



South Carolina

Statewide Truck Parking Assessment Study

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Final Report

October 19, 2022

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Final Report

prepared for

South Carolina Department of Transportation

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List of Acronyms

ADA	Americans with Disabilities Act
AID	Accelerated Innovation Deployment
ATCMTD	Advanced Transportation and Congestion Management Technologies Deployment
ATRI	American Transportation Research Institute
ATTIMD	Advanced Transportation Technologies and Innovative Mobility Deployment Program
BIL	Bipartisan Infrastructure Law
BUILD	Better Utilizing Investments to Leverage Development
CMAQ	Congestion Mitigation and Air Quality
CMV	Commercial Motor Vehicle
COG	Council of Governments
ConOps	Concept of Operations
CVISN	Commercial Vehicle Information Systems and Networks
DERA	Diesel Emissions Reductions Act
DOT	Department of Transportation
ELD	Electronic Logging Device
EPA	U.S. Environmental Protection Agency
EV	Electric Vehicle
FAST	Fixing America's Surface Transportation
FASTLANE	Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies
FHWA	Federal Highway Administration
FMCSA	Federal Motor Carrier Safety Administration
FTA	Federal Transit Administration
FY	Fiscal Year

GIS	Geographic Information System
GPS	Global Positioning System
HM	High Mast
HOS	Hours of Service
HSIP	Highway Safety Improvement Program
INFRA	Infrastructure for Rebuilding America
ITD	Innovative Technology Deployment
ITS	Intelligent Transportation System
MAASTO	Mid-America Association of State Transportation Officials
MAP21	Moving Ahead for Progress in the 21st Century Act
MDTA	Maryland Transportation Authority
MPO	Metropolitan Planning Organization
MUTCD	Manual on Uniform Traffic Control Devices
NEVI	National Electric Vehicle Infrastructure
NHFN	National Highway Freight Network
NHFP	National Highway Freight Program
NHPP	National Highway Performance Program
NHS	National Highway System
O&M	Operations and Maintenance
OS	Oversize
OW	Overweight
P3	Public Private Partnership
PVC	Polyvinyl chloride
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
ROW	Right of Way

SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SCDOT	South Carolina Department of Transportation
SCDPS	South Carolina Department of Public Safety
SCPRT	South Carolina Department of Parks, Recreation & Tourism
SSC	Stakeholder Steering Committee
STBG	Surface Transportation Block Grant Program
STIP	Statewide Transportation Improvement Program
STPAS	Statewide Truck Parking and Assessment Study
TAC	Technical Advisory Committee
TAP	Transportation Alternatives Program
TIGER	Transportation Investment Generating Economic Recovery
TPIMS	Truck Parking Information Management System
UOM	Unit of Measure
USDOT	U.S. Department of Transportation
ZEF	Zero Emissions Fuel



South Carolina

Statewide Truck Parking Assessment Study

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EXECUTIVE SUMMARY

October 2022

Study Objective

The Statewide Truck Parking
and Assessment Study (STPAS)

provides **AN ANALYSIS OF THE ADEQUACY OF TRUCK PARKING ALONG INTERSTATE CORRIDORS BY EVALUATING STATEWIDE TRUCK PARKING SUPPLY, DEMAND, GAPS, AND NEEDS;** and provides a toolbox of strategies for addressing the needs. The study area for the STPAS is defined as the one-mile buffer surrounding all Interstate highways in South Carolina. These include I-20, I-26, I-77, I-85, I-95, I-385, I-520, and I-526.

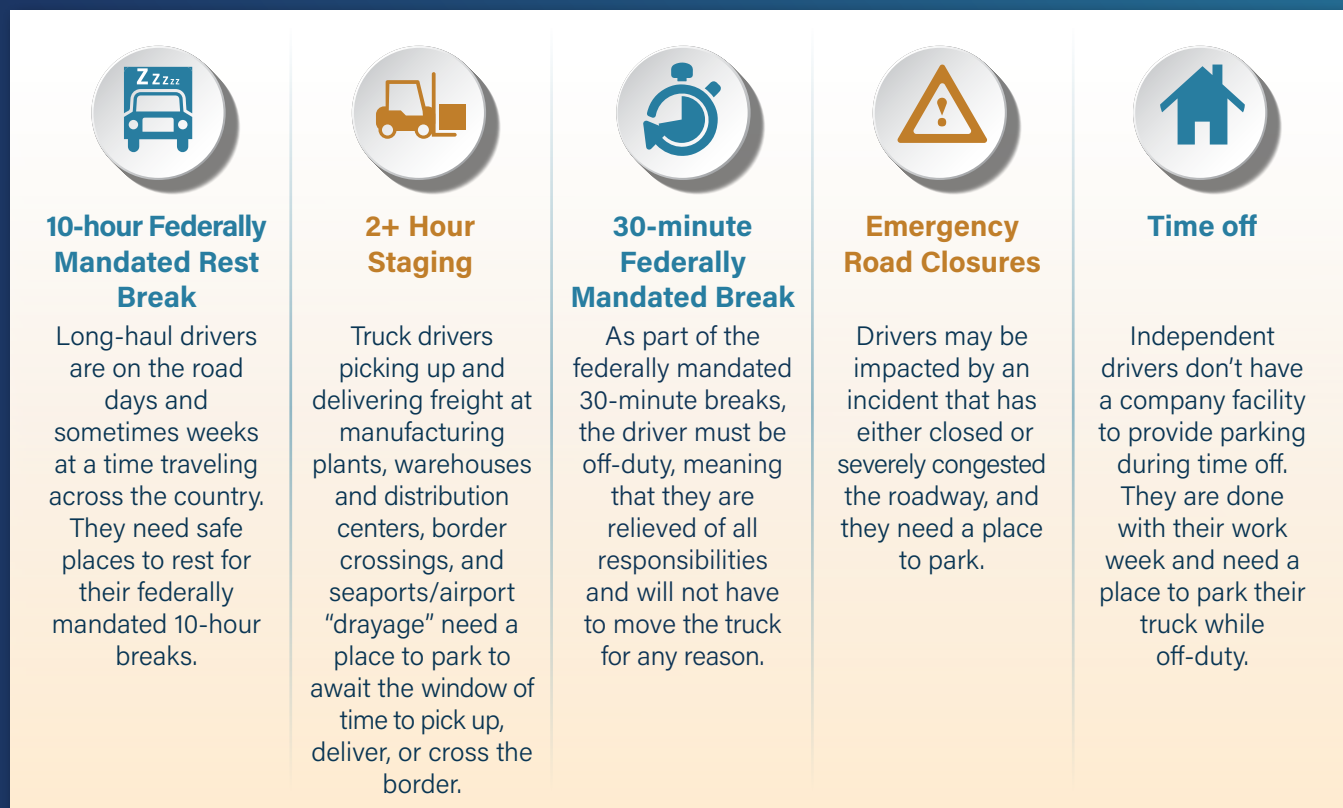
Throughout the study, the STPAS' Steering Committee and Technical Advisory Committee provided guidance to the project team. The Steering and Technical Advisory Committees consisted of experts from both the public and private sectors.



The EFFICIENT MOVEMENT OF GOODS IS CRITICAL TO BOTH THE SOUTH CAROLINA AND THE NATIONAL ECONOMY. The quality of life in South Carolina depends on the daily delivery of millions of goods shipped by a network of highways, railways, waterways, ports, airports, and pipelines. The State's economy also relies upon its multimodal freight transportation system to efficiently connect local, regional, national, and global markets. The movement of freight through, from, within, and into South Carolina will continue to expand as the State's economy and population grow and as trade increases. The South Carolina Department of Transportation (SCDOT) is working towards a more efficient and higher-capacity freight system. An adequate supply of truck parking is critical to achieving that goal. To that end, the SCDOT decided to undertake a statewide assessment of truck parking needs.

TRUCK DRIVERS NEED TO PARK FOR DIFFERENT REASONS AND THERE ARE UNIQUE CHALLENGES FOR VARIOUS TYPES OF PARKING NEEDS (see Figure 1). Drivers must adhere to Federal and state hours of service (HOS) regulations that place specific time limits on driving and rest intervals. Drivers almost always need to park and wait for delivery windows at shippers and receivers, and sometimes are impacted by unexpected road closures or congestion. Finally, truck drivers are essential workers who need to take personal breaks for rest and safety.

