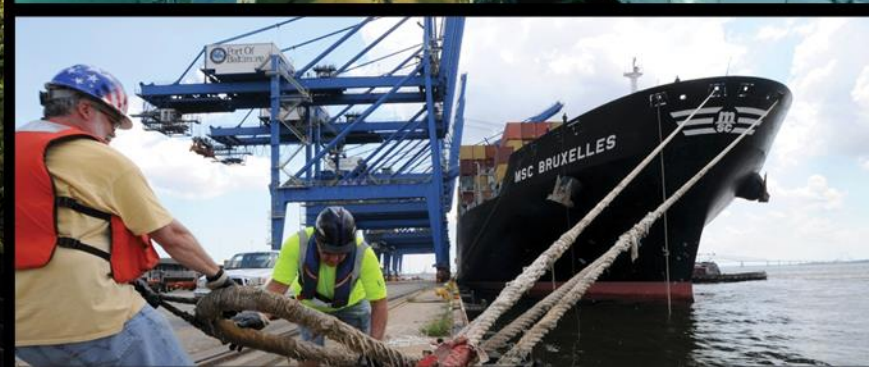


Maryland State Freight Plan



MILESTONE 2: Needs, Projects, and Strategies

Presented to : TPB Freight Subcommittee 1/6/22



Presentation Goals

1. What is the **status** of the freight plan update?
2. How were **freight needs** identified?
3. What regional **needs** and **projects** are being considered?
4. What statewide **strategies** are being considered?



Follow the survey link at the end of this presentation to share your opinions.





1. What is the status of the freight plan update?

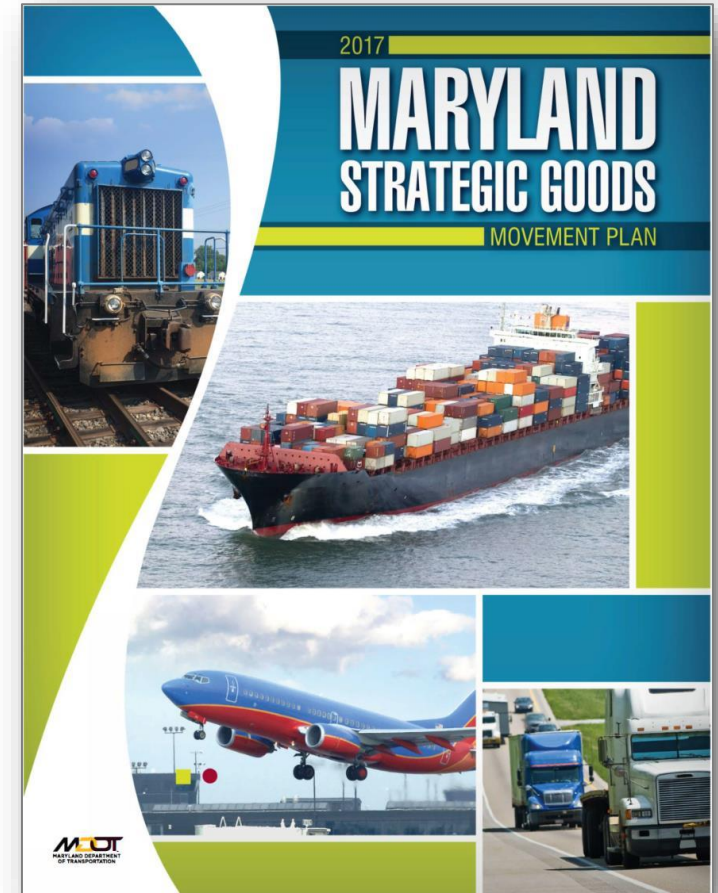


Freight Plan Overview

Purpose:

To examine existing and projected conditions, and identify policy positions, strategies, and freight projects to improve freight movement efficiency and safety.

Last completed in 2017, the Maryland Department of Transportation (MDOT) is actively updating the State Freight Plan for an expected revision date and federal re-approval by Fall 2022.



Freight Plan Overview

Highlights:

- Compliance with **Federal freight planning requirements**
- Inclusion of a **comprehensive overview of freight movement** in Maryland
- Focus on **freight supply chain** or **technology** influences
- Identification of **policy needs** and **strategies**
- Identification of **freight project priorities** and related **investment plans** for an eight-year forecast period
- Completion as a **collaborative** effort amongst freight stakeholders
- Integration and **coordination** with existing/ongoing plans and resources



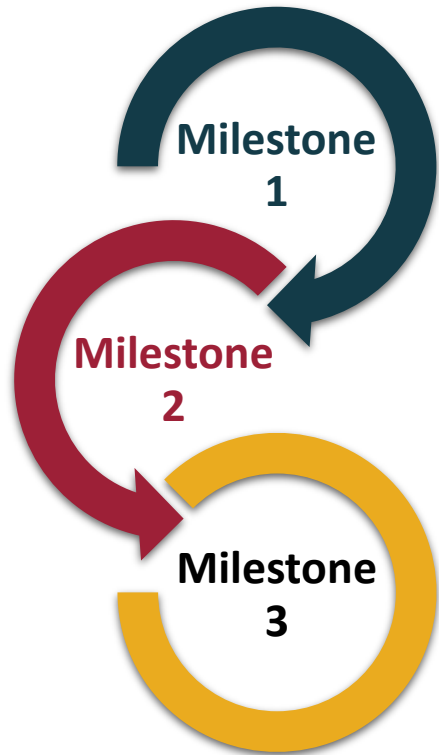
Freight Plan Requirements

The recent **Bipartisan Infrastructure Law (BIL)** (also known as the *Infrastructure Investment and Jobs Act*) expands upon previous FAST Act guidance and identifies **17 federally required elements** for a state freight plan.

1. Freight system trends, needs, and issues
2. Freight policy, strategy, and performance measure evaluations
3. Freight network
4. Alignment with National Freight Policy goals
5. Innovative technologies
6. Asset preservation and improvement strategies
7. Freight bottlenecks, mobility issues, and mitigation strategies
8. Freight congestion and mitigation strategies
9. Freight investment plan
10. **NEW** – Truck parking facilities assessment
11. **NEW** – Supply chain cargo flows
12. **NEW** – Inventory of commercial ports
13. **NEW**– Consideration of multi-state freight compacts
14. **NEW** – Impacts of e-commerce on freight infrastructure
15. **NEW** – Considerations for military freight
16. **NEW** – Focus on enhancing freight resilience and reducing freight environmental impacts
17. State Freight Advisory Committee (SFAC) consultation



Milestones



Milestone 1: Visioning

Establish the plan's vision, goals, and objectives, while also exploring initial freight-related strategies, needs, and opportunities.



Milestone 2: Trends, Needs, Projects and Programs

Identify and compile freight-relevant projects and programs to address future trends, needs, and opportunities



Milestone 3: Draft Plan Review

Compile the overall Maryland State Freight Plan for draft review, including the proposed freight investment plan and strategy details

For additional background and introductory details on the **Maryland Freight Plan** update, refer to the plan's website at: <https://mdot.maryland.gov/freightplan>.





2. How were freight needs identified?



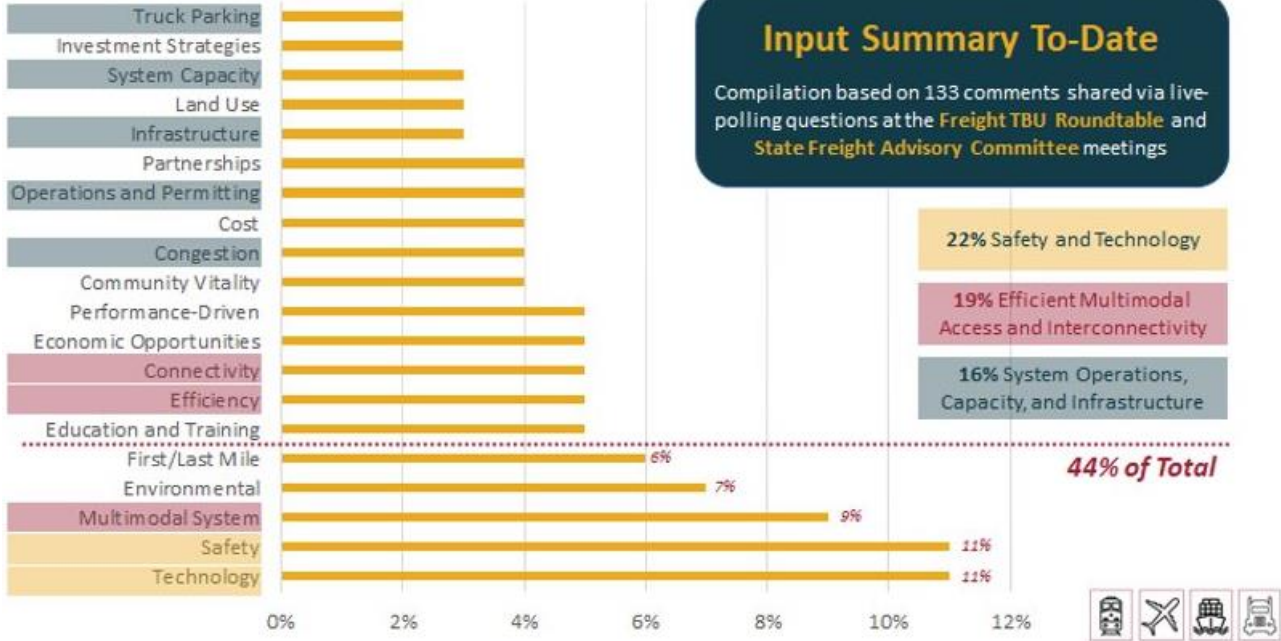
Needs Identification

via Outreach

- Freight Transportation Business Units
- State Freight Advisory Committee
- Metropolitan Planning Organizations
- Public/Private Freight Stakeholders

Milestone 1 Live Polls → 133 comments

Milestone 1 Survey → 200 comments



Needs Identification

via Freight Inventories and Analysis

- Peer Reviews and Best Practices
- 2040 Maryland Transportation Plan (MTP)
- 2021 Maryland Rail Plan Update
- 2020 Maryland Truck Parking Study
- 2019 Maryland Port Strategic Plan
- Other Maryland Modal Plans/Studies
- Freight Performance Data and Analysis

Recent Freight Actions / Resources

- 2017 MD Freight Story
- 2017 MD Freight Economy Dashboard
- 2018 SHRP2 C20 Freight Modeling in MD
- 2017 MD TSMO Strategic Plan
- 2019 MPA Strategic Plan
- 2019 MD State Hwy Mobility Report
- 2020 MD Statewide Truck Parking Study
- 2020 MD CAV Strategic Framework
- 2021 MDT Attainment Report
- 2021 MDOT SHA Truck Parking Analysis
- 2021 MD State Rail Plan
- 2021 MD Truck Platooning Legislation
- MD Roadway Performance Tool (MRPT)
- Key Freight Projects and Studies





3. What regional needs and projects are being considered?

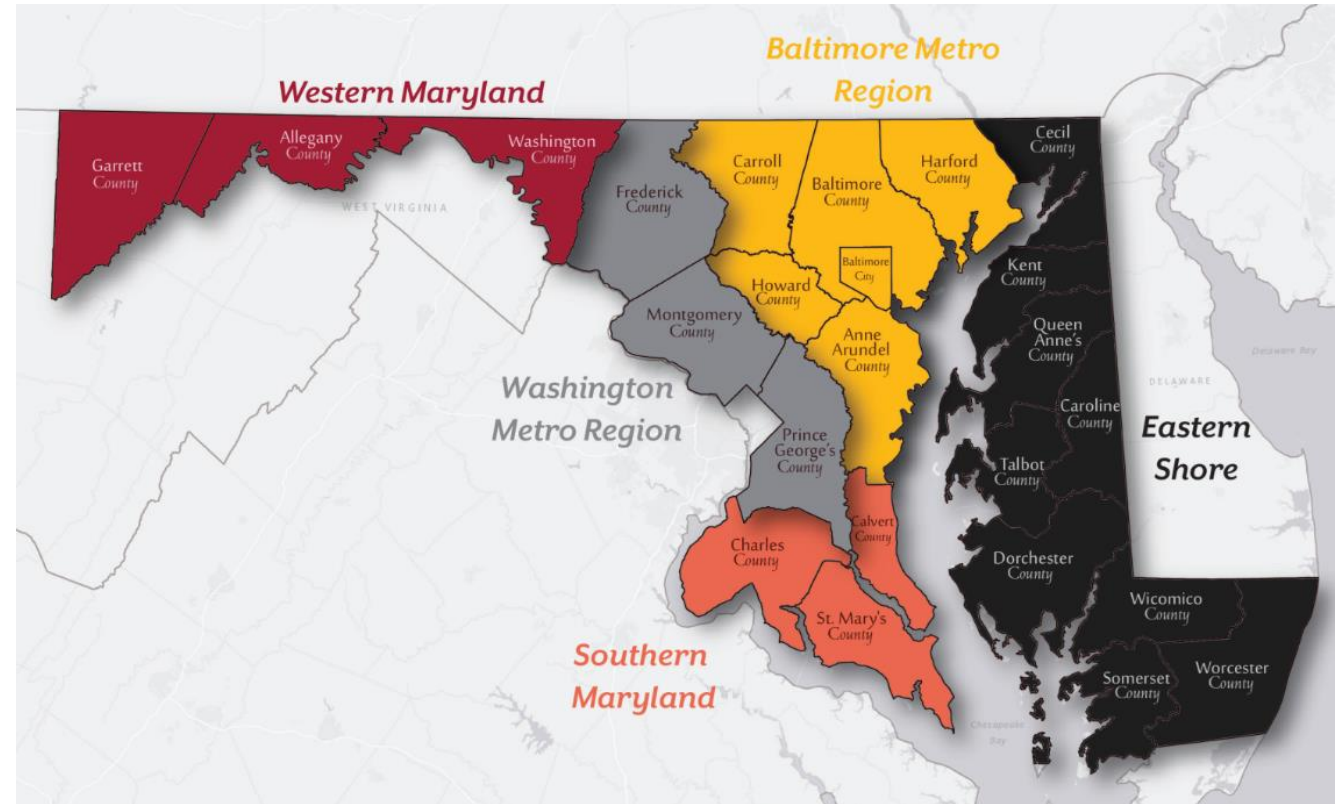


Regional Needs and Projects

Five Regions

1. Western Maryland (WE)
2. Eastern Shore (E)
3. Southern Maryland (S)
4. Baltimore Metro (B)
5. Washington Metro (WA)

The Freight Plan aims to assess key freight needs in a way that reflects the uniqueness of the different regions across Maryland and balances the broader statewide priorities alongside regional relevancy and interests.



