Government of the District of Columbia

Department of Transportation



November 14, 2023

Darlisa Thomas, Safety & Operations Transportation Specialist U.S. Department of Transportation Federal Highway Administration District of Columbia Division 1200 New Jersey Avenue, S.E., E61-214 Washington, D.C. 20590

Re: Vulnerable Road User Safety Assessment

Dear Ms. Thomas:

As the Governor's/Mayor's Representative for Highway Safety, I am pleased to submit the District of Columbia's Vulnerable Road User (VRU) Safety Assessment for your review and approval. This assessment is in response to and in accordance with the requirements set forth in 23 U.S.C. 148 (1) as amended by the Infrastructure Investment and Jobs Act (IIJA) (Pub. L. 117-58, also known as the "Bipartisan Infrastructure Law" (BIL)).

The VRU Safety Assessment provides a comprehensive review of safety outcomes for the most at-risk populations on the District's transportation network – those outside of vehicles. This assessment outlines strategies that further cement alignment across a host of District of Columbia agencies, in making the District roadways and sidewalks a safer place to ride, walk, and roll. I hope that efficient and effective implementation of the strategies listed the VRU Safety Assessment, along with FHWA's continuing support, will create safer District roadways and achieve our vision of zero fatalities.

Sincerely,

Keith Anderson

Deputy Mayor for Operations and Infrastructure Governor's Representative for Highway Safety (GR)

Keith Anderson

Vulnerable Road User Safety Assessment

2023 District of Columbia



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Introduction

A Vulnerable Road User (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. A VRU Safety Assessment analyzes the safety performance of a State with respect to these vulnerable users, with an emphasis on fatal and serious injuries, and the State's plan to improve safety.

The District's most recent Strategic Highway Safety Plan (SHSP), published in January 2021, featured a Vulnerable Road Users as a focus area that includes Pedestrians and Bicyclists as a Critical Emphasis Area. The District recognizes VRU safety is of high importance and is considered in the overall direction of safety for the State through the SHSP. A key element of the SHSP was to incorporate the elements and principles of the <u>Safe System Approach</u>, as outlined by USDOT's <u>National Roadway Safety Strategy</u> (NRSS). The VRU Safety Assessment uses the Safe System framework to understand safety issues in the State and propose programs, projects, and strategies to reduce fatalities and serious injuries.

Overview of Vulnerable Road User Safety Performance

Looking at the past 5 years of available data (from 2018 to 2022), VRU fatalities and serious injuries are generally similar year to year, except for an outlier year in 2020 (see Table 1 and Figure 1).

Table 1.	VRU	Fatalities	and	Serious I	niuries	from 2018 to 2022.

		2018	2019	2020	2021	2022	Total
	Pedestrian	12	12	10	19	17	70
Fatalities	Bicyclist	3	2	1	3	3	12
	E-Scooter	1	-	ı	ı	-	1
	Pedestrian	103	96	71	97	105	472
Serious	Bicyclist	39	42	27	22	30	160
Injuries	E-Scooter	-	-	-	9	10	19
	Other Non-Motorist	4	6	6	2	-	18
	Total	162	158	115	152	165	752

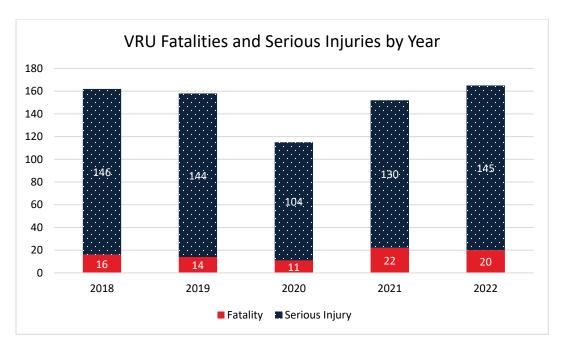


Figure 1. VRU Fatalities and Serious Injuries from 2018 to 2022.

Figure 2 shows the number of VRU fatalities by VRU type.

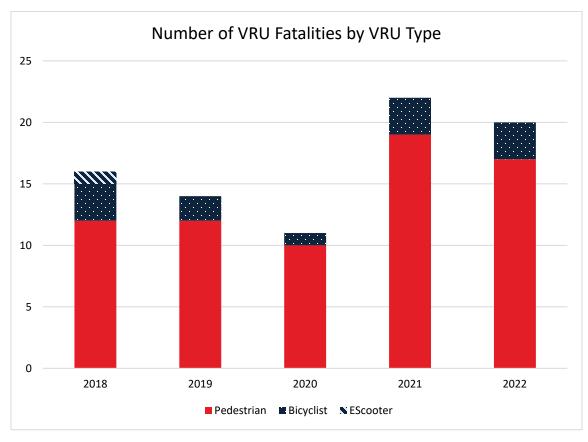


Figure 2. VRU fatalities by VRU type from 2018 to 2022.

