243 High Street Room 026
Morgantown, WV 26505
(304) 291-9571
www.plantogether.org

Agenda

Citizens Advisory Committee
243 High Street Room 026 and by WEBEX
Morgantown WV
March 14th, 2024
6:00 PM

1. Call to Order
2. Approval of Minutes
3. 2024 March - TIP Amendments and Adjustments
4. Draft Unified Planning Work Program
5. 2018-2022 Crash Report
6. Draft Electrical Vehicle Charging Station Plan
7. Community Garden Project Update
8. Other Business
9. Meeting Adjournment

CITIZENS ADVISORY COMMITTEE MEETING

January 11th, 2024

This meeting was held virtually at https://morgantownmonongaliampo.my.webex.com/meet/baustin and in person at 243 High St (Court House), Room 026 in downtown Morgantown.

Members Present:
Christiaan Abildso (Chairman), Matthew Cross, Heather Morgan, Kelli LaNeve, Chip Wamsley, Thomas Zeni (6:16pm)

Others Present: Bill Austin, Jacqueline Peate, Jing Zhang

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1. Call to Order
The CAC meeting was held virtually and in person. The phone number and web address to access the teleconference were publicized. With a quorum present, Mr. Abildso called the meeting of the CAC to order at 6:03 PM.

2. Approval of Minutes
Mr. Austin noted that the minutes of the last meeting were included in the agenda package. Mr. Wamsley moved to approve the meeting minutes as edited; seconded by Ms. LaNeve.

With no more discussion, the motion passed unanimously.

3. Safety Performance Measure Targets
Mr. Austin noted that each year the MPO needs to adopt performance measures for a variety of items. Enclosed with the Agenda packet a memorandum identifying the proposed Safety Performance Measure targets for this year. The Safety Performance Management Measures regulation supports the Highway Safety Improvement Program (HSIP) and requires State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) to set HSIP targets for 5 safety performance measures (Fatalities, Fatality Rate, Serious Injuries, Serious Injuries, and Non-Motorist Combined Fatalities and Serious Injuries). According to 23 CFR § 490.209, MPOs must establish safety performance targets within 180 days of the State DOT establishing and reporting targets in the State HSIP annual report. Part of the MPOs federal funds is utilized for these targets. Staff requested that the CAC recommend the adoption of the proposed Performance Measures to the Policy Board.

Mr. Cross moved to recommend approval; seconded by Ms. Morgan.

Mr. Abildso requested to clarify that these statistics are for the county of Monongalia to avoid confusion. MPO Staff will add Monongalia County to the graphs and clean up the tables for clarification.

Mr. Cross suggested adding citations for distracted driving to the data and analysis. Mr. Abildso said to add speeding tickets to the data. Mr. Ausitn additionally suggested adding red light running. Ms. Morgan suggested highlighting trends found in the report to help Monongalia County lower their number of fatalities.

The motion passed unanimously.

4. Patteson Drive/Maple Drive Pedestrian Study

Mr. Austin noted this study was presented to the CAC at the November meeting. It has been modified to reflect comments received during the first review. Mr. Zhang stated he added an insert map to focus on Maple Dr. / Mon General Dr. to focus on recommendations for that specific intersection.

Mr. Zeni moved to recommend approval; seconded by Ms. Morgan.

Mr. Abildso suggested adding the street names to the maps to make them easier to read.

Mr. Cross asked about the adding of bus shelters. Mr. Zhang is working with Mountain Line to determine where additional bus shelters can be added to the area. Ms. Morgan suggested the Oasis Café.

The motion passed unanimously.

5. Draft 2018-2022 Crash Report

Mr. Austin noted the Committee could find enclosed in the agenda packet the draft 2018-2022 Crash Report. The Morgantown Monongalia Metropolitan Planning Organization (MPO) Crash Report for the years 2018-2022 provides a comprehensive analysis of road traffic accidents and their associated trends within our region. This report serves as a resource for understanding patterns and causes, offering insights for both transportation planners and the public alike. By examining the data collected over these five years, the staff aims to promote a safer and more informed approach to urban and regional planning, ultimately working toward the goal of reducing accidents and enhancing road safety for all residents and commuters. Staff would appreciate the TTAC's review of this report. This draft report and draft appendix are available on the MMMPO website. No action is requited on this item, as it is an informational item.

Mr. Cross asked about the intersection at Mountaineer Station and Applebee's, stating concern about the traffic patterns. He also raised concern about lighting for pedestrians on Van Voorhis. A typo of 'Point Mation' versus 'Point Marion' was noted, and MPO Staff will correct the error. Mr. Cross asked about the roundabout near Pocahontas Street, and Mr. Austin stated he has been asking about it.

Mr. Abildso asked for clarification on the categories of the crashes involving pedestrians, which Mr. Zhang clarified, and said he will make it clear in the report.

6. Draft Unified Planning Work Program Summary

Mr. Austin stated that a memorandum identifying the work proposed for the upcoming Fiscal Year is included in the agenda packet for your information. This information includes a proposed budget which

would require the MPO's local contributions to go up by $2,500 for the City of Morgantown and $2,500 from Monongalia County. Staff would appreciate any suggestions for work to be included in the Work Program for the upcoming year the CAC may have. The complete UPWP will be presented for adoption at the March meeting. No action is required on this item, as it is an informational item.

Mr. Abildso asked about pedestrian and cyclist counters, which is included in the UPWP. Mr. Austin noted that this technology is in a great deal of flux and that staff will keep monitoring the technology.

7. Other Business

Mr. Cross mentioned the construction on Beechurst and how pedestrians are trying to cross. One of the pedestrians' buttons has been removed at Campus and Beechurst, and this is dangerous for individuals trying to cross. Ms. Morgan said she has avoided that area as a pedestrian.

8. Meeting Adjournment

The Meeting adjourned at 6:50 PM.

Memorandum

Date: February 29, 2024

To: TTAC, CAC, and Policy Board

From: MMMPO Staff

Subject: 2024 March - TIP Administrative Adjustment and Amendment

This memorandum is to document the amendments and administrative adjustments in the MPO's Transportation Improvement Program (TIP) for March, 2024.

TIP Amendment

West Virginia Department of Transportation-Division of Highways (WV DOH) has requested the following TIP amendments:

- West Run Road (GO BOND 4): Total cost increase, Federal ID change. Federal ID: STP0671010D. Construction. FY2024. Improve intersection. Federal Funds: $1,958,674, Total Funds: $19,586,739
- Morgantown Industrial Park Access Rd: Move the ROW phase to state funded. Federal ID: STBG2023313D. Right-of-way. FY2024. Construct new road and bridge. Federal Funds: $0, Total Funds: $2,500,000

Mountain Line Transit Authority (MLTA) has requested the following TIP amendments:

- Revenue Rolling Stock Replacement 5339 (for purchase of revenue producing vehicles)

  FY 2024: Adjust federal funding from $403,808 to $212,455, Local funding from $100,952 to $53,114.

  FY 2025: Adjust federal funding from $153,000 to $453,486, Local funding from $38,250 to $113,372.

FY 2026: Adjust federal funding from $153,000 to $150,000, Local funding from $38,250 to $37,500.

FY 2026: Adjust federal funding from $153,000 to $150,000, Local funding from $38,250 to $37,500.

Administrative adjustments

- Exist 152 NB and SB Ramps (AC PAYBACK). Construction phrase. Federal ID: HSIP0119502D. - funding decrease
- Burrough St (AC PAYBACK). Construction phrase. Federal ID: STP0592002D. - funding increase
- Rubble Run I-Bean. Engineering phrase. Federal ID: STBG0071165D.- funding increase
- Dellslow Arch. Engineering phrase. Federal ID: STBG0007341D - moved to 2025 and funding increase
- Smithtown W-Bean ROW. Federal ID: STBG0073098D - funding changes to $0 for both state and federal funds

The following projects will be removed from the MMMPO TIP Highway Project Table, because their funds have been obligated:

- Smithtown Rd Traffic Signal. Construction phrase. Federal ID: HSIP0119502D.
- Smithtown Rd Traffic Signal. Row of Way phrase. Federal ID: HSIP0119501D.
- Dunkard Ave Sidewalks Phase V. Construction phrase. Federal ID: TAP2018216D.
- US 119 Morgantown Lighting. Construction phrase. Federal ID: NHPP0119493D.
- Interstate 68 Overpass. Row of Way phrase. Federal ID: NHPP0119513D.
- Greenbag Rd (GO BOND 4). Construction phrase. Federal ID: NFA2317022D.

DRAFT

UNIFIED PLANNING WORK PROGRAM

FISCAL YEAR 2024 – 2025

Adopted:

Amended:

Monongalia County Courthouse
243 High Street Room 026
Morgantown, WV 26505
(304) 291-9571 phone
(304) 291-9573 fax

Accomplishments

During Fiscal Year 2023-2024 the MMMPO staff worked with the West Virginia Department of Transportation and the area's local governments to improve transportation in the region. The MPO's efforts were focused on the implementation of the area's 2050 Long Range Transportation Plan. Please find below a short description of these activities.

The primary focus of the MPO during the fiscal year was working to implement the recommendations of the recently adopted transportation plan. This effort was focused on hiring consultants to perform the Downtown Microsimulation Study a Tier One project for the area. This Study will identify strategies and solutions for other Tier One Projects such as the Willey Street improvement project and the Fairmont Road Improvement Project.

The MPO also implemented the recently adopted suballocated funding process. The MPO Policy Board recommended $400,000 in funding for the construction of sidewalk along Fairmont Road.

Other work performed by MPO Staff during FY 2023-2024, included:

MPO Staff worked to keep the following projects moving toward construction, the University Avenue/Collins Ferry Road intersection improvement project the Greenbag Road widening project, Beechurst Avenue spot improvement project and the upgrades of the West Run, Van Voorhis Road corridor projects.

