



Delaware Statewide Truck Parking Study

Focus Group Meeting #1

March 11, 2021





Agenda

Welcome from WILMAPCO

Introductions

Trucking Issues and Analytical Approach

Truck Parking in Delaware

10-Minute Break

Facilitated Discussions and Survey

Wikimap Tool Overview

Closing and Next Steps

Welcome!

From Daniel Blevins, Principal Planner, WILMAPCO



Delaware Statewide Truck Parking Study

The objective of the Delaware Statewide Truck Parking Study is to address overnight truck parking hotspots, as well as more localized, shorter-term truck parking and staging needs within the State of Delaware.

Key Objectives

Identify existing truck parking inventory and assess utilization

Understand strengths, weaknesses, opportunities, and threats of truck parking in Delaware

Develop strategies and recommendations to address truck parking needs and issues

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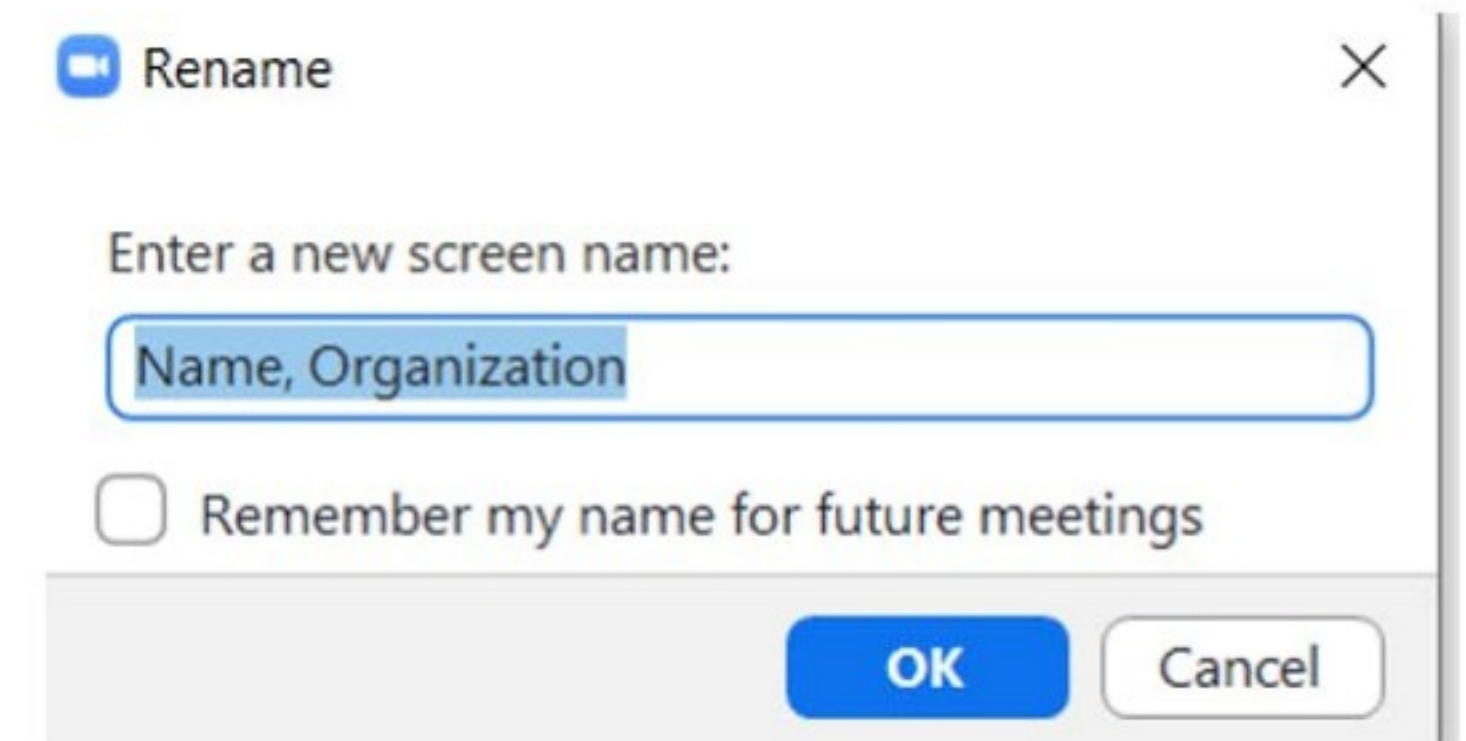
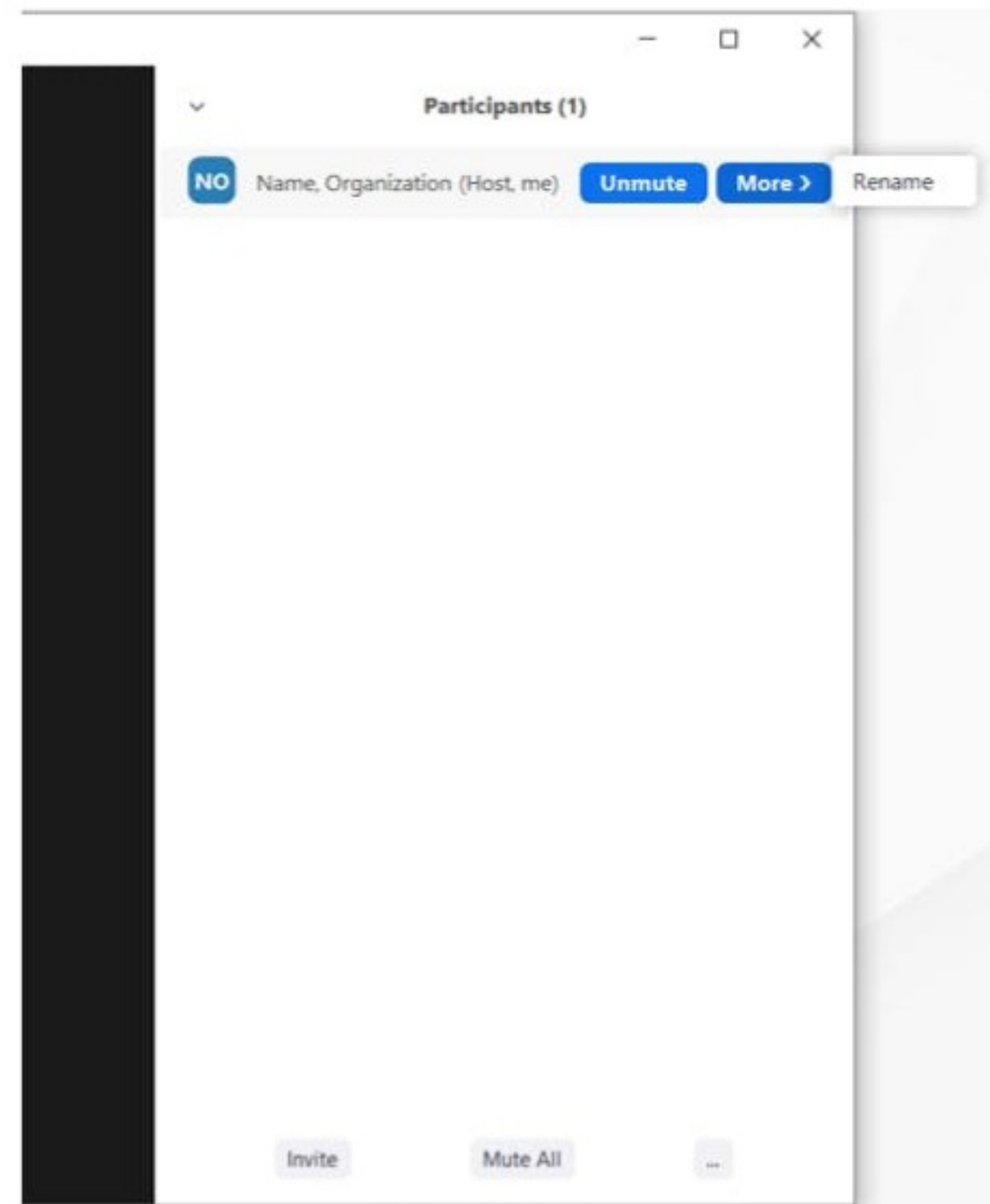
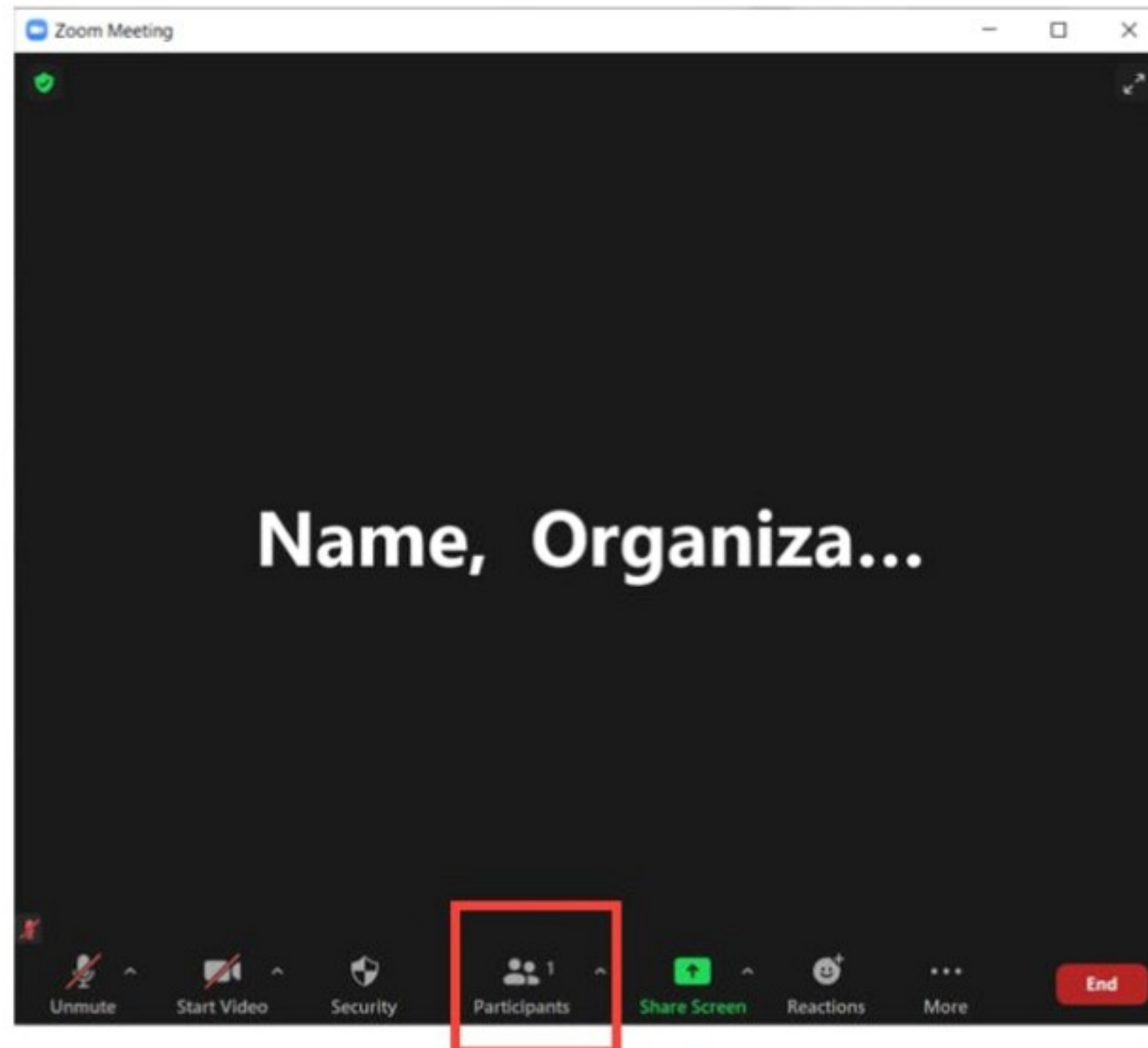
Introductions

Please edit your Zoom name to “Name , Organization”

1. Click on Participants in the bottom toolbar

2. In the participants pop-out, hover over your name and click “More” to find the “Rename” option.

3. Enter your name and organization



Introductions

Please state:

➤ Your name, organization

➤ What is your experience with truck parking in Delaware?