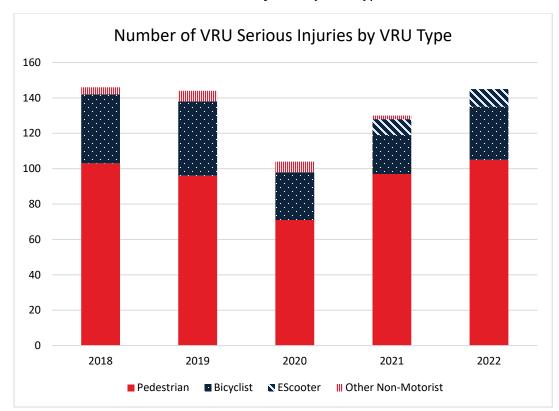


Figure 3 shows the number of VRU serious injuries by VRU type.

Figure 3. VRU serious injuries by VRU type from 2018 to 2022.

VRU fatalities and serious injuries (denoted by K and A, respectively, on the KABCO injury severity scale) have made up 32 to 42 percent of total fatalities and serious injuries in the District (see Table 2).

Table 2. VRU fatalities and serious injuries compared to total fatalities and serious injuries.

	2018	2019	2020	2021	2022
Total KA	396	379	362	441	419
VRU KA	162	158	115	152	165
Percent	41%	42%	32%	34%	39%

This percentage increased when analyzing VRU fatalities (except for an outlier year in 2020), with a range of 31 to 61 percent of total fatalities being a VRU (see Table 3).

Table 3. VRU fatalities compared to total fatalities.

	2018	2019	2020	2021	2022
Total K	33	27	36	42	33
VRU K	16	14	11	22	20
Percent	48%	52%	31%	52%	61%

Performance Targets

Both the Federal Highway Administration (FHWA) and National Highway Traffic Safety Administration (NHTSA) require States to set annual safety performance targets. The Safety Performance Final Rule establishes five metrics, including number of non-motorized fatalities and serious injuries, that States must track as part of the FHWA Highway Safety Improvement Program (HSIP).

Targets are set by reviewing annual and 5-year rolling average trends for crash data and using a power model. The District's numbers are relatively small compared to other States, which increases fluctuations each year and making it difficult to project trends. Using the rolling averages helps reduce some of these fluctuations. The lowest number of fatalities occurred in 2012 (15), but they have been increasing, similar to the patterns observed in most other similar-sized cities. The actual performance for 2018-2022 (147.4) was higher than the established target for 2022 (133).

Ward

Washington, D.C. is divided into eight Wards (see Figure 4). Table 4 shows VRU fatal and serious injuries, percentage of VRU fatal and serious injuries to the total in each Ward, and VRU fatal and serious injuries per 10,000 population.

Wards 1 and 2 are densely populated with high volumes of pedestrian and bicyclist activity. In Ward 1, 34 (or 44 percent) fatal and serious injuries are VRUs. Ward 2 had the highest number of VRU fatal and serious injuries (83), where 57 percent being VRUs (the highest in all Wards).

Ward 3 had the least amount of total fatal and serious injuries (56), with 25 being VRUs, amounting to 45 percent.

Ward 4 had the least amount of VRU fatal and serious injuries (20) and least VRU fatal and serious injuries per 10,000 population.

Ward 5 is the second most populated Ward and had 61 VRU fatal and serious injuries, amounting to 31 percent of total fatal and serious injuries.

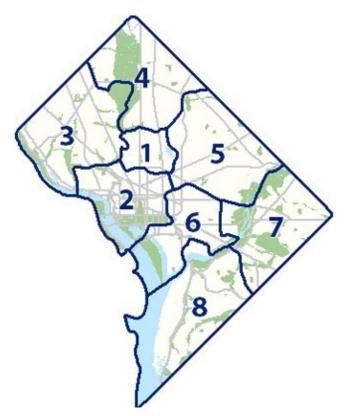


Figure 4. District Ward Map.

Ward 6 is the most populated Ward and had 56 VRU fatal and serious injuries, amounting to 33 percent of total fatal and serious injuries.

