

2022 Delaware State Freight Plan

Plan Status and Preview for the
Delmarva Freight Summit



JUNE 10, 2022



Agenda / Draft Plan Chapters

CH 1: Introduction

CH 2: Freight and the Economy

CH 3: Freight Network

CH 4: Performance and Trends

CH 5: Needs and Opportunities

CH 6: Freight Investment Plan

CH 7: Freight Strategic Plan

Background...

covered during the 2021 Delmarva Winter Freight Meeting (12.07.2021)

Proposed Actions...

being compiled as part of the overall draft plan due Summer/Fall 2022



CH 1: Introduction

What are the plan's purpose, context, and requirements?

Introduction

Purpose

The **2022 Delaware Freight Plan** will:

- assess the freight transportation system
- summarize needs and opportunities
- identify key projects, strategies, and tasks
- maximize the efficiency and reliability of Delaware's freight transportation networks
- enhance economic opportunities within the state and the surrounding region

Context



2015-2017

Delmarva Freight Plan and related FAST Act Compliance Update



2019

Innovation in Motion: The Delaware Long Range Transportation Plan



2020

National Freight Strategic Plan

2021



Infrastructure Investment and Jobs Act

Introduction

Federal Requirements

1. Freight System Trends, Needs, and Issues
2. Freight Policies, Strategies, and Performance Measures
3. Freight Network Facilities
4. Alignment with National Freight Policy and Goals
5. Innovative Technologies and Operational Strategies
6. Asset Preservation and Improvements
7. Freight Bottlenecks, Mobility Issues, and Mitigation
8. Freight Induced Congestion and Mitigation
9. Freight Investment Plan
- 10. Truck Parking Facilities Assessment**
- 11. Supply Chain Cargo Flows**
- 12. Commercial Ports Inventory**
- 13. Multistate Freight Compact Considerations**
- 14. E-commerce Impacts**
- 15. Military Freight Considerations**
- 16. Freight Resilience and Environmental Impacts**
17. State Freight Advisory Committee

(49 U.S.C. §70202)



new requirements per the IIJA

Introduction



Safety and Security

Ensure the safe and secure movement of people and goods while limiting the potential for incidents that may cause harm or disrupt the network operations.



Economic Vitality

Promote and strengthen the economic vitality of Delaware with an excellent multimodal freight transportation network that meets the needs of a diverse and growing economy.



Freight Connectivity, Accessibility, and Mobility

Improve freight network connections, accessibility, and mobility to increase options for the movement of freight and enhance the integration of the state's multimodal transportation systems.



System Management, Operations, and Maintenance

Preserve and enhance the state's multimodal freight transportation systems to support freight travel and commerce while adapting to the future's changing needs and integrating innovative strategies and technology that increase efficiency and safety during both normal and emergency situations.



Resilience, Sustainability, and Environmental Stewardship

Provide resilient and reliable freight transportation systems while protecting and enhancing the environment through sustainable best practices, integration of environmental considerations into planning and design, and responsible energy consumption.



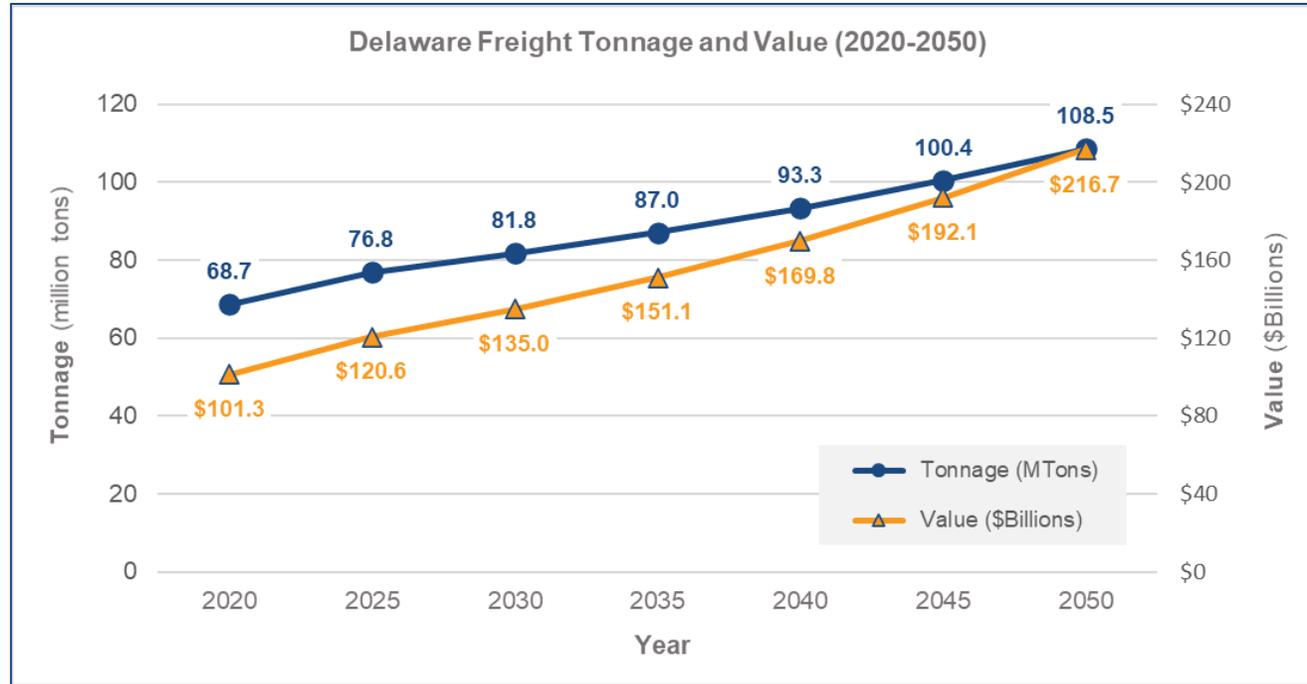
CH 2: Freight and the Economy

CH 3: Freight Network

What moves, where, and how?