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Importance of Truck Parking



Demand

Significant growth in trucking demand drives demand for truck parking



Supply

Truck parking facilities and spaces not growing at the same pace

The imbalance of truck parking supply and demand has negative economic, safety, quality of life, and infrastructure impacts.

Importance of Truck Parking

Looking for truck parking costs drivers \$5,000 to \$6,000 annually.

Drivers Care About Truck Parking

Truck Drivers Rank Truck Parking as the #1 Most Critical Trucking Issue

Impacts Beyond Drivers

Truck Driver Stops Early

Economic: Lost Drive Time & Reduced Economic Efficiency

Truck Driver Parks in Undesignated Locations

Safety: Reduced Safety for Truck Driver & Other Roadway Users

Infrastructure: Damage to Roadway & Ramp Shoulders

Quality of Life: Increased Noise & Emissions Impacts and Associated Environmental Costs from Idling Trucks

Economic: Citations Add to Cost of Doing Business

Driver Exceeds HOS looking for Truck Parking

Safety: Reduced Safety for Truck Drivers & Other Roadway Users

Quality of Life: Increased Noise & Emissions Impacts and Associated Environmental Costs from Trucks Searching for Parking

Economic: Citations Add to Cost of Doing Business



Reasons for Truck Parking Role Truck Parking in Trucking Operations

➤ Hours of Service (HOS)

- Establish limits on driving and on-duty time

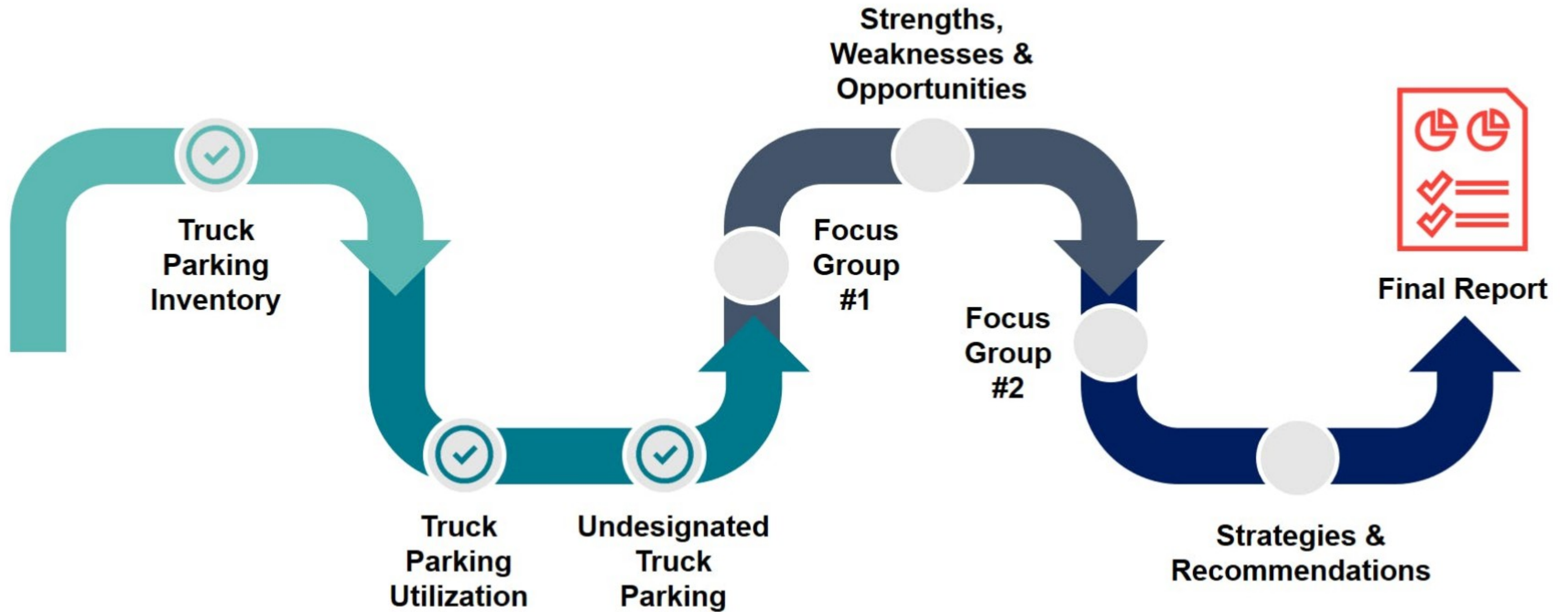
➤ Staging

- Stopping before picking up or dropping off freight

HOS Regulations

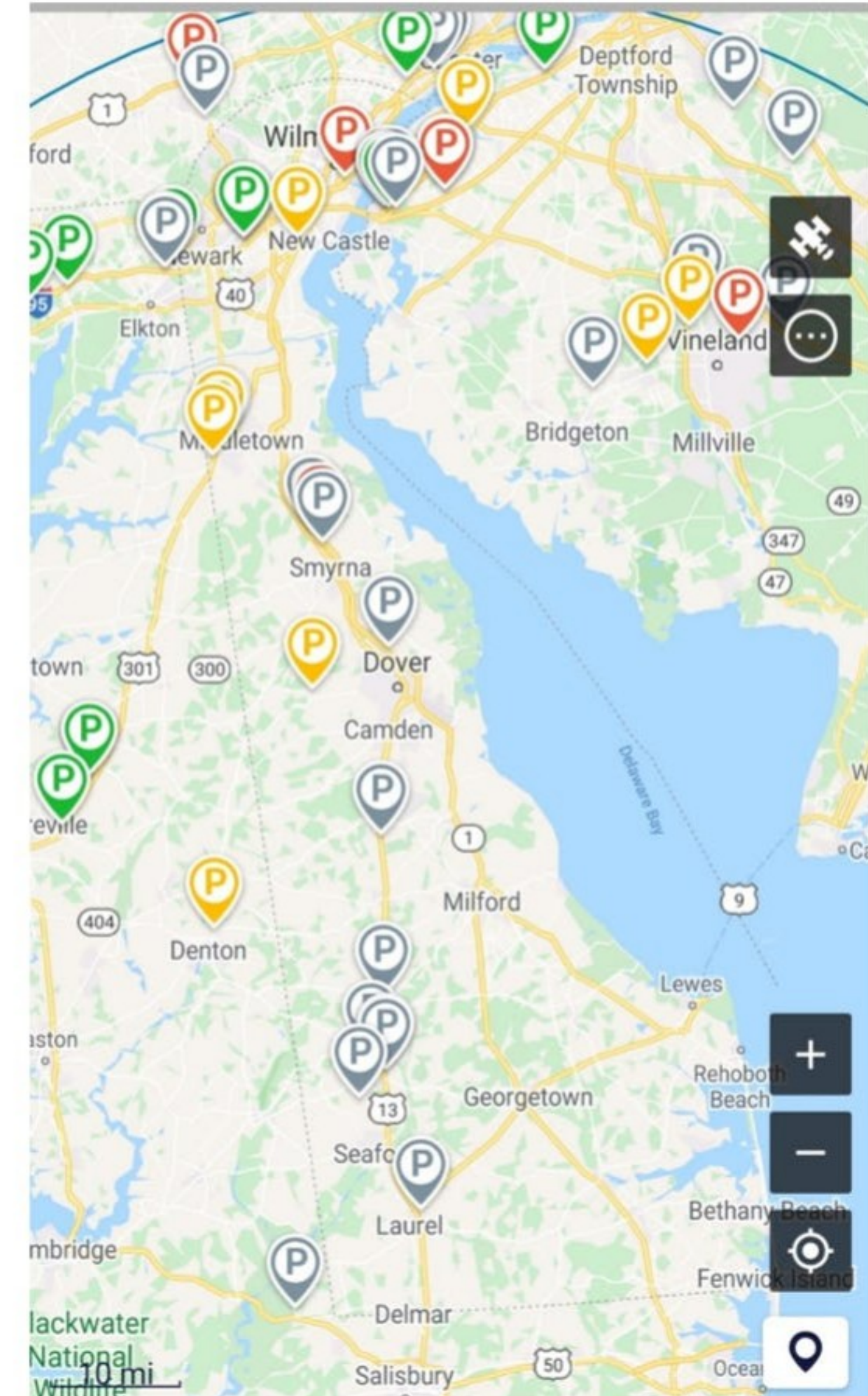
Regulation	Description
11-Hour Driving Rule	Allows max. 11 hours driving after 10 consecutive hours off-duty
14-Hour Rule	Allows a max. 14 hours working after 10 consecutive hours off-duty.
30-Minute Break Rule	Allow a max. 8 hours driving without break. Requires drivers to take a 30-minute break (non-driving period) when they have driven for 8 cumulative hours.
60/70-Hour Rule	Prohibits driving after 60 hours on duty in 7 consecutive days or 70 hours on duty in 8 consecutive days. The drivers are allowed to restart driving after at least 34 consecutive off-duty hours.
Sleeper Berth Rule	Allows drivers to use the sleeper berth to get the equivalent of at least 10 consecutive hours off-duty at one time or in several periods, as long as one off-duty period is at least 2 hours long, and the other includes at least 7 consecutive hours spent in the sleeper berth.
Adverse Driving Conditions	Allows drivers to extend their 11-hour maximum driving window by up to 2 hours only during adverse driving conditions
Short-Haul Exception	If the driver operates within a 100 air-mile radius of the normal work reporting location, and does not exceed a maximum duty period of 14 hours, then they are exempt from the previous regulations.

Analytical Approach



Developing a Truck Parking Inventory

- **Compile a list of potential truck parking locations~ within and around Delaware**
 - DeIDOT – Public truck parking locations
 - Trucker Path – Public, private, and other truck parking locations
- **Validate the count of spaces using satellite images and define truck parking areas**



Truck Parking Study– Public Locations

Process

- Validating the number of truck parking spaces against DeIDOT's Jason's Law submission
- Creating polygons delineating “Designated” and “Undesignated” areas
 - Designated areas are the parking spaces clearly marked for truck parking
 - Polygons are drawn slightly larger than the marked parking area to capture GPS drift
 - Undesignated areas include on/off ramps as well as all other unmarked locations where trucks could park

Example at Smyrna Rest Area:



CPCS Analysis of Trucker Path Data. Map Source:
Google Maps, Imagery ©2021 Maxar Technologies,
U.S. Geological Survey, USDA Farm Service
Agency, Map data ©2021

Blue = Designated
Red = Undesignated

Truck Parking Study – Private Locations

Process

- Validated the number of truck parking spaces in the “Designated” parking area
 - Designated areas are where trucks have been observed to park based on historical satellite imagery
- Validated the Truck Stop Owner and lighting infrastructure at the location
- Created polygons delineating “Designated” area and “Unknown” area
- Vacant lots (no clear owner) adjacent to Trucker Path location markers are marked as unknown

Straightforward Example:

Blue =
Designated



CPCS Analysis of Trucker Path Data. Top Image Source: Google Maps, Imagery ©2021 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2021. Bottom Image Source: Google Street View, ©2021 Google, Image Capture: Sep. 2019



Understanding Truck Parking Utilization

Truck parking utilization tells us how full a truck parking facility is at a particular time of the day.