In addition to project work MPO staff, performed several duties to maintain traffic related databases these databases include an annual traffic count program and an accident database. MPO Staff prepared a summary of crashes that occurred between 2018 and 2022 as part of this work. The 2019 traffic counts were taken in April and October to allow for the development of peak period factors. MPO The accident database was updated using additional data available from the WVDOH. Staff worked with WVDOH staff to have local counts included in the State's triennial data collection effort in the Morgantown/Monongalia County area. It is anticipated that the MPO will resume data collection activities in the upcoming fiscal year.

MPO Staff continued to investigate potential pedestrian count technologies. The technology for pedestrian counting is evolving quickly and it is difficult to evaluate the various options available. MPO Staff In cooperation with the Mon Valley Greenspace Coalition Staff prepared a map of a potential greenway network connecting non-motorized facilities throughout the area.

The MPO has been working to implement the Regional Transportation Demand Management program. During FY 2014-2015 MPO staff, working with Mountain Lines Mobility Coordinator instituted a coordinated advertising campaign and a redefined incentive package for new van pools. The momentum from this effort continued in FY 2019-2020 when there were two ongoing vanpools. Since that time the initial funding for the program has been expended. MPO Staff successfully sought funding for the continuation of this initiative in FY 2020-21. To date 19 vanpools have been started by this program with 12 of them still operating after the expiration of the MPO's subsidy.

FOCUS FOR FISCAL YEAR 2024-2025

Local initiatives:

Major initiatives to be under taken this year include:

Completion of the study of downtown Morgantown traffic operations. This Study is to analyze numerous scenarios for changing downtown's traffic patterns. Potential changes to be evaluated include the closing of "Grumbein's Island" to traffic, improvements to the operational capacity of Willey Street, evaluating the impact of eliminating the one-way street pairs (Spruce Street and High Street, Pleasant Street and Walnut Street) in downtown, and other potential improvements to the network including better coordination of the signal system. In FY 2022-23 the MPO developed an RFQ for a consultant to perform this work during FY 2023-24. This Study will be the largest single project undertaken by the MPO in FY 2023-24. MMMPO Staff time for this project will be under administrative charges.

In addition to the Downtown Traffic Operations Study MPO Staff will be working with WVDOH to Greenbag Road Design Study funded by the MPO's RAISE grant. MPO Staff will team with WVDOH to put together a Study Steering Committee and work with WVDOH to jointly administer the Study. It is anticipated that this project will take place over more than one fiscal year.

The MPO has also received a request to develop a pedestrian safety plan for University Avenue from Patteson Drive to Boyers Avenue from Star City and the City of Morgantown. This Study will be a high priority for MPO Staff.

The MPO has also received a request from the City of Morgantown for the funding of a feasibility study of the proposed pedestrian overpass on Don Knott's Boulevard. The City of Morgantown will be providing the required match for this Study.

MPO Staff will also work with Mountain Line to develop a plan for the location of bus shelters. This work may be in conjunction with a class from WVU.

During FY 2019-2020 the MPO hired a part-time employee to expand its public outreach efforts as identified in the MPO's Public Involvement Policy. This staff person is responsible for developing a newsletter to be issued at least quarterly, website maintenance, and the MPO's social media presence. These efforts will continue in the upcoming Fiscal Year.

Other tasks:

The MPO reinstituted the traffic count program in the spring of 2023 by developing joint count locations with the WVDOH triennial count program. The purpose of the program is to update the annual traffic count database with counts taken for the MPO as well as counts taken by other local agencies. The first counts for this database were taken in April of 2011 and April 2012. This database provides the MPO with base data, which may be used to project the future growth of traffic, as well as to provide decision makers with complete information about the existing conditions in the area. This data will continue to be available to the public at large for use in developing business plans and other marketing efforts, and

cooperation with the Mon Valley Greenspace Coalition. This emphasis area is addressed in line item III-C-16 and II-B-11.

-Complete Streets-The draft UPWP addresses complete streets by continuing the MPO's coordination with the WVDOT Complete Streets Commission as well as identifying projects in the Metropolitan Transportation Plan where alternatives to the single occupant vehicle are appropriate. The MPO is also developing a trial program for non-motorized vehicle data collection as part of the UPWP. The MPO will prepare a plan for bicycle and pedestrian safety on University Avenue in Morgantown and Star City. This emphasis area is addressed line item II-B-11.

-Public Involvement-Under the proposed UPWP the MPO will seek to improve our outreach to underserved communities as noted in the Equity and Justice emphasis area and to continue a robust outreach program in the media. This item is addressed in line items III-C-6.

-Strategic Highway Network (STRAHNET) for national defense (there are no designated STRAHNET facilities except I-68 and I-79 within the area) The draft UPWP does not directly address this issue but the MPO's Metropolitan Transportation Plan identifies needed improvements along these corridors. The MPO will support improvements to these facilities.

-Federal Land Management Agency Coordination (not applicable to our area).

-Planning and Environmental Linkage (streamlining the environmental process for the construction of projects by utilizing information from the planning process). The MPO will address this item in the upcoming fiscal year by developing a planning level study of one the Metropolitan Transportation Plan's priority projects to assist in identifying issues for the WVDOH project development process. This emphasis area is addressed in line items III-D-2, and III-D-3.

-Data in Transportation Planning-As noted above the MPO proposes to develop a trial data collection program for non-motorized vehicle transportation data collection in the draft UPWP. The MPO also restarted the traffic count program in the spring of 2023 in cooperation with the WVDOH Traffic Count program. This item is budgeted in line items II-A-1, II-A-4, II-A-10.

II-B-13 Collector Street Planning- MPO Staff will provide support to area municipalities in reviewing proposed development to ensure that the proposed collector streets are adequate. Staff will also review proposals to ensure that the proposed connection between major arterials and collector streets are consistent with the capacity anticipated in the Metropolitan Transportation Plan.

II-B-16 Financial Planning- MPO Staff will continue to work for the development of funding streams for transportation in general and especially for implementing the Metropolitan Transportation Plan.

II-B-17 Congestion Management Strategies- MPO staff will review and coordinate with WVDOT/DOH on potential congestion mitigation strategies including ongoing TDM activities. MPO staff will also work with Mountain Line staff on the van pool program. MPO Staff will continue to provide information on operational improvements that may assist in the mitigation of congestion including an ongoing study of signalization improvements and the operation of the downtown Morgantown street network being conducted by the State.

III Administration

III-A Planning Work Program
MPO staff will monitor the revised Planning Work Program process to insure it is being adequately implemented. Staff will also develop the 2024 Planning Work Program.

III-B Transportation Improvement Program
MPO staff will update the Transportation Improvement Program (TIP) as needed. The MPO will work with WVDOH on updating the State Transportation Improvement Program operating procedures and updating the TIP to meet the revised procedures.

III-C-6 Public Involvement
The MPO will continue to televise Policy Board Meetings. Staff also anticipates increased public involvement activities associated with the downtown microsimulation study. The MPO will continue to distribute a newsletter and upgrade its online presence. Staff will also reach out to neighborhoods throughout the area to inform residents about the MPO and its activities.

III-C-7 Private Sector Participation-The MPO will seek to encourage private sector participation wherever possible with projects as they move forward. This effort will immediately focus on the implementation of the MPO's TDM Project and in freight planning.

III-C-8 Performance Measures-MAP 21 and the FAST Act require the States and MPOs to establish and report performance measures to ensure that transportation investments are addressing national, state, and local priorities for safety, air quality, system reliability and transit and highway asset management. These performance measures will need to be reflected in the MPO's Metropolitan Transportation Plan and Transportation Improvement Program. This will be an ongoing task.

III-D-1 Transportation Enhancement Planning-MPO Staff will prepare enhancement project applications and provide assistance with enhancement planning activities as requested by area agencies.

DRAFT Morgantown Monongalia MPO Operating Budget FY 2024-2025

Cost Allocation Rate Table

All work performed outside program areas shall be charged at an hourly rate to cover actual expenses. Reimbursement/allocation rates are as follows:

Position	Hourly Rate	
Executive Director	$ 68.82	Incl. benefits + Overhead
Planner II	$ 46.31	Incl. benefits + Overhead
Shared Planner (50% MPO)	$ 43.00	Includes benefits + Overhead
Additional Travel	US Gov Rate as adjusted	

Note: The Director and the Planner II are salaried positions. Therefore, all holidays, vacation and sick leave benefits are included in the base wage rate. Hourly rate is calculated using a 2080 hour work year as the base line for full time employees. For the shared employe a 1,040 hour work year is used.

