



West Virginia State Freight Plan

presented to
WV Planning Conference

presented by
Cambridge Systematics, Inc.
Lisa Destro



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CAMBRIDGE
SYSTEMATICS



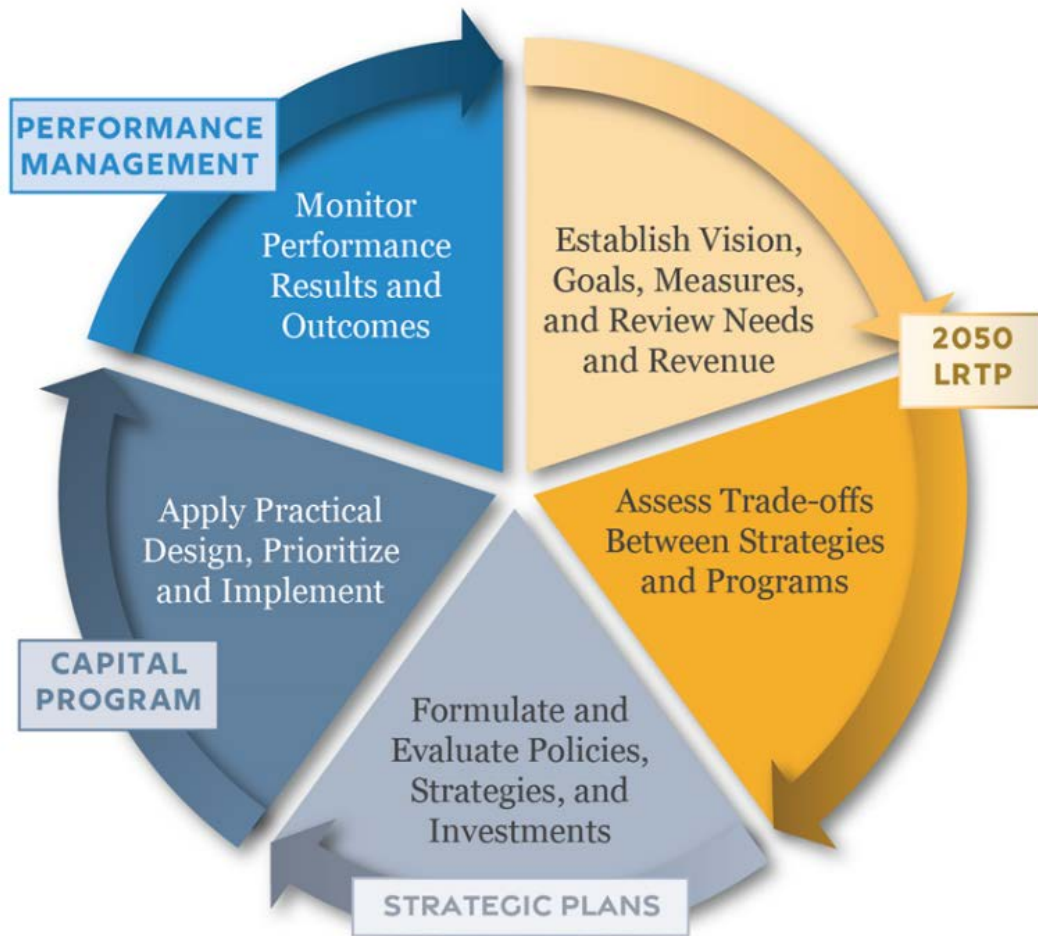
Presentation Outline

- 2023 State Freight Plan Process
- State Freight Plan Purpose and Federal Requirements
- Goals & Objectives
- Freight's Importance to WV's Economy
- WV's Multimodal Freight Infrastructure
- Freight Challenges and Opportunities
- Recommended Strategies & Investments

Freight Plan Development Process

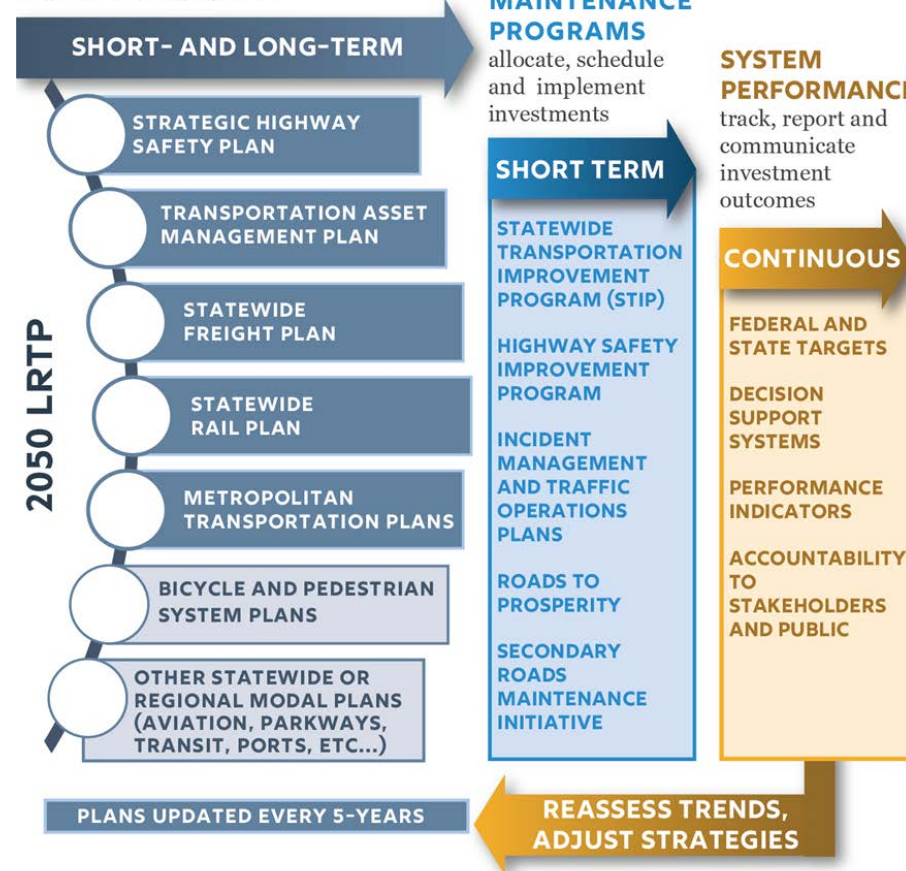


Alignment with WV's LRTP and other Plans



WVDOT's Transportation Planning Lifecycle

SYSTEM AND MODAL PLANS
guide strategic, coordinated investments to reduce costs and increase efficiency in response to emerging needs