Regional Needs and Projects

Categories (Map Legend)

- **Truck Parking Need** – based on Priority Clusters of Undesignated Truck Parking per the Maryland Statewide Truck Parking Study (2020)
- **Congested Routes** – based on congested roadways per the Maryland State Highway Mobility Report (2019/2020)
- **Congested Areas** – based on clusters of congested roadways per the Maryland State Highway Mobility Report (2019/2020)
- **Truck Bottlenecks** – based on compilation of top freight bottlenecks per FHWA’s Freight Mobility Trends Resource, the Maryland Roadway Performance Tool (MRPT), or related data resources
- **Stakeholder Input** – based on compilation of agency, stakeholder, and public comments received through previous Milestone #1 of the freight plan update, gathered from live polls, online surveys, and related discussions
- **Funded Projects** – based on projects currently programmed for funding per MDOT’s Comprehensive Transportation Plan (CTP) or other known funding sources
- **Unfunded Projects** – based on project concepts/needs identified through MDOT’s Freight Transportation Business Units (TBU) or related long-range plans that are not currently programmed for funding



Note: Regional Maps do not show relevant funded programs that may encompass multiple locations statewide (e.g. Highway Safety Facilities and Equipment program; Railroad Crossing program; P3 program; Traffic Relief Plan (Phase 2) Smart Traffic Signals; others.

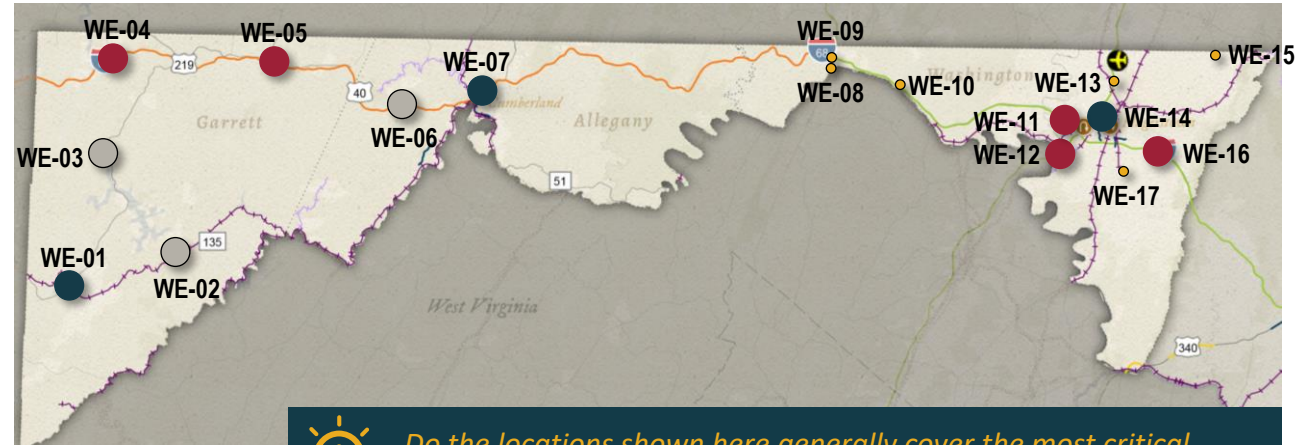
Western Maryland



- Truck Parking Need
- Congested Routes
- Congested Areas
- Truck Bottlenecks
- Stakeholder Input

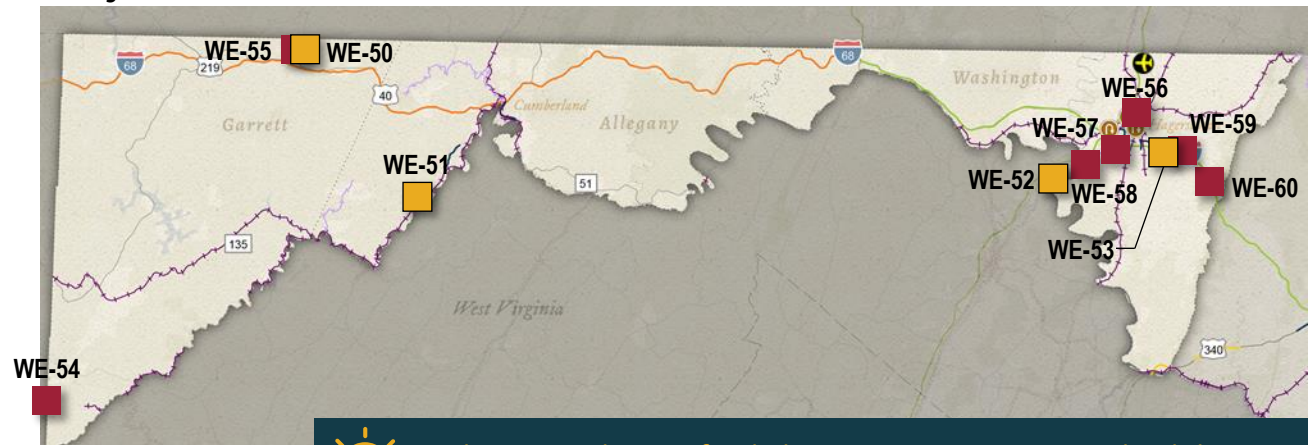
- Funded Project
- Unfunded Projects

Needs



Do the locations shown here generally cover the most critical freight needs in the Western Maryland region?

Projects



Select up to three unfunded projects in Western Maryland that you consider most favorable.

Western Maryland

Index #	Needs	Index #	Projects
WE-01	Mountain Lake Park	WE-50	US 219 (Old Salisbury Road to PA State Line)
WE-02	MD 135	WE-51	US 220 (Allegany County)
WE-03	US 219	WE-52	I-81 Phase II, III, and IV (Washington County)
WE-04	Truck Parking in I-68 (Youghiogheny Overlook Welcome Center)	WE-53	I-70 Interchange (MD 65)
WE-05	Truck Parking in I-68 / US 40 (National Freeway Grantsville)	WE-54	US 219 Bridges (over Youghiogheny River)
WE-06	US 40 Alt	WE-55	US 219 (I-68/US 40 to Old Salisbury Road)
WE-07	Hagerstown	WE-56	I-81 Phase I (Washington County)
WE-08	Route 522 Bridge in Hancock Improvements	WE-57	I-70 Bridges (over I-81 & the Winchester and Western Railroad)
WE-09	Additional I-70 Interchange in Hancock	WE-58	I-81 (US 11 to West Virginia State Line)
WE-10	I-70 Improvements	WE-59	I-70 Bridges (over CSX Hagerstown Branch)
WE-11	Truck Parking in I-70 (Hagerstown)	WE-60	I-70 Bridges (over Crystal Falls Drive)
WE-12	Truck Parking in I-81 (Williamsport)		
WE-13	I-81 Improvements		
WE-14	Cumberland		
WE-15	South Mountain Safety		
WE-16	Truck Parking in I-70 (S. Mountain Welcome Center)		
WE-17	Public Transport from Hagerstown to Frederick		

- Truck Parking Need
- Congested Routes
- Congested Areas
- Truck Bottlenecks
- Stakeholder Input
- Funded Project
- Unfunded Projects

Eastern Shore

Maryland's Multimodal Network
Eastern Shore

- Eastern Shore / Chesapeake Bay Navigable Waterways
- Port of Baltimore
- Air Cargo Airports

Intermodal Terminal Facilities

- Rail & Truck
- Truck & Truck

Maryland Rail Network

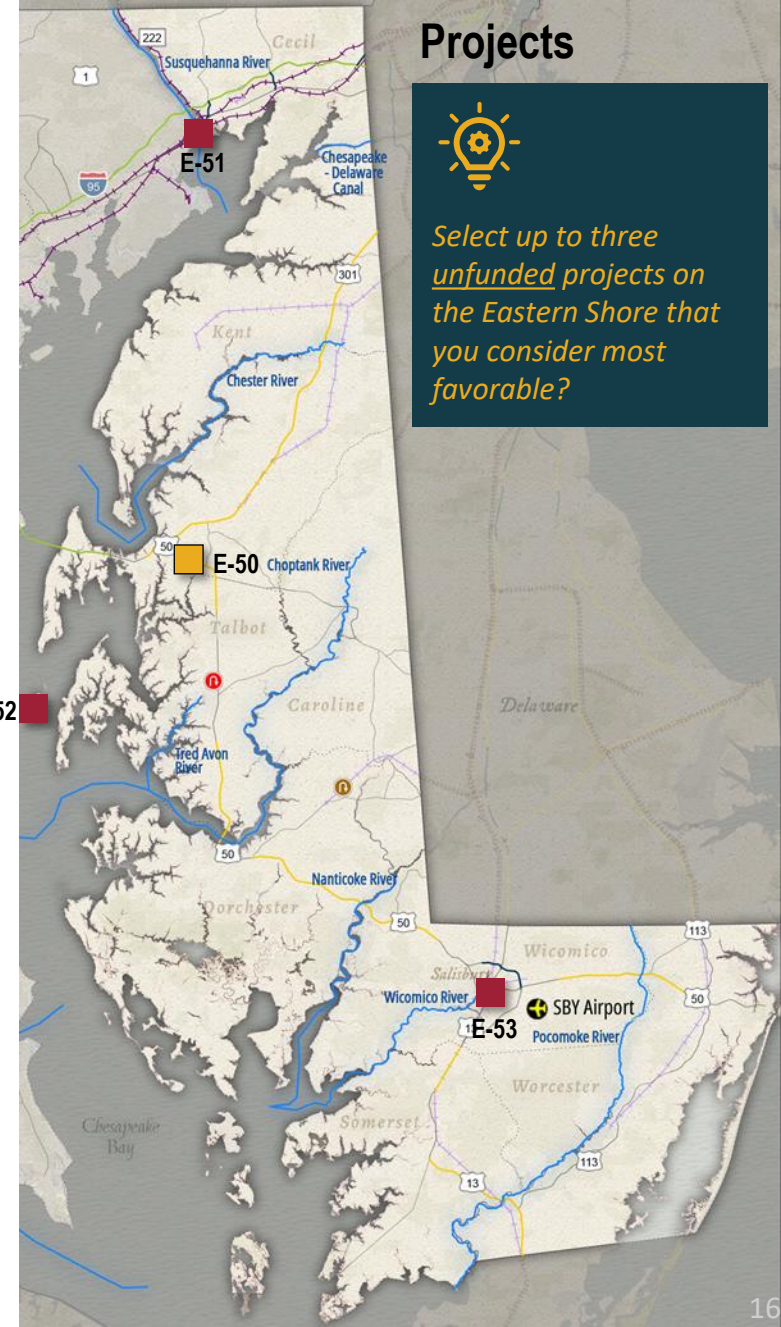
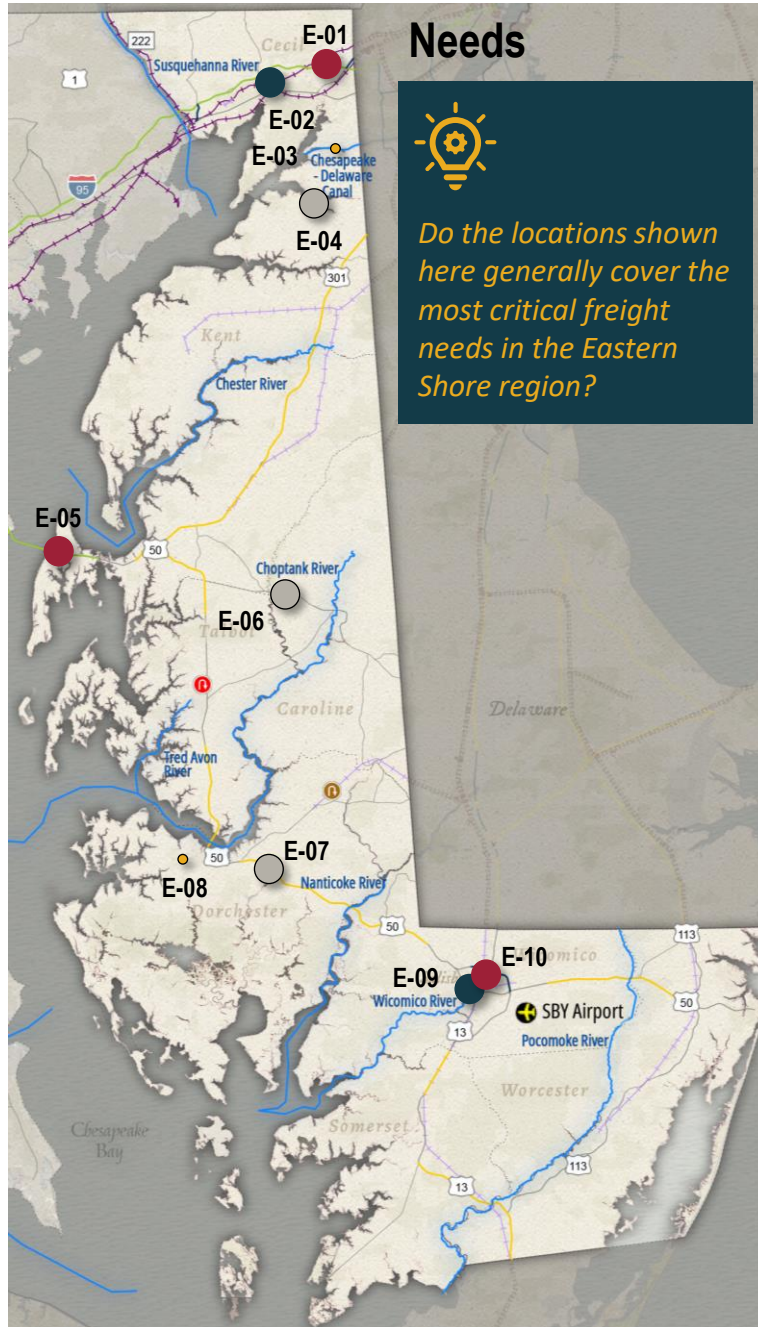
- Class I Railroad
- Short Line Railroad

