



Delaware Statewide Truck Parking Study

DRAFT Technical Memo 3: Draft Recommendations and Opportunities

Prepared for:

WILMAPCO and DeIDOT

Prepared by:



In association with:





Delaware Statewide Truck Parking Study

The objective of the Delaware Statewide Truck Parking Study is to address overnight parking hotspots as well as more localized, shorter-term truck parking and staging needs within the State of Delaware. An additional focus of this effort will include regular engagement with the local trucking community to help validate future strategies and recommendations.

Technical Memo

This Technical Memo is the third in a series of three that together inform the Study. This Technical Memo presents statewide policy and program recommendations, offers a toolkit of truck project types, and identifies location-specific opportunities to advance truck parking in Delaware.

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Opinions

Unless otherwise indicated, the opinions herein are those of the authors and do not necessarily reflect the views of WILMAPCO or DeIDOT.

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Acronyms / Abbreviations

ATCMTD	Advanced Transportation and Congestion Management Technologies Deployment
ATRI	American Transportation research Institute
BUILD	Better Utilizing Investments to Leverage Development
CMAQ	Congestion Mitigation and Air Quality
DeIDOT	Delaware Department of Transportation
DERA	Diesel Emissions Reduction Act
DMS	Dynamic Message Sign
DOT	Department of Transportation
DSRC	Dedicated Short-Range Communications
FAST Act	Fixing America's Surface Transportation Act
FHWA	U.S. Federal Highway Administration
FY	Fiscal year
GPS	Global positioning system
HSIP	Highway Safety Improvement Program
INFRA	Infrastructure for Rebuilding America
IVR	Interactive Voice Response
MAP-21	Moving Ahead for Progress in the 21 st Century
MPO	Metropolitan Planning Organization
NHFN	National Highway Freight Network
NHFP	National Highway Freight Program
NHS	National Highway System
NHPP	National Highway Performance Program
NIMBY	Not In My Backyard
P3	Public-private partnership
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
SR	State Route
STBG	Surface Transportation Block Grant Program
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TIGER	Transportation Investment Generating Economic Recovery
TWIS	Truck Weight and Inspection
U.S.	United States
U.S. DOT	United States Department of Transportation
VMS	Variable message sign
WILMAPCO	Wilmington Area Planning Council

1 Introduction

1.1 Background and Objectives

Truck parking remains a top challenge for the trucking industry, with drivers facing truck parking shortages in Delaware and nationwide. Undesignated truck parking, which refers to the issue of trucks parked at unmarked locations, serves as the most noticeable indication of a truck parking shortages and has negative impacts on the economy, safety, infrastructure, and quality of life. In Delaware, undesignated truck parking occurs near urban areas, along key freight corridors (I-95, I-495, I-295, US 13, and SR 1), on last-mile roads near freight-generating facilities. Meanwhile, truck traffic and the associated demand for truck parking is expected to increase in Delaware, with increasing goods movement nationwide, growth of freight-reliant industries in the state, and expansion of the Port of Wilmington into Edgemoor.

While there is no one “silver bullet” solution to addressing truck parking issues, there is a range of truck parking solutions available to address truck parking issues and needs. For Delaware, the available truck parking solutions include high-level policies and programs and location-specific projects.

Policies and Programs focus on institutional changes that promote the inclusion of truck parking into governance and investment decisions. While policies and programs may not directly target a specific location, they are instead part of an overarching strategy that can set the foundation for the Delaware Department of Transportation (DelDOT) and local partners to advance truck parking on a systematic basis and in decision-making. Figure 1 details the recommended policies and programs for truck parking in Delaware.

Figure 1: Delaware Truck Parking Policies and Programs – Statewide Recommendations

✓ Identify a point of contact, or “champion,” for truck parking	✓ Integrate truck parking into capital project planning and development.
✓ Secure funding for truck parking projects	✓ Coordinate truck parking information and efforts with neighboring states
✓ Partner with local land use agencies to update local land use regulations to support parking capacity on-site at freight generators	
✓ Launch a public education campaign to share information about truck parking with local agencies and the public	
✓ Work with trucking industry to exchange information about truck parking issues and solutions	

Projects refer to location-specific solutions that target specific truck parking needs or issues. Projects can be classified into the following groups:

- **Capacity expansion projects** are investments that increase the number of truck parking spaces at a given location.
- **Information and technology projects** are investments to increase access to information and technology, in order to use existing truck parking more effectively.

Figure 2 displays the Truck Parking Project Toolkit, which provides a range of available solutions to target location-specific truck parking needs or issues. The figure also identifies specific opportunities to apply these projects to truck parking issue areas in Delaware.

Figure 2: Delaware Truck Parking Projects – Toolkit and Location-specific Opportunities

TYPE	CAPACITY EXPANSION PROJECTS					INFO & TECHNOLOGY PROJECTS	
PROJECT TOOLKIT	Expand truck parking capacity at existing public rest areas.	Leverage existing state-owned facilities and land for new truck parking capacity.	Develop protected roadside truck parking along corridor shoulders.	Incentivize private development of new or expanded truck parking capacity.	Promote truck parking at private parking lots during non-peak periods.	Provide signage with information about truck parking locations.	Monitor and provide new technologies related to truck parking.
LOCATION-SPECIFIC OPPORTUNITIES FOR DELAWARE	At Smyrna Rest Area	At suitable intersections for truck parking (e.g., on freight corridor, near food and fuel) through P3	Along I-95 as part of existing Newark toll plaza upgrades	At Edgemoor	At Dover Downs Hotel & Casino and/or Dover International Speedway	Across state borders: on I-95 near Maryland and Pennsylvania borders and on I-295 near New Jersey border At Smyrna Rest Area	
		As part of existing capital planning projects (e.g., on SR 1, East Camden Bypass)	Along SR 1 as part of existing Biddle's Corner and Dover toll plaza upgrades	Near the Port of Wilmington In the Dover area			
		At Tybouts Corner and Route 273 Park and Rides					
		At US 13 weigh station					
		Build extra-wide shoulders along last-mile roads at Edgemoor					

1.2 Overview of this Technical Memo

Purpose

The purpose of this Technical Memo is to provide draft strategies and recommendations to advance truck parking in Delaware, building off the existing conditions and issues identified for truck parking in Delaware. Specifically, this memo makes recommendations for statewide policies and programs, offers a toolkit of truck project types, and identifies location-specific opportunities to advance truck parking in Delaware.

Methodology

This Technical Memo builds from the truck parking inventory and undesignated truck parking analysis, which were prepared using CPCS analysis of Trucker Path data and INRIX truck global positioning system (GPS) data. Solutions and opportunities were identified based on county parcel data for New Castle County, Kent County, and Sussex County. This Technical Memo was also informed by stakeholder feedback, collected through a Truck Parking Focus Group meeting.

Limitations

Some of the findings in this report are based on the analysis of third-party data. While CPCS makes efforts to validate data, CPCS cannot warrant the accuracy of third-party data.

2 Statewide Policy and Program Recommendations

2.1 Statewide Policy and Program Recommendations

This section provides recommendations for truck parking in the form of policies and programs that DelDOT should implement on a statewide level to set a foundation for Delaware to integrate truck parking into policies, programs, and planning statewide.

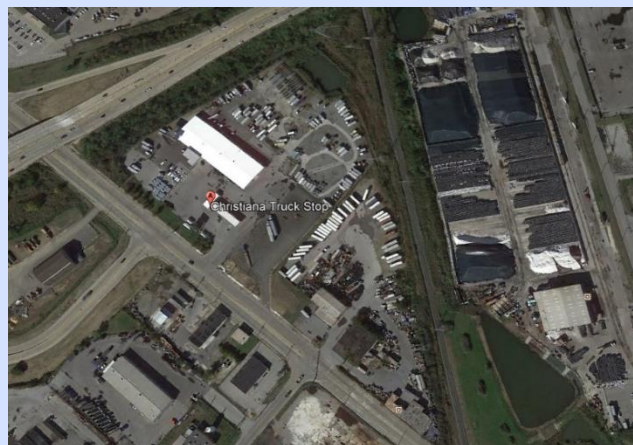
Statewide policy and program recommendations focus on institutional changes that promote the inclusion of truck parking into governance and investment decisions.

Identify a point of contact, or “champion,” for truck parking within DelDOT.

As an initial and low-cost institutional solution, DelDOT should consider designating a DelDOT truck parking “champion.” The truck parking champion serves as a point of contact that coordinates and provides information to public and private stakeholders about truck parking issues and efforts in Delaware. This individual, or group of individuals, would further champion the implementation of truck parking policies and projects in Delaware, including those identified in this Study. Delaware’s truck parking champion would also identify and implement opportunities for DelDOT to enable private sector involvement in truck parking projects. Additionally, DelDOT should consider adding a truck parking section to their website and feature the contact information for the truck parking champion, as well as provide links to the final truck parking report and other truck parking resources.

Case Study: Christiana Truck Stop

In 2013, the Wilmington Area Planning Council (WILMAPCO) published the Port of Wilmington Truck Parking Study, which identified F & H Transport, at Terminal Avenue and I-495, as a potential location to develop a staging area, where trucks can wait for port shipper or receiver appointments.¹ Since then, the location has been developed into Christiana Truck Stop, a private truck stop that sells fuel and food, and allows overnight truck parking. As part of the truck stop's development, DelDOT, through its subdivision permitting process, modified its entrance standards to allow an additional truck-only entrance, enabling the location's upgrade to a private truck stop. Future truck stop developers can reach out to a Delaware Truck Parking Champion to similarly explore opportunities that better enable truck parking development.



Source, Left: WILMAPCO, Port of Wilmington Truck Parking Study, July 2013; Source, Right: Google Earth Pro, Imagery 10/16/2020.

Integrate truck parking into capital project planning and development.

DelDOT should integrate truck parking into statewide planning and decision-making for long-term capital investments. This may include developing and tracking truck parking performance measures, adding truck parking criteria to project decision-making processes, and considering how excess land could be used for truck parking. DelDOT should also integrate truck parking into its statewide and corridor plans and studies, so that truck parking needs, issues, and opportunities are continually monitored and DelDOT can capitalize on opportunities to address truck parking needs. This further ensures truck parking is considered along with other high priority transportation projects in the state.

Secure funding for truck parking projects.

Funding is a key challenge for advancing truck parking projects, in part because truck parking competes against many other project types. Therefore, DelDOT should pursue funding or more explicitly consider truck parking in DelDOT decision making. One approach would be to placing a greater emphasis on freight- or truck parking-related criteria in the project prioritization process.

Additionally, existing federal funding programs (see Chapter 5.2) could be used for truck parking projects. For example, National Highway Freight Program (NHFP) funding is earmarked for freight-specific projects, providing an opportunity for truck parking projects to better compete for funding. DelDOT could also leverage the data and results of the Delaware Truck Parking Study to apply for

¹ WILMAPCO, Port of Wilmington Truck Parking Study, July 2013, http://www.wilmapco.org/freight/Port_Final_July14.pdf

competitive federal grant programs, such as the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant, to fund truck parking projects in Delaware.

Partner with local land use agencies to update local land use regulations to support additional parking capacity on-site at freight generators.

DelDOT should work with and provide guidance to local land use agencies to develop local requirements for freight generators to provide capacity for truck staging. DelDOT should provide localities with model ordinances to support updates to local land use code that require truck parking at new freight-generating facilities.

Case Study: Lehigh Valley Truck Parking Ordinances

In response to truck parking issues resulting from the explosion of warehouse development, townships in Lehigh Valley, Pennsylvania, have updated their zoning codes to include requirements for truck parking.

- The Township of Upper Macungie adopted an ordinance² in 2017, amending its zoning code to require the following: warehouse and distribution facilities must provide a minimum of one off-street loading space per loading dock³; and newly developed or significantly changed industrial use establishments (including for warehousing and distribution) must provide a 10 ft. x 80 ft. truck staging parking space for each ½ of a required loading space (Upper Macungie requires one loading space per loading dock). Additionally, developments are required to provide amenities within the warehouse. Examples called out in the zoning code include:
 - A truck drivers lounge
 - Restroom facilities
 - Food and beverages and the dispensing

The zoning code specifies that the lounge should be in proportion to the number of loading docks, be able to accommodate five seats, and be similar facilities provided for on-site employees.⁴

- The Township of Lower Macungie updated its zoning code to require new or enlarged industrial use buildings to provide off-street truck loading space, based on gross floor area, with one loading space for the first 10,000 ft² and one additional loading area for every 40,000 ft².⁵ Additionally, warehouse and distribution use buildings must have amenities for truck drivers that include a suitable lounge with restroom facilities and parking for the amenity, as specified.⁶

Coordinate truck parking information and efforts with neighboring states.