Figure 1. Reasons Truck Drivers Park



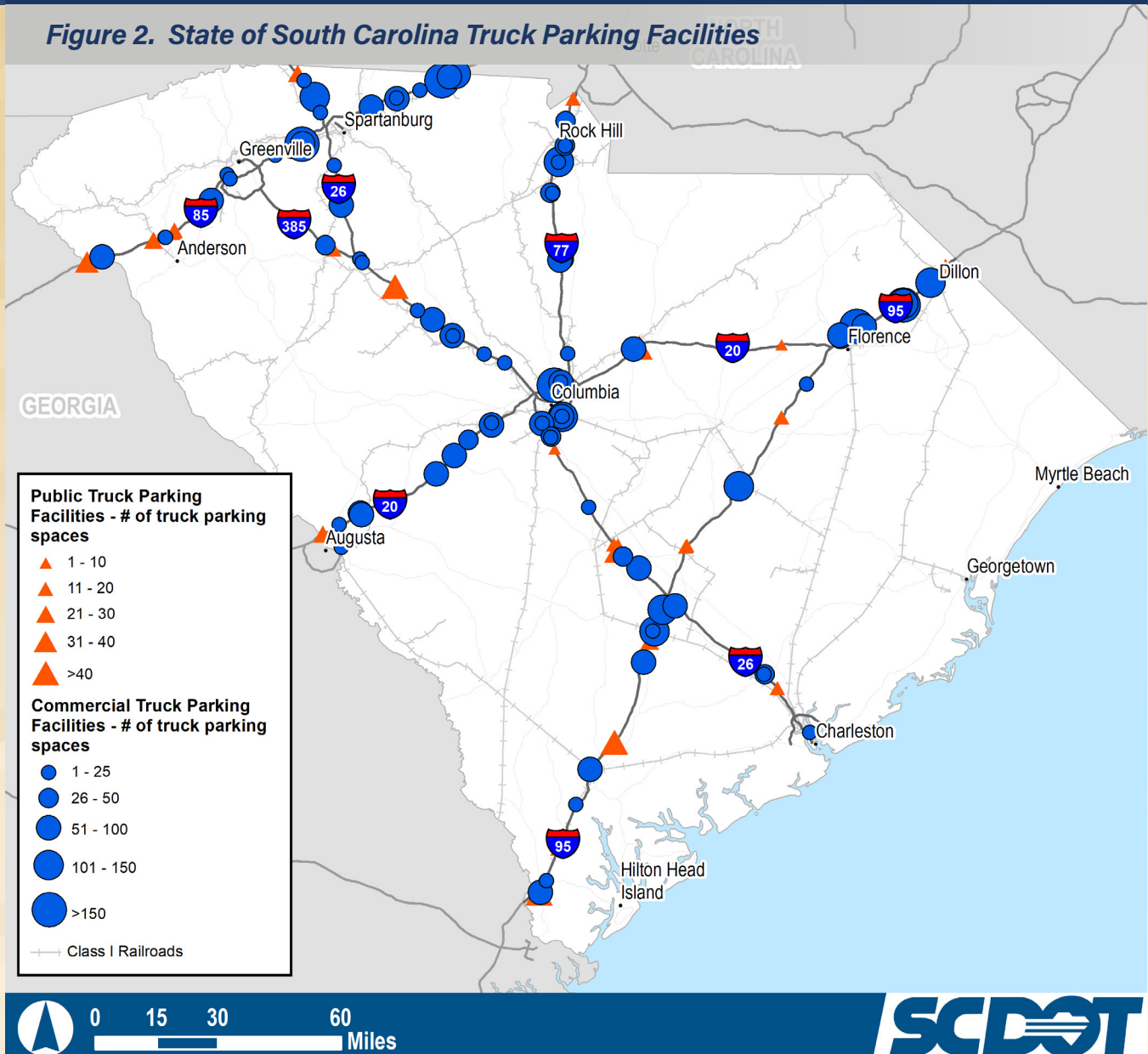
Inventory

In total, there are **OVER 6,400 TRUCK PARKING SPACES** provided at public and commercial facilities in South Carolina.

There are 90 commercial truck stops in South Carolina with 10 or more spaces, with a combined total of nearly 5,592 spaces.

There are 34 public parking facilities (including rest areas, truck parking areas, and welcome centers) which have a total of 824 spaces (about 13 percent of the statewide capacity). The Colleton I-95 Northbound Rest Area (near Yemassee) is the largest public truck parking facility in the State with 57 spaces. In total, there are 124 public and commercial truck parking facilities with approximately 6,443 truck parking spaces, shown in Figure 2.

Figure 2. State of South Carolina Truck Parking Facilities



Source: WSP Global.

Demand and Gap Assessment

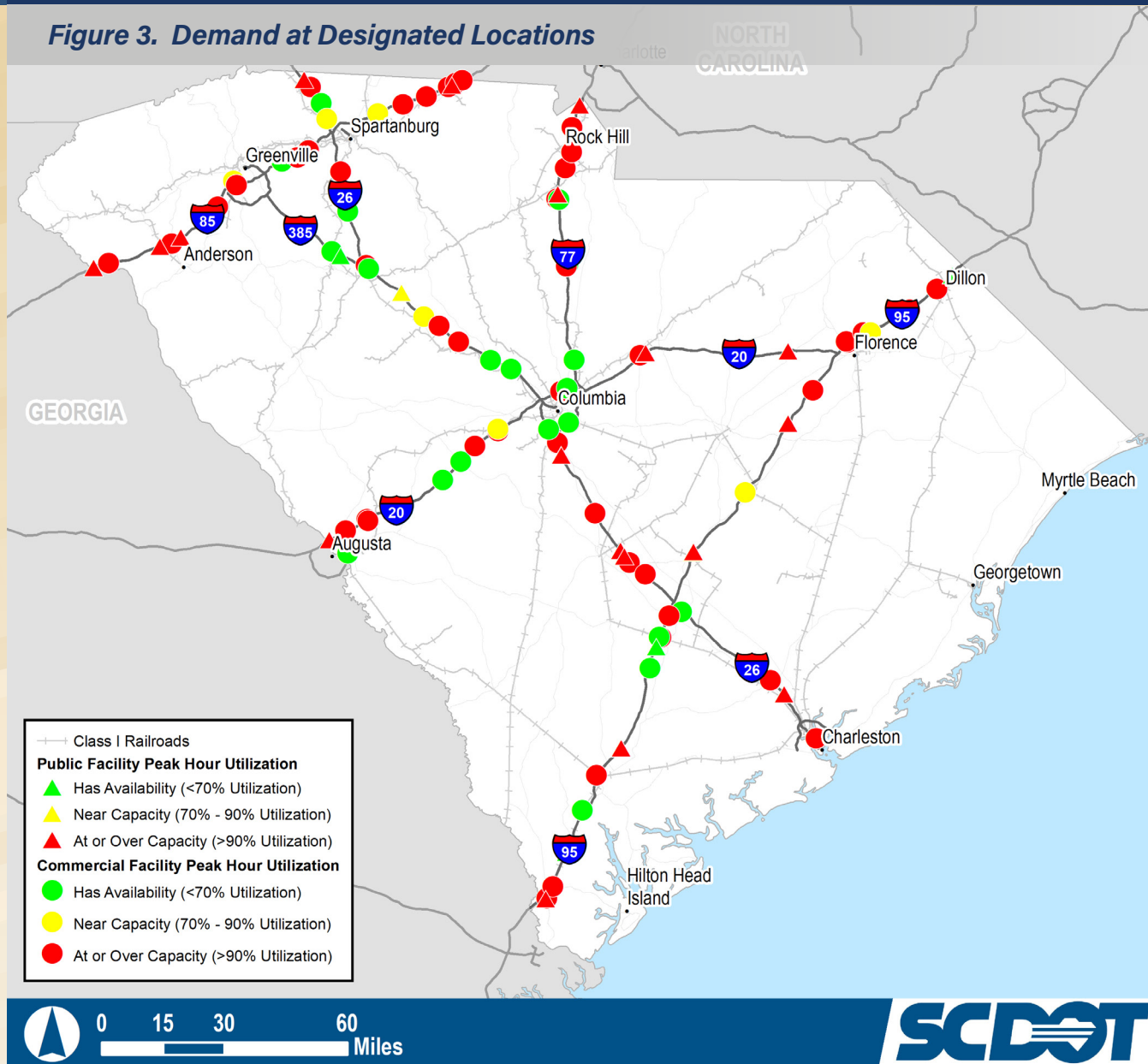
This study uses global positioning system (GPS) information provided by the American Transportation Research Institute (ATRI)

TO ESTIMATE THE DEMAND FOR TRUCK PARKING ALONG SOUTH CAROLINA'S INTERSTATE HIGHWAY NETWORK.

DESIGNATED TRUCK PARKING ALONG INTERSTATE CORRIDORS

Parking demand at designated locations during the statewide peak hour is shown in Figure 3. Of the 124 total sites with demand data, only 26 percent of the locations have availability and the remaining 74 percent are nearing, at, or over capacity. Note that "Has Availability" is defined as anything under 70 percent utilization. Over one quarter of the State's public sites are near, at, or over capacity.