Economy

Freight Flows

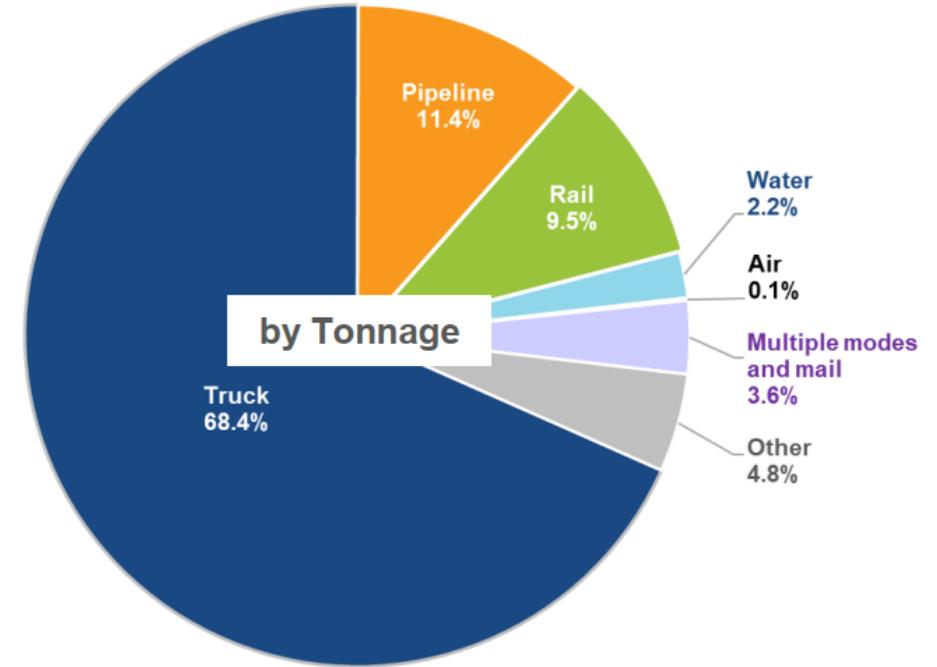


Year 2020

68.7 million tons
\$101.3 billion

Year 2050

+58% tonnage
+114% value

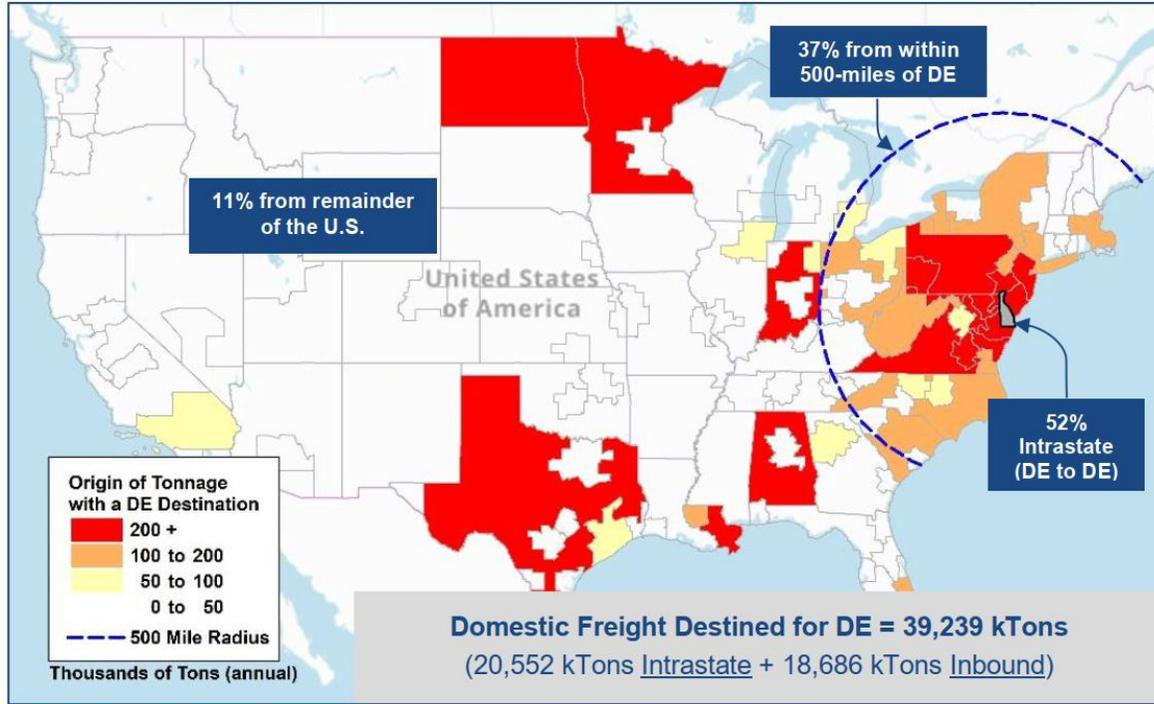


~68% trucks

...then pipeline and rail (tonnage)
...or multiple modes/mail (value)

Economy

Freight Flows

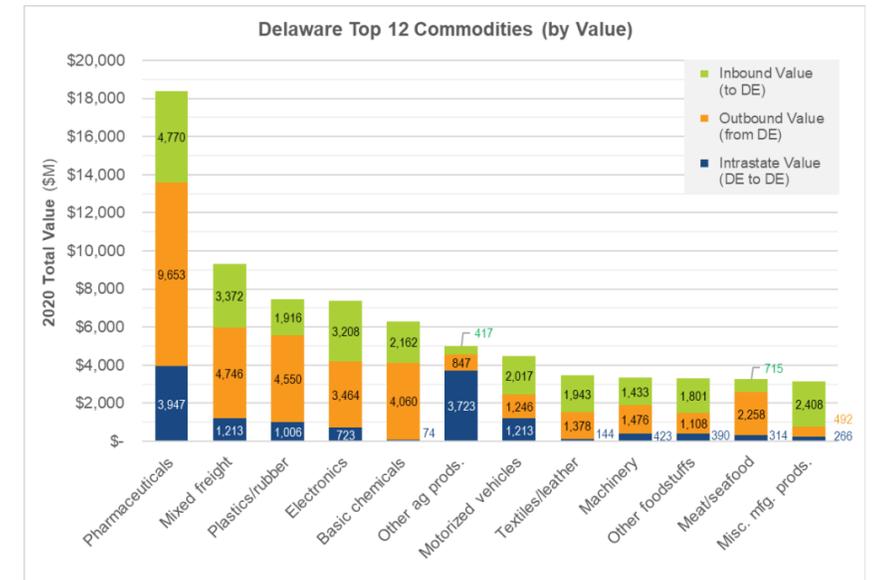
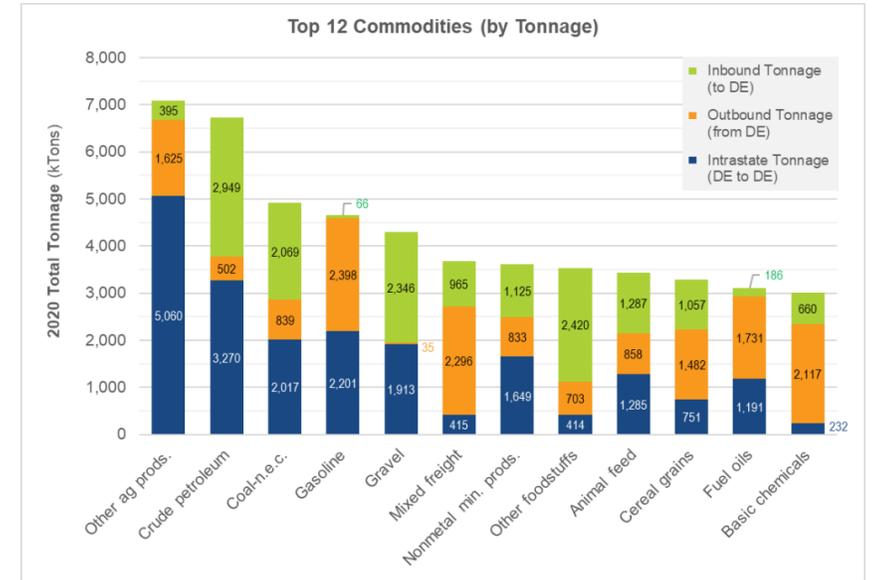