Stakeholder Engagement

West Virginia Freight Advisory Committee (FAC) Meetings

- March 23, 2023
- July 19, 2023

FHWA Truck Parking Workshop Sessions

- April 11, 2023
- April 19, 2023
- May 3, 2023

Metropolitan Planning Organizations (MPO) Outreach

- WVAMPO Briefing (December 13, 2022)
- HEPMPO Freight Summit (February 1, 2023)
- WVAMPO Briefing (April 27, 2023)

Survey Instruments (March–April 2023)

- Statewide Stakeholder Online Survey
- Statewide Stakeholder Online Map Tool

Stakeholder Interviews (February–March 2023)

- West Virginia Coal Association
- West Virginia Department of Economic Development
- Bel-O-Mar Regional Council
- Brooke-Hancock-Jefferson (BHJ) Metropolitan Planning Commission
- Fayette/Raleigh MPO
- Hagerstown/Eastern Panhandle (HEP) MPO
- KYOVA MPO
- Morgantown/Monongalia MPO
- Regional Intergovernmental Council (RIC)
- Wood-Washington-Wirt (WWW) MPO



FAC Members

WVDOH (Planning,
ROW, IT,
Aeronautics)

MPOs

State Agencies
(DEP, DNR, PSC,
Gov. Hwy Safety
Office, Route 2/I-68
Authority)

Economic
Development
Organizations

Federal (FHWA,
FMCSA)

Trucking Co.
(Owner-Operator
Independent Drivers
Association)

Railroads (Class I's,
Short Lines)

Shippers (Procter &
Gamble, Volvo,
Martin Marietta
Materials)

Trade Associations
(WV Coal, WV
Manufacturer, I-81
CC, Trucking Assoc.)

Stakeholder Interviews

Interviewees:

- MPOs
- WV Coal Association
- WV Department of Economic Development

Considerations and issues specific to the organization's region of influence

Freight and industry trends

Infrastructure needs and areas of congestion

Needs and considerations specific to various freight modes

Policy and institutional needs

Industrial access issues

Safety issues

Truck parking issues

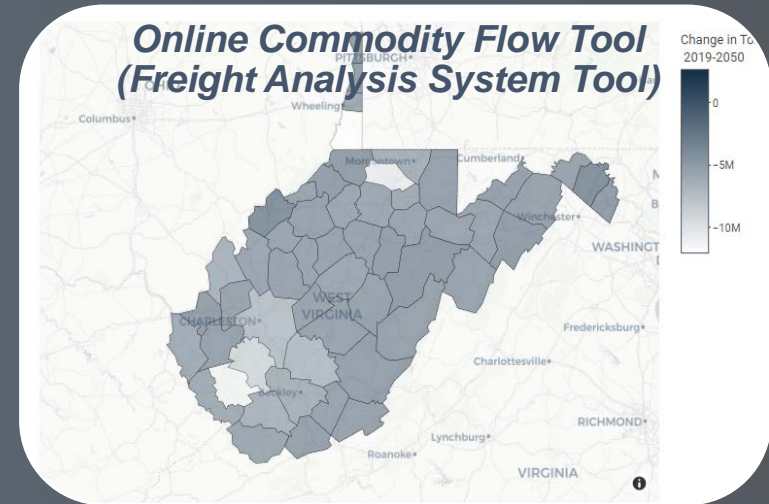
Issues related to environmental justice

Online Tools and Survey Instruments

Freight Plan

Please provide your input and share! Via Online Survey

- [Online Survey](#)
- [Online Map tool](#)
- [Online Map tool "How to" tutorial](#)
- [Online commodity flow tool](#)
- [FAC Slide Presentation 2023](#)
- [FAC Meeting Notes 2023](#)



WVDOT Freight Plan - Stakeholder Survey - Working

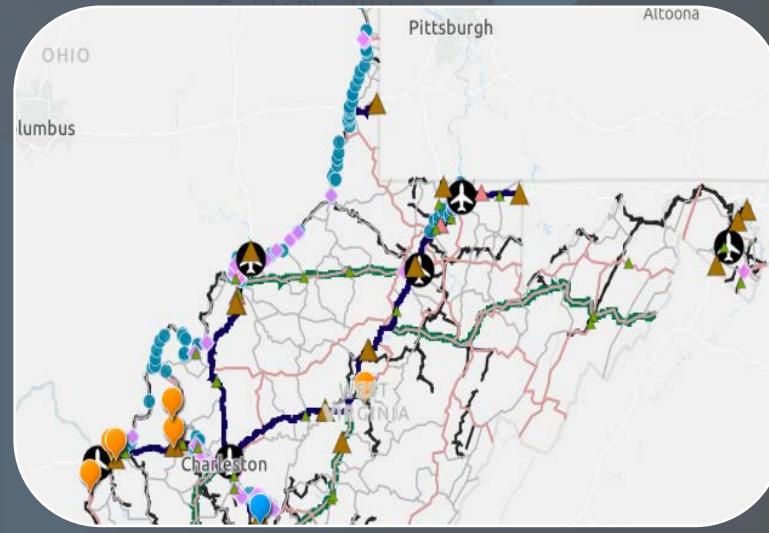
22 Mar 2023

Freight Stakeholder Survey to collect input on needs and potential solutions

Estimated time to complete: 15 minutes

[Start now](#)

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FHWA Truck Parking Workshop

3 Workshop Sessions:

- April 11, April 19, and May 3, 2023

Invited Participants:

- FAC

Invited Speakers:

- WVDOT, WV MPOs, Colorado DOT, North Carolina DOT, Real Women in Trucking, and National Association of Truck Stop Operators.

