

Morgantown Monongalia MPO
2025 - 2055 Metropolitan Transportation Plan

Appendix I: 2019 - 2023 Crash Report

Morgantown Monongalia MPO

2025 Metropolitan Transportation Plan Update

2019-2023 CRASH REPORT

MARCH 2025



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Section 1. Introduction & Overview

Purpose

The purpose of this crash report is to comprehensively document regional crash trends, crash locations, and crash types in the Morgantown-Monongalia County metropolitan area. This analysis will support the development of the MPO’s 2025 Metropolitan Transportation Plan (MTP) update, providing insight into areas that need improve transportation safety. The report will be shared with the public throughout the update process, and the findings will be incorporated into the recommendations for the MTP update. MPO Staff will utilize these findings and the supporting data in future projects when needed. These findings will be made available to other agencies in the area.

Source and Methodology

This report uses crash data provided by the West Virginia Department of Transportation, covering the period from 2019 to 2023 for Monongalia County. The data source aligns with data used in previous reports, ensuring consistency and reliability.

The data was obtained in Microsoft Excel format, including coordinate information. It was then imported into QGIS, an open-source GIS (Geographic Information System) software, for processing and mapping. Heat maps and intersection clusters were generated using the built-in analysis functions available in QGIS.

Crash Data Summary by Years

From 2019 to 2023, there were 9,409 reported crashes in the MMMPO area. The table below summarizes crash data during the study period. Note that in 2020, there were mass shutdowns due to the COVID-19 virus. This is represented in the large decrease in crashes and injuries in 2020. Aside from the unique year of 2020, in 2021 the numbers generally continued the downward trend from 2019. This is best visualized in the graph on page 5.

Number of Crashes by Year

2019	2020	2021	2022	2023
2293	1499	2079	1836	1698

Number of Injury Crashes by Year

2019	2020	2021	2022	2023
500	362	465	428	395

Number of Fatal Crashes by Year

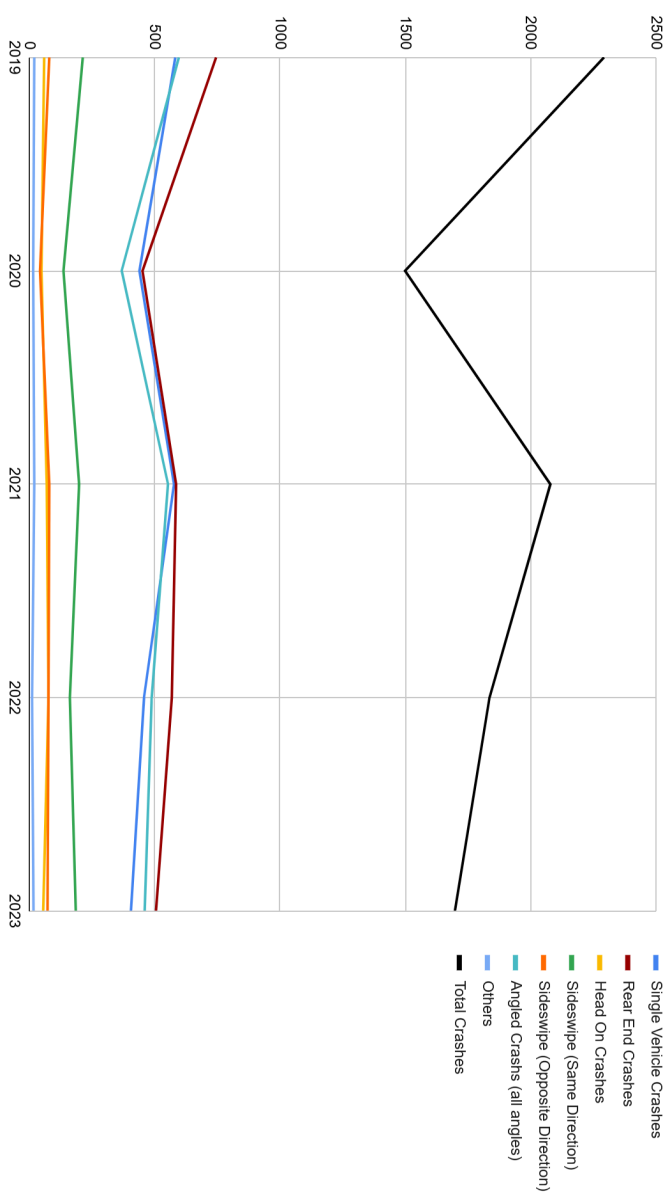
2019	2020	2021	2022	2023
8	6	7	8	6

Number of Pedestrian and Bicyclist Crashes by Year

2019	2020	2021	2022	2023
25	8	20	18	10

Number of Crash Types by Years

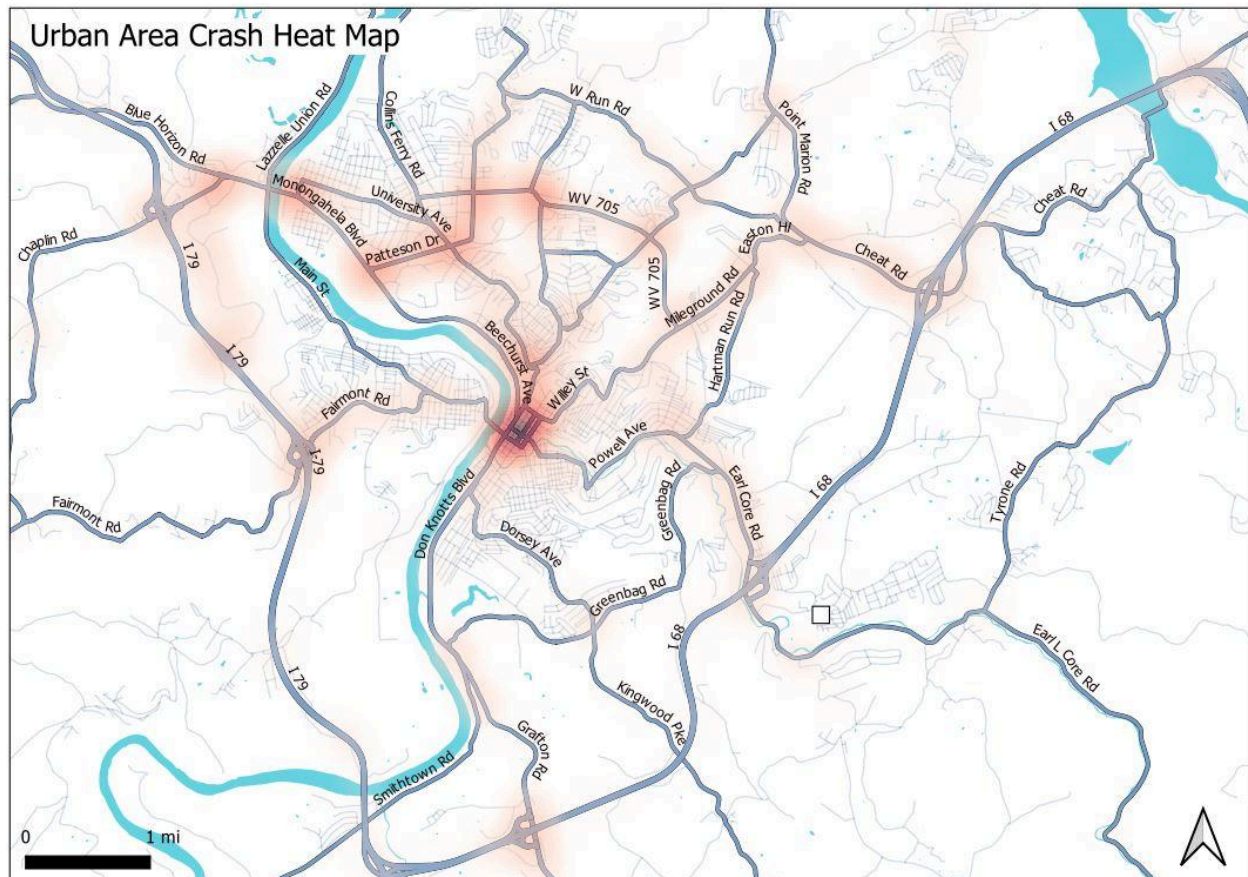
	2019	2020	2021	2022	2023
<i>Single Vehicle Crashes</i>	582	439	577	457	405
<i>Rear End Crashes</i>	745	451	585	568	505
<i>Head On Crashes</i>	59	48	69	76	55
<i>Sideswipe (Same Direction)</i>	213	136	198	161	185
<i>Sideswipe (Opposite Direction)</i>	79	42	79	76	72
<i>Angled Crashes (all angles)</i>	596	368	553	488	460
<i>Others</i>	19	15	19	10	16
<i>Total Crashes</i>	2293	1499	2079	1836	1698



Section 2. Vehicle Crash Location Analysis

Corridors

Overview



Overall, crash hotspots align closely with areas of high density and traffic volume. The following table lists the major corridors in the urban area with a high number of crashes. Intersection-related crashes, including those at both ends of each corridor segment, are included. In addition to these corridors, the most significant concentration of crashes is in the downtown area of Morgantown.