Importance of Utilization:

- Provides insight into where truck parking is available and where truck parking is difficult to find
- Comparing utilization by time of day and geographically provides insight into times of truck parking demand

Typical Utilization Patterns:

- Truck parking most difficult to find along major freight corridors and near urban areas
- Truck parking begins to fill in the early evening and maintains high utilization until the late morning when trucks leave overnight parking
- Paid truck parking often underutilized as truck drivers generally avoid paid truck parking



Understanding Undesignated Parking

Undesignated truck parking refers to unmarked locations where trucks park

Importance of Undesignated Truck Parking:

- Serves as the most noticeable indication of a truck parking issue
- Provides insight into the magnitude of unmet truck parking demand

Negative Impacts of Undesignated Parking:

- Safety hazard
- Infrastructure deterioration and flow
- Quality of life impacts

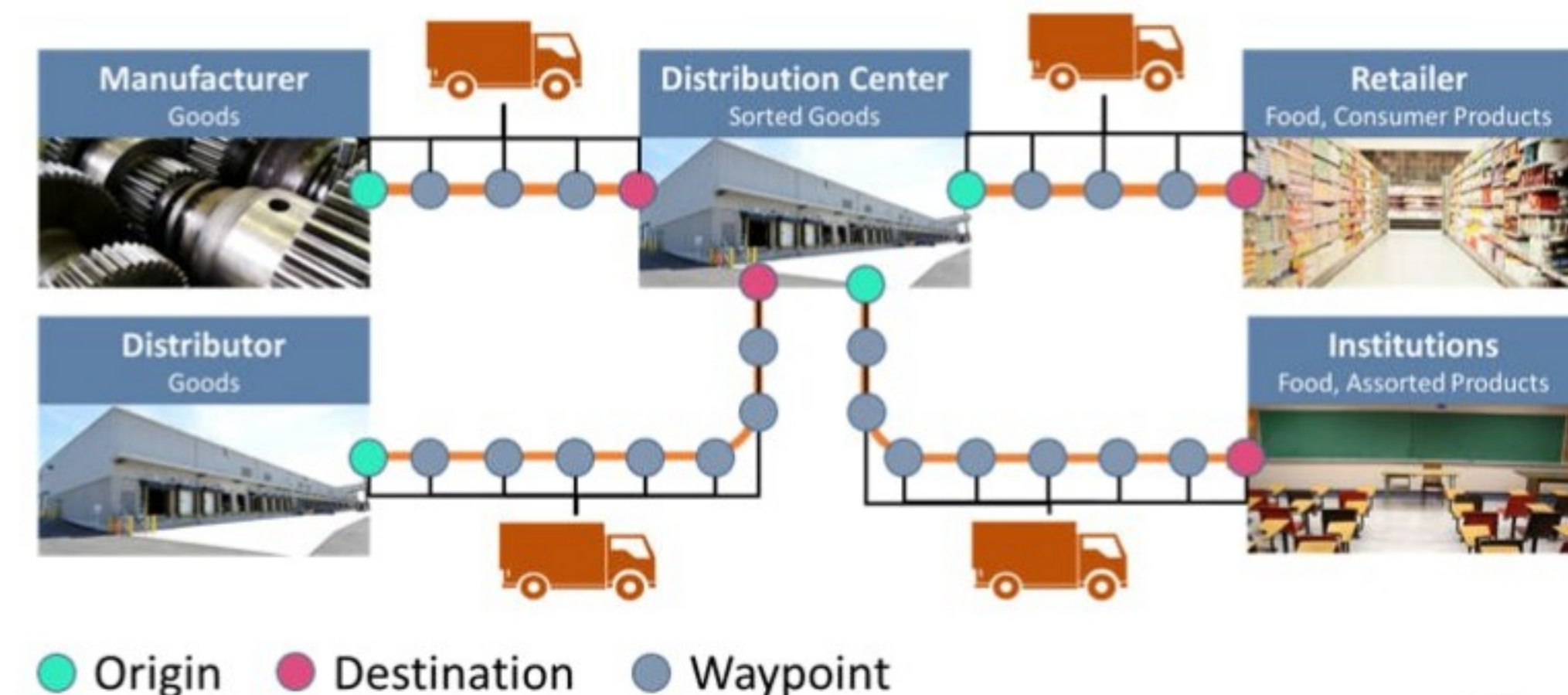
Identifying Utilization and Undesignated Truck Parking

INRIX Data Overview

- 12 weeks of data collected quarterly in 3 week periods
- Use waypoints to analyze travel speed, stop location, and stop duration
- Determine hot spots of undesignated parking

Truck Path Data Overview

- Crowdsourced data from almost one million drivers
- 1 years worth of records
- Visually identify and communicate truck parking availability to other drivers
- Algorithm used to translate inputs to low, med, high utilization





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Truck Parking Inventory

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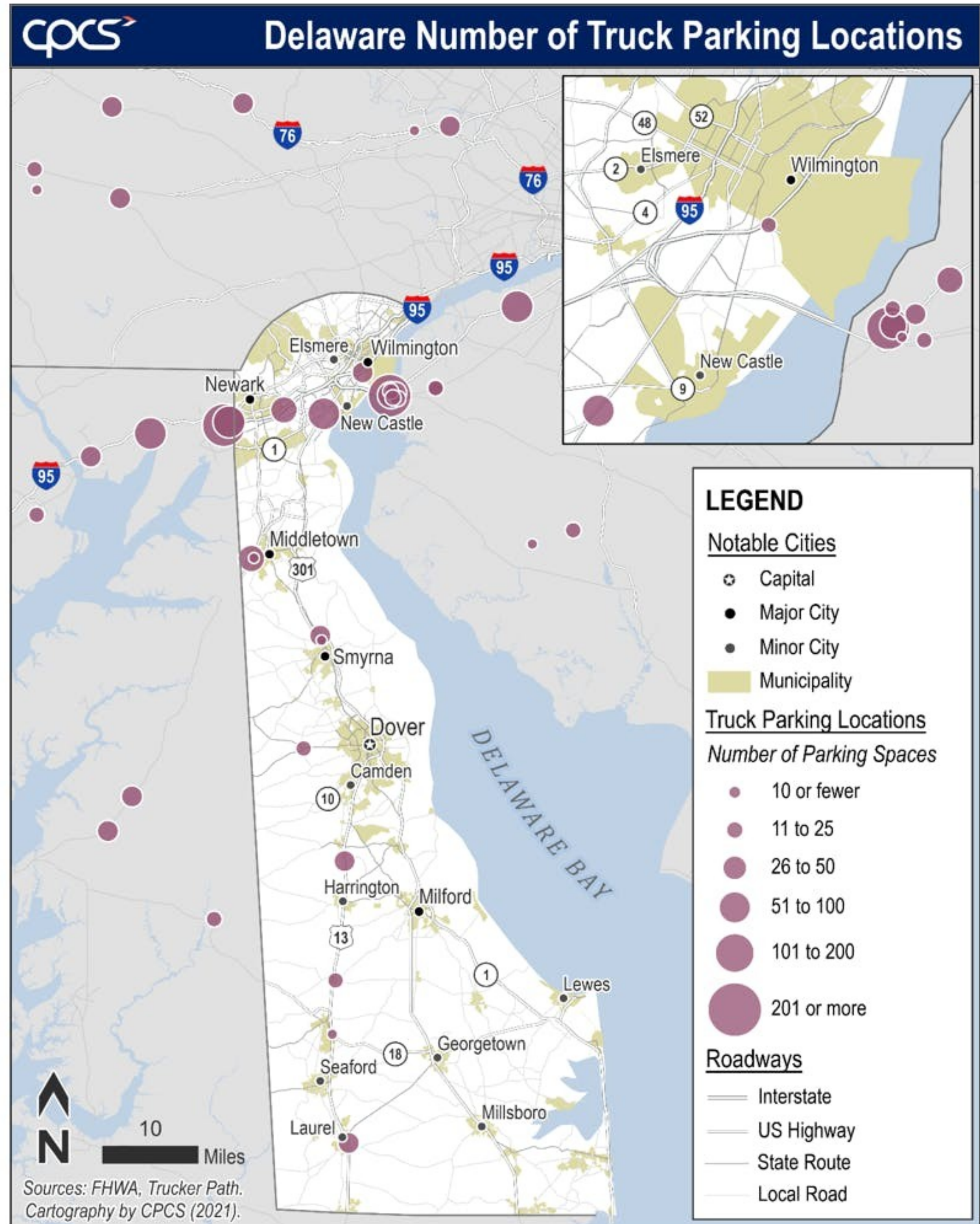
private truck stops

2

public facilities

with 76 truck parking spaces

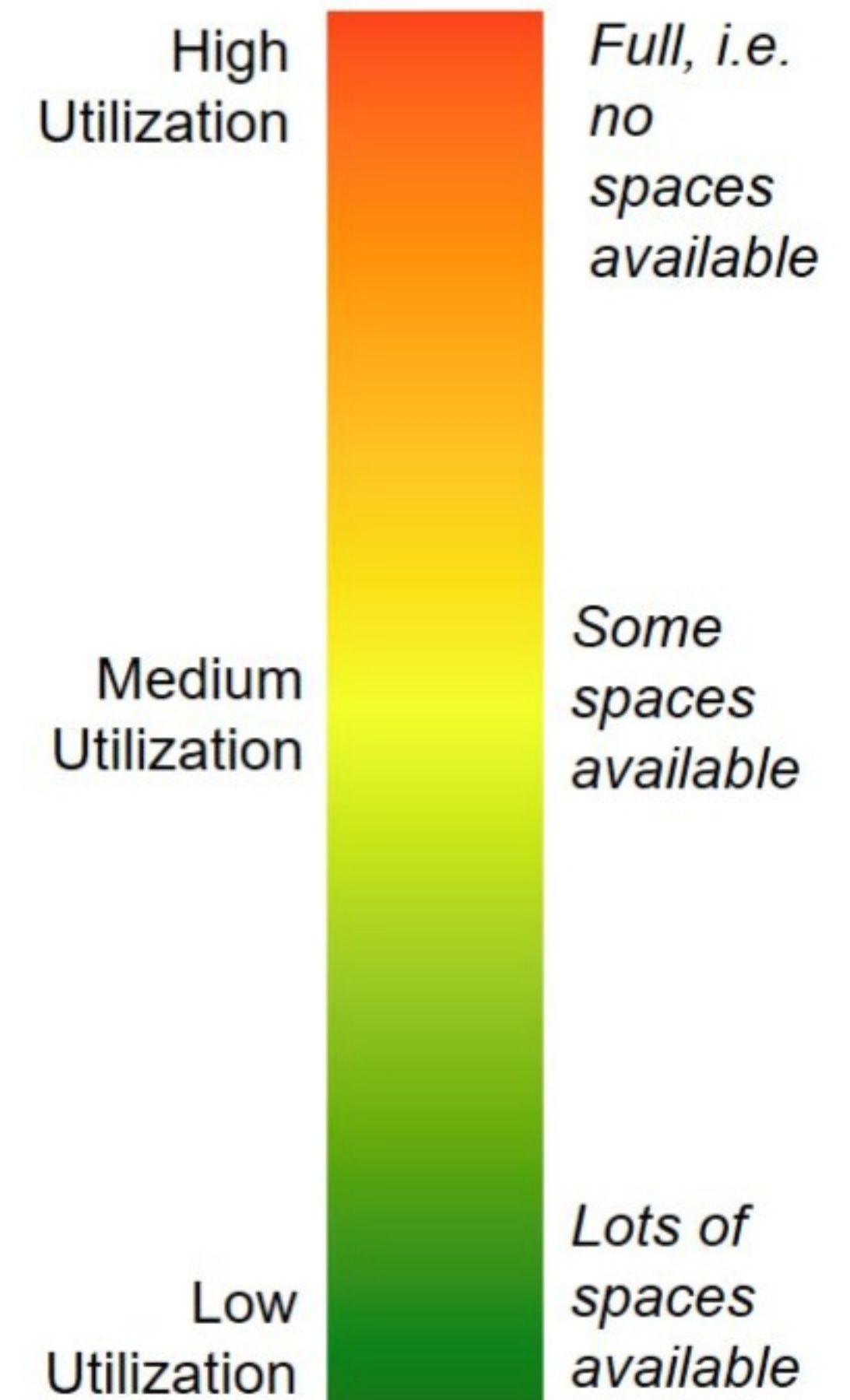
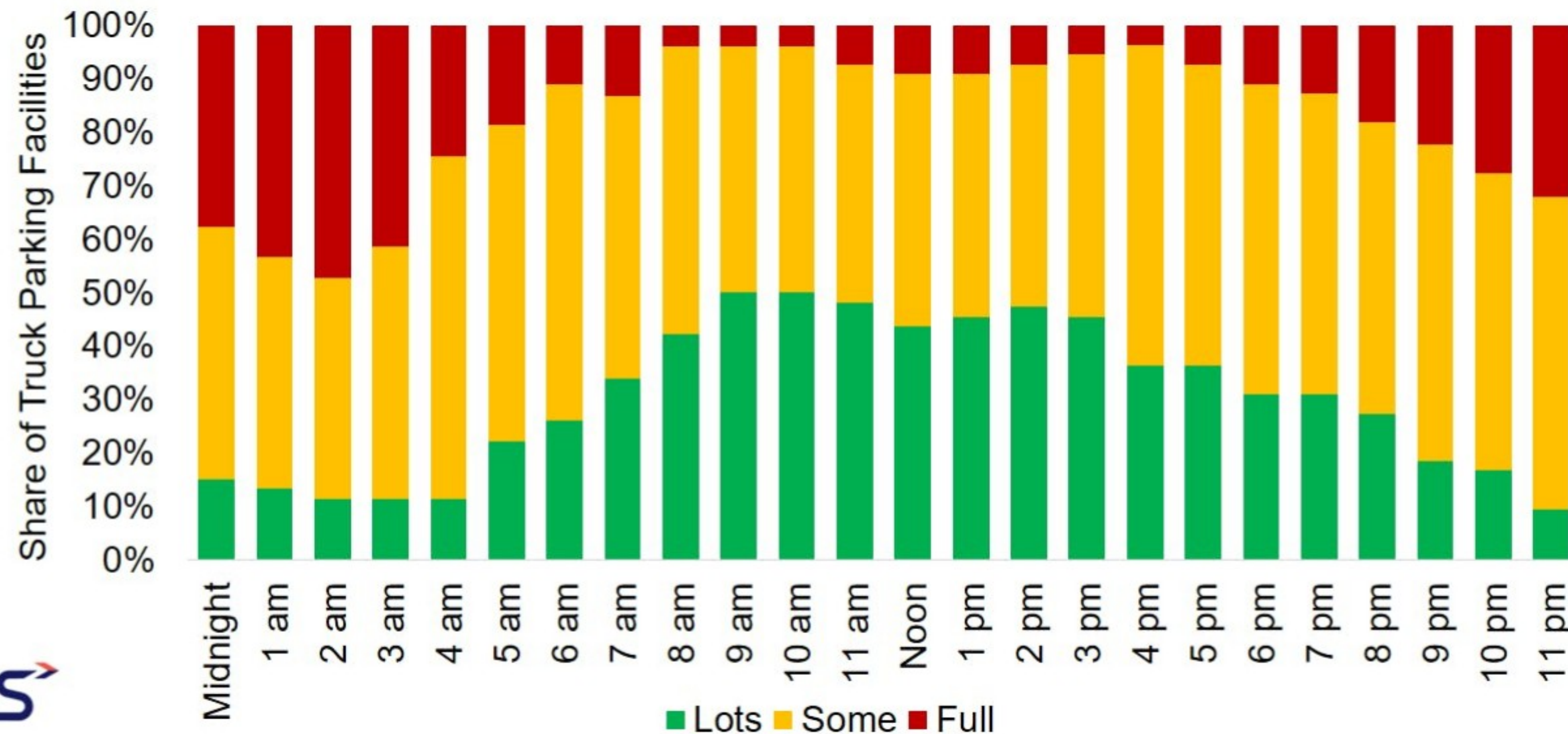
with 257 truck parking spaces