Workshop Objectives:

- Identify truck parking issues
- Needs and trends in WV
- Review effective practices and solutions for addressing truck parking challenges
- Provide opportunities for stakeholders to share effective practices
- Identify possible solutions to truck parking issues in WV.



Purpose of the State Freight Plan

- Update the Plan to meet current federal guidelines
- Gather freight related data and conduct a stakeholder engagement effort on freight related issues
- Develop data-driven, performance-based decision-making tools
- Assess the multimodal freight system conditions and economic trends
- Identify needs and opportunities to inform future freight planning, policies, and investment in West Virginia
- Identify and prioritize projects, policies, and strategies to support West Virginia's freight-related goals

Federal Requirements for Freight Plans

FAST Act (2015)



State Freight Plans shall include, at a minimum:

Identification of significant statewide **freight trends, needs and issues**

Description of **freight policies, strategies and performance measures** that will guide freight-related transportation investment decisions

Critical multimodal rural freight facilities and **rural and urban freight corridors**

Link to **national multimodal freight policy** and highway freight program goals

Description of how **innovative technologies and operational strategies** (including intelligent transportation systems) that improve the safety and efficiency of freight movements were considered

Description of improvements to reduce **roadway deterioration by heavy vehicles** (incl. mining, agricultural, energy cargo, and timber vehicles)

Inventory of **facilities with freight mobility issues** and a description of the strategies the state is employing to address the freight mobility issues

Description of **significant congestion or delay** caused by freight movements and any mitigation strategies

Freight investment plan that includes a list of priority projects and describes investment and matching funds

Consultation with the **state freight advisory committee**

Federal Requirements for Freight Plans Infrastructure Investment and Jobs Act (IIJA, 2021)



State Freight Plans shall include, at a minimum:

Assessment of **commercial motor vehicle parking** facilities

Description of **supply chain cargo flows**

Inventory of **commercial ports**

Discussion of the impacts of **e-commerce** on freight infrastructure

Considerations of **military freight**

Strategies and goals to decrease a) the severity of impacts of **extreme weather and natural disasters** on freight mobility, b) the impacts of freight movement on **local air pollution**, c) the impacts of freight movement on **flooding and stormwater runoff**, and d) the impacts of freight movement on **wildlife habitat loss**



2023 State Freight Plan

- Executive Summary
- State Freight Plan
- 8 Supporting Tech Memos
 - » 5 Modal Profiles
 - » 1 Commodity Flow Profile
 - » 1 Truck Parking Profile
 - » 1 Survey Results Summary Report
- Online Commodity Flow Visualization Tool and User Guide





Access to the State Freight Plan

➔ You can access the 2023 West Virginia State Freight Plan and all supporting tech memos here:

<https://transportation.wv.gov/highways/Planning/Pages/Freight-Plan.aspx>

Transportation > Highways > Planning Division > Freight Plan

Freight Plan

- [WV State Freight Plan 2023](#)
- [WV State Freight Plan Executive Summary](#)

- [Online commodity flow tool](#)
- [WV State Freight Plan Aviation profile](#)
- [WV State Freight Plan Commodity Flow Report](#)
- [WV State Freight Plan FAS Tool User Guide](#)
- [WV State Freight Plan Highway Profile](#)
- [WV State Freight Plan Pipeline Profile](#)
- [WV State Freight Plan Port Profile](#)
- [WV State Freight Plan Rail Profile](#)
- [WV State Freight Plan Survey Results](#)
- [WV State Freight Plan Truck Parking Profile](#)

"West Virginia Department of Transportation's (WVDOT) new State Freight Plan highlights how the inland waterway system, seaports, pipelines, and airports all contribute to the state's economic development and enhancing West Virginia's competitiveness.

The freight system in West Virginia is diverse and utilizes multiple modes of transportation. Freight is an important ingredient for economic development and enhancing West Virginia's competitiveness.