Figure 3. Demand at Designated Locations



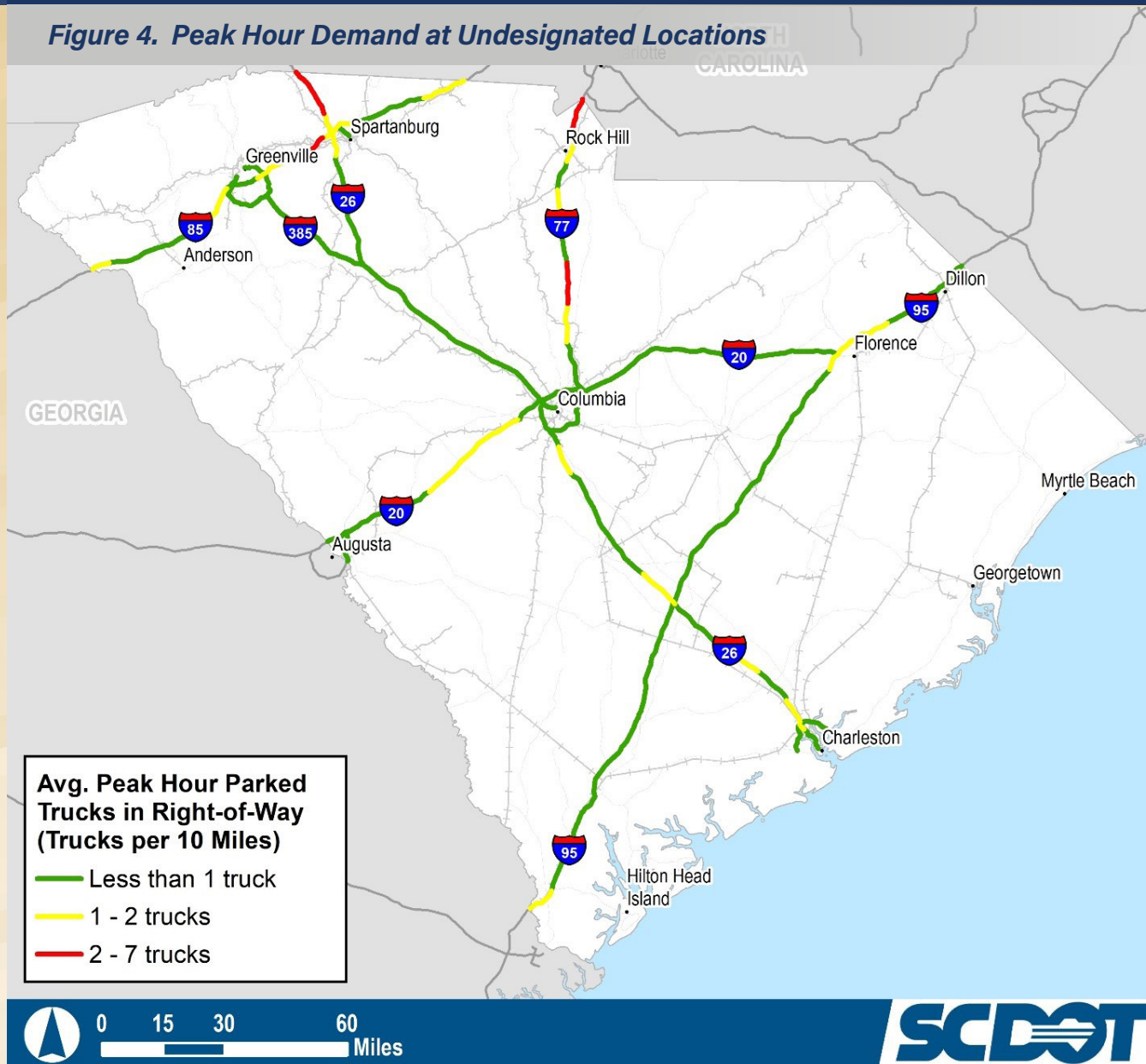
Source: ATRI; Cambridge Systematics, Inc. analysis.

UNDESIGNATED TRUCK PARKING ON INTERSTATES

Undesignated parking is truck parking outside of a dedicated truck parking facility, quantified for the purposes of this study as truck parking within Interstate right-of-way (ROW). Undesignated parking introduces safety and security risks for drivers as well as the traveling public. Trucks parked on shoulders and ramps can reduce visibility, damage pavement, and result in crashes. The highest rates of peak hour (i.e., 1:00 a.m. to 2:00 a.m.) undesignated truck parking along Interstate ROW occurs on portions of I-77, I-85, and I-26 near the North Carolina border as shown in Figure 4.



Figure 4. Peak Hour Demand at Undesignated Locations



Source: ATRI; Cambridge Systematics, Inc. analysis.

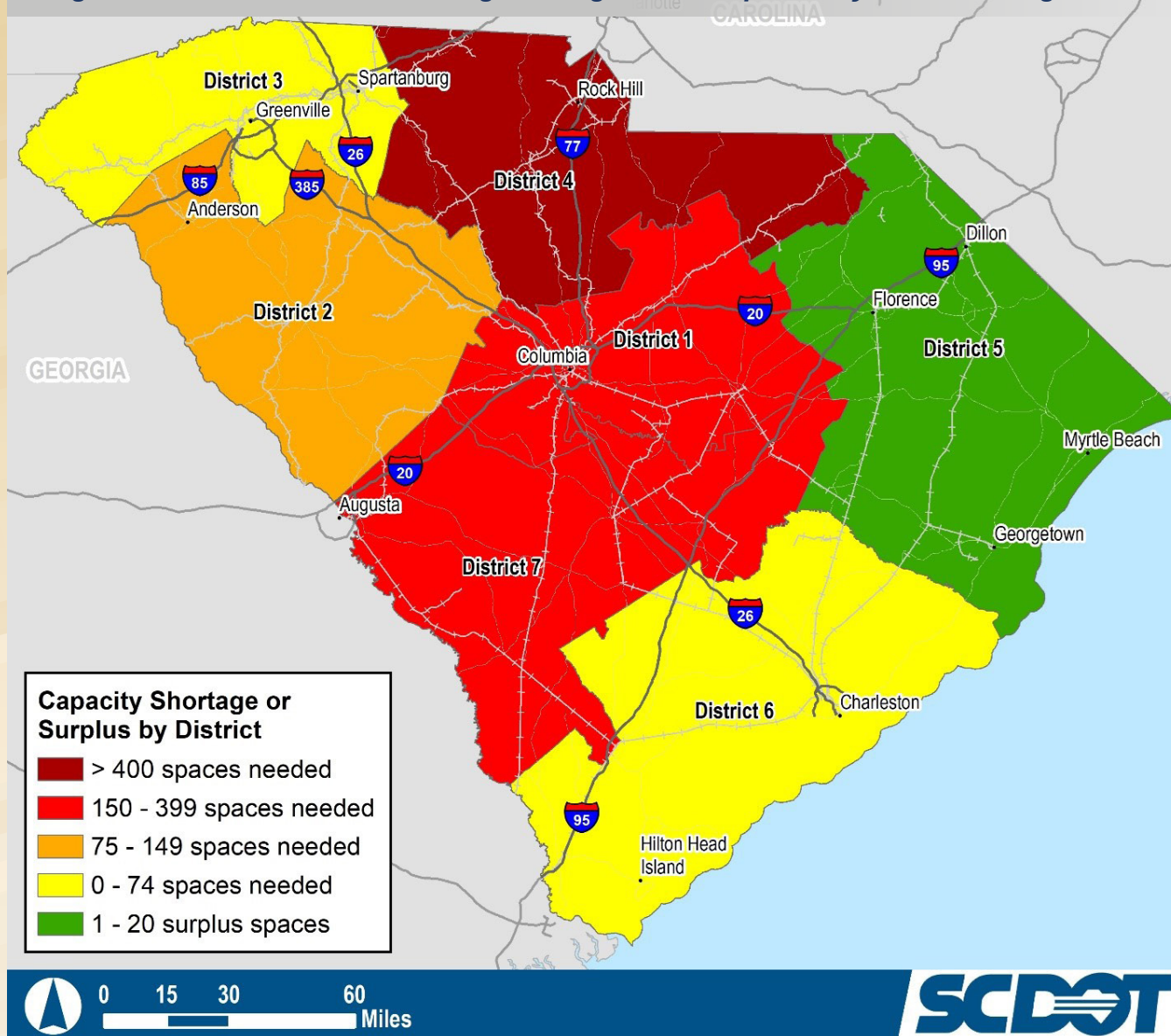
GAP ASSESSMENT

The gap assessment measures the shortage (i.e., the gap) and surplus between truck parking supply and demand across South Carolina. The shortage or surplus of truck parking is the difference between the number of spaces at designated truck parking facilities and the demand for parking (at designated facilities and surrounding undesignated parking on Interstate ROW during the peak hour.