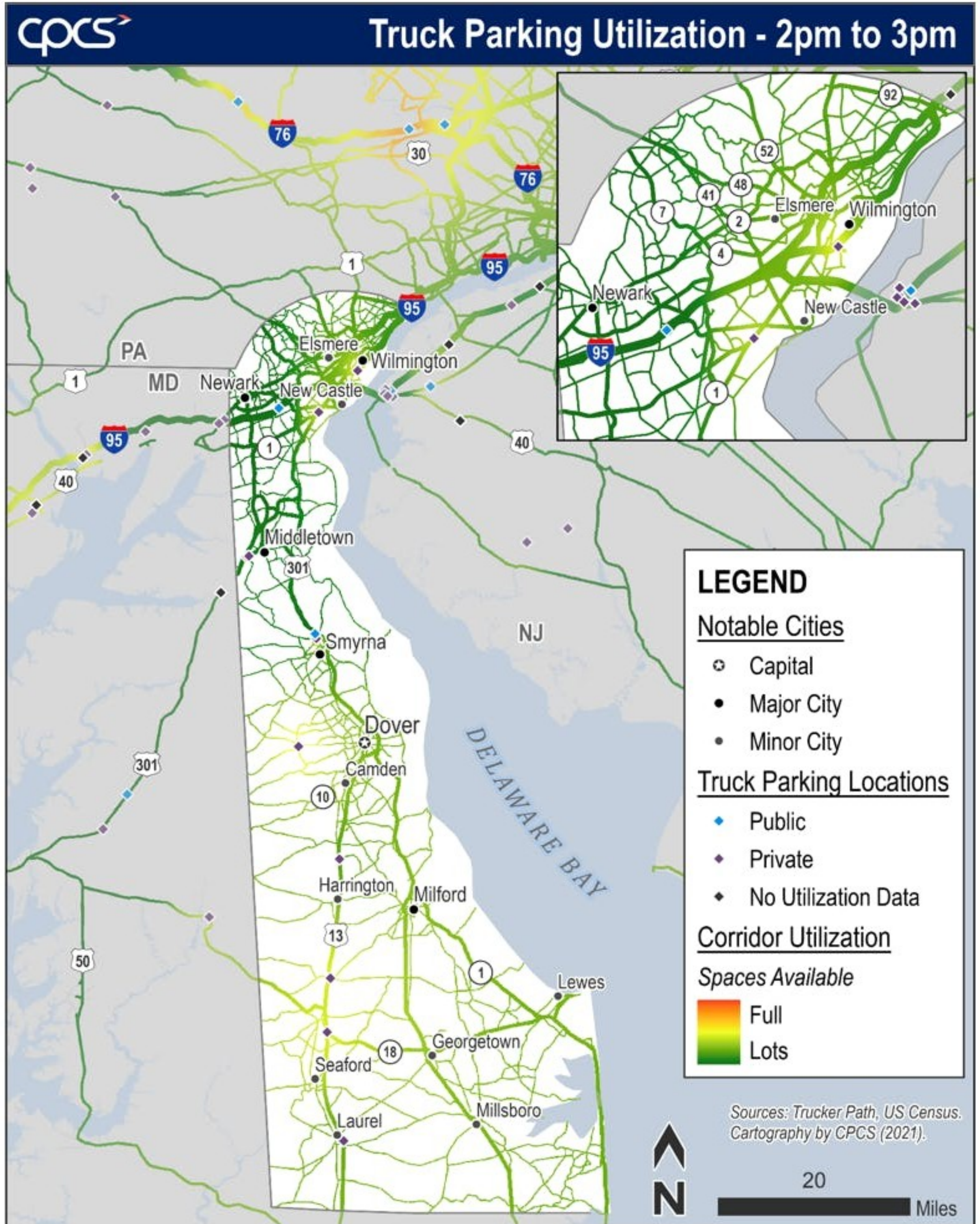
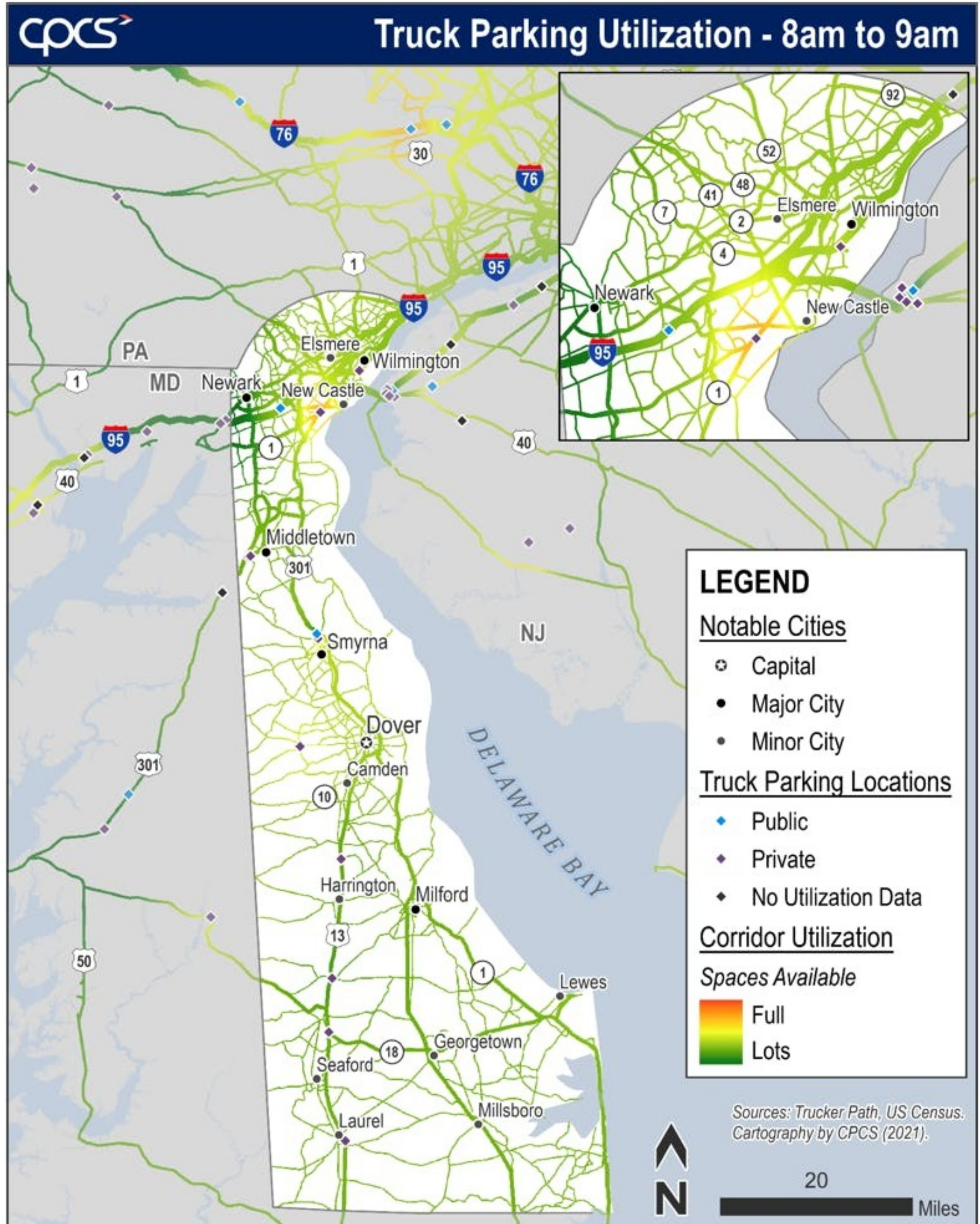