DelDOT should work with its neighboring states – Maryland, New Jersey, and Pennsylvania – to share truck parking information and coordinate truck parking efforts. For example, states can provide information to one another about changes to existing truck parking locations and availability, as well as new truck parking developments, near state borders and along multi-state corridors. Specifically, Delaware should coordinate with Maryland and Pennsylvania on truck parking along I-95, and with New Jersey on truck parking along I-295. Through ongoing coordination with neighboring states, Delaware may also explore opportunities to collaborate on corridor-specific truck parking projects near state borders and apply for federal grants to implement corridor-wide truck parking projects.

² Township of Upper Macungie, Lehigh County, Pennsylvania, Ordinance No. 2017-04, Adopted June 1, 2017, <http://www.uppermac.org/wp-content/uploads/2014/11/2017-04.pdf>

³ Township of Upper Macungie, PA, Municipal Code, Zoning, § 27-605, <https://ecode360.com/14517474>

⁴ Township of Upper Macungie, PA, Municipal Code, Zoning, § 27-601, <https://ecode360.com/14517380>

⁵ Township of Lower Macungie, PA, Municipal Code, Zoning, § 27-2304, <https://ecode360.com/34785172>

⁶ Township of Lower Macungie, PA, Municipal Code, Zoning, § 27-2406, <https://ecode360.com/34786035>

Launch a public education campaign to share information about truck parking with local agencies and the public.

The Delaware Truck Parking Study provides DelDOT with an opportunity to launch a public education campaign to inform the localities and communities about the importance of truck parking to Delaware and its local economies. DelDOT can provide localities with data and information from the Study, as well as gather feedback about local issues, needs, and opportunities related to truck parking. DelDOT should further work with counties, metropolitan planning organizations (MPOs), cities, economic development agencies, and other local agencies to share information about truck parking with local communities, in order to overcome “Not in My Backyard” (NIMBY) truck parking challenges. As part of this, DelDOT and local agencies can develop materials for distribution and present at local agency and public meetings. As DelDOT and localities share information about truck parking, there is further opportunity to collaborate around the development of locally-oriented solutions to address local truck parking needs and issues, particularly in urban areas.

Work with trucking industry to exchange information about truck parking issues and solutions.

DelDOT should continue to work with the trucking industry, as an ongoing relationship is important to continue identifying and effectively addressing issues for truck parking. DelDOT could provide information to the trucking industry about existing truck parking locations with availability, as well as new truck parking capacity in the state. Meanwhile, the trucking industry can inform DelDOT’s understanding of the changes to truck parking conditions and issues in the state, while also providing feedback on suggested or implemented solutions. DelDOT should use the Freight Working Group as a starting point for continued information exchange and should consider working with the Freight Working Group to create a truck parking task force.

3 Truck Parking Project Toolkit

This section provides a portfolio of truck parking projects that DelDOT may consider when examining a particular truck parking issue within Delaware. There is no “silver bullet” solution for truck parking; rather, effective truck parking solutions must be tailored to address a specific truck parking issue at a given location.

The truck parking Project Toolkit provides a range of available solutions for Delaware to target location-specific truck parking needs or issues.

There are multiple mechanisms through which projects can be implemented, with varying levels of involvement from the public and private sectors. Additionally, understanding the unique conditions, challenges, and opportunities for truck parking in urban and rural areas provides important context for the application of truck parking projects.

3.1 Toolkit of Project Types

3.1.1 Capacity Expansion Projects

Capacity expansion projects involve investments in projects to increase the number of truck parking spaces at a given location.

DelDOT should explore capacity expansion projects where there is a demonstrated need for additional truck parking capacity. Additional capacity is required when the existing truck parking capacity cannot meet the current or expected future demand for truck parking. This need is signaled by the presence of undesignated truck parking near existing truck parking facilities that are typically full. This need may also be signaled by the presence of undesignated truck parking in locations with no nearby truck parking facilities. DelDOT may consider the following approaches to capacity expansion projects.

Expand truck parking capacity at existing public rest areas.

DelDOT currently owns two rest areas – the Biden Welcome Center and the Smyrna Rest Area. Where land is available, new truck parking capacity could be added through parking lot expansion. Expanding truck parking capacity at existing rest areas is especially suitable where the state owns land adjacent to an existing facility. Routine maintenance and upgrades to state rest area facilities also provide opportunities for DelDOT to assess the potential for capacity expansion through site redesign for more efficient use of space. Further, a capital project to expand truck parking capacity may improve facility access, parking space access, and amenities (e.g., pavement, lighting, trash cans, etc.).

Leverage existing state-owned facilities and land for new truck parking capacity.

DelDOT may explore the use of state-owned facilities or state-owned land for truck parking, to provide additional truck parking capacity in locations where there is existing unmet demand. DelDOT may consider utilizing existing facilities with parking lots, such as weigh stations or Park and Rides, to allow truck parking during overnight periods when the lot is not in use. Facility upgrades, such as pavement upgrades, signage, lighting, and bathrooms, may also be required to convert these facilities into overnight truck parking locations. Meanwhile, DelDOT may also explore opportunities to develop truck

parking capacity on existing state-owned land, particularly near existing truck parking locations, gas stations, and/or restaurants, which offer amenities such as restrooms, food, and fuel. DelDOT could also consider entering into a public-private partnership (P3) with nearby truck stops or gas stations, with the public sector offering expanded parking, which would benefit the business in exchange for the private sector providing maintenance of the parking area and access to amenities. DelDOT may also explore opportunities to develop existing state-owned facilities and land into short-term Emergency Truck Parking sites, in the event of a vehicle, weather, or other incident.

Develop protected roadside truck parking along corridor shoulders.

Where undesignated truck parking occurs on wide corridor shoulders, and there is no nearby truck parking availability, DelDOT could develop a protected roadside truck parking, especially where there is existing state-owned land. These truck parking areas could be located off corridors with wide shoulders, but they must include protected on/off ramps to allow for safe entry and exit. Additional upgrades, such as pavement upgrades, signage, and lighting, may be required to develop truck parking areas in these locations. These areas could further be limited to short-term Emergency Truck Parking Sites during the day, with long-term parking allowed overnight. DelDOT could explore opportunities to integrate this solution into existing corridor planning and capital investments.

Case Study: Protected Roadside Parking Turnouts in Wyoming

In Wyoming, the state provides protected truck parking turnouts along major freight corridors I-25, I-80, and I-90, each of which accommodate 10 to 15 trucks. The truck turnout areas have a center aisle to protect the truck parking areas from corridor traffic. While no restrooms or amenities are provided at these facilities, the turnout areas provide space for trucks to park, including during emergency winter weather events that force trucks off the road in Wyoming. Development and maintenance of these turnouts are also relatively low.⁷



Source, Left: Map data © 2018 Google, Digital Globe from FHWA; Source, Right: Imagery © 2018, Map data © 2018 Google.

Incentivize private development of new or expanded truck parking capacity.

There are currently five private truck stops in Delaware that allow for overnight parking. DelDOT could explore opportunities to incentive the expansion of these truck stops, especially at locations that frequently reach capacity or where demand is particularly high or expected to increase. DelDOT may also work with the private sector to explore the development of new private truck stops at locations that provide a value proposition through existing or expected unmet demand for truck parking. Where needed, DelDOT may provide financial assistance, land, infrastructure upgrades, or other support to incentivize private truck parking development.

⁷ FHWA, National Coalition on Truck Parking: Parking Capacity Working Group - Creative Uses of the Right-of-way and Adjacent Areas, https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/parking_capacity/product/row.htm

Promote truck parking at private parking lots during non-peak periods.

Although DelDOT would not be the lead agency, DelDOT could work with the private sector to promote truck parking at large private parking lots with available capacity during off-hours hours or non-peak months of the year. This solution type may offer opportunities to provide truck parking capacity in urban areas where land is expensive and truck parking for last-mile deliveries is difficult to find. Suitable private parking lots include those at shopping malls, hotels and casinos, and fairgrounds. Upgrades, including pavement upgrades, signage, security, and lighting, may be required to formalize truck parking at these locations.

3.1.2 Information & Technology Projects

Information and technology projects involve investments in projects to increase access to information and technology, in order to advance truck parking.

DelDOT should explore information and technology projects where there are opportunities to address truck parking issues by providing timely and accurate truck parking. Specifically, information projects provide an opportunity to direct truck drivers to existing truck parking supply and help drivers make an informed decision about where to stop. An opportunity for an information and technology solution is signaled by the presence of undesignated truck parking near existing truck parking facilities that typically have available capacity. Meanwhile, technology projects may provide further opportunities to use new technologies to advance truck parking, such as by enhancing information access, reducing environmental impacts, and supporting the deployment of new vehicle technologies. DelDOT may consider the following information and technology projects.

Provide signage with information about truck parking locations.

DelDOT may explore the installation of signage at locations where undesignated truck parking occurs despite the availability of truck parking nearby. In order to be useful, any type of signage must be provided at critical decision-making points for drivers, accurate, and must be visible or otherwise effectively communicated to drivers. DelDOT could also provide signage for eligible facilities under the Interstate Oasis or similar State Highway Oasis program, with information about locations that offer products and services to the public and have 24-hour restroom access, and provide parking.

Federal Interstate Oasis Program

The Federal Interstate Oasis Program is one opportunity to provide static truck parking information on signage, through a P3. When a state participates in the Federal Interstate Oasis program, facilities meeting a statutorily defined standard are eligible for designation as an “Interstate Oasis,” with signage on Interstates directing drivers to the “Interstate Oasis.” Eligible facilities must be located within a certain proximity to the interstate, offer products and services to the public, have 24-hour restroom access, and provide parking for heavy trucks and automobiles that should be free of charge.⁸

Figure 2I-4. Examples of Interstate Oasis Signs and Plaques



⁸ FHWA, Manual on Uniform Traffic Control Devices, Examples of Interstate Oasis Signs and Plaques, https://mutcd.fhwa.dot.gov/hdm/2009/part2/fig2i_04_longdesc.htm; FHWA, SAFETEA-LU, Interstate Oasis Program Fact Sheet, <https://www.fhwa.dot.gov/safetealu/factsheets/iop.htm>; Federal Register, Interstate Oasis Program, A Notice by the Federal Highway Administration on 10/18/2006, <https://www.federalregister.gov/documents/2006/10/18/E6-17367/interstate-oasis-program>

DelDOT could use static signs to provide drivers with information about truck parking locations and amenities. DelDOT could also explore the use of dynamic message signs (DMS) or variable message signs (VMS) enabled by sensors or cameras at truck parking facilities to provide real-time information about the availability of truck parking spaces. In order for dynamic signage to be effective, they must provide *accurate* information at truck parking locations that help drivers find available truck parking. In addition, DelDOT could further consider the development of a state- or corridor-wide truck parking information management system. Such a system could also be implemented in coordination with neighboring states, as appropriate.

ATRI Report: Truck Driver Use and Perceptions of Truck Parking Information Systems

A 2021 survey and report from the American Transportation Research Institute (ATRI) found that most drivers find VMS to be useful and accurate. VMS accuracy is a top priority for truck parking information system utilization, with perceived accuracy influencing whether a truck driver takes action based on information provided by VMS. In the report, almost half of drivers surveyed reported taking action based on VMS, suggesting that accurate and/or perceived VMS accuracy can be improved to enhance truck parking information system utilization.⁹

Source, Image: FHWA, National Coalition on Truck Parking: Technology and Data Working Group - Truck Parking Availability Detection and Information Dissemination from MAASTO, TIGER Proposal 2015, Regional TPIMS.



Prior to implementing truck parking information technology solutions, DelDOT should conduct a best practices review and peer exchange with other states or regions that have implemented truck parking information technology projects. Several states have implemented truck parking information projects to date, including but not limited to those detailed in Figure 3 on the following page.

Monitor and provide new technologies related to truck parking.

New technologies will affect the demand for truck parking and provide opportunities to improve truck parking in Delaware. By monitoring emerging technologies, such as connected vehicles, autonomous vehicles, and electric vehicles, DelDOT can identify related issues and opportunities affecting truck parking in Delaware. For instance, DelDOT should monitor the development of electric trucks and consider providing new or additional electric vehicle charging stations at rest areas, or incentive truck stops to provide electric vehicle charging stations, to accommodate electric trucks. Similarly, DelDOT should monitor the development and application of connected and autonomous vehicle technologies and infrastructure, particularly the impact on projected truck traffic and hours of service changes, to ensure these impacts are incorporated into truck parking investment decisions.

