects of the corridor's multimodal network and introduces many of SHA's VRU safety improvements. The approach demonstrates PSAP's corridor-focused plan to improve roadway safety. Prior to reconstruction, MD 212A contained 12 metro bus stations, including stops for school buses, but lacked connecting sidewalks for pedestrian access. Sidewalks along the road were either not present or disjointed; VRUs often used the shoulder to travel. To address these issues, the design reduced lane width and incorporated bike lanes, curb and gutter, and sidewalks that feature ADA-compliant accessibility. By addressing all the corridor's infrastructure needs, SHA is optimizing the roadway for VRUs, providing better access for public transportation, and improving roadway conditions, thus improving mobility and safety for all users.

MD 212A is just one example of SHA's comprehensive approach to VRU safety. The following projects from throughout Maryland are illustrations of a variety of VRU safety projects that were recently completed or are in progress.

- **US 1 (Rhode Island Avenue) Trolley Trail** - SHA is finishing improvements to US 1 (Rhode Island Avenue) in Hyattsville and to the adjacent Rhode Island Avenue Trolley Trail. This project extends the existing off-road shared-use path southward and also removes a lane of vehicular traffic from US 1 to enhance vulnerable users network connectivity and improve safety. The project, to be completed in late 2023, also leverages the Washington region's significant trail network by completing a key connection.

- **MD 33 (Talbot Street)** - SHA is working to complete pedestrian safety and access improvements along MD 33 (Talbot Street) in the town of St. Michaels. This project includes the reconstruction of sidewalks to current ADA standards from Lee Street to Spencer Avenue and resurfacing of MD 33 within the project limits.

- **MD 187 (Old Georgetown Road)** - In Spring 2023, SHA completed a project to improve safety on MD 187 (Old Georgetown Road). This project was primarily focused on cyclist safety with the addition of buffered bicycle lanes and the installation of flex posts to vertically delineate new bicycle lanes. This project showcases how projects to improve safety for VRUs can benefit all users. Prior to this project there was no buffer between pedestrians and motor vehicle traffic. With the addition of these bike lanes, the pedestrians on the sidewalk now are buffered from vehicle traffic. This project also included upgraded crosswalks to include high-visibility crosswalks to enhance safety of pedestrians crossing MD 187.

- **MD 355 (Worthington Boulevard)** - SHA completed a project to improve safety and pedestrian access at three locations in Frederick County: Both directions of MD 355 (Worthington Boulevard) between Lew Wallace Street and MD 80 (Fingerboard Road) in Urbana; southbound MD 355 (Urbana Pike) between Holiday Drive and Lowes Lane in Frederick; and a small section on US 40 Alternate (West Main Street) in Middletown. The construction focused on upgrading the existing pedestrian facilities to meet the standards of the Americans with Disabilities Act (ADA). The existing brick sidewalk was removed and replaced with a concrete sidewalk at the request of the Villages of Urbana due to maintenance and drainage issues. Work at all three sites included reconstructing sidewalks, ramps, curb, gutter and any impacted driveways and walkways, as well as curb ramp and crossing improvements.

- **US 1 (Washington Boulevard) Pedestrian Improvements** - This $4.7 million project will make pedestrian safety improvements at four locations along nine miles of US 1 (Washington Boulevard) in Howard County. The improvement include new or updated pedestrian signals, protected median crossings, new crosswalks, a shared-use path, and new sidewalks. This project is 50% complete.

- **MD 7D (Delaware Avenue) Pedestrian Improvements** - This project will create an ADA (Americans with Disabilities Act) compliant pedestrian path along MD 7 (Delaware Avenue) from MD 281 (Main Street) to Meadow Park. Work includes reconstruction of existing sidewalks between MD 281 and Howard Street, new sidewalks from Howard Street to Big Elk Creek, a 10-foot wide pre-fabricated pedestrian bridge over Big Elk Creek, and new crosswalks.

Areas of Need

The VRU Safety Assessment followed a similar approach to the PSAP's *areas of need* in determining high-risk areas. However, two additional years of crash data were used in the analysis. The PSAP reviewed crash data from 2016-2019 while the VRU Safety Assessment reviewed crash data from 2016-2021. SHA selected six years of data rather than five for two reasons: to use a more robust set of data and to use the same starting point as the PSAP.

In the PSAP, areas of need are defined as broad geographical areas that have the highest need for VRU safety improvements. The following data inputs were used to determine areas of need:

- **Non-fatal, non-serious injury crash density** (Figure 12) illustrates areas that experience high VRU crash rates.
- **Serious injury and fatal crash density** (Figure 13) illustrates areas that experience high severity VRU crash rates.
- **Public comment density** (Figure 14) provides a different perspective on experiences with VRU crashes and/or safety that is not captured in quantitative data sources.
- **Equity** (Figure 15) highlights areas with a higher equity index and represents underserved communities that would benefit most from safety improvements.
- **Short trip opportunity areas** (Figure 16) consider population demographics and highlight areas that have a higher potential for pedestrian and cycling activity.

These factors relate to VRU safety and support the identification and prioritization of areas that would benefit from safety improvements. Each of these inputs was mapped to visualize statewide trends and overlaid to determine the areas with the highest overlap. Below are the maps illustrating each data input previously described and the resulting determination of areas of need (Figure 17).

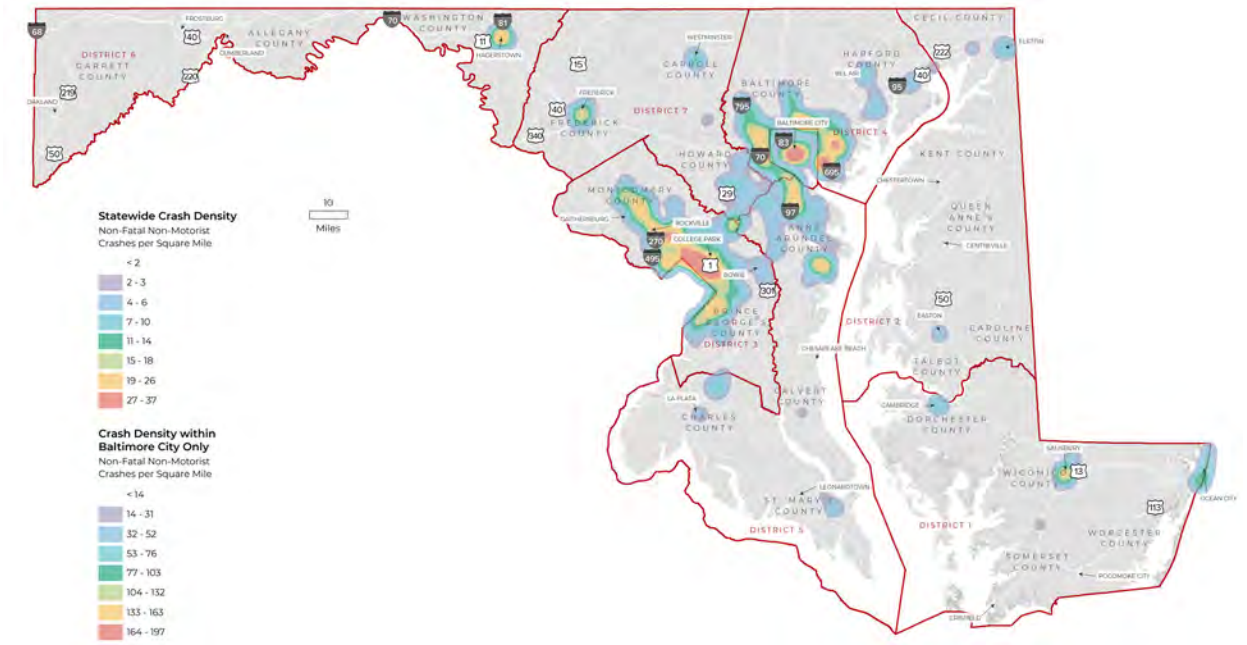


Figure 12 Non-Fatal, Non-Serious Injury Crash Density

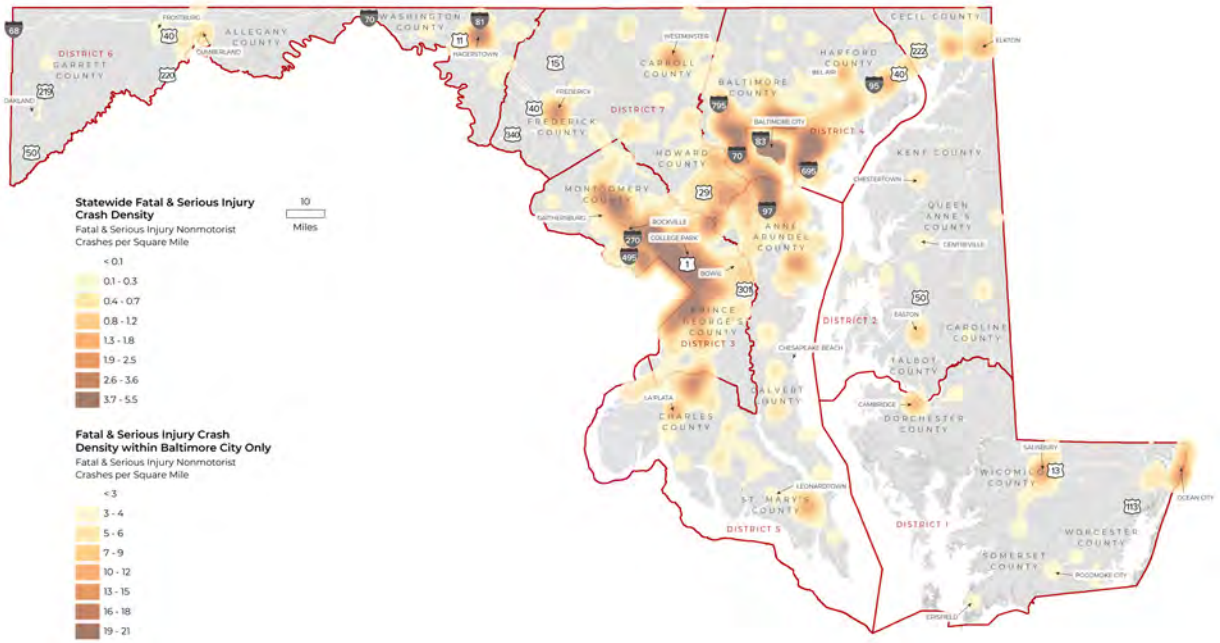


Figure 13 Fatal and Serious Injury Crash Density

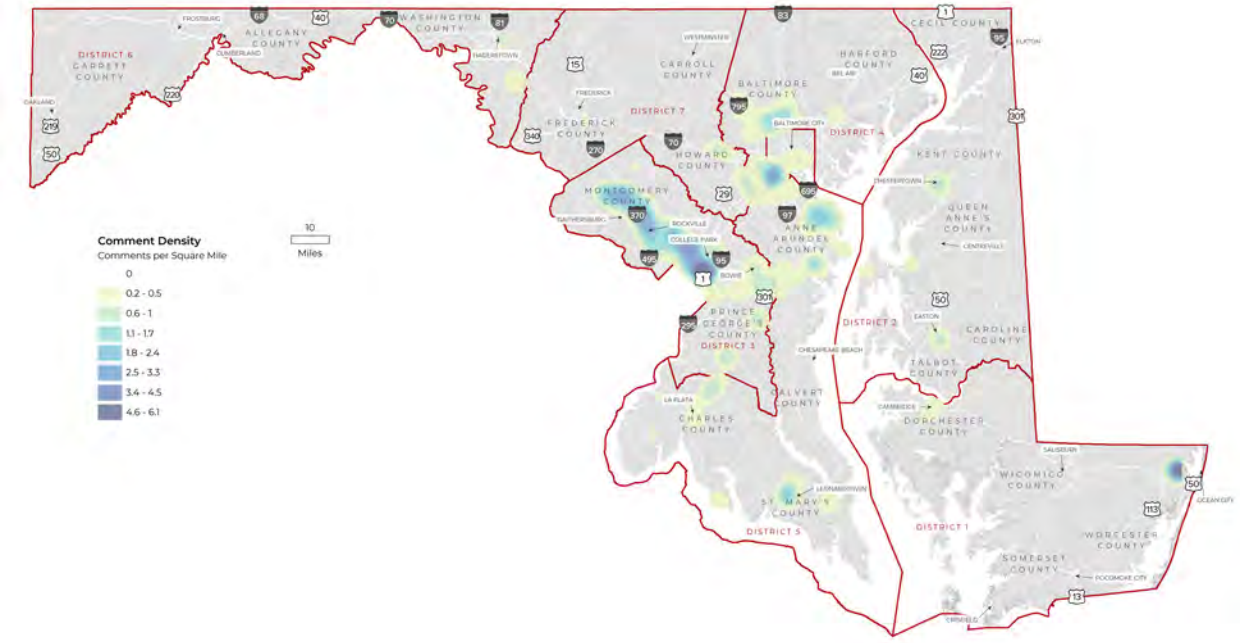


Figure 14 Public Comment Density

How Equity is Addressed in the VRU Safety Assessment

Although everyone is a pedestrian, the land use in some locations is more conducive to non-motorized travel, such as walking, biking or public transportation. This can often be a function of density and available pedestrian, bicycle, and public transportation infrastructure. However, reliance on non-motorized modes of transportation can also be a result of economics and demographics. For example, age groups under 18 years and over 65 years are less likely to drive, and lower-income households are less likely to have access to a vehicle. Those that do have a vehicle may also spend a higher proportion of their income owning and operating a vehicle.

These equity considerations directly affect pedestrian and bicycle safety. While safety is important in every part of Maryland, SHA also focuses on locations where high pedestrian and bicycle crash rates coincide with areas that are economically or socially disadvantaged, and/or in areas where a high proportion of the population is less likely to drive or have access to a vehicle.

The equity analysis shown in this map shows the areas of Maryland with above average rates of the following equity factors. For consistency with the PSAP, these factors are based on the American Community Survey (ACS) 2019 Population Estimates.

- Zero-vehicle households (above 10% of the population)
- Unemployment (above 6% of the population)
- Poverty (above 10.6% of the population)
- Disabilities (above 11.6% of the population)
- Non-White (above 48.7% of the population)
- Under 18 years old (above 22%)
- Over 65 years old (above 15.1%)
- Non-English speakers (above 6.4% of the population)

Data for each factor was determined at the Census tract level through the Census Bureau's American Community Survey (ACS) five-year estimates for 2019. Census tracts received a score of "1" for each factor that was above average, and those scores were added together for each tract to arrive at Equity Index scores. Tracts that were above average in four or more of these equity factors are shown here in Figure 15, as they are home to residents that are more likely to either not have access to a vehicle or be more burdened by the cost of owning and maintaining a vehicle.

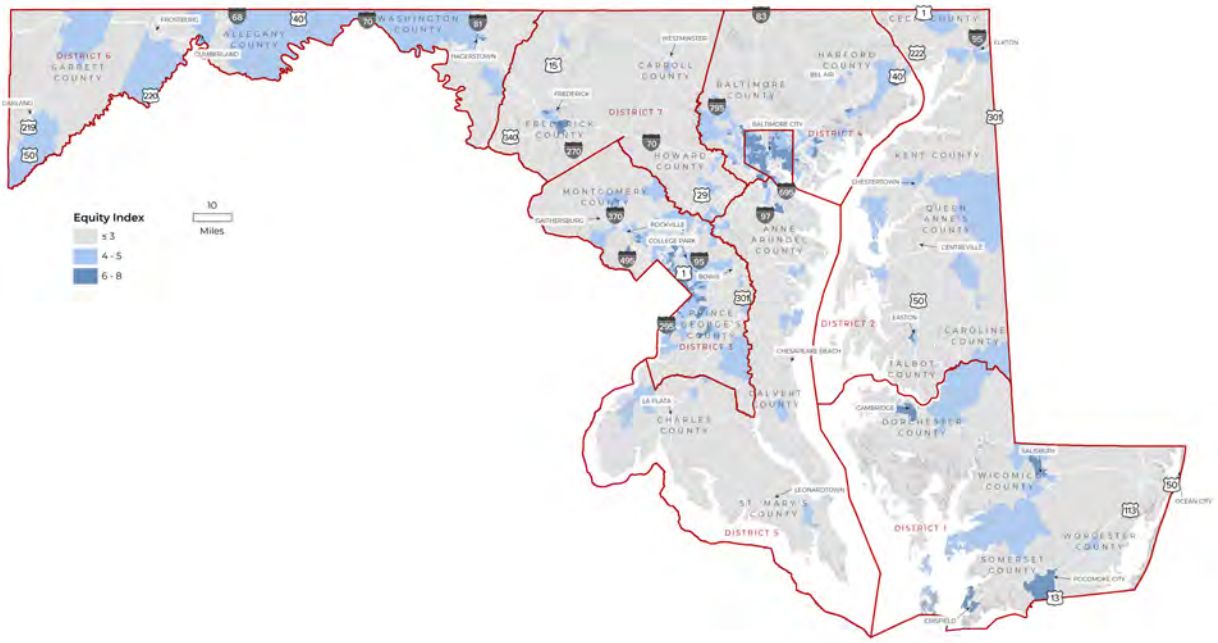


Figure 15 Equity Index

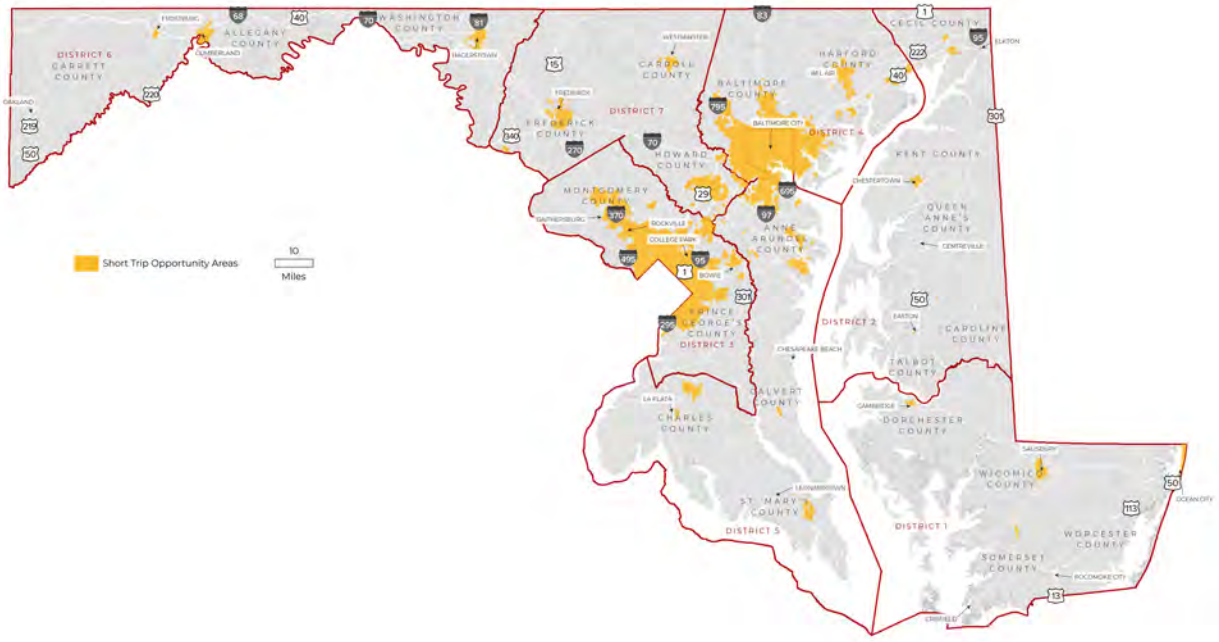


Figure 16 Short Trip Opportunity Areas

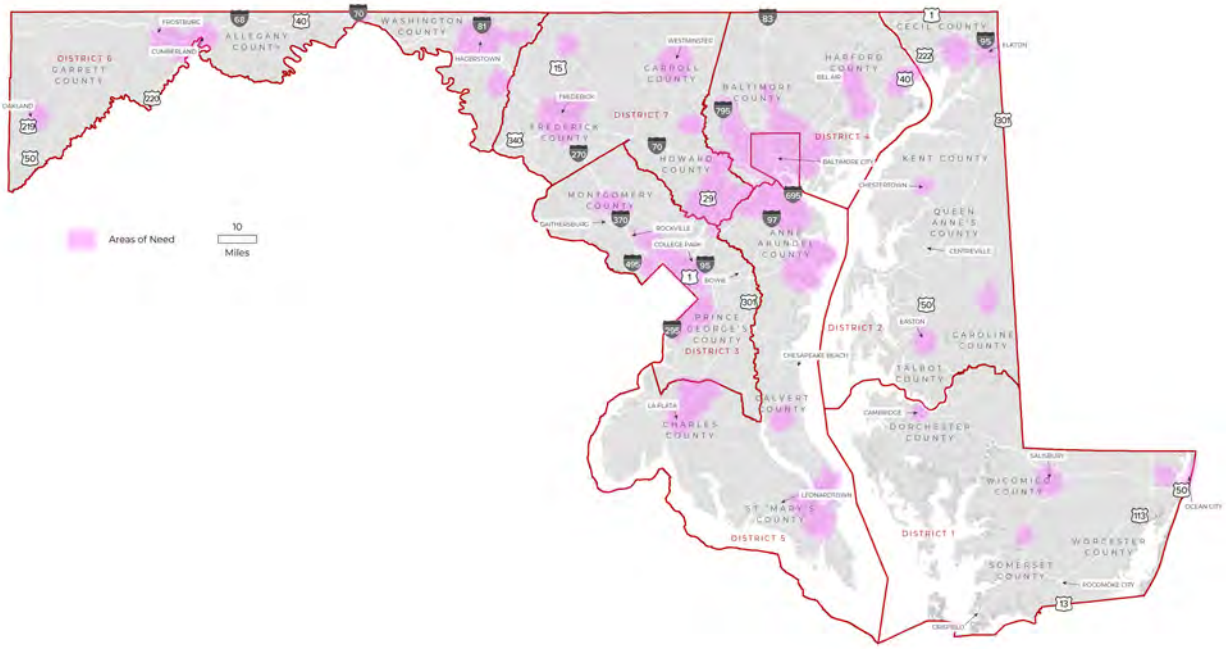


Figure 17 Areas of Need

Prioritization

The evaluation of areas of need determined broad locations that would benefit most from VRU safety improvements. The next step in the analysis was to identify specific roadways within these areas to prioritize and allocate resources. In the PSAP, these specific corridors are known as "priority corridors." The VRU Safety Assessment equivalent of these priority corridors will be referred to as *high-risk areas* to align with Federal VRU Safety Assessment requirements from 23 U.S.C. 148(l)(2)(B). High-risk areas differ from priority corridors in that they include both SHA-maintained and non-SHA-maintained roadways, whereas PSAP priority corridors only consist SHA-maintained roadways. There are also some slight differences among selected locations based on the additional two years of crash data considered in the VRU Safety Assessment.

Numerous factors were used to determine high-risk corridors. Each SHA District and Baltimore City were evaluated individually to identify high-risk corridors specific to their geography. Local and state-maintained roadways were both evaluated in the prioritization analysis. The following factors (see Table 5) were used to determine whether roadway segments were considered high-risk areas:

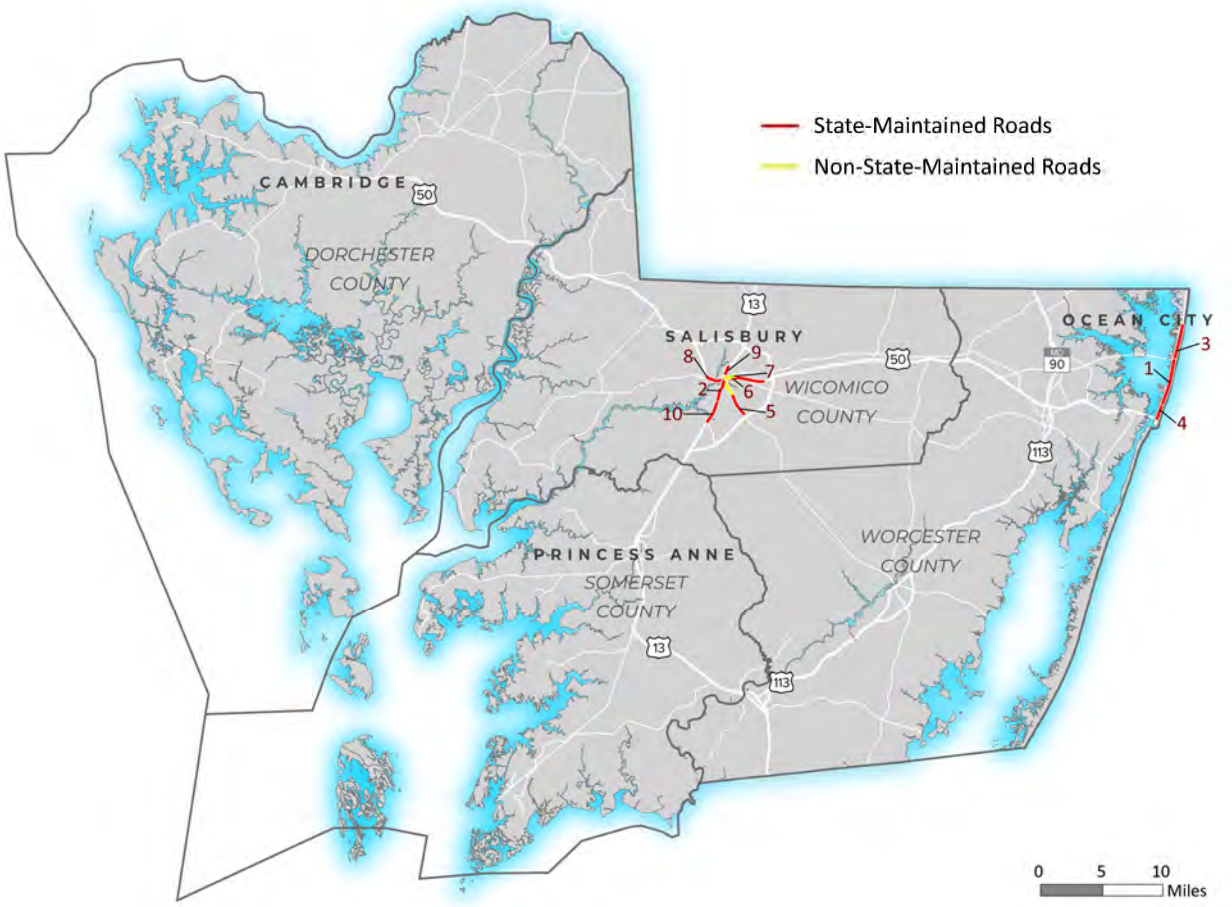
- Crash Data
    - Crash data highlights areas with high pedestrian and cycling crash rates. Crash density (crashes per mile) above the District average determined the crash score. A buffer of 200 feet was used to determine the number of crashes associated with a roadway segment.
- Equity
    - Demographic and economic factors (e.g., income, zero car households) were used to indicate areas that may result in more pedestrian and cycling activity. Communities in areas with a higher equity index tend to rely on non-motorized modes of transportation.

- Destinations & Connections
    - This factor included rail station walksheds, presence along the MDOT "Bike Spine," bus stops per mile (above the District average), and schools. Corridors that intersect with rail station walksheds were given an additional point.
    - Bus stops per mile were calculated by pulling bus stop points within a 100 feet buffer and dividing by the segment length. Bus stop density greater than the District average was used.
    - Presence of a roadway segment on the MDOT "Bike Spine" was considered.
    - Schools within a ¼ mile of a corridor were considered.
- Highway Safety Improvement Program (HSIP)
    - As defined by FHWA, HSIP is a "core Federal-aid program with the purpose to achieve a significant reduction in traffic fatalities and serious injuries on all public roads." HSIP candidate safety improvement intersections (CSII) and candidate safety improvement segments (CSIS) were previously identified based on safety challenges and were considered as a factor in the prioritization process.
- Activity Density
    - Short Trip Opportunity Areas (STOAs) are areas in Maryland that, based on proximity and density of land uses, may experience higher pedestrian and cycling trips.

Table 5 Prioritization Methodology

Category	Factor
Crash Data	Fatal non-motorized crashes per mile (above District average)
	Serious non-motorized crashes per mile (above District average)
	Other non-motorized crashes per mile (above District average)
Equity	Equity Scores 6 through 8
	Equity Scores 4 and 5
Destinations & Connections	Rail station ½ mile walkshed
	MDOT SHA Bike Spine
	Bus stops per mile (above District average)
	Schools
Highway Safety Improvement Program (HSIP)	Candidate Safety Improvement Intersections (CSII)
	Candidate Safety improvement Sections (CSIS)
Activity Density	Short Trip Opportunity Areas (STOAs)

Each roadway segment within an area of need was evaluated using the methodology above. SHA reviewed the top-ranking corridors and established a cut-off within each District, and within Baltimore City, to identify high-risk areas. These high-risk areas are shown in the following figures. It is important to note that the PSAP approach prioritizes statewide high-risk areas, while the VRU Safety Assessment shows a regional ranking. Near-term funding allocations will be prioritized along the PSAP priority corridors, where safety and access needs are most prevalent on a statewide basis.