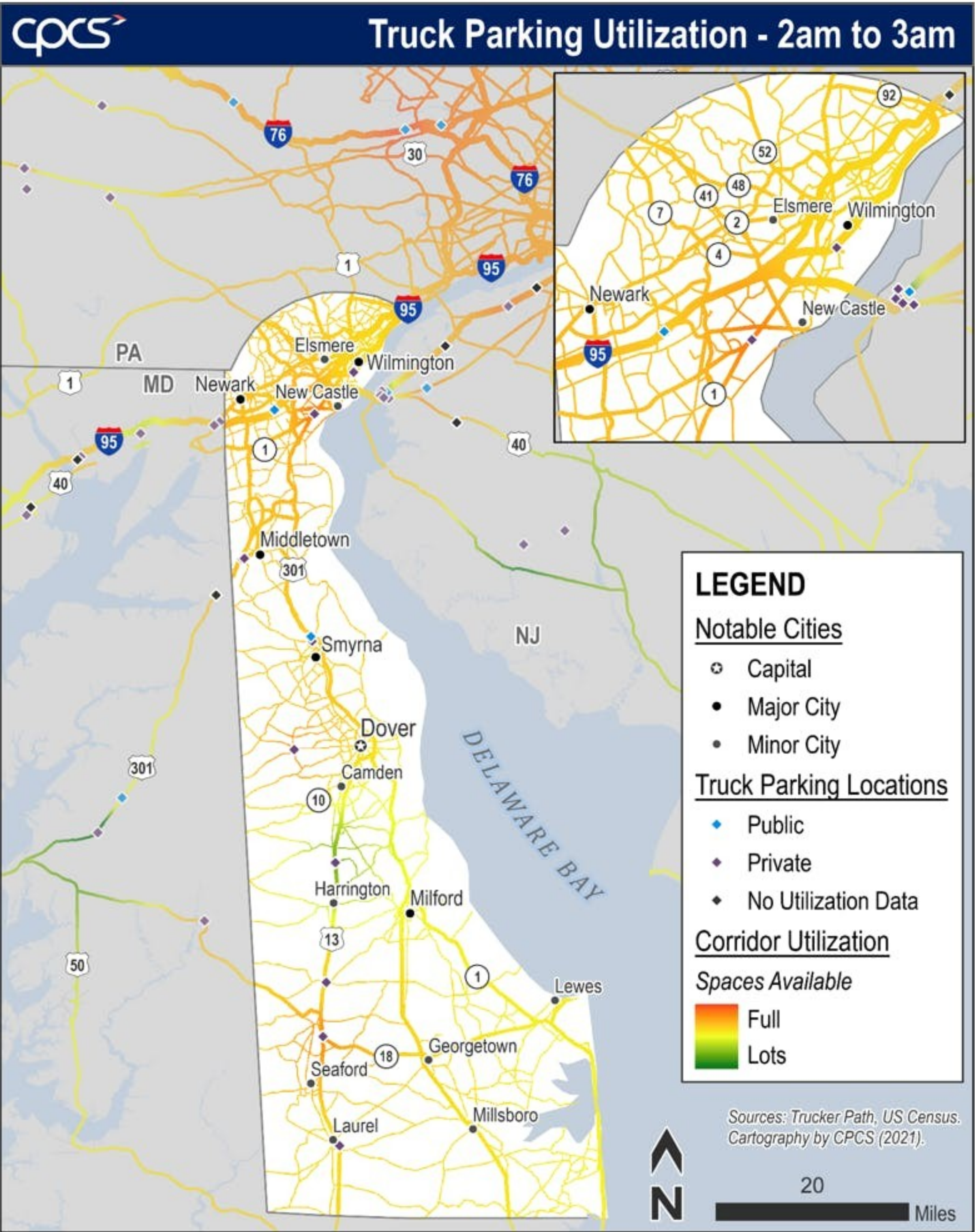
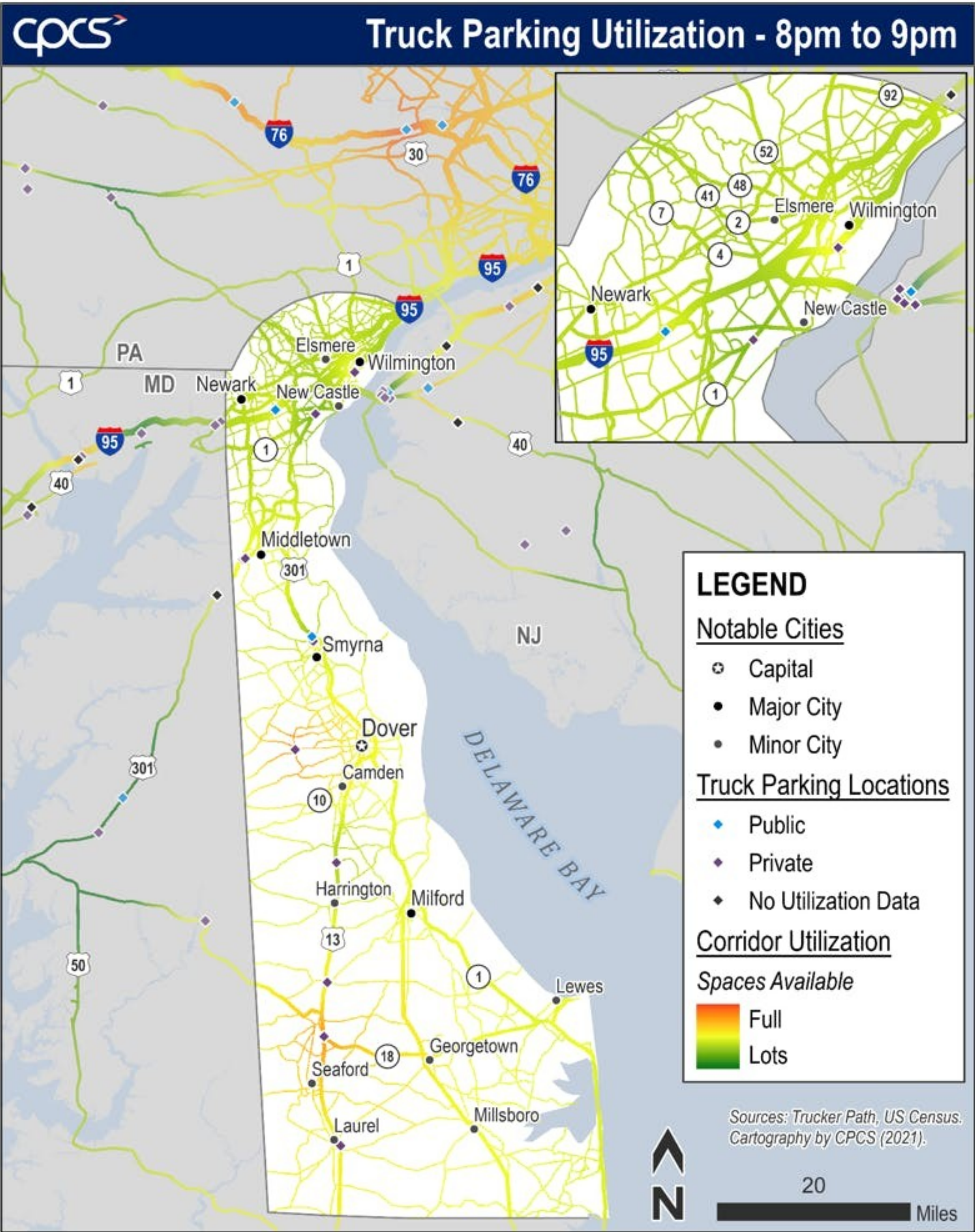
Truck Parking Utilization

Truck parking utilization is the number of trucks parked at a truck parking location relative to the number of spaces at that location

- Utilization lowest from late morning to early evening
- As the evening progresses, drivers stop for overnight rest breaks
- Peak utilization in the early morning, from 2 am to 3 am



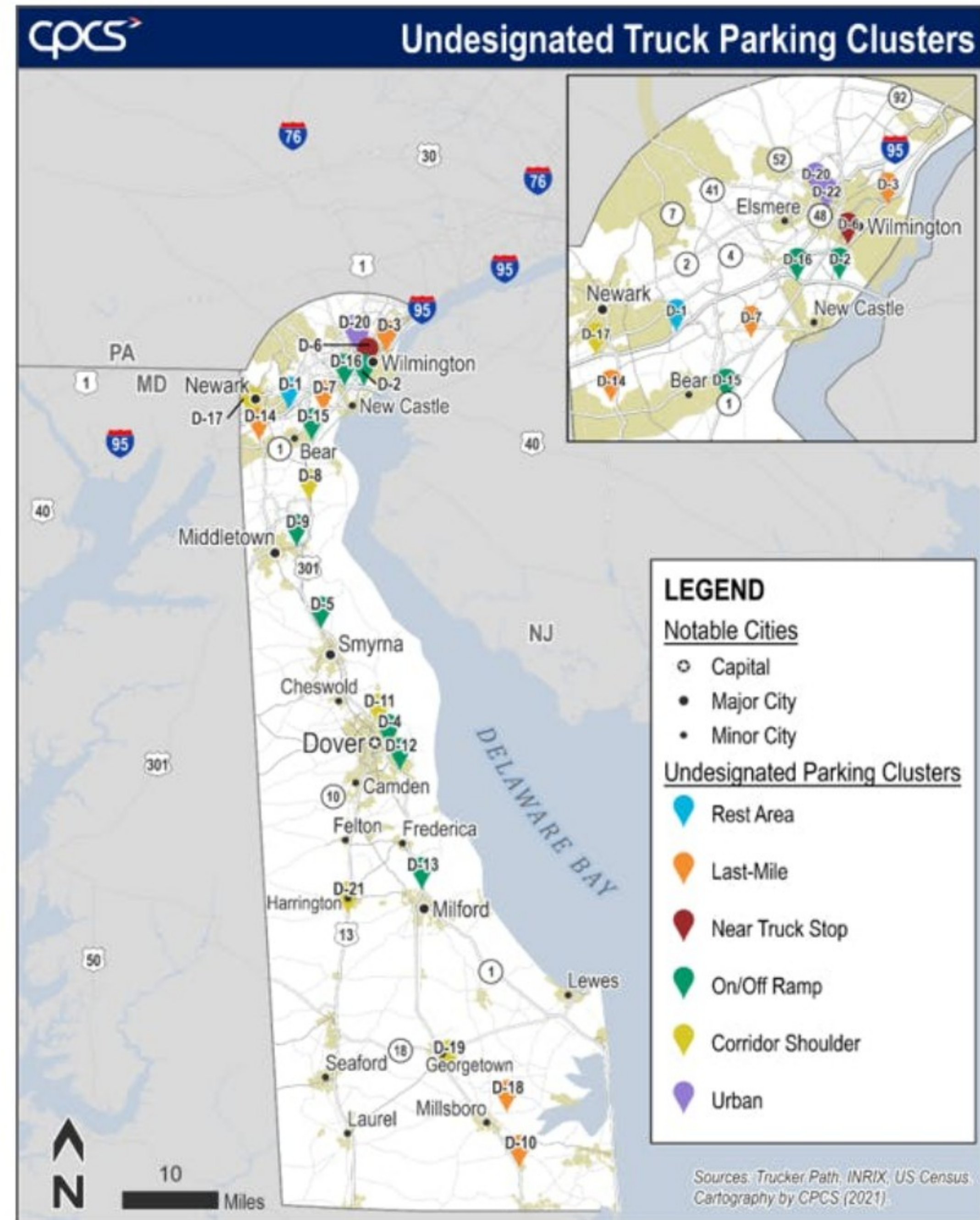




Undesignated Truck Parking

Undesignated truck parking (unmarked locations where trucks park) serves as the most noticeable indication of a truck parking issue.

22 undesignated truck parking clusters identified in Delaware.



Undesignated Truck Parking

On/off ramps



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

Last-mile



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

Corridor shoulders



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

Rest area



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

Undesignated Truck Parking

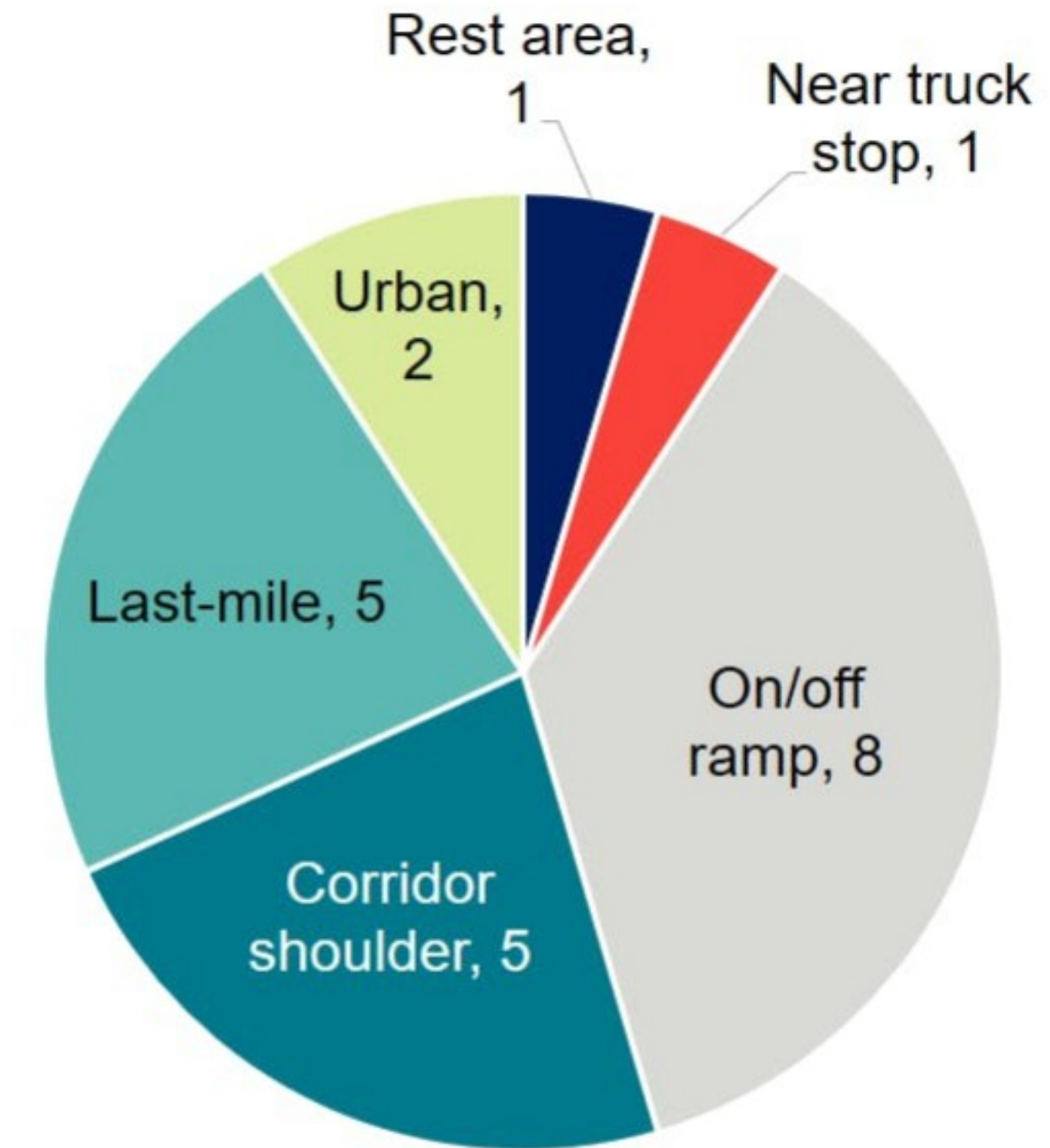
- Undesignated truck parking occurs in the greatest numbers along on/off ramp shoulders
- Largest single cluster at Biden Welcome Center rest area
- Average stop duration at clusters ranges from 1 to 16 hours