Additionally, though idle-reduction technologies are not new, they have not yet been implemented on a widespread scale. DelDOT may explore opportunities to provide and/or incentivize the use of idle-reduction technologies¹⁰ at truck parking locations to improve fuel efficiency, reduce air and noise emissions, and address public concerns related to emissions.

⁹ ATRI, Truck Parking Information Systems: Truck Driver Use and Perceptions, June 2021, <https://truckingresearch.org/wp-content/uploads/2021/06/ATRI-Truck-Parking-Information-Systems-Driver-Use-and-Perceptions-06-2021.pdf>.

¹⁰ Idle reduction technologies power vehicle services and equipment (e.g., heat, air conditioning, electricity), allowing truck drivers to shut off their truck engines while stopped. Without idle reduction technologies, truck engines must remain running to power vehicle services and equipment. From U.S. EPA, Learn About Idling Reduction Technologies (IRTs), <https://www.epa.gov/verified-diesel-tech/learn-about-idling-reduction-technologies-irts-trucks-and-school-buses>

Figure 3: Select State and Multi-State Truck Parking Information Projects

Project	Caltrans	Minnesota DOT	Colorado DOT	Florida DOT	Michigan DOT	I-95 Corridor Coalition	Tennessee DOT	MAASTO
Funding Agency	FHWA, Caltrans	MnDOT, FHWA	Federal funding, Colorado DOT	FHWA, FDOT	FHWA, MDOT	FHWA, MDOT, VDOT	FMCSA, TDOT	USDOT through TIGER grants
Location	One privately owned site on I-5.	Three public rest areas on I-94. It will also integrate with the Wisconsin I-94 system.	Six locations during the first phase. Final goal to deploy across the state on I-25, I-70, and I-76	Total of 68 locations will be active by April 2019. Seven rest areas and weigh stations along I-4 and I-95 scheduled for phase 1.	Seven private truck stops and five public rest areas.	System is active at two rest areas in I-95 and two on I-64 in Virginia. Testing done at rest areas on I-95.	Two rest areas.	Eight MAASTO states: Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Ohio, Wisconsin
Information Dissemination	Website, mobile apps, interactive voice response (IVR)	DMS, website, in-cab geolocation app device	DMS, website, mobile apps, in-cab systems	DMS, website, mobile apps, in-cab systems	DMS, websites, mobile apps, in-cab systems	Website, IVR, in-cab systems	Website, DMS, in-cab systems	Website, DMS, mobile apps, in-cab systems
Sensing Technology (Categorized)¹¹	In/Out, Space-by-space	Space-by-space	In/Out, Space-by-space ¹²	In/Out, Space-by-space ¹³	In/Out, Space-by-space	In/Out, Space-by-space	In/Out, Space-by-space	In/Out, Space-by-space

Source: Adapted from Table 3. State and Multi-State Projects of ATRI, Truck Parking Information Systems: Truck Driver Use and Perceptions, June 2021, <https://truckingresearch.org/wp-content/uploads/2021/06/ATRI-Truck-Parking-Information-Systems-Driver-Use-and-Perceptions-06-2021.pdf> and FHWA, National Coalition on Truck Parking: Technology and Data Working Group - Truck Parking Availability Detection and Information Dissemination, Last modified March 2020, https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/technology_data/product/best_practices.htm

¹¹ “In/Out Detection is defined as, “[c]ounting vehicles as they come in and as they leave a facility”, and Space-by-Space detection is defined as, “[s]ensing a vehicle parked in an assigned location.” From ATRI, Truck Parking Information Systems: Truck Driver Use and Perceptions, June 2021, <https://truckingresearch.org/wp-content/uploads/2021/06/ATRI-Truck-Parking-Information-Systems-Driver-Use-and-Perceptions-06-2021.pdf>.

¹² Colorado utilized different technology for Weigh Stations and Rest Areas. From ATRI, Truck Parking Information Systems: Truck Driver Use and Perceptions, June 2021.

¹³ Florida utilized different technology for private parking areas and public parking areas. From ATRI, Truck Parking Information Systems: Truck Driver Use and Perceptions, June 2021.

3.2 Stakeholder Involvement

Truck parking impacts both public and private stakeholders. Effective truck parking solutions, including those included in the Project Toolkit, require various levels of partnership between the public and private sectors. When projects are led by state or local agencies, private sector support leads to more efficient and effective solutions. In some cases, the private sector may have a larger role in advancing truck parking solutions, with similar support from public agencies.

- **Public-Private Partnerships (P3s)** involve partnerships between the public and private sector that enable solutions that could otherwise not be advanced by a single party. Private sector partners may include, but are not limited to, private truck stops that provide overnight truck parking, fuel stations that don't have truck parking on-site, private maintenance companies, private landowners, and freight-generating business establishments. P3s must balance the public sector's interest in advancing truck parking with the private sector's interest in the partnership. An example of a P3 arrangement that meets both public and private interests is the Federal Interstate Oasis program.
- **Delaware Public Agency Partnerships** involve partnerships between public agencies within Delaware, supporting consistent state practices (e.g., across state agencies) and enabling locally-oriented solutions (e.g., between state, county, MPO, and city level agencies).
- **Multi-State Public Agency Partnerships** involve partnerships between public agencies – often Departments of Transportation (DOTs) – across states that enable multi-state solutions, such as those along national freight corridors that cross state borders.

Partnerships within the public sector, as well as between the public and private sectors, are critical for the successful implementation of effective truck parking policies and projects. Chapter 4 and Chapter 5 will highlight the different partnership opportunities to advance truck parking projects in Delaware.

3.3 Location Factors

As truck parking issues differ by location, so do solutions. Urban and rural areas pose unique truck parking issues and needs, and the implementation of solutions is led by different agencies that face varied implementation challenges.

3.3.1 Urban

Truck parking issues in urban locations are often due to last-mile goods movement, with trucks staging in and near urban areas prior to shipper or receiver appointments. As seen in northern Delaware, existing truck parking locations in urban areas often have high utilization, with limited parking availability throughout the day and peak demand during overnight hours. Urban areas experience more concentrated volumes of undesignated truck parking, with spillover of undesignated truck parking into nearby residential roadways and communities. While additional truck parking capacity, especially for staging, is often needed in urban areas, urban-area solutions face challenges that include a high cost of land and NIMBY opposition from nearby communities.

Local agencies, such as towns and cities, are often best suited to advance truck parking solutions in urban areas, with the support from DelDOT. In collaboration with local economic development agencies, businesses, and communities, local agencies can identify the most critical truck parking needs, unique urban-area barriers, and feasible solutions to advance truck parking in an urban setting.

3.3.2 Rural

Truck parking issues in rural locations are often due to lack of truck parking facilities or spaces, with trucks parking on corridor and on/off ramp shoulders. As seen in southeast Delaware, there may be large areas and/or long corridor stretches in rural locations with no truck parking facilities. Rural areas experience less concentrated volumes of undesignated parking, but patterns of undesignated parking may be found on longer stretches of key freight corridors where truck parking is limited and/or unavailable. Further, undesignated truck parking on corridor and on/off ramp shoulders poses a higher safety risk, due to the high-speed differential between trucks re-entering the traffic stream after parking and other roadway users. Meanwhile, land is more readily available, lower cost, and less likely to encounter land use conflicts in rural areas, with potential truck parking locations often separated from communities.

State DOTs are often best suited to advance truck parking solutions in rural areas. Given Delaware's small area, compared to other states, DelDOT and counties can advance truck parking solutions in the state's rural areas. DelDOT, in collaboration with New Castle, Kent, and Sussex Counties, can collaborate to understand regional truck parking needs, as well as identify state and county resources that may be used to advance truck parking throughout the state.

4 Location-Specific Project Opportunities

This section identifies location-specific opportunities to advance truck parking in Delaware. Opportunities were informed by the truck parking inventory and undesignated truck parking analysis, in addition to the Strengths, Weaknesses, Opportunities, and Threats (SWOT) identified during previous efforts (Figure 4).

Figure 4: Delaware's Truck Parking SWOT

<p>STRENGTHS</p> <ul style="list-style-type: none"> Utilization not at full capacity at all facilities, even during peak hours Limited undesignated parking observations Biden Welcome Center is the result of a P3 	<p>WEAKNESSES</p> <ul style="list-style-type: none"> Limited geographic coverage of truck parking facilities, with notable absence in southeast DE Limited overnight locations in Kent & Sussex Counties Insufficient space for staging near Wilmington, Edgemoor High truck parking utilization in urban areas Undesignated parking at public rest areas, urban areas, along key freight corridors Crash data reporting limitations
<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> Continue truck parking efforts in the state and region, including education & outreach efforts Integrate truck parking into statewide and local planning Explore capacity expansion or new parking locations where there is state-owned land, such as through a P3 Disseminate info about truck parking locations Collaborate with local agencies to address urban issues Promote truck parking at new freight developments Coordinate with neighboring states Collaborate with trucking industry to exchange information 	<p>THREATS</p> <ul style="list-style-type: none"> Increasing goods movement, driven by growth of freight-reliant industries and potential port expansion Need for expanded access to truck parking and staging in urban areas, where capacity is strained but land is expensive NIMBY / LULU community concerns Lack of truck parking-dedicated funding Lack of clear public and private roles to address issues

Through the SWOT analysis, the Project Team identified issue areas for truck parking in Delaware and applied the Project Toolkit to identify location-specific opportunities that target specific truck parking issues in Delaware. The Project Team also engaged stakeholders during a Truck Parking Focus Group on May 20, 2021, to validate and obtain additional feedback on the identified issues and opportunities for truck parking in Delaware. Appendix A further details the Focus Group meeting, including stakeholder responses collected through polling questions during the meeting.

The following location-specific opportunities are organized by region. Each recommended opportunity refers to a project provided in Chapter 3 (Truck Parking Project Toolkit), with some opportunities further implementing policy and program practices identified in Chapter 2 (Statewide Policy and Program Recommendations).

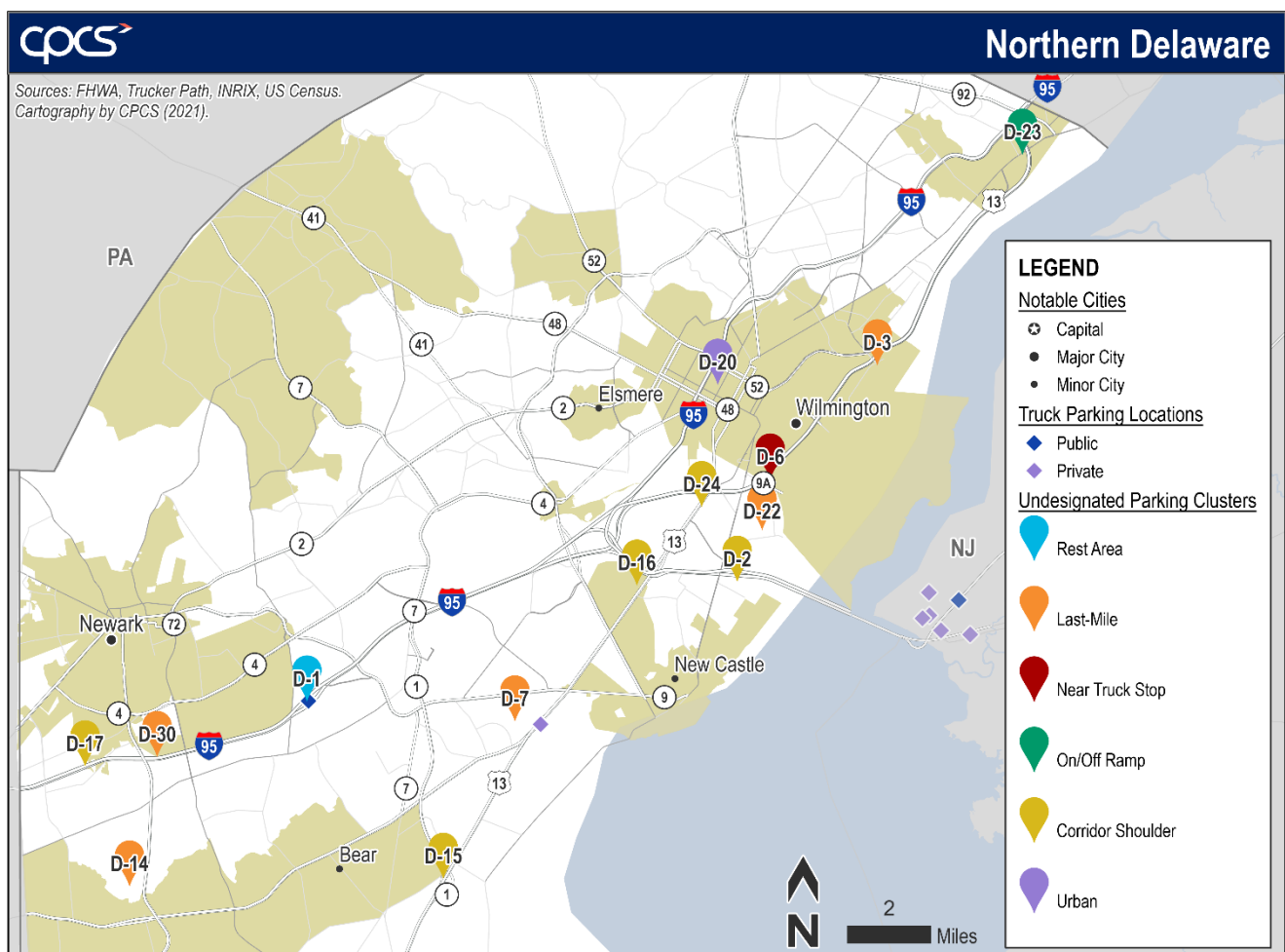
4.1 Northern Delaware

The Northern Delaware Region is focused on the northern third of New Castle County, which includes I-95 running east-west across northern Delaware, as well as I-495 and I-295 corridors. This region also includes the Wilmington and New Castle urbanized areas. The Northern Delaware Region experiences

high densities of undesignated truck parking, compared to the rest of the state. Figure 5 illustrates clusters of undesignated truck parking in the region, with the following areas showing multiple clusters:

- At the Biden Welcome Center on I-95, as well as along the Interstate corridor's shoulders and on/off ramps.
- Within the Wilmington Urban Area.
- At the Port of Wilmington and Edgemoor, where last-mile parking occurs.
- Along I-495 and I-295, where additional undesignated truck parking occurs along corridor shoulders and on/off ramps.

Figure 5: Northern Delaware Existing Truck Parking Conditions



Based on the existing truck parking conditions in the Northern Delaware Region, DelDOT should explore the following opportunities to address truck parking issues in the region.

Integrate truck parking considerations into existing capital project planning and development at Edgemoor.

The Port of Wilmington is currently in the planning stages to expand into Edgemoor, where a multi-use containerized cargo port will be developed (Figure 6). This expansion will bring more goods movement to the area, increasing truck volumes and increasing the demand for truck parking in the Edgemoor area. Edgemoor currently experiences undesignated parking (cluster D-3) as the fourth-highest undesignated truck parking cluster in the state. The planned port expansion can be expected to exacerbate this issue if additional truck parking capacity is not provided. Currently, the Edgemoor expansion is in its planning stages, which provides an opportunity to integrate several truck parking considerations, including the following, into its development.

Figure 6: Edgemoor Site



Source: Delaware Department of Natural Resources and Environmental Control, Wilmington Harbor Edgemoor Expansion, Environmental Assessment Technical Document, 2020.

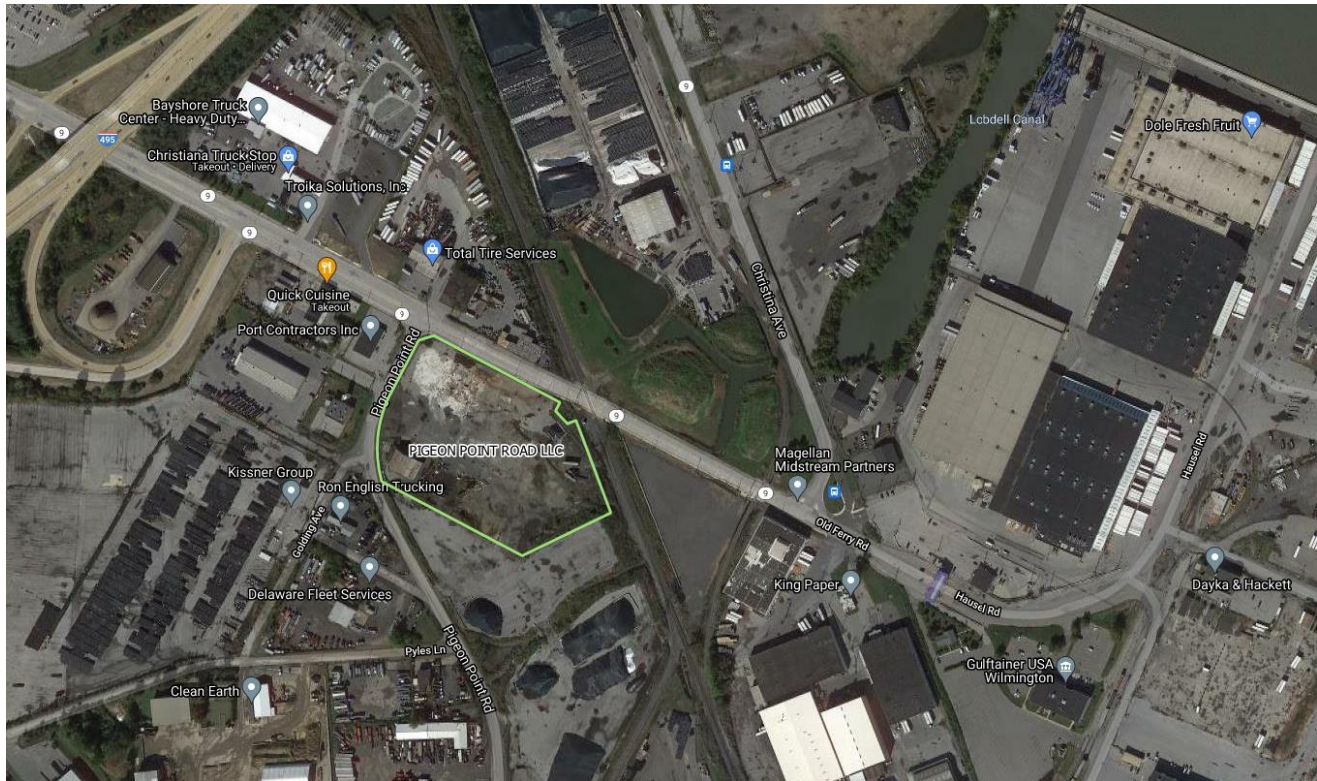
- **Incentivize private development of new staging areas on vacant land at Edgemoor.** DelDOT could explore opportunities for a P3 development of truck parking capacity, such as through financial assistance, infrastructure upgrades, or supporting local regulations.
- **Build extra-wide shoulders along last-mile roads at Edgemoor (Hay Rd. and Lighthouse Rd.), with the knowledge that trucks will stage here.** While this does not increase capacity for designated and protected truck parking, it serves as an option for trucks to stage when other options are unavailable. Parking on sufficiently wide shoulders along last-mile roads provides a safer option than parking on high-traffic corridors, as traffic speeds are typically lower on last-mile roads. Additionally, allowing for parking on last-mile road shoulders gives drivers the option to stage near their origin/destination, rather than in nearby residential areas.

Incentivize private development of new or expanded truck parking capacity near the Port of Wilmington or other freight-generating facilities.

The Port of Wilmington is a large-freight generator in Northern Delaware. Currently, the Port of Wilmington experiences undesignated truck parking on nearby last-mile roads (clusters D-6 and D-22). While the nearby Christiana Truck Stop provides truck parking, utilization is typically high, with limited parking availability throughout the day and overnight. Undesignated truck parking on the road in front of the Christiana Truck Stop further demonstrates instances of full capacity at the location. Meanwhile, freight activities at the Port of Wilmington can be expected to increase in line with national freight and e-commerce trends, coupled with the Port's planned expansion into Edgemoor. Given the expected increase in truck activity, demand for truck parking near the Port can be expected to increase as well. Without additional capacity, existing undesignated truck parking issues at the Port of Wilmington will worsen.

DeIDOT may explore opportunities to partner with the private sector to develop new truck parking capacity near the Port, where land is available for use. For instance, the Port of Wilmington Truck Parking Study identified the Pigeon Point LLC-owned lot as a potential staging area (Figure 7). This lot is currently vacant. DeIDOT could work with Pigeon Point LLC to explore options for a P3 to develop truck parking capacity at this location, such as through financial assistance, infrastructure upgrades, or enabling local regulations.

Figure 7: Potential Staging Location Near Port of Wilmington



Source: Google Maps, Imagery © 2021 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data © 2021; New Castle County Parcel Data.

In addition to exploring P3 opportunities for new truck parking capacity, DeIDOT and WILMAPCO should also partner with local governments with land use authority in northern Delaware, such as New Castle County, the City of Wilmington, and the City of Newark, to update local land use regulations to support additional truck parking capacity on-site at newly developed or expanded freight-generating facilities.

Develop protected roadside truck parking along I-95. Integrate this project into existing toll plaza upgrades at Newark.

As part of its existing planned projects, DeIDOT will upgrade Delaware's toll plazas to be fully automated. This includes upgrades at the Newark Toll Plaza on I-95, where undesignated truck parking occurs at times (cluster D-17) due to wide shoulders at the toll plaza and high freight volumes along the I-95 corridor. Further, the Newark Toll Plaza is located about four miles west of the Biden Welcome Center, which has low space availability, especially during overnight hours. As the Newark Toll Plaza is upgraded and the toll barriers are removed, DeIDOT has an opportunity to utilize existing pavement space at the toll plaza and/or expand pavement out onto the right-of-way to provide additional truck parking capacity. Development of truck parking at this location would require protected on/off ramps to allow for safe truck entry and exit, as well as basic amenities, such as restrooms and lighting, for

drivers. If new truck parking were provided at this location, DelDOT should also provide signage on I-95 to inform drivers of new truck parking capacity at these locations, potentially alleviating demand at the Biden Welcome Center.

Leverage existing state-owned facilities and land for new truck parking capacity at the intersection of US 13 and Bear Rd./Hamburg Rd. in New Castle.

At locations where undesignated truck parking currently occurs and is likely to worsen due to expected increases in freight demand and truck traffic, DelDOT could explore opportunities to leverage existing state-owned facilities and land for new truck parking development. One location with such opportunities is at the intersection of US 13 and Bear Rd./Hamburg Rd. in New Castle, near Bear. Although undesignated truck parking is currently low at this specific location (cluster D-15), compared to other clusters in Delaware, this location is proximate to other areas of high undesignated parking. The intersection is less than ten miles south along US-13 from the Wilmington urban area, Port of Wilmington, and I-95, where undesignated truck parking is concentrated in the state. Undesignated truck parking also takes place along US 13 and SR 1 south of this intersection. There are two state-owned parcels and available excess right-of-way at this intersection that DelDOT may consider for new truck parking (Figure 8):

- **Leverage existing state-owned land to develop new truck parking capacity through a P3.** The State of Delaware owns land on US 13, with two state-owned parcels in addition to adjacent right-of way. This location is on a key freight corridor and is near two existing fuel stations. DelDOT could explore developing this land for truck parking through a P3. For instance, DelDOT may partner with the adjacent fuel station, with DelDOT upgrading the existing state-owned land for truck parking, and the adjacent fuel station providing 24-hour restroom access and trash pickup for the expanded capacity lot. This provides benefits to both parties, with the private fuel station saving on costs for additional parking, which provides them with a larger fuel and food customer base, and DelDOT shifting amenity provision and maintenance services to the private sector.
- **Leverage existing state-owned Tybouts Corner Park and Ride for new overnight truck parking capacity.** An existing Park and Ride is located on Hamburg Road, just east of US 13. DelDOT may consider allowing truck parking during off-hours, overnight at this park and ride location. The addition of signage to clearly indicate hours of allowed truck parking, as well as infrastructure upgrades to accommodate the turning radius and weight of trucks, are required for the upgrade of a Park and Ride to a truck parking location. Implementation of this solution would also require DelDOT to coordinate with other state agencies, such as the Delaware State Police, to communicate that overnight truck parking is allowed at the Park and Ride. Further, DelDOT should undertake efforts to share information with drivers about new overnight parking capacity, through outreach with the trucking industry and installation of signage on nearby corridors with undesignated truck parking.

One challenge for this opportunity is the combined use of the parking lot for trucks during overnight hours and for passenger vehicles during daytime hours, with the potential for trucks to remain at the facility past allowed hours during the Park and Ride's open daytime hours. This project may also face NIMBY opposition from nearby communities. Given these risks and challenges, DelDOT should first test this opportunity through a pilot program before widespread implementation.