There is a statewide shortage of truck parking needed to meet peak period demand of over 1,000 spaces. The statewide utilization rate based on peak-hour truck parking is approximately 114 percent, indicating that peak hour demand for parking exceeds capacity.

Figure 5 shows truck parking shortages and surpluses by district. District 4 has the highest utilization of designated truck parking locations (e.g., rest areas, commercial truck stops) and undesignated truck parking (e.g., ROW, on-/off-ramps). About 3,600 trucks per day park in District 4 facilities resulting in a peak utilization rate of 135 percent. With a deficit of over 400 spaces, District 4 accounts for about 40 percent of the 1,000+ space statewide deficit.

Figure 5. Peak Hour Truck Parking Shortages and Surpluses by Interstate Segment



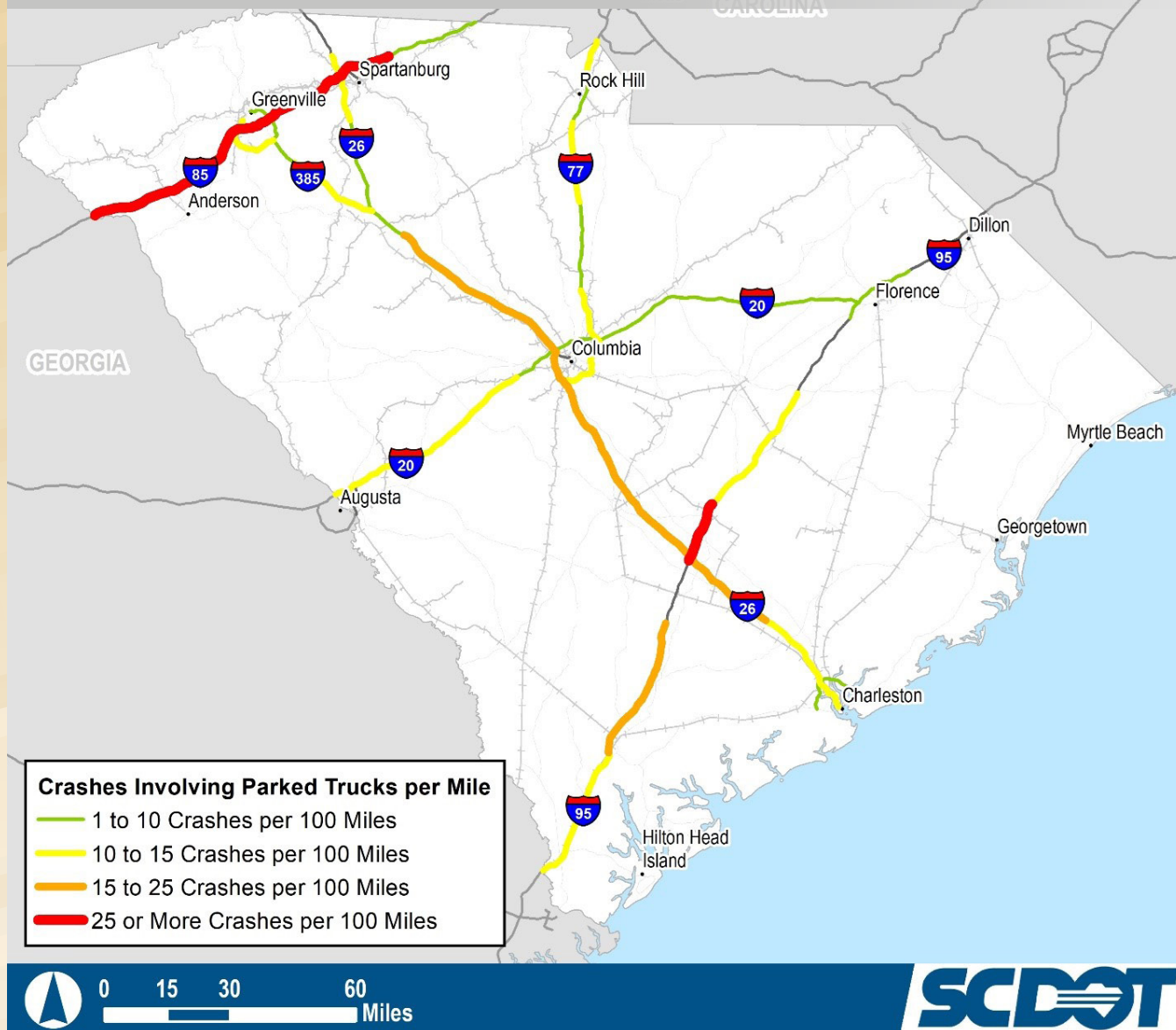
Source: ATRI; Cambridge Systematics, Inc. analysis.

SAFETY CHALLENGES

For the 2015-2019 time period, there were 119 crashes involving parked trucks on South Carolina Interstate highways. In order to compare the safety performance of Interstate highway corridors, it was necessary to determine the crash rates for incidents involving parked trucks. Crash rates were calculated as the total number of incidents involving parked trucks per mile for Interstate highways over the 2015-2019 time period. As shown in Figure 6, the highest crash rates were observed on I-85 between the Georgia state line and the City of Spartanburg. On this corridor, 5-year total crash rates for incidents involving parked trucks ranged from about 33 to 48 crashes per 100 miles.



Figure 6. Five-Year Total Crash Rates for Incidents Involving Parked Trucks, 2015-2019

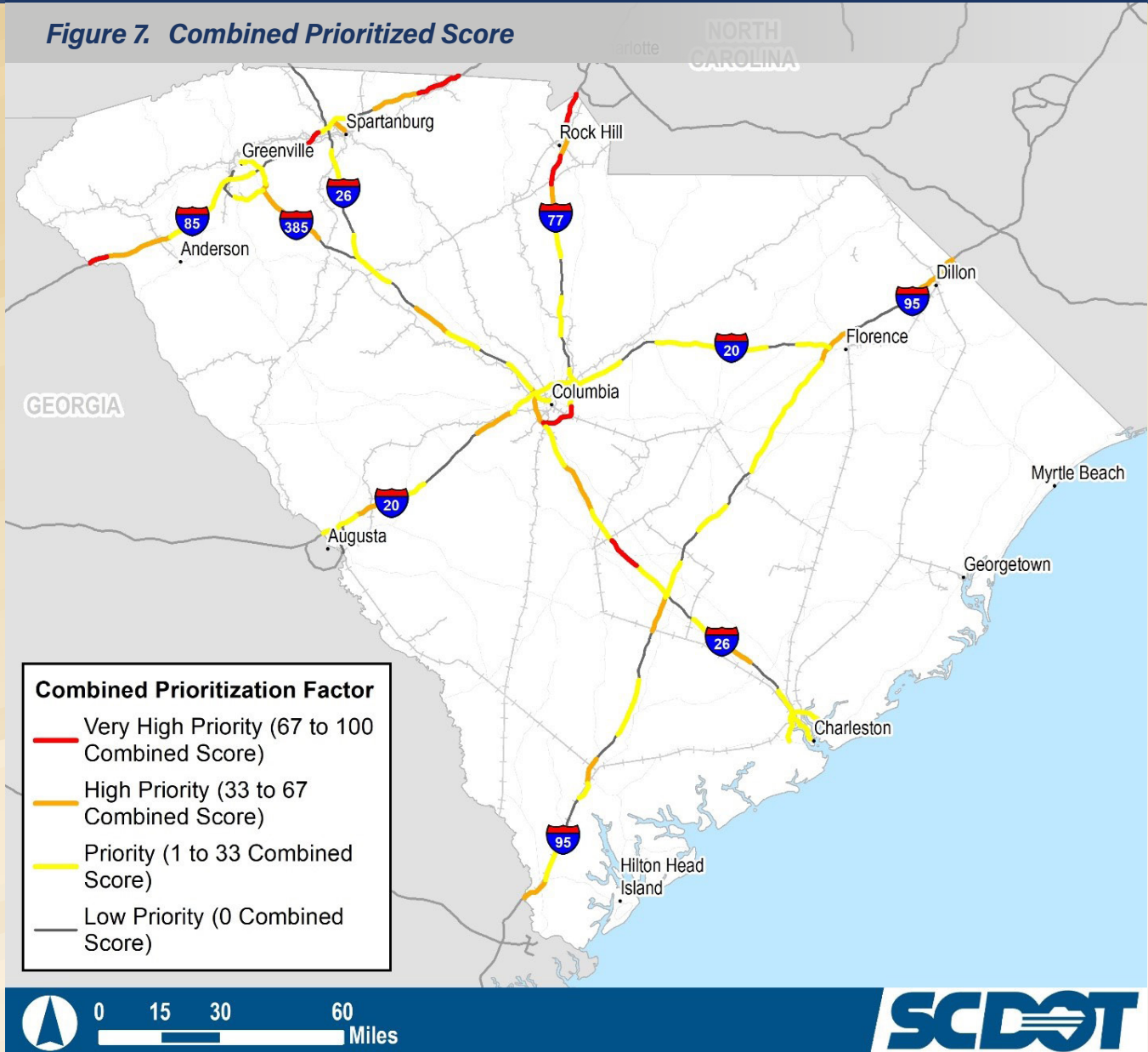


Source: South Carolina Department of Transportation; Cambridge Systematics, Inc. analysis.