Proposed Line Item Fixed Operating Expenses

Category	Consolidated Federal Planning Funds	WVDOT	City/CountyMPO/Other	Total Cost Allocation
Salaries*				
Director	$ 87,472.56	$ 10,934.07	$ 10,934.07	$ 109,341
Planner 2	$ 50,016.96	$ 6,252.12	$ 6,252.12	$ 62,521
Shared Planner	$ 22,260.00	$ 2,782.50	$ 2,782.50	$ 27,825
Benefits (see below)	$ 67,107.82	$ 8,388.48	$ 8,388.48	$ 83,885
Contracted/Capital Exenses				
Contracted Services	$ 24,000.00	$ 3,000.00	$ 3,000.00	$ 30,000
Consulting Services*	$ 100,000.00	$ 4,000.00	$ 4,000.00	$ 125,000
Computer Equipment	$ 11,200.00	$ 1,400.00	$ 1,400.00	$ 14,000
Software	$ 5,000.00	$ 500.00	$ 500.00	$ 5,000
Public Notices/Publishing	$ 2,800.00	$ 350.00	$ 350.00	$ 3,500
Overhead				
Travel & Training	$ 12,000.00	$ 1,500.00	$ 1,500.00	$ 15,000
Utilities (phone, internet, web site)	$ 1,600.00	$ 200.00	$ 200.00	$ 2,000
Copier lease, supplies, postage	$ 1,200.00	$ 150.00	$ 150.00	$ 1,500
Total	$ 384,657.34	$ 39,457.17	$ 39,457.17	**$ 479,572**

Proposes 5% COLA for MPO Staff

Employee Benefit Expenditure Detail

(Calculated on Total Wages = $199,697)

Description	Consolidated Federal Planning Funds	WVDOT	City/County/ Other	Total Cost Allocation
FICA (6.2%)	$ 9,904.47	$ 1,238.06	$ 1,238.06	$ 12,380.59
Worker's Compensation (2.3%)	$ 3,674.24	$ 459.28	$ 459.28	$ 4,592.80
Medicare (1.45%)	$ 2,316.37	$ 289.55	$ 289.55	$ 2,895.46
Retirement (12.0%)	$ 19,169.94	$ 2,396.24	$ 2,396.24	$ 23,962.43
Health Insurance 2023 + 10%	$ 29,642.80	$ 3,705.35	$ 3,705.35	$ 37,053.50
Dental & Vision Insurance	$ 2,400.00	$ 300.00	$ 300.00	$ 3,000.00
Total Employee Benefit Package				**$ 83,884.77**

Morgantown Monongalia Metropolitan Planning Organization Operating Budget FY 2024-25

Revenues and Expenditures By Major Category

Task Number	Task Item	Category	Consolidated Federal Planning Funds	WVDOT	City/County/MPO	Other	Total Cost Allocation
II-A	Inventory of Facilities						
	1	Traffic Counts	38,400	4,800	4,800		$48,000
	3	Accident Reports	1,600	200	200		$5,000
	10	Mapping	8,000	1,000	1,000		$10,000
		Total	**48,000**	**6,000**	**6,000**		**$63,000**
II-B	LRTP						
	3	Travel Model Update	900	50	50		$1,500
	6	Community goals	4,000	500	500		$5,000
	8	Deficiency Analysis	1,600	200	200		$2,000
	9	Highway Element	4,000	500	500		$5,000
	10	Transit Element	8,000	1,000	1,000		$10,000
	11	Bicycle and Ped.	12,000	1,500	1,500		$15,000
	13	Collector Street	4,000	500	500		$5,000
	16	Financial Planning	4,000	500	500		$5,000
	17	Cong. Mgmt. Strat.	1,600	200	200		$2,000
		Total	**$39,200**	**$4,900**	**$4,900**	**$0**	**$50,500**
III	Admin.				0		
	A	Work Program	6400	800	800		8000
	B	TIP	8000	1000	1000		10000
	C-6	Public Involvement	40000	5000	5000		50000
	C-7	Private Sector	9600	1200	1200		12000
	C-8	Performance	12000	1500	1500		15000
	D-1	Enhancement Plan	12000	1500	1500		15000
	D-2	Env. And Pre-TIP	28000	3500	3500		35000
	D-3	Special Studies*	100000	12500	12500		125000
	D-4	Regional and State	24000	3000	3000		30000
	E	Management and Ops	52800	6600	6600		66000
		Total	**$292,800**	**$36,600**	**$36,600**	**$0**	**$366,000**
Grand Totals - All Programs			**$380,000**	**$47,500**	**$47,500**	**$0**	**$479,500**

Morgantown Monongalia Metropolitan Planning Organization Operating Budget FY 2024-25

Revenues and Expenditures By Major Category

Task Number	Task Item	Category	Consolidated Federal Planning Funds	WVDOT	City/County/MPO	Other	Total Cost Allocation
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II-B	LRTP						
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	6	Community goals	4,000	500	500		$5,000
	8	Deficiency Analysis	1,600	200	200		$2,000
	9	Highway Element	4,000	500	500		$5,000
	10	Transit Element	8,000	1,000	1,000		$10,000
	11	Bicycle and Ped.	12,000	1,500	1,500		$15,000
	13	Collector Street	4,000	500	500		$5,000
	16	Financial Planning	4,000	500	500		$5,000
	17	Cong. Mgmt. Strat.	1,600	200	200		$2,000
		Total	**$39,200**	**$4,900**	**$4,900**	**$0**	**$50,500**
III	Admin.				0		
	A	Work Program	6400	800	800		8000
	B	TIP	8000	1000	1000		10000
	C-6	Public Involvement	40000	5000	5000		50000
	C-7	Private Sector	9600	1200	1200		12000
	C-8	Performance	12000	1500	1500		15000
	D-1	Enhancement Plan	12000	1500	1500		15000
	D-2	Env. And Pre-TIP	28000	3500	3500		35000
	D-3	Special Studies*	100000	12500	12500		125000
	D-4	Regional and State	24000	3000	3000		30000
	E	Management and Ops	52800	6600	6600		66000
		Total	**$292,800**	**$36,600**	**$36,600**	**$0**	**$366,000**
Grand Totals - All Programs			**$380,000**	**$47,500**	**$47,500**	**$0**	**$479,500**

2018-2022 Crash Report

January, 2024

Draft

Contents

Appendixes are available on the MPO's website at www.plantogether.org

1. Introduction

The Morgantown Monongalia Metropolitan Planning Organization (MPO) Crash Report for the years 2018-2022 provides a comprehensive analysis of road traffic accidents and their associated trends within our region. This report serves as a resource for understanding patterns and causes, offering insights for both transportation planners and the public alike. By examining the data collected over these five years, the staff aims to promote a safer and more informed approach to urban and regional planning, ultimately working toward the goal of reducing accidents and enhancing road safety for all residents and commuters. The following sections provide a detailed examination of the crash data, including trends and potential contributing factors

The purpose of this crash report is to:

- comprehensively document regional crash trends, crash locations, and crash types.
- identify areas of concern for planning purposes, as well as propose potential engineering countermeasures aimed at enhancing safety within these identified areas.
- raise public awareness regarding frequent crash hotspots, particularly highlighting the prevalent types of crashes occurring in specific locations.

The data used in this crash report is provided by the West Virginia Department of Transportation. MPO staff removed certain crash records that were out of the county boundary based on their GPS coordinates.

The report is developed in collaboration with City of Morgantown staff. The MPO and the City of Morgantown will continue reviewing and analyzing the data, with the potential for updates to the report.

Customized crash data analysis for specific subareas, neighborhood, and corridors is available upon request.

Online Interactive Crash Hotspot Map

MMMPO developed an online interactive crash hotspot map as a part of the crash report, made accessible to the public for easy reference of crash hotspots. It aims to enhance public awareness of prevalent crash locations and the specific types of incidents more likely to occur in those areas.

Map link:

https://www.google.com/maps/d/u/2/edit?mid=1PIE9iK69gr8EBR-BBxNzSteLgqShiq4&usp=sharing

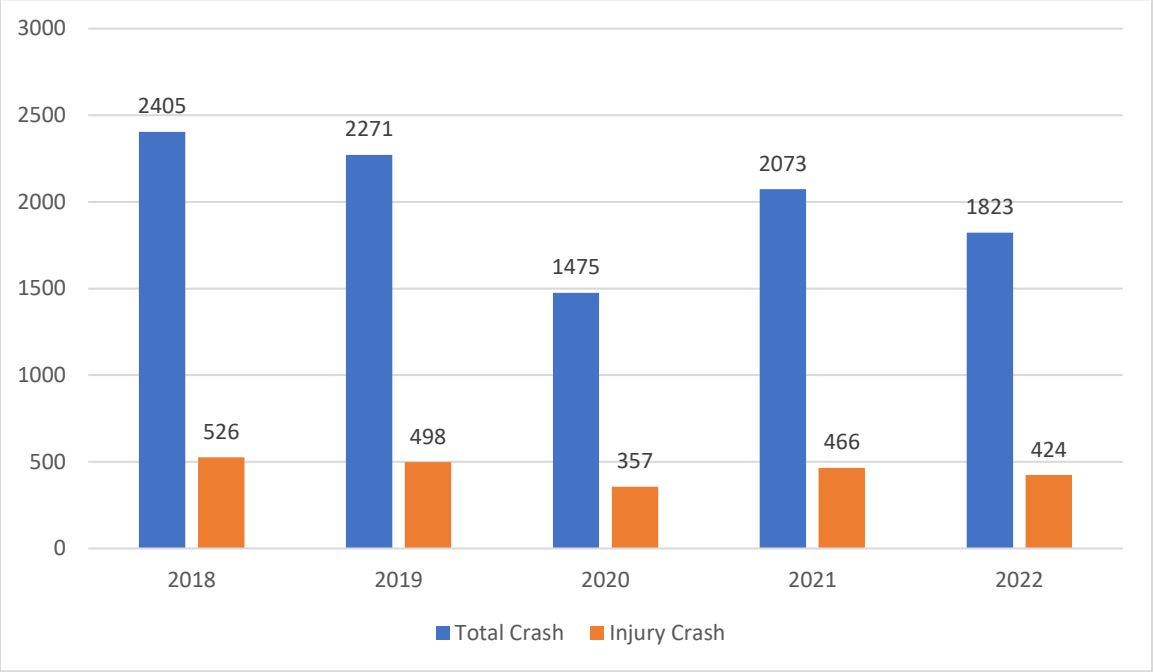
The map is also available on the MMMPO's website at www.plantogether.org.