Ward 7 is the least populated Ward and had 62 VRU fatal and serious injuries (the third highest result), amounting to 25 percent of total fatal and serious injuries.

Ward 8 had the second highest number (81) of VRU fatal and serious injuries, amounting to 35 percent of total fatal and serious injuries, and the highest VRU fatal and serious injuries per 10,000 population.

Table 4. VRU fatalities and serious injuries by Ward (2018-2022).

	VRU KA	Percentage VRU KA to Total KA	Population (2020) ¹	VRU KA per 10k Population
Ward 1	34	44%	85,285	4.0
Ward 2	83	57%	81,904	10.1
Ward 3	25	45%	85,301	2.9
Ward 4	20	29%	84,660	2.4
Ward 5	61	31%	89,425	6.8
Ward 6	56	33%	108,202	5.2
Ward 7	62	25%	76,255	8.1
Ward 8	81	35%	78,513	10.3

Note that location/Ward for 22 crashes were unknown and removed from this analysis.

Functional Classification

Table 5 shows the road mileage and VRU fatal and serious injuries by roadway functional classification. Arterials (Principal and Minor) make up 36 percent of the roadway lane miles, but 67 percent of VRU fatal and serious injuries.

Table 5. VRU fatalities and serious injuries by functional classification (2018-2022).

	Mileage	Lane Miles	Percent Lane Miles	VRU KA	Percent VRU
Interstate	24	72	3%	1	3%
Other Freeway and Expressway	22	60	2%	3	2%
Principal Arterial	108	450	18%	145	32%
Minor Arterial	164	450	18%	154	35%
Collector	154	307	12%	35	10%
Local	677	1,194	47%	87	18%

Note that location/functional classification for 16 crashes were unknown and removed from this analysis.

Speeding

Speeding occurred in VRU crashes and VRU fatal and serious injury crashes at a lesser rate than for total crashes and total fatal and serious injury crashes (see "Speeding Rate" in Table 6); however, speeding is overrepresented in VRU fatal and serious injury crashes with 25 percent of VRU fatal and serious injuries involving speed, compared to the 12 percent of total VRU crashes of all severities—meaning speeding is associated with a higher likelihood of a fatality or serious injury.

¹ https://planning.dc.gov/publication/2020-census-information-and-data

Table 6. Speeding in VRU fatalities and serious injuries (2018-2022).

	Total	Total KA	Percent Total	VRU	VRU KA	Percent VRU
Total Crashes	58,005	1,122	2%	3,533	418	12%
Crashes Involving Speeding	1,953	113	6%	57	14	25%
Speeding Rate	3.4%	10.1%		1.6%	3.4%	

Impairment

Driving Under the Influence (DUI) rates for VRU crashes of all severities were higher than statewide averages, but VRU fatalities and serious injuries were lower than statewide averages. However, DUI is overrepresented in VRU fatal and serious injuries with 19 percent involving DUI, compared to the 12 percent of total VRU crashes of all severities—meaning alcohol impairment is associated with a higher likelihood of a fatality or serious injury. It is also important to note that 31 percent of total fatal and serious injuries are VRUs.

Table 7. Alcohol impairment in VRU fatalities and serious injuries (2018-2022).

	Total	Total KA	Percent Total	VRU	VRU KA	Percent VRU
Total Crashes	58,005	1,122	2%	3,533	418	12%
Crashes involving DUI	1,571	72	5%	118	22	19%
DUI Rate	2.7%	6.4%		3.3%	5.3%	

Demographic Considerations

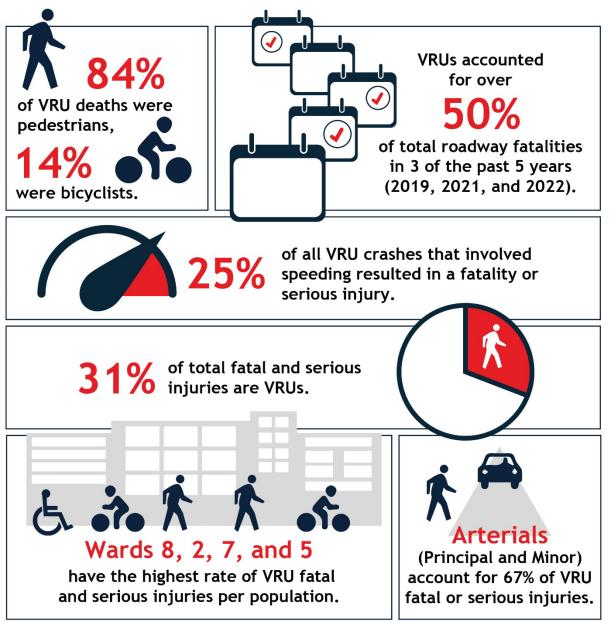
The analysis compared demographic information in the locations of VRU fatal and serious injuries to citywide rates. The rates of minority, below poverty, disability, and unemployment for VRU fatal and serious injuries were within range and marginally higher than citywide averages.