Prioritization of Truck Parking Needs

To identify segments with the greatest need for additional truck parking, segments of Interstate corridors with the highest gap in truck parking and the highest rate of crashes involving parked trucks were combined into a prioritization score (described in Chapter 4) as shown in Figure 7. **I-77, I-26, AND I-85 CONTAIN THE HIGHEST NEED CORRIDORS IN THE STATE.** In particular, I-77 from the South Carolina-North Carolina state line to the Catawba River in York County, I-26 east of U.S. 21 in Calhoun County, and I-85 from the South Carolina-Georgia state line to Oconee-Anderson County line are priority locations for addressing truck parking needs.

Figure 7. Combined Prioritized Score



Source: Cambridge Systematics, Inc.

Toolbox of Strategies

OVER ONE-FOURTH OF THE MORE THAN 1,000 TRUCK SPACE DEFICIT MAY BE MET BY CONVERTING CLOSED REST AREAS AND WEIGH STATIONS TO DEDICATED TRUCK PARKING FACILITIES.

These closed facilities, already owned by SCDOT and South Carolina Department of Public Safety and located in high need areas, could add approximately 284 truck parking spaces to the State's supply at a cost of about \$3,500,000 per 50-space site. Along with the State's planned investment in rest area rehabilitations and expansions and the potential to add truck parking spaces to Department of Parks and Recreation operated welcome centers, South Carolina can substantially close the gap between demand and supply. Additionally, South Carolina has several options for further enhancing access to truck parking and improving the utilization of public and commercial facilities.

Despite the various challenges that create barriers to implementing truck parking solutions, there are several strategies available to address truck parking needs. *The Statewide Truck Parking Assessment Study* proposed strategies are grouped into three broad categories: increasing capacity (adding spaces), better utilizing existing infrastructure, and supportive policies and programs. Table 1 lists the strategies under each category and indicates the truck parking needs it satisfies:



STRATEGIES TO INCREASE TRUCK PARKING CAPACITY—These strategies work to build new or expand existing truck parking facilities. As such, they typically are more difficult to implement given the required resources (e.g., planning and environmental reviews, engineering design, construction) and time. However, in scenarios where there is simply insufficient capacity to meet demand, strategies to increase truck parking capacity are necessary.



STRATEGIES TO BETTER UTILIZE EXISTING INFRASTRUCTURE FOR TRUCK PARKING—As opposed to building new capacity, these are operational strategies to improve the utilization of existing capacity and take advantage of non-traditional capacity. Examples include using technology to provide information to drivers on where parking is available and leveraging parking capacity at non-truck facilities in appropriate situations. The advantage of these types of strategies is that they are less costly and have a higher ease of implementation than capacity-based strategies.



POLICY AND PROGRAM STRATEGIES—These include a broad range of strategies which address the hurdles of regulatory, communication, and knowledge gaps to enhancing capacity. They vary from reassessing decision-making processes at SCDOT as they pertain to truck parking to modifying data collection practices. As the private sector is the largest provider of truck parking capacity in South Carolina, these include strategies to leverage private sector resources.

Table 1. State Strategies to Address Truck Parking Needs

	10-Hour Rest 	2+ Hour Staging 	30-Minute Break 	Road Closures 	Time off 
STRATEGIES TO INCREASE TRUCK PARKING CAPACITY					
Expand and upgrade truck parking at existing SCDOT rest areas and truck parking facilities					
Expand and upgrade truck parking at existing Department of Parks, Recreation, and Tourism Welcome Centers					
Build dedicated, SCDOT maintained, truck parking facilities within highway ROW					
Expand existing commercial vehicle weigh stations to accommodate overnight truck parking					
STRATEGIES TO BETTER UTILIZE EXISTING INFRASTRUCTURE FOR TRUCK PARKING					
Develop a Truck Parking Information Management System (TPIMS)					
Install Static Signs Indicating Upcoming Locations for Truck Parking (pre-TPIMS)					
POLICY AND PROGRAM STRATEGIES IN SUPPORT OF TRUCK PARKING					
Support private sector deployment of zero emissions fuels at truck parking facilities					
Develop guidelines for integrating truck parking into the SCDOT project development process					
Consider truck parking needs prior to the purchase or sale of right of way					
Consider truck parking needs and the potential for conversion to truck parking prior to the closure of a SCDOT facility					
Reassess public facility designs to accommodate oversize or overweight vehicles					
Modify the design guidelines for new commercial vehicle inspection facilities to include space for overnight truck parking where feasible					
Collect truck and car utilization data					
Encourage, educate, and coordinate with local and regional agencies to advance truck parking in their jurisdictions					

Source: Cambridge Systematics, Inc.

1.0 Overview

The efficient movement of goods is critical to both the South Carolina and the national economy. The quality of life in South Carolina depends on the daily delivery of millions of goods shipped by a network of highways, railways, waterways, ports, airports, and pipelines. The state’s economy also relies upon its multimodal freight transportation system to efficiently connect local, regional, national, and global markets. The movement of freight through, from, within and into South Carolina will continue to expand as the state’s economy and population grow and as trade increases. The South Carolina Department of Transportation (SCDOT) is working towards a more efficient and higher-capacity freight system. An adequate supply of truck parking is critical to achieving that goal. To that end, the SCDOT decided to undertake a statewide assessment of truck parking needs.

1.1 Why Truck Drivers Need to Park

Truck drivers need to park for different reasons and there are unique challenges for various types of parking needs (see **Figure 1.1**). Drivers must adhere to Federal and State hours of service (HOS) regulations that place specific time limits on driving and rest intervals. Drivers almost always need to park and wait for delivery windows at shippers and receivers, and sometimes are impacted by unexpected road closures or congestion. Finally, truck drivers are essential workers, who need to take personal breaks for rest and safety.

Figure 1.1 Reasons Truck Drivers Park



Commercial Motor Vehicle (CMV) labor regulations are under the purview of the U.S. Federal Motor Carrier Safety Administration (FMCSA). FMCSA propagates rules to increase safety on the road. For CMVs, the mandatory HOS regulations have the greatest impact on truck parking. The most recent HOS regulations, updated in September 2020, are outlined below in **Table 1.1**.

Table 1.1 Summary of Hours-of-Service Rules for Property-Carrying Drivers

Regulation	Description
11-Hour Driving Limit	May drive a maximum of 11 hours after 10 consecutive hours off duty.
14-Hour Limit	May not drive beyond the 14 th consecutive hour after coming on duty, following 10 consecutive hours off duty. Off-duty time does not extend the 14-hour period.
30-Minute Driving Break	Drivers must take a 30-minute break when they have driven for a period of 8 cumulative hours without at least a 30-minute interruption. The break may be satisfied by any non-driving- period of 30 consecutive minutes (i.e., on-duty not driving, off-duty, sleeper berth, or any combination of these taken consecutively).
60/70 Hour Limit	May not drive after 60/70 hours on duty in 7/8 consecutive days. A driver may restart a 7/8 consecutive day period after taking 34 or more consecutive hours off duty.
Sleeper Berth Provision	Drivers may split their required 10-hour off-duty period, as long as one off-duty period (whether in or out of the sleeper berth) is at least 2 hours long and the other involves at least 7 consecutive hours spent in the sleeper berth. All sleeper berth pairings must add up to at least 10 hours. When used together, neither time period counts against the maximum 14-hour driving window.
Adverse Driving Conditions	Drivers are allowed to extend the 11-hour maximum driving limit and 14-hour driving window by up to 2 hours when adverse driving conditions are encountered.
Short-Haul Exception	A driver is exempt from the requirements of §395.8 and §395.11 if: the driver operates within a 150 air-mile radius of the normal work reporting location, and the driver does not exceed a maximum duty period of 14 hours. Drivers using the short-haul exception in §395.1(e)(1) must report and return to the normal work reporting location within 14 consecutive hours, and stay within a 150 air-mile radius of the work reporting location.

Source: <https://www.fmcsa.dot.gov/regulations/hours-service/summary-hours-service-regulations>, September 29, 2020.

HOS regulations are strongly enforced by state agencies, and penalties can be high. To avoid these steep fines, drivers are under pressure to find parking as quickly and efficiently as possible to avoid violating HOS regulations while trying to make pick-ups/deliveries as efficiently as possible.