Corridor Name	From	To	Crash #	Percentage of Total Crashes
WV 705	Mon Blvd	Mileground Rd	962	10.2%
Chaplin Hill Rd - Mon Blvd	I-79 Exit 155	Patteson Dr	147	1.6%
Mileground Rd - Cheat Rd	WV 705	I-68 Exit 7	427	4.5%
WV 7 / Earl Core Rd	Mineral Ave	Brookhaven Rd	313	3.3%
Fairmont Rd	Westover Bridge	Mall Rd	301	3.2%
University Towncenter Dr	Chaplin Rd	I-79 Exit 153	266	2.8%
University Ave	Patteson Dr	Willey St	312	3.3%
Don Knotts Blvd	Greenbag Rd	I-68 Exit 1	160	1.7%

Areas of Special Concern

This section highlights minor streets with a high frequency of crashes, for their typically low traffic volumes. Notably, many of these crashes are single-vehicle crashes or types associated with a higher risk of severe injuries, such as head-on collisions, opposite-direction sideswipes, and right-angle crashes.

Location Description (# Crash)	Primary Crash Types	2025 MTP Update Map Book
Hampton Ave - Darst St - Richwood Ave Corridor (72)	Single Vehicles Crashes, Angled Crashes	Page S1 - 4
Canyon Rd between Canyon School Rd and Canyon Village (32)	Single Vehicles Crashes	Page S1 - 5
West Run Rd between St Clair Hill Rd and Stewartstown Rd (60)	Single Vehicles Crashes, Head-on Crashes	Page S1 - 6
Van Voorhis Rd between W Run Rd to Burroughs St (102)	Single Vehicles Crashes	Page S1 - 7
University Town Centre Dr between Emmett Dr to I-79 Exit 153 (194)	Angled Crashes	Page S1 - 8

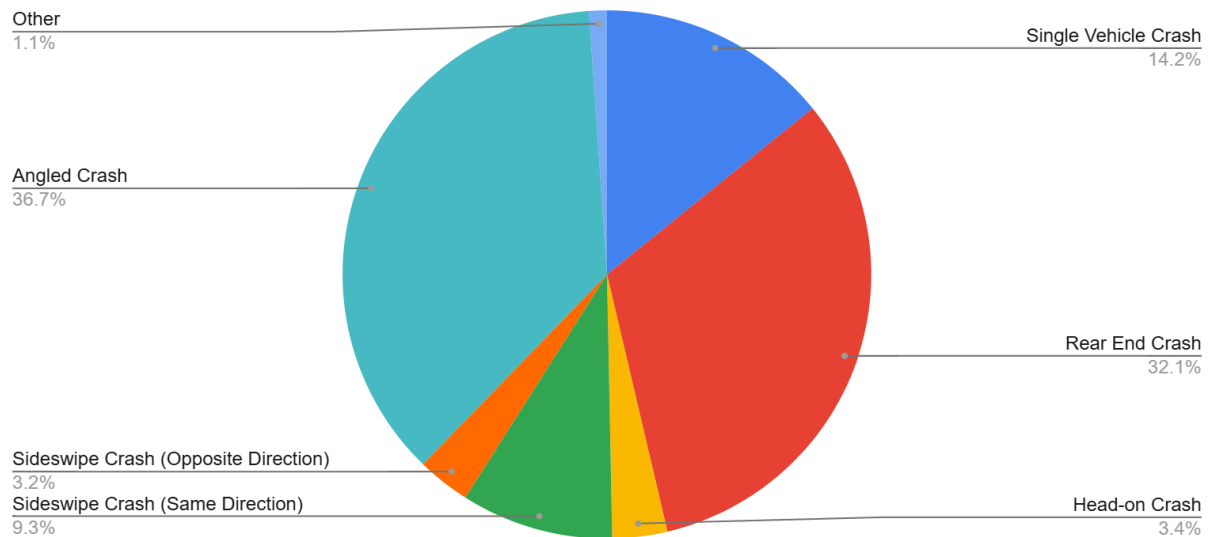
Intersections

Overview

During this reporting period, **5,416** out of 9,409 crashes were intersection-related. Among those intersection-related crashes:

- Single Vehicle Crash: **768 (14%)**
- Rear End Crash: **1,741 (32%)**
- Head-on Crash: **182 (3%)**
- Sideswipe Crash (Same Direction): **504 (9%)**
- Sideswipe Crash (Opposite Direction): **176 (3%)**
- Angled Crash: **1,986 (36%)**
- Others: **(1%)**

Chart: Types of crashes of intersection crashes



High-Crash Intersections

The top five intersections with the highest crash numbers are as follows:

1. Mon Blvd and Patteson Dr/WV 705 — **141** crashes
2. Mon Blvd and Boyers Ave — **110** crashes
3. WV 705 and Stewartstown Rd — **99** crashes
4. Patteson Dr/WV 705 and University Ave — **80** crashes
5. Chestnut Ridge Rd/WV 705 and Willowdale Rd — **80** crashes

Four out of these five locations are associated with WV 705, which is unsurprising given that the WV 705 corridor is a major arterial route. Its high traffic volume, numerous intersecting streets, and frequent weaving movements increase the likelihood of crashes in the area.

The list of intersections with more than 40 crashes. The threshold of 40 crashes was chosen because it strikes a balance between inclusivity and focus, capturing the most problematic intersections while keeping the list manageable at 24 locations.

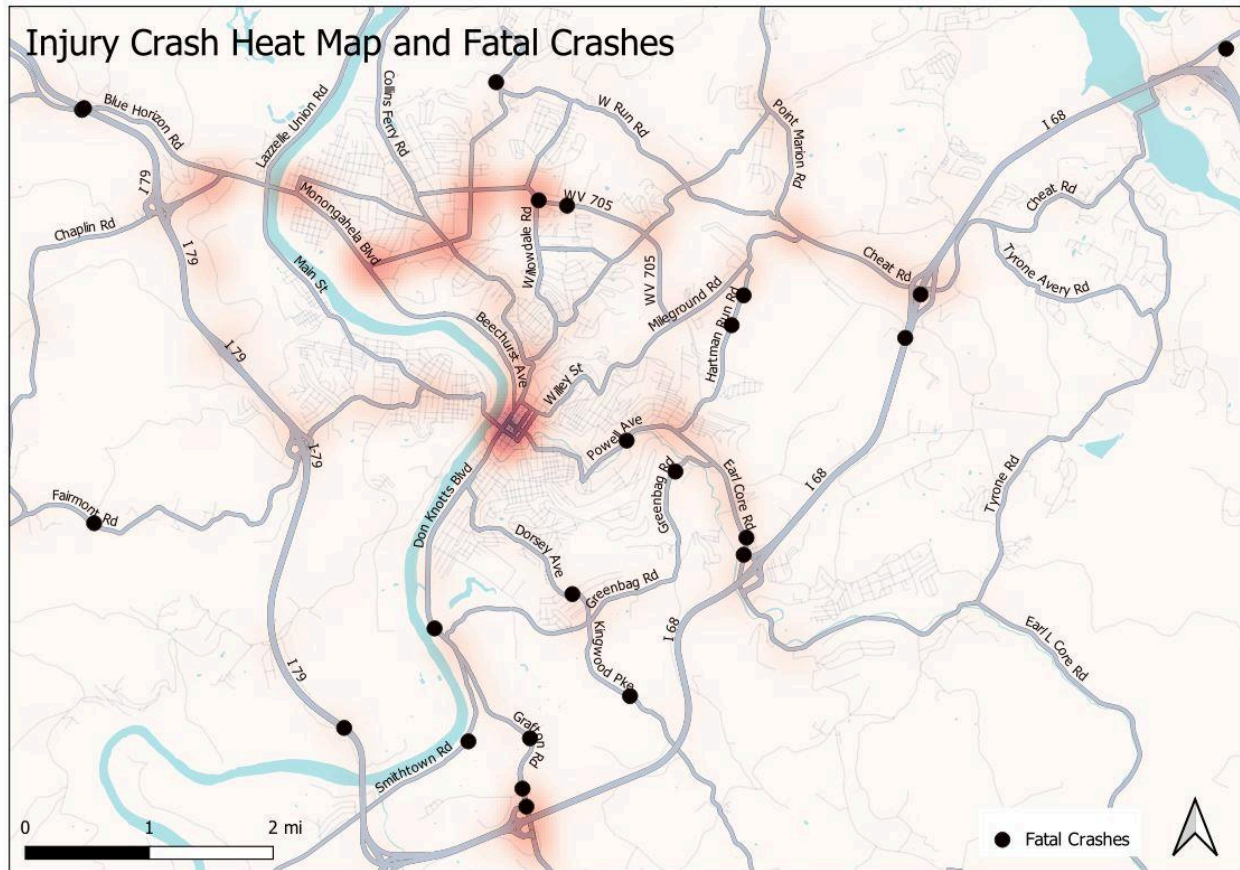
Street Name	Intersecting Street	Crash #
Mon Blvd	Patteson Dr	141
Mon Blvd	Boyers Ave	110
WV 705	Stewartstown Rd	99
Patteson Dr / WV 705	University Ave	80
Chestnut Ridge Rd / WV 705	Willowdale Rd	80
Cheat Rd	Venture Dr	76
Beechurst Ave	University Ave / Fayette St	73
Chaplin Hill Rd	Blue Horizon Rd	71
High St	Willey St	66
Van Voorhis Rd / WV 705	Burroughs St	63
Chestnut Ridge Rd / WV 705	Pineview Dr	63
Pleasant St	Spruce St	62
Beechurst Ave	Pleasant St	58
Chaplin Hill Rd	University Towncentra Dr	56
Don Knotts Blvd	Foundry St	56
Mileground Rd	Cheat Rd	54
WV 705	Mileground Rd (Roundabout)	50