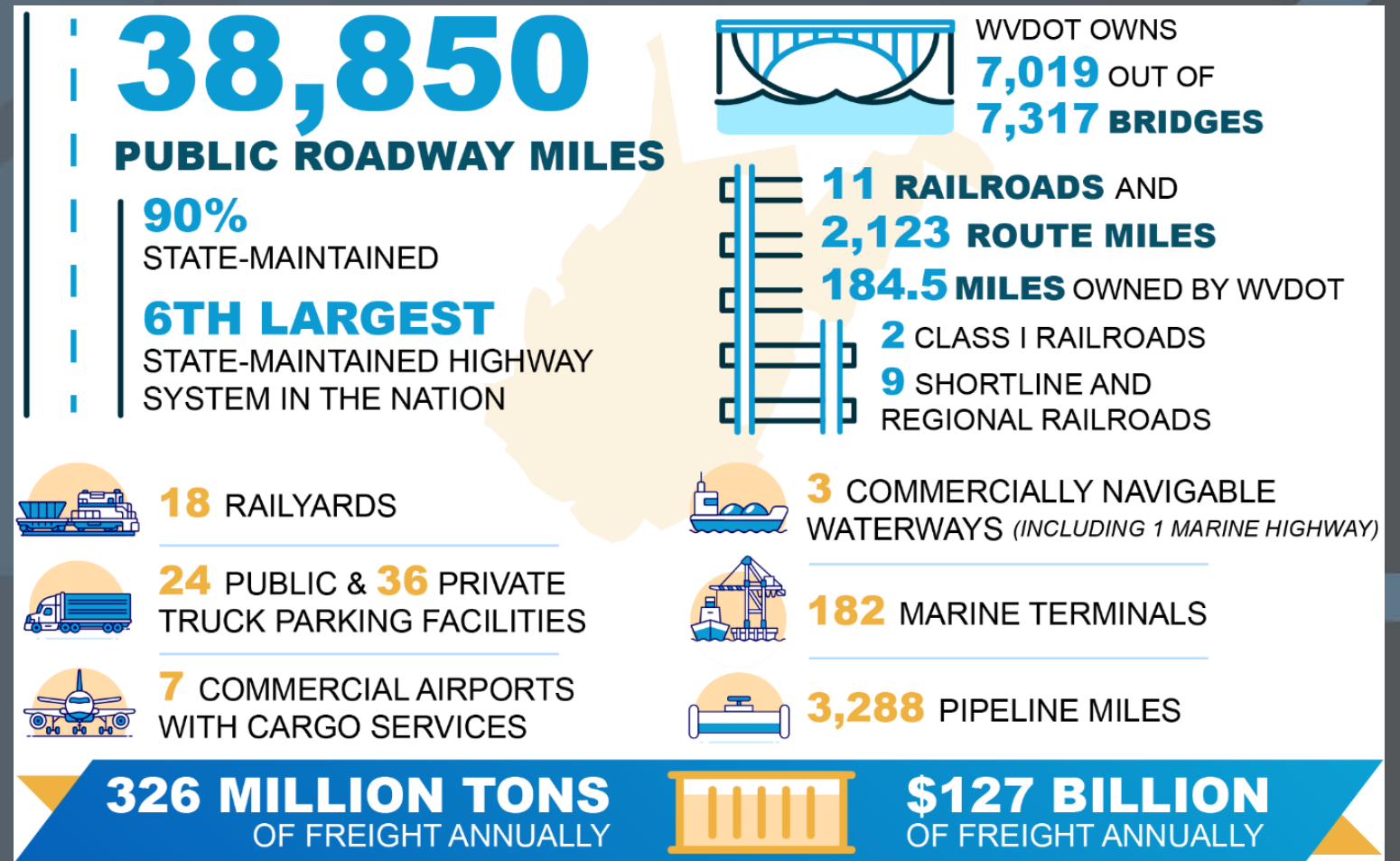
Contact Us: wvdotfreight@wv.gov

2023 State Freight Plan

1. Overview



- Goals & Objectives
- Purpose & Requirements
- Plan Alignment
- Stakeholder Engagement



2023 State Freight Plan

1. Overview – Goals & Objectives



Goals	Objectives
System Condition, Efficiency, and Fiscal Sustainability	Maintain the existing freight transportation system and freight assets in a state of good repair.
	Invest in innovative technologies and program delivery strategies supporting freight movement.
	Explore new and sustainable revenue options which fund freight investments.
Safety and Security for All Users	Reduce fatalities and serious injuries on the multimodal transportation system.
	Enhance the safety and security of freight operators and cargo.
	Manage a resilient and redundant freight transportation network.
Economic Vitality	Improve intermodal freight connections and expand direct freight access to economic activity centers and emerging industries/clusters.
	Address highway freight bottlenecks and improve first-mile/last-mile access.
	Partner with universities, community colleges, and workforce training programs to educate and train new freight operators and supporting workforces.
Multimodal Mobility, Reliability, and Accessibility	Improve freight network reliability, reduce incident clearance time and recovery, and enhance management of operational disruptions on freight corridors.
	Improve access and availability of designated and safe truck parking facilities.
	Create new opportunity for access to key destinations and jobs for underserved or disadvantaged populations.
Livable and Healthy Communities	Reduce emissions from freight movement.
	Mitigate environmental and community impacts from freight movement.
	Coordinate freight land use and transportation decisions.