Map ID	Segment Name	PSAP Priority Corridor?
1	MD 528, Coastal Hwy, from 15th St to 62nd St	
2	US 13, S Salisbury Blvd, from W College Ave to W Salisbury Pkwy	
3	MD 528, Coastal Hwy, from 62nd St to 112th St	
4	MD 528, Philadelphia Ave, from N Division St to 15th St	
5*	MD 12, Snow Hill Rd, from E Main St to W Sandy Acres Dr	
6	US 50, Ocean Gateway, from N Salisbury Blvd to Tilghman Rd	
7	E Isabella St from N Salisbury Blvd to Walston Ave	
8	US 50, W Salisbury Pkwy, from W Isabella St to N Salisbury Blvd	
9	US 13, Ocean Hwy, from E Salisbury Pkwy to Bridgeview St	
10	US 13, S Salisbury Blvd, from E Cedar Ln to W College Ave	

* The portion of Snow Hill Rd (MD 12) between E Main St and Washington St is not an SHA maintained road.

Figure 18 High-Risk Areas in District 1

SHA identified 10 high-risk areas within the areas of need for District 1. These high-risk areas were primarily concentrated in Salisbury and Ocean City. Most of the high-risk areas, except for Isabella Street and a portion of Snow Hill Road, were state-maintained roads. All the segments were within a Short Trip Opportunity Area (STOA). Most of the high-risk corridors were also in locations associated with previously identified CSII/CSIS, equity areas, and high crash rates.

Map ID	Segment Name	PSAP Priority Corridor?
1	MD 322, Easton Pkwy, from Ocean Gateway to Bay St	
2	US 40, Pulaski Hwy, from Marley Rd to North East Rd	
3	MD 272, North East Rd, from Pulaski Hwy to John F. Kennedy Memorial Hwy	
4	US 40, W Pulaski Hwy, from S Bridge St to Elkton Rd	
5	US 40, E Pulaski Hwy, from Delaware Ave to S Bridge St	
6	MD 213, Augustine Herman Hwy, from E Lewis Shore Rd to E Pulaski Hwy	
7	US 40, E Pulaski Hwy, from County Line to Delaware Ave	
8	US 40, Pulaski Hwy, from Charlestown Crossing Blvd to North East Rd	
9	US 40, W Pulaski Hwy, from Elkton Rd to Thiokol Rd	
10	MD 213, Bridge St, from E Pulaski Hwy to Elkton Blvd	
11	MD 213, Washington Ave, from N Cross St to Morgnec Rd	
12	Washington St from Glebe Rd to Easton Byp	

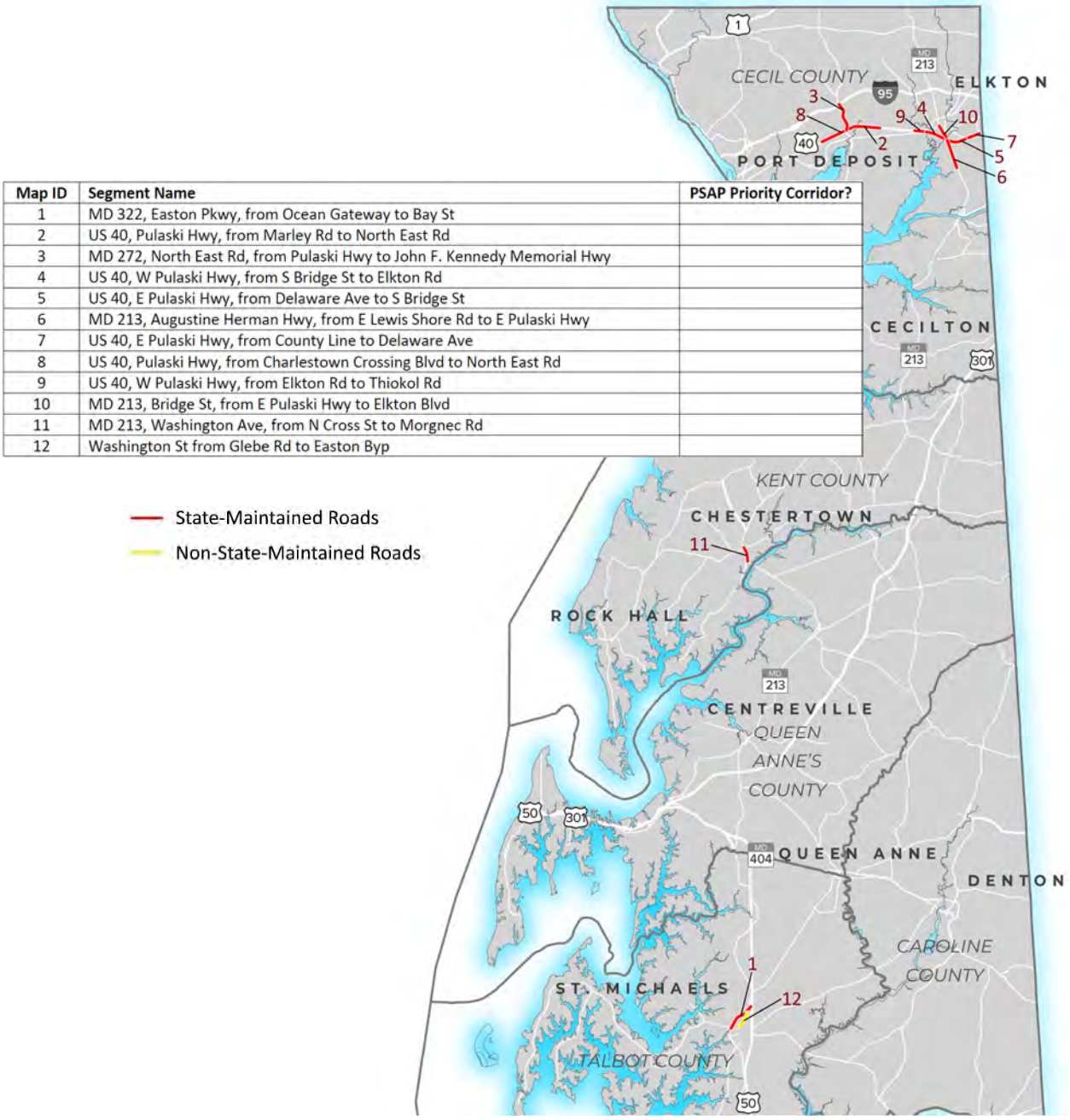
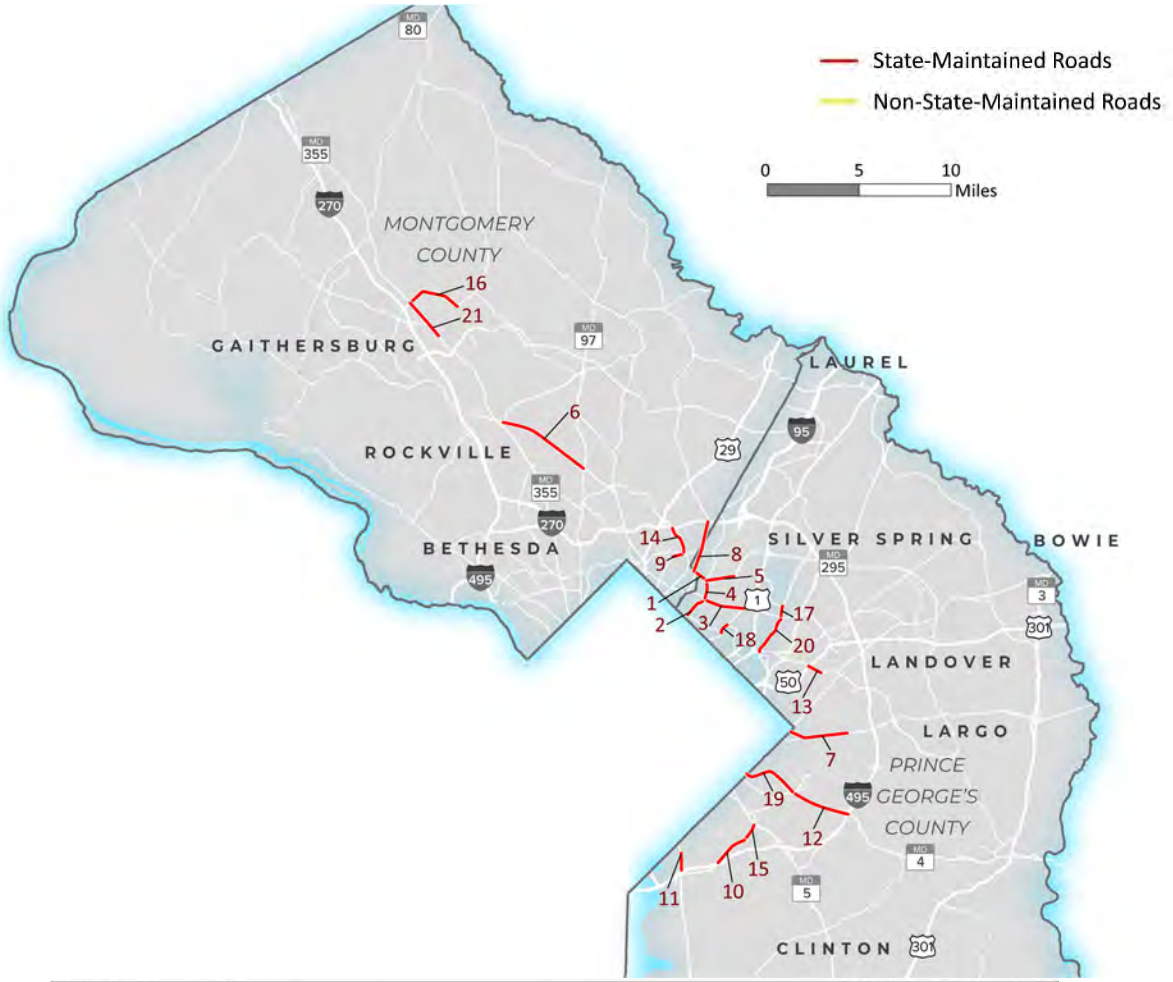


Figure 19 High-Risk Areas in District 2

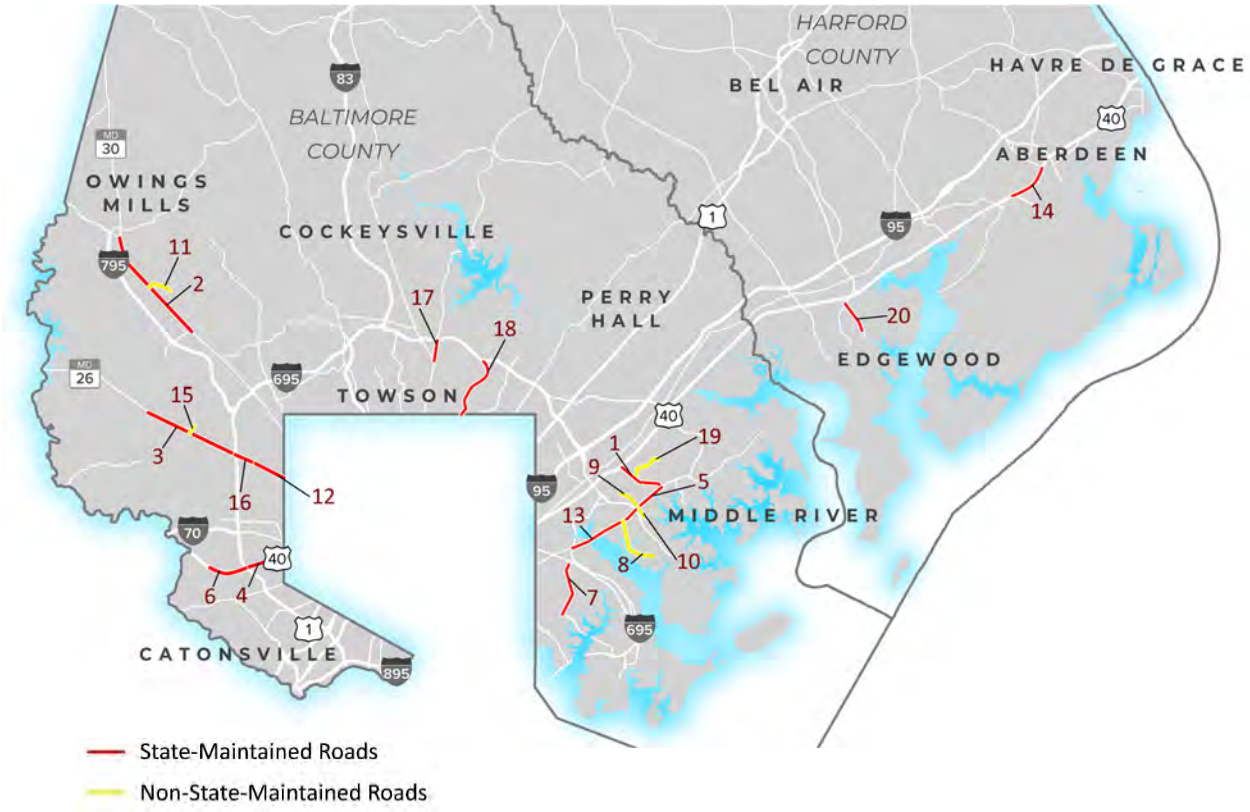
SHA identified 12 high-risk areas within the areas of need for District 2. These high-risk areas were primarily concentrated in North East, Elkton, and Easton, with one location in Chestertown. All the high-risk areas, except for the high-risk area on Washington Street between Glebe Road and Easton Bypass, were state-maintained roads.



Map ID	Segment Name	PSAP Priority Corridor?
1	MD 193, University Blvd E, from New Hampshire Ave to Riggs Rd	
2	MD 212, Riggs Rd, from Chillum Rd to East-West Hwy	
3	MD 410, East-West Hwy, from Adelphi Rd to Riggs Rd	Yes
4	MD 212, Riggs Rd, from East-West Hwy to University Blvd E	
5	MD 193, University Blvd E, from Campus Dr to Riggs Rd	Yes
6	MD 586, Veirs Mill Rd, from Connecticut Ave to First St	
7	MD 214, Central Ave, from Southern Ave to Ritchie Rd	
8	MD 650, New Hampshire Ave, from University Blvd E to Capital Beltway	Yes
9	MD 320, Piney Branch Rd, from University Blvd E to Flower Ave	Yes
10	MD 414, St Barnabas Rd, from Virginia Ln to Pohanka Pl	Yes
11	MD 210, Indian Head Hwy, from Livingston Rd to Capital Beltway	
12	MD 4, Pennsylvania Ave, from Silver Hill Rd to Capital Beltway	
13	MD 202, Landover Rd, from John Hanson Hwy to Kent Town Dr	
14	MD 193, University Blvd E, from Piney Branch Rd to Capital Beltway	
15	MD 414, St Barnabas Rd, from Pohanka Pl to Branch Ave	Yes
16	MD 124, Montgomery Village Ave, from N Frederick Rd to Woodfield Rd	Yes
17	MD 201, Kenilworth Ave, from East-West Hwy to River Rd	Yes
18	MD 500, Queens Chapel Rd, from Chillum Rd to Hamilton St	Yes
19	MD 4, Pennsylvania Ave, from Southern Ave to Silver Hill Rd	
20	MD 201, Kenilworth Ave, from Annapolis Rd to East-West Hwy	Yes
21	MD 355, S Frederick Ave, from Central Ave to Montgomery Village Ave	Yes

Figure 20 High-Risk Areas in District 3

SHA identified 21 high-risk areas within the areas of need for District 3. These high-risk areas were identified in Montgomery and Prince George's counties in areas adjacent to Washington, DC. All of the high-risk areas identified in District 3 were on state-maintained roads.

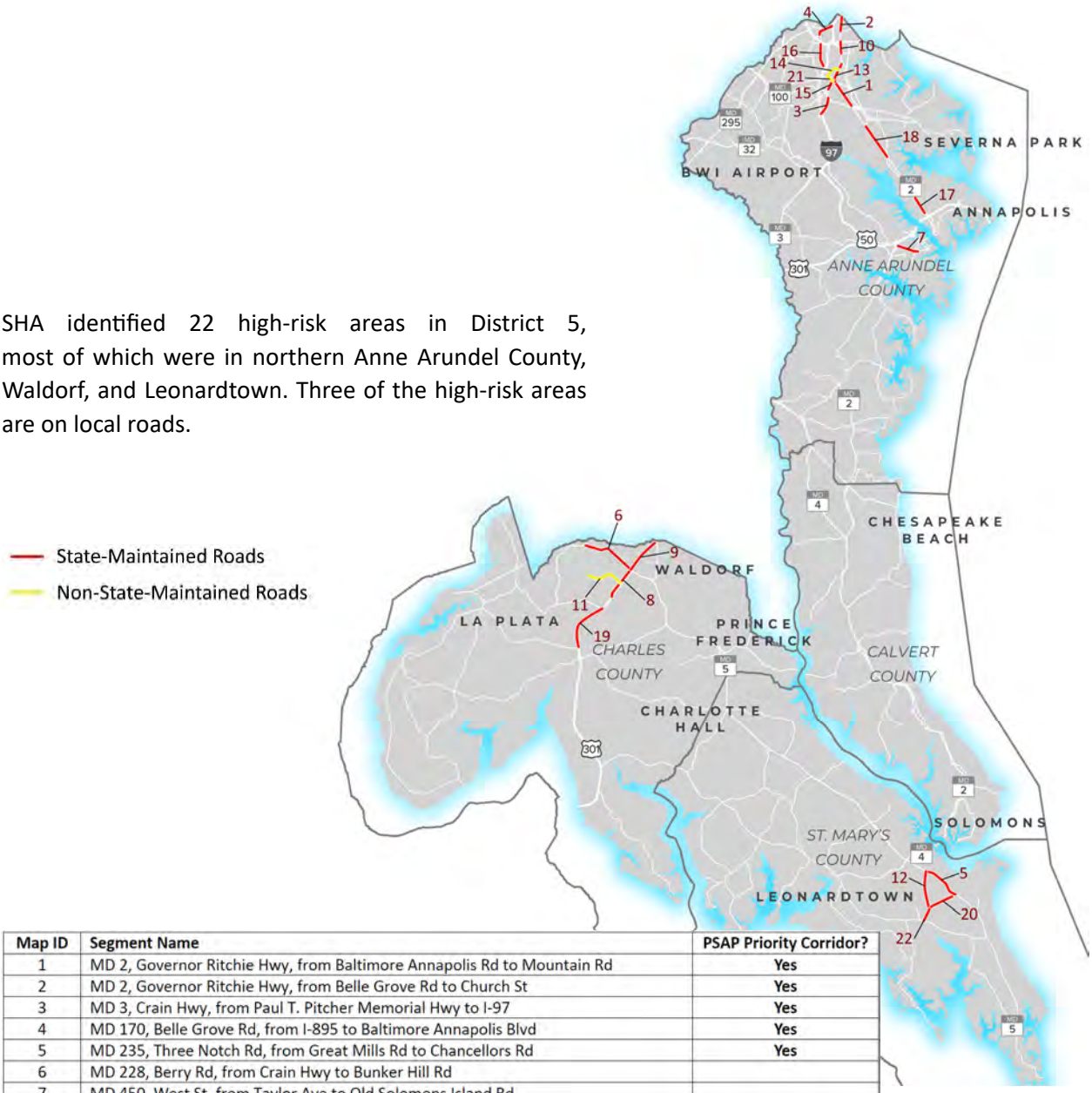


Map ID	Segment Name	PSAP Priority Corridor?
1	MD 700, Martin Blvd, from Eastern Blvd to Pulaski Hwy	Yes
2	MD 140, Reisterstown Rd, from Rosewood Ln to Westminster Pike	Yes
3	MD 26, Liberty Rd, from Baltimore Beltway to Owings Mills Blvd	Yes
4	US 40, Baltimore National Pike, from Charing Cross Rd to Baltimore Beltway	Yes
5	MD 150, Eastern Blvd, from Southeast Blvd to Martin Blvd	Yes
6	US 40, Baltimore National Pike, from Baltimore Beltway to Nuwood Dr	Yes
7	MD 157, Merritt Blvd, from Peninsula Expwy to North Point Blvd	
8	S Marlyn Ave from Sun Circle Way to Eastern Blvd	
9	Stemmers Run Rd from John Ave to Eastern Blvd	
10	Stemmers Run Rd from Eastern Blvd to Old Eastern Ave	
11	Hammershire Rd from Reisterstown Rd to Brushwood Dr	
12	MD 26, Liberty Rd, from Flannery Ln to Saint Lukes Ln	
13	MD 150, Eastern Blvd, from Baltimore Beltway to Southeast Blvd	
14	US 40, Pulaski Hwy, from Short Ln to Aberdeen Thruway	
15	Old Court Rd from Liberty Rd to Church Ln	
16	MD 26, Liberty Rd, from Saint Lukes Ln to Baltimore Beltway	
17	MD 146, Dulaney Valley Rd, from E Joppa Rd to Baltimore Beltway	
18	MD 542, Loch Raven Blvd, from Loch Hill Rd to Baltimore Beltway	
19	Compass Rd from Martin Blvd to Maple Crest Dr	
20	MD 755, Edgewood Rd, from Nuttal Ave to Emmorton Rd	

Figure 21 High-Risk Areas in District 4

SHA identified 20 high-risk areas in District 4 in the Baltimore County communities of Catonsville, Owings Mills, Towson, and Middle River, as well as two in Harford County. Most of these high-risk areas were concentrated near the city limits for Baltimore City. Approximately a third of the high-risk areas identified were local roads.

SHA identified 22 high-risk areas in District 5, most of which were in northern Anne Arundel County, Waldorf, and Leonardtown. Three of the high-risk areas are on local roads.



Map ID	Segment Name	PSAP Priority Corridor?
1	MD 2, Governor Ritchie Hwy, from Baltimore Annapolis Rd to Mountain Rd	**Yes**
2	MD 2, Governor Ritchie Hwy, from Belle Grove Rd to Church St	**Yes**
3	MD 3, Crain Hwy, from Paul T. Pitcher Memorial Hwy to I-97	**Yes**
4	MD 170, Belle Grove Rd, from I-895 to Baltimore Annapolis Blvd	**Yes**
5	MD 235, Three Notch Rd, from Great Mills Rd to Chancellors Rd	**Yes**
6	MD 228, Berry Rd, from Crain Hwy to Bunker Hill Rd	
7	MD 450, West St, from Taylor Ave to Old Solomons Island Rd	
8	US 301, Crain Hwy, from Billingsley Rd to Berry Rd	
9	US 301, Crain Hwy, from Berry Rd to Mattawoman Beantown Rd	
10	MD 2, Governor Ritchie Hwy, from E Ordnance Rd to Baltimore Beltway	
11	Smallwood Dr from Middletown Rd to Crain Hwy	
12	MD 237, Chancellors Run Rd, from Three Notch Rd to Great Mills Rd	
13	MD 2, Governor Ritchie Hwy, from E Furnace Branch Rd to Baltimore Annapolis Blvd	
14	8th Ave NW from Crain Hwy to Baltimore Annapolis Blvd	
15	MD 3, Crain Hwy, from Baltimore Annapolis Blvd to Quarterfield Rd	
16	MD 648, Baltimore Annapolis Blvd, from Baltimore Beltway Inner Loop to I-97	
17	MD 2, Governor Ritchie Hwy, from Beechwood Rd to Baltimore Annapolis Blvd	
18	MD 2, Governor Ritchie Hwy, from Baltimore Annapolis Blvd to Rt 10	
19	US 301, Crain Hwy, from Hawthorne Rd to Marshall Corner Rd	
20	MD 246, Great Mills Rd, from Chancellors Run Rd to FDR Blvd	
21	Central Ave from Crain Hwy to Dorsey Rd	
22	MD 246, Great Mills Rd, from Old Great Mills Rd to Chancellors Run Rd	

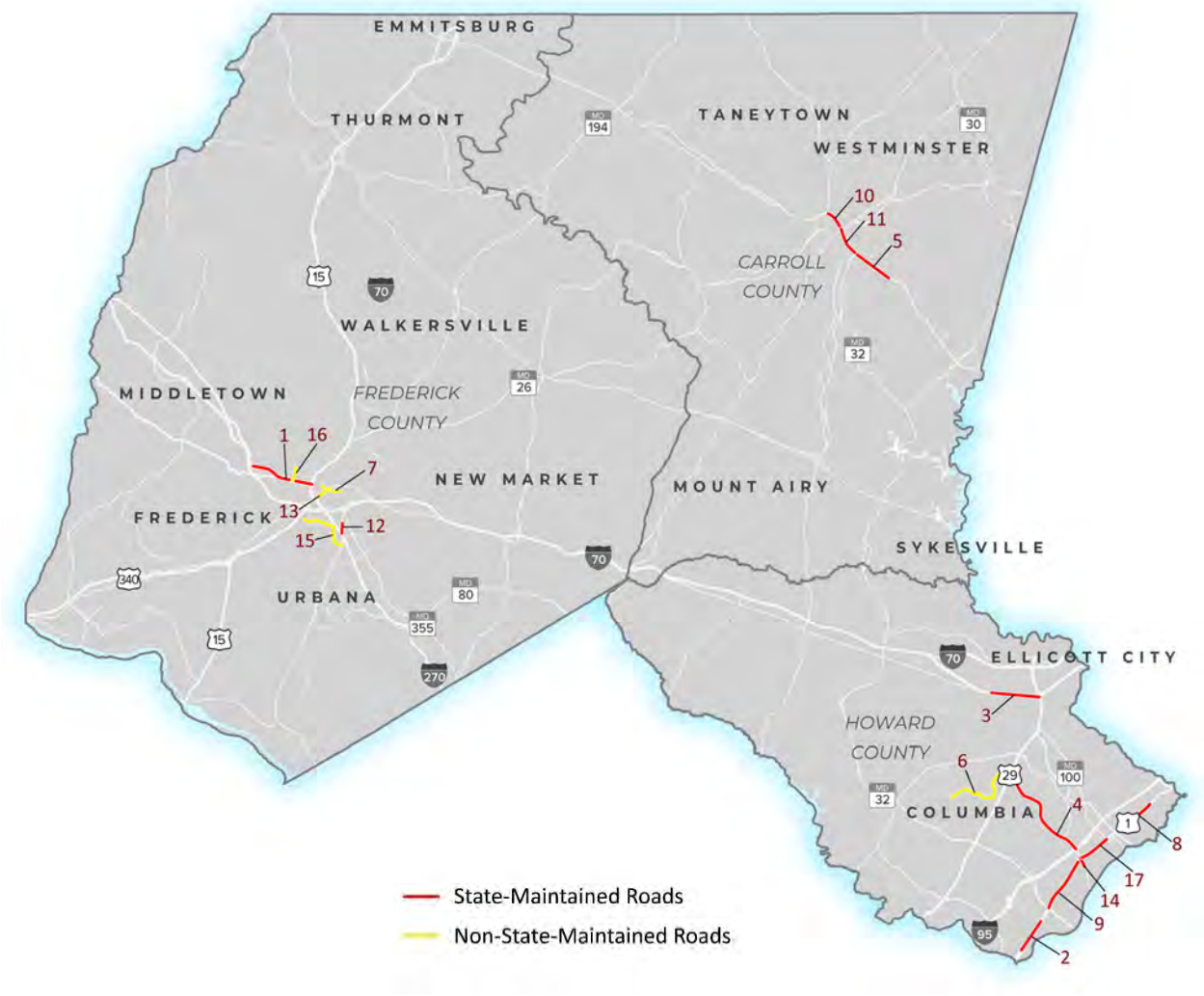
Figure 22 High-Risk Areas in District 5

Map ID	Segment Name	PSAP Priority Corridor?
1	US 40, National Pike, from I-81 to Dwight D. Eisenhower Hwy	
2*	US 11, Burhans Blvd, from Cushwas Aly to W Washington St	
3	Jefferson St from N Mulberry St to N Cleveland Ave	
4	Oak Hill Ave from Potomac Ave to Cathedral Ave	
5	Summit Ave from Virginia Ave to W Washington St	
6	US 11, Virginia Ave, from I-70 to W Wilson Blvd	
7	Antietam St from Burhans Blvd to S Cleveland Ave	
8	Potomac St from W Baltimore St to E Washington St	

*The priority corridor on US 11 (Burhans Blvd) is not an SHA maintained road.