~ half of all freight is **intrastate** within DE

~ 90% of all freight moves **within 500 miles** of DE

Top tonnage includes **ag products, petroleum, ...**

Top value includes **pharmaceuticals, mixed freight, ...**



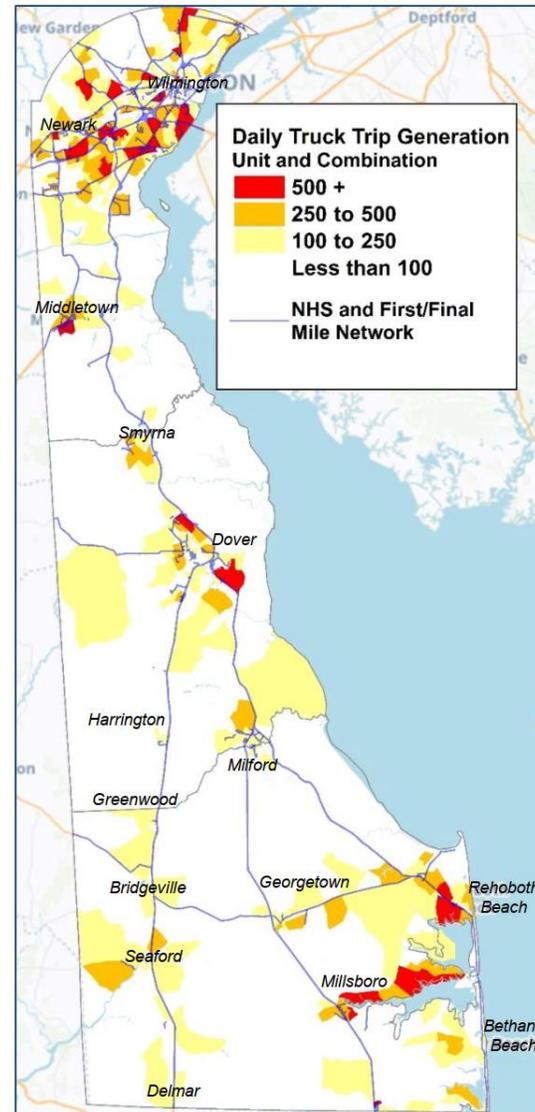
Economy

Industry Sectors

FIS EMPLOYMENT



TRUCK TRIP GENERATION



Freight Intensive Sectors (FIS)

Industries where the production and consumption of cargo (i.e., freight generation) is central to the activity, as compared to freight trips or service trips

New Castle County

manufacturing, oil & gas extraction, transportation & warehousing, hospitality, food services

Kent County

manufacturing, warehousing, agriculture, Dover AFB

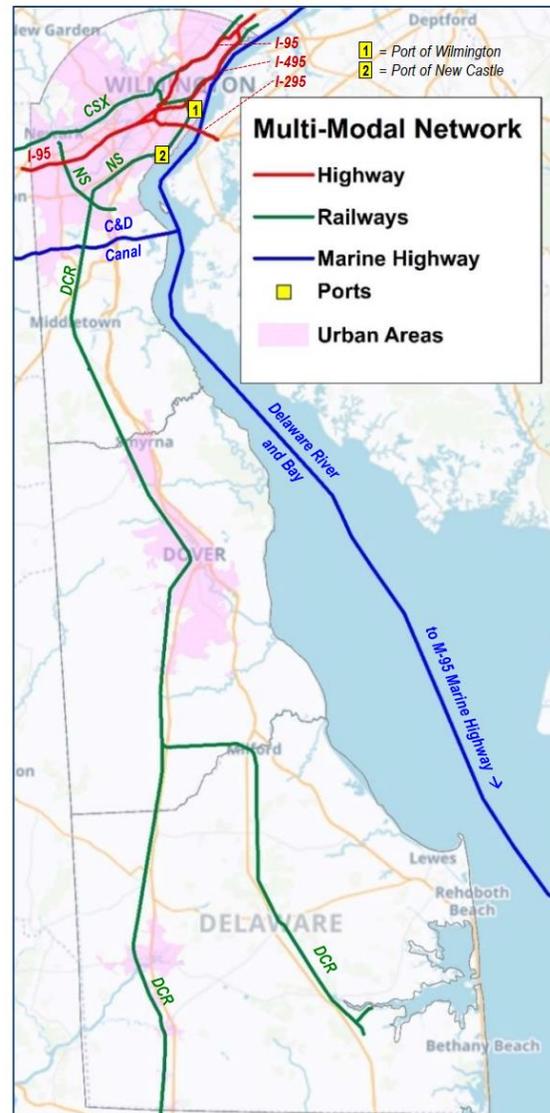
Sussex County

agriculture, retail trade, peak-season tourism

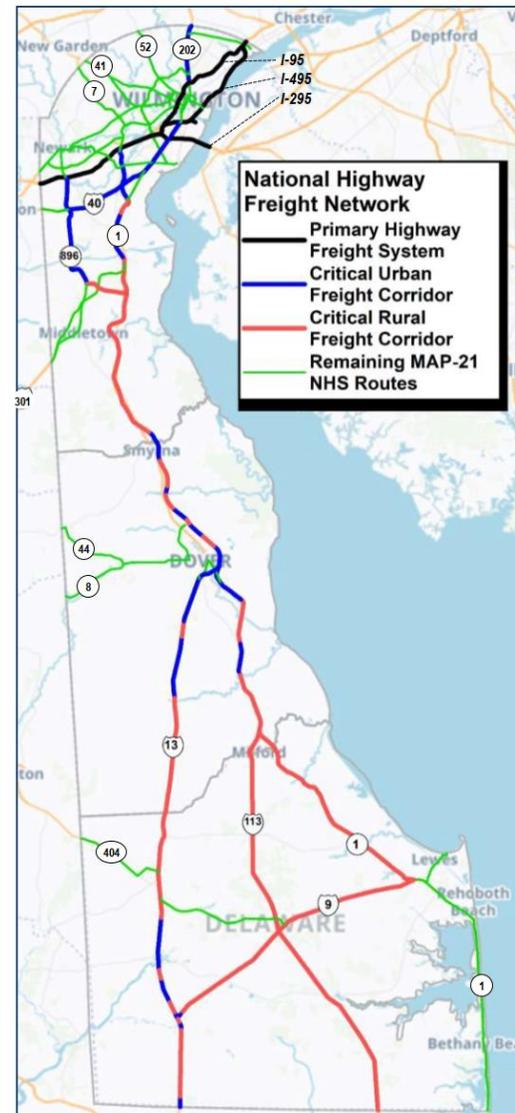
Network

Federally Designated

INTERIM MULTIMODAL FREIGHT NETWORK



NATIONAL HIGHWAY FREIGHT NETWORK



National Multimodal Freight Network (NMFN)

Interstates, NS-CSX-DCR, Port of Wilmington, New Castle port activity, Delaware River/Bay, C&D Canal, M-95

National Highway Freight Network (NHFN)