Table 8. Demographic considerations in VRU fatalities and serious injuries (2018-2022).

	Citywide	VRU KA
Average Minority Rate	57%	58%
Average Below Poverty Rate	13%	15%
Average Disability Rate	9 %	10%
Average Unemployment Rate	7%	9%

Key Findings

The following summarizes key findings from VRU fatal and serious injury data from 2018 to 2022:



These findings support the need for a Safe System Approach addressing both infrastructure and behavior, so that when humans make mistakes it does not lead to a fatality or serious injury.

Summary of Quantitative Analysis

DDOT developed High Injury Networks (HINs) specific to pedestrians and bicyclists using a sliding window methodology and weighted crash severities.

The **sliding window methodology**, as described in the Highway Safety Manual (HSM), segments corridors based on 1-mile "windows" and 0.5-mile "slides." A segment of the analysis length, or window, is created at the start of each corridor. Then additional segments are created at intervals equal to the analysis interval (see Figure 5). Once all corridors are processed and segmented, the screening identifies and assigns the crashes on each segment.



Figure 5. Sliding Window Methodology Example. Source: Kittelson & Associates, Inc.

HINs display where fatal and injury crashes occur, often by combining crash density and crash severity. **Crash weighting** emphasizes crash locations and corridors with more severe crashes rather than simply considering crash density and frequency. A crash severity weighting system was applied to crashes to add significance to crashes that result in a more severe outcome, as follows:

Fatalities: 10xSevere Injuries: 5xMinor Injuries: 1x

The crash weight was calculated by multiplying each crash severity total by its associated weight and finding the annualized score per quarter-mile.

HIN Methodology

The HIN consists of Tier 1 and Tier 2 high injury street segments and Tier 1 and Tier 2 high injury corridors.

• Tier 1 Segments are the highest injury segments in the District and cover approximately 20 percent of the reported fatal and injury crashes Districtwide for the most recent five years.

- Tier 2 Segments are added to augment the Tier 1 Segments, either to ensure the HIN Segments cover at least 20 percent of reported fatal and injury crashes in each Ward, or to identify locations not fully captured by the methodology.
- Tier 1 and 2 Corridors are added to extend the high injury segments to identify continuous high injury roadway sections with logical extents for communicating priority locations.

DDOT staff reviewed and refined Tier 2 segments based on:

- Very recent crash trends not captured in reported crash data.
- Locations with high (unweighted) crash densities exceeding high weighted crash density segments in Tier 1.
- Land use contexts that are a priority for safety improvements, such as the presence of a school.

The resultant Bicycle and Pedestrian HIN are show in Figure 6 and Figure 7, respectively.

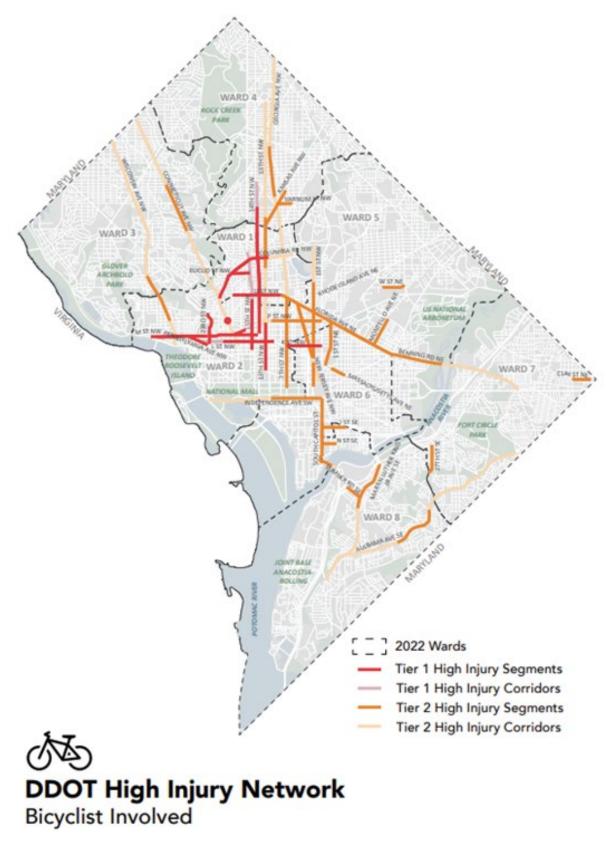


Figure 6. Bicyclist Involved HIN.