2. Overall Trending

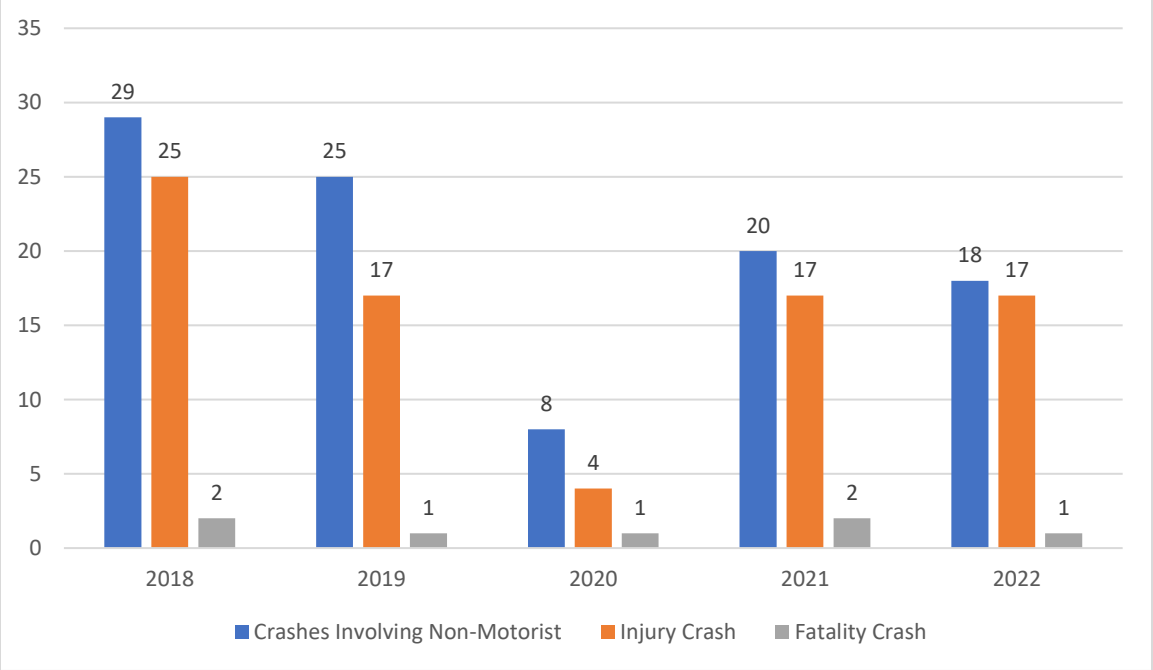
Table: Crash types by year

	2018	2019	2020	2021	2022	Five Year Total	5-year Average
Total Crash	2,405	2,271	1,457	2,073	1,823	10,029	2,006
Rear End	778	738	446	586	562	3,110	622
Single Vehicle Crash	574	576	426	573	465	2,614	523
Right Angle	311	274	175	265	221	1,246	249
Sideswipe, Same Direction	205	212	135	198	160	910	182
Angle, Front to Side Same Direction	122	142	63	100	95	522	104
Angle, Front to Side Opp. Direction	168	113	91	128	123	623	125
Sideswipe, Opposite Direction	84	77	41	77	76	355	71
Angle, Direction Not Specified	63	62	35	58	46	264	53
Head-On	80	58	48	69	74	329	66
Rear-to-Side	13	13	13	10	5	54	11
Rear-to-Rear	7	6	2	9	5	29	6
Fatality Crash	13	6	7	8	7	41	8.2
Injury Crash	526	498	357	466	424	2271	454.2
Crash Involving Non-motorists	29	25	8	20	18	100	20

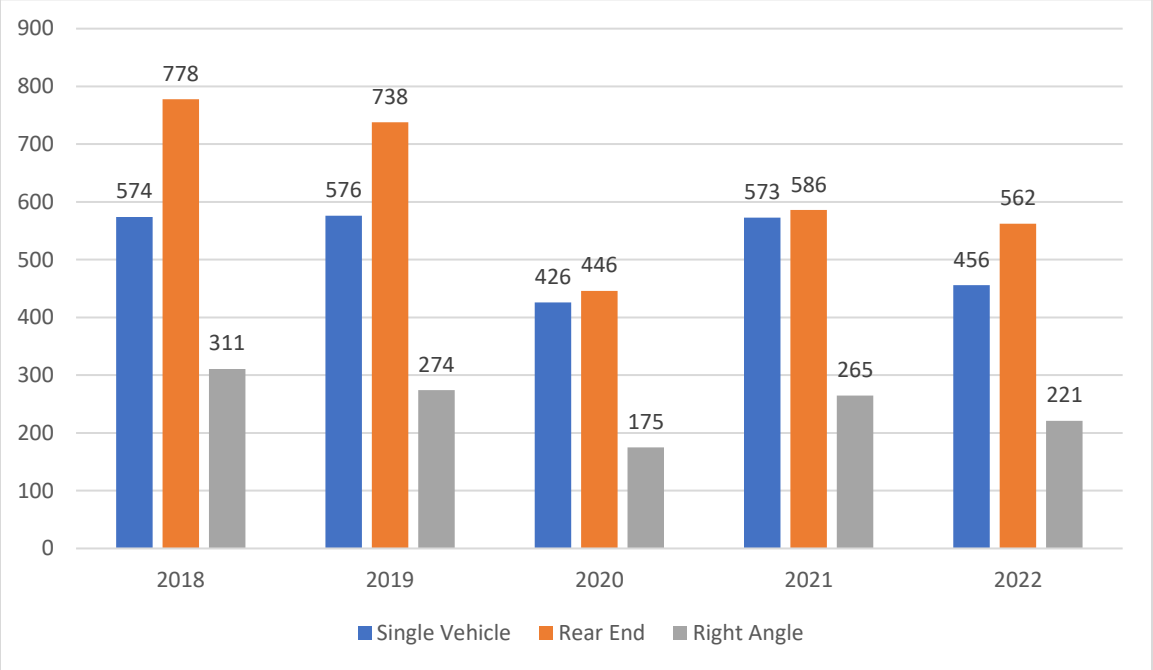
Number of Crashes by Year and by Injury



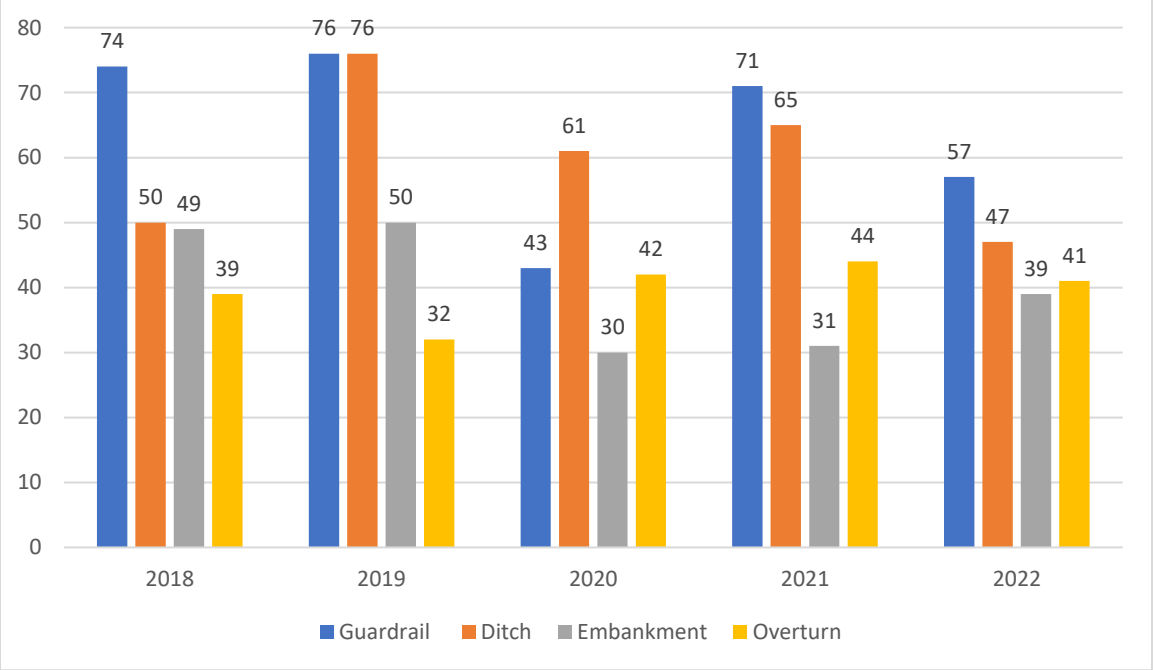
Number of Crashes by Year and by Crashes Involving Non-motorists



Number of Crashes by Year and Major Collision Types



Number of Crashes by Year and Major First Harmful Event Types*



Other major first harmful event types that are not included in the graphics are: 1) vehicle in transport, 2) parked vehicles, and 3) Utility Pole.