National Highway Freight Network

- Primary Highway Freight System (PHFS)
- Other Interstate Portions not on the PHFS
- Critical Urban Freight Corridors (CUFC)
- Critical Rural Freight Corridors (CRFC)
- Other Significant Freight Routes

- Truck Parking Need
- Congested Routes
- Congested Areas
- Truck Bottlenecks
- Stakeholder Input

- Funded Project
- Unfunded Projects



Eastern Shore

Index #	Needs
E-01	Truck Parking in I-95 / MD 279 (Elkton)
E-02	Elkton
E-03	C&D Canal Dredging
E-04	US 213
E-05	Truck Parking in US 50 / US 301 (Stevensville)
E-06	MD 404
E-07	US 50
E-08	Freight opportunities in Cambridge
E-09	Salisbury
E-10	Truck Parking in US 50 (Salisbury)

Index #	Projects
E-50	US 50 (Ocean Gateway)
E-51	Susquehanna River Bridge Replacement - <i>Rail</i>
E-52	Poplar Island Expansion/ Operations & Maintenance
E-53	US 13BU - Bridge (over East Branch Wicomico River)

- Truck Parking Need
- Congested Routes
- Congested Areas
- Truck Bottlenecks
- Stakeholder Input

- Funded Project
- Unfunded Projects

Southern Maryland

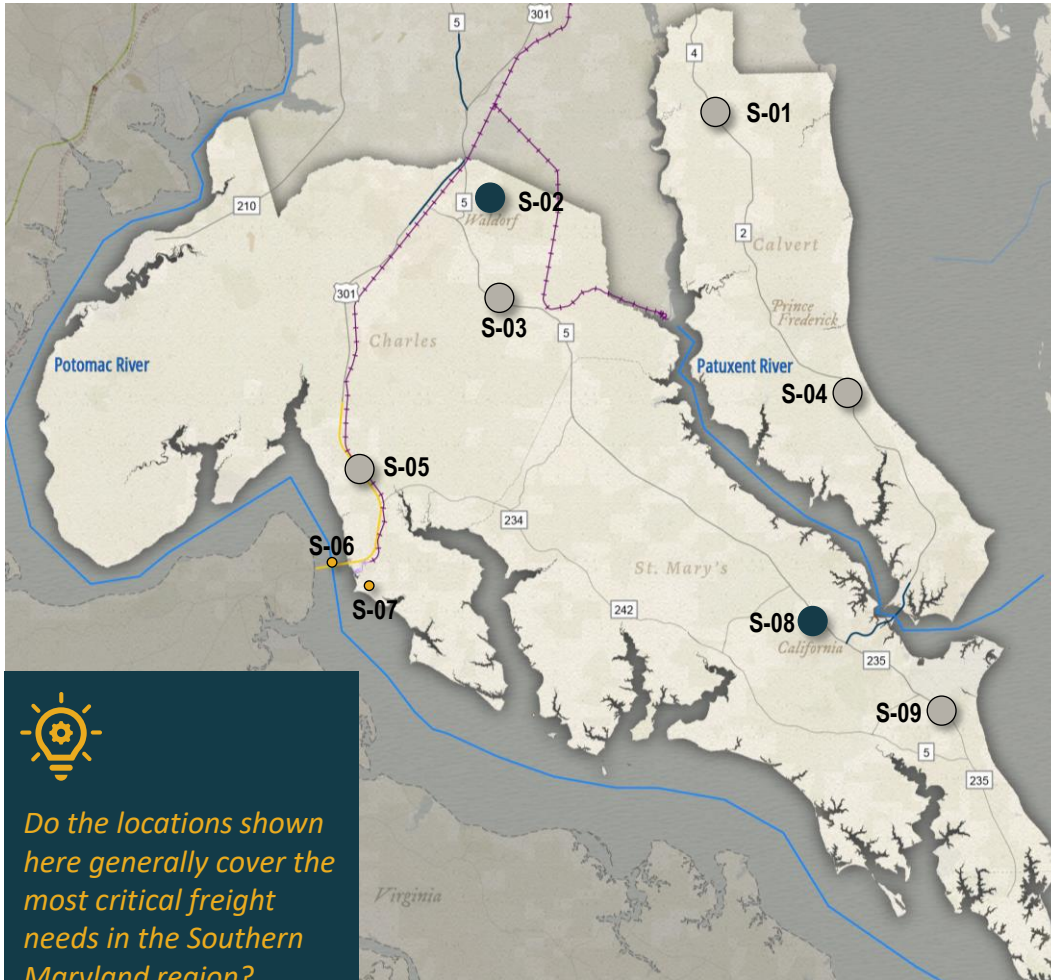
Needs

Maryland's Multimodal Network Southern, MD

- Chesapeake Bay Navigable Waterways
- Maryland Rail Network
 - Class I Railroad
 - Short Line Railroad
- National Highway Freight Network
 - Primary Highway Freight System (PFHS)
 - Other Interstate Portions not on the PFHS
 - Critical Urban Freight Corridors (CUFC)
 - Critical Rural Freight Corridors (CRFC)
 - Other Significant Freight Routes

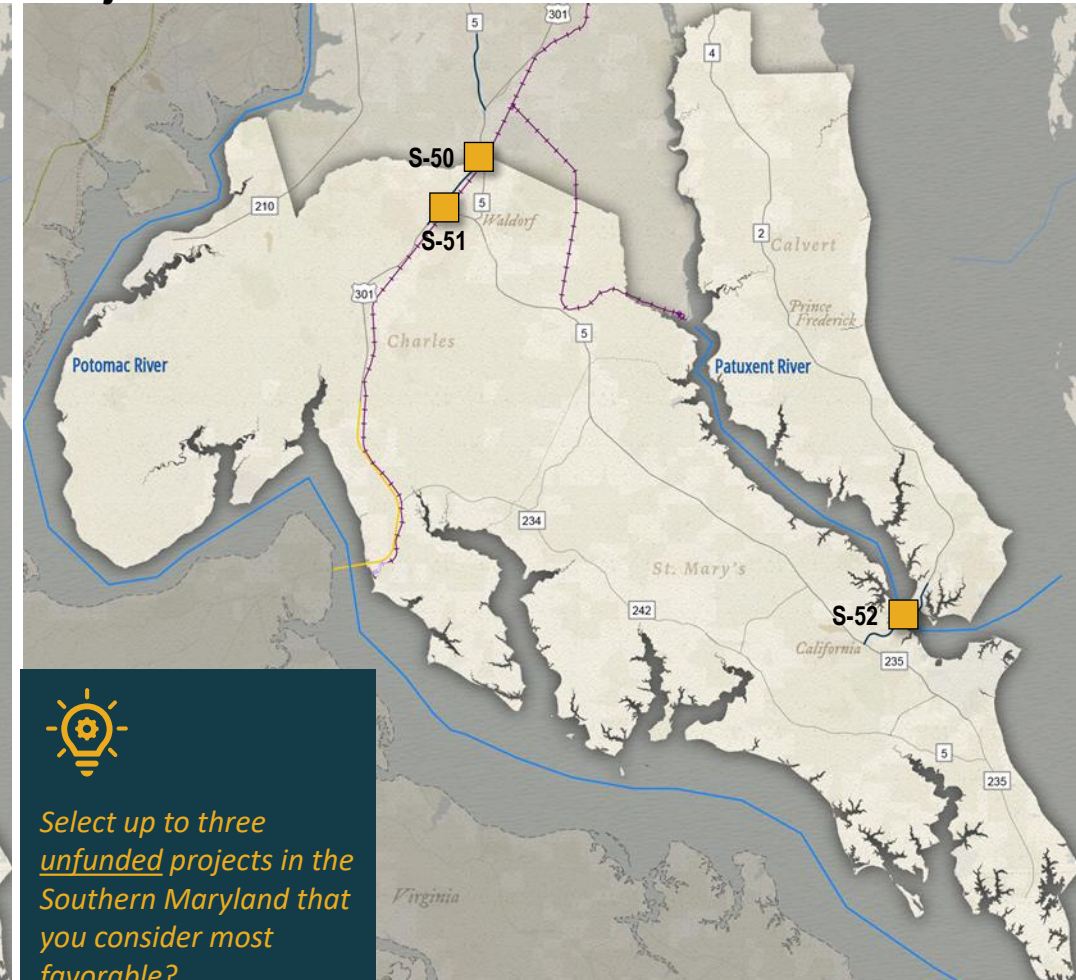
- Truck Parking Need
- Congested Routes
- Congested Areas
- Truck Bottlenecks
- Stakeholder Input


- Funded Project
- Unfunded Projects



 Do the locations shown here generally cover the most critical freight needs in the Southern Maryland region?

Projects



 Select up to three unfunded projects in the Southern Maryland that you consider most favorable?