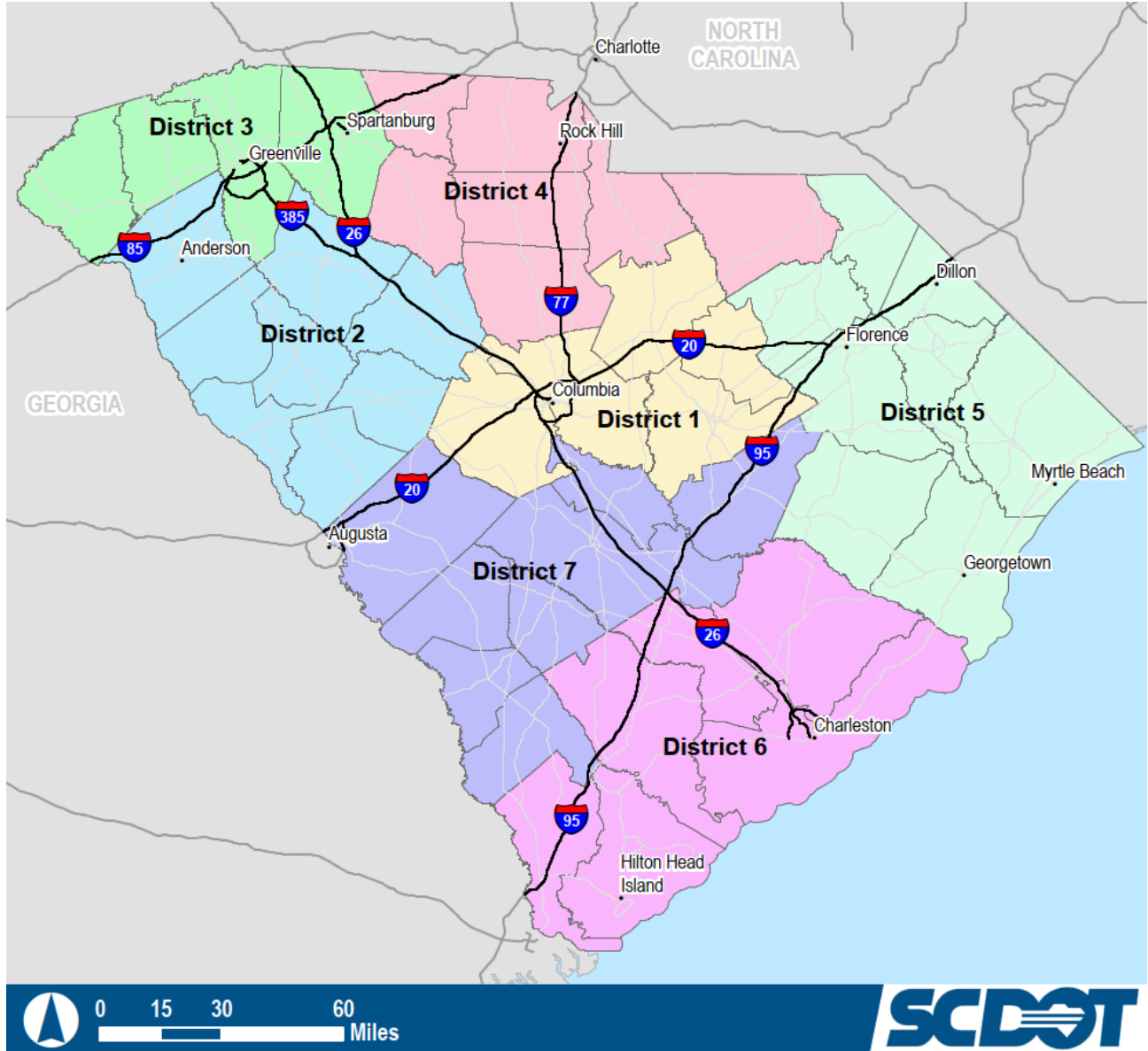
In order to increase compliance with HOS regulations, most CMV drivers are required to track their HOS with an electronic logging device (ELD). An ELD monitors a vehicle's engine to capture data on whether the engine is running, whether the vehicle is moving, miles driven, and duration of engine operation (engine hours). This approach to HOS monitoring replaced a paper version, which provided drivers with some leeway in finding parking within the HOS limits. With the full implementation of the ELD mandate in December 2019, time and location are now tracked much more precisely. This allows for closer enforcement of existing HOS regulations, which makes finding parking within allowable time limits even more critical.

1.2 Study Objectives and Process

The Statewide Truck Parking and Assessment Study (STPAS) has three objectives. The first objective was to complete an analysis of the adequacy of truck parking along Interstate corridors by evaluating statewide truck parking supply, demand, gaps and needs. This first objective has a specific emphasis on driver safety and freight travel time reliability. The second objective of the study was to provide truck parking recommendations to serve freight transportation and truck parking needs in South Carolina. The third objective of this study was to provide a better understanding of the impact of U.S. Department of Transportation (USDOT) FMCSA-mandated HOS regulations as it relates to statewide truck parking needs and trends in South Carolina.

The study area for the STPAS is defined as the one-mile buffer surrounding all Interstate highways in South Carolina. These include I-20, I-26, I-77, I-85, I-95, I-385, I-526, and I-520. These highways, as well as SCDOT districts, are shown in **Figure 1.2**.

Figure 1.2 South Carolina Department of Transportation Districts



Source: South Carolina Department of Transportation.

The STPAS is organized into the following sections according to key steps in the study:

- **Inventory.** The first step in conducting the STPAS was to establish a clear picture of the current truck parking inventory in the state. The inventory accounts for all public facilities and commercial truck parking facilities with 10 or more spaces in the study area. Knowing the total supply is necessary to determine where capacity is insufficient to meet demand.

- **Demand and Gap Assessment.** Once the STPAS determined total supply, it then estimated the demand for truck parking within the study area. Demand was estimated using traffic count data from SCDOT and truck global positioning system (GPS) data from the American Transportation Research Institute (ATRI). After determining demand, the study then performed a gap assessment identifying areas where the demand for truck parking exceeds the supply.
- **Prioritization of Truck Parking Needs.** After determining demand and identifying gaps, the STPAS then prioritized locations within the study area for addressing truck parking needs. Prioritization was primarily based on the demand needs of the location, as well as safety concerns.
- **Strategies and Implementation Considerations.** The next step in the study process was to develop a plan of action to address South Carolina’s truck parking needs. This step developed a set of strategies and action items to undertake over the short to long terms. Best practices from around the Nation informed the development of strategies and action items.
- **Funding Options to Address Truck Parking Needs.** Simultaneous to the development of the implementation plan, the STPAS identified funding mechanisms to enable that plan. Funding options were identified at the federal and state levels and include discretionary grant opportunities for which SCDOT projects may be competitive.

1.3 Stakeholder Input

Throughout all these steps, the STPAS’ Steering Committee and Technical Advisory Committee (TAC) provided guidance to the project team. The Steering Committee and TAC consisted of experts from both the public and private sectors. Members of those committees are shown in **Table 1.2**.

Table 1.2 Statewide Truck Parking and Assessment Study Committees

Name	Organization	Committee
Lee Catoe	South Carolina Department of Public Safety	Steering Committee
Doug Frate	SCDOT	Steering Committee
David Gray	SCDOT	Steering Committee
Devon Harris	South Carolina Department of Parks and Recreation	Steering Committee
Diane Lackey	SCDOT	Steering Committee
Yolanda Morris	Federal Highway Administration	Steering Committee
Jennifer Rhoades	SCDOT	Steering Committee
Roger Sears	SCDOT	Steering Committee
Rick Todd	South Carolina Trucking Association	Steering Committee
Stephen Allen	Catawba Council of Governments	TAC
Allen Ard	Ard Trucking	TAC
James Bailey	SBL Truck Driving Academy/Women in Trucking	TAC
Jeff Banton	Atlantic Intermodal Services	TAC
Philip Bethea	SCDOT	TAC

Name	Organization	Committee
Joel Britt	South Carolina Ports Authority	TAC
Chris Broussard	Southeastern Freight Lines/Women in Trucking	TAC
Mike Carey	Carey Moving & Storage	TAC
Eric Carrier	Lower Savannah Council of Governments	TAC
Sarah Cox	Berkeley-Charleston-Dorchester Council of Governments	TAC
Jim Drennan	Superior Transportation	TAC
Vic Edwards	SCDOT	TAC
Lance Estep	Appalachian Council of Governments	TAC
Kevin Gaugush	Clean Harbors/ Women in Trucking	TAC
Rick Green	Upper Savannah Council of Governments	TAC
Daniel Halsted	SCDOT	TAC
Veronica Harden	Ard Trucking	TAC
David Harrell	Big M Transportation/Women in Trucking	TAC
Mark Hoeweler	Waccamaw Regional Council of Governments	TAC
John Kane	Travel Centers of America	TAC
Alan Kozusko	SCDOT	TAC
Kevin McLaughlin	SCDOT	TAC
David Oswalt	Oswalt & Sons	TAC
Tim Parker	SCDOT	TAC
Lindsay Privette	Pee Dee Regional Council of Governments	TAC
Mark Randolph	J. Grady Randolph	TAC
Stephanie Rossi	Lowcountry Council of Governments	TAC
Dunae Shaw	Pee Dee Regional Council of Governments	TAC
Reginald Simmons	Central Midlands Council of Governments	TAC
Joey Skipper	SCDOT	TAC
Tom Weakley	Owner-Operator Independent Drivers Association	TAC
Jake Whitmire	Santee-Lynches Council of Governments	TAC
Jim Widowfield	SEFA Group	TAC
Brandon Wilson	SCDOT	TAC

Source: South Carolina Department of Transportation.