3 Recommendations

MPO staff identified top 10 safety corridor improvement and top 10 safety spot improvement, based the hotspots by crash types and first harmful events as shown in Appendix D – Areas of Concerns. The information is also available on an online interactive map at:

https://www.google.com/maps/d/u/2/edit?mid=1PIE9iK69gr8EBR-BBxNzSteLgqShiq4&usp=sharing

The locations are selected using a combination of the following criteria:

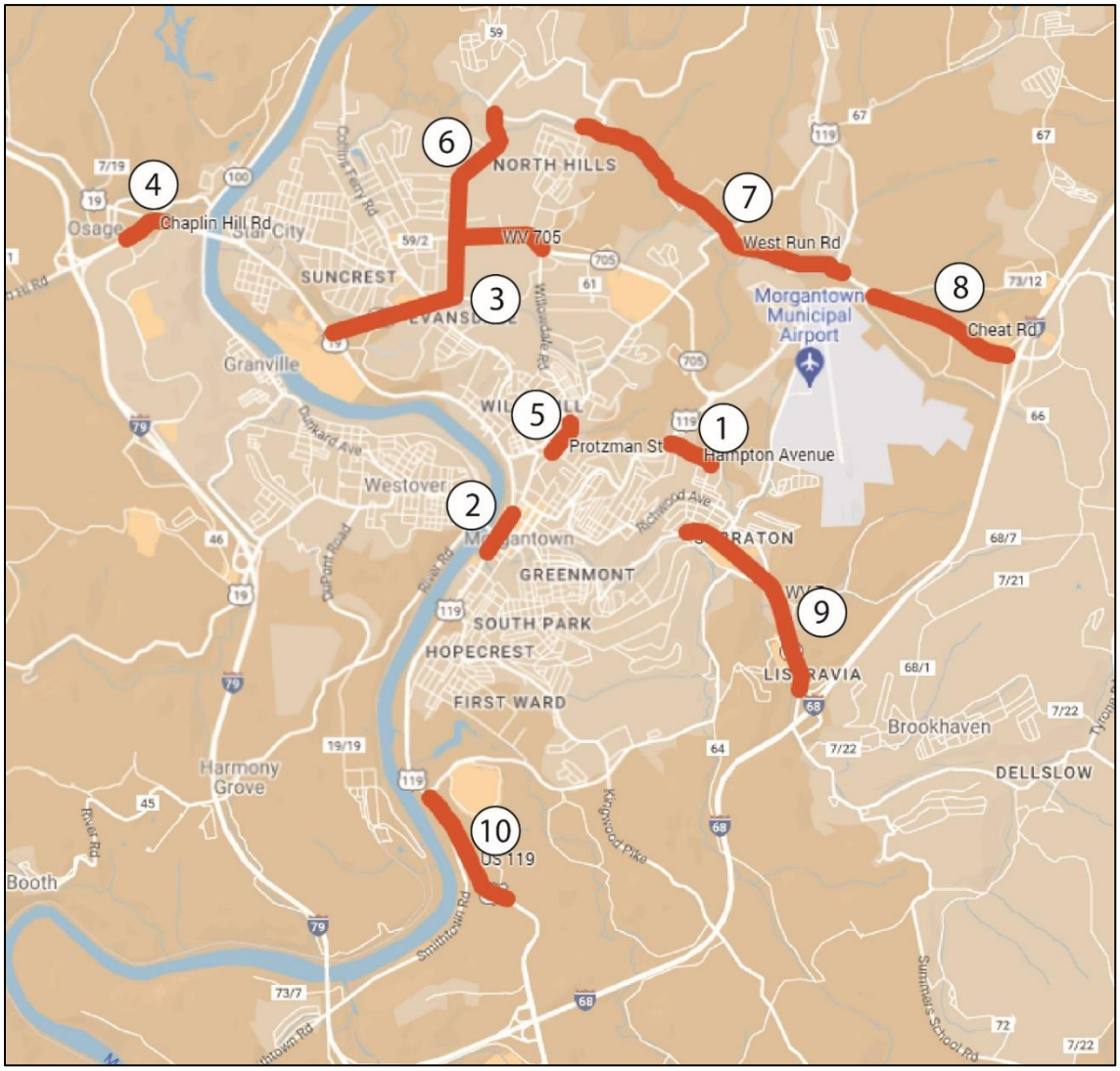
- **High Crash/Length Ratio for Specific Crash Types**: Emphasis is placed on crash types with a high likelihood of severe injuries, such as head-on collisions, right-angle crashes, and sideswipe opposite-direction crashes.
- **Multiple Category**: Locations are chosen if they are identified in multiple categories of crash hotspots, signifying a consistent pattern of safety concerns.
- **High Crash Rate per Million Vehicle Miles**: Special attention is given to locations with a high crash rate relative to the number of vehicle miles traveled, particularly for areas with low traffic volume but a disproportionately high incidence of crashes.

Top 10 Safety Improvement Corridors

(Location ID) Location Description	Primary Crash Type to Prevent	Potential Safety Concern
(1) Hampton Avenue, beginning at North Willey Street and extending eastward for 0.3 miles.	- Head on crash - Sideswipe (opposite direction) crash	- Inadequate lane separation - Narrow roadway width - Sharp curve
(2) University Ave from Fayette St to Foundry	- Head on crash - Rear end crash - Right angle crash - Sideswipe (same direction) crash	- Lane shifting and merging - Poor traffic flow
(3) WV 705 from Mon Blvd to Mon General Dr/Willowdale Rd	- Rear end crash - right Angle crash - Sideswipe (same direction) crash	- Lane shifting and merging - Poor traffic flow - Inadequate signal coordination
(4) Chaplin Hill Rd from Emmett Dr to University Town Centra Dr	- Rear end crash - Sideswipe (same direction)	- Poor traffic flow - Sharp curve - Lane shifting and merging
(5) Protzman St from Mason St to Yoke St	- Head on crash	- Inadequate lane separation - Narrow roadway width - Sharp curve
(6) Van Voorhis Rd from WV 705 to West Run Rd	- Single vehicle crash - Head on crash	- Inadequate lane separation - Narrow roadway width - Sharp curve
(7) West Run Rd from Point Marion Rd to Riddle St	- Single vehicle crash - Head on crash - Right angle crash	- Inadequate lane separation - Narrow roadway width - Sharp curve

(8) Cheat Rd from Point Mation Rd to I-68 Ramp	- Single vehicle crash - Right angle crash - Sideswipe (same direction) crash - Right angle crash	- Lane shifting and merging - Inadequate lane separation - Narrow roadway width - Sharp curve
(9) WV 7 from Decker's Creek Rd to I-68 Ramp	- Head on crash - Rear end crash - Right angle crash - Single vehicle crash - Sideswipe (opposite direction) crash	- Poor traffic flow - Lane shifting and merging - Driveway access
(10) (10) US 119 from Greenbag Rd, extending southward for 0.44 mile on Grafton Rd	- Single vehicle crash - Right angle crash - Head on crash	- Sharp curve - Lane shifting and merging - Inadequate lane separation - Overturn/Ditch/Embankment hazard