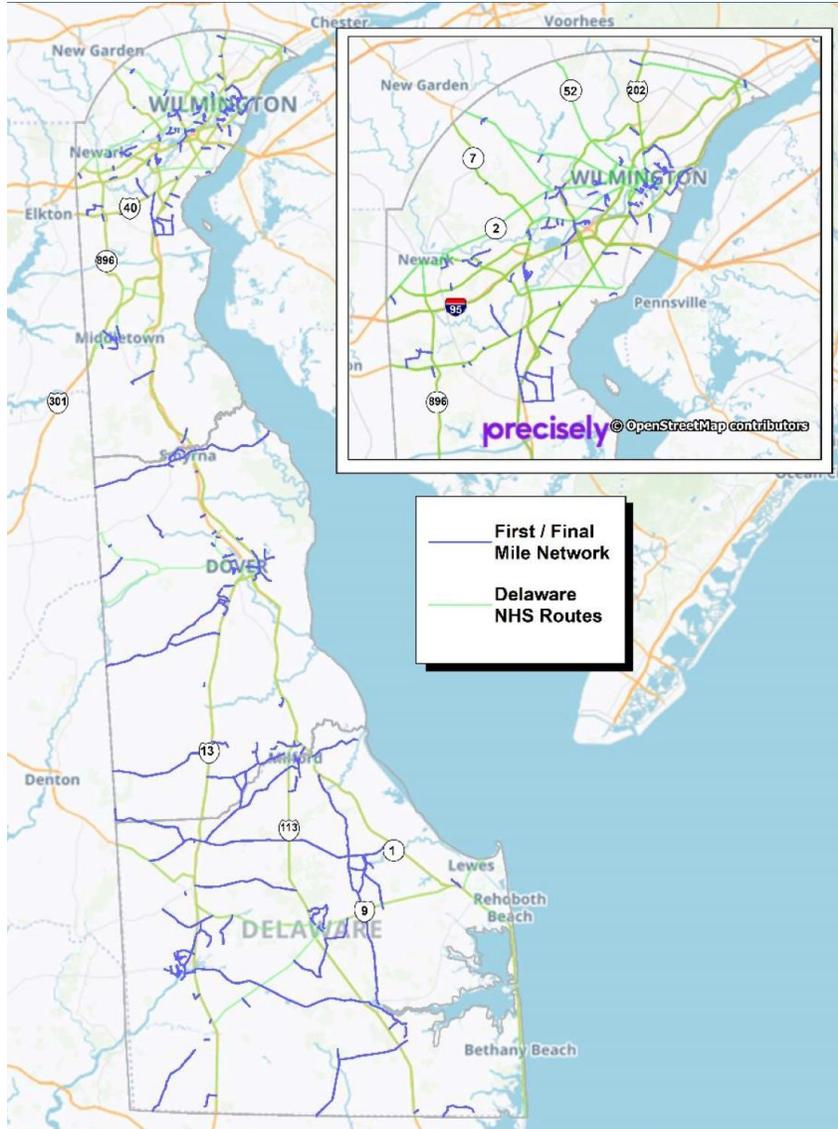
Primary Highway Freight System (PHFS), Critical Rural Freight Corridors (CRFC), Critical Urban Freight Corridors (CUFC)

CUFC/CRFC Expansion

Mileage caps under IIJA were doubled to allow up to **150** and **300** total miles for Delaware's CUFC and CRFC networks, respectively

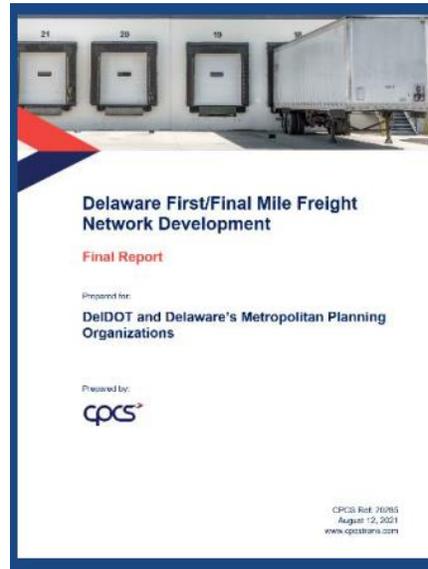
Network

Highways



Delaware First/Final Mile Freight Network

Approximately 294 miles of roadway that link freight sites to broader portions of the state's overall roadway system, the NHFN, and/or the NHS.



Areas of Focus

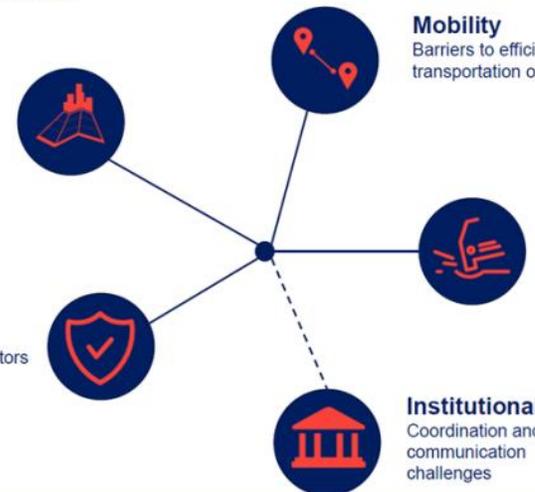
Land Use
Conflicts arising due to freight routes passing through residential or otherwise sensitive areas