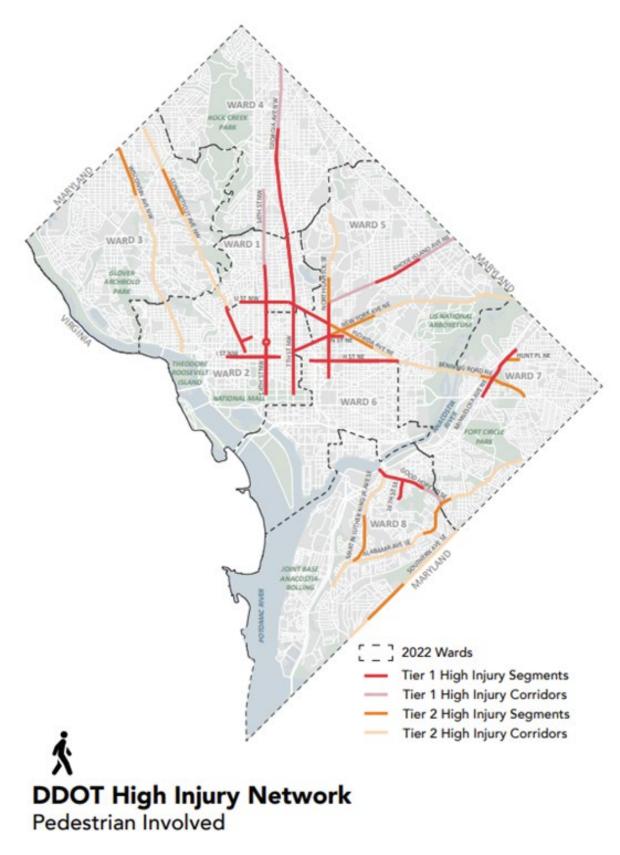


Figure 7. Pedestrian Involved HIN.

Summary of Consultation

DDOT consults with many committees and organizations that represent vulnerable road users within the district. Some of the key committees include:

- DC Pedestrian Advisory Council (PAC)
- DC Bicycle Advisory Council (BAC)
- Washington Metropolitan Area Transit Authority (WMATA) Riders Advisory Council (RAC)
- DC Multimodal Accessibility Advisory Council (MAAC)
- DC Vision Zero Advisory Council

This engagement is typically characterized by regular meetings, advisory input, project reviews, public outreach, policy development, and data sharing. Council meetings are open to the public and community members have the opportunity to share their concerns during public comment periods. There are also opportunities to provide comments related to specific items on the agenda either in person during the meeting, or online prior to the meetings.

DDOT conducted meetings with the Metropolitan Washington Council of Governments (MWCOG) and DDOT liaisons to the various committees noted above. The discussions included technical data and analyses produced by the National Capital Region Transportation Planning Board (TPB) along with the policies and programing affecting VRUs.

Specific to transit, the Bus Priority Program (BPP) expedites projects enhancing bus service in the District, with a focus on improved coordination and reduced timelines. A Toolbox of bus priority treatments for future projects was developed, and DDOT maintains a close partnership with WMATA on bus redesigns. Also, DDOT evaluates the impacts of land development actions on the District's transportation network, ensuring connectivity between transit and public spaces.

The following discusses the common areas of concerns and opportunities expressed during the consultations with MWCOG and DDOT liaisons:

Infrastructure and Maintenance

- There is a push to expand the network of on-street bike facilities instead of trails, indicating a preference for as many protected bicycle facilities as possible.
- There is a call for the equitable placement of bike lanes, suggesting that there may be areas of the city that are currently underserved by bicycling infrastructure.
- There is a desire for accessible pedestrian signals at every traffic signal. Additional
 accessibility concerns include ensuring adequate sidewalk widths and balancing
 improvements for bicyclists and pedestrians with providing adequate parking for
 individuals with disabilities.
- Complaints have been raised about the poor maintenance of existing facilities.
- Community members question the effectiveness of the 311 system, a non-emergency city services hotline, and are evaluating how well it addresses their concerns.
- Collaborated with a Federal Highway Administration (FHWA) panel to modify their design standards, aiming to improve accessibility and guarantee compliance with the Americans with Disabilities Act (ADA).