Figure 8: State-owned Facilities and Land at the Intersection of US 13 and Bear Rd./Hamburg Rd.



Source: Google Maps, Imagery © 2021 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data © 2021; New Castle County Parcel Data.

Leverage existing state-owned Route 273 Park and Ride for new overnight truck parking capacity in Christiana.

Similar to the opportunity at the Tybouts Corner Park and Ride, DelDOT could allow for truck parking during off-hours, overnight at the Route 273 Park and Ride in Christiana. Given the risks and challenges associated with providing truck parking at state-owned Park and Rides, DelDOT should first test this opportunity through a pilot program before widespread implementation. The Christiana Park and Ride serves as a good pilot location, given its proximity to two of the state's top undesignated truck parking clusters – at the Biden Welcome Center on I-95 (cluster D-1) and for last-mile parking where US 13 and US 40 meet by New Castle (cluster D-7).

Provide signage with information about truck parking locations across state borders. Coordinate these efforts with neighboring states, particularly along the multi-state corridors of I-95 and I-295.

DelDOT should work with its neighboring states to provide signage about truck parking locations across state borders. Specifically, Delaware should coordinate with Maryland and Pennsylvania to identify opportunities to use signage to direct truck drivers on I-95 to available truck parking spaces across state borders, and with New Jersey for signage on I-295. Such a multi-state partnership for truck parking information would provide truck parking visibility along the entire corridor between states.

For example, the Maryland Truck Parking Study identified overnight available truck parking at the Perryville Truck Weight and Inspection stations (TWIS), which are located on I-95 about 16 miles east

of the Delaware border (Figure 9). At the time of the Maryland Truck Parking Study, an average of 13 utilized spaces out of 59 total spaces at the northbound location, and an average of 3 utilized spaces out of 52 total spaces at the southbound location.¹⁴ DelDOT should work with the Maryland DOT to provide static signage or develop new dynamic signage on I-95 southbound in Delaware, near the Maryland border, to direct truck drivers to available truck parking at the Perryville Weigh Station

If location-specific signage along multi-state corridors proves effective, DelDOT and neighboring states DOTs may also explore opportunities to develop a regional and/or corridor-wide truck parking information management system that provides truck parking and information availability across state borders along key freight corridors, such as I-95.

Figure 9: Perryville Weigh Station in Maryland



Source: Google Maps, Imagery © 2021 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data © 2021

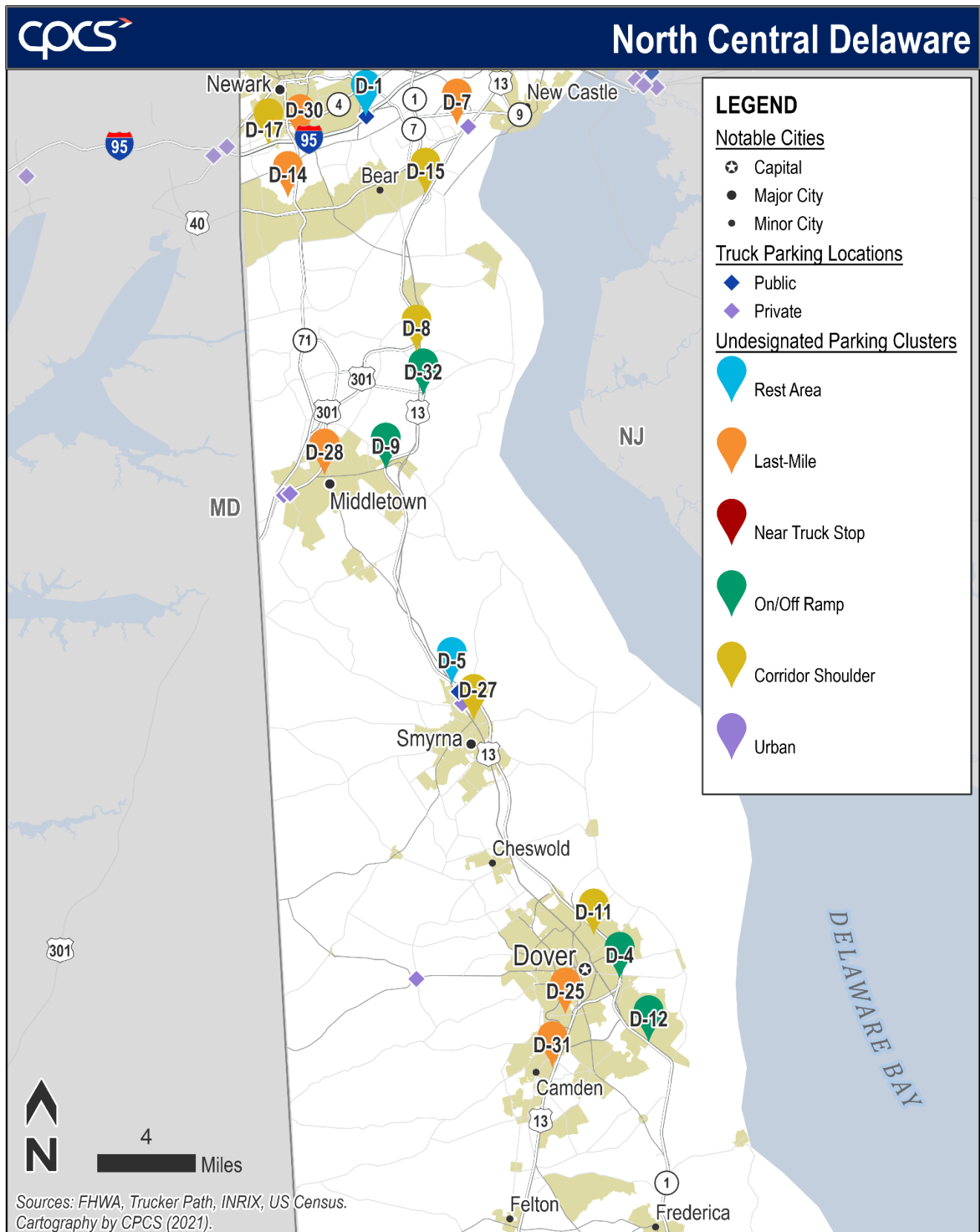
4.2 North-Central Delaware

The North-Central Delaware Region encompasses the southern two-thirds of New Castle County and most of Kent County through Dover. This region is focused on undesignated truck parking occurring on the state's north-south corridors of US 13 and SR 1. Figure 10 displays the existing truck parking conditions in this region, with undesignated truck parking occurring in the following locations:

- On SR 1, along corridor and on/off ramp shoulders at locations from Bear down through Dover.
- On US 13, last-mile undesignated truck parking occurs near the New Castle and Dover areas.
- At the Smyrna Rest Area, undesignated truck parking occurs in and around the rest area, particularly along the SR 1 off-ramp to US 13 that leads to the rest area itself.

¹⁴ Maryland DOT, Maryland Statewide Truck Parking Study 2020, <https://www.mdot.maryland.gov/OPCP/MDOTTruckParkingStudyWeb.pdf>

Figure 10: North-Central Delaware Existing Truck Parking Conditions

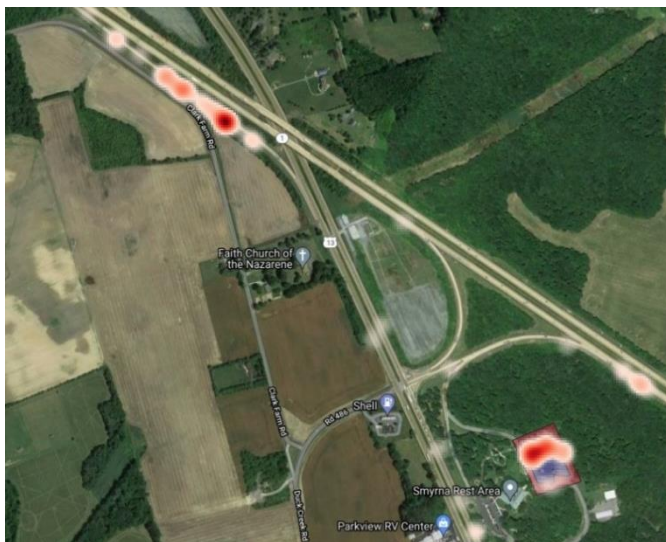


Based on the existing truck parking conditions in the North-Central Delaware Region, DelDOT should explore the following opportunities to address truck parking issues in the region.

Expand truck parking capacity and provide signage with information about truck parking at Smyrna Rest Area.

The Smyrna Rest Area is one of two publicly owned truck parking locations in Delaware and providing 24 truck parking spaces. While the Smyrna Rest Area is not consistently at full capacity, utilization increases overnight, with limited parking availability. Within the North-Central Region, the highest concentration of undesignated truck parking occurs at and near the Smyrna Rest area (cluster D-5). In addition to trucks parked in undesignated areas at the rest area itself, trucks park along the SR 1 off-ramp to US 13 that leads to the rest area, without seeing if there is any truck parking availability at the rest area (Figure 11).

Figure 11: Undesignated Truck Parking at Smyrna Rest Area



Source: CPCS Analysis of INRIX data; Google Maps, Imagery © 2021 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data © 2021, with CPCS polygons overlaid based on analysis of Trucker Path Data

Freight activity in Delaware is expected to increase, especially in New Castle and Kent Counties, with goods moving along the state's key north-south corridors of US 13 and SR 1. Without additional truck parking capacity to handle the growing demand for truck parking, undesignated truck parking issues at the Smyrna Rest Area and along the connecting US 13 and SR 1 corridors can be expected to get worse.

Given the existing and projected conditions, DelDOT should explore the following opportunities to balance truck parking supply with demand at the Smyrna Rest Area. For both opportunities, DelDOT should also work with the trucking industry to provide information to drivers about existing and/or new truck parking availability at the rest area.

- **Expand truck parking capacity at the Smyrna Rest Area.** As traffic activity increases in the North-Central region, so will the demand for truck parking. Available truck parking is currently limited at the Smyrna Rest Area during peak overnight hours. DelDOT has the opportunity to increase truck parking capacity at Smyrna through site expansion, as the DelDOT Central District owns the surrounding land.
- **Provide dynamic signage with information about the Smyrna Rest Area.** Undesignated truck parking along the SR 1 off-ramp shows that truck drivers park in this undesignated location without entering the Smyrna Rest Area. Further, some of these undesignated stops occur during late morning and daytime hours, times during which truck parking is typically available at the rest area. In order to direct drivers to available spaces, DelDOT could explore the opportunity to install signage ahead of or at the SR 1 off-ramp, with information about Smyrna Rest Area. Specifically, DelDOT should consider dynamic signage that provides real-time information about the number of spaces available at the Smyrna Rest Area. If drivers know a

truck parking space is available, they are more likely to continue on to the rest area, instead of parking on the off-ramp.

Develop protected roadside truck parking along SR 1. Integrate this project into existing toll plaza upgrades at Dover and Biddle's Corner.

As part of its planned projects, DelDOT will upgrade Delaware's toll plazas to be fully automated. This includes upgrades at the Biddle's Corner Toll Plaza (cluster D-8) and Dover Toll Plaza (cluster D-11) on SR 1, where undesignated truck parking occurs at times due to wide shoulders at the toll plazas and relatively high truck volumes along SR 1. As these toll plazas are upgraded and toll barriers are removed, DelDOT has an opportunity to utilize existing pavement space at the toll plaza and/or expand pavement out onto the right-of-way or DelDOT-owned land to provide additional truck parking capacity. Development of truck parking at these locations would require protected on/off ramps to allow for trucks to safely enter and exit the traffic stream. If new truck parking were provided at these locations, DelDOT should also provide signage on SR 1 to inform drivers of new truck parking capacity at these locations, potentially reducing occurrences of undesignated truck parking along SR 1 in Delaware.

Integrate truck parking considerations into existing capital project planning and development along SR 1.