Safety
Barriers to safe transportation operators

Mobility
Barriers to efficient freight transportation operations

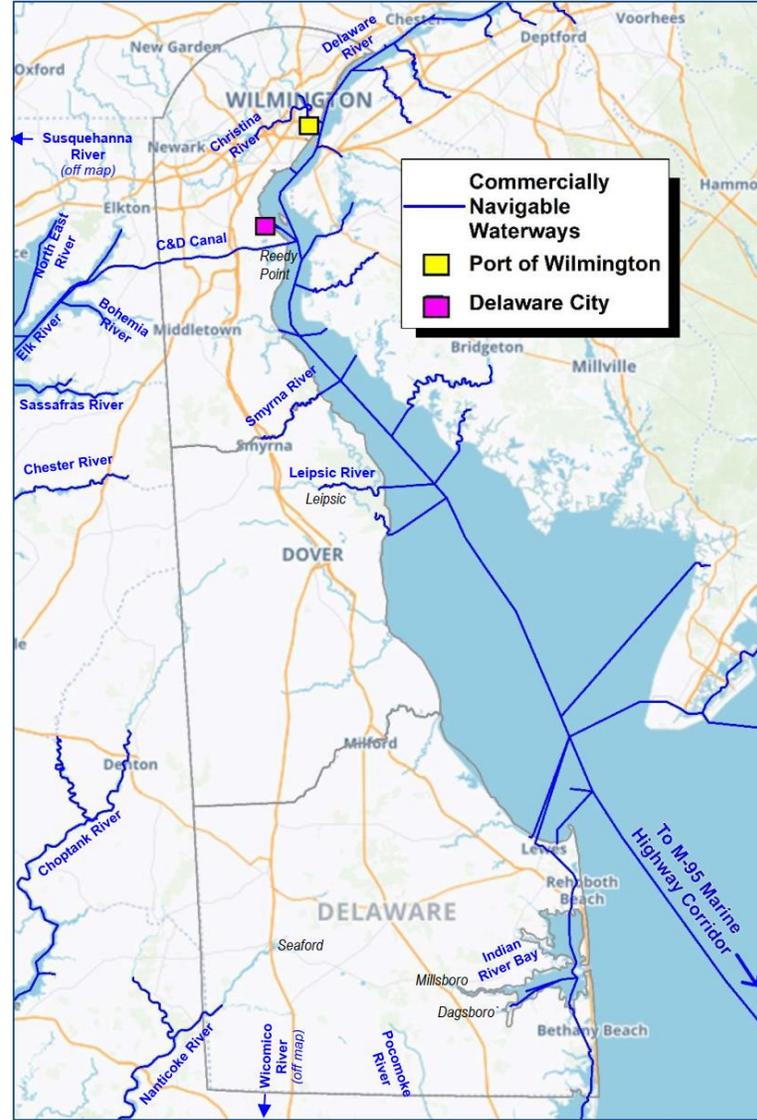
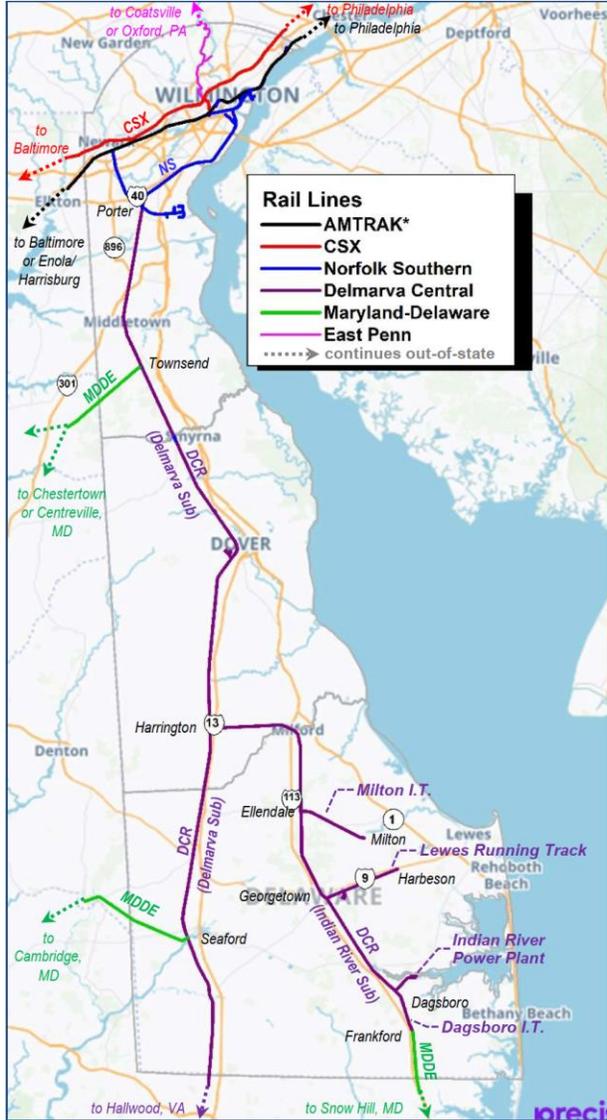
Condition
Deteriorated or inadequate road infrastructure

Institutional
Coordination and communication challenges



Network

Rail, Port, Waterway



Rail

Class I via NS, CSX

Class III via DCR, MDDE, ESPN

Port

Port of Wilmington

New Castle port activity

Delaware River/Bay System

C&D Canal

M-95 Marine Highway

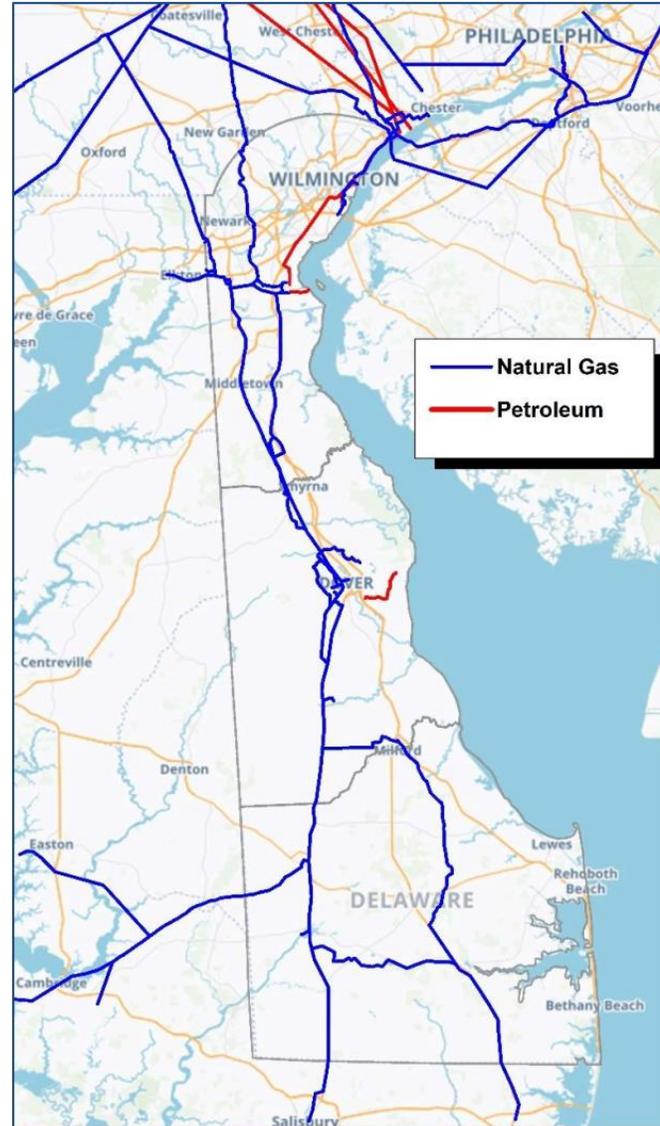
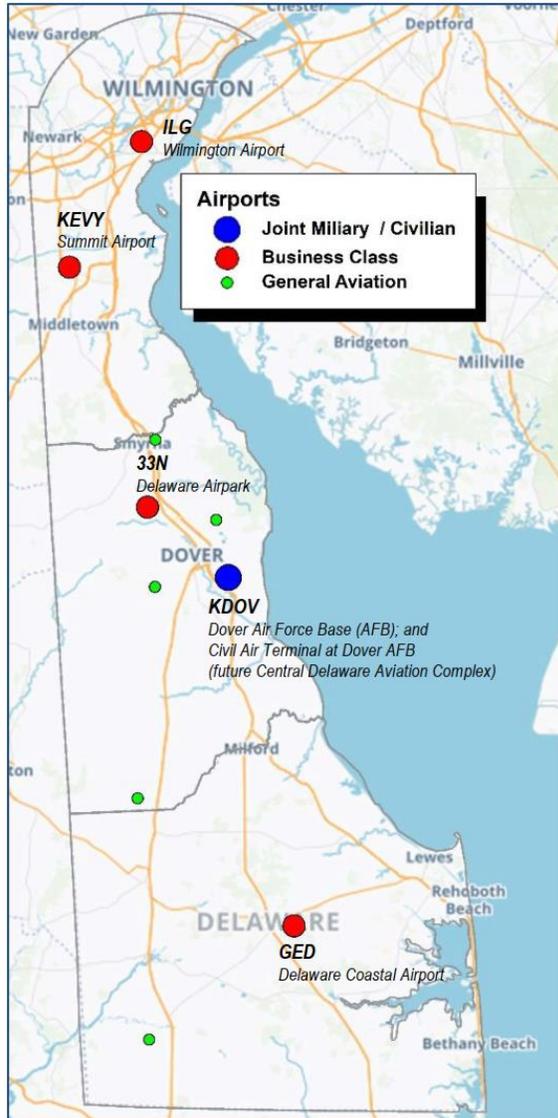
Waterway