Southern Maryland

Index #	Needs	Index #	Projects
S-01	MD 4	S-50	US 301 (Interchange at MD 5)
S-02	Waldorf	S-51	US 301 (Intersection at MD 228/ MD 5 Business)
S-03	MD 5	S-52	MD 4 (Patuxent Beach Road and Solomons Island Road)
S-04	MD 2		
S-05	MD 301		
S-06	MD 301 Bridge (Potomac River)		
S-07	Coordination between MD & CSX		
S-08	California		
S-09	MD 235		

- Truck Parking Need
- Congested Routes
- Congested Areas
- Truck Bottlenecks
- Stakeholder Input

- Funded Project
- Unfunded Projects

Baltimore Metro Region

Maryland's Multimodal Network
Baltimore Metro Region

- Chesapeake Bay Navigable Waterways
- Port of Baltimore
- Air Cargo Airports

Intermodal Terminal Facilities

- Air & Truck
- Port & Truck
- Truck - Port - Rail
- Rail & Truck

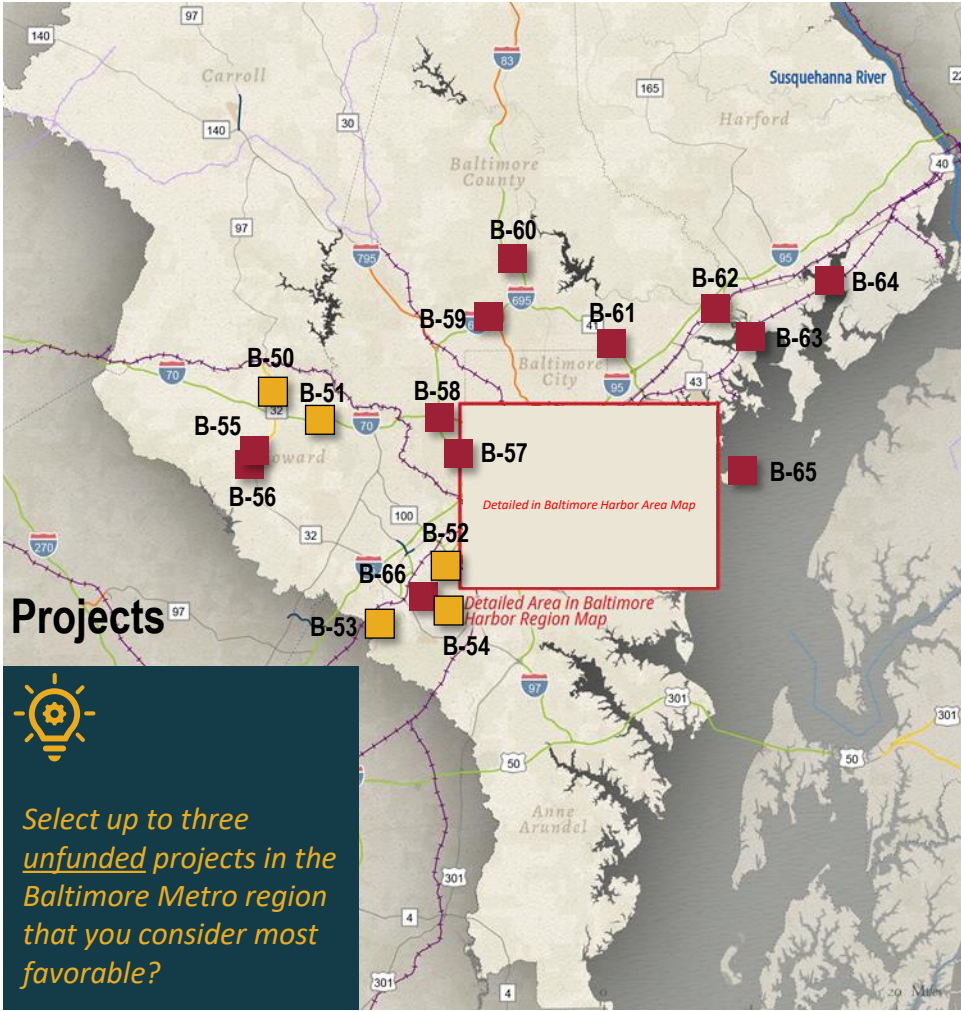
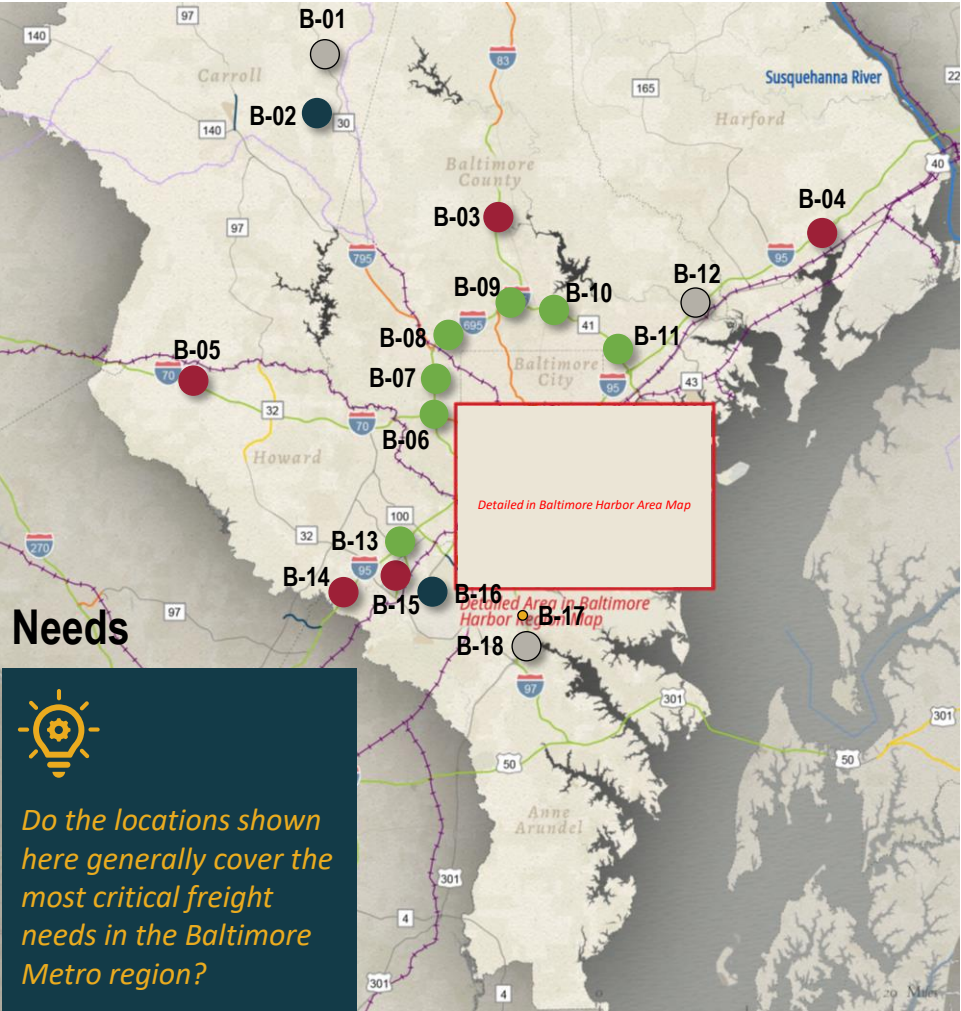
Maryland Rail Network

- Class I Railroad
- Short Line Railroad

National Highway Freight Network

- Primary Highway Freight System (PHFS)
- Other Interstate Portions not on the PHFS
- Critical Urban Freight Corridors (CUFC)
- Critical Rural Freight Corridors (CRFC)
- Other Significant Freight Routes

- Truck Parking Need
- Congested Routes
- Congested Areas
- Truck Bottlenecks
- Stakeholder Input
- Funded Project
- Unfunded Projects



Baltimore Metro Region

Index #	Needs	Index #	Projects
B-01	MD 30	B-50	MD 32 (Carroll County)
B-02	Manchester	B-51	I-70 (Howard County)
B-03	I-83 (Cockeysville)	B-52	MD 295 (Hanover Road Extended)
B-04	I-95 (Maryland House Rest Area Aberdeen)	B-53	I-95 (Howard County)
B-05	I-70 (Rest Area Mt. Airy)	B-54	MD 175 (Anne Arundel County)
B-06	I-695 Inner Loop @ MD 122	B-55	MD 32 (north of Linden Church Rd to I-70)
B-07	I-695 (I-70 / I-795)	B-56	MD 32 (Linden Church to I-70)
B-08	I-695 (I-795 / I-83)	B-57	I-695 (US 40 to MD 144)
B-09	I-83 (MD 25 / MD 25 A & I-83)	B-58	I-695 Interchange (I-70)
B-10	I-695 (I-83 / MD 41)	B-59	I-695 (Baltimore County)
B-11	I-695 (MD 41 / I-95)	B-60	I-83 Bridge (over Padonia Road)
B-12	I-95	B-61	I-695 (Bridge on Putty Hill Avenue)
B-13	I-95 (MD 32 / MD 100)	B-62	US 40 (Bridges over Little and Big Gunpowder)
B-14	US 1/ MD 175 (Jessup)	B-63	Gunpowder River Bridge Replacement - <i>Rail</i>
B-15	I-95 (Welcome Center Laurel)	B-64	Bush River Bridge Replacement - <i>Rail</i>
B-16	Jessup	B-65	Hart/Miller Island Operations
B-17	I-97 EV charging infrastructure	B-66	MD 175 (National Business Parkway to McCarron Court)
B-18	I-97		

- Truck Parking Need
- Congested Routes
- Congested Areas
- Truck Bottlenecks
- Stakeholder Input

- Funded Project
- Unfunded Projects

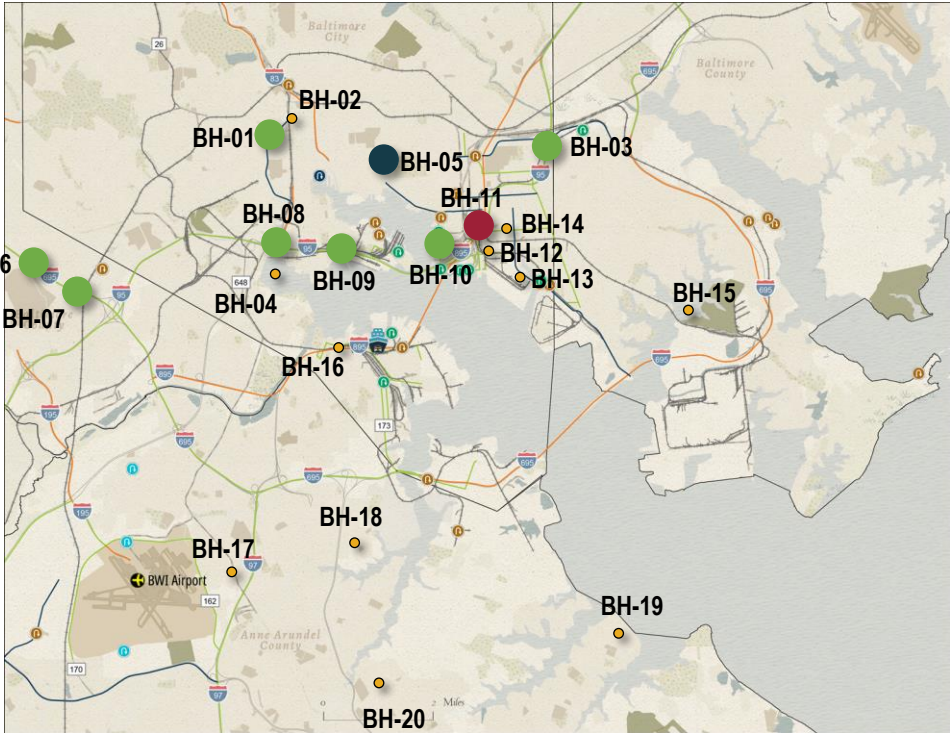
Baltimore Harbor Area

Maryland's Multimodal Network
Baltimore City/Harbor Area

- Port of Baltimore
- Air Cargo Airports
- Intermodal Terminal Facilities**
 - Air & Truck
 - Truck - Port - Rail
 - Port & Truck
 - Rail & Truck
- Maryland Rail Network**
 - Class I Railroad
 - Short Line Railroad
- National Highway Freight Network**
 - Primary Highway Freight System (PFHS)
 - Other Interstate Portions not on the PFHS
 - Critical Urban Freight Corridors (CUFC)
 - Critical Rural Freight Corridors (CRFC)
 - Other Significant Freight Routes

- Truck Parking Need
- Congested Routes
- Congested Areas
- Truck Bottlenecks
- Stakeholder Input

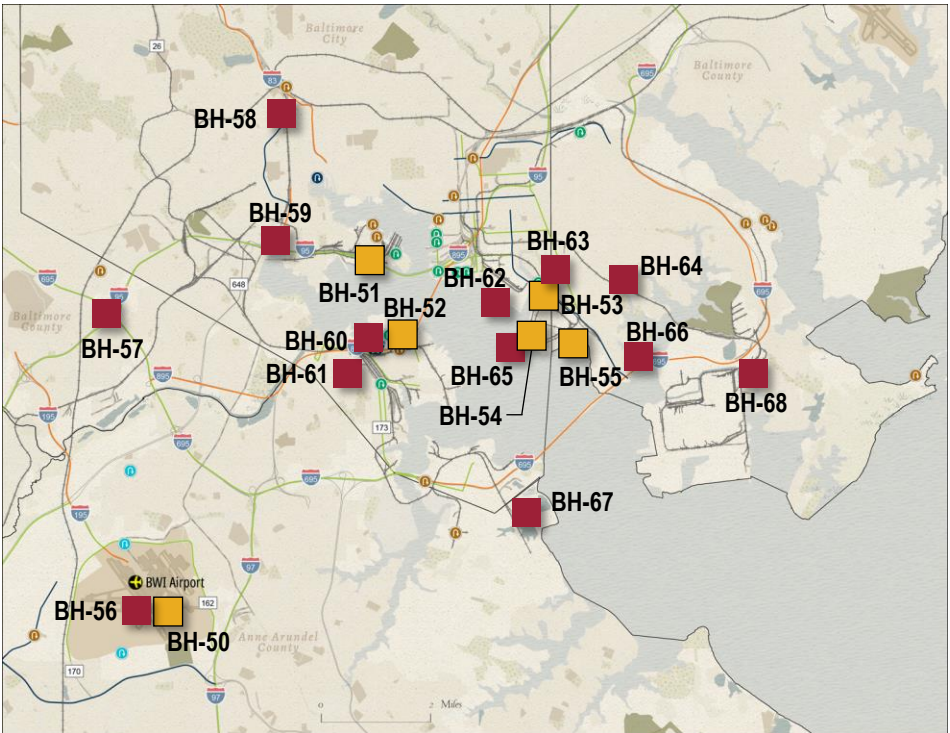
- Funded Project
- Unfunded Projects



Needs



Do the locations shown here generally cover the most critical freight needs in the Baltimore Harbor area?