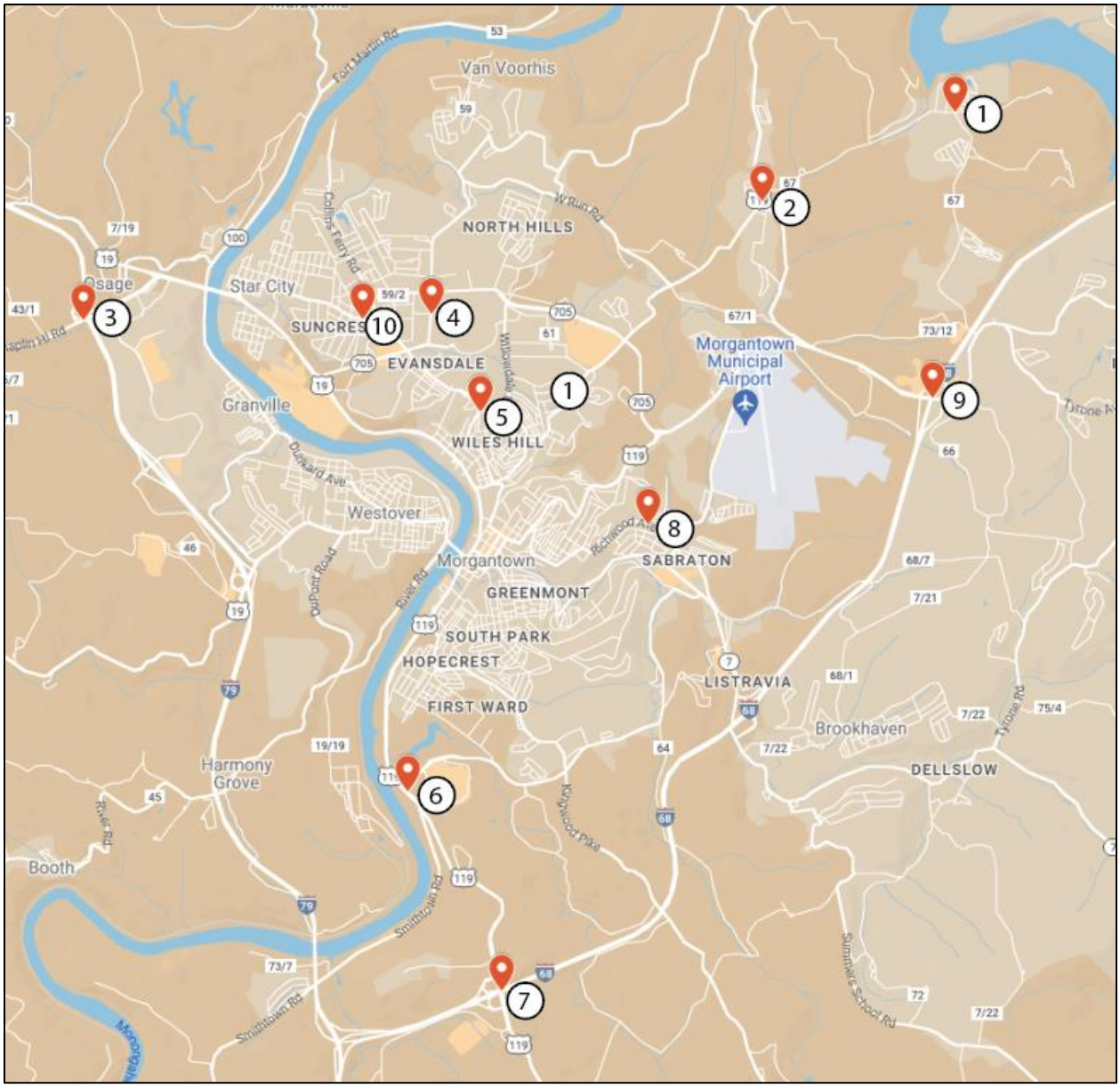
Top 10 Safety Corridor Improvement Map



Top 10 Safety Spot Improvement

(Location ID) Location Description	Primary Crash Type to Prevent	Potential Safety Concern
(1) Canyon Rd and Canyon School Rd	- Single vehicle crashes	- Short sight distance - Slope and Sharp curve - High speed on Canyon Rd
(2) Point Marion Rd and Canyon Rd	- Head on crash	- short sight distance - Slope - Receiving lane alignment (east-west)
(3) Chaplin Hill Rd and I-79 Exit 155 / Malone Dr Area	- Right angle crash	- High speed traffic on Chaplin Hill Rd. - High traffic volume on Chaplin Hill Rd
(4) WV 705 / Van Voorhis Rd and Christy St	- Right angle crash	- High speed traffic on WV 705. - High traffic volume on WV 705. - Multilane crossing for left-turn traffic
(5) University Ave and North St	- Head on crash	- Short sight distance - Slope and Sharp curve - High speed on University Ave
(6) Smithtown Rd and Grafton Rd / Don Knotts Blvd	- Head on crash - Right angle crash	- Slope and high speed on Drafton Rd - Skewed intersection
(7) Grafton Rd and I-68 Exit 1 Area	- Right angle crash	- High sped traffic on Grafton Rd - High traffic volume on Grafton Rd
(8) Richwood Ave and Darst St	- Right angle crash	- Slope on Richwood Ave
(9) Cheat Rd and I-68 Exit 7 Area	- Right angle crash	- High speed traffic on Cheat Rd - High traffic volume on Cheat Rd
(10) University Ave and Laurel St	- Right angle crash	- Narrow roadway width - High speed traffic on University Ave - High volume of turning traffic from Pocahontas Ave

Top 10 Safety Spot Improvement Map



Recommended Safety Improvement Relationship with MTP and TIP

The following table shows how the recommended safety improvements in this report correlates with the MPO's Metropolitan Transportation Plan (MTP) and Transportation Improvement Program (TIP).

(ID) Location		Included in MTP	Included in TIP
Corridor Improvement	(1) Hampton Avenue from North Willey Street extending eastward for 0.3 miles.	No	No
	(2) University Ave from Fayette St to Foundry	Yes	No
	(3) WV 705 from Mon Blvd to Mon General Dr/Willowdale Rd	Yes	Partially
	(4) Chaplin Hill Rd from Emmett Dr to University Town Centra Dr	Yes	No
	(5) Protzman St from Mason St to Yoke St	Yes	No
	(6) Van Voorhis Rd from WV 705 to West Run Rd	Yes	Yes
	(7) West Run Rd from Point Marion Rd to Riddle St	Yes	Yes
	(8) Cheat Rd from Point Mation Rd to I-68 Ramp	Yes	No
	(9) WV 7 from Decker's Creek Rd to I-68 Ramp	Yes	No
	(10) US 119 from Greenbag Rd, extending southward for 0.44 mile on Grafton Rd	Yes	Partially
Spot Improvement	(1) Canyon Rd and Canyon School Rd	No	No
	(2) Point Marion Rd and Canyon Rd	Yes	No
	(3) Chaplin Hill Rd and I-79 Exit 155 / Malone Dr Area	Yes	Yes
	(4) WV 705 / Van Voorhis Rd and Christy St	Yes	No
	(5) University Ave and North St	No	No
	(6) Smithtown Rd and Grafton Rd / Don Knotts Blvd	Yes	Yes
	(7) Grafton Rd and I-68 Exit 1 Area	Yes	No
	(8) Richwood Ave and Darst St	No	No
	(9) Cheat Rd and I-68 Exit 7 Area	Yes	No
	(10) University Ave and Laurel St	Yes	Yes

MMMPO Electric Vehicle (EV) Readiness Plan

DRAFT

Table of Contents

Introduction

Electric vehicles (EVs) have gained traction as an environmentally conscious mode of transportation, significantly reducing carbon footprints. This document provides a comprehensive overview of electric vehicles in the context of Monongalia County, offering insights into crucial aspects of the implementation of this technology. The background section covers essential topics such as EV education, charging infrastructure, strategic location selections, and federal standards. Serving as an informative foundation, this document is a valuable resource for those seeking a holistic understanding of EVs. The analysis segment delves into the current status of EVs and charging ports in Monongalia County, presenting data on existing infrastructure while forecasting future needs. Additionally, it identifies potential locations for new charging ports to meet the rising demand for electric mobility. In a commitment to inclusive planning, the document underscores the incorporation of public input, positioning it as a collaborative resource for ongoing research or project development within the Monongalia County Metropolitan Planning Organization (MMMPO).

EV Charging Infrastructure Basics

Vehicles and Charging Ports

Vehicle Type

Currently, there are three types of electric vehicles on the market. This Readiness Plan focuses on BEVs and PHEVs.

Battery Electric Vehicles (EBVs)

- Run on electricity only and are recharged from an external power source.
- EBVs include battery electric buses (BEBs) and electric school buses (ESBs).
- It is also referred to as an “all-electric vehicle”.

Plug-in Hybrid Electric Vehicles (PHEVs)

- Run on electricity and are recharged from an external power source.
- Incorporate a smaller internal combustion engine that can recharge the battery. When electricity is unavailable, PHEVs can run on gasoline alone.

Fuel Cell Electric Vehicles (FCEVs)

- Use the electrochemical process to convert hydrogen into electricity.
- Not for recharging its battery from an external source.

Charging Port Type

Level 1

- Common residential 120V alternating current (AC) outlet
- 40-50 hours to charge a light-dury BEV
- 5-6 hours to charge a PHEV
- Typical location: Home

Level 2

- 240V (in residential applications) or 208V (in commercial applications)
- 4-10 hours to charge a light-duty BEV
- 1-2 hours to charge a PHEV
- Typical location: Home, Workplace, and Public

DCFC (Direct Current Fast Charging)

- Common for heavy-traffic corridors
- 20 minutes - 1 hour to charge a light-dury BEV (80%)
- 5 - 30 minutes to charge a light-dury PHEV (80%)

- Most PHEVs currently on the market are not capable of using DCFCs.
- Typical location: Public

Electric Bus Basics

Electric buses, including BEBs and ESBs, run on electricity only and require recharging their onboard battery packs from an external power source. A type of BEB, ESBs tend to have smaller battery packs as they often operate on shorter routes with a midday break during school hours for charging.

There are three types of charging ports for BEBs. They can be installed at the storage facility or on-route.

- **Plug-in charging**: Slowest option (AC/DC, 40-350 kW), ideal for overnight depot charging due to long charge times. Faster options are emerging.
- **Wireless inductive charging**: Uses floor pads and magnetic fields (50-250 kW), offers convenience but is less common.
- **Overhead conductive (pantograph) charging**: Fastest option (165-600 kW), connects via a pantograph for quick stops at depots (5-20 min). Also used for in-motion charging (IMC) trolleybuses on limited routes.

Key considerations:

- Charging speed varies depending on technology and power level.
- Depot charging is common for slow to medium-speed options.
- Faster options like pantograph or high-power plug-in are ideal for route charging.
- Consider battery size, route lengths, and charging needs when choosing infrastructure.

Location Selections

General Considerations

The following are major factors to consider when choosing locations for public EV charging locations.

- Land availability and cost: Finding suitable land with the necessary infrastructure can be challenging in some areas. Ideal locations often have the following characteristics:
    - Areas or locations with underserved communities
    - Proximity to public transportation and travel corridors
    - Proximity to local public services
    - Proximity to local businesses
    - Proximity to nearby multifamily housing

    - Availability of parking

- Electric grid capacity: Upgrading the grid may be necessary to support the increased demand for electricity from EV charging stations.

- Community needs and preferences: Engaging with the community is crucial to ensure that EV charging stations are placed in locations that are most beneficial to residents.

- Equity Considerations (see section below)

Level 2 Stations

Workplace parking lots: Employers are increasingly installing Level 2 chargers to attract and retain employee who drive EVs.

Retail centers: Shopping malls, grocery stores, and other businesses with long dwell times are ideal locations for Level 2 chargers, as customers can top up their batteries while shopping or running errands.

Apartment complexes: To cater to residents who don't have access to home charging, apartment complexes are installing Level 2 chargers in designated parking areas.
Community centers and libraries: Public buildings with ample parking can offer Level 2 charging as a convenience to residents.

Curbside parking: On-street parking spaces with Level 2 chargers can be a good option in dense urban areas where off-street parking is limited.

Rest stops and travel plazas: Level 2 chargers at rest stops and travel plazas can help address range anxiety for EV drivers on long trips.

DCFC Stations

High-traffic corridors: Busy roads and highways are ideal locations for DCFC stations, as they can help reduce range anxiety for EV drivers on short trips.

Convenience stores and gas stations: Convenience stores and gas stations with ample parking can attract customers by offering DCFC stations.

Public transportation hubs: Train stations, bus terminals, and airports can offer DCFC stations for travelers who need a quick charge before their trip.