User Behavior / Safety Culture

- Concerns exist regarding aggressive driving and overall safety in the district, with calls
 for improved enforcement and driver education. Some communities exhibit a higher
 tolerance for risk than others, and there is a notable absence of cross-jurisdiction
 enforcement in the DC-MD-VA area.
- Residents have expressed concerns about the enforcement of pedestrian priority crosswalks, indicating that there may be issues with drivers not yielding to pedestrians in crosswalks.
- There is friction between different travel modes, such as vehicles, bicycles, and pedestrians, due to their unique behaviors and specific design requirements. Certain countermeasures taken to improve one mode of travel have received strong criticism from users of other modes.
- The District has seen benefits from its Street Smart² campaign and desires to continue it in future years. Street Smart emphasizes both the enforcement of traffic laws and education for drivers, pedestrians, and cyclists.

Data Opportunities

- Improved integration of police and hospital data, suggesting that this could potentially enhance the understanding and management of safety issues.
- Data and resources to collect and track data for near misses and crash risk.
- Speed data, especially concerning the pedestrian and bicycle HINs.

² https://www.bestreetsmart.net/

Program of Strategies

DDOT has been planning and implementing proven countermeasures that align with Safe System elements (i.e., Safer Roads, Safer Speeds, Safer Users, Safer Vehicles, and Post Crash Care). The State understands that redundancy is crucial and is created by layering various types of strategies.

The Safe System Approach is a framework for road safety that represents a significant shift from traditional approaches. The principles of the Safe System Approach anticipate human mistakes by designing and managing road infrastructure to keep the risk of a mistake low; and when a mistake leads to a crash, to mitigate the impact on the human body to help reduce fatalities and serious injuries. Because the human body has limits for tolerating crash forces, those forces must be managed to not exceed certain limits, especially for VRUs without the added protection offered inside a vehicle. Road design and management should encourage safer speeds. The responsibility to create such a Safe System is shared among all transportation stakeholders, from transportation system users to roadway managers, designers, law enforcement, educators/advocates, engineers, and planners. The VRU Assessment's program of projects/strategies aligns with the Safe System Approach by creating safer road and speeds at high-crash locations and locations with higher risk of crashes occurring, even if no crash history exists. It is imperative that redundancy is built into the transportation system so that safety is never fully dependent on one facet of the system.

The following strategies were developed based on crash data analysis, consultations, and the Safe System principles and elements.

Strategy 1. Increase Visibility and Awareness of VRUs

This strategy recommends measures that increase conspicuity where pedestrians are more exposed and vulnerable—nighttime and at crossing locations. The following countermeasures can be considered for installation in applicable contexts:

- Lighting at intersections, mid-block crossings, and along the roadway.
- High visibility crosswalk markings.
- Sight distance enhancements.
- Sign and pavement marking enhancements.
- New marked mid-block crossings where needed, considering rectangular rapid flashing beacons (RRFBs), flashers, and pedestrian refuge islands on roads with higher speed and more than two lanes (e.g., arterials).
- No Turn on Red and/or Leading Pedestrian Intervals (LPIs) at signalized intersections.

Strategy 2. Separate VRUs in Space

Providing pedestrians and bicyclists with dedicated facilities decreases opportunities for conflicts with motor vehicles. The following countermeasures can be considered for installation in applicable contexts:

- Expand and connect sidewalk and/or shared use path networks.
- Consider Pedestrian Hybrid Beacons (PHBs) and pedestrian refuge islands on multilane roads to facilitate a safer crossing.

- Curb extensions to reduce crossing distance and exposure.
- Consider bicycle lanes, with buffered bicycle lanes and separated bicycle lanes with vertical elements from the travel lane being the safest.
- Allocate roadway width to accommodate wider shoulders and/or bicycle lanes (can be done in conjunction with repaying projects).

Strategy 3. Achieve Safer Speeds

To decrease injury severities when a crash occurs, vehicle speeds and crash forces should be managed so that the kinetic energy transferred does not exceed the tolerances of the human body. The following countermeasures can be considered for installation in applicable contexts:

- Vertical traffic calming measures, such as speed humps, speed tables, and raised crosswalks.
- Speed Safety Cameras.
- Driver speed feedback signs.
- Speed limit reduction

Strategy 5. Address impaired driving.