Projects



Select up to three unfunded projects in the Baltimore Harbor area that you consider most favorable?

Baltimore Harbor Area

Index #	Needs	Index #	Needs
BH-01	MU 6020 / Martin L King Blvd (MD 295 & MU 1703 / N Howard St)	BH-18	Multimodal Access need in Chestnut Hill Cove
BH-02	Double Stack in Howard St Tunnel	BH-19	Freight Innovation Opportunity near Riviera Beach
BH-03	I-95 (I-895 / MU 1280 / Newkirk St & I-895 / City Line)	BH-20	Multimodal Access need east of Marley Neck Road
BH-04	Dredge the Port of Baltimore		
BH-05	City of Baltimore		
BH-06	I-695 Outer Loop (Edmonson Ave)		
BH-07	I-695 (I-895 / I-70)		
BH-08	MU 1700 / I-395 (MU 4295 / Camden St & MU 1395 / E Lombard St)		
BH-09	MU 5875 / Conway St (MD 2 / I-395)		
BH-10	I-95 (I-695 / I-395)		
BH-11	City of Baltimore Connecting to the Port / Industrial Clusters		
BH-12	Environmental need at Seagirt Marine Terminal		
BH-13	Freight Innovation Opportunity Seagirt Marine terminal		
BH-14	Keith Avenue and Broening Highway Improvements		
BH-15	Freight Innovation Opportunity at Bear Creek		
BH-16	Multimodal Access Improvements North of Frankfurst Ave		
BH-17	Goods movement need in Ferndale		

-  Truck Parking Need
-  Congested Routes
-  Congested Areas
-  Truck Bottlenecks
-  Stakeholder Input



Baltimore Harbor Area

Index #	Port Projects	Index #	Port Projects
BH-51	Replace Cruise Terminal Wharf at SLP Berth 9	BH-62	Seagirt Loop Channel
BH-52	Fairfield Masonville Stormwater Management Phases 2 - 5	BH-62	50' Berth at Seagirt Marine Terminal
BH-52	FMT Kurt Iron Slip Terminal Development	BH-63	DMT Berth 3 Reconstruction
BH-53	DMT Berth 1 & 2 Reconstruction	BH-64	Dundalk Marine Terminal Operations and Maintenance
BH-54	Renovate DMT Berths 7 & 8	BH-64	DMT Resiliency and Flood Mitigation BUILD
BH-54	Renovate DMT Berth 9 & 10	BH-65	Dundalk Dredging Energy Ports
BH-55	DMT Berth 13 Berth Rehabilitation	BH-66	Innovative Use Fleming Park Grant
BH-55	DMT Berth 11 & 12 Deck and Beam Replacement	BH-67	Cox Creek Operations and Maintenance
BH-59	Mid-Bay Island Option	BH-67	Cox Creek Expansion Feasibility/EIS Study
BH-59	Innovative Use	BH-67	Cox Creek Expansion Construction
BH-59	Innovative Use Projects RFP solicitation	BH-67	Cox Creek Expansion Construction Stage 2
BH-60	Fairfield Masonville Stormwater Mgmt. Phase I		
BH-60	Fairfield Pier 4 Repairs		
BH-61	Masonville Dredge Placement Facility		
BH-61	Masonville Construction Management		
BH-61	Masonville Operations & Maintenance		

■ Funded Project
■ Unfunded Projects

Baltimore Harbor Area

Index #	Airport Projects	Index #	Other Projects
BH-50	BWI North Cargo Electrical Substation Replacement	BH-57	I-95 and I-695 (Concrete Deck Overlays)
BH-50	BWI North Cargo Road and Parking, Mill & Overlay (23-01)	BH-58	Frederick Douglas Tunnel (Replacement B&P Tunnel) - <i>Rail</i>
BH-50	BWI Southwest Quadrant Development Planning	BH-68	MD 151/MD151B
BH-50	BWI Cargo Building #107, Install Oil Water Separator		
BH-50	BWI Cargo Complex Expansion/Relocation		
BH-50	BWI Cargo Ramp ACC Sections Mill & Overlay (22-01)		
BH-50	BWI Cargo Ramp PCC Restoration (23-03)		
BH-50	BWI Cargo Service Road Mill & Overlay (19-02)		
BH-50	BWI Runway 15R-33L Extension		
BH-50	BWI New Parallel Runway Development		
BH-56	Midfield Cargo Area Improvements at BWI Marshall Airport		
BH-56	Airfield Lighting Vault Relocation at BWI Marshall Airport		

 Funded Project
 Unfunded Projects

Washington Metro Region

Maryland's Multimodal Network
Washington Metro Region

- Chesapeake Bay Navigable Waterways
- Port of Baltimore
- Air Cargo Airports

Intermodal Terminal Facilities

- Truck & Truck

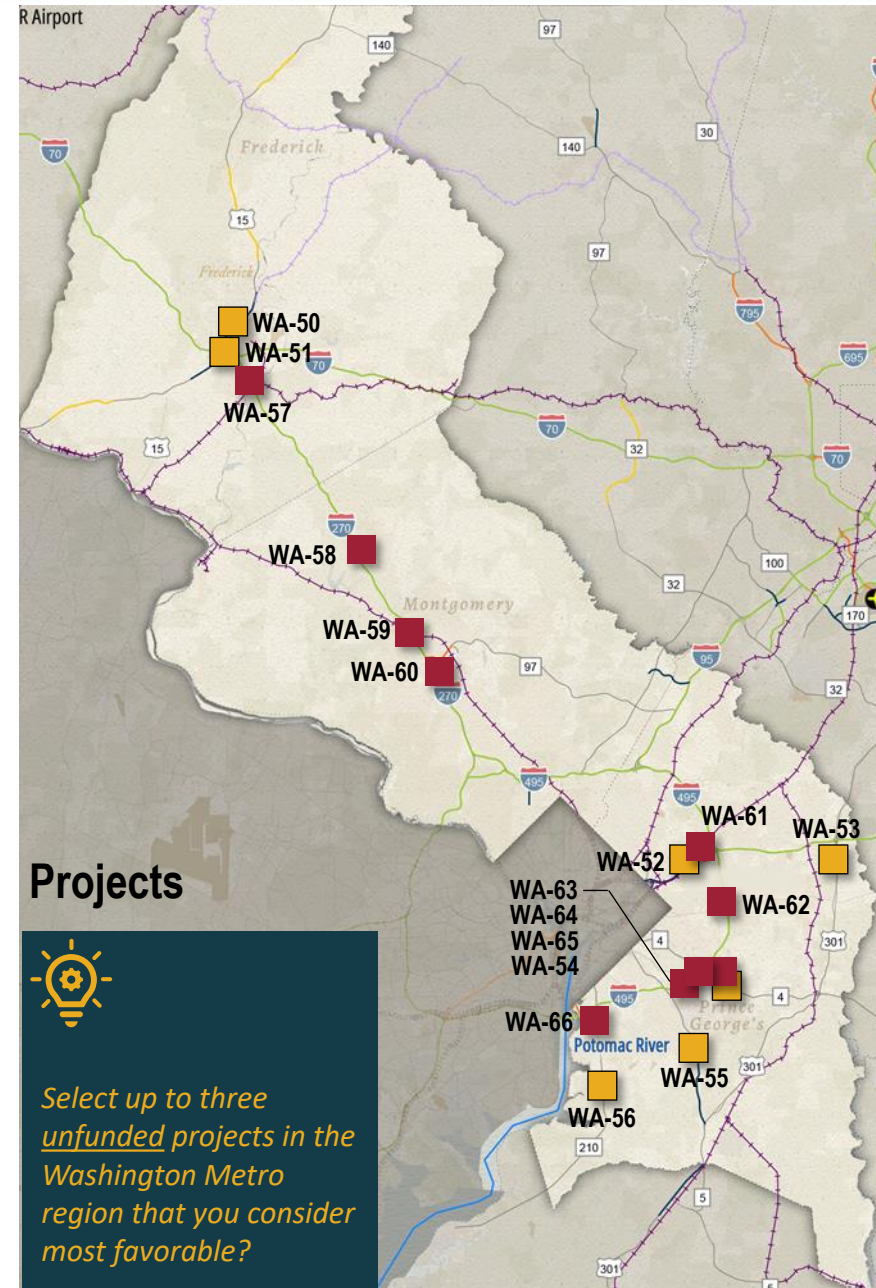
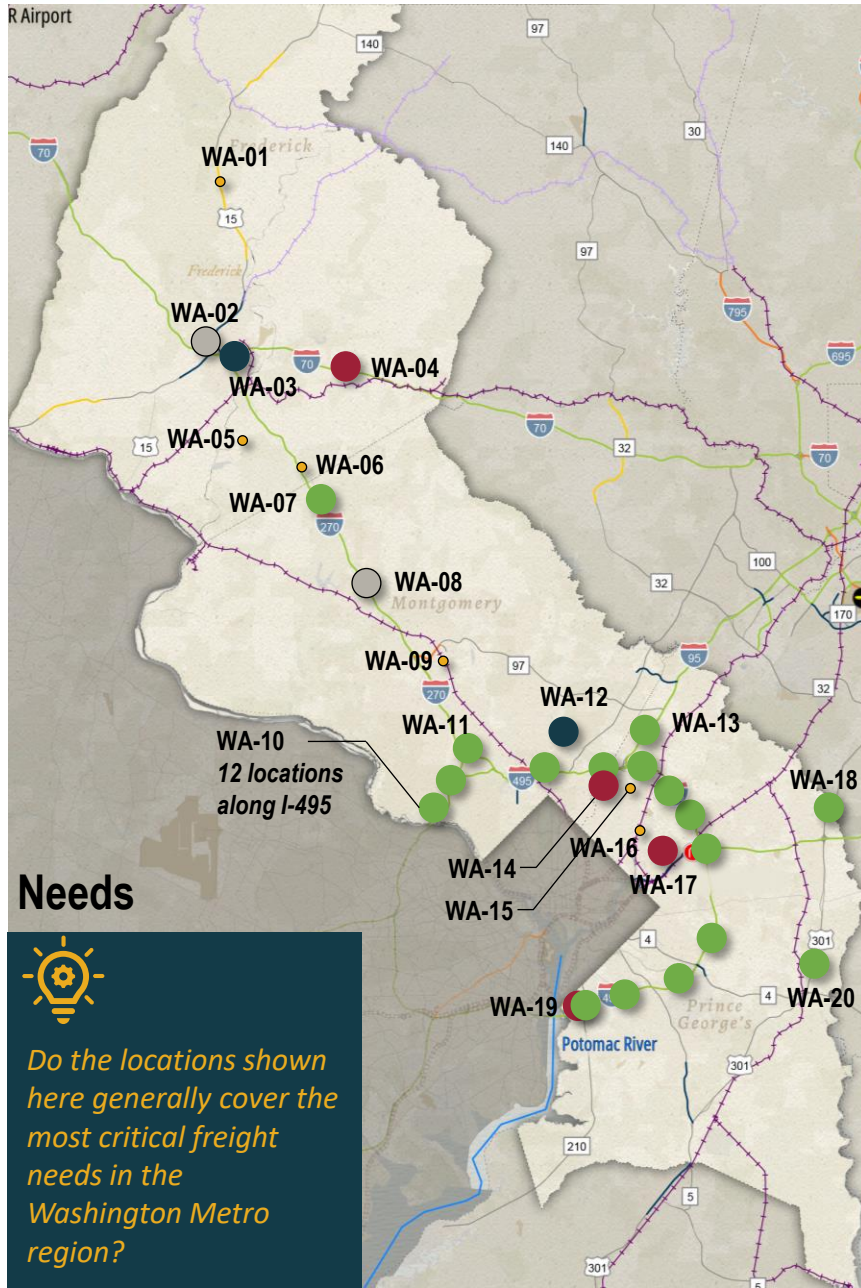
Maryland Rail Network