Equity Considerations

Project benefits and costs should be fairly distributed across the community, especially considering low-income, minority, and disabled populations. Equity concerns that might arise include a project's affordability, accessibility, reliability, location, safety, and related employment and economic opportunities.
According to National Electric Vehicle Infrastructure Standards and Requirments, disadvantaged communities (DACs) mean

> *Census tracts or communities with common conditions identified by the U.S. Department of Transportation and the U.S. Department of Energy that consider appropriate data, indices, and screening tools to determine whether a specific community is disadvantaged based on a combination of variables that may include, but are not limited to, the following: low income, high and/or persistent poverty; high unemployment and underemployment; racial and ethnic residential segregation, particularly where the segregation stems from discrimination by government entities; linguistic isolation; high housing cost burden and substandard housing; distressed neighborhoods; high transportation cost burden and/or low transportation access; disproportionate environmental stressor burden and high cumulative impacts; limited water and sanitation access and affordability; disproportionate impacts from climate change; high energy cost burden and low energy access; jobs lost through the energy transition; and limited access to healthcare.*
>
> *(23 CFR 680.104 "Disadvantaged communities (DACs)")*

Equity Data

USDOT Equitable Transportation Community (ETC) Explorer
https://experience.arcgis.com/experience/0920984aa80a4362b8778d779b090723/page/ETC-Explorer---Homepage/

USDOT Electric Vehicle Charging Justice40 Map
https://anl.maps.arcgis.com/apps/webappviewer/index.html?id=33f3e1fc30bf476099923224a1c1b3ee

The White House Council on Environmental Quality: Climate and Economic Justice Screen Tool
https://screeningtool.geoplatform.gov/en/#11.4/39.6257/-79.9679

Federal Standards and Requirements

The Federal Highway Administration (FHWA) issued new national standards for federally funded EV chargers in February 2023. These new standards aim to ensure that charging is a predictable and reliable experience for EV drivers. This section includes the part of the requirements that are most relevant to EV charging station planning at the community level. For full information on the standards and requirements, please consult 23 CFR Part 680 National Electric Vehicle Infrastructure Standards and Requirements.

Except where noted, these regulations apply to all NEVI Formula Program projects as well as projects for the construction of publicly accessible EV chargers that are funded with funds made available under Title 23, United States Code, including any EV charging infrastructure project funded with Federal funds that is treated as a project on a Federal-aid highway.

Number of charging ports

When including DCFCs located along and designed to serve users of designated AFCs, charging stations must have at **least four** network-connected DCFC charging ports and be capable of simultaneously charging at least four EVs.

In other locations, EV charging stations must have at **least four network-connected (either DCFC or AC Level 2 or a combination of DCFC and AC Level 2)** charging ports and be capable of simultaneously charging at least four EVs.

More information in 23 CFR 680.106(b)

Power level

DCFC charging ports must support output voltages between 250 volts DC and 920 volts DC. DCFCs located along and designed to serve users of designated AFCs must have a continuous power delivery rating of at least 150 kilowatts (kW) and supply power according to an EV's power delivery request up to 150 kW, simultaneously from each charging port at a charging station. These corridor-serving DCFC charging stations may conduct power sharing so long as each charging port continues to meet an EV's request for power up to 150 kW.

Each AC Level 2 charging port must have a continuous power delivery rating of at least 6 kW and the charging station must be capable of providing at least 6 kW per port simultaneously across all AC ports. AC Level 2 chargers may conduct power sharing and/or participate in smart charge management programs so long as each charging port continues to meet an EV's demand for power up to 6 kW unless the EV charging customer consents to accepting a lower power level.

More information in 23 CFR 680.106(d)

Availability

Charging stations located along and designed to serve users of designated Alternative Fuel Corridors must be available for use and sited at locations physically accessible to the public 24 hours per day, 7 days per week, year-round. Charging stations not located along or not designed to serve users of designated Alternative Fuel Corridors must be available for use and accessible to the public at least as frequently as the business operating hours of the site host.

More information in 23 CFR 680.106(e)

Security

States or other direct recipients must implement physical strategies to protect the charging station including

- Lighting;
- Siting and station design to ensure visibility from onlookers;
- Driver and vehicle safety;
- Video surveillance;
- Emergency call boxes;
- Fire prevention;
- Charger locks;
- Strategies to prevent tampering and illegal surveillance of payment devices.

More information in 23 CFR 680.106(h)

Community Engagement

States must include in the State EV Infrastructure Deployment Plan a description of the community engagement activities conducted as part of the development and approval of their most recently submitted State EV Infrastructure Deployment Plan, including engagement with disadvantaged communities (DACs). This only applies to the NEVI Formula Program projects

More information in 23 CFR 680.112(d)

Other Federal Laws

The American with Disabilities Act of 1990 (ADA), and its implementing regulations, apply to EV charger projects. (23 CFR 680.118(c))

The Uniform Relocation Assistance and Real Property Acquisition Act applies to EV charger projects. (23 CFR 680.118(g))

The National Environmental Policy Act of 1969 (NEPA) applies to EV charger projects. (23 CFR 680.118.(h))

Status and Need Assessment

Current Stations

Current EV charging stations in the Morgantown Monogalia MPO area:

Location Name	Type	Ports	Network	Access	Address
City of Morgantown Farmers Market	Level 2	1	None	Public, 24/7	415 Spruce St
University Motor	Level 2	2	ChargePoint	Public, 24/7	58 Don Knotts Blvd
University Motor	DC Fast	1	ChargePoint	Public, 24/7	58 Don Knotts Blvd
Subaru of Morgantown	Level 2	1	Blink	Public, 24/7	1730 Mileground Road
Sheetz-Tesla Supercharger	DC Fast	8	Tesla Supercharger	Public, 24/7	1901 Earl L Core Road
Hampton Inn & Suites Morgantown / University Town Centre	Level 2	2	None	Hotel customer use only	325 Granville Square
Black Bear Village	Level 2	3	Blink	Public, 24/7	380 Richard Harrison Way
Triple S Harley-Davidson	DC Fast	1	ChargePoint	Public, 24/7	7300 Willie G Ave Westover, WV 26501
Premier Chevrolet Buick GMC	Level 2	2	None	Public / Business Hours	5392 University Town Centre Dr
Sheetz - Tesla Supercharger	DC Fast	8	Tesla Supercharger	Public, 24/7	21 Asturias Lane

Data source: US DOE Alternative Fuels Data Center: https://afdc.energy.gov/stations/#/find/nearest?fuel=ELEC

EV Registration Estimation

Estimation of EV registered by year in West Virginia and neighboring states.

	EV Registered by Year per 10,000 People					Average Annual Increase
	2018	2019	2020	2021	2022	
West Virginia	1	2	3	6	11	83%
Pennsylvania	6	9	13	21	37	58%
Ohio	5	9	12	18	29	56%
Virginia	12	18	24	36	65	53%
Four State Average	**6**	**10**	**13**	**20**	**36**	**63%**

Source: U.S. DOE Alternative Fuels Data Center - TransAltas

Considering that the MPO area is relatively urban compared with the rest of West Virginia and that urban areas generally tend to have higher EV ownership rates compared to rural areas due to factors like charging infrastructure, shorter commutes, and higher environmental awareness, this readiness plan used the **four state average number for the number of EV registered by year per 10,000 people in the Morgantown Monongalia area**.

Estimation of EV registered by year in the MPO area.

	EV Registered by Year					Total
	2018	2019	2020	2021	2022	
Per 10,000 population	6	10	13	20	36	
Actual EV*	60	95	130	203	355	843

**Population in the Morgantown Monongalia MPO Area ≈ 100,000*

Estimation of the number of EVs in the MPO area

Vehicles added from 2018 to 2022 ≈ 850
Vehicles added before 2018 ≈ 300
Vehicles added in 2023 ≈ 450
Vehicles purchased in out-of-state ≈ 400
Total EV in the MPO area ≈ 2,000

Current Need

The following needs assessment was calculated by using the Electric Vehicle Infrastructure Projection Tool (EVI-Pro) Lite provided by the U.S. Department of Energy Alternative Fuels Data Center. More information about the tool can be found at https://afdc.energy.gov/evi-pro-lite

Assumption

Parameter	Value
EVs to support	2,000 (existing condition as of 2023) 10,884 (2030)
Vehicle Mix (system default)	• PEV Sedans: 25% • PEV C/SUVs: 47% • PEV Pickups: 25% • PEV Vans: 3%
How much support do you want to provide for plug-in hybrid electric vehicles(PHEVs)?	Partial support: Calculate using half of the full support assumption.
Home Charging Access	99% (assumed)

Results - Level 2 Ports

65 Public Level 2 Charging Ports		
# of Ports	Location Type	Description
6	Retail	Ports collocated with shopping (e.g., groceries, clothes, appliances) or dining amenities
4	Recreation Center	Ports collocated with recreational (e.g., parks, movies, bars, museums) or exercise activities
8	Healthcare Facility	Ports located at healthcare facilities such as hospitals, clinics, dental, or therapy
4	Education Facility	Ports located at educational facilities such as schools and universities
3	Community Center	Ports located at religious and community gathering centers
3	Transportation Facility	Ports located at transport hubs including park-and-rides, railway stations, and airports
29	Neighborhood	Publicly accessible ports located curbside near

		where people live
8	Office	Publicly accessible ports collocated with offices or business parks

Results - DC Fast Charging Ports

10 Public Level 2 Charging Ports		
# of Ports	Location Type	Description
5	Retail - 150 kW	Ports collocated with shopping (e.g., groceries, clothes, appliances) or dining amenities
1	Retail - 250 kW	Same above
3	Recreation Center - 150 kW	Ports collocated with recreational (e.g., parks, movies, bars, museums) or exercise activities
1	Recreation Center - 250 kW	Same above

Future Need (2030)

Based on the National Renewable Energy Laboratory (NREL) national electric vehicle infrastructure needs assessment, 12% of light-duty vehicles on the road could be plug-in electric vehicles by 2030. Applied to Morgantown that would mean **10,884** vehicles are plug-in electric vehicles. (source: U.S. Department of Energy Alternative Fuels Data Center - Electric Vehicle Infrastructure Projection Tool)

Results - Level 2 Ports

253 Public Level 2 Charging Ports		
# of Ports	Location Type	Description
30	Retail	Ports collocated with shopping (e.g., groceries, clothes, appliances) or dining amenities
13	Recreation Center	Ports collocated with recreational (e.g., parks, movies, bars, museums) or exercise activities
22	Healthcare Facility	Ports located at healthcare facilities such as hospitals, clinics, dental, or therapy
13	Education Facility	Ports located at educational facilities such as schools and universities

10	Community Center	Ports located at religious and community gathering centers
19	Transportation Facility	Ports located at transport hubs including park-and-rides, railway stations, and airports
109	Neighborhood	Publicly accessible ports located curbside near where people live
37	Office	Publicly accessible ports collocated with offices or business parks

Results - DC Fast Charging Ports

10 Public Level 2 Charging Ports		
# of Ports	Location Type	Description
6	Retail - 150 kW	Ports collocated with shopping (e.g., groceries, clothes, appliances) or dining amenities
3	Retail - 250 kW	Same above
5	Retail - 350+ kW	Same above
4	Recreation Center - 150 kW	Ports collocated with recreational (e.g., parks, movies, bars, museums) or exercise activities
2	Recreation Center - 250 kW	Same above
3	Recreation Center - 350+ kW	Same above

Deficiency Analysis

The following table compares the current stations and the results of the needs analysis (current and future) from the sections above.