Figure 23 High-Risk Areas in District 6

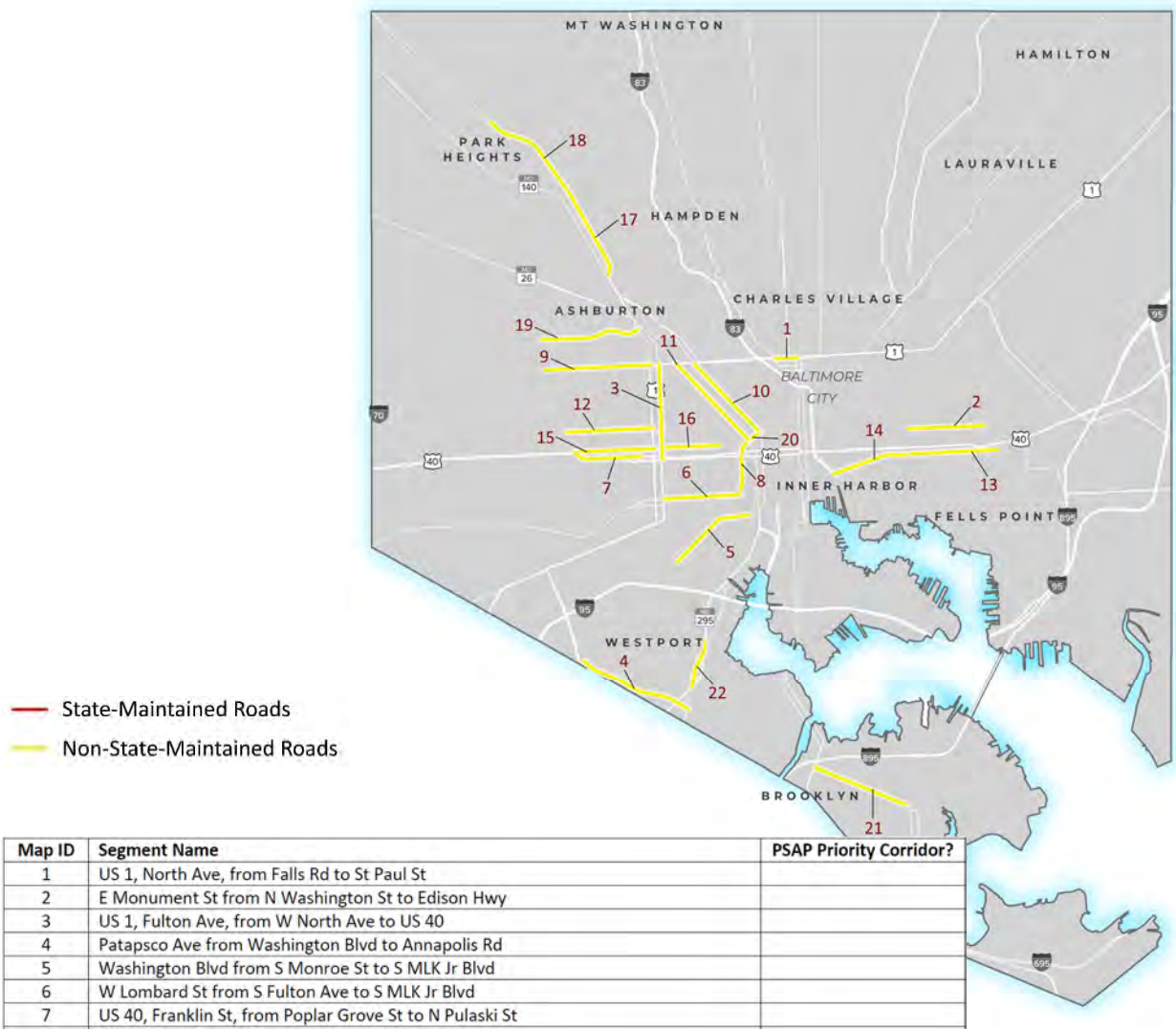
SHA identified eight high-risk areas in District 6, all of which were in the Hagerstown area. Unlike other Districts, where the majority of the high-risk areas were on state-maintained roads, less than half of the high-risk areas in District 6 are state-maintained.



Map ID	Segment Name	PSAP Priority Corridor?
1	US 40, W Patrick St, from Kehne Rd to Frederick Fwy	
2	US 1, Washington Blvd, from Grover Pl to Patuxent River	Yes
3	US 40, Baltimore National Pike, from Centennial Ln to Columbia Pike	
4	MD 175, Rouse Pkwy, from Columbia Pike to I-95	
5	MD 140, Baltimore Blvd, from Malcolm Dr to the Carrol County Northern Landfill	
6	Little Patuxent Pkwy from Hickory Ridge Rd to Columbia Pike	
7	W South St from W Patrick St to S Market St	
8	US 1, Washington Blvd, from MD 100 to Montgomery Rd	
9	US 1, Washington Blvd, from Patuxent Fwy to Waterloo Rd	
10	MD 140, Baltimore Blvd, from Manchester Rd to Littlestown Pk	
11	MD 140, Baltimore Blvd, from Malcolm Dr to Manchester Rd	
12	MD 85, Buckeystown Pike, from Eisenhower Memorial Hwy to Julia Ln	
13	S Jefferson St from Prospect Blvd to W Patrick St	
14	MD 175, Waterloo Rd, from Washington Blvd to Patuxent Institutional Driveway	
15	Crestwood Blvd from Hannover Dr to Buckeystown Pike	
16	Willowdale Dr from W Patrick St to Schaffer Dr	
17	US 1, Washington Blvd, from Waterloo Rd to Dorsey Rd	

Figure 24 High-Risk Areas in District 7

SHA identified 17 high-risk areas in Columbia, Frederick, and Westminster for District 7. These consist of a mix of state and local roads.



Map ID	Segment Name	PSAP Priority Corridor?
1	US 1, North Ave, from Falls Rd to St Paul St	
2	E Monument St from N Washington St to Edison Hwy	
3	US 1, Fulton Ave, from W North Ave to US 40	
4	Patapsco Ave from Washington Blvd to Annapolis Rd	
5	Washington Blvd from S Monroe St to S MLK Jr Blvd	
6	W Lombard St from S Fulton Ave to S MLK Jr Blvd	
7	US 40, Franklin St, from Poplar Grove St to N Pulaski St	
8	MLK Jr Blvd from W Lombard St to N Mulberry St	
9	W North Ave from N Hilton St to N Monroe St	
10	MD 129, Druid Hill Ave, from N MLK Jr Blvd to W North Ave	
11	Pennsylvania Ave from N MLK Jr Blvd to W North Ave	
12	W Lafayette Ave from N Franklintown Rd to N Monroe St	
13	E Fayette St from N Washington St to N Highland Ave	
14	E Fayette St from N President St to N Wolfe St	
15	Edmondson Ave from Poplar Grove St to N Monroe St	
16	Edmondson Ave from N Fulton Ave to N Fremont Ave	
17	Park Heights Ave from Druid Park Dr to W Cold Springs Ln	
18	Park Heights Ave from W Cold Spring Ln to W Northern Pkwy	
19	Gwynns Falls Pkwy from N Hilton St to N Monroe St	
20	MLK Jr Blvd from W Mulberry St to Druid Hill Ave	
21	MD 173, Patapsco Ave, from Potee Ave to Fairhaven Ave	
22	MD 648, Annapolis Rd, from Waterview Ave to Baltimore Washington Pkwy	

Figure 25 High-Risk Areas in Baltimore City

While Baltimore City has numbered state routes with its city limits, these roads are not maintained by SHA. Consequently, all the high-risk areas identified within the areas of need in Baltimore City through the VRU Safety Assessment were identified as local roads. The majority of Baltimore City's high-risk corridors are located in the west, with few high-risk areas identified in the northern or northeastern regions of the city.

4 Consultation

Inclusive Consultation Process

SHA undertook a comprehensive, inclusive consultation process for the high-risk areas identified in Chapter 3. This process was informed by the October 21, 2022 Federal guidance memorandum. Specifically, the memorandum states:

- States are required to consult with local governments, metropolitan planning organizations (MPOs), and regional transportation planning organizations that represent a high-risk area.
- FHWA also encourages States to consult institutional, advocacy, and community groups, particularly those that represent populations that may be underrepresented based on the demographics of the locations of fatalities and serious injuries.

More than 100 interested parties listed below were invited to participate in the consultation process, including all Maryland metropolitan planning organizations and county/local governments that contained high-risk areas. Statewide and local transit providers, organizations with an equity focus, bicycle/pedestrian advisory committees, and a wide variety of advocacy groups were all invited. A full list of invitees is provided below. This list does not include SHA officials from the Office of Traffic and Safety, Office of Planning and Preliminary Engineering, and Districts, who also participated. It also does not include representatives of The Secretary's Office at MDOT or the Maryland Highway Safety Office.

Metropolitan Planning Organizations (MPOs) and related agencies

- Baltimore Regional Transportation Board
- Calvert-St. Mary's MPO
- Hagerstown-Eastern Panhandle MPO
- National Capital Region Transportation Planning Board
- Salisbury/Wicomico MPO
- Tri-County Council for Southern Maryland
- Wilmington Area Planning Council

Local jurisdictions and transit agencies

- Annapolis Department of Transportation
- Anne Arundel County Department of Public Works
- Anne Arundel County Transit
- Baltimore City Department of Transportation
- Baltimore County Bureau of Traffic Engineering and Transportation Planning
- Carroll County Department of Public Works
- Carroll Transit System
- Cecil County Department of Public Works
- Cecil County Transit
- Charles County Roads Division
- Charles County VanGO
- City of Aberdeen
- City of Annapolis
- City of Fruitland

- City of Gaithersburg
- City of Hagerstown
- City of Hyattsville
- City of Mount Rainier
- City of Rockville
- City of Salisbury
- City of Takoma Park
- City of Westminster
- Delmarva Community Services
- Frederick County Division of Public Works
- Frederick County Transit
- Garrett County Department of Public Works
- Garrett Transit Service
- Harford County Department of Public Works
- Harford County Transit LINK
- Howard County Department of Public Works
- Howard County Office of Transportation/RTA
- Kent County Department of Public Works
- Montgomery County Department of Transportation
- Montgomery County RideOn
- Ocean City Transportation
- Prince George's County Department of Public Works and Transportation
- Shore Transit
- St. Mary's County Department of Public Works and Transportation
- St. Mary's Transportation Service
- Talbot County Department of Public Works
- Town of Bladensburg
- Town of Capitol Heights
- Town of Chestertown
- Town of Easton
- Town of Edmonston
- Town of Forest Heights
- Town of La Plata
- Town of North East
- Town of Riverdale Park
- Washington County Division of Engineering
- Washington County Transit
- Wicomico County Department of Public Works
- Worcester County Department of Public Works

Statewide/regional transit agencies

- Maryland Transit Administration
- Washington Metropolitan Area Transit Authority

Equity-focused organizations

- CASA de Maryland
- Disability Rights Maryland
- Maryland Department of Aging
- Maryland Department of Disabilities
- National Federation of the Blind
- Salvation Army
- Workforce Training

Bicycle/pedestrian advisory groups

- Anne Arundel County Bicycle Advisory Commission
- Baltimore City Mayor's Bicycle Advisory Commission
- BMC Bicycle Pedestrian Advisory Committee
- Frederick Bicycle Pedestrian Advisory Committee
- Hagerstown Bicycle Advisory Committee
- Maryland Bicycle and Pedestrian Advisory Committee
- Maryland-National Capital Park and Planning Commission
- Montgomery County Bicycle Action Group
- Ocean City Bicycle and Pedestrian Advisory Committee
- Washington Metropolitan Council of Governments Bicycle and Pedestrian Subcommittee
- Wilmington Area Planning Council Nonmotorized Transportation Working Group

Advocacy and other groups

- American Discovery Trail
- B360
- Baltimore Transit Choices
- Bike Maryland
- BikeAAA
- BikeMore
- BYKE Collective
- Canal Towns Partnership
- Capital Trails Coalition
- Central Maryland Transportation Alliance
- East Coast Greenway
- Frederick Bicycle Coalition
- Montgomery Bicycle Advocates
- North Bethesda Transportation Center
- Rails to Trails Conservancy
- Rockville Pedestrian Advocacy Committee
- Washington Area Bicyclist Association

SHA was unable to find contact information for the City of Seat Pleasant and the Town of Elkton, both of which contain high-risk areas. County representatives (Prince George's County and Cecil County respectively) provided comments for those high-risk areas.

Consultation Meetings

SHA undertook five virtual consultation meetings as follows:

- Eastern Shore (Districts 1 and 2): July 11, 2023
- Montgomery and Prince George's counties (District 3): July 13, 2023
- Baltimore and northern suburbs (District 4 and Baltimore City): July 18, 2023
- Southern Maryland and Anne Arundel County (District 5): July 19, 2023
- Western Maryland and Howard County (Districts 6 and 7): July 20, 2023

More than 130 people, excluding the project team, attended these meetings.

Each meeting consisted of a presentation of about 30 minutes followed by dedicating the majority of the meeting to input by interested parties. The presentation described the purpose of the VRU Safety Assessment, provided a thorough discussion of the PSAP, outlined the key differences between the PSAP and the VRU Safety Assessment, and described the high-risk areas in the region covered by the meeting. Following the presentation, the project team described how the participants could provide input. The attendees then went through each high-risk area individually, providing comments on pedestrian and cyclist issues in the area, suggestions for improvements, and land use and other context associated with the area. Specific comments offered by participants are listed in a separate document, the Consultation Supplement. Several attendees noted their satisfaction with the presentation and with the process used to obtain input.

Online Survey

To supplement the consultation meetings, SHA developed an online survey. This survey consisted of an interactive map illustrating all high-risk areas in the state, as shown in Figure 25.

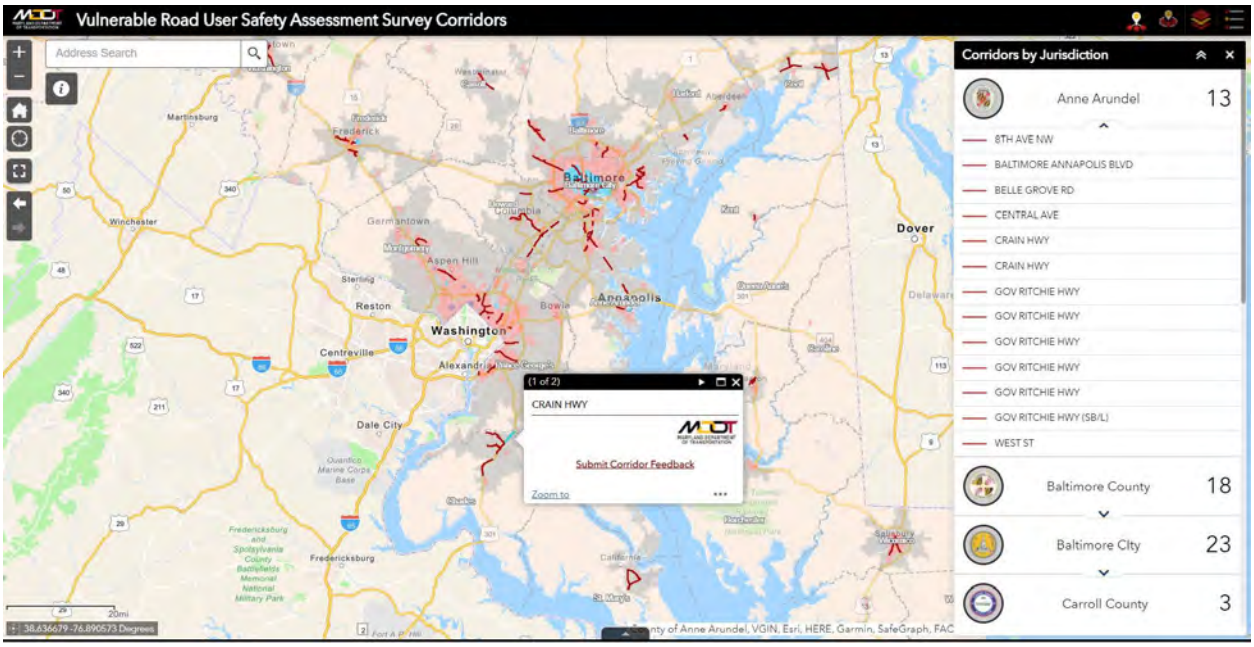


Figure 26 Online Survey

Participants could click on each high-risk area to access a survey asking four questions about that area:

- In your experience, what are the primary PEDESTRIAN safety concerns in this area?
- In your experience, what are the primary CYCLIST safety concerns in this area?
- What types of improvements would you like to see in the area to enhance the safety of pedestrians and cyclists?
- Please provide other information that would aid in understanding VRU safety concerns or actions needed to improve VRU safety.

An option was also given to provide contact information if the participant chose to do so.

More than 150 individual survey responses were received. Because many responses contained more than one comment, this resulted in several hundred comments for the project team's consideration.

Summary of Consultation Outcomes

As noted above, all input received during the consultation process, both in meetings and through the survey, is provided in the Consultation Supplement document. In addition, the high-risk area summaries in Chapter 5 describe key takeaways for each high-risk area on a state road.

In summary, respondents:

- Expressed the need for additional focus on VRU safety,
- Offered their observations on safety concerns and/or potential safety improvements for most high-risk areas that were identified, and
- Provided valuable information on recent or ongoing projects or studies in some high-risk areas.

The recommendations in the following chapter are, in many cases, derived directly from the results of the consultation process.

5 Recommendations

The recommendations in this chapter are divided into two parts. The first part includes general recommendations to advance VRU safety in Maryland. Recommendations for local roads are provided in that section. The second part includes a toolbox of recommendations for specific high-risk areas on state roads – 63 in all.

General Recommendations

Continue PSAP implementation, informed by the VRU Safety Assessment

SHA has placed great emphasis on implementation of the PSAP, beginning even before formal publication of the document in May 2023. Since 2019, more than 350 context-driven cycling and pedestrian safety projects have been completed throughout Maryland. In addition, SHA has programmed $97.5 million for pedestrian safety improvements and is actively developing projects to begin design activities for the top-scoring corridors referenced in the PSAP.

The VRU Safety Assessment provides an additional pool of potential safety improvement locations to supplement the PSAP. Most notably, it includes high-risk area locations in every SHA District. This equips District staff with information on the areas of greatest need for pedestrian and cyclist safety improvements, allowing them to determine where to program funding to prioritize those improvements.

Continue systemic safety investments

As described by FHWA, "a systemic approach to safety involves widely implemented improvements based on high-risk roadway features correlated with specific severe crash types. The approach helps agencies broaden their traffic safety efforts at little extra cost."

More than one-quarter of the Highway Safety Improvement Program (HSIP) funds that Maryland receives from the Federal government are used for systemic improvements. These include lighting, pavement markings, signing, sidewalk upgrades, and traffic barrier upgrades.

This report recommends that SHA continue to evaluate high-risk roadway features and implement improvements that are focused on VRU safety, including lighting, high-visibility crosswalk markings, and signing. National Cooperative Highway Safety Program Report 893, *Systemic Pedestrian Safety Analysis*, should be used as guidance for selection of proven VRU safety countermeasures.

Provide information on local road high-risk areas to county and municipal governments

This VRU Safety Assessment included evaluation of local roads as noted in Federal guidance. Because SHA does not have jurisdiction over municipal and county roads, this report recommends that SHA cooperate with the appropriate local jurisdictions to improve safety in locally owned and maintained high-risk areas. This includes sharing comments received through the consultation process. This information may be used by counties and municipalities as they develop their capital programs and seek funding for safety improvements. The local jurisdictions already have access to crash data directly from Maryland State Police, so they are able to perform analysis specific to their high-risk areas.

High-Risk Area Recommendations

Summary

Sixty-three high-risk areas were identified on state roads. While several of these overlap with PSAP priority corridors, there are additional high-risk areas in all seven SHA Districts. However, it is important to note that the PSAP corridors reflect the risk category from a statewide perspective, where some District high-risk areas may be lower risk relative to high-risk areas in other Districts. All of the high-risk areas on state roads are listed below.

District 1

- MD 528, Philadelphia Avenue/Coastal Highway from Division Street to 112th Street, Worcester County
- US 13 business, Salisbury Boulevard from East Cedar Lane to Bridgeview Street, Wicomico County
- MD 12, Snow Hill Road from Washington Street to Sandy Acres Drive, Wicomico County
- US 50 business, Salisbury Parkway/Ocean Gateway from West Isabella Street to Tilghman Road

District 2

- MD 322, Easton Parkway from Ocean Gateway to Bay Street, Talbot County
- MD 213, Washington Avenue from North Cross Street to Morgnec Road, Kent County
- US 40, Pulaski Highway from Marley Road to Charlestown Crossing Boulevard, Cecil County
- MD 272, North East Road from I-95 to Pulaski Highway, Cecil County
- US 40, Pulaski Highway from Thiokol Road to the Delaware state line, Cecil County
- MD 213, Bridge Street/Augustine Herman Highway from Elkton Boulevard to Lewis Shore Road, Cecil County

District 3

- MD 210, Indian Head Highway from I-495 to Livingston Road, Prince George's County
- MD 414, St. Barnabas Road from Virginia Lane to Branch Avenue, Prince George's County
- MD 4, Pennsylvania Avenue from Southern Avenue to I-495, Prince George's County
- MD 214, Central Avenue from Southern Avenue to Ritchie Road, Prince George's County
- MD 202, Landover Road from John Hanson Highway to Kent Town Drive, Prince George's County
- MD 201, Kenilworth Avenue from Annapolis Road to River Road, Prince George's County
- MD 500, Queen's Chapel Road from Chillum Road to Hamilton Street, Prince George's County
- MD 410, East-West Highway from Riggs Road to Adelphi Road, Prince George's County
- MD 212, Riggs Road from Chillum Road to University Boulevard East, Prince George's County
- MD 193, University Boulevard East from New Hampshire Avenue to Campus Drive, , Prince George's County
- MD 650, New Hampshire Avenue from University Boulevard East to I-495, Prince George's County and Montgomery County
- MD 320, Piney Branch Road from Flower Avenue to University Boulevard East, Montgomery County
- MD 193, University Boulevard East from Piney Branch Road to I-495, Montgomery County

- MD 586, Veirs Mill Road from First Street to Connecticut Avenue, Montgomery County
- MD 355, South Frederick Avenue from Montgomery Village Avenue to Central Avenue, Montgomery County
- MD 124, Montgomery Village Avenue/Midcounty Highway from North Frederick Avenue to Woodfield Road, Montgomery County

District 4

- US 40, Pulaski Highway from Short Lane to Aberdeen Thruway, Harford County
- MD 755, Edgewood Road from Nuttal Avenue to Emmorton Road, Harford County
- MD 157, Merritt Boulevard from Peninsula Expressway to North Point Boulevard, Baltimore County
- MD 150, Eastern Boulevard from I-695 to Martin Boulevard, Baltimore County
- MD 700, Martin Boulevard from Pulaski Highway to Eastern Boulevard, Baltimore County
- MD 542, Loch Raven Boulevard from Loch Hill Road to I-695, Baltimore County
- MD 146, Dulaney Valley Road from East Joppa Road to I-695, Baltimore County
- MD 140, Reisterstown Road from Westminster Pike to Rosewood Lane, Baltimore County
- MD 26, Liberty Road from Owings Mill Boulevard to Flannery Lane, Baltimore County
- US 40, Baltimore National Pike from Nuwood Drive to Charing Cross Road, Baltimore County

District 5

- MD 2, Governor Ritchie Highway (Segment 1) from Belle Grove Road to Church Street, Anne Arundel County
- MD 2, Governor Ritchie Highway (Segment 2) from I-695 to Ordnance Road, Anne Arundel County
- MD 2, Governor Ritchie Highway (Segment 3) from East Furnace Branch Road to Mountain Road, Anne Arundel County
- MD 2, Governor Ritchie Highway (Segment 4) from MD 10 to Baltimore Annapolis Boulevard, Anne Arundel County
- MD 2, Governor Ritchie Highway (Segment 5) from West Campus Drive to Mountain Road, Anne Arundel County
- MD 170, Belle Grove Road from Baltimore Annapolis Boulevard to I-895, Anne Arundel County
- MD 648, Baltimore Annapolis Boulevard from I-695 to I-97, Anne Arundel County
- MD 3, Crain Highway (Segment 1) from Baltimore Annapolis Boulevard to Quarterfield Road, Anne Arundel County
- MD 3, Crain Highway (Segment 2) from MD 100 to I-97, Anne Arundel County
- MD 450, West Street from Old Solomons Island Road to Taylor Avenue, Anne Arundel County
- US 301, Crain Highway (Segment 1) from MD 5 to Billingsley Road, Charles County
- US 301, Crain Highway (Segment 2) from Marshall Corner Road to Hawthorne Road, Charles County
- MD 228, Berry Road from Bunker Hill Road to Crain Highway, Charles County
- MD 235, Three Notch Road from Chancellors Run Road to Great Mills Road, St. Mary's County
- MD 237, Chancellors Run Road from Three Notch Road to Great Mills Road, St. Mary's County
- MD 246, Great Mills Road from Old Great Mills Road to Three Notch Road, St. Mary's County

District 6

- US 40, National Pike from I-81 to I-70, Washington County
- US 11, Virginia Avenue from I-70 to Wilson Boulevard, Washington County

District 7

- US 40, West Patrick Street from Kehne Road to Frederick Freeway, Frederick County
- MD 85, Buckeystown Pike from I-70 to Julia Lane, Frederick County
- MD 140, Baltimore Boulevard from Littlestown Pike to Carroll County Northern Landfill, Carroll County
- US 1, Washington Boulevard (Segment 1) from Montgomery Road to MD 100, Howard County
- US 1, Washington Boulevard (Segment 2) from MD 103 to MD 32, Howard County
- US 1, Washington Boulevard (Segment 3) from Freestate Drive to the Patuxent River, Howard County
- MD 175 (Segment 1), Rouse Parkway from Columbia Pike to I-95, Howard County
- MD 175 (Segment 2), Waterloo Road from Washington Boulevard to the Patuxent Institution, Howard County
- US 40, Baltimore National Pike from Centennial Lane to Columbia Pike, Howard County

Countermeasures

SHA's Context Driven Toolkit links safety countermeasures with context zones and, in some cases, additional criteria such as posted speed. This toolkit allows for the selection of appropriate safety tools for each of the state-maintained high-risk areas in this report. Summaries of these countermeasures are provided below, with more information available for each in the Toolkit.

This is simply a list of potential countermeasures. In each case, specific site conditions and criteria for each high-risk area must be considered by the planner or designer when determining the right countermeasures at each location. Not all countermeasures are appropriate at all locations.

Barrier Separated Bike Lanes

A barrier separated bike lane is an exclusive facility for bicyclists that is located within or directly adjacent to the roadway and is physically separated from motor vehicle traffic by a vertical element. They are differentiated from shared use paths because they are bike-only facilities. Barrier separated bike lanes are also referred to as "cycle tracks" or "protected bike lanes." Vertical elements in the barrier area provide an increased sense of comfort and safety for users of the bike lane. Examples of vertical elements include delineator posts, bollards, concrete barriers, raised medians, or elevating the facility to intermediate or sidewalk grade.

Continental Crosswalks

Continental (longitudinal bar) crosswalks are a type of high-visibility crosswalk markings. Continental crosswalk markings use thick striping oriented parallel to the approach travel lanes to increase the visibility of pedestrian crossings for both pedestrians and motorists. Motorists are warned to expect pedestrian crossings while approaching the intersection and to stop for crossing pedestrians because these pavement markings can be detected sooner than traditional parallel line crosswalk markings. At uncontrolled

locations, continental crosswalks identify a preferred crossing location for pedestrians. At midblock locations, crosswalk markings legally establish the crosswalk.

Green Pavement for Bike Lanes

Colored pavement within a bike lane increases visibility of the facility, highlights potential areas of conflict, and reinforces that drivers must yield to bicyclists when entering a conflict area. Green-colored pavement is used to designate locations where bicyclists are expected to operate, and areas where bicyclists and other roadway traffic might have potentially conflicting weaving or crossing movements. This may include a bike box, extension lines through an intersection or across driveways, turning queue boxes or protected intersections. Consistent application of color within a roadway corridor is important to promote clear understanding by all users.

Hardened Centerlines

Hardened centerlines are roadway treatments that slow left-turning vehicle traffic by "hardening" (creating a physical barrier) between opposing travel directions. The hardened centerline may also extend past the crosswalk to provide an even greater safety benefit. Hardened centerlines can slow down left-turning vehicles by discouraging motorists from oversteering through a turning movement. This is achieved by forcing the left-turning vehicle to navigate around the hardened centerline, and by making it more difficult for the left-turning vehicle to use parts of the crosswalk and opposing vehicle lanes to execute a wider, higher speed left turn. The smaller turn radius not only slows the left-turning vehicle down, but also increases the visibility of pedestrians in the crosswalk, improves motorist reaction time to pedestrians in the crosswalk, and reduces serious injury risk in the event of a collision.

In-Lane Floating Bus Stops

An in-lane floating bus stop consists of a raised platform that allows buses to pick up passengers without pulling out of traffic lanes. Bike facilities such as bike lanes are diverted behind the bus stop amenities. This configuration allows transit vehicles to stay in their own lane without crossing the bike paths, and gives cyclists added protection from vehicular traffic at the bus stop. Benefits to an in-lane floating bus stop include reduced bus dwell times, elimination of bus-bike conflicts, and more space for transit passengers and amenities.

Lane Width Reduction

Where safety and speeding concerns are identified, or where travel lanes are wide or not defined with markings, a lane width reduction or "lane diet" may be used to reallocate road space. Lane width reductions often occur during a resurfacing or roadway improvement project, and may include repurposing of additional paved space with markings, or by physically removing unused paved areas. Lane diets provide multiple benefits, including encouraging reduced vehicle operating speeds in denser context environments, reducing crossing distances for pedestrians to decrease exposure to motor vehicle traffic, allowing for compact intersection geometry that facilitates shorter signal cycles, reducing paved surfaces to decrease stormwater impacts, and reallocating roadway space for other uses.

Leading Pedestrian Intervals

A leading pedestrian interval (LPI) is the presence of a pedestrian phase prior to any vehicular phase when crossing at a signalized intersection. The interval allows the pedestrian the opportunity to enter an

intersection 4 to 7 seconds (7 seconds preferred) before any vehicles are given a green signal indication. This extra time provides pedestrians with an opportunity to establish their presence in the crosswalk before motorists start turning and provides additional crossing time for those who need it. This head start increases the percentage of motorists who yield the right-of-way to pedestrians and can reduce conflicts between pedestrians crossing a roadway and turning vehicles. Consideration will be given to balancing vehicle capacity at each location where the treatments are being considered.

Midblock Crosswalks

Midblock crosswalks designate appropriate locations for pedestrians to cross a road at non-intersection locations, and include appropriate traffic control devices to manage conflicts and improve safety. These facilities may be provided where significant pedestrian generators are located on opposite sides of a road, or where a pedestrian or bike path is located away from intersections, like a regional trail. Frequent applications include midblock bus stops, metro stations, parks, plazas, or entrances to key destinations.