Nanticoke River (Seaford)

Wicomico River (Salisbury)

Other (minor shipments)

Network



Airports

Air carrier service (Wilmington), Business class (Summit Airport, Delaware Airpark, and Delaware Coastal Airport), and Joint Use at Dover AFB / Civil Air Terminal (future Central Delaware Aviation Complex)

Pipeline

387 miles natural gas distribution
44 miles petroleum pipeline

Power Generation

Fuel and equipment shipped by pipeline, truck, rail, barge, and ship
power generating sites statewide



CH 4: Performance and Trends

CH 5: Needs and Opportunities

*How well does the system operate,
and what planning considerations
are important?*

Performance and Trends

IIJA Emphasis Areas

- Key data and program resources, study initiatives, and freight relevant insights that align with IIJA emphasis areas

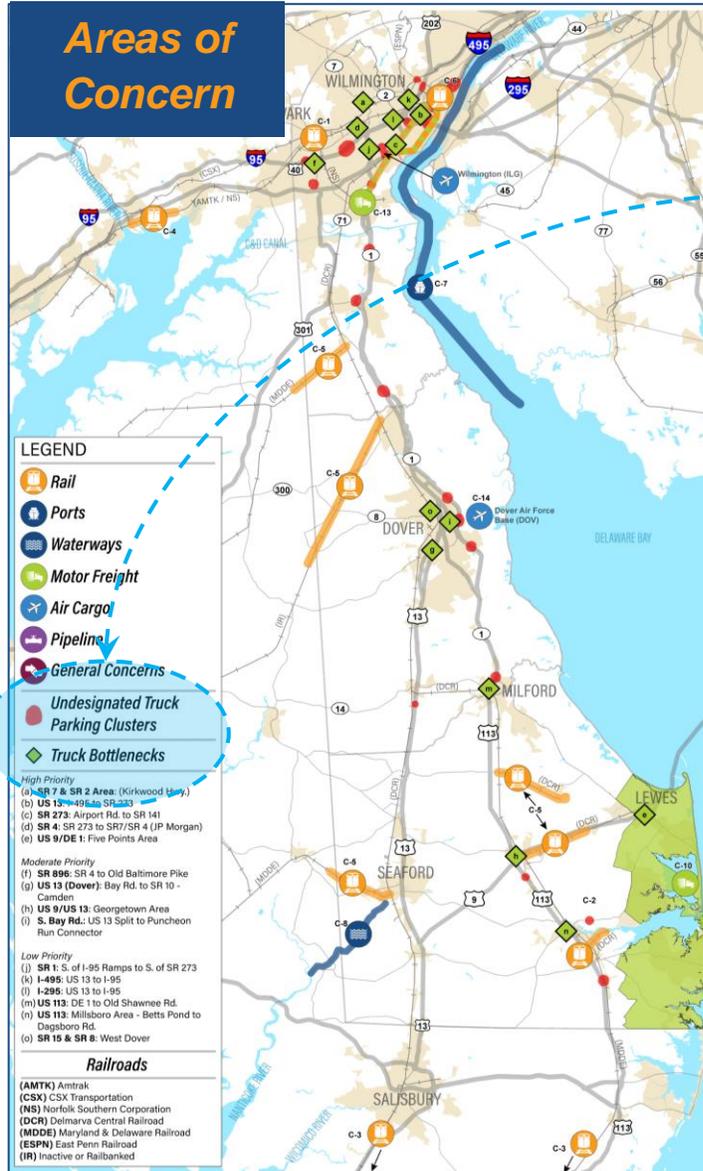
Performance measurement	Commercial ports
Innovative technologies and operational programs	Multi-state freight coordination
Asset preservation and improvement programs	E-commerce considerations
Freight congestion and mitigation	Military freight considerations
Truck parking facilities	Freight resilience and environmental impacts
Supply chain cargo flows	

EXAMPLES:

2021 Delaware Statewide Truck Parking Study
2022 Port of Wilmington Area Alternatives Study
2023 Dover Air Force Base Compatible Use Study

Needs and Opportunities

Area-Specific Details



EXAMPLE CONCERNS:

truck bottlenecks and undesignated truck parking cluster data per DeIDOT / WILMAPCO



C-9 – Truck parking



C-11 – Truck bottlenecks

EXAMPLE OPORTUNITIES:

findings and momentum from recent Dover/Kent County MPO studies



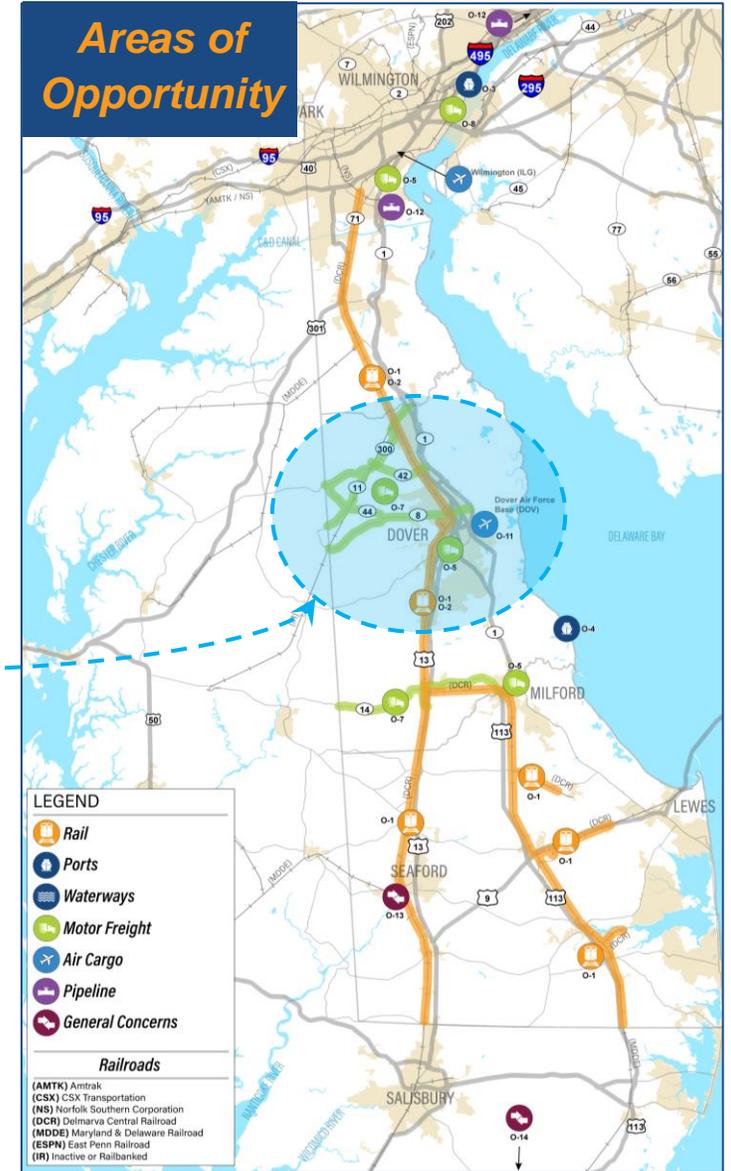
O-2 – rail accessible property



O-7 – east/west connectivity



O-11 – air cargo operations



Needs and Opportunities

?? ??
**Future
 Scenarios**
 ?? ??