Street Name	Intersecting Street	Crash #
Patteson Dr / WV 705	Morrill Way	45
Fairmont Rd	Commerce Dr	45
Mileground Rd	Hartman Run Rd	44
Van Voorhis Rd / WV 705	Christy St	43
University Ave	Campus Dr	43
Fairmont Rd	I-79 ramp (east)	42
Beechurst Ave	Walnut St	41

Intersection with More Than 20 Crashes (Urban Area View) is available in the 2019-2023 Crash Report Update Map Book, page: S1 - 1.

Fatal and Injury Crash Locations

2,160 (23%) out of 9,409 were injury crashes. There were 39 fatal crashes. Below is a heat map showing injury crash locations. The black dots show fatal crash locations.

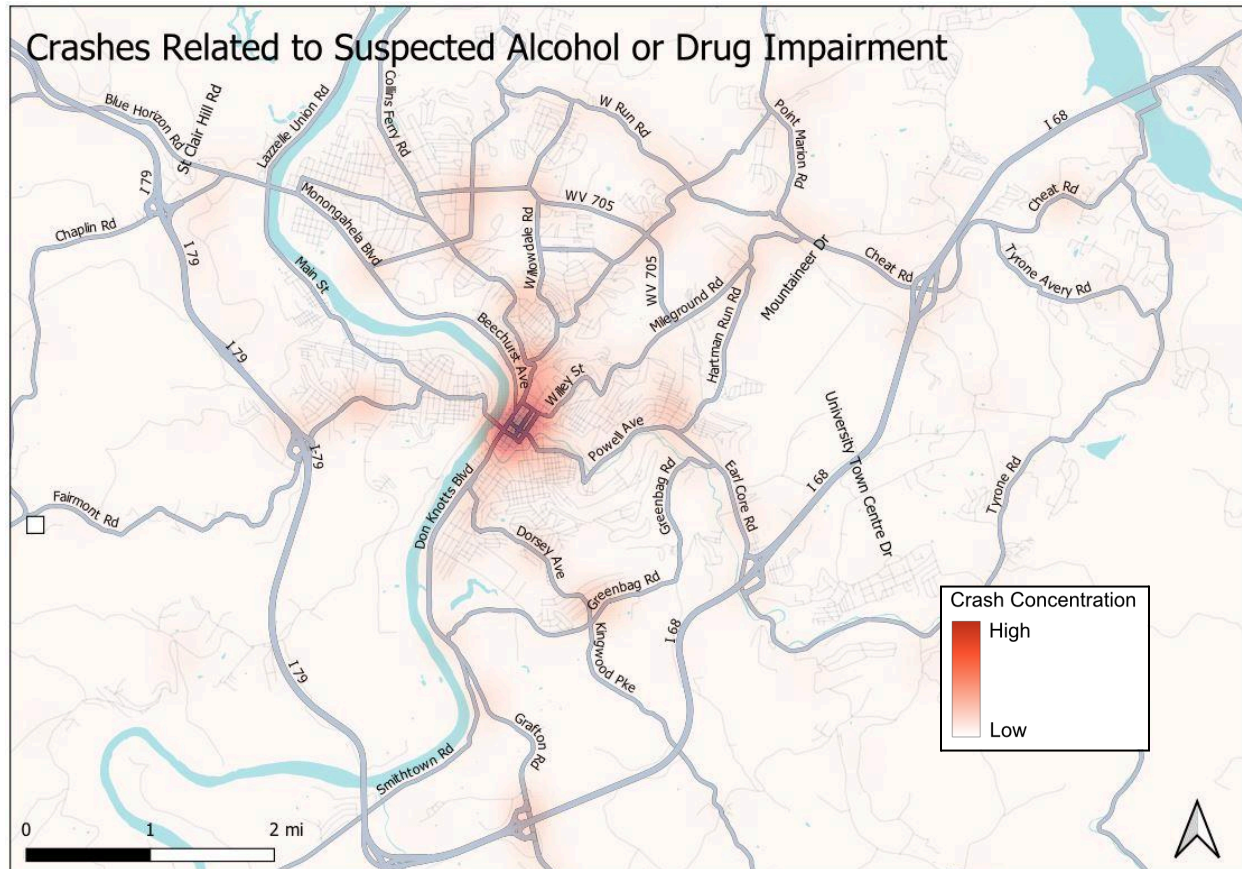


Injury crash concentrations generally align with overall crash concentrations. However, fatal crashes are more dispersed across the road network. Notably, the following locations, despite having relatively low traffic volumes, exhibit a noticeable number of deadly crashes.

- Hartman Run Rd near the Heart Field Rd (Airport Business Park): 2 fatal crashes
- Van Voorhis Rd north of the West Run Rd intersection: 1 fatal crash
- Greenbag Rd near the Deckers Creek intersection/bridge: 1 fatal crash
- Dorsey Ave at the intersection of Apolla Dr: 1 fatal crash
- Kingwood Pike between Greenbag Rd and Cobun Valley Ln: 1 fatal crash

Crashes Related to Suspected Alcohol or Drug Impairment

491 (5%) out of 9,409 crashes were recorded involving suspected alcohol and/or drug impairment. Below is a heat map showing the crash location under this category.



In general, the concentration is in the Morgantown downtown area. In addition, the crash locations are dispersed throughout the urban area, with a slightly higher frequency observed along the following area/corridor:

Area Description	Number of Crashes	Percentage of Total Crashes in this Category
The general downtown area, including WVU Downtown campus and Sunnyside	61	12.4%
West Run Rd from Van Voorhis Rd to Point Marion Rd	13	2.7%

WV 705 from Mon Blvd to Stewartstown Rd	31	6.3%
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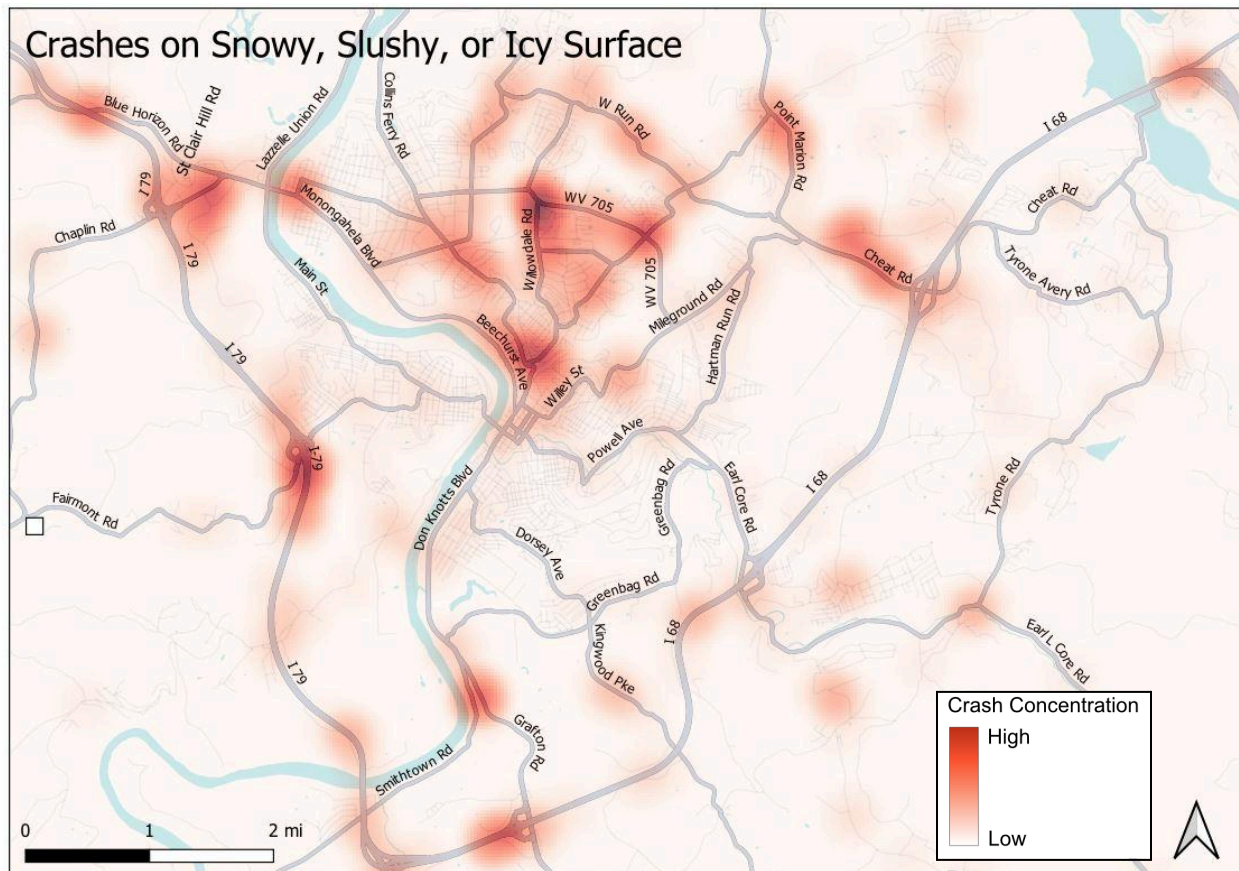
Streets of Relatively Low Traffic Volume. Clusters of crashes on street segments/intersection areas with relatively low traffic volume are:

Segment			Length	Crash #
Street Name	From	To		
Fairmont Rd	Maple Ave	Columbus St	787 ft	6
University Ave	Evans St	Warrick St	423 ft	4
Cheat Rd	Stockett Sd	Deerwood Dr	1313 ft	5

Street Name	Intersecting Street	Crash #
Greenbag Rd	Dorsey Ave	9
Fair Chance Rd	Morgan Run Rd	4

Crashes on Snowy, Slushy, or Icy Roads

691 out of 9,409 (7%) crashes were recorded when the road was snowy, slushy, or icy. These weather conditions can create hazards and limit visibility. Below is a heat map of the crashes on snowy, slushy, or icy roads.

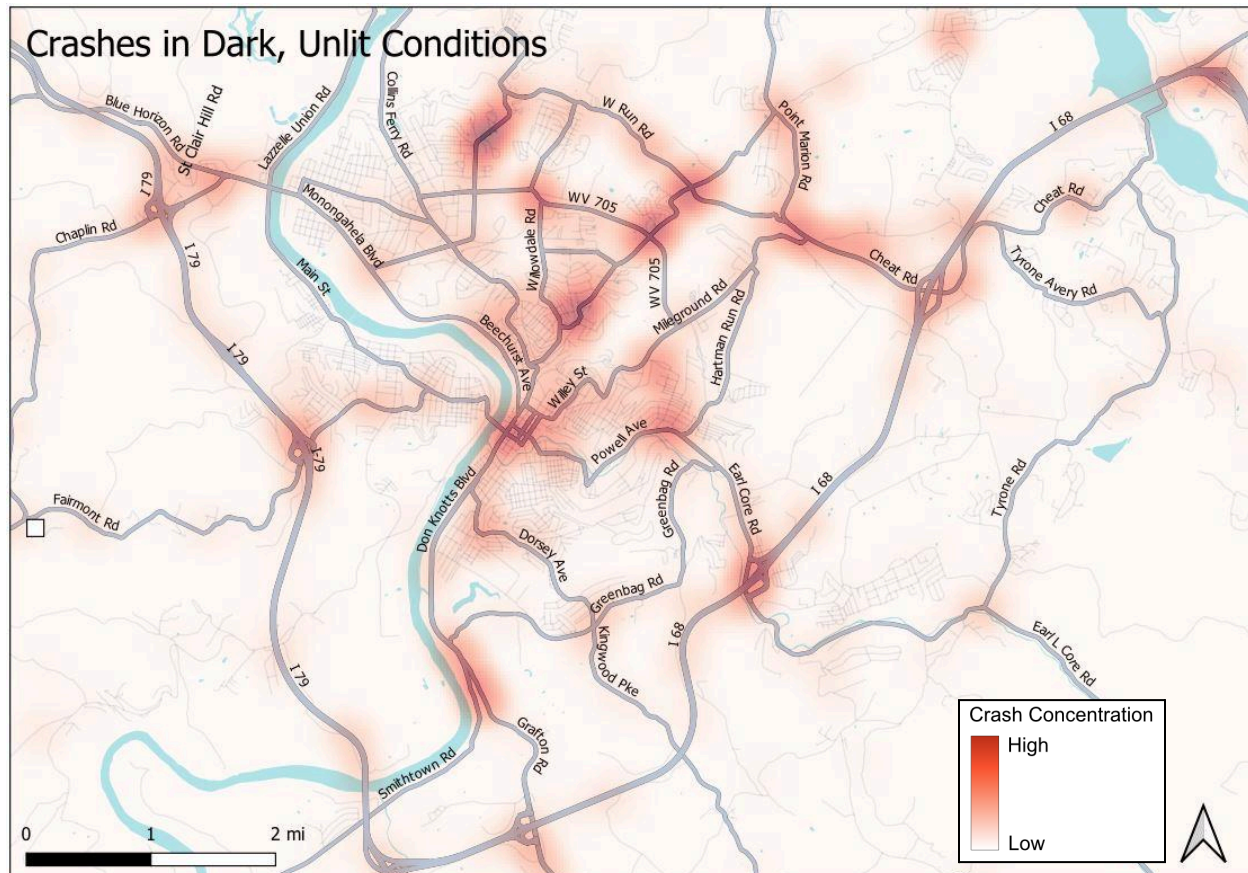


The crashes under this category are concentrated in the following intersections/segments:

- WV 705 near the intersection of Willowdale Rd / Pinview Dr.
- WV 705 near the intersection of Stewartstown Rd
- Willowdale Corridor
- Stewartstown Rd / University Ave / Campus Dr intersection area
- Chaplin Hill Rd / University Town Centre Dr / Blue Horizon intersection area
- Cheat Rd from Old Cheat Rd and I-68 Exit 7
- Smithtown Rd and Grafton Rd intersection area
- I-79 near Exit 152
- University Ave near Oakland St intersection area
- Point Marion Rd from Canyon Rd to West Run Rd
- Mon Blvd and Boyers Ave intersection area

Crashes in Dark, Unlit Conditions

1,333 out of 9,409 (14%) crashes occurred in dark, unlit conditions. Below is a heat map of the crashes under this category.



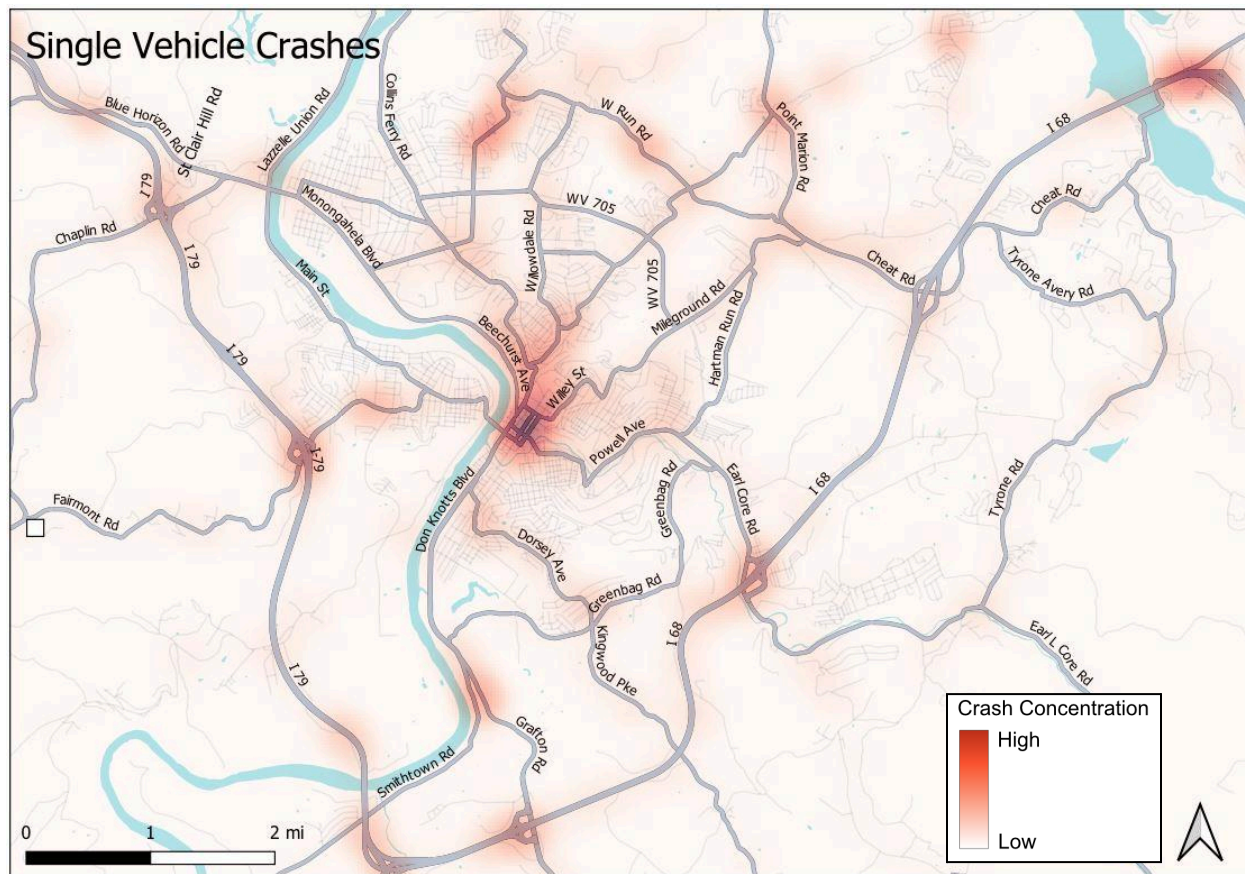
The crashes in dark and unlit conditions spread throughout the urban area, with the following concentrations:

- Van Voorhis Rd from Southview St to W Run Rd
- Stewartstown Rd from WV 705 to W Run Rd
- Point Marion Rd - Cheat Rd from Canyon Rd to I-68 Exit 7
- Stewart Rd/Protzman St corridor
- Grafton Rd and Smithtown Rd intersection area
- Chaplin Hill Rd and Blue Horizon Rd area

Crashes By Collision Types

Single Vehicle Crashes

2,461 out of 9,409 (26%) single-vehicle crashes. Below is a heat map of the crashes under this category.

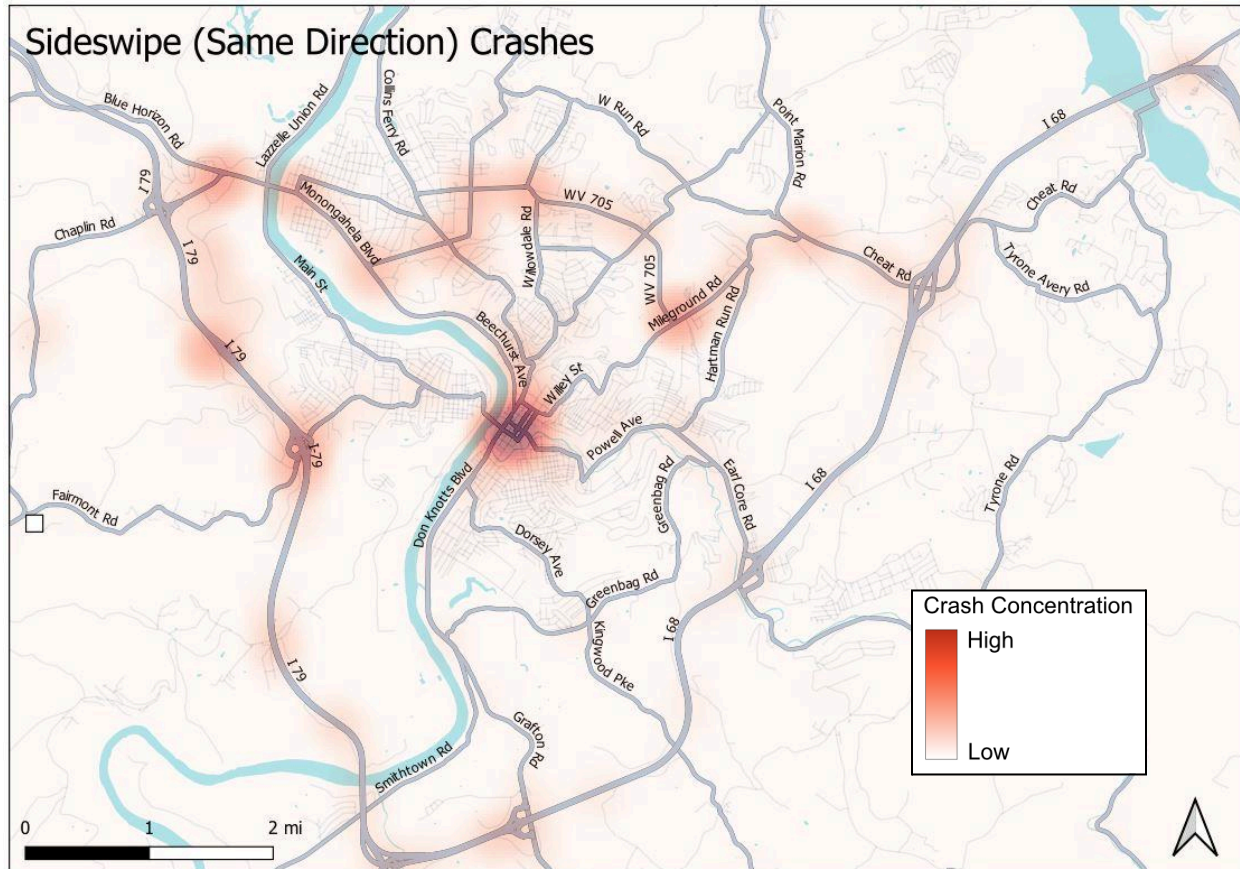


The highest concentration of single-vehicle crashes is in the **downtown area**. Some of the other concentrations are listed below:

Road	From	To
Van Voorhis Rd	Valley View St	West Run Rd
I-68 Exit 10 Area	n/a	n/a
West Run Rd	St Clair Hill Rd	Stewartstown Rd
Point Marion Rd and Canyon Rd area	n/a	n/a

Sideswipe (Same Direction) Crashes

893 (9%) out of 9,409 opposite direction sideswipe crashes. Below is a heat map of the crashes under this category.

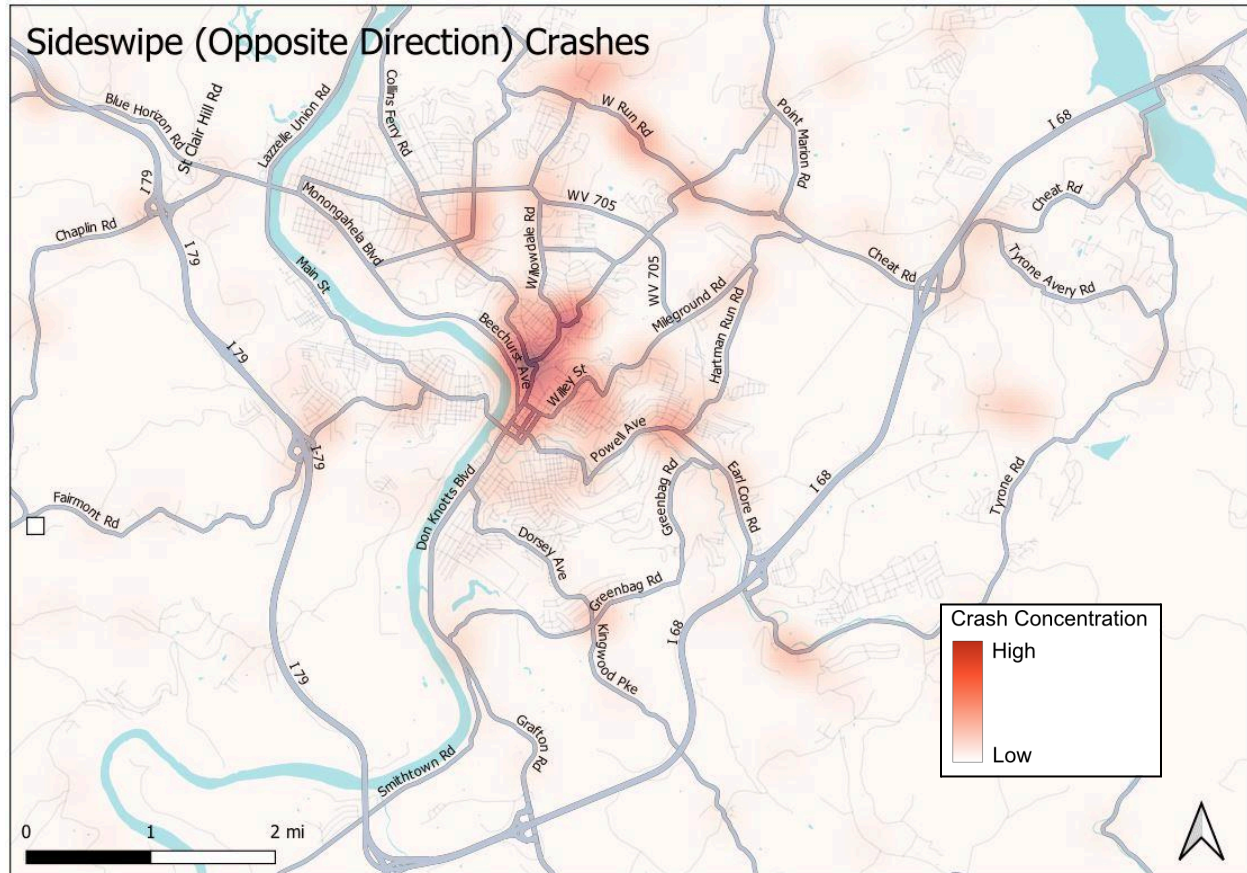


The highest concentration of single-vehicle crashes is in the **downtown area**. Some of the other concentrations are listed below:

Road	From	To
WV 705	Mon Blvd	Stewartstown Rd
Cheat Rd	Point Marion Rd	I-68 Exit 7
Mon Blvd - Chaplin Hill Rd	WV 705	I-79 Exit 155
Mileground / WV 705 Roundabout	n/a	n/a
I-79 Exit 152 Area (Westover/Morgantown Mall)	n/a	n/a

Sideswipe (Opposite Direction) Crashes

347 out of 9,409 (4%) opposite direction sideswipe crashes. Below is a heat map of the crashes under this category.

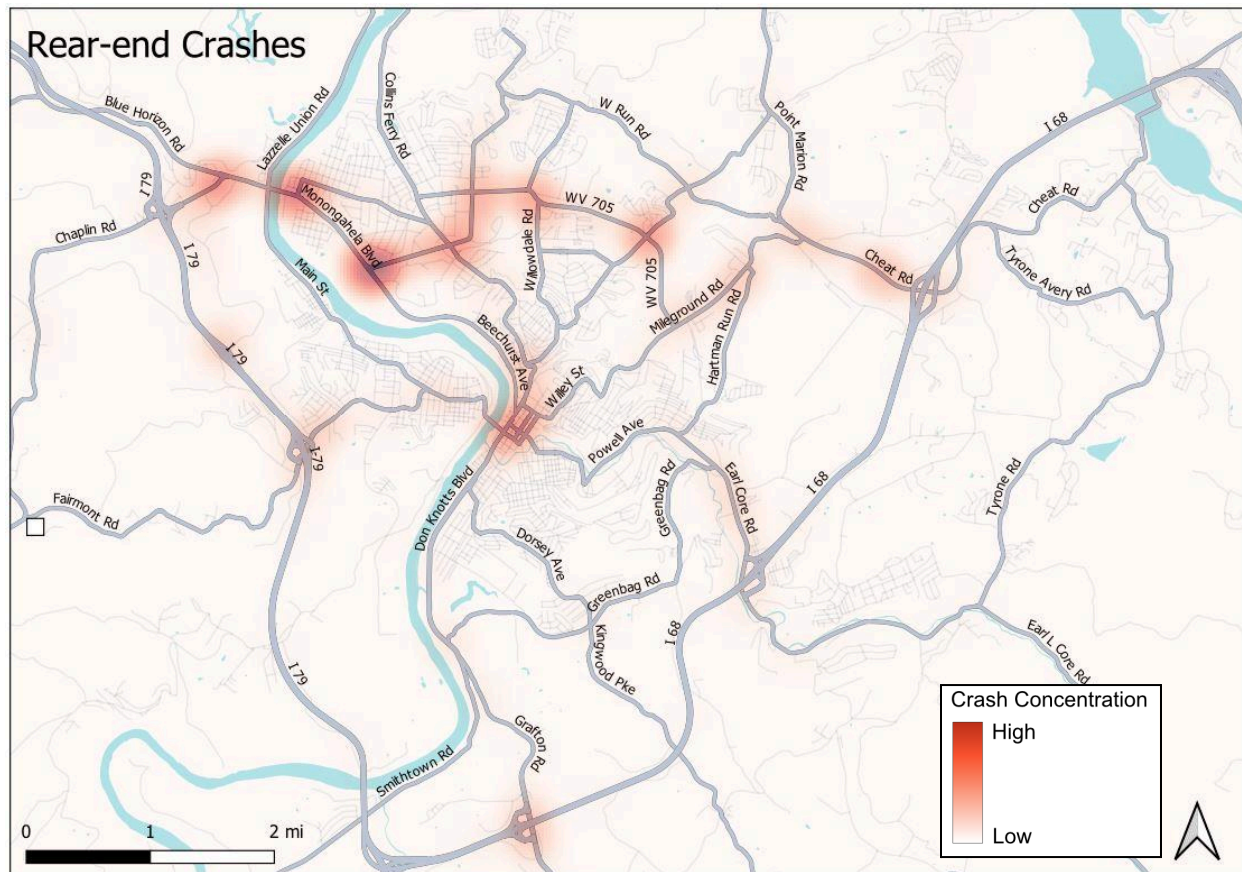


The highest concentration of single-vehicle crashes is in the **University Ave and Campus Dr area and the Stewart St Corridor**. Some of the other concentrations are listed below:

Road	From	To
Bakers Ridge Rd near St Clair Hill Rd	n/a	n/a
West Run Rd	Pineview Dr	Point Marion Rd
N Willey St	Spruce St	Mileground Rd
WV 705	University Ave	Burrough St
WV 705 and Willowdale intersection area	n/a	n/a

Rear-end Crashes

2,856 out of 9,409 (30%) rear-end crashes. Below is a heat map of the crashes under this category.

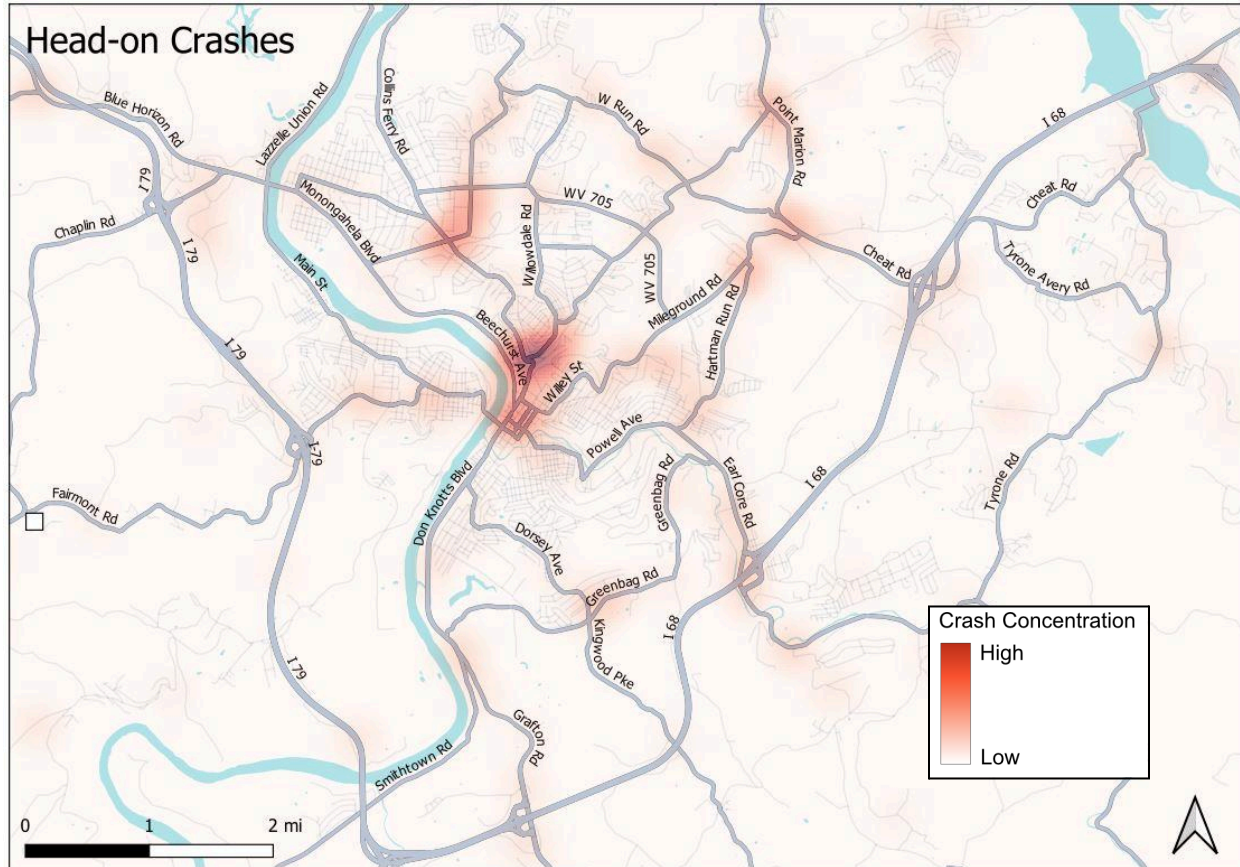


The highest concentration of single-vehicle crashes is at the following intersections / Segments are listed below:

Road	From	To
Mon Blvd and Patteson Dr intersection	n/a	n/a
Mon Blvd and Boyers Ave intersection	n/a	n/a
WV 705	Mon Blvd	Stewartstown Rd
Downtown area	University Ave	Burrough St
Cheat Rd and Venture Dr intersection	n/a	n/a
Chaplin Hill Rd	Emmet Dr	Univ. Town Centre Dr.