On/off ramp Shoulder



Source: Google Street View, ©2021 Google, Image Capture: Sept. 2019

**Types of Undesignated Parking
(by Number of Clusters)**



Last-mile



Source: Google Street View, ©2021 Google, Image Capture: Mar. 2020

Truck Parking Violations

FMCSA Records of HOS Violations in Delaware (2017-2020)

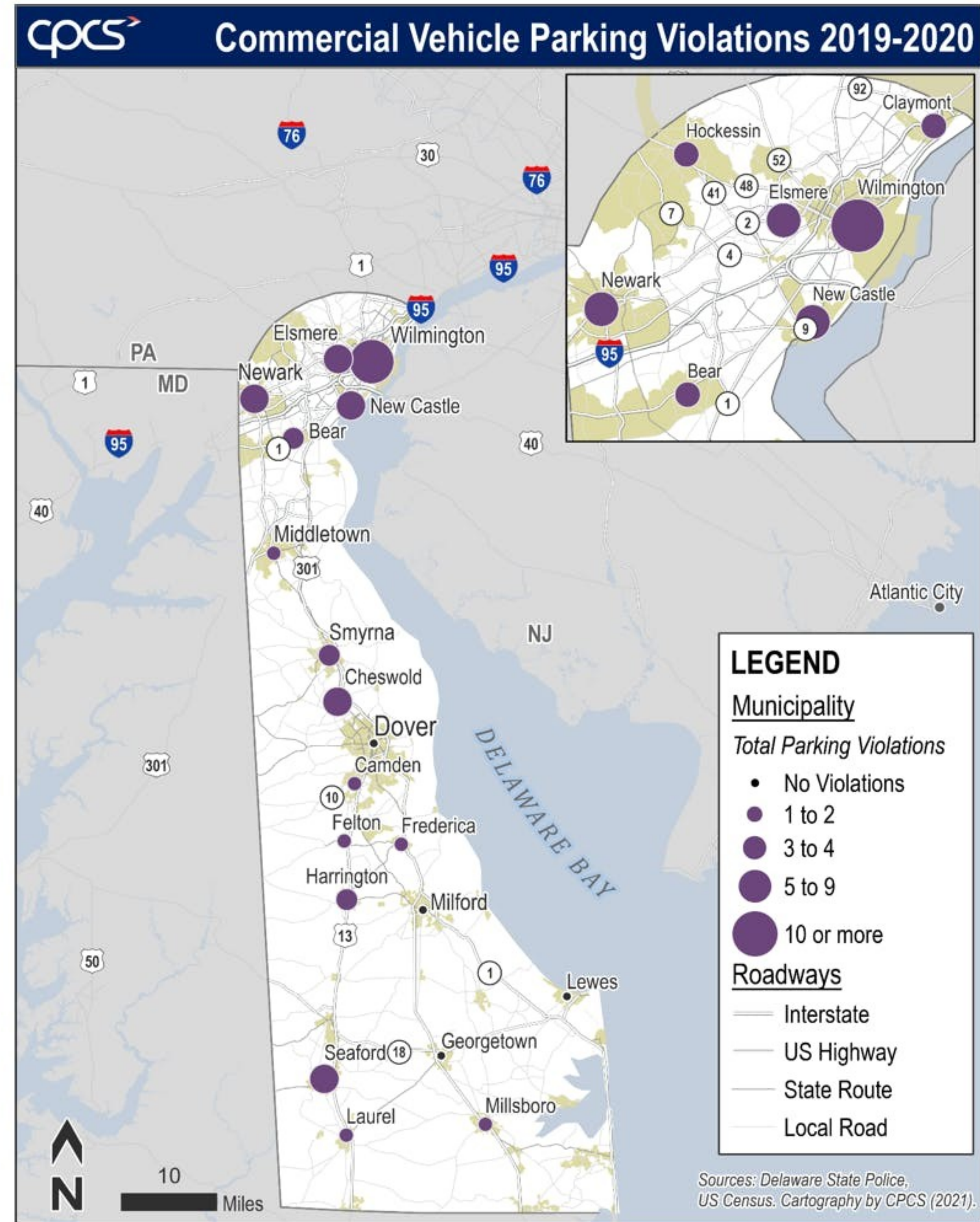
➤ Just over 2 percent of 12,500 roadside violations in Delaware related to violations of HOS regulations

➤ The majority of HOS violations relate to driving beyond the 14 hour duty period

Violation	No. of Violations	Percent of Total Violations
Driving beyond 8 hour driving limit since the end of the last on duty, off duty, or sleeper period of at least 30 minutes	14	0.11%
Driving beyond 14 hour duty period	116	0.93%
Driving beyond 14 hour duty period – Nominal Violation	45	0.36%
Driving beyond 11 hour driving limit	59	0.47%
Driving beyond 11 hour driving limit in a 14 hour period – Nominal Violation	14	0.11%
Driving after 70 hours on duty in an 8 day period	6	0.05%
Driving after 70 hours on duty in an 8 day period – Nominal Violation	0	0.00%
Driving after being declared out-of-service for HOS violation(s)	2	0.02%
Driving after 60 hours on duty in a 7 day period	0	0.00%
Total	256	2.05%

Truck Parking Violations

CMV Parking Violations from the Delaware State Police (2019-2020)



Truck Parking-Related Crashes

When drivers are unable to find safe designated parking near the end of their HOS, they are faced with a difficult choice.

Parking in undesignated areas can lead to crashes

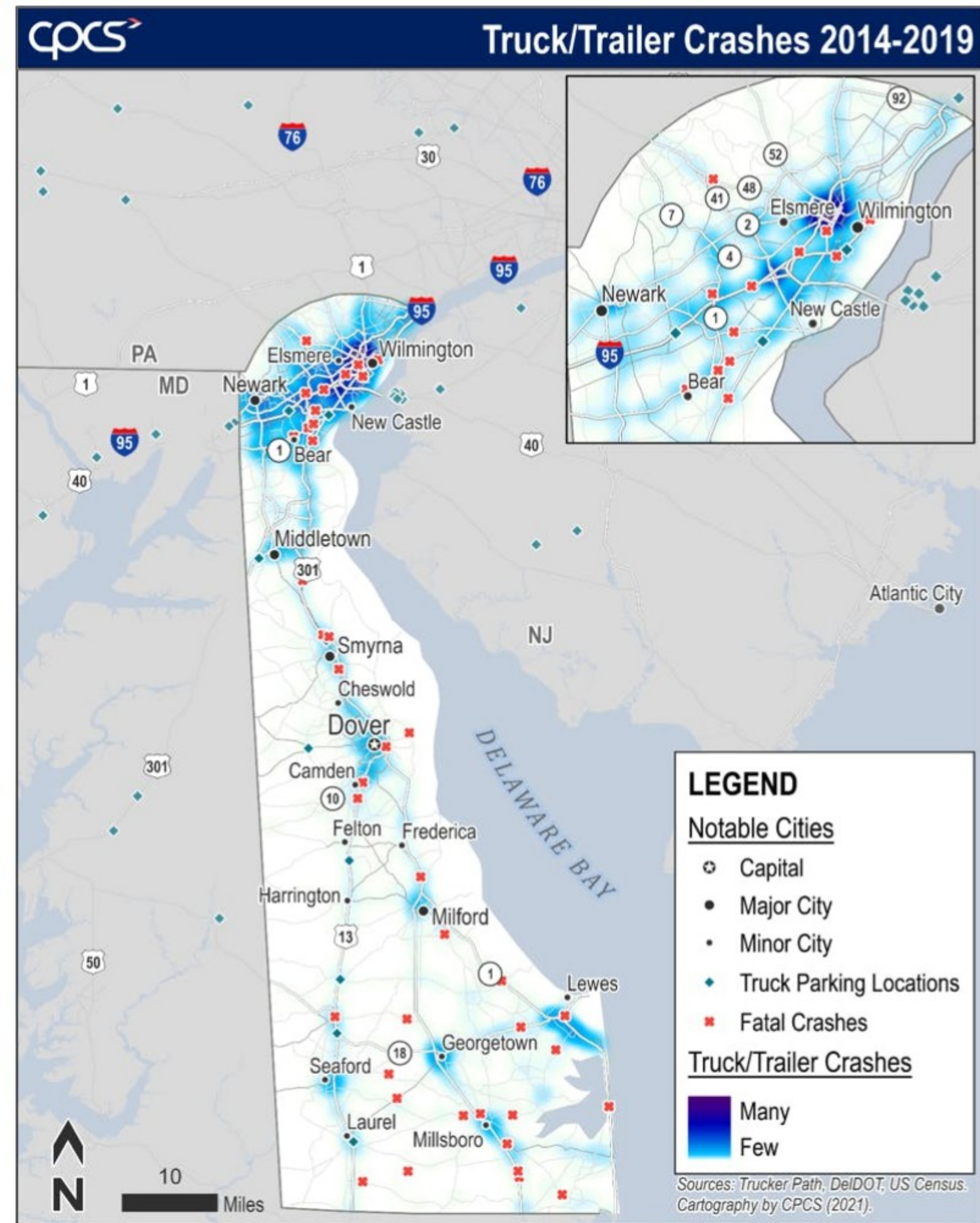
- Undesignated parking is a safety hazard to truck drivers themselves and other highway users.
- Trucks parked on DE corridor shoulder involved with at least two fatal crashes in the last decade – one in 2014, another in 2020.

Fatigued driving can lead to crashes

- Fatigued drivers lose their ability to stay vigilant and time their psychomotor/cognitive responses.
- Even with adherence to HOS regulations, truck drivers may still be fatigued, especially around the end of a shift and when hard to find safe parking.

Truck/Trailer Crashes

- Over 6,700 crashes in Delaware involved trucks/trailers between 2014 and 2019
- 0.6 percent (41 crashes) resulted in a fatality
- Truck/trailer-involved crashes have increased 42.7% from 908 crashes in 2014 to 1,296 in 2019



Soliciting Your Input



During this session, an online audience response application (Mentimeter) will be used to collect your inputs on issues related to truck parking, as well as the preliminary study findings presented at the meeting.



Voting will be anonymous



The inputs will be used as talking points to facilitate discussion around the statewide truck parking supply, demand, and current issues.



Results will be shown on the screen in real time

Go to
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10-Minute Break

Questions to Consider

- What do you see are Delaware's top truck parking issues and why?
- What solutions and opportunities can address Delaware's truck parking needs and issues?
- What project or policy gaps related to truck parking would you like to see resolved?