2023 State Freight Plan

2. Freight's Importance to WV's Economy

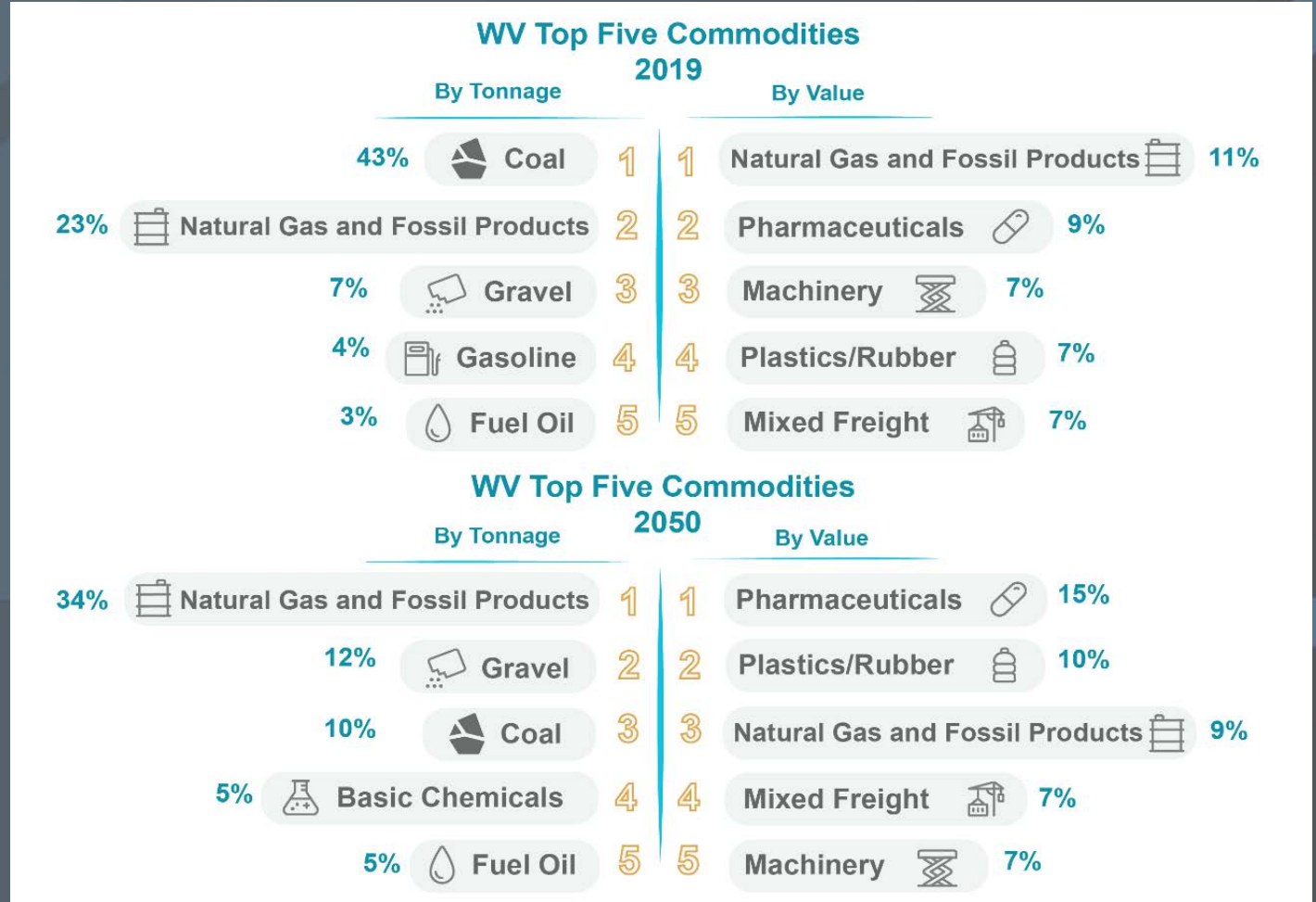


➤ Freight & Economic Trends

➤ Industry and Supply Chain Spotlights

➤ Freight Activity and Forecasts

» Includes a new [commodity flow analysis tool for WVDOT](https://camsys.shinyapps.io/WVDOT_FAS/)