DelDOT is currently investing in various infrastructure upgrades to reduce congestion and travel times, and improve connectivity and safety along SR 1. Undesignated truck parking occurs along several stretches of SR 1 in the North-Central Region (including clusters D-8, D-32, D-9, D-5, D-11, D-4, and D-12). As goods movement in Delaware increases, there will be additional demand for truck parking along the state's freight corridors – including SR 1. In order to keep pace with growing truck parking demand, DelDOT should pursue opportunities to integrate truck parking improvements into existing project planning and investment, such as by leveraging existing right-of-way to develop truck parking at or around planned interchanges or providing extra-wide shoulders for staging on last-mile local roads. DelDOT may consider integrating truck parking considerations into the existing planned projects on SR 1:

- **New Castle County:** Planned project to widen the corridor and make interchange improvements from SR 273 to the Roth Bridge in New Castle County.¹⁵
- **Dover:** Dover/Kent County MPO is currently studying opportunities to develop a frontage road that serves as a freight corridor to connect existing and planned industrial parks along SR-1.¹⁶

Leverage existing state-owned land for new truck parking capacity at the intersection of US 13 and West Lebanon Rd./SR 10 in Camden. Integrate this project into the existing East Camden Bypass project.

DelDOT is currently in the design and planning phase of the East Camden Bypass project – an investment to provide a new connection from US 13 to Lebanon Road (SR 10) and Rising Sun Road.¹⁷ The preferred alternative for the bypass (Figure 12) runs right by state-owned land (Figure 13), at the intersection of US 13 and West Lebanon Road/SR 10, where additional truck parking capacity could be developed as part of the East Camden Bypass project. This intersection is located south of Dover,

¹⁵ DelDOT, Projects Portal, Project: SR 1 Widening, SR273 to the Roth Bridge, <https://deldot.gov/projects/index.shtml?dc=details&projectNumber=T200511001>.

¹⁶ Dover/Kent County MPO, Projects, Studies, <https://doverkentmpo.delaware.gov/projects/>

¹⁷ DelDOT, Projects Portal: Project: East Camden Bypass, <https://deldot.gov/projects/index.shtml?dc=details&projectNumber=T201709502>.

between two undesignated truck parking clusters (cluster D-25 to the north and cluster D-31 to the south). This location is suitable for truck parking given its location on a key freight corridor and its proximity to several restaurants. DeIDOT may consider this opportunity to develop additional truck parking capacity to meet the growing truck parking demand that will come with increased freight development in Dover nearby, as well as increasing truck volumes expected statewide.

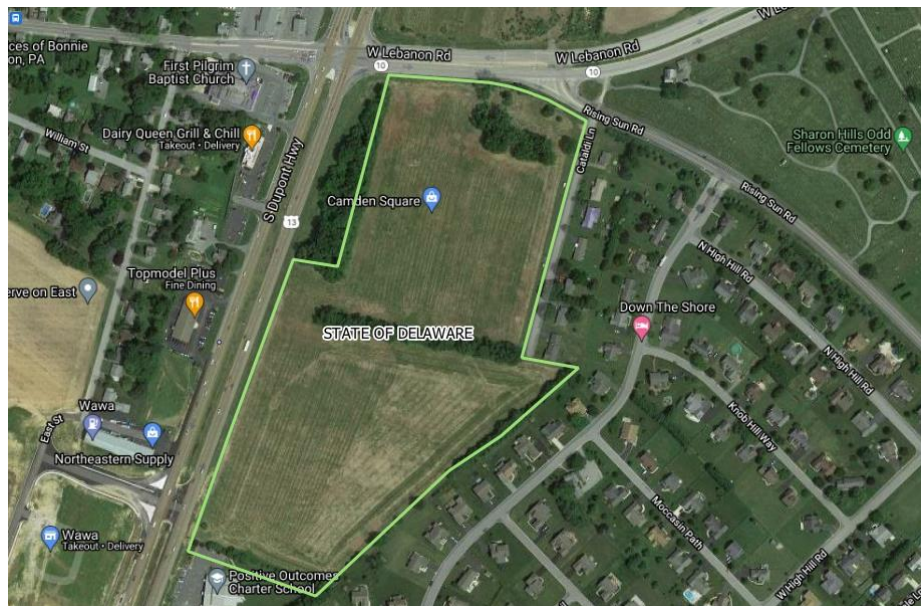
A potential challenge for developing truck parking at this location is NIMBY opposition, given nearby local residences. However, the bypass would provide separation between the truck parking facility and the nearby residential community, unlike the state-owned parcel at the intersection of US 13 and Webbs Lane, an opportunity also considered for development.

Figure 12: Camden Bypass Preferred Alternative (Partial)



Source: DeIDOT, East Camden Bypass Project, Preferred Alternative, May 2021

Figure 13: Camden Bypass Project Truck Parking Opportunity



Source: Google Maps, Imagery © 2021 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data © 2021; Kent County Parcel Data.

Leverage existing state-owned weigh station for new overnight truck parking capacity on US 13 NB.

DelDOT could allow overnight truck parking when the weigh station on US-13 northbound (Figure 14) is closed. This weigh station is located about four miles north of Smyrna Rest Area on US-13, which often sees high utilization during peak overnight hours (cluster D-5). Allowing for overnight truck parking at the weigh station may alleviate truck parking demand that occurs at Smyrna Rest Area when capacity is full.

Delaware has previously explored this opportunity. However, it was not pursued due to concerns of trucks parking at the facility during the Weigh Station's daytime hours, when inspections take place. Further, weigh station facilities, including restrooms, are closed overnight.

DelDOT could revisit this opportunity with strategies to address existing concerns.

Strategies include installing signage to clearly indicate when truck parking is allowed on site. DelDOT could also provide basic amenities, such as bathroom facilities and lighting, for truck drivers parked at the weigh station overnight. Facility operation could be provided through a hired private company, or Delaware could provide temporary toilets at the weigh station. Given the risks and challenges, if DelDOT considers this opportunity for implementation, it should first be tested through a short-term pilot program that would inform more substantial investment in amenities.

Figure 14: Delaware State Police US-13 NB Weigh Station



Source: Google Maps, Imagery © 2021 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data © 2021

Incentivize and/or require private development of new truck parking capacity at new freight-generating facilities in Dover.

At locations where undesignated truck parking currently occurs and is likely to worsen due to the expected increase in freight demand and truck traffic, DelDOT could explore opportunities to advance truck parking. In the Dover area, there are several locations along SR 1 that are either currently planned for industrial development, or being considered for industrial or logistics use. The Dover area currently experiences some undesignated truck parking, with several small clusters (clusters D-11, D-4, D-25, D-31, and D-12) scattered around the city. The development of new industrial and logistics facilities indicates truck parking demand will also increase in the area. Without additional capacity, truck parking issues in the Dover area will grow as volumes of truck traffic increase. In addition to planning for the increase of truck volumes by integrating truck parking considerations into capital planning and investments (see above opportunity), DelDOT may consider the following opportunities for private truck parking development.

- **Incentivize private development:** In partnership with localities, DelDOT could work with industrial developers to incentivize the inclusion of truck parking capacity at expanding or new facilities. This includes opportunities for a P3, where DelDOT incentivizes private truck parking development through financial assistance, infrastructure upgrades, or enabling local regulations.

- **Partner with local agencies to update local land use regulations:** DeIDOT should provide guidance for local land use agencies to update local land use regulations to require a minimum truck parking capacity on-site at newly developed or expanded freight-generating facilities. DeIDOT and localities have a window of opportunity to implement these regulations prior to the development of new freight-generating facilities.

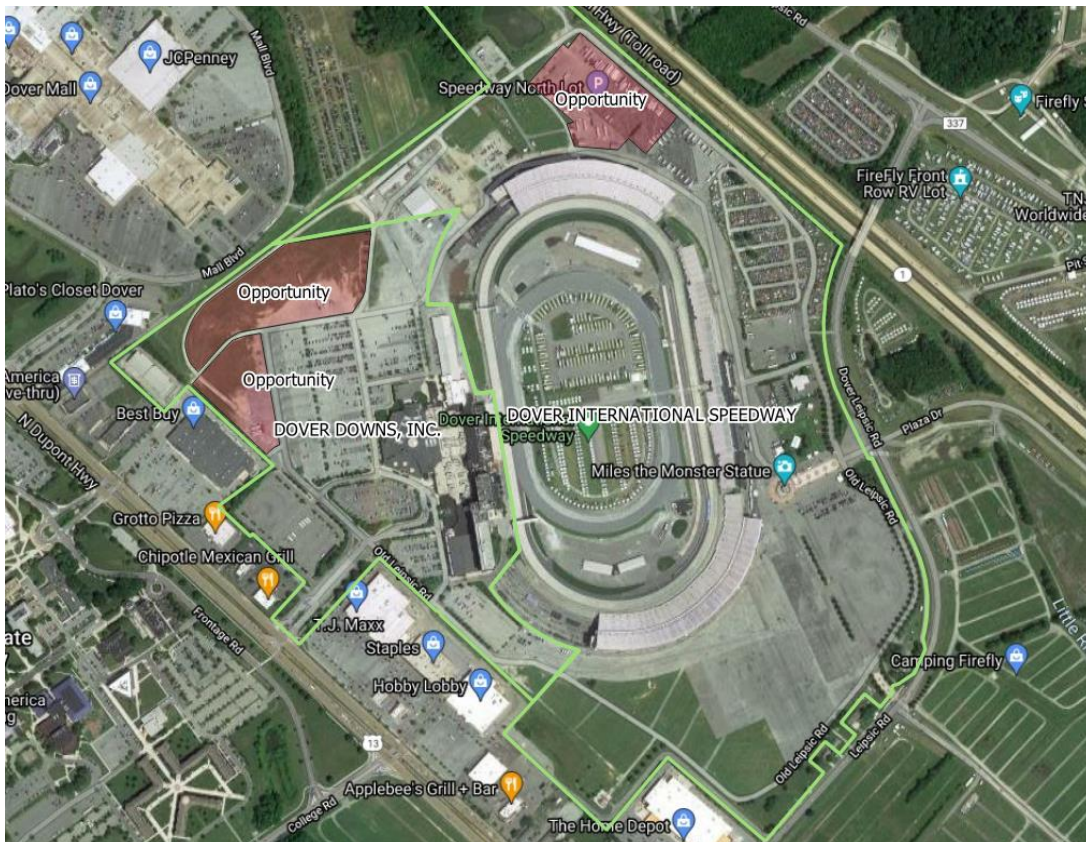
Promote truck parking at Dover Downs and/or Dover International Speedway during non-peak periods.

DeIDOT should explore opportunities to partner with private businesses to promote truck parking during the business's off-peak periods. Specifically, Dover Downs Hotel and Casino and Dover Downs International Speedway are potential partners for this opportunity. There are locations within both properties that could provide overnight truck parking capacity (Figure 15).

At the Dover Downs Hotel and Casino, providing truck parking could attract drivers to purchase food and services provided by the hotel and casino. For this location, DeIDOT may consider providing incentives for additional truck parking capacity through infrastructure upgrades or support for zoning changes, as needed, for truck parking development.

Meanwhile, the Dover International Speedway location would likely be a paid lot, with truck drivers paying for a reserved space in the lot. For this location, DeIDOT can provide data and context about the need for truck parking in the region to support zoning changes and address NIMBY opposition, as needed, for truck parking development.