Many infrastructure-related countermeasures noted in Strategies 1 to 3 may help reduce DUI-involved fatalities and serious injuries, but education and enforcement are also needed. The District can double-down on effective communication, outreach, and media campaigns—or consider new strategies—to educate the public on the dangers of driving while impaired. Enforcement activities (including automated) can be used in tandem to further increase awareness.

Strategy 6. Prioritize project locations to benefit historically under-resourced groups/areas.

DDOT can enhance its consideration of risk-based factors community input when identifying and prioritizing safety-related VRU projects. DDOT developed an Equity Assessment Tool that includes safety as a defined indicator to consider during an equity evaluation. The Tool will help identify which users within the VRU category are considered under-resourced as well as the locations of high transportation disadvantage. The Tool also provides equity metrics allowing the practitioner to understand how areas of transportation disadvantage correlate to high-risk areas, as well as if under-resourced groups are disproportionately represented in fatalities and serious injuries.

The Tool is designed to provide a step-by-step process of evaluating a project, program or service's impact on historically under-resourced groups using the following indicators:

- Meaningful Internal/External Engagement.
- Safety.
- Reliability.
- Affordability and Enjoyable Spaces.
- ADA Accessibility.
- Access to DDOT's Programs and Services.
- Sustainability.

• Recruitment, Hiring, and Retention.

Under-resourced groups are defined by DDOT as:

- Black, Indigenous, and other People of Color (BIPOC).
- People with low-income.
- People living with disabilities.
- LGBTQ+ people.
- Individuals who identify as female.
- Youth.
- Older adults.
- Residents at risk of displacement.
- People experiencing homelessness or housing insecurity.
- Immigrant and refugee communities.
- People with limited English proficiency and literacy.

Implementation

DDOT has focused on VRU safety in the SHSP by identifying Pedestrians and Bicyclists as a Critical Emphasis Area. The recommendations in this Assessment are consistent with those strategies, which include a focus on continuing to accommodate pedestrian and cyclists in the roadway network through roadway design, implementing educational programs, and enforcement.

DDOT developed an HSIP Implementation Plan in 2023, and DDOT will organize its HSIP funding around four infrastructure emphasis areas: Signalized Intersection, Unsignalized Intersection, Pedestrians, and Bicyclist. DDOT will continue implementing projects that use FHWA's Proven Safety Countermeasures, such as retroreflective backplates, LPI, PHBs, RRFBs, bicycle lanes, and road diets. DDOT's works closely with the Highway Safety Office (HSO) and Vision Zero on behavior-related SHSP emphasis areas to supplement the HSIP's infrastructure projects.

The following provides information on the District's VRU-related programs:

Traffic Safety Input (TSI) Program

DDOT manages a public-facing Traffic Safety Input (TSI) Dashboard to handle traffic safety improvement requests. In the fall of 2021, DDOT expanded the program to increase responsiveness to city-wide safety concerns raised by the public. Residents can call 311 and submit requests for new traffic safety measures, and the Dashboard tracks the progress from start to finish for prioritized project locations. The program develops short-term, high-impact measures to improve multimodal safety and manage and/or calm traffic flow in areas where problems are observed. The projects generally involve review, data collection, site visits, or other actions as part of the evaluation for implementation. Projects are prioritized based on roadway characteristics, crash patterns, equity, proximity to Vison Zero High Injury Network (HIN) corridors, and locations frequented by vulnerable road users (e.g., pedestrians, bicyclists). DDOT's aims to prioritize 800 locations per year for evaluation of TSI submissions and to implement safety countermeasures as needed. Examples of past projects include:

- Vertical traffic calming devices (i.e., speed humps, speed tables, raised crosswalks).
- Automated traffic enforcement (i.e., study and recommendations for deploying speed, red light running, and stop sign cameras)
- RRFBs and PHBs.
- Curb extensions.
- Sign and pavement marking enhancements.

Annual Safety Program (AsaP)

As part of their Vision Zero initiative, DDOT commits to up to 100 sites or projects each year to proactively increase safety at data-driven locations through their Annual Safety Program (ASaP). The program implements quick-build interventions and multi-modal solutions at critical locations along their HIN or at high injury intersections. Examples of past projects include:

- Pedestrian flashers at high pedestrian risk intersections to improve pedestrian safety at uncontrolled crossings.
- Driver speed feedback signs to improve pedestrian and bicycle safety.
- Speed limit reduction (via USLIMITS2 studies).
- Pedestrian and bicycle safety improvement projects that stemmed from past Livability Studies, including improved signs, markings, signal hardware, RRFBs, ADA ramps, accessible pedestrian signals, curb extensions medians, and slip lane closure.
- Intersection Safety Improvement Program (ISIP) project sites are selected based on SHSP Critical Emphasis Areas (e.g., Bicyclists, Pedestrians) and ranked in terms of priority using an injury weighted severity index and a pedestrian/bicyclist weighted severity index. Examples of countermeasures applied at these intersections include sign and marking improvements, upgraded ADA ramps, signal phasing and equipment modifications and retroreflective backplates, and No Turn on Red restrictions.