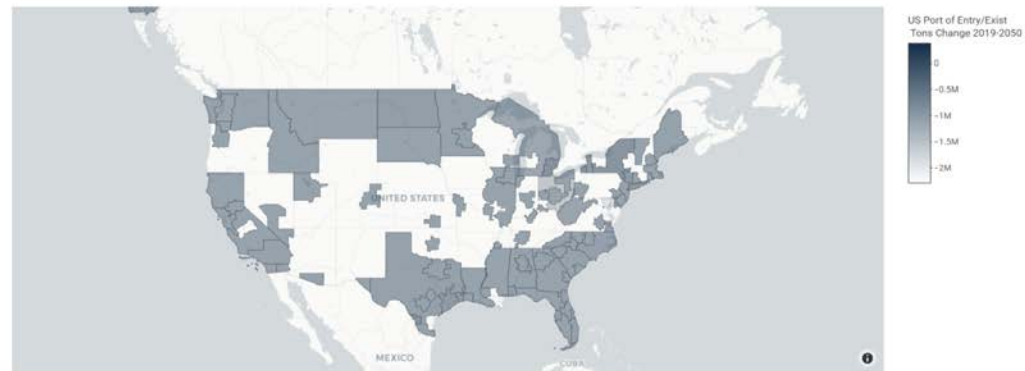




Change by Foreign Trade Zones for International Trade Map

Map Units

Absolute Value Percent



Change by International Trading Partners Map

Map Units

Absolute Value Percent



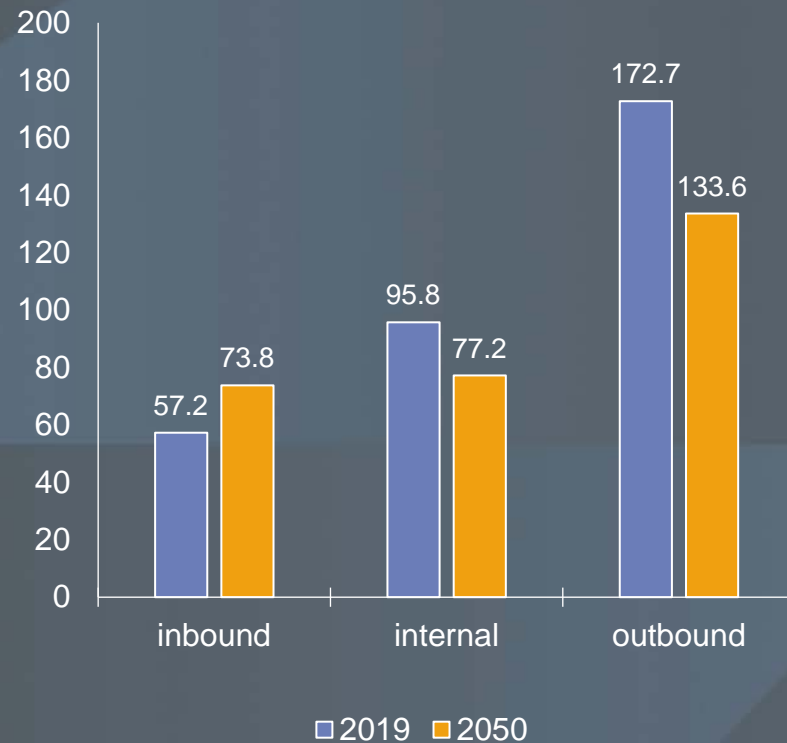
2023 State Freight Plan

2. Freight's Importance to WV's Economy

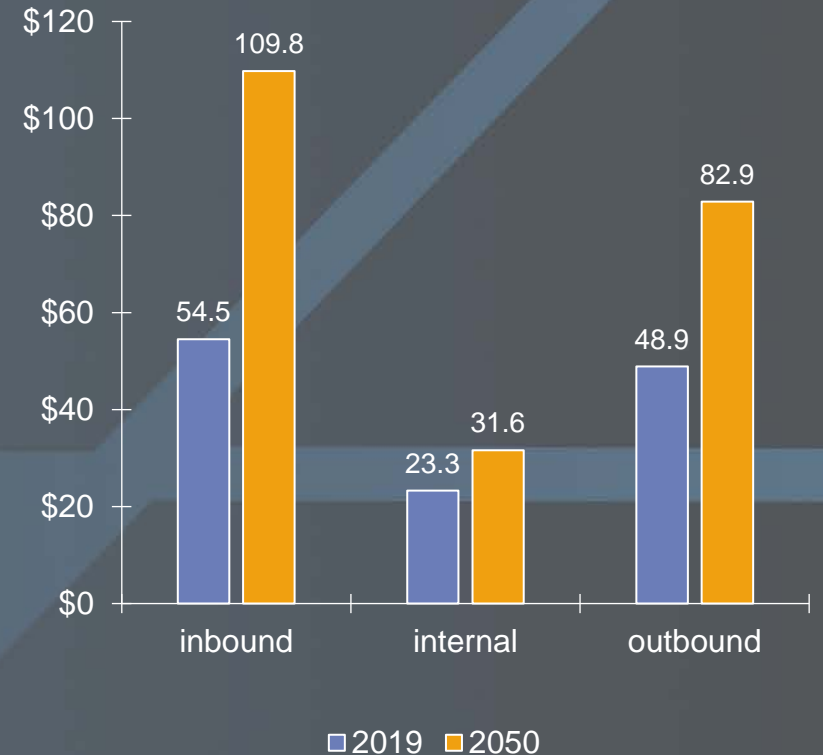


- The rise in higher per-unit-price commodities will drive the increase in overall freight value
- From 2019 to 2050, the freight system is projected to carry less tonnage yet higher values
- The rail network is projected to be the most affected by changes in the coal industry

Tons (in millions)



Value (in billions)



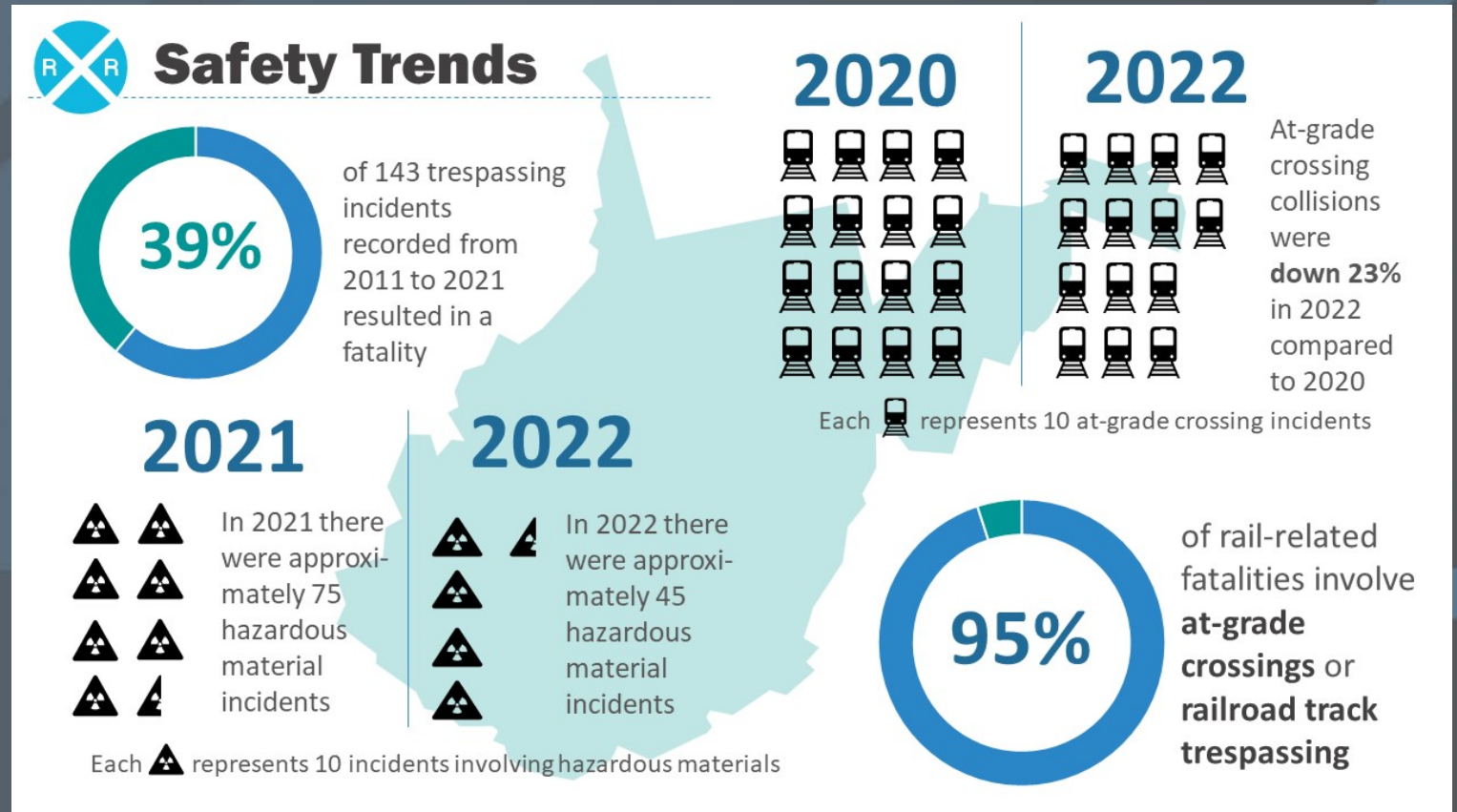
2023 State Freight Plan

3. WV's Multimodal Freight Infrastructure



➤ Freight Network

- » Infrastructure
- » Condition and performance
- » Safety and security
- » Demand trends