Location Type		Current Condition		Current Need		Future Needs (2030)	
		Port Type	Port # (Deficiency)	Level 2	DC Fast	Level 2	DC Fast
Public	Retail	–	0 (6)	6	6	30	14
	Recreation Center	–	0 (4)	4	5	13	9
	Healthcare Facility	–	0 (8)	8	–	22	–
	Education Facility	–	0 (4)	4	–	13	–
	Community Center	Level 2	1 (2)	3	–	10	–
	Transportation Facility	–	0 (3)	3	–	19	–
	Neighborhood	–	0 (29)	29	–	109	–
	Office	–	0 (8)	8	–	37	–
Other	Gas station	DC Fast	16	–	–	–	–
	Car / Motorcycle Dealer	Level 2	5	–	–	–	–
		DC Fast	2	–	–	–	–
	Multi-Unit Dwelling	Level 2	5	–	–	–	–

Preliminary Recommendations

Focus Areas (Non-Neighborhood)

Location Type	**Location Description (map ID)**	**Charger Types (# of Ports)**
Retail	University Towncenter (1)	Level 2 (20) DC Fast (10)
	Suncreat Towncenter (2)	Level 2 (10) DC Fast (4)
Recreation / Community Center	Marilla Park (3)	Level 2 (8) DC Fast (2)
	Hazel Ruby McQuain Park (4)	Level 2 (4) DC Fast (2)
	Start City Riverfront Park (5)	Level 2 (4) DC Fast (2)
	Westover City Park (6)	Level 2 (4) DC Fast (2)
	Caperton Trail Park (7)	Level 2 (4)
Healthcare Facility	Ruby Memorial Hospital (8)	Level 2 (10)
	Mon Health Medical Cetner (9)	Level 2 (10)
	WVU Medicine - University Towncenter (10)	Level 2 (4)
Education Facility	WVU Parking Falling Run Rd/University Ave Area (11)	Level 2 (4)
	WVU Parking Colisuem (12)	Level 2 (8)
	WVU Rec Center (13)	Level 2 (4)
Transportation	Morgantown Airport (14)	Level 2 (4)
	Mountain Line Westover Terminal / Westover Park and Ride (15)	Level 2 (4)
	I-68/US43 Park and Ride (N/A)	Level 2 (4)

	Brookhaven Park and Right (16)	Level 2 (4)
	WVU Parking PRT-Mountain Station (17)	Level 2 (8)
Office	Spruce Street Garage (18)	Level 2 (6)
	University Ave Garage (19)	Level 2 (6)
	City Fayette St Parking (20)	Level 2 (4)
	Mountainlair Garage (21)	Level 2 (6)
	Mon County Schools Admin Office (22)	Level 2 (4)
	Downtown Farmers Market (23)	Level 2 (4)
	WVU Medical School Campus Area (24)	Level 2 (10)

Focus Areas (Neighborhood)

Equity Priority Location

The following areas are identified as high priority locations for EV infrastructure investment in terms of equity and economic justice. The tools used to identify those locations are USDOT Equitable Transportation Community (ETC) Explorer, USDOT Electric Vehicle Charging Justice40 Map, and the White House Council on Environmental Quality - Climate and Economic Justice Screen Tool.

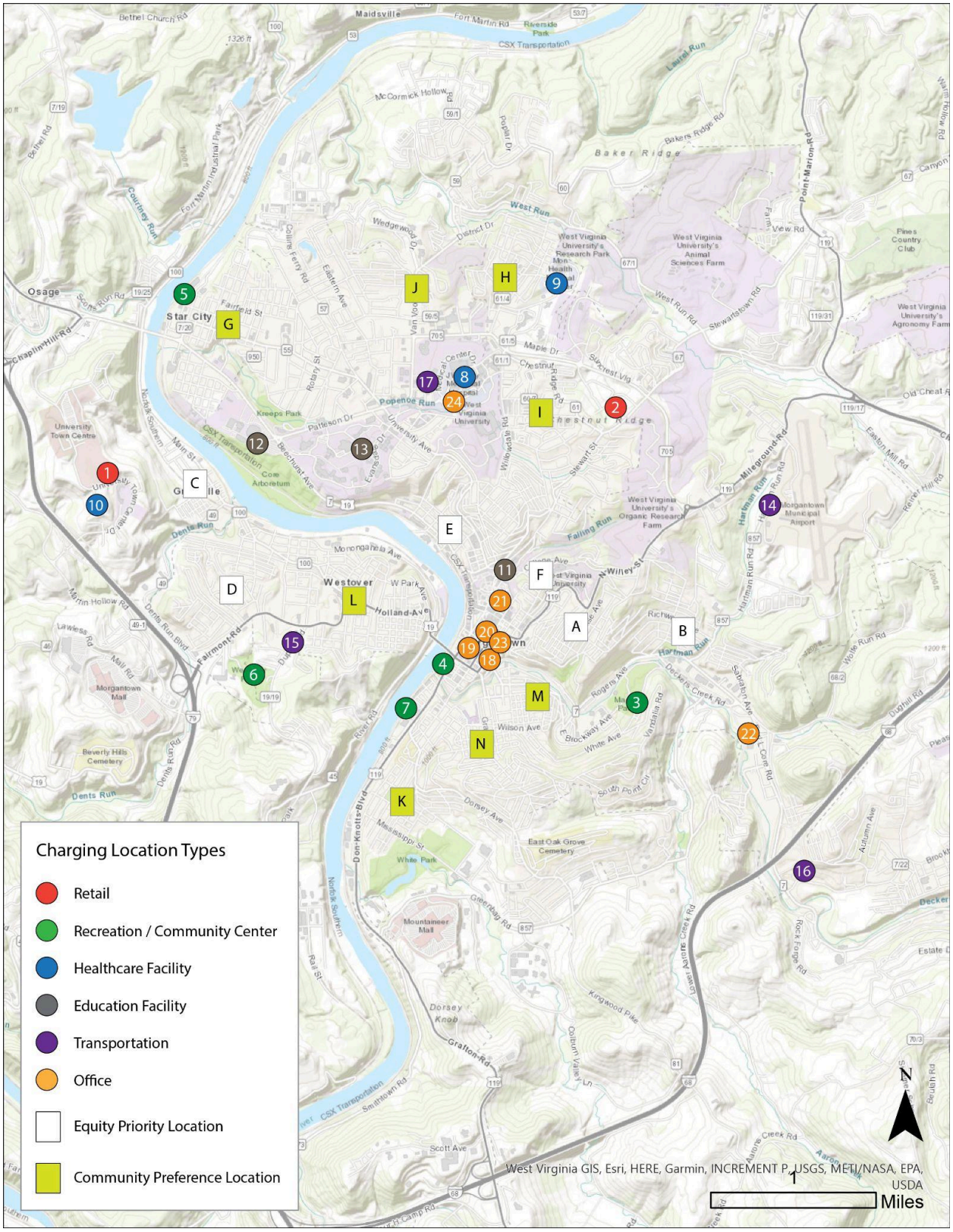
Location Name (map ID)	**Primary Streets**
Woodburn (A)	Snider St, Monongalia Ave, Richwood Ave
Sabraton (B)	Richwood Ave
Main Street - Granville (C)	Main Street
Morgan Height - Westover (D)	Riverview Ave, Columbus St, Fairmor Dr
Sunnyside (E)	Grant Ave, McLane Ave
Mountaineer Middle School area (F)	Cornell Ave, Price St

Community Preference Locations

The following areas are not identified as the equity and economic justice priority location, but they are identified as community preference locations considering the population density, housing types, and adjacent land use.

Location Name	**Primary Streets**
Star City (G)	Stafford St, Congress Ave
North Hills (H)	Pineview Dr, Headlee Ave
Apartments in Valley View Area (I)	Valley View Ave
Apartments in Va Voorhis Area (J)	Van Voorhis Rd
First Ward (K)	West Virginia Ave, Madigan Ave, Mississippi St
Triangle - Westover (L)	Holland Ave, Dunkard Ave
Greenmont (M)	Cobun Ave, Kingwood St
South Park (N)	Park St, Grand St, Wilson Ave

Recommendation Map



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Planned Community Outreach

Agency	Potential Input Areas			
	Development / Building Code	Fleet	Charging Station / focus area	Energy
Municipalities / County	X	X	X	X
MLTA		X	X	
Board of Education		X	X	
Utility Company			X	X
WVU		X	X	
Business (developer, car dealership, and others)		X	X	
Environmental groups	X		X	