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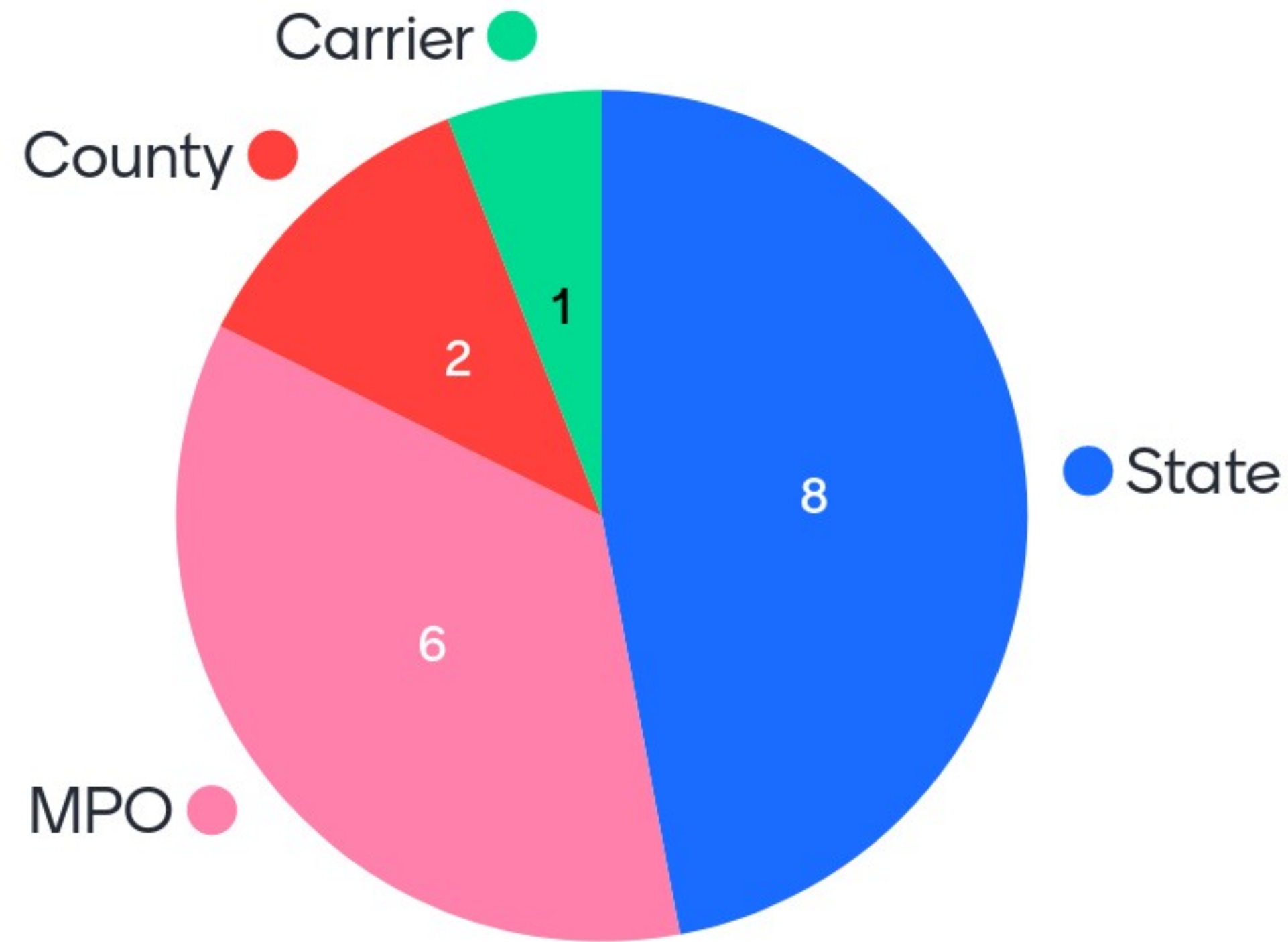
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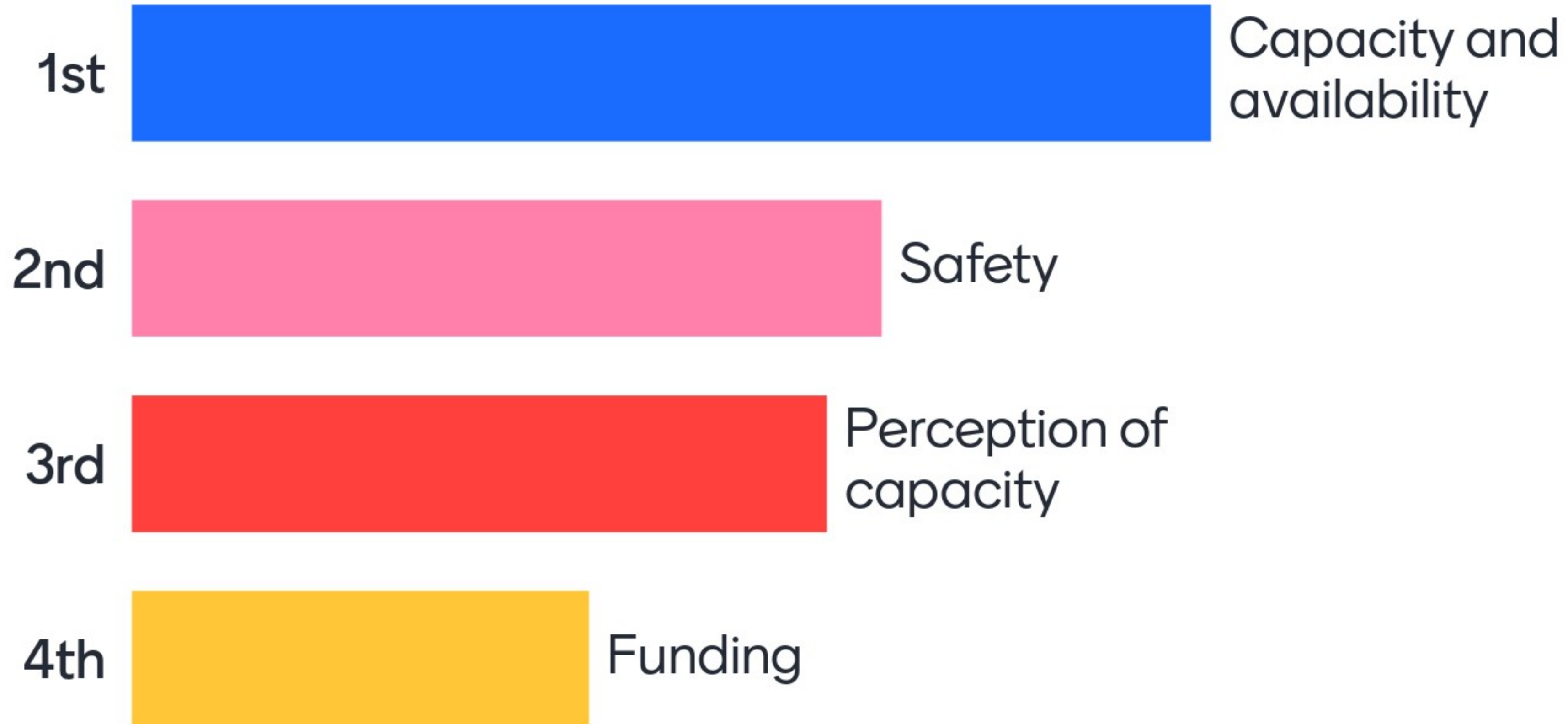
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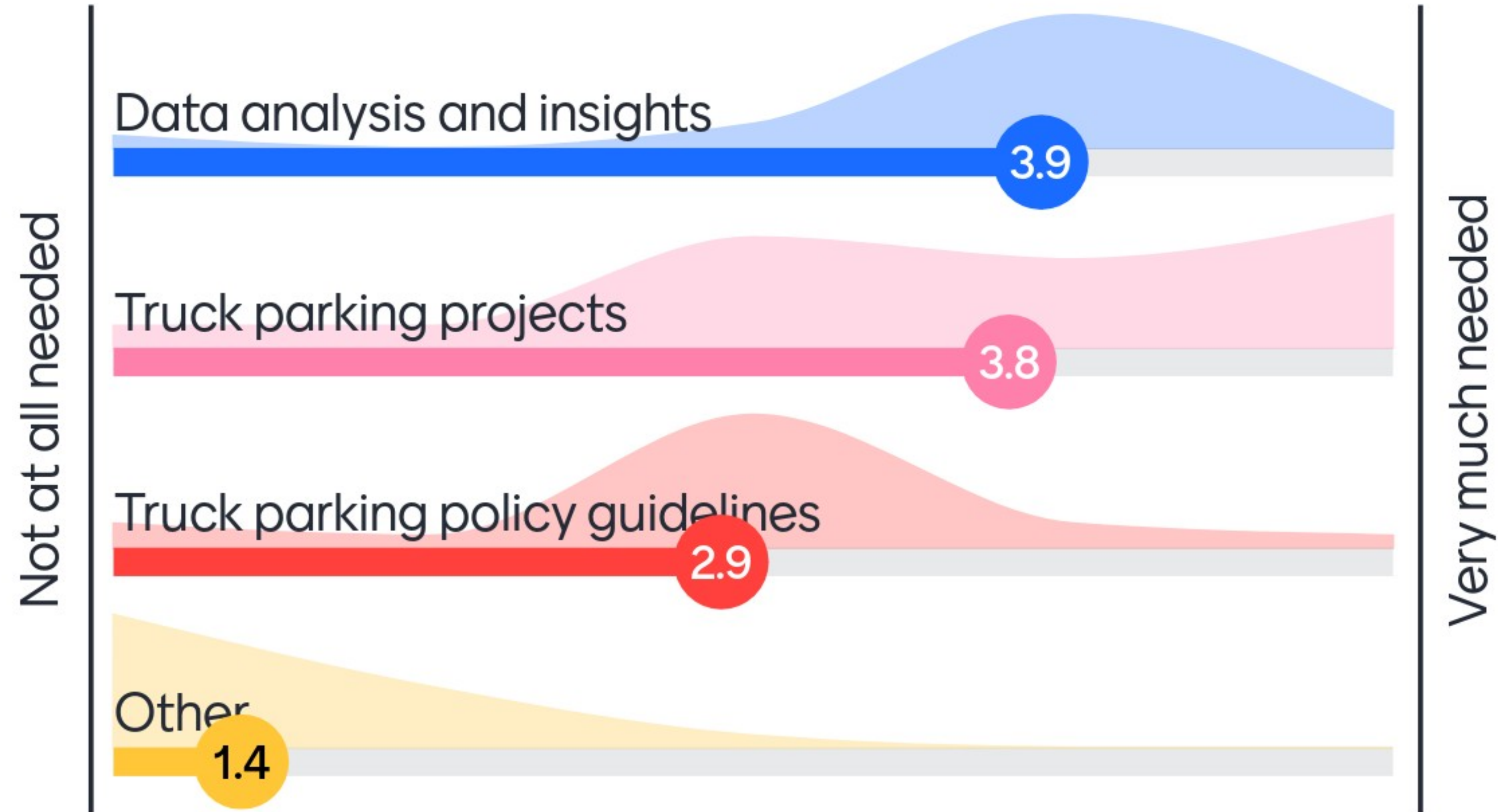
What best describes your industry?



Rank the following truck parking issues:



What is most needed to address truck parking challenges?



What are Delaware's most pressing truck parking issues?

Central Delaware needs a designated truck parking area

Lack of parking in general

Ability to communicate/identify available parking

Who pays? public or private?

Having adequate parking spaces and/or methods of letting truckers know where parking is so that they don't have to get caught at the end of their HoS.

COOPERATION BETWEEN PRIVATE PARKING SUPPLIERS AND DELDOT.

Lack of parking in Sussex County.

Safety issues related to trucks parking on ramps and shoulders. In addition to the reasons you mentioned earlier, blocking bike lanes (shoulders) is another safety aspect of this issue.

Adequate availability in Central Delaware, along Delaware's backbone Rt1. Kent County has attracted multiple manufacturing companies, with an increase in the trucking industry for more opportunity, leading to more local residents needing temp parkin

What are Delaware's most pressing truck parking issues?