2.0 Inventory

This section provides an inventory of all truck parking facilities within one mile of Interstate routes across the state. Its purpose is to create a comprehensive database of the location and capacity of truck parking facilities in South Carolina. The development of a truck parking inventory is critical to meeting the first objective of the STPAS as it determines the state's truck parking supply.

2.1 Methodology

The inventory of truck parking facilities covers both public and commercial facilities. Public facilities include rest areas and welcome centers, which are owned by SCDOT and are located adjacent to state highways to provide temporary parking for rest and access to restrooms, vending machines, and other basic services. They do not provide food, fuel, or other commercial amenities. Data on the location and capacity of public truck parking facilities was gathered from previous SCDOT truck parking initiatives, the STPAS Steering Committee, TAC, third-party websites, and information collected from examining current aerial maps. All public truck parking facilities, regardless of the number of parking spaces, were included in the analysis. Importantly, in cases where public facilities were co-located, but separated by a median barrier (e.g., an eastbound facility and a separate westbound facility directly across the highway), each facility was counted separately as part of the analysis.

Commercial truck parking facilities are private businesses that provide fuel, and often offer food, rest, and other services for truck drivers. It is important to note that for this study, only commercial truck parking facilities that provide 10 or more parking spaces were included in the analysis. Data on the location and capacity of commercial truck parking facilities was gathered from previous SCDOT truck parking initiatives; the STPAS Steering Committee; the STPAS TAC; third-party websites (e.g., TruckStopGuide.com, AllStays.com, truckstopsandservices.com); company websites (e.g., Pilot Flying J, Loves Travel Stops); and information collected from examining current aerial maps.

Information on the capacity (i.e., number of spaces) of truck parking facilities reported from the various data sources was not always consistent, especially for commercial facilities. As a result, the following methodology was used to develop the most accurate capacity estimate given the limitations of this study:

1. If a commercial facility's website indicated that there is a certain number of designated truck parking spaces, and that matches with the number reported by third-party sites (or is within 10 percent of reported numbers), then it was assumed that the reported number is accurate.
2. If a commercial facility's website did not report any information on truck parking capacity, but third-party sites reported a consistent (within 10 percent of each) number of truck parking spaces, then it was assumed that the third-party sites were accurate and the reported number of spaces was included in the inventory.
3. For commercial and public facilities where all consulted sources provide inconsistent data, striped truck parking spaces were counted using aerial maps.
4. For parking facilities that have open parking areas instead of (or in addition to) striped spaces, the number of parking spaces was estimated based on aerial imagery.

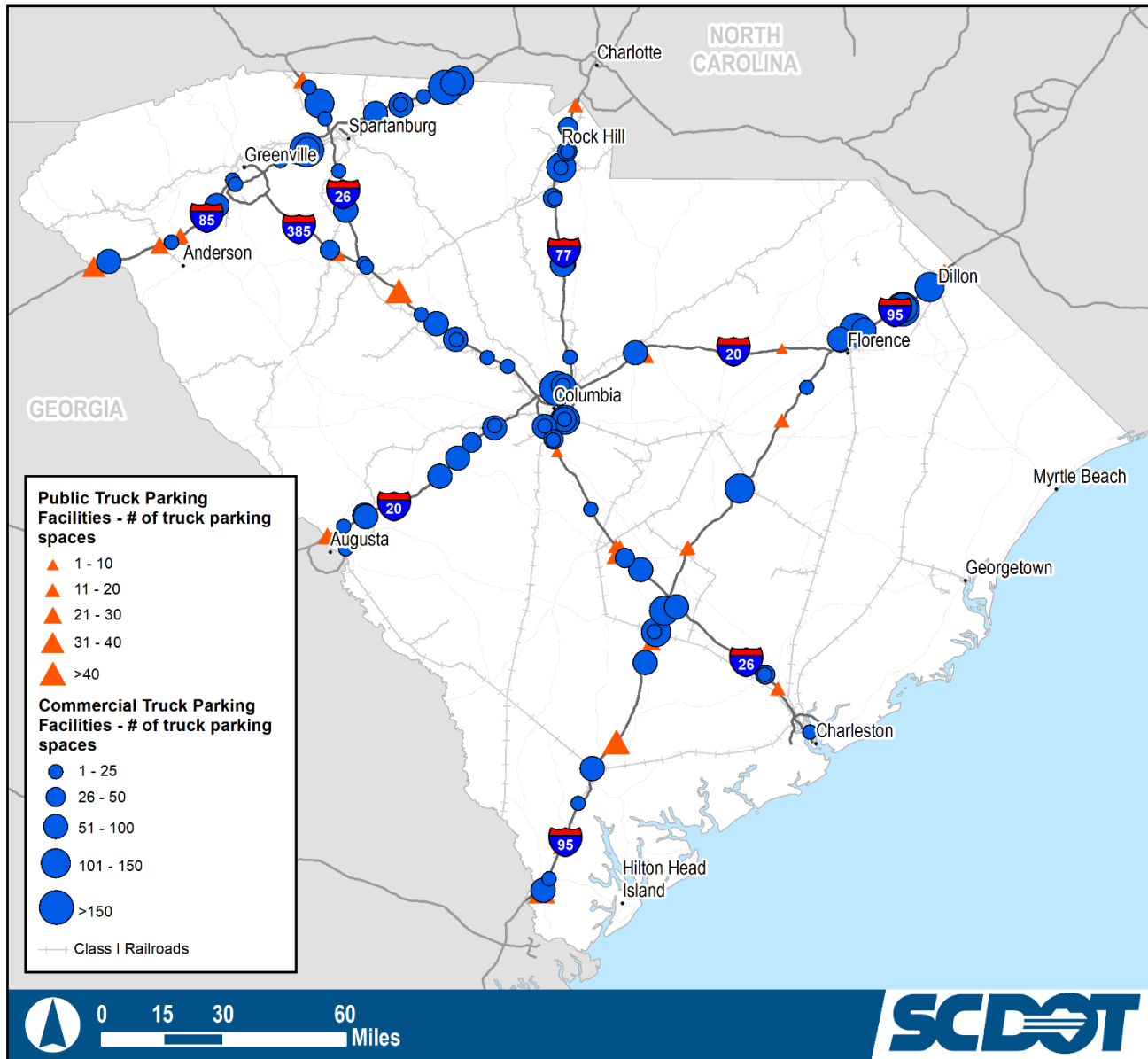
5. Closed rest area facilities are not included in the inventory. However, those facilities are listed in Appendix A as there is a possibility that they may be reopened.

Table A.1 in Appendix A shows the truck parking capacity for each facility included in the inventory, along with the data sources used to develop that estimate. **Figure A.1** to **Figure A.7** illustrate public and commercial truck parking facilities for each SCDOT district.

2.2 Truck Parking Inventory

Figure 2.1 shows the results of the truck parking inventory. It depicts both public and commercial facilities along with their estimated capacities. In total, there are 124 truck parking facilities, which include both public and commercial lots. These facilities provide approximately 6,416 truck parking spaces. The remaining figures and tables in this section of the report provide a summary of where the facilities are located and the total number of truck parking spaces available.

Figure 2.1 State of South Carolina Truck Parking Facilities



Source: WSP Global.