The location and placement of midblock crosswalks are subject to a variety of factors, including context, intersection spacing, roadway width, traffic volume and speed, stopping sight distance, presence of pedestrian generators, and reported safety concerns. Because midblock crosswalks are located away from intersections, where motorists traditionally expect to encounter pedestrians crossing the road, design of the crosswalk must include appropriate traffic control features. Where conflicts are uncontrolled, the design must allow drivers to recognize potential conflicts, and stop for pedestrians in or entering the crosswalk.

No Turn On Red

A No Turn On Red (NTOR) restriction is designated by a posted NO TURN ON RED (R10-11b) sign at the signalized intersection for any approach where the restriction may improve safety. The purpose of this treatment is to eliminate conflicts between turning vehicles and pedestrians or bicyclists during a concurrent walk (or bike signal) phase, and to mitigate sight line restrictions.

Pedestrian Hybrid Beacon

Pedestrian hybrid beacons (PHBs) are traffic control devices that are installed at crossings of major streets that provide a controlled opportunity for pedestrians to cross the street. The beacon is different from a conventional traffic signal because it includes a three-section triangular signal display, with two red signal faces side-by-side, above a yellow signal face below and centered between the red signals. It also remains “dark” until a pedestrian that desires to cross the street is detected. The signal activates with an initial yellow to red lighting sequence that directs motorists to slow and come to a stop. The pedestrian signal then displays WALK to allow the pedestrian to begin their crossing. At conclusion of the WALK interval, the red signals begin flashing in an alternating wig-wag pattern, and the pedestrian signal displays Flashing Don’t Walk, and upraised hand symbols for the pedestrian clearance interval. During this time, drivers are permitted to treat the beacon under a stop-and-go operation, yielding to any pedestrians in the crosswalk, or proceeding if the crosswalk is clear. After the pedestrian clearance is complete, the hybrid beacon reverts to a dark display.

Posted Speed Limit Reduction

Posted speed limits notify drivers of the maximum safe speed, established either by statute or through an engineering study to establish a speed zone, based on a variety of operational, safety and roadside factors. On roadways with observed safety challenges, where reducing operating speeds would reduce the frequency of collisions, and reduce the severity of collisions that do occur, a posted speed limit reduction may be utilized to improve safety. In denser context areas, a reduction in the posted speed limit may have a significant impact on safety for more vulnerable users, including pedestrians and bicyclists. Higher operating speeds reduce a driver's ability to react when they encounter these users in the road, and result in higher severity outcomes when collisions occur.

Protected Intersections

A protected intersection maintains physical separation between vehicular and bicyclist movements through an intersection. A corner protection island, forward queuing area, and recessed bike and pedestrian crossings reduces vehicular turning speeds, increases visibility of bicyclists or pedestrians crossing the street, and provides space to yield while vulnerable users clear the intersection. This treatment is most effective at locations with high volumes of bicyclists and motorists, or medium to high volumes of bicyclists, motorists, and pedestrians. Protected intersections are a preferred treatment for separated bike lanes in an urban context. At signalized intersections, signal timing may provide leading or protected phasing to further reduce potential conflicts.

Rectangular Rapid Flashing Beacon

Rectangular Rapid Flashing Beacons (RRFBs) are pedestrian-actuated visual enhancement devices, used in combination with a pedestrian, school, or trail crossing warning sign to improve safety at uncontrolled marked crosswalks. The RRFBs are placed on both sides of an uncontrolled crosswalk supplementing an applicable warning sign. The beacons differ from standard flashing beacons because the device utilizes a rapid flash frequency (approximately 75 flashing sequences per minute), and brighter light intensity display. RRFBs can be activated by passive or pedestrian-actuated detection.

Individual high-risk areas on state roads

The Consultation Supplement includes relevant information for all 63 high-risk areas on state roads, including:

- Context zone(s) in which the high-risk area is located,
- Traffic volumes,
- Posted speed limits,
- Multimodal facilities present, and
- Key points from the consultation process.

The Consultation Supplement also includes all comments received from the consultation meetings and survey as described in Chapter 4.

Maryland State Highway Administration

Vulnerable Road User Safety Assessment

Consultation Supplement

November 2023

Contents

Supplemental Information for High-Risk Areas on State Roads

This document is a supplement to the 2023 Maryland State Highway Administration (SHA) Vulnerable Road User (VRU) Safety Assessment. It focuses on information received during the VRU Safety Assessment consultation process. The following pages contain detailed information on high-risk areas identified in the assessment. The supplement concludes with a listing of all comments received during consultation meetings and from the project's online survey. More information about the consultation process is found in Chapter 4 of the assessment document.

The following pages provide relevant information for all 63 high-risk areas on state roads, including:

- Context zone(s) in which the high-risk area is located
- Traffic volumes
- Posted speed limits
- Multimodal facilities present
- Key points from the consultation process

High-risk areas are listed by SHA District, from 1 to 7.

District 1, Worcester County (Ocean City area)

MD 528, Philadelphia Avenue/Coastal Highway from North Division Street to 112th Street

Context zones: Urban Center, Suburban Activity Center/Traditional Town Center

Traffic volumes: 24,000-42,000 vehicles per day

Posted speed limits: 40 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus/bike lanes
- Bus stops

Key points from the consultation process:

- Bikes share bus lane, which doesn't work well
- Also consider ped/bike access along MD 90 and MD 589 connecting to the west
- Provide more police enforcement funding

District 1, Wicomico County (Salisbury area)

US 13 business, Salisbury Boulevard

from East Cedar Lane to Bridgeview Street

Context zones: Urban Center, Suburban Activity Center/Traditional Town Center

Traffic volumes: 18,000-29,000 vehicles per day

Posted speed limits: 35 mph

Multimodal facilities present:

- Continuous sidewalks

Key points from the consultation process:

- Very busy corridor for pedestrians and cyclists
- Speed limits are far too high for an urban area
- Provide center median, improved lighting, separated bike facilities and pedestrian signals
- See US 13 Master Plan

District 1, Wicomico County (Salisbury area)

MD 12, Snow Hill Road

from Washington Street* to West Sandy Acres Drive

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: About 10,000 vehicles per day

Posted speed limits: 30-40 mph

Multimodal facilities present:

- Sidewalks
- Bike lanes

Key points from the consultation process:

- Very busy corridor for pedestrians and cyclists
- Speed limits are far too high for an urban area
- Provide center median, improved lighting, separated bike facilities and pedestrian signals

* Snow Hill Road between Main Street and Washington Street is a high-risk area owned and maintained by the City of Salisbury.

District 1, Wicomico County (Salisbury area)

US 50 business, Salisbury Parkway/Ocean Gateway

from West Isabella Street to Tilghman Road

Context zones: Urban Center, Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: 16,000-19,000 vehicles per day

Posted speed limits: 35-55 mph

Multimodal facilities present:

- Sidewalks
- Bike lanes

Key points from the consultation process:

- Very busy corridor for pedestrians and cyclists
- Speed limits are far too high for an urban area
- Provide center median, improved lighting, separated bike facilities and pedestrian signals

District 2, Talbot County (Easton area)

MD 322, Easton Parkway

from Ocean Gateway to Bay Street

Context zones: Suburban

Traffic volumes: About 15,000 vehicles per day

Posted speed limits: 45-50 mph

Multimodal facilities present:

- No pedestrian facilities
- Bus stops

Key points from the consultation process:

- No comments received

District 2, Kent County (Chestertown area)

MD 213, Washington Avenue

from North Cross Street to Morgnec Road

Context zones: Traditional Town Center

Traffic volumes: About 14,000 vehicles per day

Posted speed limits: 25-30 mph

Multimodal facilities present:

- Intermittent sidewalks

Key points from the consultation process:

- Speeding is a concern
- There are no designated pedestrian crossings north of Greenwood Avenue
- Cyclists refer to the Chester River bridge as the "Bridge of Death"
- Provide state support to develop a local bike/ped plan

District 2, Cecil County (North East area)

US 40, Pulaski Highway

from Marley Road to Charlestown Crossing Boulevard

Context zones: Suburban

Traffic volumes: 27,000-30,000 vehicles per day

Posted speed limits: 55 mph

Multimodal facilities present:

- Bike lanes
- Bus stops

Key points from the consultation process:

- Focus on US 40/MD 272 intersection
- Cecil County bike plan implementation will take bicyclists off of US 40

District 2, Cecil County (North East area)

MD 272, North East Road

from Pulaski Highway to I-95

Context zones: Suburban

Traffic volumes: About 22,000 vehicles per day

Posted speed limits: 45-50 mph

Multimodal facilities present:

- Limited, intermittent sidewalks
- Bus stops

Key points from the consultation process:

- Provide bike/ped connections to Cecil College to the north

District 2, Cecil County (Elkton area)

US 40, Pulaski Highway

from Thiokol Road to the Cecil County line

Context zones: Suburban, Suburban Activity Center/Traditional Town Center

Traffic volumes: 30,000-32,000 vehicles per day

Posted speed limits: 45-50 mph

Multimodal facilities present:

- Bike lanes
- Bus stops

Key points from the consultation process:

- Heavy transit use
- Issues at Delaware Avenue/Maloney Road intersection
- Need sidewalks, lighting improvements, and a median fence to deter midblock crossings

District 2, Cecil County (Elkton area)

MD 213, Bridge Street/Augustine Herman Highway
from Elkton Boulevard to Lewis Shore Road

Context zones: Traditional Town Center, Suburban, Rural

Traffic volumes: 16,000-18,000 vehicles per day

Posted speed limits: 25-50 mph

Multimodal facilities present:

- Continuous sidewalks north of Pulaski Highway
- No sidewalks south of Pulaski Highway

Key points from the consultation process:

- Ensure that huge Southfields development addresses all pedestrian needs between Pulaski Highway and Frenchtown Road

District 3, Prince George's County

MD 210, Indian Head Highway
from I-495 to Livingston Road

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: About 24,000 vehicles per day

Posted speed limits: 30-40 mph

Multimodal facilities present:

- Bus stops

Key points from the consultation process:

- Midblock pedestrian crossings due to long signal spacing, high travel speeds, lack of street lighting
- Provide protected bike lanes through lane repurposing

District 3, Prince George's County

MD 414, St. Barnabas Road
from Virginia Lane to Branch Avenue

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: 35,000-42,000 vehicles per day

Posted speed limits: 40 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Thanks to the State Highway Administration for its recent road safety audit

District 3, Prince George's County

MD 4, Pennsylvania Avenue
from Southern Avenue to I-495

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: 21,000-37,000 vehicles per day

Posted speed limits: 45 mph

Multimodal facilities present:

- Intermittent sidewalks east of Brooks Drive
- Bike lanes east of Silver Hill Road
- Bus stops

Key points from the consultation process:

- Evaluate whether safety improvements completed about eight years ago have helped

District 3, Prince George's County

MD 214, Central Avenue
from Southern Avenue to Ritchie Road

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: 22,000-53,000 vehicles per day

Posted speed limits: 30-40 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Complete the sidewalk network
- Provide protected bike lanes
- Address crossings to and from the Central Avenue connector trail where it parallels MD 214

District 3, Prince George's County

MD 202, Landover Road
from John Hanson Highway to Kent Town Drive

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: About 48,000 vehicles per day

Posted speed limits: 35 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- This route is used to access the Landover Metro station

District 3, Prince George's County

MD 201, Kenilworth Avenue
from Annapolis Road to River Road

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: About 29,000 vehicles per day

Posted speed limits: 40 mph

Multimodal facilities present:

- Continuous sidewalks
- Some bike lanes
- Bus stops

Key points from the consultation process:

- Fast traffic with missing crosswalks and people crossing midblock
- Limited, if any, bicycle facilities
- Substantial improvements will be made in conjunction with the Purple Line; confirm that these will address pedestrian and cyclist safety
- Designs should reflect a denser context zone than exists today

District 3, Prince George's County

MD 500, Queen's Chapel Road
from Chillum Road to Hamilton Street

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: About 34,000 vehicles per day

Posted speed limits: 35 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- High-speed, high-volume traffic
- Access to West Hyattsville Metro
- Ongoing project to improve pedestrian facilities
- Provide protected bicycle facilities and intersection improvements for cyclist safety

District 3, Prince George's County

MD 410, East-West Highway
from Riggs Road to Adelphi Road

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: 29,000-46,000 vehicles per day

Posted speed limits: 35 mph

Multimodal facilities present:

- Continuous sidewalks east of Toledo Terrace
- Northwest Branch Trail shared use path
- Bus stops

Key points from the consultation process:

- Conflict between dense redevelopment/Metro station and very wide pedestrian-unfriendly road
- No bicycle facilities of any kind
- Implement the road diet recommended in the PG Plaza Transit District Development Plan, along with more frequent pedestrian crossings
- Designs should reflect a denser context zone than exists today

District 3, Prince George's County

MD 212, Riggs Road
from Chillum Road to University Boulevard East

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: About 38,000 vehicles per day

Posted speed limits: 35 mph

Multimodal facilities present:

- Continuous sidewalks
- Bike lanes
- Bus stops

Key points from the consultation process:

- There is a dangerous trail crossing along this segment
- A project is in the works to address this crossing

District 3, Prince George's County

MD 193, University Boulevard East
from New Hampshire Avenue to Campus Drive

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: 33,000-39,000 vehicles per day

Posted speed limits: 35 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Insufficient sidewalks and crosswalks
- No or unprotected bike lanes next to high-speed traffic
- Low-income area with many people walking and cycling
- Substantial improvements will be made in conjunction with the Purple Line; confirm that these will address pedestrian and cyclist safety

District 3, Prince George's County and Montgomery County

MD 650, New Hampshire Avenue
from University Boulevard East to I-495

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: 35,000-70,000 vehicles per day

Posted speed limits: 35 mph

Multimodal facilities present:

- Intermittent sidewalks
- Bus stops

Key points from the consultation process:

- Very heavy traffic, narrow and poorly maintained sidewalks, limited safe crossing opportunities
- Extend limits all the way through the Beltway interchange
- Narrow lanes or reduce number of lanes to provide bike lanes and wider sidewalks
- Advance the recommendations of the Montgomery and Prince George's County Road Safety Audit

District 3, Montgomery County

MD 320, Piney Branch Road

from Flower Avenue to University Boulevard East

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: About 22,000 vehicles per day

Posted speed limits: 30 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Lack of a continuous and separated safe bikeway
- Substantial improvements will be made in conjunction with the Purple Line; confirm that these will address pedestrian and cyclist safety
- Need better crossings at unsignalized locations

District 3, Montgomery County

MD 193, University Boulevard East

from Piney Branch Road to I-495

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: 35,000-44,000 vehicles per day

Posted speed limits: 35 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Fast traffic with inconsistent, narrow, unbuffered sidewalks and many uncontrolled crossings
- No bicycle facilities of any kind
- Provide wide, continuous sidewalks with separation from motor vehicles
- Calm traffic and provide protected bicycle facilities

District 3, Montgomery County (Rockville area)

MD 586, Veirs Mill Road

from First Street to Connecticut Avenue

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: About 27,000 vehicles per day

Posted speed limits: 35-40 mph

Multimodal facilities present:

- Continuous sidewalks
- Bike lanes, separated in some locatoins
- Bus stops

Key points from the consultation process:

- Pedestrian challenges include high-speed traffic, very wide roadway, incomplete sidewalks, infrequent signalized crossings (sometimes with bus stops), and ramps that are inaccessible
- No bicycle facilities of any kind
- Ensure upcoming bus rapid transit project addresses pedestrian and cyclist safety
- Provide protected bike lanes, wider sidewalks, slower traffic, more frequent crossings, and crosswalks across all legs of signalized intersections
- [Dozens of comments received, more than anywhere else in District 3]

District 3, Montgomery County (Gaithersburg area)

MD 355, South Frederick Avenue

from Montgomery Village Avenue to Central Avenue

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: About 26,000 vehicles per day

Posted speed limits: 40 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Very high traffic volumes and speeds
- Narrow sidewalks, missing crosswalks at intersections and other key locations
- Very dangerous for cycling
- Bus rapid transit under design will make many changes to the corridor

District 3, Montgomery County (Gaithersburg area)

MD 124, Montgomery Village Avenue/Midcounty Highway

from North Frederick Avenue to Woodfield Road

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: 20,000-39,000 vehicles per day

Posted speed limits: 35-50 mph

Multimodal facilities present:

- Continuous sidewalks on Montgomery Village Avenue
- No sidewalks on Midcounty Highway
- Bus stops

Key points from the consultation process:

- Too many exclusive right turn lanes; re-evaluate eliminating these
- Build out master planned shared use path on at least one side
- Upgrade pedestrian signals and provide ADA improvements
- Fix the fire house intersection

District 4, Harford County (Aberdeen area)

US 40, Pulaski Highway

from Short Lane to Aberdeen Thruway

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: About 30,000 vehicles per day

Posted speed limits: 30-55 mph

Multimodal facilities present:

- Intermittent sidewalks
- Bus stops

Key points from the consultation process:

- Many destinations for people walking and bicycling, including bus stops and train station, along with significant numbers of people without access to cars
- High speeds, long distances between crosswalks, narrow shoulders
- Improve lighting, reduce speeds, reduce crosswalk spacing, provide leading pedestrian intervals

District 4, Harford County (Edgewood area)

MD 755, Edgewood Road

from Nuttal Avenue to Emmorton Road

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: About 2,000 vehicles per day

Posted speed limits: 35-40 mph

Multimodal facilities present:

- Continuous sidewalks

Key points from the consultation process:

- No comments received

District 4, Baltimore County (Dundalk area)

MD 157, Merritt Boulevard

from Peninsula Expressway to North Point Boulevard

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: 21,000-35,000 vehicles per day

Posted speed limits: 40 mph

Multimodal facilities present:

- Continuous sidewalks
- Bike lanes

Key points from the consultation process:

- The bike lanes are between car lanes
- Consider converting outside lanes to protected bike lanes

District 4, Baltimore County (Essex area)

MD 150, Eastern Boulevard

from I-695 to Martin Boulevard

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: 27,000-38,000 vehicles per day

Posted speed limits: 30-35 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Many residential communities, small businesses, and bus stops
- Limited crosswalks

District 4, Baltimore County (Middle River area)

MD 700, Martin Boulevard

from Pulaski Highway to Eastern Boulevard

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: About 21,000 vehicles per day

Posted speed limits: 35-50 mph

Multimodal facilities present:

- Bike lanes
- Bus stops

Key points from the consultation process:

- Speeding is a concern

District 4, Baltimore County (Towson area)

MD 542, Loch Raven Boulevard

from Loch Hill Road to I-695

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: 20,000-30,000 vehicles per day

Posted speed limits: 35-40 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Road is too wide for travel demand; repurpose space for people walking and bicycling
- Complete the sidewalk network and provide more frequent crossings
- This stretch is a very good candidate for complete street design, as it has frequent transit, many pedestrians and bicyclists, and runs through disadvantaged areas where many people lack access to motor vehicles

District 4, Baltimore County (Towson area)

MD 146, Dulaney Valley Road

from East Joppa Road to I-695

Context zones: Urban Core, Suburban Activity Center/Traditional Town Center

Traffic volumes: About 36,000 vehicles per day

Posted speed limits: 30-40 mph

Multimodal facilities present:

- Continuous sidewalks in most areas
- Bus stops

Key points from the consultation process:

- Sections do not have sidewalks
- No dedicated facilities for bicycles, though there are lots of recreational bike opportunities to the north
- Provide continuous sidewalks and bike facilities, especially addressing safety at interchange ramps

District 4, Baltimore County (Owings Mills area)

MD 140, Reisterstown Road

from Westminster Pike to Rosewood Lane

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: 16,000-24,000 vehicles per day

Posted speed limits: 30-40 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- No comments received

District 4, Baltimore County (Randallstown area)

MD 26, Liberty Road

from Owings Mill Boulevard to Flannery Lane

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: 22,000-43,000 vehicles per day

Posted speed limits: 35 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Land uses create significant pedestrian demand, but there are limited facilities for people walking
- "A lot has been done for a long time on this stretch of road," and nothing has worked
- Build on Liberty Road Task Force report
- Need a bigger project to reconstruct the road

District 4, Baltimore County (Catonsville area)

US 40, Baltimore National Pike

from Nuwood Drive to Charing Cross Road

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: 23,000-52,000 vehicles per day

Posted speed limits: 45 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Land uses create significant pedestrian demand, but there are limited facilities for people walking
- Very wide with associated high speeds and long stretches without crosswalks
- Provide more frequent crossing opportunities, buffers with trees, and signal timing to slow traffic

District 5, Anne Arundel County (Brooklyn Park area)

MD 2, Governor Ritchie Highway (Segment 1)

from Belle Grove Road to Church Street

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: About 19,000 vehicles per day

Posted speed limits: 35 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Long distances between signalized crossings result in many people crossing midblock
- Narrow travel lanes with high speeds and no shoulders
- Sidewalks are overgrown and/or curb tight

District 5, Anne Arundel County (Glen Burnie area)

MD 2, Governor Ritchie Highway (Segment 2)

from I-695 to Ordnance Road

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: About 36,000 vehicles per day

Posted speed limits: 35 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Weave from eastbound I-695 to MD 2 is a safety issue for everyone, including pedestrians
- Huge intersection at Ordnance Road is difficult to cross
- In the Motor Vehicle Administration area, people sometimes walk in the median

District 5, Anne Arundel County (Glen Burnie area)

MD 2, Governor Ritchie Highway (Segment 3)

from East Furnace Branch Road to Mountain Road

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: 20,000-23,000 vehicles per day

Posted speed limits: 45 mph

Multimodal facilities present:

- Intermittent sidewalks
- Bus stops

Key points from the consultation process:

- Few, if any, sidewalks, and many driveways
- Provide better crossings to the B&A Trail
- Crossings are needed at both West Pasadena and Magothy Bridge, as they serve different populations

District 5, Anne Arundel County (Pasadena area)

MD 2, Governor Ritchie Highway (Segment 4)

from MD 10 to Baltimore Annapolis Boulevard

Context zones: Suburban

Traffic volumes: 49,000-60,000 vehicles per day

Posted speed limits: 50 mph

Multimodal facilities present:

- Continuous sidewalks in the area of the Magothy Bridge Road intersection
- Intermittent sidewalks elsewhere
- Bike lanes
- Bus stops

Key points from the consultation process:

- Many comments regarding general lack of safety and facilities for pedestrians and cyclists
- Very high speeds, which make crossing unsafe for both walking and cycling
- Provide better crossings to the B&A Trail
- [More than 100 comments received, more than anywhere else in the state]

District 5, Anne Arundel County (Arnold area)

MD 2, Governor Ritchie Highway (Segment 5)

from West Campus Drive to Mountain Road

Context zones: Suburban

Traffic volumes: About 39,000 vehicles per day

Posted speed limits: 50 mph

Multimodal facilities present:

- Intermittent sidewalks
- Bus stops

Key points from the consultation process:

- Do not add a lane in each direction as is being considered; this is the wrong idea for VRU safety
- Provide better crossings to the B&A Trail
- Provide bridges across the highway, especially at Arnold

District 5, Anne Arundel County (Brooklyn Park area)

MD 170, Belle Grove Road

from Baltimore Annapolis Boulevard to I-895

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: About 12,000 vehicles per day

Posted speed limits: 30 mph

Multimodal facilities present:

- Continuous sidewalks

Key points from the consultation process:

- Active shared use path project with sidewalk improvements; make sure crossing improvements are included in this project

District 5, Anne Arundel County (Linthicum Heights area)

MD 648, Baltimore Annapolis Boulevard

from I-695 to I-97

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: About 17,000 vehicles per day

Posted speed limits: 30-40 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Sidewalk feasibility study is in Anne Arundel County's priority letter

District 5, Anne Arundel County (Glen Burnie area)

MD 3, Crain Highway (Segment 1)

from Baltimore Annapolis Boulevard to Quarterfield Road

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: About 22,000 vehicles per day

Posted speed limits: 30 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Northern section is in Glen Burnie town center plan
- Pedestrian crossings at night may be a concern

District 5, Anne Arundel County (Glen Burnie area)

MD 3, Crain Highway (Segment 2)

from MD 100 to I-97

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: 17,000-31,000 vehicles per day

Posted speed limits: 40 mph

Multimodal facilities present:

- Nearly continuous sidewalks
- Bus stops

Key points from the consultation process:

- A capital project is coming to add sidewalks between Stevenson and Green Branch, under I-97
- Pedestrian crossings at night may be a concern

District 5, Anne Arundel County (Annapolis area)

MD 450, West Street

from Old Solomons Island Road to Taylor Avenue

Context zones: Suburban Activity Center/Traditional Town Center

Traffic volumes: About 26,000 vehicles per day

Posted speed limits: 25-30 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Many comments expressed extreme concern about bicyclist safety
- Inadequate sidewalks and pedestrian crossings at MD 2 and MD 450
- Many people recommended extension of the Poplar Trail, especially a safe crossing at MD 2
- Others suggested eliminating one lane of travel in each direction and creating bike lanes

District 5, Charles County (Waldorf area)

US 301, Crain Highway (Segment 1)

from MD 5 to Billingsley Road

Context zones: Suburban

Traffic volumes: 31,000-59,000 vehicles per day

Posted speed limits: 45-55 mph

Multimodal facilities present:

- No pedestrian facilities
- Bus stops

Key points from the consultation process:

- No comments received

District 5, Charles County (La Plata area)

US 301, Crain Highway (Segment 2)

from Marshall Corner Road to Hawthorne Road

Context zones: Suburban

Traffic volumes: 31,000-38,000 vehicles per day

Posted speed limits: 50-55 mph

Multimodal facilities present:

- No pedestrian facilities
- Bus stops

Key points from the consultation process:

- No comments received

District 5, Charles County (Waldorf area)

MD 228, Berry Road

from Bunker Hill Road to Crain Highway

Context zones: Suburban

Traffic volumes: 35,000-38,000 vehicles per day

Posted speed limits: 35-50 mph

Multimodal facilities present:

- Intermittent sidewalks
- Bus stops

Key points from the consultation process:

- No comments received

District 5, St. Mary's County (Lexington Park area)

MD 235, Three Notch Road

from Chancellors Run Road to Great Mills Road

Context zones: Suburban

Traffic volumes: About 33,000 vehicles per day

Posted speed limits: 45 mph

Multimodal facilities present:

- Continuous sidewalks
- Bike lanes
- Bus stops

Key points from the consultation process:

- Not safe for bicyclists due to number of travel lanes
- County is looking into a shared use path

District 5, St. Mary's County (Lexington Park area)

MD 237, Chancellors Run Road

from Three Notch Road to Great Mills Road

Context zones: Suburban

Traffic volumes: About 19,000 vehicles per day

Posted speed limits: 45 mph

Multimodal facilities present:

- Continuous sidewalks
- Three Notch Trail (shared use path)
- Bike lanes
- Bus stops

Key points from the consultation process:

- Continuous sidewalks
- Some areas have a narrow shoulder for bicyclists

District 5, St. Mary's County (Lexington Park area)

MD 246, Great Mills Road

from Old Great Mills Road to Three Notch Road

Context zones: Suburban

Traffic volumes: About 17,000 vehicles per day

Posted speed limits: 35-40 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Sidewalks, but no bike lanes

District 6, Washington County (Hagerstown area)

US 40, National Pike

from I-81 to I-70

Context zones: Urban Center, Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: 21,000-33,000 vehicles per day

Posted speed limits: 25-45 mph

Multimodal facilities present:

- Continuous sidewalks in downtown Hagerstown
- Intermittent sidewalks elsewhere
- Bike lanes

Key points from the consultation process:

- SHA sidewalk is in progress on the east side of Hagerstown
- Western part of corridor lacks sidewalks, and many pedestrians cross midblock
- Provide new sidewalks (especially to the west), lighting, and midblock crossings

District 6, Washington County (Hagerstown area)

US 11, Virginia Avenue

from I-70 to Wilson Boulevard

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: About 11,000 vehicles per day

Posted speed limits: 30 mph

Multimodal facilities present:

- Continuous sidewalks east of Halfway Boulevard
- Bus stops

Key points from the consultation process:

- Mixed land use with plenty of pedestrian demand
- No bike lanes and limited sidewalks; high traffic volume and speeds
- Complete the sidewalk system; add accessible pedestrian signals; add bike lanes where possible

District 7, Frederick County (Frederick area)

US 40, West Patrick Street

from Kehne Road to Frederick Freeway

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: 15,000-44,000 vehicles per day

Posted speed limits: 45-50 mph

Multimodal facilities present:

- Intermittent sidewalks

Key points from the consultation process:

- Median barriers may be effective in reducing uncontrolled midblock crossings

District 7, Frederick County (Frederick area)

MD 85, Buckeystown Pike

from I-70 to Julia Lane

Context zones: Suburban

Traffic volumes: About 23,000 vehicles per day

Posted speed limits: 40 mph

Multimodal facilities present:

- Intermittent sidewalks
- Bike lanes

Key points from the consultation process:

- A project completed in 2022 provided sidewalks across the interchange

District 7, Carroll County (Westminster area)

MD 140, Baltimore Boulevard

from Littlestown Pike to Carroll County Northern Landfill

Context zones: Suburban Activity Center/Traditional Town Center, Suburban, Rural

Traffic volumes: 41,000-51,000 vehicles per day

Posted speed limits: 45-55 mph

Multimodal facilities present:

- Intermittent sidewalks north of Ralph Street/Cranberry Road
- Bike lanes

Key points from the consultation process:

- Provide additional sidewalks
- Reduce the incidence of midblock crossings
- Do not provide any accommodation for pedestrians or cyclists; roads are for moving people and goods

District 7, Howard County (Elkridge area)

US 1, Washington Boulevard (Segment 1)

from Montgomery Road to MD 100

Context zones: Suburban

Traffic volumes: 23,000-37,000 vehicles per day

Posted speed limits: 40-50 mph

Multimodal facilities present:

- No pedestrian or bicycle facilities

Key points from the consultation process:

- All of US 1 is Howard County's primary focus for pedestrian safety, due to an unusually diverse mix of land uses, high vehicle speeds, and limited ped/bike facilities
- 30% of County jobs, many of which are of moderate income, are along this corridor
- Undertake a comprehensive redesign; focus through traffic on routes that are designed for it (e.g., I-95 and MD 295)
- Shared use paths are preferred rather than on-street bike facilities

District 7, Howard County (Jessup area)

US 1, Washington Boulevard (Segment 2)

from MD 103 to MD 32

Context zones: Suburban

Traffic volumes: 28,000-36,000 vehicles per day

Posted speed limits: 45-50 mph

Multimodal facilities present:

- Intermittent sidewalks
- Bike lanes
- Bus stops

Key points from the consultation process:

- All of US 1 is Howard County's primary focus for pedestrian safety, due to an unusually diverse mix of land uses, high vehicle speeds, and limited ped/bike facilities
- 30% of County jobs, many of which are of moderate income, are along this corridor
- Undertake a comprehensive redesign; focus through traffic on routes that are designed for it (e.g., I-95 and MD 295)
- Shared use paths are preferred rather than on-street bike facilities

District 7, Howard County (Laurel area)

US 1, Washington Boulevard (Segment 3)

from Freestate Drive to the Patuxent River

Context zones: Suburban Activity Center/Traditional Town Center, Suburban

Traffic volumes: 39,000 vehicles per day

Posted speed limits: 35-50 mph

Multimodal facilities present:

- Intermittent sidewalks
- Bus stops

Key points from the consultation process:

- All of US 1 is Howard County's primary focus for pedestrian safety, due to an unusually diverse mix of land uses, high vehicle speeds, and limited ped/bike facilities
- 30% of County jobs, many of which are of moderate income, are along this corridor
- Undertake a comprehensive redesign; focus through traffic on routes that are designed for it (e.g., I-95 and MD 295)
- Shared use paths are preferred rather than on-street bike facilities

District 7, Howard County (Columbia area)

MD 175 (Segment 1), Rouse Parkway

from Columbia Pike to I-95

Context zones: Suburban

Traffic volumes: 41,000-68,000 vehicles per day

Posted speed limits: 35-50 mph

Multimodal facilities present:

- No pedestrian or bicycle facilities

Key points from the consultation process:

- Essentially a freeway with very high speeds
- Provide safer crossings, including better crossings at signals and means to direct people to safer crossing locations
- Provide safer facilities either along the road or along roughly parallel routes

District 7, Howard County (Jessup area)

MD 175 (Segment 2), Waterloo Road

from Washington Boulevard to the Patuxent Institution

Context zones: Suburban

Traffic volumes: About 19,000 vehicles per day

Posted speed limits: 40 mph

Multimodal facilities present:

- Intermittent sidewalks

Key points from the consultation process:

- Lots of truck traffic to and from I-95
- Many pedestrian crossings, including at the Patuxent Institution

District 7, Howard County (Ellicott City area)

US 40, Baltimore National Pike

from Centennial Lane to Columbia Pike

Context zones: Suburban

Traffic volumes: About 48,000 vehicles per day

Posted speed limits: 45 mph

Multimodal facilities present:

- Continuous sidewalks
- Bus stops

Key points from the consultation process:

- Heavy traffic, high speeds, big intersections, many businesses
- Challenges with sidewalk connectivity, especially near US 29
- Focus area in the County's General Plan, including corridor design guidelines and new sidewalks

All Comments Received During the Consultation Process

DISTRICT 1

Wicomico County

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
E SALISBURY PKWY/OCEAN GATEWAY	US 50, E Salisbury Pkwy, from N Salisbury Blvd to Tilghman Rd	Speed limits are far too high for an urban area, throughput is over-prioritized vs. safety, a complete lack of pedestrian signals at most intersections and full access intersections and driveways provide multiple threats.	There is no bike infrastructure along this corridor at all	center median, improved lighting, separated bike facilities and ped signals	This is actually an incredibly busy corridor for pedestrians and cyclists and injuries are common, especially near Downtown and the University	From Priscilla to College Ave needs ped/bike improvements, crossings, lighting, and a median (reflected in US 13 Master Plan); Salisbury got a grant to address many corridors
S SALISBURY BLVD	US 13, S Salisbury Blvd, from W College Ave to W Salisbury Pkwy	Speed limits are far too high for an urban area, throughput is over-prioritized vs. safety, a complete lack of pedestrian signals at most intersections and full access intersections and driveways provide multiple threats.	There is no bike infrastructure along this corridor at all	center median, improved lighting, separated bike facilities and ped signals	This is actually an incredibly busy corridor for pedestrians and cyclists and injuries are common, especially near Downtown and the University	Crosswalks and APC/CPS needed at US 13 and Carroll St (hospital)- it's better to have something that isn't quite up to ADA standards than nothing at all; needs bike/ped improvements, crossings, lighting, and a median (reflected in US 13 Master Plan); Many university students and residents walk and bike here
SNOW HILL ROAD	MD 12, Snow Hill Rd, from E Main St to W Sandy Acres Dr	Speed limits are far too high for an urban area, throughput is over-prioritized vs. safety, a complete lack of pedestrian signals at most intersections and full access intersections and driveways provide multiple threats.	There is no bike infrastructure along this corridor at all	center median, improved lighting, separated bike facilities and ped signals	This is actually an incredibly busy corridor for pedestrians and cyclists and injuries are common, especially near Downtown and the University	
S SALISBURY BLVD	US 13, S Salisbury Blvd, from E Cedar Lane to W College Ave					People use active RR tracks to walk into town, people coming from Fruitland? Walmart into town, many university students and residents walk and bike here, discontinuous bike lanes

DISTRICT 1

Wicomico County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
W SALISBURY PKWY	US 50, W Salisbury Pkwy, from W Isabella St to N Salisbury Blvd	Speed limits are far too high for an urban area, throughput is over-prioritized vs. safety, a complete lack of pedestrian signals at most intersections and full access intersections and driveways provide multiple threats.	There is no bike infrastructure along this corridor at all	center median, improved lighting, separated bike facilities and ped signals	This is actually an incredibly busy corridor for pedestrians and cyclists and injuries are common, especially near Downtown and the University	Salisbury got a grant to address many corridors

DISTRICT 1

Worcester County

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
COASTAL HWY	MD 528, Coastal Hwy, from 15th St to 62nd St	Lack of Police enforcement, not enough overtime funds to make pedestrian and bicycle enforcement a priority.	Lack of Police enforcement, not enough overtime funds to make pedestrian and bicycle enforcement a priority.	More Police enforcement funding to address pedestrian and bicycle violations to prevent crashes.	More Police enforcement funding to address pedestrian and bicycle violations to prevent crashes.	Bikes share bus lane, which doesn't work well; BPAC is working on an off-route bike connection and would appreciate SHA's support
COASTAL HWY	MD 528, Coastal Hwy, from 15th 62nd St to 112th St	Lack of Police enforcement, not enough overtime funds to make pedestrian and bicycle enforcement a priority.	Lack of Police enforcement, not enough overtime funds to make pedestrian and bicycle enforcement a priority.	More Police enforcement funding to address pedestrian and bicycle violations to prevent crashes.		Bikes share bus lane, which doesn't work well Ped/bike access along 90 and 589 connecting to the west BPAC is working on an off-route bike connection and would appreciate SHA's support
PHILADELPHIA AVE	MD 528, Philadelphia Ave, from N Division St to 15th St	Lack of Police enforcement, not enough overtime funds to make pedestrian and bicycle enforcement a priority.	Lack of Police enforcement, not enough overtime funds to make pedestrian and bicycle enforcement a priority.	More Police enforcement funding to address pedestrian and bicycle violations to prevent crashes.		Bikes share bus lane, which doesn't work well Ped/bike access along 50 connecting to the west BPAC is working on an off-route bike connection and would appreciate SHA's support

DISTRICT 1

General Comments

- West Ocean City and Ocean Pines may not be represented due to J-1 students not showing up in census data, which wouldn't capture seasonal workers; MHSO has a partnership with J-1 students
- In Worcester County, not reflected as a red corridor, Bike Ped separate accommodations along route 589 between Rte 90 and Rte 50. Also light crossing for many bike/ped users coming from Ocean Pines on 589 turning East on Rte 50. An alternative route could be on Grey's Corner Road with a crossing at Samuel Bowen Rd.

DISTRICT 2

Cecil County

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
NORTH EAST RD	MD 272, North East Rd, from Pulaski Hwy to John F. Kennedy Memorial Hwy					Connect to Cecil College to the north
PULASKI HWY	US 40, Pulaski Hwy, from Charlestown Crossing Blvd to North East Rd					Focus on the intersection of 40 and 272, which in the SHSP; Cecil County bike plan implementation will take bicyclists off of US 40
W PULASKI HWY	US 40, W Pulaski Hwy, from S Bridge St to Elkton Rd					Another SHA project is in the works, they have considered a fence along US 40 due to midblock crossings; need sidewalks and lighting improvements
E PULASKI HWY	US 40, E Pulaski Hwy, from Delaware Ave to S Bridge St					Heavy transit use, issues at Delaware Ave/Maloney Rd intersection
BRIDGE ST	MD 213, Bridge St, from E Pulaski Hwy to Elkton Blvd					Southfields development- residential logistics, recreation on both sides of 213 between 40 and Frenchtown Rd; Southfields development- residential logistics, recreation on both sides of 213 between 40 and Frenchtown Rd; developer is improving 40/213; DR says the developer must address "all pedestrian needs" from the site north to US 40

DISTRICT 2

Kent County

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
WASHINGTON AVE	MD 213, Washington Ave, from N Cross St to Morgnec Rd	Most cars do not stop for pedestrians in designated crossings without signals; most specifically, Washington Street at Kent Street. There are NO designated pedestrian crossings on Washington Ave north of Greenwood avenue--half the Town. Speed limits are generally ignored. Even if they weren't, the posted speeds on Washington Avenue north of Greenwood Ave. and along MD 291 are too high.	There are NO designated signaled crossings on Washington Ave north of Greenwood avenue--half the Town. Washington Ave (MD 213) is too narrow to accommodate bikes. The sidewalk on the Chester River Bridge (MD 213) is too narrow to accommodate bikes, though this is the requirement. Cyclists refer to it as "the bridge of death." The signaled bike crossing on MD 291 is extremely unsafe, as some cars use the shoulder to bypass cars that stop as required.	Add signaled pedestrian crossings along MD 213 at Southgate Drive, Manor Avenue, Morgnec Road (MD 291) and Kent Street along Washington Ave. Reduce and enforce the speed limits on Washington Ave. north of Greenwood Ave. Add barriers to the shoulders around the bike crossing on MD 291. Designate a safe cycling parallel and to the east of Washington Ave. Build the proposed Chester River Parkway bypass east of Washington Ave. to add an alternative river crossing.	State support is needed to develop a local Bike/Ped Plan. Chestertown has no resources to support such an effort.	

DISTRICT 2

General Comments

- None

DISTRICT 3

Montgomery County

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
MONTGOMERY VILLAGE AVE	MD 124, Montgomery Village Ave, from N Frederick Ave to Woodfield Rd	Fixing the firehouse intersection Removing hot rights Sidewalk improvements The major issue is the too many exclusive right turn lane that leads to the commercial property. Based on the traffic data, there maybe a room to eliminate these right lane and extend the sidewalk to convert it to the shared use path.	Need to buildout the master planned shared use path on at least one side No bicycle facility. Please consider adding side path to make room for cyclist.	Comments are above. Intersection improvements and side path to accommodate pedestrian and bicyclist	Montgomery County will do a Road Safety Audit on the County maintained portion of Montgomery Village Avenue this fiscal year. It would be great to see where the two efforts can be advanced together.	ADA improvements needed throughout, potential for sidewalks or side paths to be evaluated Signal upgrades at Russell and Christopher, new signal at Pier Point Place Interesting intersection at fire stations (coordinate with them), left outs will be maintained We recently participated on the PSRA walk audit conducted by District 3 and provided comments to them.
NEW HAMPSHIRE AVE (SB/L)	MD 650, New Hampshire Ave, from University Blvd E to Capital Beltway	Traffic is very heavy, moves very fast and there is little opportunity to cross the street safely. Sidewalks are narrow and poorly maintained. Advance recommendations from the Montgomery and Prince George's County Road Safety Audit.	There is no safe place for a cyclist. The choice is to ride on the road with high speed cars driven by distracted and selfish motorists or ride on a narrow poorly maintained sidewalk. Neither are reasonable choices. Advance recommendations from the Montgomery and Prince George's County Road Safety Audit.	Much wider sidewalks and bike lanes. Advance recommendations from the Montgomery and Prince George's County Road Safety Audit.	Please consider how a pedestrian or cyclist can safely arrive at a destination. Many times the bike lane just ends in the middle of a highway. There isn't even a ramp to a sidewalk. Advance recommendations from the Montgomery and Prince George's County Road Safety Audit.	Extend all the way through the Beltway interchange Curb tight sidewalks are scary Widen sidewalks, narrow lanes to provide buffers and lower speeds Longer ped phase crossing between bus stops north of the Beltway Inadequate crossings at Metzerott Road and Piney Branch Road
PINEY BRANCH RD	MD 320, Piney Branch Rd, from University Blvd E to Flower Ave	High speed heavy traffic with narrow and poorly maintained sidewalks. High vehicle speeds Lack of protected crossings	Lack of a continuous and separated safe bikeway. High vehicular speed limit needs lowering. On ramps and off ramps without any consideration of through cyclists. This is now an urban corridor, needs to be treated as such in planning. Poor coordination with PG, MoCo, MNCPPC, Purple Line authorities to just get improvements for safety made. This is not the first time I have raised these concerns. I understand it is complex but I've been patient for 14 years now. There is no space for a cyclist to safely travel. Lack of cycling infrastructure Narrow sidewalks if you have to share with people walking	Bike lanes and traffic calming. Additional RRFBs and PHBs to meet the protected crossing guidelines the County set for this area	Please consider full access. The bike lane should take the cyclists to a safe destination. The accessible corners the county is installing are too narrow and have 90 degree angles which make it impossible for a cyclist to maneuver. There should be a ramp at the end of the bike lane to the side walk with a smooth merge type angle. Important to get these changes in prior to Purple Line service starting to not add new issues on to existing one	Lots of school bus arm violations Need better crossings at unsignalized locations Purple Line includes sidewalks and bike lanes between Arliss and University Ballasted track will divide Piney Branch Road When done, will only need to stop for school buses in one direction Improvements in progress west of Arliss How is Long Branch Trail crossing handled? When Purple Line project is done, will be signalized crossings at Garland and Barron MCDOT has a Purple Line BiPPA project on Flower Ave north of Piney Branch Rd

DISTRICT 3

Montgomery County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
S FREDERICK AVE	MD 355, S Frederick Ave, from Central Ave to Montgomery Village Ave	1 - High speed vehicles too close to narrow overgrown with weeds sidewalk. We sometimes walk from Bohrer Park across 355 at Deer Park then down past Central Ave to get to Sagar Beer Wine. It is a most unpleasant walk. Crossing 355 requires crossing Deer Park, crossing 355 then crossing Deer Park again to proceed. Seems we are always on the wrong side of Deer Park. A fourth cross walk would be nice. 2 - With the addition of the WaWa across from Gaithersburg High School just north of Deer Park there is going to be a lot of U-turn traffic zooming across 3 lanes of NB 355 from the WaWa to get SB on 355. Many will crash. Some will die. 3 - There should be a pedestrian crossing at or near Central Ave. Many many people, including me, jaywalk at the church on Rosemont one half block south of Central to get to the bus stops on the other side of 355. Maybe hawk lights. The shopping center on 355 between North Westland and South Westland will have a Sheetz and an Aldi and many more people crossing to get to those stores.	I ride a bike a lot. I frequently ride 5 miles to get to the Copacabana Bakery across from the Lakeforest bus terminal (best $1,49 chocolate croissant in town). I maintain the ghost bike and ghost shoes on 355 at South Westland. There is another ghost bike and pair of ghost shoes about half way up to Central. That is four dead people. You have to be out of your f***ing mind to ride a bike up 355 on that stretch. Note - I frequently ride down 355 from Central Ave to the metro at Shady Grove and on to Montgomery College. I really p*** off people when I take the whole lane. Somebody's gonna kill me with their car. I double dare you to ride a bike there. Or on the "bike lane" on Shady Grove.	Separated and protected bike lanes so I can ride down 355 from Clarksburg to Nats Park. Ha ha like that will happen short of a nuclear war.	I'd be glad to meet you at the Shady Grove Metro to take you on a bike ride up 355 to get a chocolate croissant. Bring a change of underwear.	BRT under design will make many changes Mall closure may create additional opportunities Signals need to be upgraded (the BRT project will likely do this)
UNIVERSITY BLVD E	MD 193, University Blvd E, from Piney Branch to Capital Beltway	Inconsistent sidewalks, fast vehicular traffic, few crossings. Unbuffered sidewalks, high speed, no shade, disrespectful drivers Very heavy high speed traffic with narrow and poorly maintained sidewalks. -- high vehicle speeds -- narrow sidewalks Sidewalk are not wide enough and needs to be widen. The uncontrolled intersections are difficult for residents to navigate. Please review them to include protected crossing esp. E Schuyler Rd.	No bicycle facilities whatsoever. Reinstall the ones that were there before. no dedicated/protected lanes, high speed, disrespectful drivers No safe place for a cyclist to travel. -- high vehicle speeds -- narrow sidewalks and no dedicated biking infrastructure There is no infrastructure for Cyclist please review the possibility of shared sidewalk and bike facility	For people walking - wide, continuous sidewalks with separation from motor vehicles. For people cycling - protected bike lanes. road diet, buffered shaded sidewalks, protected bike lanes (concrete) Wide sidewalks and bike lanes and traffic calming. -- use of traffic calming methods (including a road diet) should be considered to manage excessive speeds in this area.	Talk a walk there sometime and you'll understand. Please consider completing the route to access one safe place to the next, such as from neighborhoods to shopping and schools. The access should include gradusl merge like angles. The handicap accessible corners cannot be navigated by a cyclist.	Need lower speeds, narrower lanes, safer ramp crossings Could extend north to Wheaton County is evaluating automated speed enforcement, as there is sometimes extreme speeding MCPD is evaluating south of the beltway for automated speed enforcement

DISTRICT 3

Montgomery County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
VEIRS MILL RD	MD 586, Veirs Mill Rd, from Connecticut Ave to First St	Crossing the road given all the lanes and the speed of traffic. Incomplete sidewalks, fast vehicular traffic, wide lane roads. There are missing sidewalk segments - westbound direction between Twinbrook Pkwy and Bradley Avenue, and east bound between service road entrance and Edmonston Dr. The signalized crossing at Woodburn Rd is not safe. Multiple lanes in each direction, rarely do motorists in both lanes stop. Interrupted sidewalks and too few signalized crossings of Viers Mill. Bus stops in the middle of blocks encourage pedestrians to cross mid-block. The access road complicates many intersections with cars going across a cross street in the access road conflicting with right-turning cars and creates several turning and crossing dangers for pedestrians crossing those streets. Marked crossings are very far apart and many are not protected by a walk light. Crossing on foot takes a very long time since there are 2 service roads and the traffic medians are narrow, making it uncomfortable to wait either by the side of the road or in the center.	The lack of bike lanes. Where there are side roads, they switch sides of the Veirs Mill Road, forcing you to cross. There are no bicycle facilities alongside the majority of the corridor with the exception of the wide shoulder from Parkland Road to Rock Creek Park. This is not a safe corridor for people riding bikes. There is no bicycle lane on much of Veirs Mill Rd. Especially in westbound direction. There should be a separated path on MD 586 from the existing path east of Twinbrook Parkway all the way to first street. The access road complicates many intersections with cars going across a cross street in the access road conflicting with right-turning cars and creates several turning and crossing dangers for cyclists using the access road as a separated bike path. There isn't a clearly marked space for cyclists to ride. The many unprotected left turns for cars going in the opposite direction and right-on-reds from side streets make it too dangerous to use the carriage roads. Crossings at signaled intersections don't have marked spaces for bikes and some (like at Edmonston Dr) need cyclists to cross the service roads in a cumbersome way through bus stop shelters or similar.	Create separated bike lanes for the whole length of Veirs Mill Road, and improve the sidewalks and crossings. For people walking, wide sidewalks, larger separation from vehicular traffic, slower vehicular traffic via narrowed lanes, and frequent intersections are important. For people on bikes, protected bike lanes are critical. This is a corridor with heavy vehicular traffic and concrete protection is needed for people to ride their bikes here. Signalized intersections should have marked crosswalks on all legs. unsignalized intersections should have HAWK signals. shared use path should be added to full length of street eliminate all right turn lanes. Lower speed limits (along with enforcement). Simplify intersections, possibly eliminating the access road to avoid the "right hook" conflict with access road and turning traffic. Bus stops in the middle of blocks encourage pedestrians to cross mid-block - these should be revisited. A wide outside lane along with lower speed limits and simplified intersections would help cyclists. A buffered bike lane might be preferred by some, but education and a wide outside lane would be better. Add more signage warning drivers about pedestrians and cyclists. For example, consider adding 'sharrows' to the service roads.	Narrow vehicular lanes, add protected bike facilities, and consistent sidewalks are all needed. This is a high injury network corridor for the City of Rockville and for Montgomery County. Viers Mill is stressful to drive, walk, and ride on as a cyclist because of the proximity to all the nearby homes and side streets. If there's a way to concentrate pedestrian crossings at intersections with traffic lights, that would make things simpler. Eliminating right-on-red and the unprotected left turns across the road will also reduce the stress level.	40/45 mph speed limits need to be reduced, especially with BRT coming Councilmember Gonzales is advocating for continuous sidewalks BIPPA project and BRT are coming; need to work with Rockville to continue improvements south Get rid of slip lanes at Connecticut and Veirs Mill BRT and BIPPA will remove all but one of these slip lanes and will modify the remaining one

DISTRICT 3

Montgomery County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.
VEIRS MILL RD (continued)	MD 586, Veirs Mill Rd, from Connecticut Ave to First St	Safely crossing 586 at crosswalks and currently not controlled stretches of the highway. Crossing at light controlled intersections and at long stretches of road with no designated crossing pathways. Many lanes to cross. Narrow sidewalks in some spots shared with bicycles where there are no bicycle lanes on the roadway High speed traffic with no space for a cyclist and little opportunity for a pedestrian or cyclist to safely cross the road.	Reducing the risk of bicycling on route 586. This could include the creation of bicycle lanes. Lack of access to safer bicycle lanes on the road. This corridor is extremely unsafe for cyclists. The lack of a bike lane (separated or even marked) and heavy traffic leads me to have to find alternate north/south routes. The decreased speed limit has helped make the road feel safer for driving. Northwest direction on-road bike lanes disappear forcing bicyclist to stop and transfer to sidewalk. There is no safe space for a cyclist.	Add HAWK beacons to the existing crosswalks. The intersection at Woodburn Rd is especially dangerous because it's at the top of a blind crest from both directions and there is a crosswalk encouraging people to cross there. Alternatively, make the pedestrian refuges in the center and sides of the road larger so that people can wait comfortably for gaps in traffic. Potentially more light regulated crossing sites and better overhead lighting for the crossing areas Longer times to cross at regulated crossing sites and restriction of left and right turning vehicles while pedestrians are crossing. Reducing speed limits to no greater than 35 mph and to no greater than 30 mph in the commercial areas. Reduce the speed limit to 35 mph and 30 mph in the commercial areas. Better surface lighting at the currently light controlled intersections. Do not allow left hand or right hand turns at the controlled intersections while pedestrians are crossing with the light. Increase the time allowed for crossing at light controlled intersections. Install sidewalks on Viers Mill where they are currently missing. Create a road diet that would include a physically separated bike lane. Widening of sidewalks and continuity of bicycle lanes, e.g approaching Aspen Hill Av	Please consider full access. Such as ramps to and from sidewalks with plenty of space for cyclists and pedestrians. The handicap accessible corners the county has been installing are too narrow and have 90 degree angles that make it impossible for a cyclist to maneuver. Many times a person is left standing in the street while waiting for a wheelchair to pass.

DISTRICT 3

Montgomery County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.
VEIRS MILL RD (continued)	MD 586, Veirs Mill Rd, from Connecticut Ave to First St	Sidewalks in poor condition and presented as haphazard shapes, dimensions, textures creating a patchwork of hazards; driveway aprons dangerous with many with steep angled sides and never meant for pedestrians of any mode of mobility; many public right of way paths have overgrown trees, scrubs, and thorny bushes in the public right of way especially along overpasses; many curb ramps in poor condition or not compliant with ADA; county bus stops are not served by proper sidewalks leading to housing and commercial areas; some sidewalks are too narrow and force pedestrians into the street/highway when meeting wheelchair pedestrians coming from the opposite direction; pedestrian crossing signal controls are not wheelchair accessible (ADA) despite assertions from SHA that there is "no problem." My perspective in primarily based on the Rockville portion of Veirs Mill. Steep downwards hill leading in both vehicle directions to a HAWK signal crosswalk at Turkey Branch. Vehicular speed, size and tailgating can lead to unsafe pedestrian crossing. A pedestrian who uses the HAWK signal crosswalk correctly can still be struck by a motorist who is not compelled to slow down. In general sidewalks are not continuous and narrow in places. Long distances between protected crossings. Need for additional walking time to cross Veirs Mill Road. Missing sidewalks along the corridor.	Cyclists must share the road with motorized vehicles. Vehicle speed, driver aggressiveness or inattentiveness may lead to collisions on shared roads. Lack of cyclist infrastructure along the corridor. Low bicycling level of comfort.	Bike lanes that travels from one safe destination to another. Such as neighborhoods or bike path to the shopping centers. SHA should meet with the local advocates who know these areas and take a walk together to identify the problems. Problems should be prioritized and scheduled for addressing in a comprehensive plan. Call me. I can help. At Turkey Branch: Would ask if passive measures can be implemented to slow vehicle traffic and alert motorists. Provide dedicated bike lanes protected with concrete. Protected and dedicated bike lines are safer than lanes shared with motor vehicles or dedicated space demarcated with paint or flexible barriers. More people could be encouraged to cycle and reduce the number of motorists who are forced to drive to complete errands close to home. Adding pedestrian recall at high pedestrian volume crossings such as Veirs Mill Road at Randolph Road and Atlantic Ave.	I submitted a concern in 2022 about the inaccessible and problematic pedestrian crossing and signaling travelling north at Veirs Mill and Edmonston to SHA. In response, SHA indicated that there was no problem. I visited the location again recently with Bryan Barnett-Woods, City of Rockville. He is in agreement with me and indicated that he will request SHA to reconsider the conclusion. I use public transit frequently. Pedestrian access and public transit need to be better connected to the community living, commercial, and workforce spaces. State roads are not just for vehicles to access community living, commercial and workforce spaces. Pedestrian and cyclist routes need better lighting. The expectation that the burden is on the pedestrian or cyclist to carry their own lighting or to dress properly is unrealistic, especially when the planetary periods of light and dark change constantly as the seasons change. Until the SHA treats pedestrians as part of the intended traffic on the roads, drivers of vehicles will continue to regard pedestrians and cyclists as a roadway nuisance. SHA would not allow dangerous potholes, foliage or concrete obstacles obstructing road lanes, or improper construction of critical roadway features. In fact, SHA maintains repair schedules and gives the public notice of roadway work far in advance. Other modes of roadway users and vulnerable roadway users of the public right of way and roadway need the same type of planning and investment. I have experienced 2 crashes and several near misses as a pedestrian using a wheelchair. I do not have the sense that the operators of vehicles are convinced that the SHA supports non-vehicle road users so "why should they?" I recommend a campaign to change that perspective and perhaps the behaviors will change. Google Maps Street View show a bicycle--painted white--at this crossing. At some point at least one person likely has already died at this intersection. It's unclear whether the HAWK signal crossing is a response to this death. MDOT SHA should clarify if this crosswalk design is serving the needs of pedestrians or if they are still at risk of collision at an intersection where motorists are not compelled to slow down. https://www.wusa9.com/article/news/local/neighbors-demand-fix-after-second-crosswalk-death/65-276190164 https://www.google.com/maps/@39.0599897,-77.0891213,3a,75y,229.67h,81.32t/data=!3m6!1e1!3m4!1so39wVk0YXElwE19Du0R4Mg!2e0!7i16384!8i8192?entry=ttu The County and State are putting significant resources for bus rapid transit along Veirs Mill Road to include crucial investments in infrastructure for people walking and biking. We really, really need SHA OoTS and District 3 to partner and expedite design requests and permits to get this needed project done.