*Projects
 Strategies
 Tasks*

Example scenarios with considerable uncertainty...

Growth >	e-commerce and tourism impacts >	<ul style="list-style-type: none"> local consolidation centers first/final mile enhancements seasonal bottleneck reduction
Technology >	CAV, platooning, drones, automation >	<ul style="list-style-type: none"> mapping, data, cybersecurity driver training legislation and regulations
Global Disruption >	vulnerable networks and supply chains >	<ul style="list-style-type: none"> resilience and redundancy multimodal systems supply chain studies



CH 6: Freight Investment Plan

CH 7: Freight Strategic Plan

What actions – including projects, strategies, and specific planning tasks – are important?

Freight Investment Plan

- Candidates:**

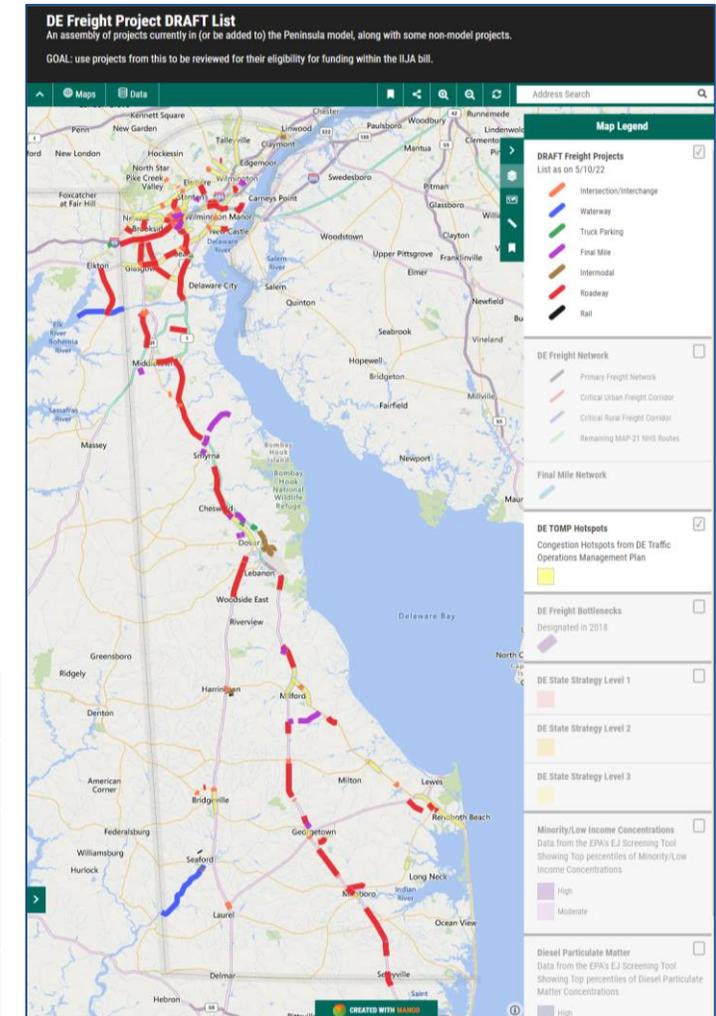
~120 projects screened from the DE CTP and MPO RTP or related long-range plans to assess potential “freight-relevance”

- Methodology:**

Mixture of data, mapping, and qualitative insights through 15 screening criteria, including linkage to IJA emphasis areas

- Screening Criteria:**

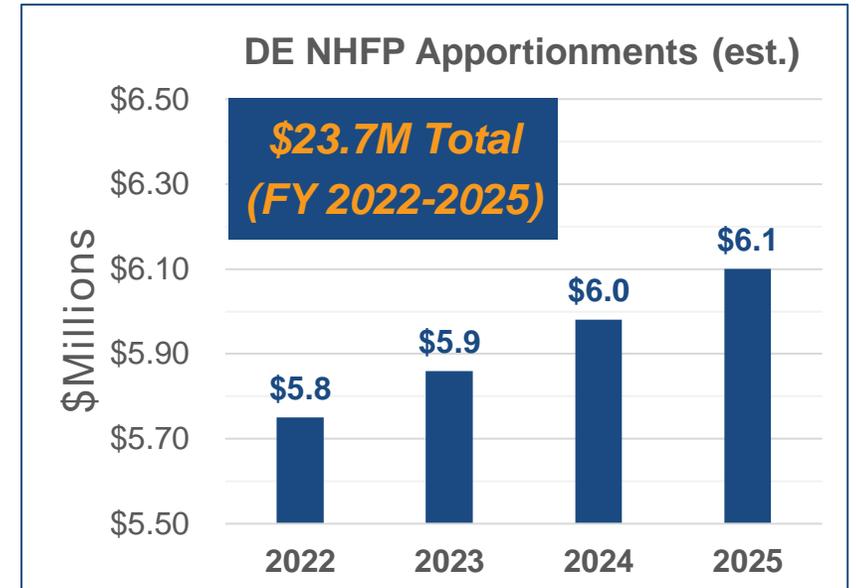
Prior study?	First/final mile route?	SLR 4-ft inundation?
NHFN?	DE state strategy level?	Project key focus type?
STRAHNET?	CTP or MPO LRTP status?	Regional impact?
DE TOMP hotspot?	EJ minority/low income?	IJA program eligibility?
DE truck bottleneck?	EJ diesel particulates?	Project cost range?