2023 State Freight Plan

4. WV's Freight Challenges and Opportunities

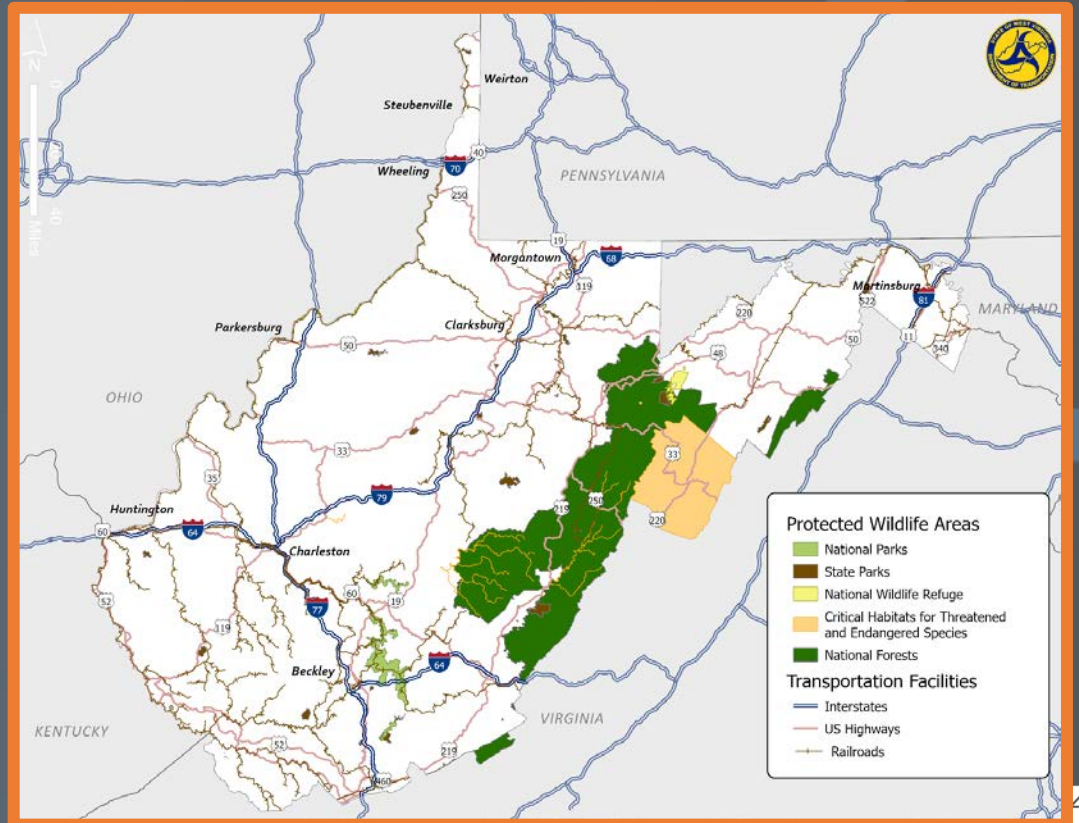
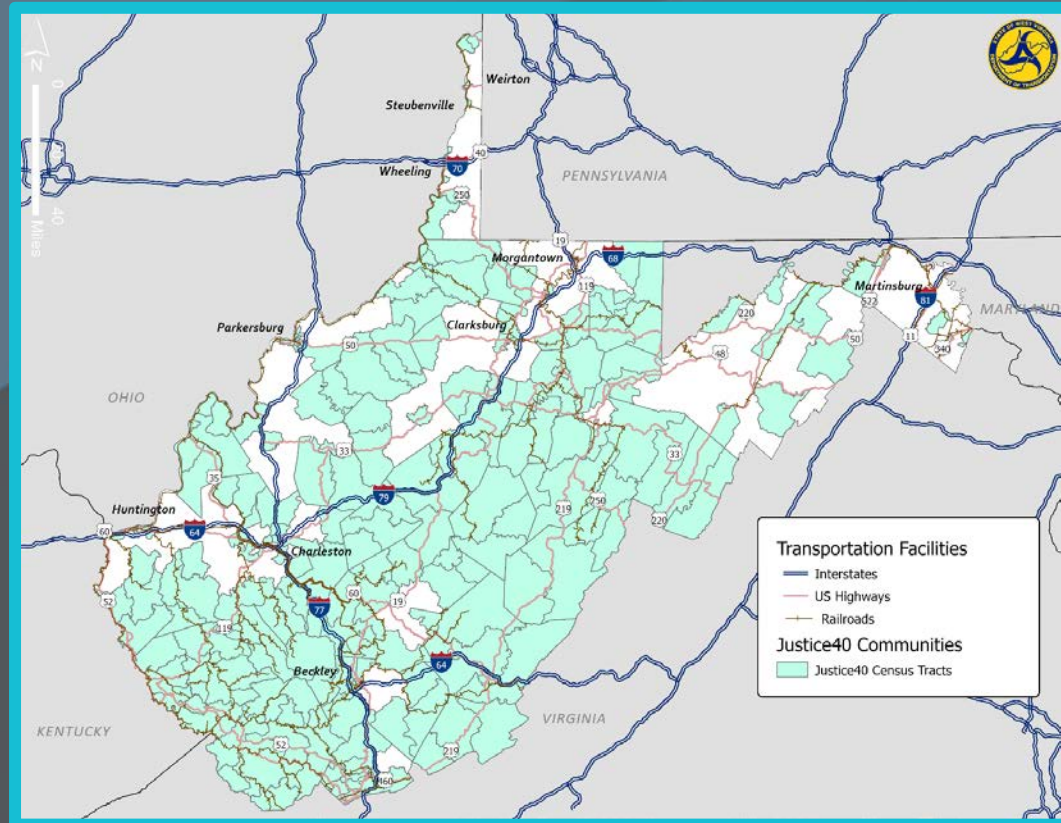


➤ Multimodal Freight Needs

➤ Freight & Equity

➤ Performance Measures

➤ Freight & Environment



4. WV's Freight Needs



Highway Needs

- Truck Parking
- Truck Safety
- System Capacity, Connectivity, and Mobility
- Asset Management
- Transportation Technology
- Industrial Access
- Resiliency/Flooding



Freight Rail Needs

- General Rail Safety
- Improved Safety at Grade Crossings
- Commodity Diversification
- Industrial Access
- Improved Service
- Aging Infrastructure (Tracks and Bridges)
- Capacity and Vertical Clearance
- Sustainability



Ports & Waterways Needs

- Flooding and Aging Infrastructure
- Multimodal Connectivity
- Container on Barge Facilities



Air Cargo Needs

- Maintaining Service
- Maintaining Road Connectivity
- Processing Facilities
- Technology and the Future of Aviation