- Class I Railroad
- Short Line Railroad

National Highway Freight Network

- Primary Highway Freight System (PHFS)
- Other Interstate Portions not on the PHFS
- Critical Urban Freight Corridors (CUFC)
- Critical Rural Freight Corridors (CRFC)
- Other Significant Freight Routes

- Truck Parking Need
 - Congested Routes
 - Congested Areas
 - Truck Bottlenecks
 - Stakeholder Input
-
- Funded Project
 - Unfunded Projects



Index #	Needs	Index #	Projects
WA-01	Upgrade US 15	WA-50	US 15 & US 40 (Frederick County)
WA-02	US 40	WA-51	I-70 (Mount Phillip Road to east of MD 144FA)
WA-03	Frederick	WA-52	US 50 (Prince Georges County)
WA-04	I-70 (Monrovia)	WA-53	US 301 (north of Mount Oak Road to US 50) MD 197 (US 301 to Mitchellville Road)
WA-05	Freight Opportunities (Buckeystown)	WA-54	MD 4 (MD 223 to I-95 / I-495)
WA-06	Upgrade I-270 (South of Frederick)	WA-55	MD 5 (I-95 / I-495 to US 301 at TB)
WA-07	I-270 SB (MD 109)	WA-56	MD 210 (I-95 / I-495 to MD 228)
WA-08	I-270	WA-57	MD 85 Phase 1 (Fredrick County)
WA-09	Extend DC Metro (Shady Grove to Frederick)	WA-58	I-270 Eisenhower Memorial Highway, Phase 1
WA-10	I-495 (12 locations)	WA-59	I-270 (ICM)
WA-11	I-270 (I-495)	WA-60	I-270 Eisenhower Statewide, P3
WA-12	Aspen Hill	WA-61	New Carrollton Station Track 1 Platform - <i>Rail</i>
WA-13	I-95 (I-495 / MD 200)	WA-62	I-95 Bridges (over MD 214)
WA-14	I-95 / I-495 (Weigh Station in Adelphi)	WA-63	I-95 / I-495 (over Suitland Road)
WA-15	Micro mobility options (College Park)	WA-64	I-95 / I-495 (over Suitland Parkway)
WA-16	Multimodal Access Improvements (Riverdale)	WA-65	MD 4 New Interchange (Suitland Parkway)
WA-17	US 50 (Landover)	WA-66	MD 210 (New Interchange at Kerby Hill)
WA-18	MD 3 (I-595/ US 50 & MD 242)		
WA-19	I-495 (Emergency Vehicle Lot 3)		
WA-20	US 301 (MD 214 & I-595/ US 50)		

- Truck Parking Need
- Congested Routes
- Congested Areas
- Truck Bottlenecks
- Stakeholder Input

- Funded Project
- Unfunded Projects



4. What statewide strategies are being considered?



Strategies by Goal



Safety, Security, and Resilience

Ensure the safe, secure, and resilient movement of goods on Maryland's multimodal freight network.



Economic Opportunity and Efficiency

Enhance economic competitiveness through freight industry opportunities, mobility improvement, and strategic system expansion.



System Preservation and Modernization

Modernize Maryland's multimodal freight network and operations with innovative solutions from origin to destination.



Quality of Service, Efficiency, and Customer Experience

Enhance transportation services and communications for users of Maryland's multimodal freight system.



Environmental Protection and Sensitivity

Support sustainable freight infrastructure, community vitality, and environmental stewardship.



Fiscal Responsibility

Ensure responsible freight system investment and management through performance-based decision-making and innovative funding mechanisms and partnerships.



Transportation Choices and Connections

Support alternative transportation choices and goods delivery options by improving multimodal and last-mile connections.



Safety, Security, and Resilience

Summary Freight Needs





Safety, Security, and Resilience



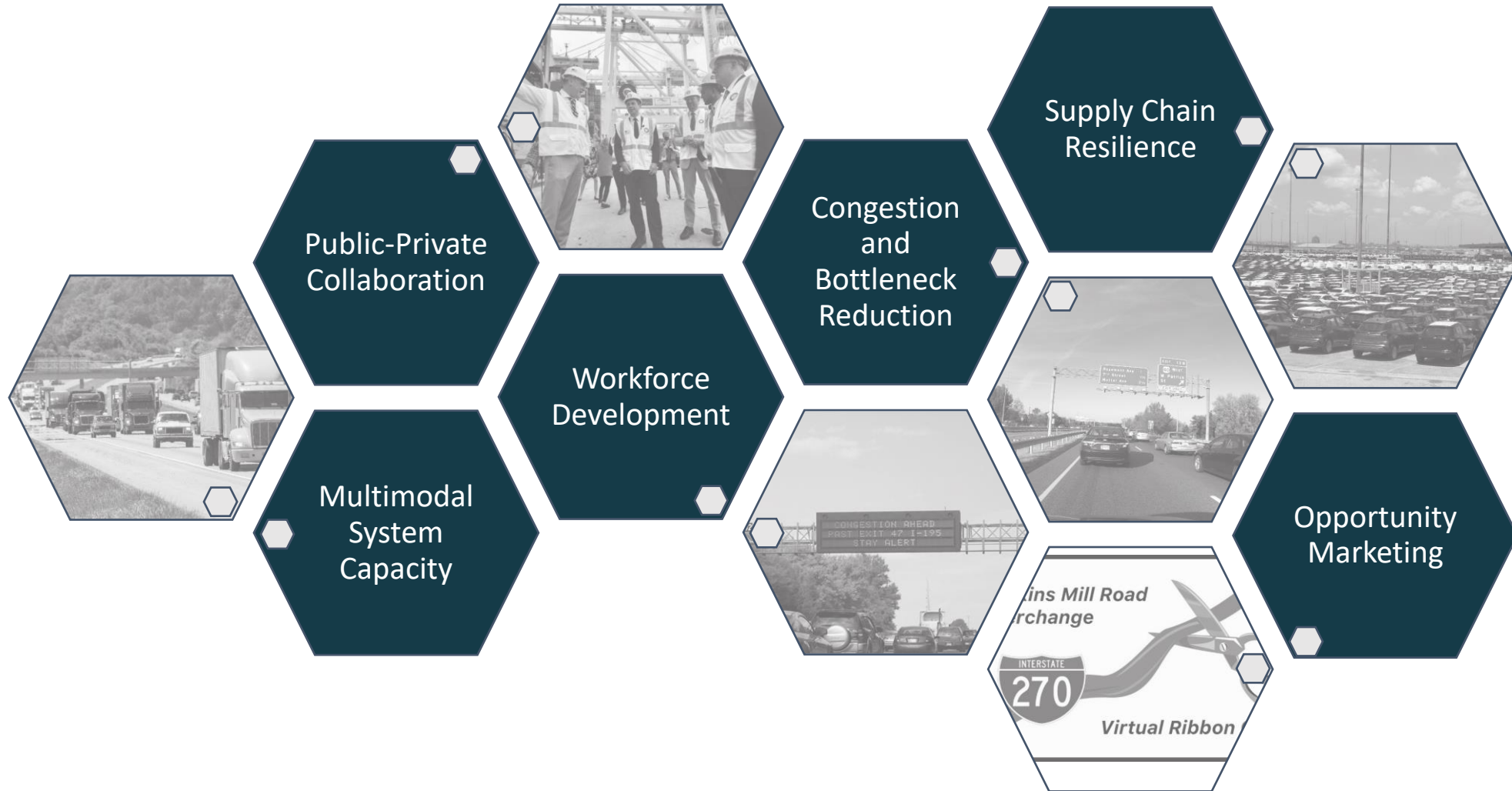
Select up to three strategies for **Goal #1** that you consider most favorable?

ID	Summary Freight <u>Strategies</u>	<input checked="" type="radio"/> Primary Goal	<input type="radio"/> Secondary Goal							
1.01	Infrastructure Safety Improvements Initiate appropriate infrastructure safety improvements with commercial motor vehicles in mind. (MTP)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.02	Railroad Crossing Upgrades Install new flashing light signals and replace outdated components at existing active warning device installations at rail-highway grade crossings. (MTP)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.03	Truck/Rail Safety Monitoring Programs Collaborate with partners to maintain truck and rail safety enhancement and monitoring program. (MTP)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.04	Airport Zoning Permit Process Continue to work closely with Anne Arundel, Howard, and Baltimore counties in implementing the Airport Zoning Permit process for proposed development within the vicinity of BWI Marshall and Martin State airports. (MTP)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.05	Security Infrastructure Upgrades Continue to upgrade security infrastructure such as closed-circuit television, security cameras, and other technology on the multi-modal transportation system. (MTP)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.06	Vulnerability Assessments and Adaptation Strategies Identify and inventory assets that are vulnerable to flooding and inundation, and develop adaptation strategies such as reconstruction, relocation, and protective infrastructure to address existing and potential future weaknesses. (MTP)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.07	Incident Management Technologies Invest in technology to facilitate 24/7 roadway clearance and public information of incidents through the Coordinated Highway Action Response Team (CHART). (MTP)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.08	Rail Safety, Security, and Resilience Strategies Promote strategies that improve rail safety, security, and resilience identified in the Maryland State Rail Plan.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.09	Truck Parking Improvement Strategies Promote strategies to improve truck parking issues identified in the Maryland Truck Parking Study.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Economic Opportunity and Efficiency

Summary Freight Needs





Economic Opportunity and Efficiency



Select up to three strategies for **Goal #2** that you consider most favorable?

ID	Summary Freight <u>Strategies</u> (1 of 2)	<input checked="" type="radio"/> Primary Goal <input type="radio"/> Secondary Goal							
2.01	Performance Reporting Develop a data supported system for performance reporting and project prioritization. (MTP)			<input checked="" type="radio"/>					<input type="radio"/>
2.02	Economic Modeling Use the economic model to assess productivity benefits through travel cost savings, reliability benefits of industry, delivery logistics and supply chain benefits, and agglomeration effects on access to specialized skills and services to facilitate business opportunities throughout Maryland. (MTP)			<input checked="" type="radio"/>					<input type="radio"/>
2.03	Significant Corridor Congestion Reduction Address congestion and bottlenecks on nationally and regionally significant corridors to facilitate access to major employment, freight, and activity centers. (MTP)			<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>			
2.04	Supply Chain Congestion Reduction Reduce or mitigate the effects of congestion on industry supply chains where appropriate. (MTP)			<input checked="" type="radio"/>		<input type="radio"/>			
2.05	Key Freight Bottleneck Improvements Implement improvements at key freight bottlenecks identified in the state freight plan, mobility report, or related resources including the Maryland Roadway Performance Tool (MRPT). (MTP, updated)			<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>			
2.06	Property Acquisition for Port/Terminal Expansion Acquire property adjacent to existing Port facilities to preserve opportunities for expanding terminal space. (MTP)			<input checked="" type="radio"/>					<input type="radio"/>
2.07	Identification of Rail Capacity Constraints Identify locations where projected volume may exceed capacity on key freight rail corridors. (MTP)			<input checked="" type="radio"/>		<input type="radio"/>			<input type="radio"/>
2.08	TSMO Improvements Implement Transportation System Management and Operations (TSMO) improvements to reduce congestion on highway systems, focusing on integrated freeway and arterial management and operations. (MTP)		<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>