Freight Investment Plan

- **National Highway Freight Program (NHFP)**
- **IIJA 5-year formula funding** through DeIDOT or MPO transportation programming, with initial estimates including:
 - \$ 1.4 B in highway/bridge formula funds
 - \$ 27 M to reduce emissions
 - \$ 31 M to increase resilience
 - \$ 15 M for highway safety traffic programs
 - \$ 9 M to augment CMV safety efforts
 - \$ 18 M to expand EV charging networks
 - \$ 6 M for infrastructure development for airports
- **Competitive Grant Programs:**
 - RAISE Grants, INFRA Grants, FAA Terminal Program, MEGA Projects, PROTECT Program, Port Infrastructure Development Program, FHWA Nationally Significant Bridges Program, Charging and Fueling Infrastructure, Reconnecting Communities Pilot Program, Rural Surface Transportation Grant Program

https://www.transportation.gov/sites/dot.gov/files/2022-01/BIL_Delaware.pdf



NHFP Allocations through FY 2025:

- **SR 72 / Advanced Utilities Work**
- **SR 72 / McCoy Rd to SR 71**
- **US 13 / Lochmeath Way to Puncheon Rd Connector**
- **US 40 / Salem Church Rd to Walther Rd**

Freight Strategic Plan



Safety and Security

Truck parking | Permitting and enforcement | Technology and legislative constraints



Economic Vitality

Freight Intensive Sectors (FIS) | Supply chains | Rail accessible land use | Multi-jurisdictional coordination



Freight Connectivity, Accessibility, and Mobility

Multimodal opportunities | First/final mile network | Freight and passenger conflicts | Warehousing & distribution



System Management, Operations, and Maintenance

Freight bottlenecks | Work zone management | ITS and operational technologies | Highway and bridge conditions



Resilience, Sustainability, and Environmental Stewardship

Vulnerable infrastructure | Community impacts | Environmental impacts | Land use and freight implications

Freight Strategic Plan

ONGOING Tasks (annual or intermittent updates)

1. Truck traffic trend analysis (*Wavetronix data application*)
2. Grant pursuits (*screening priorities, eligibility, cost compatibility*)
3. Rail corridor preservation and education (*annual program and safety funds*)

PROCEDURAL Tasks (formal agency/stakeholder coordination)

4. CUFC/CRFC expansion (*additional mileage per IIJA*)
5. STRAHNET refinement (*updated connectivity via US 301*)
6. NMFN refinement (*FHWA updates and/or multimodal CRFF considerations*)

Freight Strategic Plan

SHORT-TERM Tasks (next 1-4 years)

7. Truck parking info systems (*Smyrna pilot follow-up*)
8. Truck parking data updates (*2024 usage/trends*)
9. Supply chain studies (*freight intensive sectors (FIS), pharmaceuticals, e-commerce, green energy*)
10. Land use agency coordination (*first/final mile network planning*)
11. Local freight planning support (*DeIDOT contract to provide municipal assistance*)
12. Truck parking facilities (*implementation of 2021 study recommendations*)
13. First/final mile network refinements (*GIS data updates*)
14. System resilience planning (*freight impacts alongside SLR studies*)

Freight Strategic Plan

LONG-TERM Tasks (beyond 4-years out)

15. Energy supply chain trends (*DE rail, port, refinery implications*)
16. Potential feasibility studies (*based on DE Senate Resolution 10**)
 - Bypass between US 1 and I-95
 - Dedicated freight line between Perryville and Newark
 - Rail spur parallel to SR 41
 - SR 896 corridor improvements and alternate/parallel route
 - SR 7, SR 41, and SR 48 truck restrictions / alternate routes

NOTE: *Additional guidance required from General Assembly and bi-state working group*

*** DE Senate Resolution 10:** *Special Committee to Study and Make Recommendations Regarding Truck Traffic & Freight Movements Along SR 41, SR 48, and SR 7*



Thank You!

DeIDOT Freight Website:

<http://freight.deldot.gov>

DeIDOT Freight Contact:

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ADDITIONAL REFERENCE

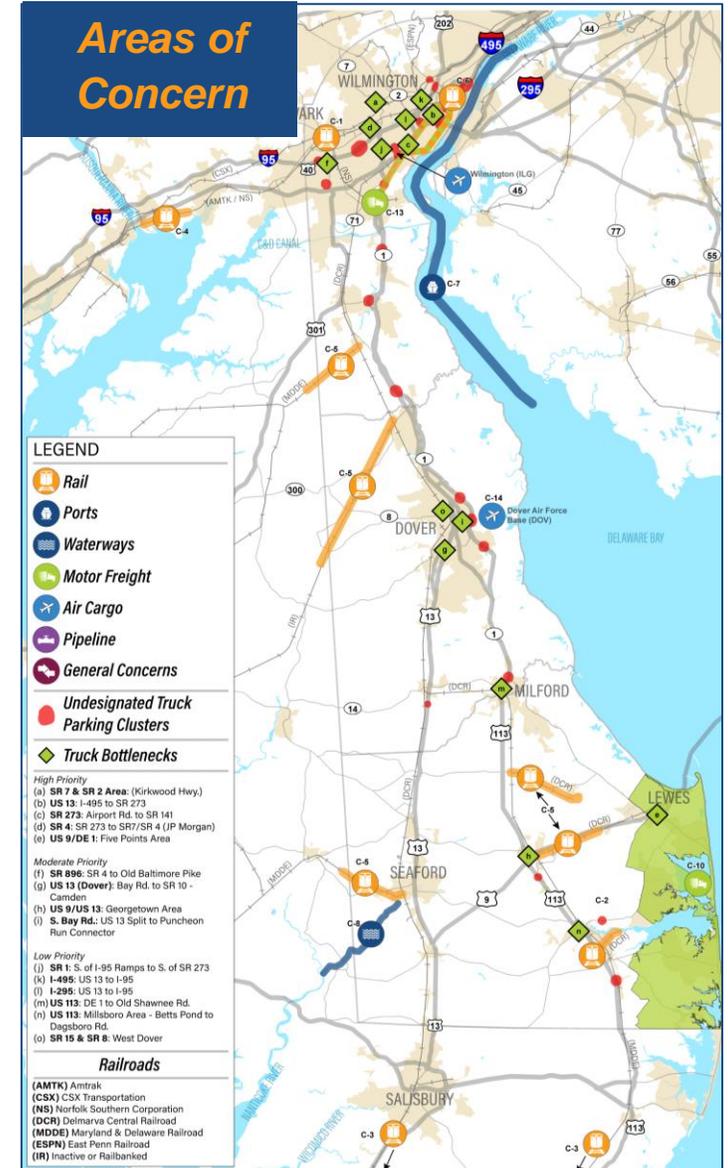
Areas of Concern (complete list)

Areas of Opportunity (complete list)

Needs and Opportunities

Areas of Concern

	C-1 – Rail crossing safety		C-10 – Seasonal congestion
	C-2 – Indian River rail markets		C-11 – Truck bottlenecks
	C-3 – Southern DE rail markets		C-12 – Truck routing
	C-4 – Class I rail access		C-13 – Highway resilience
	C-5 – Rail preservation		C-14 – Air cargo access
	C-6 – Rail system resilience		C-15 – Cybersecurity
	C-7 – Port traffic impacts		C-16 – Fuel & shipping costs
	C-8 – Dredging		C-17 – Warehousing & dist.
	C-9 – Truck parking		C-18 – Land use planning



Needs and Opportunities

Areas of Opportunity

	O-1 – short line rail markets		O-10 – UAV technology
	O-2 – rail accessible property		O-11 – air cargo operations
	O-3 – Port expansion		O-12 – oil/shale markets
	O-4 – Port specialty freight		O-13 – warehousing & dist.
	O-5 – truck parking expansion		O-14 – specialty industries
	O-6 – CAV technology		O-15 – FIS connectivity
	O-7 – east/west connectivity		
	O-8 – Port access improvements		
	O-9 – real-time info systems		