DISTRICT 3

Prince George's County

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
CENTRAL AVE	MD 214, Central Ave, from Southern Ave to Ritchie Rd	Insufficient sidewalk	no bike lane, drivers go well above speed limit, making road less safe for cyclists	Protected bike lane, complete sidewalk		Central Avenue connector trail may help Capitol Heights Metro to Largo Metro Recently received grant funding Address crossings to/from trail where it parallels 214
INDIAN HEAD HWY	MD 210, Indian Head Hwy, from Livingston Blvd to Capital Beltway	Midblock crossings due to signal spacing, travel speeds of motorists, lack of street lighting	No bike lane. Lack of bike facilities	Protected bike lane Bike lanes via lane repurposing.	By forthcoming purple line station, should have complete street with protected bike lane	At all interchanges, provide countermeasures at ramps
EAST WEST HWY	MD 410, East-West Hwy, from Adelphi Rd to Riggs Rd	Too many lanes for car traffic makes it a long road to cross. Encourages high speeds and lots of cars swerving back and forth between lanes. Right turn lanes have slip lanes so that cars don't slow down for pedestrians crossing. Right turn on red means cars roll through crosswalks at red lights without checking for pedestrians. Sidewalk ends at Toledo and forces you to walk on the shoulder of the lane at grade. Insufficient crosswalks around mall where there are many businesses and housing lining the road. No sidewalk west of Home Depot	There are no cyclist facilities in this corridor. You must either ride in the road with fast traffic or on the sidewalk with pedestrians. No bike lane, drivers speed because road is designed for speed higher than posted limit.	Lane reduction where at some points there are 8 car lanes across. The right lane should be repurposed into a protected bike lane to slow traffic and allow alternative methods of traveling through the corridor. Current the right turn lane is often used by cars to speed by traffic at stop lights. Remove slip lanes and make the intersections no turn on red so it is safer to cross. Add sidewalks and protected bike lanes between Toledo and Riggs. Complete sidewalk, protected bike lane, additional mid-block crosswalks with HAWK	This area is incredibly hostile to any user other than car drivers due to the unnecessarily large space devoted to vehicle lanes. This is adjacent to a metro station and should be accessible my other users.	Trail crossing with no traffic control, limited visibility, and high speeds Pedestrian RSA yesterday Potential road diet (6 to 4 lanes) in the area around the mall "One of Prince George's County's three downtowns" Huge priority for the community (walk with then-Delegate Alonzo Washington) - working on a BID - this input helps our process

DISTRICT 3

Prince George's County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
EAST WEST HWY (continued)	MD 410, East-West Hwy, from Adelphi Rd to Riggs Rd	East-West Hwy/MD 410 is a barrier to walkable neighborhoods in the area. It's a wide and fast street that makes it undesirable and dangerous to walk to nearby public transit (Hyattsville Crossing Metro Station and bus hub), commercial and office space (Mall at PG and nearby office buildings), and community spaces (library, churches, community centers), and stunts desired investments in transit-oriented development. Pedestrian crossings are too few and far between. Pedestrian crossings have insufficient refuge islands at mid-crossing to feel safe. Channelized turn lanes/slip lanes allow drivers to make turns at high speeds through marked pedestrian crosswalks. In many places, there are too many travel lanes, which makes pedestrian crossing distances greater. The street includes many dedicated turn lanes, which are used by drivers as passing lanes and to travel straight (rather the intended turn) through intersections, which adds unpredictability for pedestrians trying to cross. MDSHA does not mark all crosswalks (e.g., Editor's Drive Park, Toledo Terrace), which makes crossings longer and more complicated for pedestrians in order to prioritize car level of service over pedestrian safety. Pieces of cars, downed signs, and broken fences (to keep pedestrians from using the street) litter the road as reminders to vulnerable users of the frequency with which drivers crash along this street. Based on the speed of most drivers, most of those crashes would cause serious injury or death if a pedestrian or cyclist happened to be in the vicinity.	This is a street where people only bike, for more than the shortest possible distance, when they are desperate. There are currently no bike facilities on this street. It is illegal in Hyattsville to bike on the sidewalk. Most people will travel great distances out of their way to reach businesses and public transit stations using side streets rather than bike on East-West Highway, which is a deterrent to more people choosing to bike short distances to access public transit and their daily needs and reducing the average vehicle miles travelled in the area. With 6-8 lanes in many places, the street is incredibly wide. Many drivers use the multiple lanes to jockey for position between redlights and travel in excess of the posted speed limit (i.e., fatal speeds to people on bikes). It is not a place where even confident cyclists feel safe, due to the traffic volume, traffic speed, and aggressive driving.	If MDOT wants people to walk and bike on this street, they should implement the road diet recommended in the PG Plaza Transit District Development Plan. Based on the number of lanes, traffic volumes, and motor vehicle speeds, the bike facilities, however, need to be protected (either on-street bike lanes with concrete vertical protection, or grade-separated bike lanes near the sidewalk), in order to be all ages and abilities and encourage a wide range of the population to be comfortable biking on this road to access the Metro station and nearby businesses, employers, and community centers (see e.g., FHWA Bikeway Selection Guide 2019). With additional space available from a road diet (including the elimination of excess dedicated turn lanes), MDOT can install pedestrian refuge islands mid-crossing, which should be a minimum of 6' wide. Being near a major transit station, all of the pedestrian signals along this street should be programmed with automated pedestrian signals (i.e., eliminate the need to press a beg button for a signal) and leading pedestrian indicators to give vulnerable road users a head start to safely cross the street. MDOT should figure out a design that eliminates the need for a pedestrian bridge and install a crossing that supports transit-oriented development and transit-supportive land uses around Hyattsville Crossing Metro Station. Remove lanes to reduce crossing distances, narrow the travel lanes to help slow vehicle speeds, remove slip lanes and adjust turning radii to promote slower speeds when turning.	MDOT classifies this area as Suburban Activity Center / Traditional Town Center (Zone C). However, the long-term plans for this area (i.e., transit-oriented development around a Metro station, within biking distance of other Metro and Purple Line stations, transit districts, and local centers), should lead to MDOT treating the context of this area as more "urban" when it comes to pedestrian and bicycle facilities. MDOT should update its Context Driven planning guides to include new categories/contexts for areas that are within the walk and bike-shed of Metro, Purple Line, and MARC stations in PG County to receive more transit-supportive bike and pedestrian facilities, and urban street designs, as the starting place for MDOT's projects and road designs.	- City of Hyattsville requested adequate funding in the MDOT six-year capital budget to implement the vision for East West Highway detailed within the 2016 Prince George's Plaza TDDP to include lowering the speed limit to 30 miles per hour, restriping of MD-410 to test a road diet concept with no more than two travel lanes in each direction, and implementing complete streets elements such as protected on-street bicycle lanes and enhanced pedestrian infrastructure. We believe the retrofitting of this roadway to include these elements will make walking, bicycling, and transit use more comfortable and safer within the Transit District and greatly improve the experience for all users in the corridor. Also removal of slip lanes is necessary they are inappropriate in a transit district and dangerous to pedestrians and cyclists.

DISTRICT 3

Prince George's County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
KENILWORTH AVE	MD 201, Kenilworth Ave, from Annapolis Rd to East-West Hwy	This has never been a pleasant or safe place to travel outside a car - either walking or rolling. Prior to the start of Purple Line construction, MDSHA never included any bike or pedestrian facilities on Kenilworth Ave/MD 210 between East-West Hwy/MD 410 and River Road/MD 431. There were almost no sidewalks. Existing sidewalks were the exception, rather than the rule, and disjointed, ending without warning. Nearby neighborhoods do not have good pedestrian access to this section of Kenilworth Ave, access which will be even more important when the Purple Line opens. Pedestrian crossings at signals were poor, with either missing crosswalks (e.g., Rittenhouse St) or no marked crosswalks (e.g., Tuckerman St), and no pedestrian refuge mid-crossing.	There are currently no bike facilities on this street. Most people will travel out of their way to avoid biking on Kenilworth Ave. With multiple travel lanes in either direction and drivers traveling in excess of the posted 35 mph speed limit (i.e., fatal speeds to people on bikes), it is not a place where even confident cyclists feel safe, due to the traffic volume, traffic speed, and aggressive driving. For the southbound bike lane being installed as part of the Purple Line construction, it's not clear if MDOT designed the bike lane to cross the intersection with the Purple Lines at a safe angle (i.e., 90 degrees, but no less than 60 degrees) or made design changes to reduce the risk of crash and serious injury (e.g., painted bike lanes to zig-zag/jug handle to cross the tracks at a safe angle; or if a 60-90 degree angle crossing is not possible, updated the plans to install material to fill the gaps between the rails to avoid catching people's bike tires, leading to crash and possible injury or death).	I believe MDOT plans to install sidewalks, bike lanes, and high-visibility crosswalks as part of the construction of the Purple Line, which is good and will be significant improvements to this section of street. Based on the number of lanes, traffic volumes, and motor vehicle speeds, the bike facilities, however, need to be protected (i.e., concrete vertical protection), in order to be all ages and abilities and encourage a wide range of the population to be comfortable biking on this road to access the Purple Line stations and nearby businesses, employers, and community centers (see e.g., FHWA Bikeway Selection Guide 2019). Alternatively, a shared-use side path would also work to provide bike facilities that appeal to more than fearless and a portion of confident cyclists. The East Riverdale neighborhood has limited pedestrian/bike access to Kenilworth Ave, and by extension, to Purple Line stations. Coordinating with PG County to add a path to connect from 57th Ave (near the intersection with Somerset Rd) to Kenilworth Ave (Project #4 in the Discovery District Multi-Use Trail Transit Access Plan, MWCOG, 2022), would significantly improve access for the East Riverdale Community. MDOT should also add a sidewalk on the north side of River Road, at the intersection with Kenilworth Ave, to provide pedestrian access to the county offices and medical buildings on the north side of River Road. Finally, if MDOT could create, improved, safe connections to the Anacostia Tributary Trail network, particularly the trails on the western side of the river, along this stretch of Kenilworth and River Road, that would provide a huge benefit for residents of East Riverdale.	While MDOT project pages have recently improved, MDOT should update its policies around project pages to archive all of the slides/handouts from all prior community meetings, and the 30 percent/60 percent/ and final design plans (or, at a minimum, common cross-sections and design features of public interest, for each phase). MDOT will often present to various community stakeholders at the 30/60 percent design phase, but those presentations might not appear on the project page; additionally, the community will not hear about final design choices, unless they request additional information from MDOT, or until construction is completed. Including more detailed information, including interim and final design plans, will lead to greater transparency and more informed stakeholders. For example, even having reviewed the county's Purple Line Corridor Access Studies, sector plans, transportation plans, and MDOT's published materials about the Purple Line, I'm still not clear what recommendations were ultimately included in MDOT's final plans. Many of the people responding to this survey, or providing input on adjacent county and local transportation plans, have little to no idea what pedestrian and bicycle facilities MDOT currently has under construction. Without that type of information, it is difficult to provide meaningful community input on this street, or nearby/connected projects.	River Road to south of 410 is the biggest issue Access to Purple Line

DISTRICT 3

Prince George's County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
KENILWORTH AVE	MD 201, Kenilworth Ave, from Annapolis Rd to East-West Hwy	This is not a place designed to welcome people walking, which is unfortunate because it's about to become an important transit center for the county. It has okay sidewalks (continuous on both sides). However, it can feel intimidating walking that close to relatively fast-moving traffic in some locations, where there isn't much of a buffer. Crossing the street can be problematic. Marked and signaled pedestrian crossings are spaced out, which leads some people to cross mid-block (which honestly can feel safer than trying to cross at certain signals, in a marked crosswalk with the pedestrian signal, with slip lanes and aggressive drivers approaching you from multiple directions). Pedestrian signal cycles are short, and don't give some people, especially children or people with mobility issues, much time to cross. Several of the crossings have slip lanes or channelized turns, which can lead to drivers making turns faster than seems safe through crosswalks. Drivers at some intersections will block the box, which leads to aggressive drivers frustrated by the blocked intersections, or drivers dangerously trying to "beat" the light at the beginning or the end of the cycle. Speed of the traffic on Kenilworth Ave and safe places for pedestrians to cross. The primary safety concerns for pedestrians are the lack of sidewalks, crosswalks and lighting in this area. Pedestrians are forced to cross within breaks of traffic which pose a huge risk for injury. This is due mainly to the construction of the Purple Line Metro being installed.	I try to avoid biking on this street. While there are bike lanes in some places, with multiple lanes, of fast traffic, and aggressive drivers jockeying for position between redlights, it is not a place where most cyclists feel safe, due to the traffic volume, traffic speed, and aggressive driving. No bike lane and the speed of traffic. The Primary safety concerns for cyclists are the lack of dedicated cycling lanes. This is due to the construction of the Purple Line Metro being installed.	I'm not sure what improvements are coming with the Purple Line, but this area should be far more walkable and bikeable now that MDOT is building a major transit station nearby. The slip lanes at Riverdale Road should be removed ASAP. The intersection with East-West Hwy should be improved to encourage people to walk to the Purple Line station (install pedestrian refuge islands; maybe remove the slip lanes from some directions, if possible). Based on the number of lanes, traffic volumes, and motor vehicle speeds, the bike facilities, however, need to be protected (either on-street bike lanes with concrete vertical protection, or grade-separated bike lanes near the sidewalk), in order to be all ages and abilities and encourage a wide range of the population to be comfortable biking on this road to access the Metro station and nearby businesses, employers, and community centers (see e.g., FHWA Bikeway Selection Guide 2019). There is a somewhat wide, asphalt sidewalk on the eastern side of Kenilworth Ave from south of Riverdale Road to Ingraham Street. If that is intended to be a shared-use path it should be better marked and signed to encourage people to use it for bicycles (in most municipalities in the county, it is illegal to ride bicycles on sidewalks; its also probably illegal to ride on sidewalks in unincorporated areas of the county, but the county ordinance from the 1970s is not clear). It should also have warning markings across driveways to alert drivers. Being near a major transit station (Purple Line Station), all of the pedestrian signals along this street should be programmed with automated pedestrian signals (i.e., eliminate the need to press a beg button for a signal) and leading pedestrian indicators to give vulnerable road users a head start to safely cross the street. There are an overwhelming amount of signs (legal traffic signs, business signs, and illegal bandit signs), the volume of which blurs out all of the signs (i.e., it's pretty hard to separate the signal from the noise - to focus on safety signs, with all of the other visual pollution around them). Speed camera/red light camera, a barrier in the median to prevent jaywalking, safe and illuminated pedestrian crossings. Some safety improvements that could enhance the safety of pedestrians and cyclists are temporary sidewalks, temporary biking lanes, temporary lighting and longer light cycles.	MDOT classifies this area as Suburban Activity Center / Traditional Town Center (Zone C). However, the long-term plans for this area (i.e., transit-oriented development around a Metro station, within biking distance of other Metro and Purple Line stations, transit districts, and local centers), should lead to MDOT treating the context of this area as more "urban" when it comes to pedestrian and bicycle facilities. MDOT should update its Context Driven planning guides to include new categories/contexts for areas that are within the walk and bike-shed of Metro, Purple Line, and MARC stations in PG County to receive more transit-supportive bike and pedestrian facilities, and urban street designs, as the starting place for MDOT's projects and road designs.	More crashes (and more severe crashes) between 410 and Kennedy

DISTRICT 3

Prince George's County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
UNIVERSITY BLVD	MD 193, University Blvd E, from Riggs Rd to Campus Dr	Poor sidewalk condition, long pedestrian wait signals, not enough safe pedestrian crossings As you already know from the crash data, this has been one of PG County's highest ranked high-injury corridors. Before Purple Line construction started, it felt like walking next to a limited access highway, closer to Adelphi Road. The sidewalks were not continuous on both sides. The sidewalks were too close to fast moving vehicles with little or no buffer. Marked crosswalks are spaced relatively far apart. Where there is housing and commercial space along the street, it's dangerous, because pedestrians are inclined to cross the relatively fast and wide street to reach their destination and encounter fast moving cars, and drivers moving too fast to notice pedestrians (with narrowed peripheral vision, and unable to really "see" pedestrians and other things approaching from the periphery). The intersection with Adelphi Rd & Campus Drive is confusing and pretty daunting/unnerving and time-consuming to travel outside of a car. Insufficient crosswalks for the number of businesses lining the road, and the number of persons on foot or bike in this area. Confusing crossing at intersection with Campus Drive Insufficient crosswalks Insufficient sidewalk, insufficient crosswalks - very long distance between crosswalks	Unprotected bike lane, fast moving traffic, no LPI/LBI Lack of a continuous and separated safe bikeway. High vehicular speed limit needs lowering. On ramps and off ramps without any consideration of through cyclists. This is now an urban corridor, needs to be treated as such in planning. Poor coordination with PG, MoCo, MNCPPC, Purple Line authorities to just get improvements for safety made. This is not the first time I have raised these concerns. I understand it is complex but I've been patient for 14 years now. I have been struck by a motorist while bicycling here. Lucky to be alive. Please do something now, starting with ensuring that Purple Line improvements don't have features like low angle bike lane crossings. Thank you. It's not a place I enjoy or prefer to ride due to the traffic volume, traffic speed, and aggressive driving. It feels like a street where if I or a driver makes even a relatively minor error, I can end up seriously injured or killed. After Purple Line construction started, I stopped traveling by bike on this corridor. No cycling-specific infrastructure on this stretch west of Campus Dr. Car traffic is 7 lanes across, which is scary to cycle along and to cross, except at pedestrian crosswalks. Road is designed for high speed and there are no bike lanes No bike lane, high speed road designed for speeds well above posted limit No bike lane	Wider/protected bike lane, wider sidewalks, more ped/bike signaling The plans for the Purple Line appear to make improvements to the sidewalks and adding buffered bike lanes. Based on the number of lanes, traffic volumes, and motor vehicle speeds, the bike facilities, however, need to be protected (either on-street bike lanes with concrete vertical protection, grade-separated bike lanes near the sidewalk, or shared-use paths), in order to be all ages and abilities and encourage a wide range of the population to be comfortable biking on this road to access the nearby UMD & UMGC campuses, Purple Line stations, businesses, employers, and community centers (see e.g., FHWA Bikeway Selection Guide 2019). With the buffered lanes, it seems like MDOT could use University Blvd as a pilot/model/demonstration project for a quick-build protected bike lane by adding concrete barriers/curb stops. If MDOT added a protected bikeway between Wheaton and the Adelphi Road-UGMC-UMD Purple Line Station, it would be transformational in improving the regional bike network, by providing an all-ages and all-abilities, protected facility and making a dangerous, high-injury corridor accessible to people outside of cars. Add shade and tree cover for pedestrians and people taking public transit. Add protected intersections, as recommended by the County's Adelphi Rd-Campus Drive Sector Plan. Being near major transit stations (Purple Line Stations), and along a major light rail corridor, all of the pedestrian signals along this street should be programmed with automated pedestrian signals (i.e., eliminate the need to press a beg button for a signal) and leading pedestrian indicators to give vulnerable road users a head start to safely cross the street. I cycle here to visit businesses in this stretch and the only time I've been comfortable riding is when there were cones separating the right lane from traffic due to Purple Line construction. I would like to see protected bike infrastructure connecting to Campus Dr/University Blvd bike lanes east of Adelphi Rd. Complete sidewalk. More crosswalks, with all mid-block being HAWK, protected bike lane Add mid-block crosswalks with HAWK, ensure complete sidewalk Add crosswalks with HAWK, complete sidewalk, protected bike lane	Lower-income area with a lot of ppl on foot Low-income area, many pedestrians and cyclists	Good to see this is "back on the list" 650 to West Park Drive is far worse than anywhere else in the County Purple Line is coming, but don't wait until it's done to make improvements Extend to Adelphi Road due to Purple Line Purple Line will provide continuous sidewalks, buffered bike lanes (5' lanes + 2' minimum buffers), and narrower lanes to help reduce speeds

DISTRICT 3

Prince George's County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
QUEENS CHAPEL RD	MD 500, Queens Chapel Rd, from Chillum Rd to Hamilton St	Before MDSHA's current, ongoing Queens Chapel Rd project, the lack of continuous sidewalks was a huge problem, especially since this is a street many pedestrians must use to reach the West Hyattsville Metro station. The NW Branch Trail crossing was dangerous. Many drivers do/did not stop for the pedestrian-activated signals at the trail crossing. Slip lanes at Chillum Rd, Ager Rd, and Hamilton St made/make pedestrian crossings unnecessarily dangerous. Some of the turning radii at intersections are huge, and promote vehicle speed over pedestrian safety. Some of the feeder roads, specifically Chillum Rd, Ager Rd, and Hamilton St are overdesigned (e.g., more travel lanes than necessary, faster design and operating speeds than what is reasonable or safe near Metro stations and transit districts, or that what is generally safe – drivers travel at speeds that are fatal to vulnerable road users and those speeds make it more challenging for drivers to see and react to vulnerable road users). The private driveways along the street are numerous, wide, and angled to allow drivers to enter and exit at speed. Some driveways are too close to intersections and are used by drivers to cut through the intersection to avoid waiting at the light. The driveways add hazards and risks to vulnerable road users. As one example, there are angled parking spaces on the NE corner of Queens Chapel Rd & Hamilton St, where the parking spaces back up to where people walk and bike; additionally, most of these particular parking spaces for specific, private businesses encroach on the public right of way. [*Note there's a typo in the auto-populated corridor name for the survey*]	It's not a place I enjoy or prefer to ride due to the traffic volume, traffic speed, and aggressive driving. I typically bike this way only when visiting a business that cannot be reached by a longer, safer route. I hope that MDSHA eventually makes it a complete street with protected, all-ages and abilities, bike facilities. It is a direct route to connect to many major transit stations, businesses, community spaces, and employers. So, protected bike facilities would greatly improve the region's bike facilities network.	MDSHA deserves praise for where the current plan appears to be adding missing sidewalks, and installing an improved pedestrian-activated red light (as I understand it) at the NW Branch Trail crossing, and eliminating some of the slip lanes at Chillum Road and Hamilton St. If it's not in the plans already, MDSHA should eliminate the remaining slip lanes at Ager Road and Hamilton St (e.g., make Ager Road a t-intersection), and reduce the large turning radii at those intersections. Sidewalks would be improved with wider buffers and shade and buffer from street trees. Based on the number of lanes, traffic volumes, and motor vehicle speeds, the bike facilities, however, need to be protected (either on-street bike lanes with concrete vertical protection, grade-separated bike lanes near the sidewalk, or shared-use path), in order to be all-ages and abilities and encourage a wide range of the population to be comfortable biking on this road to access the Metro station and nearby businesses, employers, and community centers (see e.g., FHWA Bikeway Selection Guide 2019). Add protected intersections, at Chillum Rd and Hamilton St, to encourage and support walking and biking to use public transit at the Metro station. Add automated pedestrian signals and leading pedestrian indicators to give vulnerable road users a head start to safely cross the street. At a minimum, this treatment should be applied to all signalized intersections within the walkshed and bike shed of the Metro station. MDSHA should coordinate consolidating and reducing the number driveway entrances, especially near major public transit stations; and MDSHA should coordinate with PG County and the City of Hyattsville to review encroachments on public right of way. MDSHA should implement a road diet on Chillum Road, and work with PG County and Hyattsville to do the same on Ager Road and Hamilton St. With the exception of limited access highways that prohibit non-motorists, MDSHA should design its streets near Metro, Purple Line, and MARC stations to have design, operating, and target speeds of 25 mph.	This is another example of where the public would benefit from MDOT project sites that compile a history of public meeting information and include 30%/60%/final design plan information. MDSHA deserves credit for many of the improvements that it appears to be making as construction on the corridor progresses (e.g., sidewalks, improved trail crossing, removing slip lanes). However, it is difficult for most people to know what MDSHA has planned for construction and evaluate what improvements are still needed.	NW Branch trail crossing is hazardous SHA is adding sidewalks and signalized trail crossing County also did a project on Ager and Jamestown Current project didn't address midblock crossings, like at Aldi Significant development around West Hyattsville Metro

DISTRICT 3

Prince George's County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
QUEENS CHAPEL RD (continued)	MD 500, Queens Chapel Rd, from Chillum Rd to Hamilton St	Uncontrolled speeding, unmonitored vehicle traffic, motorists ignoring traffic controls and cyclists. SHA giving preference to motorists. Insufficient sidewalk, unsafe crosswalk at Hamilton due to slip lane, extremely delayed installation of new signalized crossing at NW Branch trail/Jamestown	Uncontrolled speeding, unmonitored vehicle traffic, motorists ignoring traffic controls and cyclists. SHA giving preference to motorists. No bike lane, cars speed well above limit as road is designed for speed well above posted limit	Increased police monitoring, changing the infrastructure, so motorists MUST slow down. The road is engineered for throughput, not for safety of pedestrians or cyclists. Throughput is anathema to safety. Protected bike lane, activate the signalized crossing, remove slip lane at Hamilton	SHA prioritizes motorists. THIS MUST CHANGE!!	
ST BARNABAS RD	MD 414, St Barnabas Rd, from Virginia Ln to Branch Ave					Thanks to SHA for recent road safety audit
PENNSYLVANIA AVE	MD 4, Pennsylvania Ave, from Silver Hill Rd to Capital Beltway					Have improvements from about 8 years ago helped?
LANDOVER RD	MD 202, Landover Rd, from John Hanson Hwy to Kent Town Dr					This route used to access Landover Metro
RIGGS RD	MD 212, Riggs Rd, from Chillum Rd to East-West Hwy					Trail crossing Project coming at Riggs Road and 410 that will address this crossing

DISTRICT 3

General Comments

- I would love to hear a little more about how you plan to collaborate with county and municipality level governments in this process
- How does this review differ from the NHTSA review completed in the last year?
- How do the context types line up with local planning, especially local designations of activity centers, downtowns, etc.?
- Our municipality is applying for Federal RAISE and Reconnecting Communities grants for some projects, who can we contact to ensure we are incorporating the PSAP in our application?
  Due to these corridors being classified under the context guide, as less dense than suburban activity centers, the speeds are too high and should be reduced.
- What is the process for a local jurisdiction to get SHA to modify its contexts? Prince George's County has no urban centers.
- If P/L [Purple Line] rail lines will "divide" roads, MDOT SHA will need to put out supplemental information on how motorists are supposed to respond to stopped school buses. The law is difficult to follow as it stands and the P/L looks to further complicate matters and result in more citations or confusion leading to crashes.

DISTRICT 4

Baltimore County

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
DULANEY VALLEY RD	MD 146, Dulaney Valley Rd, from E Joppa Rd to Baltimore Beltway	Sections do not have sidewalks, and crossings over highway entrances and exits are difficult for pedestrians to navigate.	No dedicated facilities for bicycles, difficulty navigating highway entrances and exits. Lots of recreational bike opportunities to the North.	Sidewalks on both sides for entire length of the corridor. separated bicycle facilities. More thought into how to make highway entrances and exits easier to cross for VRUs.	Lots of potential to connect neighborhoods north of the beltway to services to the south, as well as connecting Towson residents more directly to Loch Raven Reservoir.	
EASTERN BLVD	MD 150, Eastern Blvd, from Martin Blvd to Baltimore Beltway	Not a lot of crosswalks for Peds. Lots of residential communities and small business along this stretch of road. there are some bus stops.				
LOCH RAVEN BLVD	MD 542, Loch Raven Blvd, from Loch Hill Rd to I-695			3 travel lanes in each direction encourages high car speeds so convert outside travel lanes to jersey barrier protected bike lanes, which will also protect the sidewalk users.		"Lots of space" without very high volumes - Add bike facilities - More crossings - Focus south of Putty Hill to Taylor - Sidewalk on west side ends past Glendale
MARLYN AVE S	CO 4775, S Marlyn Ave, from Sun Circle Way to Eastern Blvd			Consolidate on-street parking and provide bike lanes		
MARTIN BLVD	MD 700, Martin Blvd, from Eastern Blvd to Pulaski Hwy	There are no sidewalks along the stretch. coming from Pulaski Hwy cars tend to speed due to the length of the stretches.			A jersey barrier protected bike lane is needed since the road is used as a drag strip.	
MERRITT BLVD	MD 157, Merritt Blvd, from Peninsula Expwy to North Point Blvd		The bike lanes are BETWEEN car lanes. Does this corridor really need 3 travel lanes each way? Could the outside lanes be converted to protected bike lanes?		The bike lanes are BETWEEN car lanes. Does this corridor really need 3 travel lanes each way? Could the outside lanes be converted to protected bike lanes?	

DISTRICT 4

Baltimore County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
LIBERTY RD	MD 26, Liberty Rd, from Owings Mills Blvd to Flannery Ln					Lots of comments from constituents in this area PSAP priority corridor under consideration by District 4 SHA won't give specific guidance for local roads "A lot has been done for a long time on this stretch of road" - Nothing has worked - Flashers are on all day every day, reducing their effectiveness - Need a bigger project to reconstruct the road - Can this be improved before traffic increases due to the Triple Bridges project at I-695 and I-70? A lot of issues are related to land use. Hopefully this was addressed in the Liberty Road Task Force review and report. https://www.wbaltv.com/article/liberty-road-task-force-revitalization-plans-report/42761885
BALTIMORE NATIONAL PIKE	US 40, Baltimore National Pike, from Charing Cross Rd to Nuwood Dr					Similar land use issue to Liberty Rd Long stretches without crosswalks; it's easier to cross midblock Similar comment regarding Triple Bridges Long crosswalk spacing, very wide with associated high speeds; make it narrower Enforcement is challenging; provide a place for enforcement and emergency response Time the signals for slower speeds Provide buffer, ideally with street trees, for pedestrians

DISTRICT 4

Harford County

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
PULASKI HWY	US 40, Pulaski Hwy, from Short Ln to Aberdeen Thruway	Long distances between crosswalks. Fast speeding cars. High concentration of residential and commercial on both sides. Significant numbers of persons with lack of car access needing to get back and forth. Bus stops and train station with frequent pedestrian trips. Population of houseless people. Lighting could be improved.	Narrow shoulders and fast speeding cars. Frequent construction impeding use of shoulder area for cyclists. Drivers not respecting cyclists who need to commute or use for recreation/exercise (vehicle supremacy behavior). Cyclists need of helmets and lighting and access to reflective wear.	Improved lighting. Lower speeds. Improved facilities around train station. Signalized crosswalks closer together. Leading pedestrian intervals at existing intersections.		

DISTRICT 4

General Comments

- None.