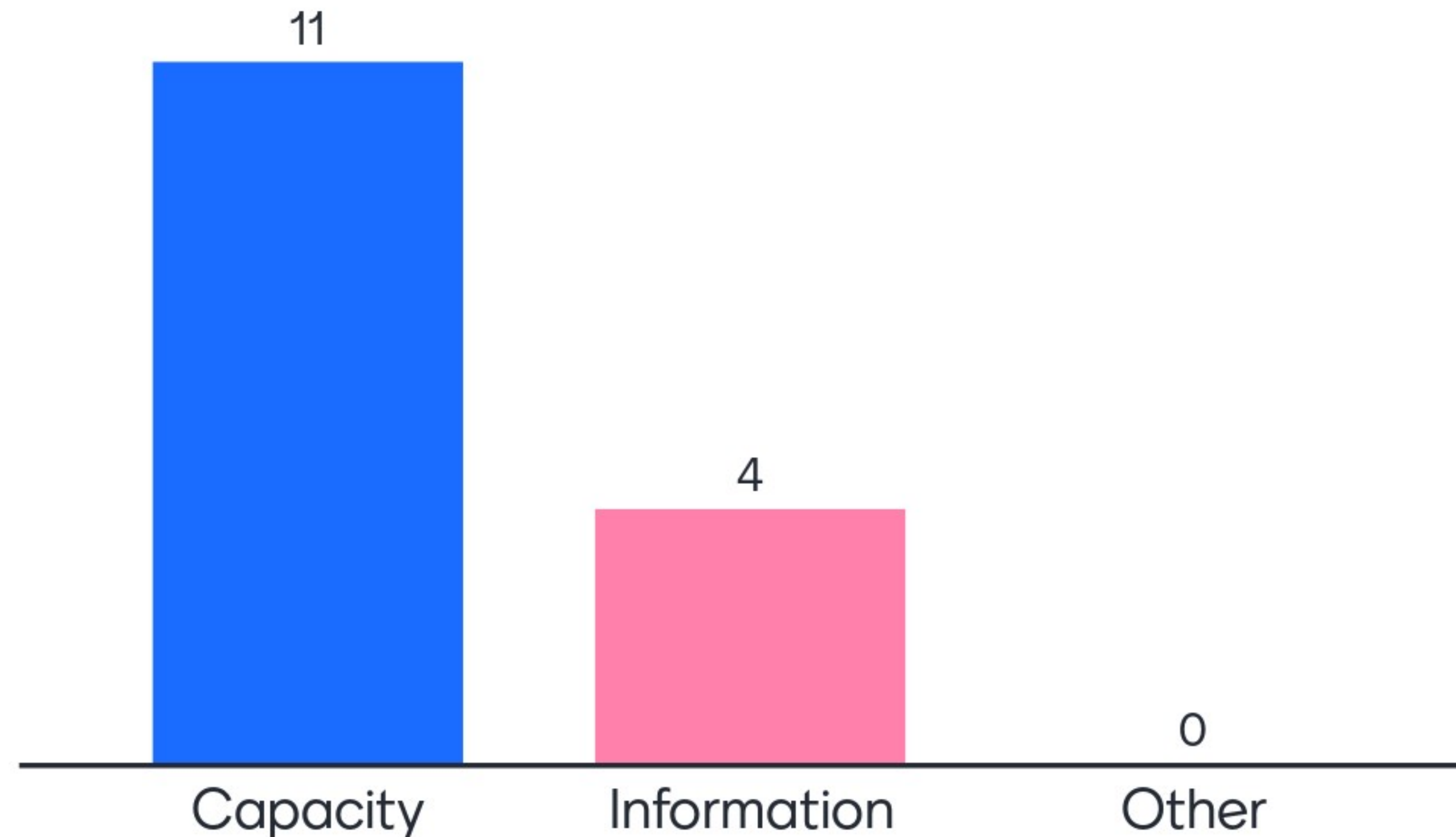
More availability in strategical locations

Information

Finding a balance between governments, industry and public's wants and needs for a common sense, real world working solution

Local land use controls that support truck facilities

In your opinion, are DE's truck parking issues due to a lack of truck parking spaces (capacity) or info about parking availability (information)?



What do you see as the root causes of truck parking issues in Delaware?

Increase in Logistic and Distribution and lack of planning for the increase in the past

Based on some of the discussion so far, lack of training/education on this topic for at least some drivers may be part of the issue.

Public disconnect between the need for trucks on the road/parking for them and packages destined for their household/businesses

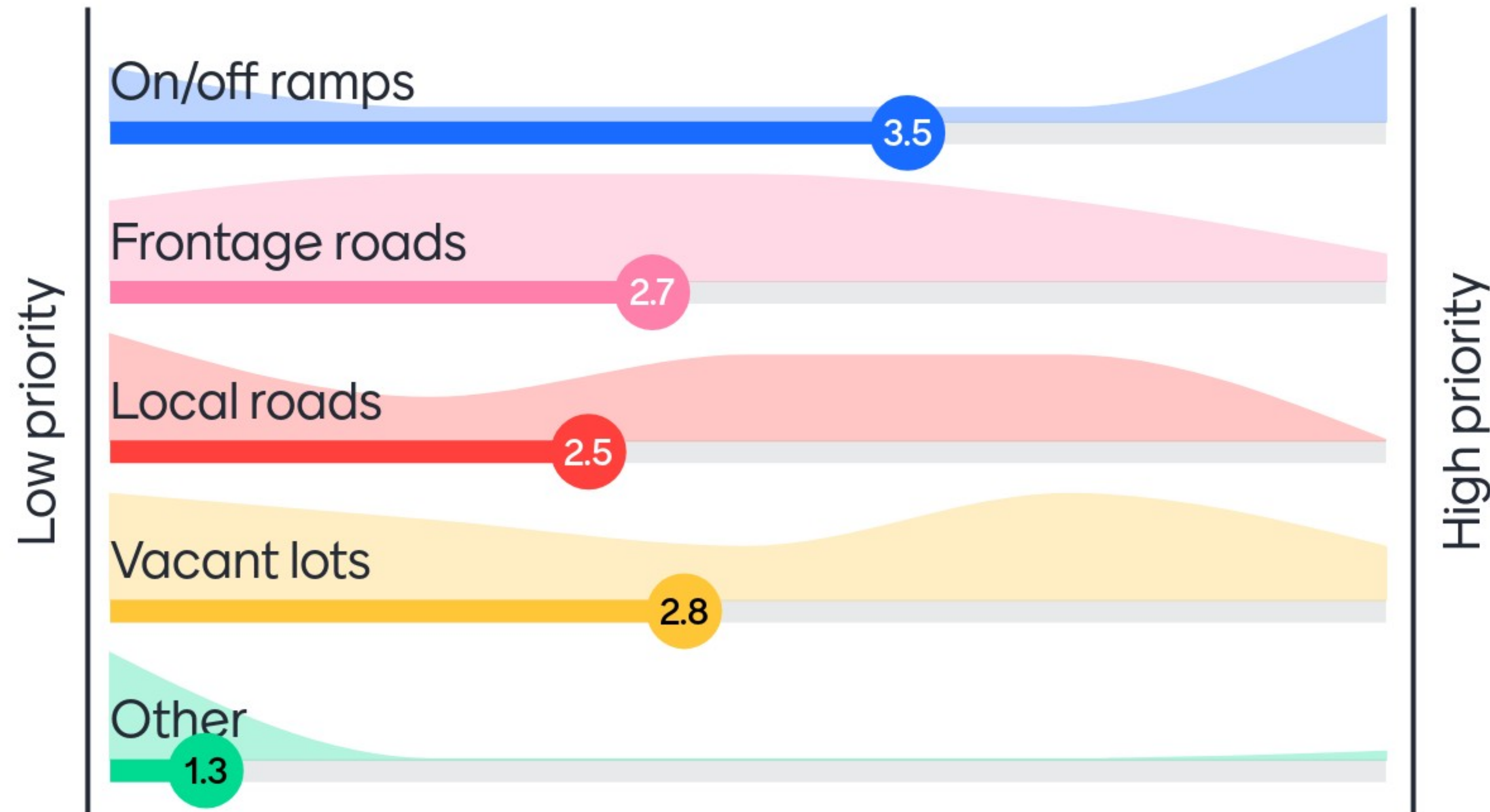
locally unwanted land use (LULU)

Lack of commercial influence on public policy to create adequate parking. Public knowledge of landowners around Rt1 of potential for development

Land value in the north east corridor is not conducive to truck parking. Truck parking doesn't generate the revenue to ultimately justify its existence

Distribution centers (Walmart, Amazon etc) outpacing additional parking availability. Electronic Hours of Service forcing drivers to rest when hours expire so looking for parking is not an option.

What level of priority should be given to different types of undesignated parking?



What are Delaware's most important truck parking opportunities?

In attracting Distribution companies - having designated truck parking would be a selling point.

Keeping truck parking in step with changing industries

Coordinating with the private sector to share info and data as to where private facilities may be profitable.

Potential redevelopment of underutilized commercial spaces for truck parking/staging uses

STATE/PUBLIC WORK WITH POTENTIAL/ACTUAL PRIVATE TRUCK PARKING FACILITIES TO CREATE MORE, SAFE PARKING

Re purposing vacant lots for designated truck parking

Expansion of open space along undeveloped parcels in northern and southern part of Kent County. Possibly focusing on a single new parking facility in the Dover area along Rt 1

Identifying and dissemination of truck parking to drivers and carriers in the corridor

Considerations with capital projects

What are Delaware's most important truck parking opportunities?

Location along the eastern corridor would make Delaware positioned well for truck parking revenue.

Coordination with industry

The use of truck parking facilities for emergency use (debris holding)

Reaching out to past providers to re-energize them in offering spaces

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

Please make sure that collected information is shared with the panel.

CREATING RESPONSIBLE DRIVERS

Please develop a public information campaign to get the information to those truckers that may not be informed.

Excellent discussion and use of survey website

Can Delaware be more proactive in making sure data in Trucker Path (and other apps) is as comprehensive + accurate as possible?

Thank you this has been very informative



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WikiMap Introduction

*Introduction to the WikiMap tool from Daniel Blevins,
Principal Planner, WILMAPCO*



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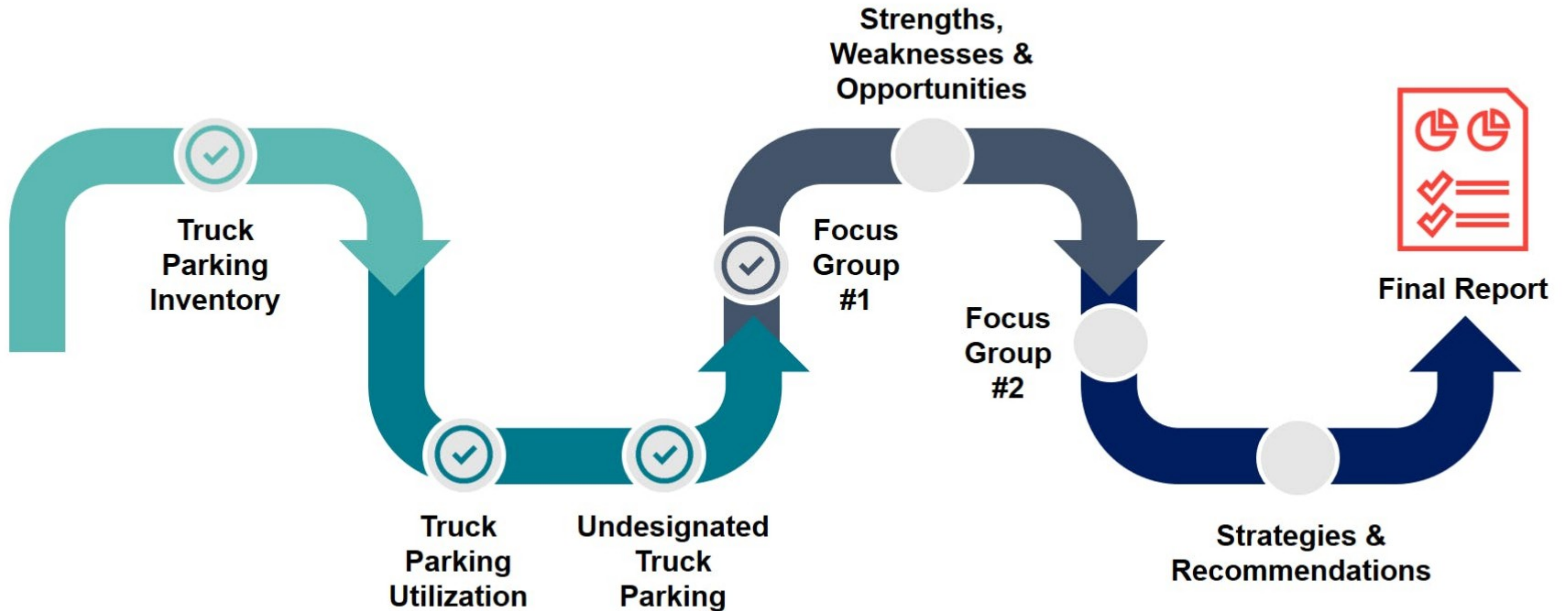
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