Pipeline Needs

- Monitor New Pipeline Developments and Last-Mile Terminal Connectors
- Monitor Pipeline Safety

Multimodal Policy Needs

- Ensure a Competitive State Workforce
- Truck Driver Retention and Attraction
- Leverage Federal Grant Funding Opportunities
- Project Selection Processes
- Integration of Freight Planning Into WVDOT Activities
- Continued FAC Engagement



Recommended Strategies

2023 State Freight Plan

5. Freight Strategies & Investments



- **Strategies** - address freight-specific needs and can be advanced by WVDOT over short- and long-term implementation periods
 - » 24 strategies were developed through a review of stakeholder input, analysis of recent freight system performance and needs, and insights and outcomes from the 2050 LRTP and previous freight plans and modal plans
- **Freight Investment Plan** - fiscally constrained investment approach through the National Highway Freight Program (NHFP)
 - » The NHFP provides funding to improve the efficient movement of freight on the designated national highway freight network



Strategies – Multimodal

- Monitor and position for Federal **grant opportunities** and submit and support applications that advance freight system performance and economic competitiveness.
- Incorporate **freight/economic development** related **impacts** and benefits in the **project selection** processes. This will permit better prioritization of proposed investments, help identify and pursue funding options, and offer new avenues for stakeholder engagement.
- Develop a statewide **transportation and economic development plan**. Including identifying strategies to mitigate existing barriers to employment and ensure a competitive state workforce.
- **Regularly convene the FAC**. Discuss Freight Plan implementation, emerging needs, lessons learned, and partnership and funding opportunities.
- Improve **coordination with railroads** that own and operate the rail network within the multimodal freight system. The WVDOH has efforts underway with the state's operating railroad companies to improve communications and expedite approvals essential to highway project delivery and system maintenance.
- Advance **investments** in **resilient** and **energy-efficient infrastructure**. Incorporate freight-specific needs in the State Resiliency Plan and its deployment strategy.
- Invest in **building redundancy** into the system. Including transportation management and operations, real time information, incident management, and work zone management.



Strategies – Highway Freight

- Continue **implementation** of the **TAMP**.
- Advance/accelerate delivery of projects that **preserve bridges and pavement on truck routes**.
- Periodically **re-evaluate truck network** and **intermodal connector designations**.
- Conduct a **truck parking and safety assessment and investment study** to prioritize the list of truck-involved crashes safety hot spots, and truck parking locations feasible for expanding, and develop implementation actions.
- **Expand public truck parking facilities** that are at or over capacity in accordance with truck parking investment study results.



Strategies – Rail Freight

- Maintain **vitality of rail system** and enhance utility to WV's evolving economy.
- Conduct assessment of **opportunities** for traffic development and develop prioritized state policy **for at-risk rail lines**.
- Facilitate **investment in freight rail infrastructure** through state grants and/or loans, or a freight rail investment credit.
- Support improved **access to intermodal service** by WV industry.
- Continue improving rail/highway safety by **investing in at-grade crossings** in accordance with the **State Action Plan**. Where conditions warrant, consider other options, including grade separations.

Strategies – Ports and Waterways, Air Cargo, Pipeline



Ports & Waterways

- Support national investment in **state of good repair** along the **inland waterway** system that serves WV.
- Improve **road and rail access** to **inland port** facilities.
- Promote **development opportunities** at West Virginia **port facilities** and along the **waterways**.

Air Cargo

- Develop a **State Aviation System Plan** to identify, prioritize, and track airport needs.
- Maintain **roadway connections** between West Virginia's **major markets and airport facilities**.

Pipeline

- Improve **multimodal access** to **pipeline terminals**.
- Support federal efforts to ensure **pipeline safety**.

2023 State Freight Plan

5. Freight Strategies & Investments



➤ Freight Investment Plan

» Fiscally constrained investment approach for Federal funding (FY23 – FY28)

Project and Description	Funding Source (\$Millions)	FY23	FY24	FY25	FY26	FY27	FY28	Total
Corridor H: Parsons-Davis	Total Project Cost	\$97.6	\$54.5	–	–	–	–	\$152.1
	NHFP	\$15.2	\$25.1	–	–	–	–	\$40.2
	Other Federal	\$82.4	\$44.6	–	–	–	–	\$111.8
	State Match	–	–	–	–	–	–	–
Corridor H: Hardy Co 23/12—VA State Line	Total Project Cost	–	–	\$144.9	\$144.9	\$144.9	\$144.9	\$579.6
	NHFP	–	–	\$15.2	\$30.3	\$45.4	\$60.6	\$151.5
	Other Federal	–	–	\$129.8	\$114.6	\$99.5	\$84.3	\$428.1
	State Match	–	–	–	–	–	–	–

Highest Priority Strategies for Short-Term Implementation



- Regularly convene the FAC (Multimodal)
- Monitor and position for Federal grant opportunities that advance freight system performance and economic competitiveness (Multimodal)
- Incorporate freight/economic development related impacts and benefits in project selection processes (Multimodal)
- Develop a statewide transportation and economic development plan, including strategies to mitigate existing barriers to employment and ensure a competitive state workforce (Multimodal)
- Improve coordination with railroads that own and operate the rail network within the multimodal freight system (Multimodal)
- Conduct a truck parking and safety assessment and investment study (Freight Highway)
- Expand public truck parking facilities that are at or over capacity in accordance with truck parking investment study results (Freight Highway)
- Conduct assessment of opportunities for freight rail traffic development and develop prioritized state policy for at-risk rail lines (Freight Rail)
- Continue improving rail/highway safety by investing in at-grade crossings in accordance with the SAP (Freight Rail)



Thank You!

Comments/Questions

Check out the Freight Plan website:

<https://transportation.wv.gov/highways/Planning/Pages/Freight-Plan.aspx>

➤ Brian E. Carr
WVDOH Planning Division
brian.e.carr@wv.gov

➤ Lisa Destro
Cambridge Systematics
ldestro@camsys.com