Traffic Signal Construction and Modification

DDOT utilizes HSIP funding to address systemic improvements, which includes adding, upgrading, modifying, and removing traffic signals at intersections and midblock locations. Examples of past projects include:

- PHBs.
- Accessible Pedestrian Signals (APS).
- LPI.
- Age friendly timing.
- Clearance intervals and all-red phases.

Corridor Projects

Corridor projects have included the following:

- Vision Zero HIN. The District will prioritize proactive safety interventions on the roadways with the most deaths and injuries. The District will use this map to prioritize safety improvements that span multiple intersections and projects for even larger portions of corridors.
- Road safety audits (RSAs). DDOT currently conducts RSAs before launching new corridor projects (i.e., road diets, corridor safety improvement, bus priority, and protected bike lanes) along corridors that have been classified as part of the HIN. With the embrace of a Safe System approach, DDOT staff now has a small, dedicated team that coordinates and documents safety issues in conjunction with corridor projects that are both multimodal and safety focused. DDOT is considering dedicating additional resources to expand the RSA program to every corridor project, including those that are not classified as High Injury Corridors, as well as evaluating corridors where recent projects were completed to determine if the safety treatments are operating as intended.
- Road diet projects. DDOT considers road diets for all local and capital projects that
 have been constructed since the adoption of DDOT's Complete Streets Policy. These
 projects include other countermeasures, such as bicycle lanes, walkways, dedicated

- turn lanes, and pedestrian refuge islands. DDOT uses road diets to explicitly slow down prevailing speeds, while adding safety and multimodal improvements for bicycle and/or transit users as well as pedestrians. We continue to prioritize road diets on the HIN to balance all day demand with provided street capacity.
- **Bicycle lanes**. The District currently has 78 miles of standard bicycle lanes across the city. In 2010, DDOT began installing protected bicycle lanes and now has 35 miles of protected bicycle lanes. The total on-street bicycle network is 113 miles, which complements the District's 62-mile network of shared-use paths. DDOT's work plan call for an aggressive expansion of this network, through the construction of 10 miles of protected bikeways (shared-use paths and protected bicycle lanes) per year, prioritizing projects based on MoveDC—the District's long-range transportation plan.

HSO Impairment Driving Efforts

Because almost one-third of DUI-involved fatal and serious injuries are VRUs, efforts to reduce impaired driving will also benefit VRU safety. National Highway Transportation Administration (NHTSA) grant funds support all HSO program areas that support the purchase of DUI testing/enforcement activities and equipment, provide awareness and education campaigns, conduct DUI education and outreach, and support specialized education for law enforcement and prosecution to increase effective DUI adjudication.

The HSO partners with the Washington Regional Alcohol Program (WRAP) to provide communication and outreach strategies to the public on the dangers of driving while impaired. These efforts include education programs for high schools, community groups, and businesses. The *SoberRide* campaigns also offer no-cost taxicab rides designed to prevent drunk driving during the Holiday Season, Halloween, St Patrick's Day, Cinco de Mayo, and Independence Day.

The HSO is also working with the Higher Education Center for Alcohol and Drug Misuse, Treatment, and Recovery from the Ohio State University to focus on VRUs within our many collegiate environments. By evaluating data-collection, on and off campus policies, and education programs, the HSO will leverage new countermeasures to engage Gen Z individuals who represent 9% of the DC population but nearly 25% of roadway injuries.

The District will continue to participate in the National Enforcement Crackdown—with the primary message of Drive Sober or Get Pulled Over—during the summer months and on holidays. The HSO has engaged Alliance Marketing to host community events that target drug and alcohol impaired driving behaviors in hopes of increasing risk perception on these behaviors - especially the use of cannabis behind the wheel. The HSO also works with others to create the media campaign that operates in conjunction with regional law enforcement waves aimed to get impaired drivers off the roads and educate the public about the dangers and consequences of drunk drivers.