Figure 15: Opportunities at Dover Downs and Dover International Speedway



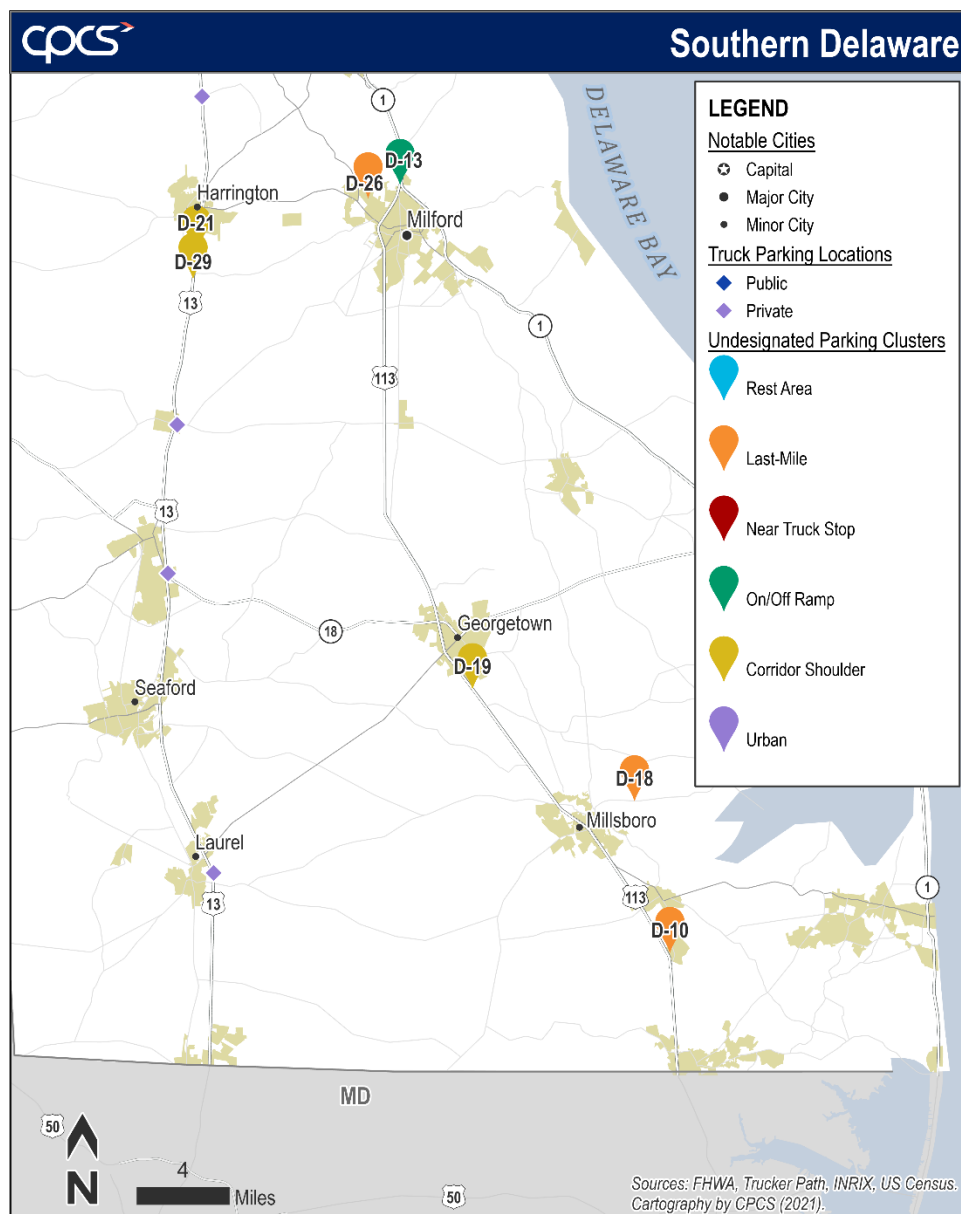
Source: Google Maps, Imagery © 2021 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data © 2021; Kent County Parcel Data; with CPCS polygons overlaid.

4.3 Southern Delaware

The Southern Delaware region includes some of Kent County and all of Sussex County. Compared to the rest of the state, this region experiences less undesignated truck parking. However, there is limited truck parking capacity in this region, with four smaller truck parking locations offering 5 to 28 spaces located along US 13. Meanwhile, there are no truck parking locations on SR 1 south of Dover or US 113 south of Milford. Figure 16 illustrates the existing truck parking conditions in this region, with undesignated truck parking in the following areas:

- On US 113, along corridor shoulders, as well as last-mile parking on last-mile roads near freight-generating facilities that connect to the Interstate.
- On US 13 south of Harrington; however, undesignated truck stop counts are relatively low.

Figure 16: Southern Delaware Existing Truck Parking Conditions



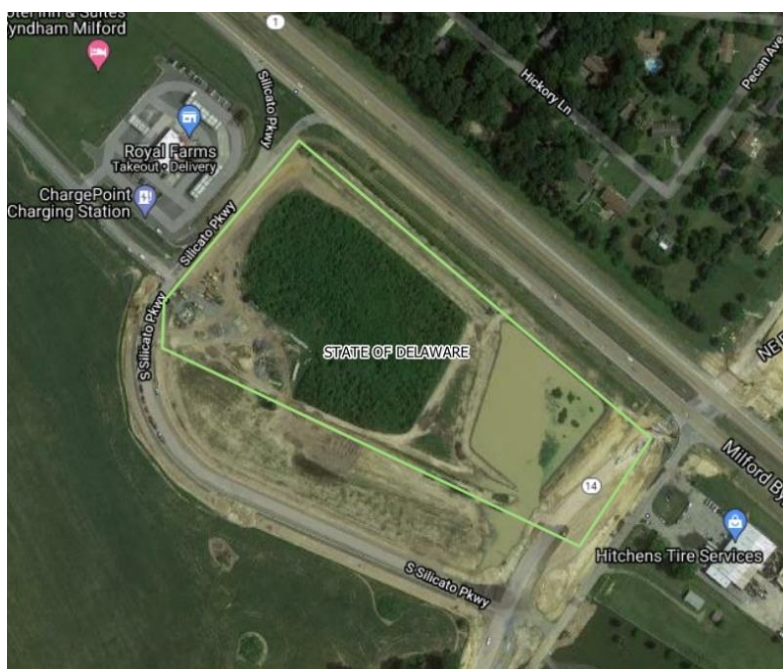
Based on the existing truck parking conditions in the Southern Delaware Region, DeIDOT should explore the following opportunities to address truck parking issues in the region.

Leverage existing state-owned land to develop new truck parking capacity, at the intersection of SR 1/Bay Rd./Milford Bypass and NE Front St in Milford, through a public-private partnership.

This location provides an opportunity for DeIDOT to leverage existing state-owned land for new truck parking development. This location is suitable for truck parking given its location on a key freight corridor just a mile south of an undesigned truck parking cluster (cluster D-15). The location is easily accessible by trucks traveling both northbound and southbound on SR 1. Additionally, it is adjacent to an existing fuel station. Currently, there are no truck parking locations in southeast Delaware. While undesigned truck parking levels are low in the Southern Region compared to the rest of the state, DeIDOT may explore this opportunity to provide truck parking capacity given its suitable location and the region's limited truck parking.

DeIDOT could explore developing this land through a P3 with the adjacent fuel station, with DeIDOT upgrading the existing state-owned land for truck parking, and the adjacent fuel station providing 24-hour restroom access and trash pickup for the expanded capacity lot. This benefits both parties. The private fuel station saves on costs for additional parking, which provides them with a larger fuel and food customer base. Meanwhile, DeIDOT shifts amenity provision and maintenance services to the private sector.

Figure 17: State-owned Land at the Intersection of SR 1/Bay Rd./Milford Bypass and NE Front St.



Source: Google Maps, Imagery © 2021 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data © 2021; Kent County Parcel Data

Continue to monitor existing truck parking conditions, identify potential truck parking issues, and consider opportunities to advance truck parking.

Given the limited truck parking issues in the Southern Region, compared to the rest of the state, the majority of existing truck parking opportunities in Delaware are focused on the Northern and Central regions of the state. However, DeIDOT should continue to monitor truck parking conditions in Southern Delaware, so that if new issues arise or undesigned truck parking increases, DeIDOT is prepared to use the Project Toolkit to identify location-specific opportunities and advance truck parking in the region.

Integrate truck parking considerations into existing capital project planning and development along SR 1 and US 113.

DeIDOT is currently investing in various infrastructure upgrades to reduce congestion and travel times, and improve connectivity and safety along SR 1 and US 113. While undesigned truck parking is

limited in the Southern Region compared to other regions in Delaware, there are a few clusters near Milford (clusters D-13 and D-26) and along US 113 (clusters D-19, D-18, and D-10). Demand for truck parking will further grow with increasing goods movement through the state, including along key freight corridors of SR 1 and US 113. To meet growing truck parking demand, DelDOT should strategically pursue opportunities to integrate truck parking improvements into existing project planning and investment in Sussex County. This may include leveraging existing right-of-way to develop truck parking at or around planned interchanges, or providing extra-wide shoulders for staging on last-mile local roads.

5 Implementation Plan

This section identifies a high-level plan for implementation for the identified statewide and policy program recommendations, as well as the location-specific opportunities to advance truck parking in Delaware. The following section also identifies funding opportunities to support truck parking efforts in the state.

5.1 Implementation Plan

Figure 18 and Figure 19 on the following pages outline the proposed implementation plan, including a general location for applying each recommendation or opportunity, the lead agency and partners, and identified challenges.

5.2 Federal Funding Opportunities

There is a range of federal funding opportunities that could be used to fund truck parking efforts in Delaware. The Moving Ahead for Progress in the 21st Century (MAP-21) Act of 2012, enacted Jason's Law (Section 1401) to address the truck parking shortage on U.S. highways. As part of this legislation, truck parking was established as an eligible activity for select federal funding programs.¹⁸ These, as well as other federal funding programs, may be used to advance truck parking projects. DelDOT should explore the following federal funding sources to fund truck parking opportunities in Delaware:

- The **National Highway Performance Program (NHPP)** is currently funded under the Fixing America's Surface Transportation Act (FAST Act), providing funding to support the condition, performance, and construction along the National Highway System (NHS), as well as investments to support progress toward achieving NHS asset management performance targets.¹⁹ Funding is apportioned to states, with Delaware's total NHPP apportionment for fiscal year (FY) 2021 at \$102,130,367.²⁰
- The **Highway Safety Improvement Program (HSIP)** is currently funded under the FAST Act and provides funding to reduce traffic fatalities and serious injuries on public roads. Delaware's total HSIP apportionment for FY 2021 was \$9,952,066.²¹
- The **Surface Transportation Block Grant Program (STBG)**, formerly known as the Surface Transportation Program, is currently funded under the FAST Act, providing flexible funding for

¹⁸ FHWA, MAP-21 Truck Parking,

https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/map21truckparking.htm

¹⁹ FHWA, Fact Sheet, FAST Act, NHPP, Last modified February 26, 2016,

<https://www.fhwa.dot.gov/fastact/factsheets/nhppfs.cfm>

²⁰ FHWA, Fiscal Year (FY) 2021 Computational Tables, Table 3: National Highway Performance Program (NHPP), <https://www.fhwa.dot.gov/fastact/fy2021comp.pdf?revised>

²¹ FHWA, Fiscal Year (FY) 2021 Computational Tables, Table 5: Highway Safety Improvement Program (HSIP), <https://www.fhwa.dot.gov/fastact/fy2021comp.pdf?revised>

projects focused on preserving and improving road conditions and performance.²² Delaware's total STBG apportionment for FY 2021 was \$51,201,212.²³

- The **National Highway Freight Program (NHFP)** was established under the FAST ACT and provides funding to states to support the efficient movement of freight on the National Highway Freight Network (NHFN). Funding is apportioned to states, contingent on state development of a U.S. Federal Highway Administration (FHWA) approved State Freight Plan.²⁴ Delaware's total NHFP apportionment for FY 2021 was \$6,337,038.²⁵
- The **Congestion Mitigation and Air Quality (CMAQ) Improvement Program** is currently funded under the FAST Act, providing funding for transportation-related environmental projects to help states and localities meet requirements of the Clean Air Act and its amendments.²⁶ Delaware's CMAQ apportionment for FY 2021 was \$12,427,468.²⁷
- The **Infrastructure for Rebuilding America (INFRA)**, formerly known as FASTLANE, is currently funded under the FAST Act. INFRA is a competitive grant program that provides grants to provide funding for up to 60 percent of nationally and regionally significant freight and highway projects.²⁸
- The **Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD)** was established under the FAST Act to provide funding, through competitive grants, for model development sites that support the large-scale installation and operation of advanced transportation technologies, to advance safety, efficiency, system performance, and infrastructure return on investment. ATCMTD funds are provided for up to 50 percent of project costs.²⁹
- The **Rebuilding American Infrastructure with Sustainability and Equity (RAISE)**, formerly known as the Better Utilizing Investments to Leverage Development (BUILD) and the Transportation Investment Generating Economic Recovery (TIGER), provides funding through competitive grants for road, rail, transit, and port projects that reach national objectives including

²² FHWA, Special Federal-aid Funding, STBG, Updated September 21, 2017,

<https://www.fhwa.dot.gov/specialfunding/stp/>; FHWA, FAST Act, Fact Sheet, Last modified February 8, 2017, <https://www.fhwa.dot.gov/fastact/factsheets/stbgfs.cfm>.

²³ FHWA, Fiscal Year (FY) 2021 Computational Tables, Table 4: Surface Transportation Block Grant Program (STBG), <https://www.fhwa.dot.gov/fastact/fy2021comp.pdf?revised>

²⁴ FHWA, Fact Sheet, FAST Act, NHFP, Last modified February 8, 2017, <https://www.fhwa.dot.gov/fastact/factsheets/nhfpfs.cfm>

²⁵ FHWA, Fiscal Year (FY) 2021 Computational Tables, Table 9: National Highway Freight Program (NHFP), <https://www.fhwa.dot.gov/fastact/fy2021comp.pdf?revised>

²⁶ FHWA, Air Quality, CMAQ, Updated March 23, 2020, https://www.fhwa.dot.gov/environment/air_quality/cmaq/; FHWA, Fact Sheet, FAST Act, CMAQ, Last modified March 10, 2016, <https://www.fhwa.dot.gov/fastact/factsheets/cmaqfs.cfm>.