Head-on Crashes

307 out of 9,409 (3%) head-on crashes. Below is a heat map of the crashes under this category.

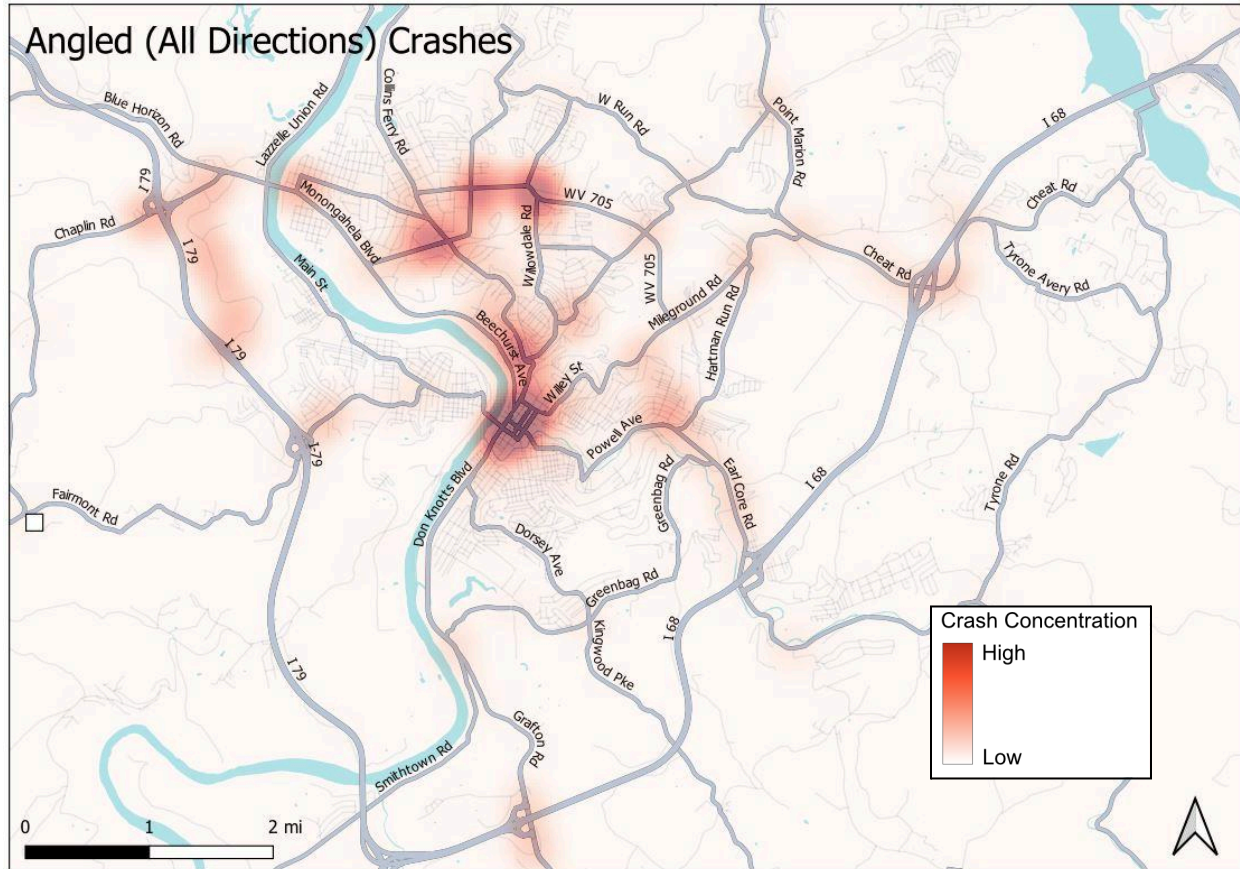


The highest concentration of single-vehicle crashes is in the **University Ave and Campus Dr area and the Stewart St Corridor, including Protzman St**. Other locations include:

Road	From	To
WV 705	Takoma St	Burrough St
Point Marion Rd	Canyon St	Cheat Rd
W Run Rd	Pineview Dr	Stewartstown Rd
Hampton Ave - Richwood Ave	N Willey St	Hartman Run Rd
WV 7 / Earl Core Rd	Greenbag Rd	I-68 Exit 4

Angled (All Directions) Crashes

2,466 out of 9,409 (26%) angled crashes. Below is a heat map of the crashes under this category.



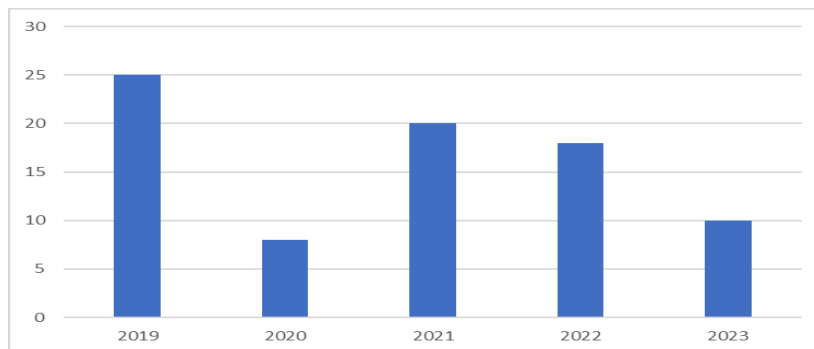
The highest concentration of single-vehicle crashes is in the **downtown area and the University Ave corridor in the Sunnyside area**. Other locations include:

Road	From	To
WV 705 and University Ave intersection area	n/a	n/a
WV 705 and Burrough St intersection area	n/a	n/a
WV 705 and Willowdale / Pineview Dr area	n/a	n/a
University Town Centre Dr	Chaplin Hill Rd	I-79 Exit 153
Mon Blvd and Boyers Ave intersection area	n/a	n/a

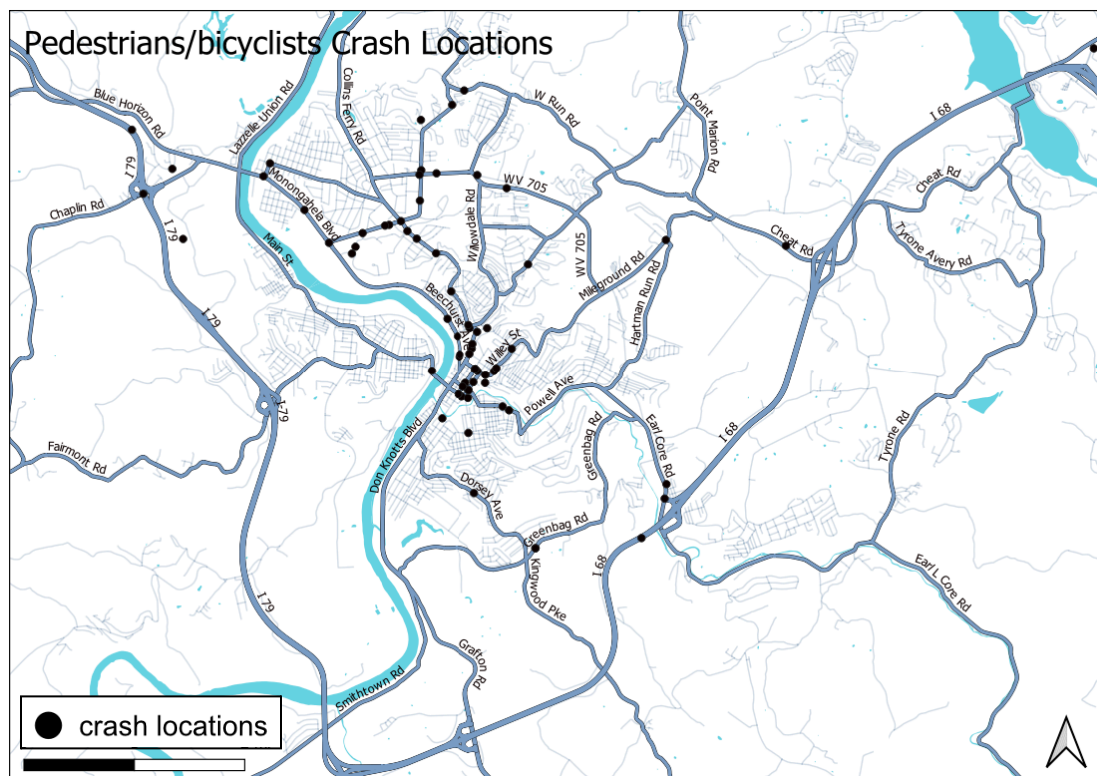
Section 4. Vulnerable Road Users

Overview

There were **81** crashes involving pedestrians or bicyclists. There were an average of **16** pedestrian/bicyclist crashes between 2019-2023. The yearly changes are shown below:

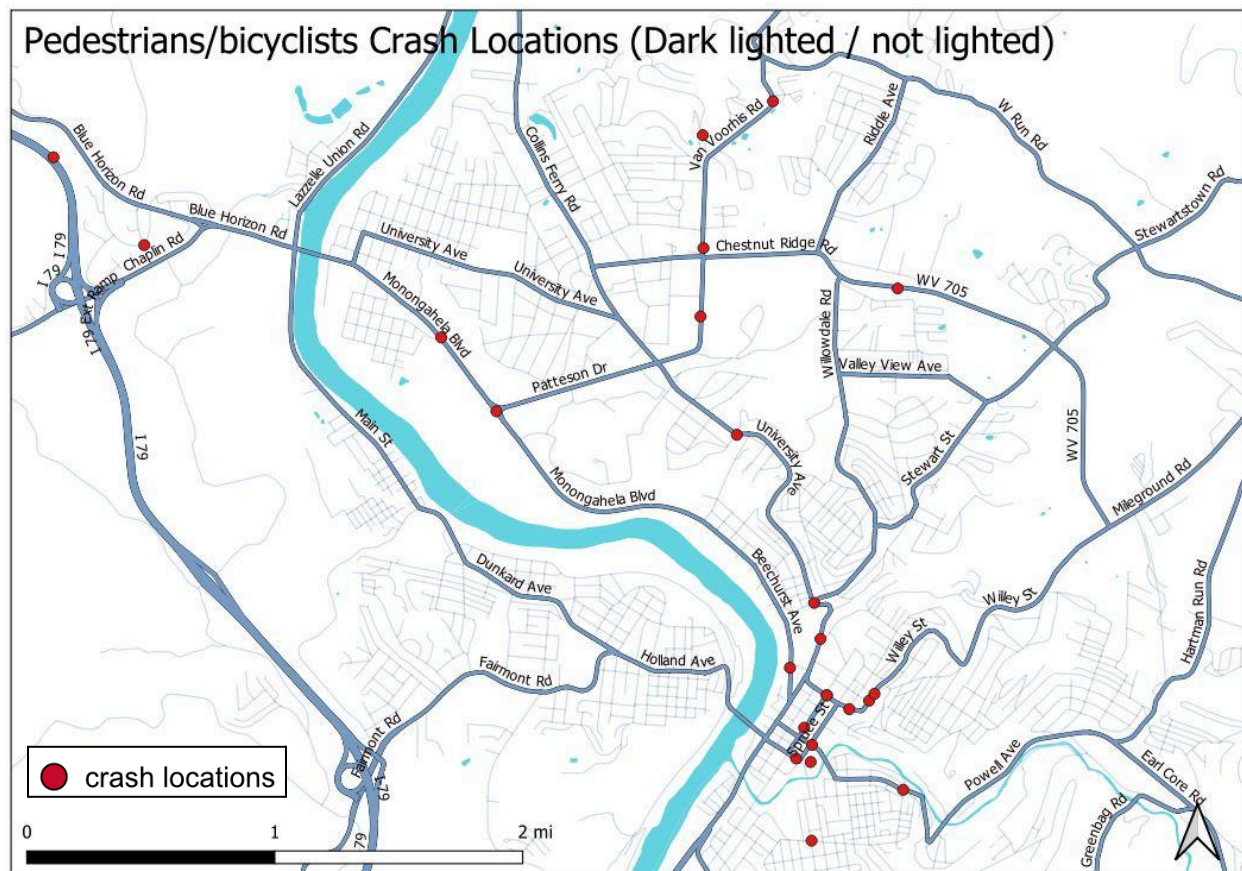


Pedestrians/bicyclists Crash Locations



Most of the crashes under this category are on the major streets close to the WVU Campus area, including University Ave (12 crashes), WV 705 (11 crashes), Downtown (14 crashes), and Beechurst Ave (4 crashes). However, some other locations worth noting are Cheat Rd, West Run Rd, Van Voorhis Rd, Earl Core Rd, Greenbag Rd, Stewartstown Rd, Wilson Ave, and Dorsey Ave.

Ped/Bicycle Crashes in Dark Conditions



The concentration of pedestrian and bicycle crashes that happened during dark conditions (light or not lighted) are mainly in the downtown area, with particular clustering on Willey St from High Street to Richwood Ave and downtown Pleasant St/Walnut St area.

Section 5. Preliminary Recommendations

This report provides a baseline analysis of the 2019-2023 crash data from WVDOH. The following section will outline preliminary recommendations. While these are not final, the MPO encourages entities to review these recommendations as guidelines moving forward. The following sections review improvements for major corridors, short segment improvements, pedestrian and bike improvements, and others.

Identified for Safety Improvements on Major Corridors

- WV 705 from Mon Blvd to Mileground Rd (roundabout) with the following key intersections:
 - Mon Blvd and Patteson Dr/WV 705
 - Patteson Dr/WV 705 and University Ave
 - Chestnut Ridge Rd/WV 705 and Willowdale Rd
 - WV 705 and Stewartstown Rd
- Chaplin Hill Rd/Mon Blvd from I-79 Exit 155 to Patteson Dr, with the following key intersection:
 - Mon Blvd and Boyers Ave
- Mileground Rd/Cheat Rd from WV 705 (roundabout) to I-68 Exit 7, with the following key intersection:
 - Cheat Rd and Venture Dr

Special Spot/Short Segment Improvements

Location	Primary Scope of Improvements
Canyon Rd between Canyon School Rd and Canyon Village	Road improvement, especially curve safety improvement, to prevent single-vehicle crashes.
Hampton Ave/Carst St from N Willey St to Sabraton Ave	Road improvement to prevent single-vehicle crashes.
University Town Centre Dr from Emmett Dr to I-79 Exist 153	Safety improvement at intersections to prevent angled crashes
West Run Rd from St Clair Hill Rd to Stewartstown Rd	Road improvement to prevent single-vehicle crashes and head-on crashes

Pedestrian and Bicycle Safety Improvements

Safety improvement on streets close to the WVU campus areas, including:

- The overall University Ave corridor
- WV 705 from Mon Blvd to Chestnut Ridge Rd
- Beechurst Ave near the downtown campus area
- General Downtown area

Safety improvements at the following locations with recorded crashes involving pedestrians:

- Cheat Rd near Venture Dr
- Earl Core Rd near I-68 Exit 4
- Stewartstown Rd near Protzman St
- General South Park area including Dorsey Ave

Identified in Previous Reports with Ongoing Projects

Staff recommends monitoring the before/after of these projects, as they are ongoing.

- The corridor of Van Voorhis Rd from WV 705/Burroughs St and West Run Rd is undergoing improvement projects this year.
- West Run Rd near Van Voorhis Rd is undergoing improvements this year.
- Greenbag Rd near Dorsey Ave. This area has an ongoing project to improve safety.

Other Recommendations

- Develop strategies to reduce crashes related to alcohol or drugs in the Morgantown downtown area.
- Enhance snow-removal service at the following locations:
 - WV 705 near the intersection of Willowdale Rd / Pinview Dr.
 - WV 705 near the intersection of Stewartstown Rd
 - Willowdale Corridor
 - Stewartstown Rd / University Ave / Campus Dr intersection area
 - Chaplin Hill Rd / University Town Centre Dr / Blue Horizon intersection area
 - Cheat Rd from Old Cheat Rd and I-68 Exit 7
 - Smithtown Rd and Grafton Rd intersection area
 - I-79 near Exit 152
 - University Ave near Oakland St intersection area
 - Point Marion Rd from Canyon Rd to West Run Rd
 - Mon Blvd and Boyers Ave intersection area
- Enhance street lighting at the following locations:
 - Van Voorhis Rd from Southview St to W Run Rd

- Stewartstown Rd from WV 705 to W Run Rd
- Point Marion Rd - Cheat Rd from Canyon Rd to I-68 Exit 7
- Stewart Rd/Protzman St corridor
- Grafton Rd and Smithtown Rd intersection area
- Chaplin Hill Rd and Blue Horizon Rd area