Economic Opportunity and Efficiency



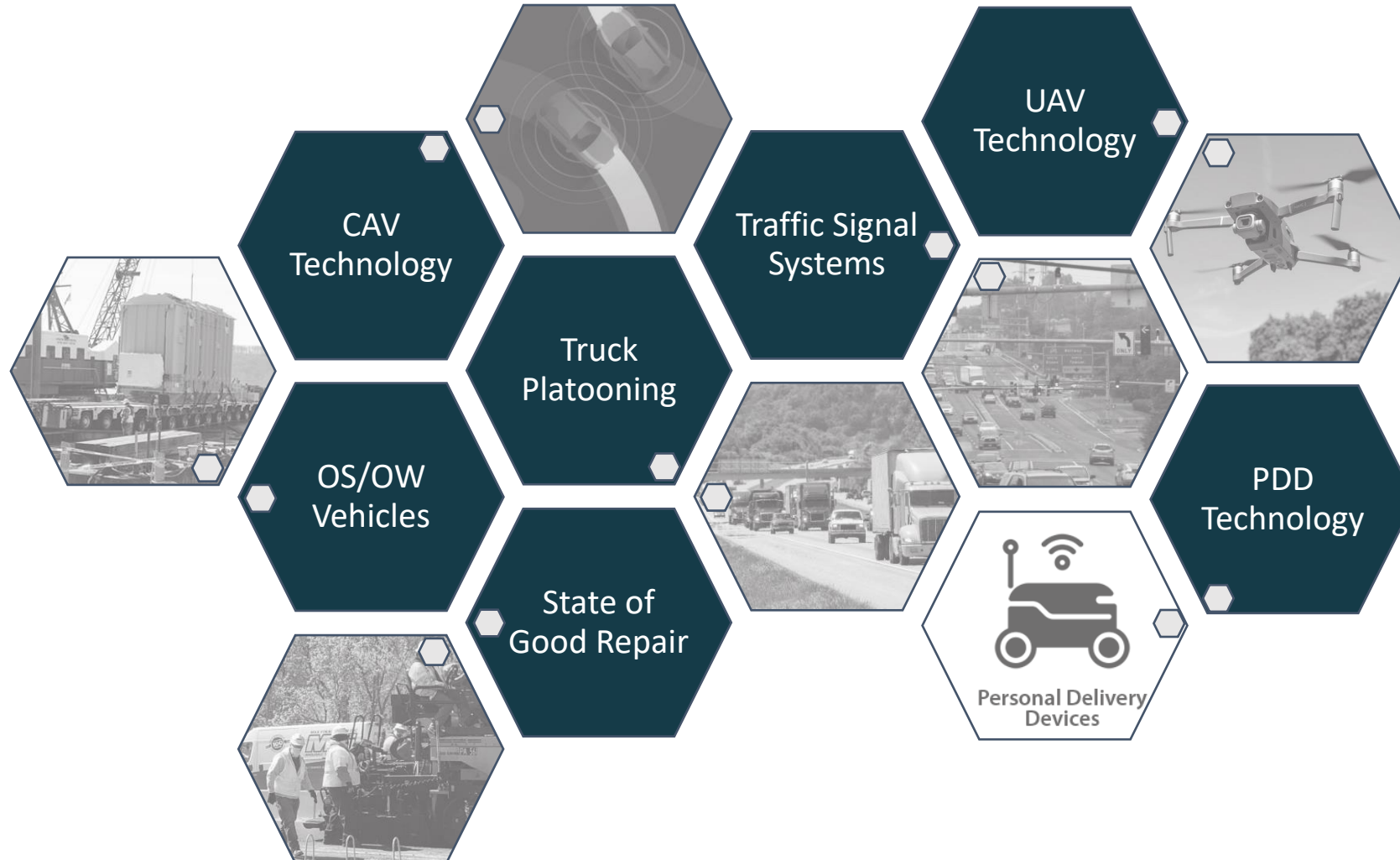
Select up to three strategies for **Goal #2** that you consider most favorable?

ID	Summary Freight <u>Strategies</u> (2 of 2)	<input checked="" type="radio"/> Primary Goal <input type="radio"/> Secondary Goal							
2.09	Air Cargo Facility Expansion Expand air-cargo facilities at BWI Marshall Airport. (MTP)		<input checked="" type="radio"/>						<input type="radio"/>
2.10	Freight and Logistics Workforce Development Collaborate with public and private sector partners to address freight transportation and logistics needs and workforce development.		<input checked="" type="radio"/>			<input type="radio"/>			
2.11	Freight and Logistics Educational Programs Provide advice and guidance to Maryland Higher Education Commission, community colleges, and industry partners to define educational programs in freight and logistics.		<input checked="" type="radio"/>			<input type="radio"/>			
2.12	Truck Industry Career Outreach Support public outreach efforts by the trucking industry promoting careers.		<input checked="" type="radio"/>			<input type="radio"/>			
2.13	Truck Driver Education Programs Collaborate with independent and small fleet carriers and educational institutions to understand their specific needs and concerns and advise in the development of driver education and development programs.		<input checked="" type="radio"/>			<input type="radio"/>			
2.14	Heavy Equipment Apprenticeship Programs Consider instituting heavy equipment apprenticeship programs to provide on the job training.		<input checked="" type="radio"/>						
2.15	Port Growth Strategies Promote strategies to grow cargo volumes at the Port of Baltimore as identified by the Maryland Port Strategic Plan.		<input checked="" type="radio"/>					<input type="radio"/>	<input type="radio"/>



System Preservation and Modernization

Summary Freight Needs





System Preservation and Modernization



Select up to three strategies for **Goal #3** that you consider most favorable?

ID	Summary Freight Strategies	<input checked="" type="radio"/> Primary Goal	<input type="radio"/> Secondary Goal							
3.01	Truck Size and Weight Studies Study the effects of truck size and weight for permitted and non-permitted loads on safety, infrastructure, and the economy. (MTP)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>						
3.02	Airport Facility and Runway Maintenance Maintain the State's aviation facilities and runways in a state of good repair to support the vitality of aviation statewide. (MTP)		<input type="radio"/>	<input checked="" type="radio"/>						<input type="radio"/>
3.03	Navigation Channel Maintenance Maintain the navigation channel depth and width to allow safe, two-way traffic to and from the Port of Baltimore. (MTP)		<input type="radio"/>	<input checked="" type="radio"/>						<input type="radio"/>
3.04	State Owned Rail Asset Maintenance Maintain, rehabilitate, and improve State owned rail assets as identified in the MDOT Freight Lines Strategic Plan. (MTP)		<input type="radio"/>	<input checked="" type="radio"/>						<input type="radio"/>
3.05	CAV Pilot/Testing Programs Implement Connected and Automated Vehicles (CAV) pilots and support CAV testing through partnerships to build experience and attract partner investment in Maryland. (MTP)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>				<input type="radio"/>		
3.06	Truck Platooning Opportunities Assess opportunities for implementing truck platooning. (MTP)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>				<input type="radio"/>		
3.07	Rural Freight Needs and Funding Opportunities Understand the unique needs of rural freight transportation and ensure equitable consideration for freight funding opportunities.			<input checked="" type="radio"/>						<input type="radio"/>
3.08	PDD/UAV/Future Technology Assessments Evaluate the impact of Personal Delivery Devices (PDD), Unmanned Aerial Vehicles (UAV/drones), and similar technologies to the multimodal freight network.		<input type="radio"/>	<input checked="" type="radio"/>						<input type="radio"/>
3.09	Rail Infrastructure Modernization Promote strategies to modernize rail infrastructure identified in the Maryland State Rail Plan.			<input checked="" type="radio"/>						<input type="radio"/>



Quality of Service, Efficiency, and Customer Experience

Summary Freight Needs





Quality of Service, Efficiency, and Customer Experience



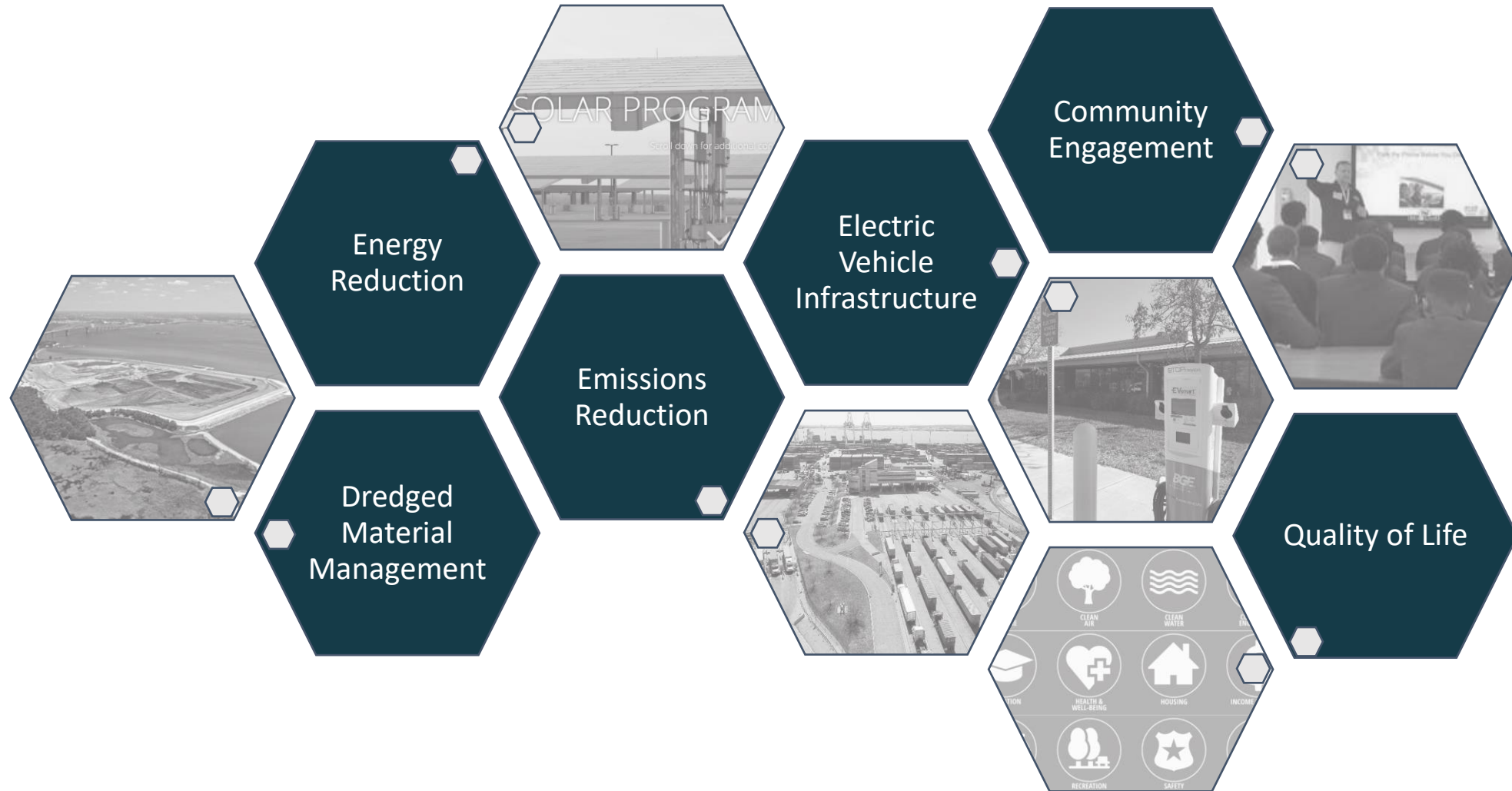
Select up to three strategies for **Goal #4** that you consider most favorable?

ID	Summary Freight Strategies	<input checked="" type="radio"/> Primary Goal	<input type="radio"/> Secondary Goal							
4.01	Traffic Signal Optimization Continue to perform Traffic Signal Synchronization and installation of “smart signals” to provide an efficient flow or prioritization of traffic, increasing the efficient operations of a corridor and reducing unwarranted idling at intersections.					<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>		
4.02	ITS and Corridor/Systems Management Expand CHART and other intelligent transportation systems and operation tools to better manage peak hour congestion on Interstate and regionally significant corridors. (MTP)				<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>		
4.03	Truck Parking Information Systems Implement current state-of-the-practice in truck parking availability technology systems where appropriate and feasible. (MTP)			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>			
4.04	State-Owned Rail Asset Benefit Assessments Identify the competitive and strategic redundancy benefits that all could gain from more effective use of State-owned rail assets. Where justified, recommend for consideration for the MDOT MTA Freight Lines Strategic Plan.				<input type="radio"/>		<input checked="" type="radio"/>			
4.05	Statewide Truck Route Mapping Updates Release updated truck route map and establish a process for periodic review and update.						<input checked="" type="radio"/>			<input type="radio"/>
4.06	Local/MPO Truck Route Mapping Coordination Partner with MPOs and municipalities to establish localized truck routing and mapping.						<input checked="" type="radio"/>			<input type="radio"/>
4.07	Truck Route Planning and Education Promote trucking companies to educate drivers on truck routing and plan trips that avoid nonfreight routes.				<input type="radio"/>		<input checked="" type="radio"/>			<input type="radio"/>
4.08	Truck Route Information and Communication Systems Implement current and reliable truck routing that is communicated to all truck drivers in various ways. (e.g. maps, GPS systems, and road signs)					<input type="radio"/>	<input checked="" type="radio"/>			<input type="radio"/>
4.09	Maryland Rail Service Efficiencies Promote strategies to increase efficiency, predictability, and customer satisfaction of Maryland rail services						<input checked="" type="radio"/>			
4.10	Truck Parking Committee and Outreach Convene a standing truck parking committee and conduct further outreach on truck parking issues to advance initiatives detailed in the Maryland Truck Parking Study						<input checked="" type="radio"/>			<input type="radio"/>