DISTRICT 5

Anne Arundel County

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
GOV RITCHIE HWY	MD 2, Section 1, Governor Ritchie Hwy, from Belle Grove Rd to Church St					County is studying Brooklyn Park as a whole A lot of crossings away from unsignalized intersections (spacing is too great for people to walk to them) Sidewalks are overgrown and/or curb tight Narrow travel lanes with high speeds and no shoulders Another community complaint was High speeds, lots of trucks. Anything that could be done to slow traffic and reduce long through trips would reduce some of that conflict between local and long distance trips
GOV RITCHIE HWY	MD 2, Section 2, Governor Ritchie Hwy, from I-695 to Ordnance Rd					Weave from EB 695 to MD 2 is an issue for everyone, including pedestrians May be missing sidewalks in this area Huge intersection at Ordnance Road Sidewalk in the MVA area is under design; people walk in the median!
GOV RITCHIE HWY	MD 2, Section 3, Governor Ritchie Hwy, from East Furnace Branch Rd to Mountain Rd					Walk and Roll did a deep dive into Glen Burnie, among other areas Crossings to B&A Trail Few if any sidewalks, many driveways This area does have crossing concerns. There are some improved crossings, but there are some that need improvement One more comment about Section 3 is that the Rt. 2 crossing at West Pasadena and the crossing at Magothy Bridge are not able to serve the same residents, so they do each need safe crossings. Because of the narrow width of B&A, and lack of sidewalks, between West Pasadena and Magothy Bridge one cannot simply cut across to choose one intersection over the other.

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Anne Arundel County (continued)

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GOV RITCHIE HWY	MD 2, Section 4, Governor Ritchie Hwy, from Baltimore Annapolis Blvd to Rt 10	Crossing Rt 2 Illegal crossing against lights, crossing not in cross walks. Drunk walking in the road Lack of sidewalks in areas near community centers Severna Park, Cypress Creek to B&A Blvd Northbound Earleigh Heights/Magothy Bridge from Ritchie Highway to the Post Office and from Ritchie Hwy to the Baltimore and Annapolis trail Arnold Road and Ritchie Highway from the B&A Trail to Ritchie Hwy and Ritchie Hwy to the B%A Blvd. There are NO SAFE walkways or bikeways along this horrible stretch of highway. Pedestrians can't cross safely anywhere. Way too many cars using the intersections at once without a dedicated pedestrian walk time. missing sidewalks from some residential areas to the shopping centers	Crossing Rt 2 Failing to follow or ignoring traffic signals and signs No Bike Lanes Same as above for pedestrians - terrible conditions. Cyclists are at great risk. Cyclists not knowing rules of the road and autos yielding right of way when they shouldn't. Stop signs don't work on the bike paths; need deterrents that force the cyclists to walk across intersections instead of biking across.	Safe crossings of Rt 2 so VRU's can reach the B&A Trail which parallels Rt 2 Enforcement of laws against illegal crossing, public drunkeness, and publication of these enforcements to encourage obeying the laws and thereby not getting run over Sidewalks and Bike Lanes Sidewalks behind guardrails and bike lanes with raised warning bumps separating them from the roadway. PSAs towards bikers; reminders to drivers to stop yielding to accommodate bikers that don't need accommodating (those just standing waiting their turn, for example). Speed bumps or whatever which forces bikers to actually stop at intersections. BTW, I swear many bikers think they are pedestrians; that doesn't help them do right.	The state and county need better coordination so investments go to the most useful improvements. Example is the wasted money on pocket lanes on Rt 2 near Magothy Bridge which are short bike lanes to nowhere. The critical need was for a safer crossing of Rt 2 at that intersection so people from Pasadena could safely reach the B&A Trail. Extend three lanes from Earleigh Heights to Cypress Creek. Have third lane consistently be added and removed from the same side (add a lane on the right, remove it on the right.) Ritchie Highway is a terrible road for vehicles and pedestrians alike. Shame on the SHA for allowing such an over developed mess. Every bike path intersection I use scares the heck out of me because I worry about hitting an idiot car that yielded right of way shouldn't have or a bike that didn't yield to right of way that should have.	Need better collaboration between State and County - Bruster's intersection (Magothy Bridge Rd) needed a better crossing built by nearby developments rather than pocket lanes Need to look at network gaps like crossing Ritchie Highway to Baltimore & Annapolis Trail - Use Safer Streets Priority Finder - Focus on corridors is somewhat limiting my concerns the intersections of Rt 2 Richie Hwy , Magothy Bridge RD , Earleights RD , People making right turns onto Rt 2 To the Magothy Gate way shopping , come across to the third lane of traffic their focus on the shopping entrance ,instead of entering the first lane as reguired by law , the light changes , Folks making a right on red from Magothy bridge to Richie Hwy present a problem . The firehouse located at this intersection . There are plans to have additional commercial activities . This intersection is badly congested .As a community organization we have objected to additional commercial development . eliminating the right on red could be a solution. There has been a 2 pedestrian deaths in several [comment ends here]

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Anne Arundel County (continued)

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GOV RITCHIE HWY (continued)	MD 2, Section 4, Governor Ritchie Hwy, from Baltimore Annapolis Blvd to Rt 10	Drivers regularly exceed the posted speed limits and run red lights in the area. There is rarely any traffic enforcement. Automated traffic enforcement would be ideal. Traffic calming would also help greatly with safety. Specifically, a traffic circle at the Rt. 648/B&A Blvd. and Asbury Drive intersection would remove dangerous conflicting left turns and allow for both traffic calming and better traffic flow then currently exists. There are no sidewalks, pedestrian, or cyclist accommodations along Rt. 648/Baltimore & Annapolis Blvd., from Rt. 2 intersection, heading east and north, to Lower Magothy Beach Rd. intersection. There is also not even any shoulder width along Asbury Drive south of Rt. 648, across Cattail Creek and up the hill to the Asbury Church. Many pedestrians use this corridor, and they are forced to walk in the roadway with 40+ mph traffic. There should be sidewalks and/or flexposts installed along Rt. 648/B&A Blvd. as well as Asbury Drive to allow pedestrians and cyclists to safely reach and cross the Route 2 intersections with Rt. 648. Gov. Ritchie HWY is a 4-lane north and south road. Bicyclists and Pedestrians desperately need a separated/dedicated bike/ped path from the B&A Trail into the State Capital, Annapolis. Lack of sidewalks; speed and volume or traffic is excessive There's no safe spot to cross Richie Highway. There's too many vehicles speeding and flying through yellow and red lights. There's no shoulder or safe space for walkers or bikers over bridges.	Drivers regularly exceed the posted speed limits and run red lights in the area. There is rarely any traffic enforcement. Automated traffic enforcement would be ideal. Traffic calming would also help greatly with safety. Specifically, a traffic circle at the Rt. 648/B&A Blvd. and Asbury Drive intersection would remove dangerous conflicting left turns and allow for both traffic calming and better traffic flow then currently exists. There are no sidewalks, pedestrian, or cyclist accommodations along Rt. 648/Baltimore & Annapolis Blvd., from Rt. 2 intersection, heading east and north, to Lower Magothy Beach Rd. intersection. There is also not even any shoulder width along Asbury Drive south of Rt. 648, across Cattail Creek and up the hill to the Asbury Church. Many pedestrians use this corridor, and they are forced to walk in the roadway with 40+ mph traffic. There should be sidewalks and/or flexposts installed along Rt. 648/B&A Blvd. as well as Asbury Drive to allow pedestrians and cyclists to safely reach and cross the Route 2 intersections with Rt. 648. Same as for Pedestrians...we need a separated/dedicated Bike/Ped path. People should not be walking and biking along a 4-lane road. This path needs to go all the way from the B&A Trail, across the Naval Academy Bridge, and into the State Capital, Annapolis Lack of sidewalks and/or bike lanes; speed and volume or traffic is excessive Speeding vehicles and no shoulder.	*Traffic circle at Rt. 648/B&A Blvd.-Asbury Dr. intersection *Sidewalk along Rt. 648/B&A Blvd., between Lower Magothy Beach Rd. and Asbury Drive to Route 2 signalized crossing (currently, there is a dangerous shoulder at the slip lane off Route 2 that allows zero width for pedestrians to safely reach the intersection). *Sidewalks and/or flexposts installed along Rt. 648/B&A Blvd. *Sidewalks and/or flexposts installed along north end of Asbury Drive to Rt. 648/B&A Blvd. Traffic calming near entrance to Berrywood I wish the speed limit was decreased as you enter Severna Park from Pasadena - like at the Welcome to Severna Park sign. The speed limit is currently 45 and people really go 60 and then slow down real quick as the enter the 35mph zone. So if the 35 mph zone is expanded, I think bikers and walkers would be safer.	Motorized vehicles have 90%+ of the right-of-way width in this area. It is unsafe and unfair to pedestrians/cyclists to not allow those VRUs a safe way to use the routes in the area. Enforcement of existing laws is also needed (speed, red lights, excessive noise from modified vehicles). There are many off-the-shelf automated enforcement technologies out there that could enforce the rules and also generate revenues from ticketing the violators of the speed limits, red lights, and decibel limits. Please meet with Berrywood Community Association Board I wish speed was more closely monitored. There are so many accidents involving cars getting rear ended because of speeders. I was rear ended while stopped at a stop light and it was estimated the drunk driver was going 60mph at 3:30pm - while many students are crossing and driving. If the slow zone is expanded, I truly feel it would keep everyone safer.	

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Anne Arundel County (continued)

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GOV RITCHIE HWY (continued)	MD 2, Section 4, Governor Ritchie Hwy, from Baltimore Annapolis Blvd to Rt 10	Lack of sidewalks. Lack of safe crossings. Speed and volume of traffic It is very unsafe to cross ritchie highway by foot. There are no pedestrian signs and cross walks are not clear. There are inadequate/non-existing shoulder areas to protect pedestrians and cyclists. This presents several safety issues and inhibits non-vehicle travel. Unsafe crossings in the Severna Park center due to the number and numerous direction of car traffic lanes. Disjointed & too narrow sidewalks. Lack of "feeder" paths that lead to the Richie corridor. Crossing Route 2 There are no safe ways to cross over Ritchie Highway as a pedestrian. A foot bridge would be AMAZING and would allow Severna Park residents on the East side of Ritchie the opportunity to safely go to the BNA bike trail and the shops and restaurants on the West side of Ritchie. There aren't sidewalks or safe walking / biking routes. And along the B&A corridor from Pasadena toward Ritchie hwy is non-existent.. and there's a bus stop that has many walkers in danger. Many people (especially young people) cross Ritchie Highway to get to the business along B and A boulevard, as well as the B and A trail in Severna Park. There are a lack of safe crossings for the highway, particularly for Berrywood, Stewarts Landing, Magothy Forest, and other neighborhoods on the northbound side of Ritchie Highway.	No bike lanes or bike paths. Lack of safe crossings. Speed and volume of traffic There is not a biking lane on ritchie highway it is expected that cyclists will you the bike path that runs from glen burnie to Annapolis. However cyclist still need to cross the highway at some point and cross walks and pedestrian safe walking signs are not adequate. No space for cyclist other than in traffic lanes in many cases. This presents many dangerous issues for both cyclists and vehicles. Unsafe crossings in the Severna Park center due to the number and numerous direction of car traffic lanes. Disjointed & too narrow bike paths along Richie. Lack of "feeder" paths that lead to the Richie corridor and the B&A bike trail. Crossing Route 2 There are no safe ways to cross over Ritchie Highway as a bicyclist. A foot bridge would be AMAZING and would allow Severna Park residents on the East side of Ritchie the opportunity to safely go to the BNA bike trail and the shops and restaurants on the West side of Ritchie. Same as above. We need sidewalks / lanes See above, lack of safe crossings to get to the B and A trail.	Dedicated bike paths and sidewalks along and going to/from Ritchie hwy. Pedestrian bridges over Ritchie hwy. More public transportation options throughout to reduce reliance on vehicles, resulting in reduced traffic Crosswalks and lights. expansion (widening) of Ritchie HWY and surrounding roads like B&A Blvd (648). Two or three pedestrian bridges or tunnels to cross Richie in the Severna Park center. Wide bike & walking lanes on either side of Richie in the Severna Park area. Feeder paths to the Richie corridor in the Severna Park center. Pedestrian/cyclist bridge over roadway Add a bridge over Ritchie. A paved path with lines / a sidewalk We would LOVE to have a path from Berrywood to the trail via Whites Road. Such a trail would go up B and A boulevard, perhaps have a light to help with crossing Ritchie Highway. I would love to see a pedestrian/cyclist bridge cross Ritchie Highway at any point in Severna Park, but would especially love to see it cross from B and A to Whites Road. (There is one that spans East West Boulevard that would be similar.)	There are almost no crosswalks to enable safe pedestrian travel across the highway and many people just cross traffic away from stoplights. Currently the Severna Park center is only safely accessible to the surrounding neighborhoods by car. I shared the bulk of my concern in the top comment area. Please do something to help ensure safety from B&A to Ritchy HWY and while on Ritchie Hwy. There have been a few incidents of pedestrians and cyclists hit by cars on Ritchie Highway. Please consider the improvements I mentioned above.	

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High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
GOV RITCHIE HWY (continued)	MD 2, Section 4, Governor Ritchie Hwy, from Baltimore Annapolis Blvd to Rt 10	The crossing by Benfield and Ritchie. Also need a safer crossing at the crossing of Ritchie and B&A Blvd. by Joe's Seafood. Lots of bicyclists and high school students need to get from the east side of the highway to the bike trail or SPHS on the west side. It's very tricky with all of the turning lanes and traffic moving in multiple directions at high speeds. We need a pedestrian/bike overpass to ensure safe crossing and not disrupt the flow of traffic. Also, we need sidewalks that go the full length of road in front of Brian Boru's. The sidewalk ends and then people walk in the shoulder with cars flying by at 60 mph. In attentive and aggressive drivers. Lack of sidewalks on b&a which is being used as an alternative route to avoid traffic and lights on rt. 2, between mountain road and whites road and therefore is heavily congested posing risks to pedestrian and bicyclist as demonstrated by the death of several over the years. It’s scary to cross. Time for crossing street is VERY short — eg at Baltimore Annapolis and Ritchie Hwy I have to run across to make it over in time Cars turning right onto Ritchie Hwy intersecting the cross walk when walk sign is on No sidewalks along Ritchie Hwy No sidewalks! Lack of crosswalks across Ritchie highway as well as lack of safe walking paths to get to Ritchie highway.	Same as above. Very difficult to get from the east side communities of Severna Park to the west side of Ritchie and the bike trail, schools, shops and restaurants. Our teens tend to work or frequent businesses on that side of Ritchie where there are more food places and jobs. They are often on foot, scooters, skateboards or bicycles. It's a tragedy waiting to happen. No shoulder, sidewalk or lane on Asbury and b&a, our rt,2. The b&a trail is not accessible east of rt2. Due to lack of sidewalks. Dangerous for cyclists. No bike lanes or designated crossing for cyclists trying to get from east side of Ritchie Hwy to west / B&A trail No bike lane There is no bike lane on Ritchie highway.	A pedestrian/cyclist overpass over Ritchie at Benfield and Ritchie or just north of there at B&A blvd so pedestrians, cyclists and esp kids/teens can cross safely. Sidewalks with guard rails Pedestrian/cyclist bridges in Severna Park. Sidewalks, pedestrian overpasses or underpasses, longer walk times for pedestrians, slower speed A sidewalk on RT 2 and BA blvd would be great. Safer and more frequent crosswalks or pedestrian overpass. More sidewalks leading to Ritchie highway and along the corridor.	We have lived in Severna Park for almost 20 years. Ritchie Hwy has gotten much more dangerous in that time. Between all of the turning lanes and volume of activity plus high speeds and frequent accidents, it's a hazard. Need to do something before more people get killed. Give the counsel man a bike, let him bike down b&a or rt. 2 without a police escort... He'll know the right thing to do then	

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GOV RITCHIE HWY (continued)	MD 2, Section 4, Governor Ritchie Hwy, from Baltimore Annapolis Blvd to Rt 10	Excessive speed of drivers above the limits on local streets and Richie highway. There is very little enforcement of chronic speeding. A huge percentage of drivers are using handheld phones while driving and at lights with no enforcement. This is very visible to everyone and should be enforced regularly at least at major intersections to educate drivers and make them pay accordingly. Make them pay and they will learn. No sidewalk and no protection from vehicles if walking along the road. Granted, the road wasn't designed for pedestrians, but they are there, nevertheless. There are NO sidewalks on many major roads around here - including, but not limited to, portions of Benfield Road and Jumpers Hole Road. There aren't even sidewalks on one side of the Elementary and Middle Schools. This means people simply cannot walk around here, forcing people to drive and creating a very unsafe environment for those that attempt to walk. Ritchie Highway and B&A Blvd. (at least the section that meets Ritchie Highway where the other side is Whites Road) is an area where a lot of walkers and runners need to cross to get to the B&A trail. B&A Blvd. has no sidewalks and at points, no shoulder to walk on. It is very dangerous getting to Ritchie Highways from neighborhoods that are East of Ritchie Highway. Crossing Ritchie is also very dangerous at this point, even with the crosswalk and walk/don't walk light.	Distracted drivers should be fined continuously. Excessive speed and handheld cellphones present a major issue to cyclists. At any major intersection handheld cellphones can easily be observed. You can look in the window and they do not even know we are there. Many drivers have reading glasses on to use their mobile devices. Same as pedestrian concerns above. There are NO bike lanes on many major roads around here - including, but not limited to, Benfield Road and Jumpers Hole Road. "Sharing" a road with cars going over 40 MPH is not acceptable and dangerous. There is plenty of room to add bike lanes on many major roads around here, including Benfield Road and Jumpers Hole Road. Same as above. Also, while I notice some markings for bikes on Ritchie, I would much prefer riding on the trail than on Ritchie.	Enforcement of existing laws for drivers. Ritchie hwy is 45 mph through Severna Park and it is never enforced. The rest of Ritchie Hwy has drivers with handheld cellphones sitting at lights and not moving when the light change then they roar away at excessive speeds. Dedicated and protected pathway for cyclists and pedestrians. Sidewalks and bike lanes are needed on all major roads. Additionally, there needs to be traffic calming measures on Benfield Road (road bumps, traffic lights, stop signs, etc.). The speed limit should also be decreased to 35 mph. Cars fly through this area and there is at least one elementary school crossing on this road (if not more). Ideally it would be great to get a walking/riding bridge over Ritchie and a dedicated lane/sidewalk for cyclists/walkers/runners on B&A Blvd.	Increase the cost of moving violations AND increase the enforcement. Each year more and more people demand walkability/bikeability. Severna Park needs to keep up with the trend both for the safety of its residents and to continue to be a place that people want to move. It is common sense - it saves lives and it increases property values.	

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Anne Arundel County (continued)

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GOV RITCHIE HWY (continued)	MD 2, Section 4, Governor Ritchie Hwy, from Baltimore Annapolis Blvd to Rt 10	There are few, if any crosswalks. For instance, while their is a sidewalk parallel to Rt2 in Severna park, major intersections like Robinson and R2, or 648 and Rt 2 don't have crosswalks to safely connect those crosswalks. There aren't sidewalks on the roads leading up to Ritchie Highway or along Ritchie highway particularly in the east side. The east side needs safer passage to get across Ritchie highway to be able to access the Baltimore Annapolis Trail. It seems impossible to cross along the entire length within Severna Park. It is very daunting and I work like to feel safe crossing so that I could utilize the trail. pedestrians have a way to control lights Ritchie Hwy , Magothy Bridge , Earleigh Heights Rd Lack of places to cross or traverse from east side to west side that feel safe. There are crosswalks, but pedestrians feel rather exposed.	No bike lanes. No easy passage to get across Ritchie highway from the east side over to the Baltimore Annapolis Trail which is on the west side Cycling along the corridor? I would never attempt this. Traffic travels too fast and the third lane on the right suddenly ends then starts again. Not conducive to safe cycling. there are no cyclist lanes . Congested with lots of commercial , activities and firehouse operations and traffic creating distractions with numerous lanes . Traffic going to Magothy Gate way shopping center should enter on magothy Bridge Road , Not come across Earleigh Heights to Ritchie Hwy . to turn into the third lane to enter Magothy Gateway Shopping center , Creates a problem for people making a right turn on Red onto Richie Hwy . This is a complex unsafe condition . Variation in lanes up and down Ritchie, no buffer zone along road edges to make cycling safe. No enforcement of laws regarding dirt bikes, atv's and other non-street legal vehicles up and down Ritchie Highway.	Connect the sidewalks with crosswalks for pedestrian safety. I would like to see pedestrian bridges over Ritchie Highway to safely pass over from the east side to the west side in the Severna park area. Ritchie highway cuts our town in half and in order to access the walkable areas and trails - people living on the east side need to be able to safely cross over Ritchie Highway where speed is high. Also - to have sidewalks along Ritchie Highway and larger roads leading up to it. Easier crossing paths, bridges, etc. from the east side to the west side of Rt. 2 in order to use the trail. cars blocking intersections when light changes . less traffic Pedestrian/non-motorized vehicle bridges in major towns along Ritchie. At least one in Severna Park and one adjacent to Arnold, possibly 1-3 in Glen Burnie due to its overall size/length along the corridor.	The west side of Severna park is very walkable because of all the side walks and trails. The middle school and high school are located in the west side. For children and adults living on the east side - there is no safe passage across or over Ritchie Highway. I propose a pedestrian bridge over the highway in this area. If there were one - kids could walk or ride their bikes to school and other activities throughout our town. Ritchie highway splits Severna park in half and their is no safe way across other than by car No enforcement of laws regarding dirt bikes, atv's and other non-street legal vehicles up and down Ritchie Highway. That gangs of these vehicles along with motorcycles performing wheelies, standing tricks and other dangerous acts that intimidate cars, let alone cyclists or pedestrians (which is even more negatively affecting the well-being of those users) are not prosecuted or even attempting to be controlled by police is a travesty to the communities along Ritchie.	

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Anne Arundel County (continued)

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GOV RITCHIE HWY (continued)	MD 2, Section 4, Governor Ritchie Hwy, from Baltimore Annapolis Blvd to Rt 10	It's nearly impossible to cross Ritchie Highway at intersections, even those with stoplights. Cars are turning right on red without paying attention to pedestrians who may be in the crosswalk. Cars are also driving through the intersections from the cross streets, in some cases turning left with the light while pedestrians are still in the crosswalk. There is not enough time to cross the road with the timing of the lights. Also, the lack of sidewalks makes it very dangerous to walk along Ritchie Highway on either side of the road. Governor Ritchie Highway is a disaster! Traffic is at a gridlock starting 7 am 9 am and then again every afternoon starting at 3 until 8 pm. Cars try to avoid Rt. 2 and use B and A Blvd, as a cut through creating further gridlock, and neighborhoods who have to access B and A Blvd. to get out of their neighborhoods face solid traffic congestion. There are few pedestrian crosswalks, and no specific cyclist lanes. Ritchie Hwy is a death trap for pedestrians who wish to cross safely. The entire stretch of Ritchie Hwy from Arnold to Glen Burnie is a disaster and the "Upgrades" to the intersections on Ritchie Hwy by the SHA has made this horrible roadway WORSE!! The intersection at Earleigh Heights Road is BEYOND horrible and has caused traffic to move onto north-bound 648 which totally gridlocks communities along 648.	It is impossible to ride a bicycle safely on this road which lacks bicycle lanes. Before the intersection of Ritchie Highway and Magothy Bridge Road heading north, where there is a bike lane, the driver must cross over the bike lane in order to turn east onto Magothy Bridge. This is a very busy intersection because of the shopping center on the northeast corner of the intersection. At the intersection of Ritchie Highway and 648/White's Road, it is very difficult to ride a bike across Ritchie, much less walk across, because there is no pedestrian walk light. There is no cyclist lane! Exactly the same disaster that the highway presents for pedestrians - a death trap for cyclists too!	SIDEWALKS! More consistent and well thought-out bike lanes Walk lights for pedestrians/cyclists with sufficient time to cross Ideally, a pedestrian bridge across Ritchie Hwy near the McKinsey Rd. intersection Lessen traffic on all of Ritchie Hwy. and B and A Blvd. by curbing development, especially homes/apartments along the highway itself. A cycle lane SEPARATED by a PHYSICAL BARRIER is the only safe option.	The easiest action for increasing safety for crossing Ritchie Hwy would be pedestrian cross lights at each intersection with a button for the pedestrian to push to increase the timing of the green lights at the cross streets. There are too many cars on these roads. Yesterday it took me 30 minutes to drive 0.9 miles at 4 pm because traffic was bumper to bumper. Occupants of Fair Oaks on the Magothy have great difficulty even crossing Ritchie Hwy. after 4 pm. A pedestrian or cyclist is NOT safe on Ritchie Hwy and making it wider to accommodate more traffic is NOT the answer.	As a resident of Pasadena, I would like a safe pedestrian and bicyclist crossing from West Pasadena to East-West Hwy. The intersection seems to be of a lower elevation than the roads entering into it. Thus, if it is a person on a bike coming from West Pasadena, for example, there is a risk that they misjudge and do not decelerate in time to not run into the road. And the elevation issue also relates to the speed of cars approaching the traffic lights north and south on Ritchie Hwy.

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Anne Arundel County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
GOV RITCHIE HWY (continued)	MD 2, Section 4, Governor Ritchie Hwy, from Baltimore Annapolis Blvd to Rt 10	We live in a neighborhood on the north side of Rt. 2 and crossing to the opposite side of the street is extremely dangerous. Requesting an elevated pedestrian walkway. The primary pedestrians' safety concerns is that the are no sidewalks along Magothy Bridge Road for those people who want to/have to walk to MD bus stop at Earleigh Heights Fire Department. Some people do not own cars. The MD bus services runs along Ritchie Highway. So people who live along roads such as Magothy Bridge Road have to walk on dirt along the road. Safe crossing needed of Rt. 2 (in both directions) needed at West Pasadena Rd and East-West Hwy. The intersection itself is dangerous due to the low elevation compared to the roads entering into it, and also due to how wide the highway is at that location. It is not clear if there is even enough time to walk across in one traffic light cycle. Furthermore, there were sidewalks recently installed on the West Pasadena side, ostensibly to increase access to the Rt. 2 intersection. However this was a pointless project if the intersection itself is still not safe for crossing. long sites along this route do not have safe cross walks. Traffic speed is generally very much over posted speed and lots of backups from Route 10 to College Parkway.	Same as above. The bike lanes for cyclist along Magothy Bridge Road abruptly just stop. Either have dedicated bike lanes or stop marking half lanes as bike lanes. I imagine there is significant overlap with pedestrian safety. I also shared thoughts about children on bicycles in the additional comments section below. Cross walks for cyclist are on wrong corners at Magothy Bridge and Ritchie Hwy.	Additional crosswalks, bike lanes and an elevated pedestrian cross way. Sidewalks are needed for roads leading to Ritchie Highway. Bike lanes need to be truly bike lanes. A Rt. 2 walk and roll bridge crossing at West Pasadena intersection and one at Magothy Bridge intersection. "Traffic pattern needs to change at Ritchie Hwy and Magothy Bridge Road. Bike and pedestrian crossing are both on right turn and fire equipment exit from Fire House. Light to stop traffic for Fire Department should be on Ritchie Hwy North before Fire Department(where grass is growing) and not exit on turn with bikes,cars and pedestrians plus fire trucks."	Of particular interest to me is that children of residents in Pasadena have safe access to the county's parks and recreation amenities just as other county children do. There are many children who are at the age where they can start riding their bikes around their community with less supervision, but most don't do that because they are cut off from everything other than busy roads and parking lots. There are not any parents I have encountered who would let their children cross Rt. 2 as it is currently designed even with the parent in front of them. Those kids who do ride their bikes in Pasadena do so on the edges of travel lanes on Mountain Road and on other similar busy local roads. Thank you for all your work on these important issues! come north on Ritchie Hwy turning right on Magothy Bridge Road. Drive south to Annapolis and see how other Fire Departments exit to Ritchie Hwy with their emergency equipment.	I would say this section is similar, maybe longer block lengths and less sidewalks along MD 2 so crossings are important and some way to cross without having to go 1/2 along MD 2 to get to a light Again unfortunate that this ends on the southern end just as you reach desirable destinations. The gap between Section 4 and 5 covers a lot of opportunities for short trips that are difficult due to MD 2 not having sufficient safe sidewalks and crossing options. We've also gotten a lot of requests for improvements on MD 648 in that section of MD 2 (where it comes out at Whites Road) to connect that big neighborhood to the B&A trail

DISTRICT 5

Anne Arundel County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
GOV RITCHIE HWY (continued)	MD 2, Section 4, Governor Ritchie Hwy, from Baltimore Annapolis Blvd to Rt 10	In Pasadena, No sidewalks or crosswalks for off ramps. Traffic speeds in turning lanes. Not enough sidewalks Placing pedestrian crossings on a four way intersection spaning a six lane highway is incredibly dangerous for pedestrians. A case in point is the crossroad of Richie Highway and Robinson Rd. In almost any civilized country highway code would *mandate* such a pedestrian crossing be elevated or underground. There are many families with children who would love to ride their bikes or walk from the east of Richie Highway to the Baltimore and Annapolis trail but don't do so for fear of crossing Richie Highway. What kind of society is this, where parents are afraid of going for a walk or bike ride with their kids because the roads are so dangerous? Crossing ritchie at B and A and whites road. The crosswalks are difficult to recognize. They need more signage, blinking lights, and generally more attention.	In Pasadena, no bike path or way to safely cross off ramps from Ritchie Hwy. No way to safely ride 648 to cross Ritchie Hwy to get to B&A trail. Not enough ways to safely get to and from the B&A trail, minimal shoulder in some places, high speeds As above plus cycle paths that end suddenly in the middle of a road as happens in the Baltimore Annapolis Blvd as it reaches Richie Highway Crossing ritchie at B and A and whites road.	I'd like to see more bike paths to get to Ritchie Hwy to get to B&A trail without the need to ride along hwy, only cross over. I would absolutely love more dedicated sidewalks and bike lanes connecting neighborhoods not already connected to the B&A trail to the trail. Including those east of Ritchie Highway along the Magothy river At a minimum elevated or underground crossings across Richie Highway. Also, sidewalks connecting neighborhoods on the East side of Richie Highway with elevated crossings and Baltimore Annapolis Trail Bike/walking lane down b and an across ritchie at whites road. Allow safer access to trail from berrywood, Stewart's landing and Magothy neighborhoods.	More enforcement of speeding and illegal turns. I have at least one neighbor I know of whose spouse died on a bike near Richie Highway after being hit by a car. This is completely unacceptable in the world's richest country. Many families in the area have served in Iraq, the armed forces, and other dangerous places yet may die at home on an unsafe road. They deserve better. Surely we can afford elevated crossings. The question is whether anyone cares about the lives of pedestrians or cyclists.	Of the two Rt. 2 crossings, the intersection at East-West and the Magothy Bridge one, the former strikes me as a better option if one has to choose since there is not already lots of development like there is at the Earliegh Heights one. Just seems like there is more space for, say, a pedestrian bridge.