²⁷ FHWA, Fiscal Year (FY) 2021 Computational Tables, Table 7: Congestion Mitigation & Air Quality Improvement Program (CMAQ), <https://www.fhwa.dot.gov/fastact/fy2021comp.pdf?revised>

²⁸ FHWA, Fact Sheet, FAST Act, INFRA Grants, Modified August 24, 2017, <https://www.fhwa.dot.gov/fastact/factsheets/infragrantsfs.cfm>; U.S. DOT, INFRA Grants FAQ, Updated February 22, 2021, <https://www.transportation.gov/buildamerica/financing/infra-grants/infra-grants-faqs>

²⁹ ATCMTD, Fact Sheet, FAST Act, Last modified February 8, 2017, <https://www.fhwa.dot.gov/fastact/factsheets/advtranscongmgtfs.cfm>

safety, environmental safety, quality of life, economic competitiveness, state of good repair, innovation, and partnership.³⁰

- The **Diesel Emissions Reduction Act (DERA)** program provides funding through grants and rebates for projects that reduce harmful emissions from diesel engines, in order to protect human health and improve air quality. The U.S. Environmental Protection Agency administers DERA funding.³¹
- The **Truck Parking Safety Improvement Act** was introduced to the U.S. House of Representatives in 2020 to direct the U.S. DOT to set aside dedicated truck parking funds to be provided to states and localities through competitive grants.³² The bill was reintroduced to the House in 2021 and if passed, would authorize \$755 million over five years (FY 2022 to FY 2026) for truck parking.

³⁰ U.S. DOT, RAISE Discretionary Grants, Updated April 13, 2021, <https://www.transportation.gov/RAISEgrants>; U.S. DOT, About RAISE Grants, Updated May 14, 2021 <https://www.transportation.gov/RAISEgrants/about>

³¹ EPA, DERA Funding, <https://www.epa.gov/dera>

³² 116th Congress (2019-2020), H.R.6104 – Truck Parking Safety Improvement Act, <https://www.congress.gov/bill/116th-congress/house-bill/6104?s=1&r=1>

Figure 18: Statewide Policy & Program Recommendations – Implementation Plan

Recommendation	Location	Lead	Partners	Challenges
Statewide Policy & Program Recommendations				
Identify a point of contact, or “champion,” for truck parking within DeIDOT.	Statewide	DeIDOT	-	<ul style="list-style-type: none"> Competing with other priorities (staff time)
Integrate truck parking into capital project planning and development.	Statewide	DeIDOT	Local agencies	<ul style="list-style-type: none"> Competing with other priorities (capital and operational funding)
Secure funding for truck parking projects.	Statewide	DeIDOT	Public sector, private sector	<ul style="list-style-type: none"> Competing with other priorities (capital and operational funding)
Partner with local land use agencies to update local land use regulations to support additional parking capacity on-site at freight generators.	Statewide	DeIDOT, local land use agencies	-	<ul style="list-style-type: none"> Must occur prior to development Could impact the competitiveness of Delaware
Coordinate truck parking information and efforts with neighboring states.	Statewide	DeIDOT	Maryland DOT, Pennsylvania DOT, New Jersey DOT	<ul style="list-style-type: none"> Competing with other priorities (staff time) Coordination between states
Launch a public education campaign to share information about truck parking with local agencies and the public.	Statewide	DeIDOT	Local agencies	<ul style="list-style-type: none"> Addresses perspectives related to truck parking but not the cause of truck parking issues
Work with trucking industry to exchange information about truck parking issues and solutions.	Statewide	DeIDOT	Delaware Motor Transport Association, truck parking stakeholders	<ul style="list-style-type: none"> Addresses information sharing related to truck parking but not the cause of truck parking issues Difficult to assess the impact

Figure 19: Project Opportunities – Implementation Plan

Recommendation	Location	Lead	Partners	Challenges
Project Opportunities: Capacity Expansion				
Expand truck parking capacity at existing public rest areas.	<ul style="list-style-type: none"> Smyrna Rest Area 	DeIDOT	-	<ul style="list-style-type: none"> Competing with other priorities (capital and operational funding)
Leverage existing state-owned land to develop new truck parking capacity through a P3.	<ul style="list-style-type: none"> Intersection of US 13 and Bear Rd./Hamburg Rd. in New Castle Intersection of SR 1/Bay Rd./Milford Bypass and NE Front St. in Milford 	P3 (DeIDOT, private sector)	Local agencies	<ul style="list-style-type: none"> Requires P3 coordination NIMBY opposition
Leverage existing state-owned land to develop new truck parking capacity through existing capital projects.	<ul style="list-style-type: none"> Intersection of US 13 and West Lebanon Rd/SR 10 in Camden, as part of East Camden Bypass project 	DeIDOT	Local agencies	<ul style="list-style-type: none"> Competing with other priorities (capital and operational funding) NIMBY opposition
Integrate truck parking considerations into existing capital project planning and development.	<ul style="list-style-type: none"> Project to widen road from SR 273 to Roth Bridge in New Castle County Project to develop a frontage road for freight traffic to connect industrial parks near Dover 	DeIDOT	Local agencies	<ul style="list-style-type: none"> Competing with other priorities (capital and operational funding)
Leverage existing state-owned Park and Rides for new overnight truck parking capacity.	<ul style="list-style-type: none"> Tybouts Corner Park and Ride 273 Park and Ride 	DeIDOT	Other state agencies	<ul style="list-style-type: none"> Combined use for passenger vehicles during the day and trucks overnight NIMBY opposition Upgrades may be required for truck parking (e.g., pavement upgrades, signage, basic amenities)
Leverage existing state-owned Weigh Station for new overnight truck parking capacity.	<ul style="list-style-type: none"> Weigh station on US 13 NB 	DeIDOT	Other state agencies	<ul style="list-style-type: none"> Combined use for truck inspection during the day and truck parking overnight Need overnight access to amenities

Build extra-wide shoulders along last-mile roads, with the knowledge trucks will stage here.	<ul style="list-style-type: none"> Edgemoor 	DeIDOT	Local agencies, private sector	<ul style="list-style-type: none"> Provides safer space for truck parking but is not separated from the roadway Addresses certain types of undesigned truck parking but not the cause of truck parking issues
Develop protected roadside truck parking along corridors, and integrate this project into existing toll plaza upgrades.	<ul style="list-style-type: none"> Newark Toll Plaza (I-95) Biddle's Corner Toll Plaza (SR 1) Dover Toll Plaza (SR 1) 	DeIDOT	-	<ul style="list-style-type: none"> Competing with other priorities (capital and operational funding) Upgrades may be required for truck parking (e.g., protected barriers, pavement upgrades, signage, basic amenities)
Incentivize private development of new staging areas on vacant land.	<ul style="list-style-type: none"> Edgemoor 	P3 (DeIDOT, private sector)	-	<ul style="list-style-type: none"> Requires P3 coordination Limited land availability
Incentivize private development of new or expanded truck parking capacity at freight-generating facilities, through a P3.	<ul style="list-style-type: none"> Port of Wilmington New freight-generating facilities 	P3 (DeIDOT, private sector)	-	<ul style="list-style-type: none"> Requires P3 coordination Limited land availability
Require private development of new truck parking capacity at freight-generating facilities.	<ul style="list-style-type: none"> Dover area New freight-generating facilities 	DeIDOT, local land use agencies	Private sector	<ul style="list-style-type: none"> Must occur prior to development Could impact the competitiveness of Delaware
Promote truck parking at private parking lots during non-peak periods.	<ul style="list-style-type: none"> Dover Downs Hotel & Casino Dover International Speedway 	DeIDOT, P3 (DeIDOT, private sector)	Local agencies	<ul style="list-style-type: none"> May require a P3 NIMBY opposition Need overnight access to amenities Upgrades may be required for truck parking (e.g., pavement upgrades, signage, basic amenities)

Recommendation	Location	Lead	Partners	Challenges
<i>Project Opportunities: Information & Technology</i>				
Provide dynamic signage with information about truck parking at a public rest area.	<ul style="list-style-type: none"> Smyrna Rest Area 	DeIDOT	-	<ul style="list-style-type: none"> Competing with other priorities (capital and operational funding)
Provide signage with information about truck parking locations across state borders.	<ul style="list-style-type: none"> On I-95 near Maryland border On I-95 near Pennsylvania border On I-295 near New Jersey border 	DeIDOT	Maryland DOT, Pennsylvania DOT, New Jersey DOT	<ul style="list-style-type: none"> Competing with other priorities (capital and operational funding) Coordination with other states

6 Conclusion and Next Steps

This Technical Memo presents statewide policy and program recommendations, offers a toolkit of truck project types, and identifies location-specific opportunities to advance truck parking in Delaware.

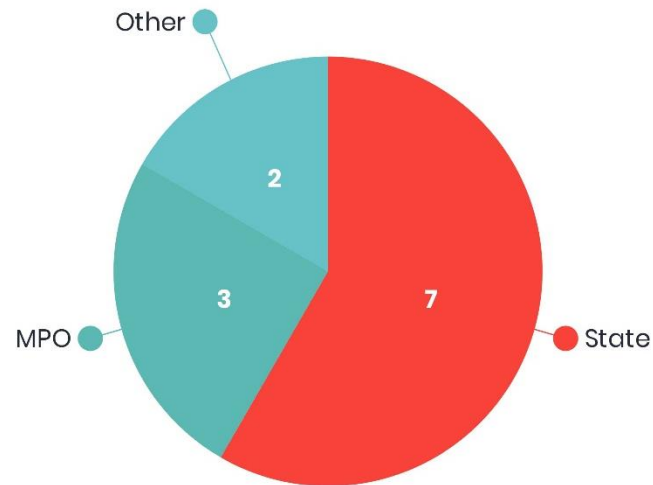
The next phase of this study will assign high-level costs to select recommended projects. The final phase of this study will incorporate and synthesize findings of the three technical memos developed, as well as the feedback of state and local stakeholders, into a final, comprehensive report for truck parking in Delaware.

Appendix A Truck Parking Focus Group 2

On May 20, 2021, DeIDOT and WILMAPCO, in coordination with the project team, hosted the project's second Truck Parking Focus Group Meeting to present updated findings on Delaware's truck parking issues and opportunities, including the results of a Strengths, Weaknesses, Opportunities, and Threats (SWOT). The focus group also provided an overview of available truck parking solutions for consideration in Delaware, including preliminary opportunities to address truck parking issues in specific regions.

The following provides the stakeholder feedback collected through polling during the Focus Group meeting. Stakeholder responses were collected through Mentimeter, a live-polling platform.

What best describes your industry?



Do you have any additional comments we have not yet discussed specific to the SWOT? Please specify which part of the SWOT your comment refers to.

Did you notice a geography to the parking types? Staging vs Time constraints?
Different for various parts of the state?

Competition with other priorities

Not sure if the public sees this as an issue – we hear much more about trucks driving in or near residential areas (i.e. 41/48)



In your opinion, what are the key barriers to addressing Delaware's truck parking needs (e.g. institutional, funding, public perception, etc.)?

Funding

Public Perception -- "I don't want it in my back yard"

very distributed truck destinations -- leads to widely dispersed truck parking needs not easily met with one or two additional sites, public perceptions are not great, and not quickly improved.

It is just difficult for state DOTs to engage in business development. How can you spur private development and use resources to make it lucrative? This is not typical state DOT expertise.

Who goes first, public or private?

When it comes to technology, which one do you put the resources into?

Acceptance of truck parking by private service providers: Convenience stores etc. Zoning restrictions

Competition with other priorities

8



What are the best solutions and strategies to address these identified barriers to advance truck parking in Delaware?

Whats the national trend on public/private partnerships?

Should Delaware prioritize capacity before technology?



In your opinion, what should be the priority solution to address truck parking issues in this region (Northern Delaware)?

is the issue a minor capacity issue at many/multiple locations or large capacity shortfalls at relatively few locations? the majority of current parking is at private land uses (not truck just at truck stops).

seems like public funds could support tech response if issue is minor capacity at many sites, and/or funding one or two new truck parking sites near these new generators (port, amazon, etc.)



In your opinion, what should be the priority solution to address truck parking issues in this region (North-Central Delaware)?



In your opinion, what should be the priority solution to address truck parking issues in this region (Southern Delaware)?



Are there any other considerations that we have not yet discussed today?