Environmental Protection and Sensitivity

Summary Freight Needs





Environmental Protection and Sensitivity



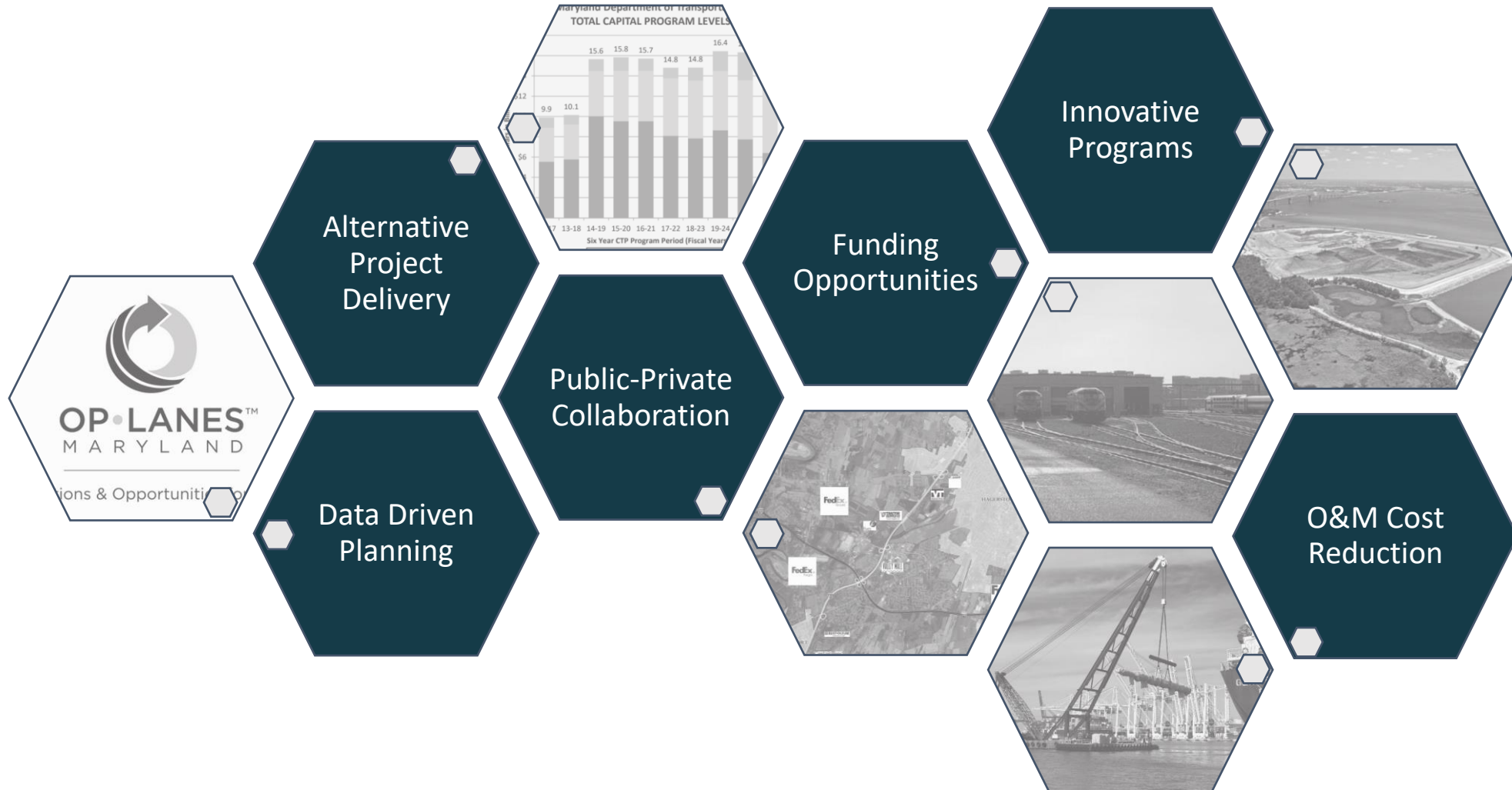
Select up to three strategies for **Goal #5** that you consider most favorable?

ID	Summary Freight <u>Strategies</u>	<input checked="" type="radio"/> Primary Goal	<input type="radio"/> Secondary Goal							
5.01	Infrastructure Vulnerability, Risk, and Adaptation Studies Prepare for future climate impacts on transportation infrastructure through: Site and Stressor Identification, risk assessment, and adaptation development. (MTP)			<input type="radio"/>		<input type="radio"/>		<input checked="" type="radio"/>		<input type="radio"/>
5.02	Sustainable Seaport Strategies Develop and implement a “Green Port Strategy” consistent with industry trends and initiatives including US EPA’s Strategy for Sustainable seaports. (MTP)				<input type="radio"/>	<input type="radio"/>		<input checked="" type="radio"/>		<input type="radio"/>
5.03	Dredging Program Management and Priorities Promote dredging and dredged material placement priorities for inclusion in Federal appropriations and authorization bills. (MTP)					<input type="radio"/>		<input checked="" type="radio"/>		<input type="radio"/>
5.04	Dredging Program Outreach and Education Increase public knowledge, understanding, and support of Maryland’s Dredged Material Management Program through strategic outreach to the communities, businesses, and schools in the vicinity of project sites. (MTP)							<input checked="" type="radio"/>		<input type="radio"/>
5.05	Fuel Efficient Truck Technologies Promote and/or incentivize fuel-efficient technologies for medium and heavy-duty trucks. (MTP)					<input type="radio"/>		<input checked="" type="radio"/>		
5.06	Rail Diesel Engine Retrofits/Replacements Encourage and incentivize retrofits and/or replacements of old, diesel powered non-highway engines, such as switchyard locomotives, with new hybrid locomotives. (MTP)					<input type="radio"/>		<input checked="" type="radio"/>		
5.07	Port Environmental, Energy, and Social Responsibility Goals Advance actions related to the Port of Baltimore’s environmental and energy sustainability goal, and social responsibility goal, as detailed in the Maryland Port Administration’s Strategic Plan.						<input type="radio"/>	<input checked="" type="radio"/>		



Fiscal Responsibility

Summary Freight Needs





Fiscal Responsibility



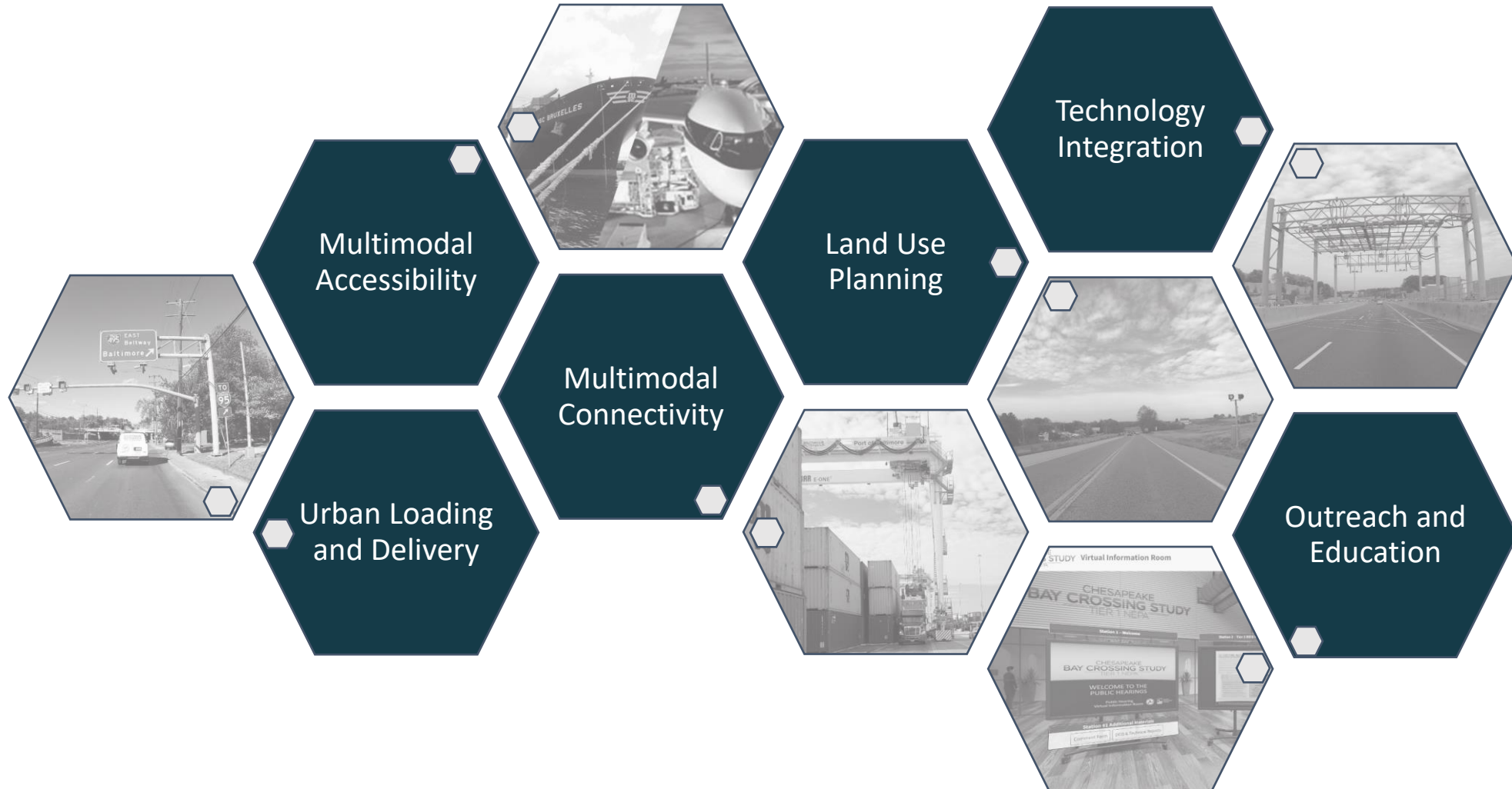
Select up to three strategies for **Goal #6** that you consider most favorable?

ID	Summary Freight <u>Strategies</u>	● Primary Goal ○ Secondary Goal								
6.01	TSMO Program Coordination Coordinate Transportation System Management and Operations (TSMO) activities across MDOT with regional and local agencies with clear, common objectives. (MTP)				○				●	○
6.02	Collaboration for Double Stack Rail-Port Connectivity Collaborate with public and private partners including CSX and Amtrak to create a double-stack rail network into and out of the Port of Baltimore. (MTP)				○				●	○
6.03	Partnerships/Funding to Expand Truck Parking Increase truck parking facilities in key locations through innovative project delivery solutions and partnerships with private travel service providers. (MTP)	○	○						●	
6.04	Partnerships/Funding to Enhance Short Line Rail Coordinate with public and private short lines to seek innovative funding and financing sources and leverage available public resources with public-private partnerships where possible to fund projects that will advance the public benefit.		○						●	
6.05	Partnerships/Funding to Maximize Rail Investment Benefits Promote alternative project delivery methods and strategic partnerships to maximize value in rail investments as identified in the Maryland State Rail Plan.		○						●	○



Transportation Choices and Connections

Summary Freight Needs





Transportation Choices and Connections



Select up to three strategies for **Goal #7** that you consider most favorable?

ID	Summary Freight <u>Strategies</u>	● Primary Goal	○ Secondary Goal							
7.01	Multimodal Connectivity and Access Improvements Coordinate infrastructure improvements to facilitate multimodal connectivity and access. (MTP)				<input type="radio"/>	<input type="radio"/>				<input checked="" type="radio"/>
7.02	Inland Transportation Capabilities for Port Operations Expand inland transportation capabilities at the Port of Baltimore. (MTP)				<input type="radio"/>					<input checked="" type="radio"/>
7.03	Landside and Freight Rail Capabilities for Port Access Improve landside and freight rail access to the Port of Baltimore, including implementation of an Intermodal Container Transfer Facility in the vicinity of the Port of Baltimore. (MTP)				<input type="radio"/>					<input checked="" type="radio"/>
7.04	Freight Transportation and Land Use Planning Guidance Provide transportation and land use planning guidance to local and regional agencies for economic development and freight efficiencies that support community goals.				<input type="radio"/>		<input type="radio"/>			<input checked="" type="radio"/>
7.05	Public/Private Sector Plan Coordination Coordinate freight related plans and programs of the private sector and local agencies with MDOT's plans for integrated and informed decision-making.								<input type="radio"/>	<input checked="" type="radio"/>
7.06	Last Mile Logistics Considerations Consider emerging last mile logistics trends in planning, project development and design processes.				<input type="radio"/>		<input type="radio"/>			<input checked="" type="radio"/>
7.07	Curb Management Strategies Incorporate innovative curb management strategies into freight design considerations to decrease curbside congestion and ensure safety of all road users.				<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			<input checked="" type="radio"/>
7.08	Land Use Planning/Zoning for Truck Parking Integrate truck parking into local land use, zoning, and planning to advance initiatives detailed in the Maryland Truck Parking Study.						<input type="radio"/>		<input type="radio"/>	<input checked="" type="radio"/>

Thank You!



TAKE OUR SURVEY

<https://www.surveymonkey.com/r/W2NQTKG>

Survey will remain open
until January 24, 2022

Please take our survey at the link above to share your opinions on **priorities** or **other ideas** related to the freight needs, projects, programs, and strategies throughout Maryland.

For more information, please contact us at the following:

Project Website:

<https://mdot.maryland.gov/freightplan>

Project Email:

MDStateFreightPlan@mdot.maryland.gov