DISTRICT 5

Anne Arundel County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
GOV RITCHIE HWY	MD 2, Section 5, Governor Ritchie Hwy, from West Campus Dr to Baltimore Annapolis Blvd					Working with SHA on sidewalks - Again, crossings to the B&A Trail, especially Joyce Lane Consideration is being given to adding a lane in each direction, which is the wrong idea for VRU safety - Instead, make controlled access roads easier Trail along College Parkway north of this segment Provide bridges across the highway, especially at Arnold A long-term project may extend B&A Trail south of MD 450, across the US Naval Academy bridge into Annapolis Agree with comments about the problem with increasing the number of lanes for traffic! Please don't. As development increases - bringing more people to this area - it would be preferable to ensure that area (the southmost section of rte 2) is engineered for people and not for cars, even if that means less vehicular traffic on that corridor.
BELLE GROVE RD	MD 170, Belle Grove Rd, from I-895 to Baltimore Annapolis Blvd					Active shared use path project with sidewalk improvements; make sure crossings are included Also in Brooklyn Park study Design is funded through TAP; construction is not
BALTIMORE ANNAPOLIS BLVD	MD 648, Baltimore Annapolis Blvd, from Baltimore Beltway Inner Loop to I-97					Sidewalk feasibility study is in the County's priority letter

DISTRICT 5

Anne Arundel County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
8TH AVE NW	CO 3616, 8th Ave NW, from Crain Hwy to Baltimore Annapolis Blvd					Part of Walk & Roll Run off the road crashes are being addressed on the curve near Penrod Flea market on east side near Valvoline label on map - Parking on shoulders - Lots of pedestrian traffic West end is close to Cromwell light rail station and B&A trailhead 8th Ave is within the TOD boundary that we are applying to MDOT for a designation, at Cromwell
CENTRAL AVE	CO 634, Central Ave, from Crain Hwy to Dorsey Rd					Not sure why this area is highlighted Cyclist fatality, not related to road design This street is a cut-through for cyclists Remove this road from the list since one major contributor was a major crash at MD 3 Probably covered by town center plan
CRAIN HWY	MD 3, Section 1, Crain Hwy, from Baltimore Annapolis Blvd to Quarterfield Rd					Northern section is in town center plan May include pedestrian crossings late at night
CRAIN HWY	MD 3, Section 2, Crain Hwy, from MD 100 to I-97					Could be crossings here too Capital project coming to add sidewalks between Stevenson and Green Branch (under I-97) Are sidewalks actually comfortable? MD 3 and Millersville Road will soon have a shared use path on both sides [This intersection is far outside the VRU high-risk area] - South Shore project is under development - Need a safe crossing of MD 3 in the short term; this can’t wait until the development is done- "

DISTRICT 5

Anne Arundel County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
WEST ST	MD 450, West St, from Taylor Ave to Old Solomons Island Rd	Safe crossings and extension of the Poplar Trail in both directions. Inadequate ADA compliant continuous sidewalk Sidewalk right next to roadway with no buffer. Motorists do not always stop at marked crossings. (All there is is paint and a sign.) Many, many vehicle entrances/exists for businesses break up the sidewalk. For both bicyclists and pedestrians getting from downtown Annapolis out to the Mall, Parole Towne Center, the Hospital, and to jobs on the outer edge of the city, is like taking your life into your own hands. For both bicyclists and pedestrians getting from downtown Annapolis out to the Mall, Parole Towne Center, the Hospital, and to jobs on the outer edge of the city, is like taking your life into your own hands.	Safe crossings and extension of the Poplar Trail in both directions No place for a cyclist to safely exist. Neither the roadway nor the sidewalk are safe for a cyclist of any skill level. Frequent motorist turns from both lanes in both directions make the roadway hazardous for everyone. For both bicyclists and pedestrians getting from downtown Annapolis out to the Mall, Parole Towne Center, the Hospital, and to jobs on the outer edge of the city, is like taking your life into your own hands. For both bicyclists and pedestrians getting from downtown Annapolis out to the Mall, Parole Towne Center, the Hospital, and to jobs on the outer edge of the city, is like taking your life into your own hands.	SHA needs to work with AAC and Annapolis to extend the Poplar trail westward to the intersection of 2/450 including a safe ped/bike crossing to reach the existing SUPs on the west side of the intersection. This may need ROW along 450 east of Rt 2. Reduce thru-way traffic to one lane each way, add a middle turning lane, and add bike lanes along the sides. This will make the roadway more safe for motorists, pedestrians, and cyclists by reducing dangerous high-speed lane changes and encouraging thru-traffic to use a different road or drive more slowly. The need for a dedicated bike/ped path from downtown out to the edge of town is of the utmost importance. If we want people out of cars, for those who can afford one, and get people safely to schools, libraries, and jobs we need separated pathways. The need for a dedicated bike/ped path from downtown out to the edge of town is of the utmost importance. If we want people out of cars, for those who can afford one, and get people safely to schools, libraries, and jobs we need separated pathways.	We need continuous separated separated bike/ped facilities like extension of the Poplar Trail so VRUs can safely travel from downtown Annapolis to Parole I have lived here for more than a decade and commute by bicycle. This is easily the most dangerous road I know of (excluding actual freeways where bicycles are not permitted). There have been multiple VRU deaths. This segment of West St is a blight on our city and needs significant improvements to make it safe and welcoming for all citizens.	Conditions are better at the east end of the corridor, with more local traffic Curb tight sidewalks Higher volumes, no tree canopy, parking lots, etc. toward MD 2 E-W Express Trail will extend existing trail west - This project is funded - No concept at Gibraltar Avenue and MD 2 Need pedestrian crossings at MD 2 and MD 450 Existing shared use path from diner at NW corner of MD 2 and MD 450 all the way across US 50 One other comment on the MD 450 segment. In addition to the West East Express trail project which parallels MD 450, we are also working on some key connections across MD 450 to connect the West East Express to other trails. The intersections on MD 450 at S. Cherry Grove and Glen/Russell Streets are particularly important as ped/bike crossings There also may need to be some traffic concessions to make pedestrian travel safer in the western section. May have to give up a turn lane or introduce a crossing or something that may slow vehicular traffic I would echo what Eric says about West Street and that speeds and volumes pick up west of chinquapin and getting them safely all the way to MD 2 is important

DISTRICT 5

St. Mary's County

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
THREE NOTCH RD	MD 235, Three Notch Rd, from Chancellors Run Road to Great Mills Rd					3 lanes and a shoulder for accel/decel Not safe for bicyclists County is looking into a shared use path
CHANCELLORS RUN RD	MD 237, Chancellors Run Rd, from Three Notch Rd to Great Mills Rd					Some areas have narrow shoulder for bicyclists Continuous sidewalks
GREAT MILLS RD	MD 246, Great Mills Rd, from Old Great Mills Rd to Three Notch Rd					No bike lanes, but sidewalks Pedestrians cross at will

DISTRICT 5

General Comments

- Please look at the Brooklyn Park Mobility Study than AA Cty is doing as a vital input in northern AA Cty. (https://www.aacounty.org/AACOOIT/Transportation/Walk%20And%20Roll%20Final%20Plan.pdf)
- There is a gap between high-risk areas at MD 2 and MD 450
    - There is a major trail initiative in this area
    - It is a significant gateway into the city
- See St. Mary's/Calvert local strategic highway safety plan
- Both Charles and St Marys need better crosswalks and more of them with signals, also the lack on sidewalks are needed.
- Any bike infrastructure along most any state road needs physical separation due to speeds and truck traffic. If it's not safe enough for my disabled adult daughter to ride her e-trike, it isn't really safe infrastructure and will not serve some of the most vulnerable POTENTIAL users.
- Very interested in what kind of countermeasures are being examined. That phrase could mean a lot of things.

DISTRICT 6

Washington County

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
ANTIETAM ST	MU 30, Antietam St, from Burhans Blvd to S Cleveland Ave	Traffic signals do not have APS facilities	No bike lanes, and on one or both sides of the street, force cyclists to share space with vehicles.	Upgrade traffic signals to be APS-equipped; consider bike boxes at intersections		Mixed land use with sharrows Only a handful of ways to get east-west in Hagerstown "Bypass" for US 40 Lots of alleys and limited sight distance Many destinations including library and courthouse North end of stadium property
BURHANS BLVD	US 11, Section 1, Burhans Blvd, from Cushwas Aly to W Washington St	Sidewalks on only one side of the street (for the most part); four lanes of traffic; no APS equipment at the signalized intersections.	No bike lanes; high traffic volumes	Pretty much impossible to add sidewalks along the other side of the street due to constraints; make sure that existing sidewalks are ADA-compliant; add APS equipment to the signalized intersections.		Candidate for road diet
JEFFERSON ST	MU 1210, Jefferson St, from N Mulberry St to N Cleveland Ave	Sidewalks are not fully ADA-compliant, and there are many stoops and utility poles that pedestrians must navigate around as they walk through the corridor.	No bike lanes, forcing cyclists to share the street with vehicles	Add APS facilities at the signalized intersections; consider bike boxes at the intersections.	The sidewalks are on the City's list to be upgraded. Difficult to do much for cyclists due to the narrow width of the street and on-street parking.	Matt: Dense residential Skate park and fairgrounds are a big destination Some people drive fast on one-way streets
OAK HILL AVE	MU 1840, Oak Hill Ave, from Potomac Ave to Cathedral Ave	Oak Hill Avenue is very wide, which causes vehicles to speed; this endangers pedestrians trying to cross the street. No APS facilities at the Oak Hill/Northern Avenue intersection.	Speeding vehicles. While there aren't designated bike lanes on Oak Hill, the street is so wide that cyclists feel safe sharing the street with vehicles.	APS facilities at the Oak Hill/Northern Avenue intersection.	Neighborhood groups have asked the City to evaluate traffic calming measures on Oak Hill Avenue; however, when we proposed installing central medians to narrow the street and make it less comfortable for drivers to speed, the majority of the residents in the neighborhood opposed the idea. Because there are no stop signs on Oak Hill between Northern Avenue and Prospect Avenue, any new crosswalks would essentially be mid-block crosswalks, which we try to avoid.	Bypass for Potomac Ave Schools and Shopping at complicated Northern Avenue intersection, otherwise residential Part of Hub City Loop

DISTRICT 6

Washington County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
POTOMAC ST	MU 2005, Potomac St, from W Baltimore St to E Washington St	Lack of APS equipment at signalized intersections. Extremely long crosswalk distance at the Potomac/Baltimore intersection. Wide intersections, sidewalk conditions, obstructions creating paths >36"	Lack of bike lanes, and heavy traffic heading south from the downtown area; on-street parking. No bicycle facilities	The City is in the process designing improvements to the Potomac/Baltimore intersection as part of a Safe Routes to Schools project.	City of Hagerstown received a TAP grant in Oct 2022 to help re-do Potomac/Baltimore intersection as recommended in Hagerstown BPPAP	
SUMMIT AVE	MU 2301, Summit Ave, from Virginia Ave to W Washington St	Sidewalks are not fully ADA-compliant; no APS equipment at the signalized intersections.	There are bike lanes, but traffic volumes and the narrowness of the street still make it uncomfortable for cyclists.	The City is working to make the sidewalks ADA-compliant; add APS equipment at the traffic signals.		Existing bike lane New minor league stadium is being built here, which will result in more demand for walking and bicycling Connects City Park to downtown Mixed land use
VIRGINIA AVE	US 11, Section 2, Virginia Ave, from I-70 to W Wilson Blvd	Incomplete sidewalk system, especially in the segments outside Hagerstown City limits; high traffic volumes and speeds; no APS equipment at the signalized intersections. Lack of sidewalks, lack of safe separation from travel lanes, crosswalks/ped signals and/or ADA ramps through corridor (intersections like Governors Blvd, Halfway Blvd, Virginia Ave).	No bike lanes; high traffic volume and speeds Lack of bicycle facilities, this is part of US11 that can connect downtown Hagerstown/City Park/new Municipal Multipurpose Stadium to Williamsport/new C&O Canal NPS Headquarters, lack of bike facilities (lanes, flex posts, etc.)	Complete the sidewalk system where it is currently missing; add APS equipment at the signalized intersections; add bike lanes where possible.	HEPMPO's relevant bicycle and pedestrian plans provided in separate email	

DISTRICT 6

Washington County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
NATIONAL PIKE	US 40, National Pike, from I-81 to Dwight D. Eisenhower Hwy	Pedestrians trying to cross a four lane divided highway at locations other than intersections or crosswalks; traffic volumes and speeds; missing sidewalks on segments of the corridor outside of the City limits of Hagerstown. Lack of lighting, midblock crossings, high speeds, signals lack APS/CPS signals, review of signage, some intersections have narrow turn lanes that could possibly be turned to bulb outs, western portions of this corridor lack sidewalks	Very limited bike lanes; high traffic volumes and speeds Lack of lighting, midblock crossings, high speeds	SHA is in the process of designing and constructing sidewalks along Route 40 on the eastern side of the City, and implementing other pedestrian elements to improve safety. Increased lighting, addition of mid-block crossing near McDonalds	Consideration should be given to the installation of sidewalks from Nottingham Road west along Route 40 to the shopping center at Garland Groh Blvd; there is a lot of pedestrian traffic walking along Route 40 from the City to access the shopping center, and there are no sidewalks. The installation of sidewalks will be complicated by the I-81 interchange, but it may be possible to install a sidewalk in the central median that separates the eastbound and westbound lanes of Route 40 in that area.	Diverse, with a handful of context zones Detour route for freeway incidents Sidewalk and ADA work in progress Looked at speed management/midblock crossing between Cannon and Cleveland Lighting Consolidated adaptive signal system No sidewalks to the west

DISTRICT 6

General Comments

- City of Hagerstown received an FY22 SS4A Planning grant and are hoping to get started on their Action Plan in late Fall
- Why are there no PSAP corridors in D6?
    - Interactive map is published without specific scores
    - BPPA areas were not explicitly considered by PSAP
- How are local crash reports included?
    - ACRES includes all police reports statewide, not just from State Police

DISTRICT 7

Carroll County

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
BALTIMORE BLVD	MD 140, Baltimore Blvd, from Malcolm Dr to Carroll County Northern Landfill	Keeping pedestrians OFF the roads. The ROADS are for transport of goods and services, primarily through cars and trucks. That is how our economy and our lives work. This is primarily an exurban area and does not have reason to provide infrastructure for pedestrians, except around shopping areas.	Keep the cyclists OFF the roads. They do NOT represent a significant enough percentage of road users, and does not provide enough utility for the rest of the public to tolerate a change in how we allocate resources and how traffic policy is made and implemented. No increases in paving over green for a "bike lane." Just stupid policy. Stop it.	I don't want to see any for pedestrians or cyclists. These are ROADS, and for the purposes of moving goods and services around. Pedestrians and cyclists do NOT make up enough of the users along the roads to make ANY accommodation for them.	Stop trying to make changes to the necessary movement of people and goods by trying to tell us that we need to take pedestrians and cyclists into account on roads. It's absurd.	Widened over the years, sometimes without sidewalks Looking into sidewalk connections Would like to reduce the incidence of midblock crossings Local safety plan discussions about pedestrian safety City and county have been good partners in requiring sidewalks in new developments
BALTIMORE BLVD	MD 140, Baltimore Blvd, from Manchester Rd to Littlestown PK	None. It's a road and a major corridor/route for goods and services. Keep it that way.	None. Keep cyclists off the roads. They are such a minuscule amount of riders compared to the numbers of cars, trucks and emergency vehicles that use our ROADS that they should not be considered.	None. It's a ROAD, not a park.		See above
BALTIMORE BLVD	MD 140, Baltimore Blvd, from Malcolm Dr to Manchester Rd					See above

DISTRICT 7

Frederick County

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
CRESTWOOD BLVD	CO 1179, Crestwood Blvd, from Hannover Dr to Buckeystown Pike	Crossing at unsignalized intersections, wide roads/long crosswalks, lack of lighting, speeding, high traffic volume.	As far as I know, not very many cyclists use this corridor. Local cyclist advocacy group has not identified this road as an area of concern (fyi: adjacent New Design Rd was identified, separated bike lane installed earlier this year).	"Better pedestrian crossings - identifying most frequently used and/or most appropriate crossings and upgrading them with warning lights, street lightning, pedestrian refuge islands, etc.	Potential improvements need to consider transit bus routes, school transportation patterns, local demographics (Crestwood Village age restricted housing at corner of New Design Rd and Crestwood Blvd).	One of the busiest streets in the County system Commercial to east, residential to west Street lighting may be beneficial County is adding sidewalks incrementally on both sides
W PATRICK ST	US 40, W Patrick St, from Kehne Rd to Frederick Fwy					Median barriers in about half of this section

DISTRICT 7

Frederick County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
BUCKEYSTOWN PIKE	MD 85, Buckeystown Pike, from Eisenhower Memorial Hwy to Julia Ln					Intersection improvements last year provided sidewalks across the interchange

DISTRICT 7

Howard County

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
LITTLE PATUXENT PKWY	CO 794, Little Patuxent Pkwy, from Hickory Ridge Rd to Columbia Pike	High speed vehicular traffic. Too few safe crossings for pedestrians to CROSS the corridor. Inadequate/non-existing facilities for pedestrians traveling ALONG the corridor.	Inadequate/non-existing facilities for pedestrians traveling ALONG the corridor.	Traffic calming to reduce speeds. A greater number of crossings. Shared use path along the entire corridor -- building on the existing SUP from the library to Cedar Lane.	The Columbia pathway system provides partial connectivity along this corridor from Vantage Point Rd to Cedar Lane. This could be built upon to provide full connectivity along the entire corridor. The meandering nature of the section of path from Vantage Point Rd to South Entrance Lane does not necessarily serve peds/cyclists using it for basic transportation (i.e., to/from work). Also, a safe bike/ped facility crossing 29 at the east end of this corridor is critical.	Master plan for downtown Columbia Howard Hughes (developer) built shared use path along LPP from hospital to downtown Design guidelines will eventually result in more shared use paths New library coming on the lake Improve crossings Downtown Partnership is doing a walk audit They've added a lot of signalized crosswalks in the last few years
ROUSE PKWY	MD 175, Section 1, Rouse Pkwy, from Columbia Pike to I-95	Very heavy high speed traffic with little opportunity to safely cross the streets. Sidewalks are narrow.	There is no safe place for a cyclist.	Bike lanes and wider sidewalks.	Please consider a complete route from one safe place to another. Such as from neighborhood to shopping center or schools. The destination should include a gradual merge like access and not 90 degree angles.	Guardrail between Tamar and Dobbin has directed pedestrians to the tunnel crossing MD 175 This is essentially a freeway with high speeds Fatality at Tamar Speeds must be mitigated Need protected infrastructure Current focus is safer crossings There are pathways along roughly parallel routes, including US 29 bridge to hospital

DISTRICT 7

Howard County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
WATERLOO RD	MD 175, Section 2, Waterloo Rd, from Washington Blvd to Patuxent Institution Driveway	MD 175, Section 2, Waterloo Rd, from Washington Blvd to Patuxent Institution Driveway				Nigel: Lots of truck traffic on/off of I-95 David: Many ped crossings, including at the jail
WASHINGTON BLVD	US 1, Section 1, Washington Blvd, from Montgomery Rd to MD 100					All of US 1 is a problem, with minimal shoulders) This corridor is Howard County's primary focus for pedestrian safety - Evaluation 5 years ago to develop five focus area improvements - Rowanberry intersection at the library - Doctor Patel Drive intersection - Lack of sidewalks - Speeding - Lighting - Needs a comprehensive redesign, focusing through traffic on routes that are designed for it (e.g., I-95, MD 295) - Applied for SS4A planning grant 30% of county jobs, many moderate income, are along this corridor - New housing - Three focus areas with new development are in the General Plan - Unusually broad mix of land uses
WASHINGTON BLVD	US 1, Section 2, Washington Blvd, from MD103 to MD 32					Just finished improvements at Guilford New sidewalks between Assateague and Cedar Lane, at huge truck stop Amount of traffic nearly prohibits bicycling New high school is coming at Mission Rd
WASHINGTON BLVD	US 1, Section 3, from Freestate Drive to the Patuxent River					Similar concerns here to other segments A few improvements by developers near the race track Improvements lined up for couplet area, but they are "band aids" Lots of missing sidewalks No bike infrastructure (or maybe a very small amount) Preference is for separate shared use paths County study suggested removing auxiliary lanes to create a bike lane in couplet; SHA will do this at next repaving

DISTRICT 7

Howard County (continued)

High-Risk Area	Limits	In your experience, what are the primary PEDESTRIAN safety concerns on this corridor?	In your experience, what are the primary CYCLIST safety concerns on this corridor?	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Please provide other information that would aid in understand VRU safety concerns or actions needed to improve VRU safety in this area.	Consultation meeting comments
WASHINGTON BLVD	US 1, Washington Blvd, from Patuxent Fwy to Waterloo Rd	There are many low income pedestrians but a complete lack of sidewalks in some areas. Sidewalks and lighting should be provided for the entire route. It is very difficult to obtain data to back up any non-car project because we do not systematically collect data on these users. We do not know how many users there are now and if we build a facility, we don't collect data on how much it's used. The mantra has been "build it and they will come" but there is no actual data to support that mantra. Not enough sidewalks for pedestrians. Pedestrians not utilizing crosswalks.	US 1 is not compatibile with bikes. A separate hiker/biker is proposed in the US 1 planning documents. However, there is no concept or preliminary engineering done. As development continues along US 1, developers are required to build bike facilities but it is piecemeal. There needs to be a framework in place that can be filled in by developers and monitored by access management. Parts of US RT 1 do not have shoulders, bike lanes or wide enough lanes for 2 cars plus a bike to safely travel.	All sidewalks and pathways should be 100% exempt from stormwater management and erosion & sediment control requirements. The pollutant discharge from this type of facility is negligible but is a major hurdle to expanding our sidewalk/trail networks. We're spending massive amounts of money regulating runoff from sources that don't truly matter. Farms are killing the Bay not bikes & peds. If we want to actually decrease fatalities, then we need to clear out all the red tape and give a blank check for building safer facilities. Widen the roadway and add sidewalks. Adding metal guardrails along RT 1 may discourage pedestrians from crossing where they aren't supposed to cross.	As it stands now, every mode of powered human transport between a bike and a car is illegal in this State. Any person with access to ANY form transportation should be allowed to use it on low speed roadways. We should re-designate all residential streets as 20 mph, multi-user facilities. We should link separate neighborhoods into a low speed network by building pre-fabricated bridges and trails through strategic locations. This would eliminate the need to build facilities on higher speed roadways or at least substantially reduce the cost of creating a network. Speed differential is what kills peds & bikes. Bikes can travel at speeds of around 25 mph. A 50 mph vehicle striking a bike will be fatal in most cases. If we actually want zero fatalities then we cannot permit bikes to be co-mingled with trarffic above "death speeds". Our policies should not be encouraging VRU to engage in actions with a significant risk of death. I believe we are seeing the rise of cycling fatalities because we're building facilities that are inherently dangerous to most users. Elite bikers are the only ones who want to ride on higher speed facilities and they're being killed. We should stop building these facilities and focus on providing safe facilities for the other 95% of potential users. We don't build roads for Ferraris, we build them for dump trucks.	
BALTIMORE NATIONAL PIKE	US 40, Baltimore National Pike, from Centennial Ln to Columbia Pike					Challenges with sidewalk connectivity, especially near US 29 Heavy traffic, high speeds, big intersections, many businesses Another focus area for General Plan - Corridor design guidelines - Leveraging new development to build sidewalks - Will need State involvement to connect these sidewalk pieces

DISTRICT 7

General Comments

- Emphasized the need to fill gaps in the network
- How are local crash reports included? ACRES includes all police reports statewide, not just from State Police.

BALTIMORE CITY

High-Risk Area	Limits	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Consultation meeting comments
W NORTH AVENUE	MU 2210, W North Ave, from N Hilton St to N Monroe St		North Avenue Rising project wrapped up in 2020; not many improvements were made in this stretch of North Avenue
E NORTH AVENUE	US 1, E North Ave, from Falls Rd to St Paul St		Howard and North has had significant improvements through North Avenue Rising "Sketchy" entrance onto cycle track at Maryland Avenue Many bus stops on both North Ave and Charles St Main concerns are at Penn/North and from Greenmount to the east Baltimore City has its own High Injury Network
FULTON AVE	US 1, Fulton Ave, from Lombard St to US 40		Priority for BCDOT, along with Monroe St Dense neighborhoods, schools, West Baltimore MARC station Included in SS4A demonstration grant application
PENNSYLVANIA AVE	MU 4005, Pennsylvania Ave, from N MLK Jr Blvd to W North Ave		Metro stops Intersection improvements in last HSIP application (raised crosswalks, RRFBs)
DRUID HILL			Same issues; high speeds, dense areas, lots of crossings
W LAFAYETTE AVE	MU 1900, W Lafayette Ave, from N Franklin Rd to N Monroe St		In SS4A application
EDMONDSON AVE	MU 1920, Edmondson Ave, from Poplar Grove St to N Monroe St		Signal timings for slow speeds; contract just started
EDMONDSON AVE	MU 1920, Edmondson Ave, from N Fulton Ave to N Fremont Ave		Signal timings for slow speeds; contract just started
FRANKLIN ST	US 40, Franklin St, from Poplar Grove St to N Pulaski St		Part of E-W RAISE corridor; draft 30% design - May not go as far as it needs to go for ped/bike safety
WASHINGTON BLVD	MU 1281, Washington Blvd, from S Monroe St to S MLK Jr Blvd		Some of this was part of a previous grant (small spot improvements) Washington/Monroe is one of the most dangerous intersections in the city Graham Projects has done tactical urbanism/public art improvements Quick build project at Bayard Bush Street is in separated bike lane network plan and greenway network plan

BALTIMORE CITY (continued)

High-Risk Area	Limits	What types of improvements would you like to see along the corridor to enhance the safety of pedestrians and cyclists?	Consultation meeting comments
W LOMBARD ST	MU 1395, W Lombard St, from S Fulton Ave to S MLK Jr Blvd		HSIP applications for intersections like Stuart Hill Academy
MLK JR BLVD	MU 6020, MLK Jr Blvd, from W Lombard St to N Mulberry St		Separated shared use path going to construction soon That project may not include intersection improvements Lots of congestion, especially during peak hours Signal retiming would be useful Maybe dynamic lanes; road is empty outside peak hours, leading to speeding
E FAYETTE ST	MU 1680, E Fayette St, from N Washington St to N Highland Ave		Part of E-W RAISE alignment to create “true BRT” One side of the street will be buses, reducing crossing distance
E FAYETTE ST	MU 1680, E Fayette St, from Fallsway to N Wolfe St		Part of E-W RAISE alignment to create “true BRT” One side of the street will be buses, reducing crossing distance
ANNAPOLIS RD	MD 648, Annapolis Rd, from Waterview Ave to Baltimore Washington Pkwy		Now has two separated bike lanes because of a recent major retrofit
PATAPSCO AVE	MU 100, Patapsco Ave, from Washington Blvd to Baltimore Washington Pkwy		Possible project here; DOT and South Baltimore Gateway Partnership Lots of midblock crossings HSIP-funded pedestrian hybrid beacons are coming
PATAPSCO AVE	MU 100, Patapsco Ave, from Potee Ave to Fairhaven Ave		Considered for HSIP application Brooklyn is a city priority for access to transit
E MONUMENT ST	MU 1370, E Monument St, from N Wasington St to Edison Hwy	Extend the protected bike lane eastward to at least Highland Avenue	In SS4A application Milton or Montford is a problem “A ton of crossings” West of Wolf (outside our high-risk area) has a two-way cycle track, which may create more bicycling demand on this section of Monument
GWYNNS FALLS PKWY	MU 1023, Gwynns Falls Pkwy, from N Hilton St to N Monroe St	Maybe build the Greenway here?	Proposed 12’ shared use path Mondawmin RAISE grant will address part of this area Intersection with Monroe is bad for peds

BALTIMORE CITY

General Comments

- Baltimore City high injury roadway network, https://arcg.is/05GPKS, prioritizes ped and bike incidents and other severe crashes.

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