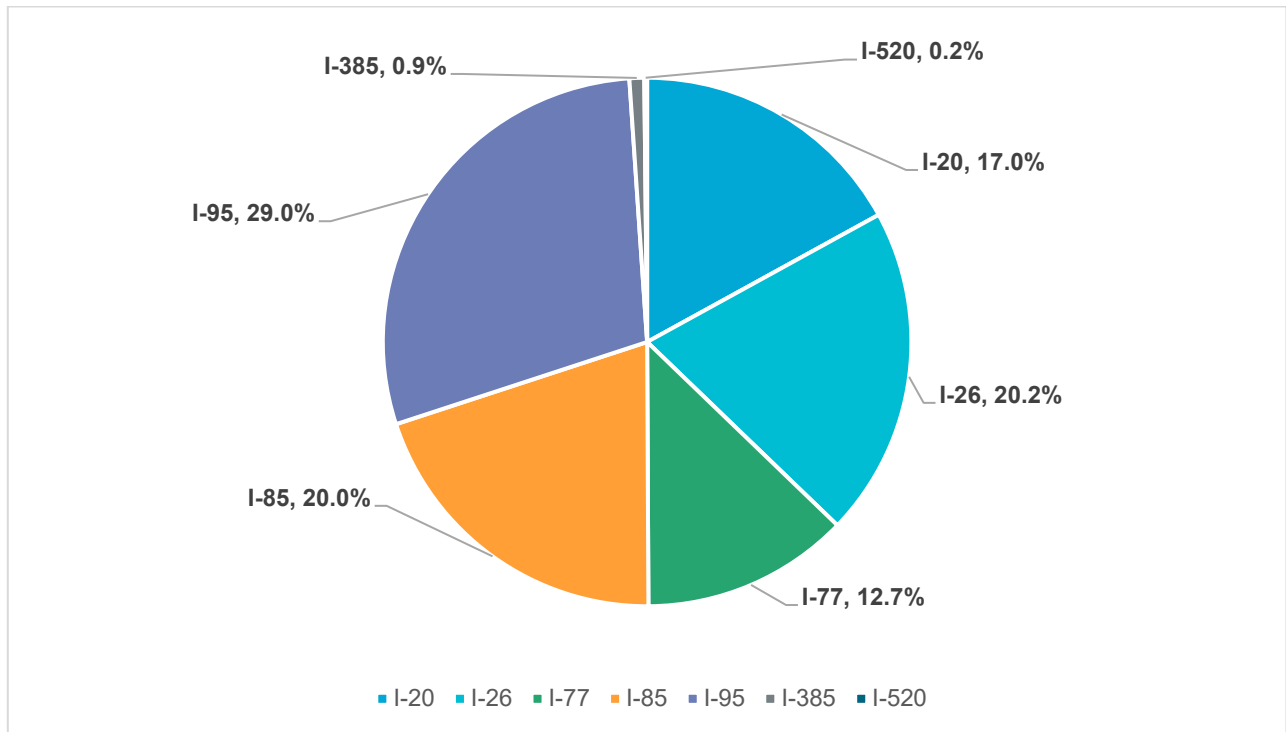
Table 2.1 shows the total number of commercial and public parking spaces by Interstate corridor. In total, there are 6,416 truck parking spaces along Interstate corridors in the state. The vast majority of these spaces, over 87 percent or 5,592 spaces, is provided by commercial facilities. About 13 percent of truck parking spaces along Interstate corridors in South Carolina, 824 in total, are provided by public facilities. As shown in **Table 2.1** and **Figure 2.2**, the I-95 corridor contains the largest share of both public and private parking spaces. Nearly 28 percent of commercial spaces and nearly 38 percent of public spaces are located along I-95. It is followed by I-26 and I-85 as having the most truck parking capacity. Over 19 percent of commercial spaces and approximately 26 percent of public spaces are located on I-26. I-85 contains over 21 percent of commercial truck parking spaces and about 13 percent of public spaces. Together, these three corridors comprise over two-thirds of all truck parking spaces (commercial and public) in the study area.

Table 2.1 Total Truck Parking Facilities by Interstate Corridor

Interstate Corridor	Number of Commercial Parking Spaces	Percent of Total Commercial Parking Spaces Statewide	Number of Public Parking Spaces	Percent of Total Public Parking Spaces Statewide	Total Parking	Percent of Total Parking Statewide
I-95	1,548	27.7%	310	37.6%	1,858	29.0%
I-26	1,081	19.3%	215	26.1%	1,296	20.2%
I-85	1,178	21.1%	108	13.1%	1,286	20.0%
I-20	963	17.2%	128	15.5%	1,091	17.0%
I-77	771	13.8%	45	5.5%	816	12.7%
I-385	40	0.7%	18	2.2%	58	0.9%
I-520	11	0.2%	0	0.0%	11	0.2%
Total	5,592	100.0%	824	100.0%	6,416	100.0%

Source: WSP Global.

Figure 2.2 Percentage of Truck Parking Spaces by Corridor



Source: WSP Global.

As shown in **Table 2.2**, in total there are 124 truck parking facilities—34 public and 90 commercial. **Table 2.2** also provides more detail on commercial truck parking facilities, separating them into two categories: full-service truck stops and other commercial facilities. Full-service truck stops are often preferred by motor carriers

as they typically provide more amenities, such as laundry, showers and Internet. Full-service truck stops comprise nearly 64 percent of all commercial facilities and provide nearly 82 percent of commercial spaces.

Table 2.2 Total Number of Truck Parking Facilities and Parking Spaces by Type

Truck Parking Facility Type	Number of Facilities	Number of Spaces
Public	34	824
Commercial	90	5,592
Full-service Truck Stop	58	4,613
Other Commercial Facilities	32	979
Total of all Commercial and Public Facilities	124	6,416
Located in Rural Area	91 (31 public facilities; 60 commercial facilities)	4,671 (769 in public facilities; 3,902 in commercial facilities)
Located in Urban Area	33 (3 public facilities; 30 commercial facilities)	1,745 (55 in public facilities; 1,690 in commercial facilities)

Source: WSP Global.

In addition, **Table 2.2** shows the allocation of facilities and spaces between urban and rural areas. The majority of truck parking spaces and facilities are located in rural areas of the state. Of the 6,416 total truck parking spaces, about 73 percent (4,671 spaces) are in rural areas. Of the 124 total truck parking facilities, nearly 73 percent (91 facilities) are in rural locations. This is important as the 2019 Jason’s Law Survey preliminary results indicated that urban areas typically lack truck parking despite being areas of high demand.¹ The prevalence of truck parking capacity in rural areas is likely driven by the availability of land and lower costs relative to urban areas.

Table 2.3 shows the number of parking facilities and truck parking spaces by SCDOT district. The state is divided into 7 transportation districts, which are each comprised of multiple counties (see **Figure 1.2**). The results in **Table 2.3** indicate that districts generally have a comparable number of public facilities. Districts 1 and 4 have the most commercial facilities and parking spaces. Together, they account for about 39 percent of all commercial facilities and spaces. Four of the state’s seven Interstate highways traverse District 1, which likely contributes to the prevalence of commercial facilities. District 4 contains the I-77 and I-85 corridors, which connect to large metropolitan regions in Charlotte and Atlanta. This is a driving factor in the relatively large share of commercial spaces observed in that district.

¹ Federal Highway Administration (FHWA) Office of Freight Management and Operations, “Jason’s Law Commercial Motor Vehicle Parking Survey and Comparative Assessment,” December 1, 2020, presentation to the National Coalition on Truck Parking, https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/2020/mtg/nctptpwnmtg12012020.pdf.

Table 2.3 Total Number of Truck Parking Facilities and Spaces by SCDOT District

District	Commercial Facilities	Percent of Total	Commercial Spaces	Percent of Total	Public Facilities	Percent of Total	Public Spaces	Percent of Total
1	20	22.2%	1,133	20.3%	4	11.8%	98	11.9%
2	12	13.3%	522	9.3%	5	14.7%	163	19.8%
3	12	13.3%	686	12.3%	2	5.9%	59	7.2%
4	15	16.7%	1,046	18.7%	4	11.8%	67	8.1%
5	8	8.9%	894	16.0%	3	8.8%	47	5.7%
6	13	14.4%	662	11.8%	7	20.6%	230	27.9%
7	10	11.1%	649	11.6%	9	26.5%	160	19.4%
Total	90	100.0%	5,592	100.0%	34	100.0%	824	100.0%

Source: WSP Global.

3.0 Demand and Gap Assessment

This section fulfills the first objective of the STPAS: to conduct a statewide truck parking evaluation that will assess the current supply and demand for truck parking in South Carolina and identify truck parking needs. It estimates the demand for parking along Interstate corridors across the state at both designated facilities and undesignated locations. In order to understand the need for truck parking, this section also estimates the gap between available capacity and unmet demand.

3.1 Demand Assessment

3.1.1 Designated Truck Parking along Interstate Corridors

Identifying demand, or the total number of trucks that park at a designated facility or geographic area, is the second critical component for understanding if a specific location, corridor, or geographic area has a shortage or surplus of truck parking. This study uses GPS information provided by ATRI to estimate the demand for truck parking along South Carolina's Interstate highway network. This section discusses truck parking demand at designated sites. Designated truck parking sites are the 124 public and commercial parking locations identified across the state that are discussed in Section 2.2. The data were collected for four 4-week periods in the winter, spring, summer, and fall of 2019, for a total of 105 days. Data for 2019, as opposed to 2020, was selected for the study as it is assumed to reflect more typical travel patterns given the impacts of the COVID-19 pandemic to trip making behavior in 2020. In addition, this section discusses the approach for collecting and processing the GPS data, results, and how the information will be used in later tasks.

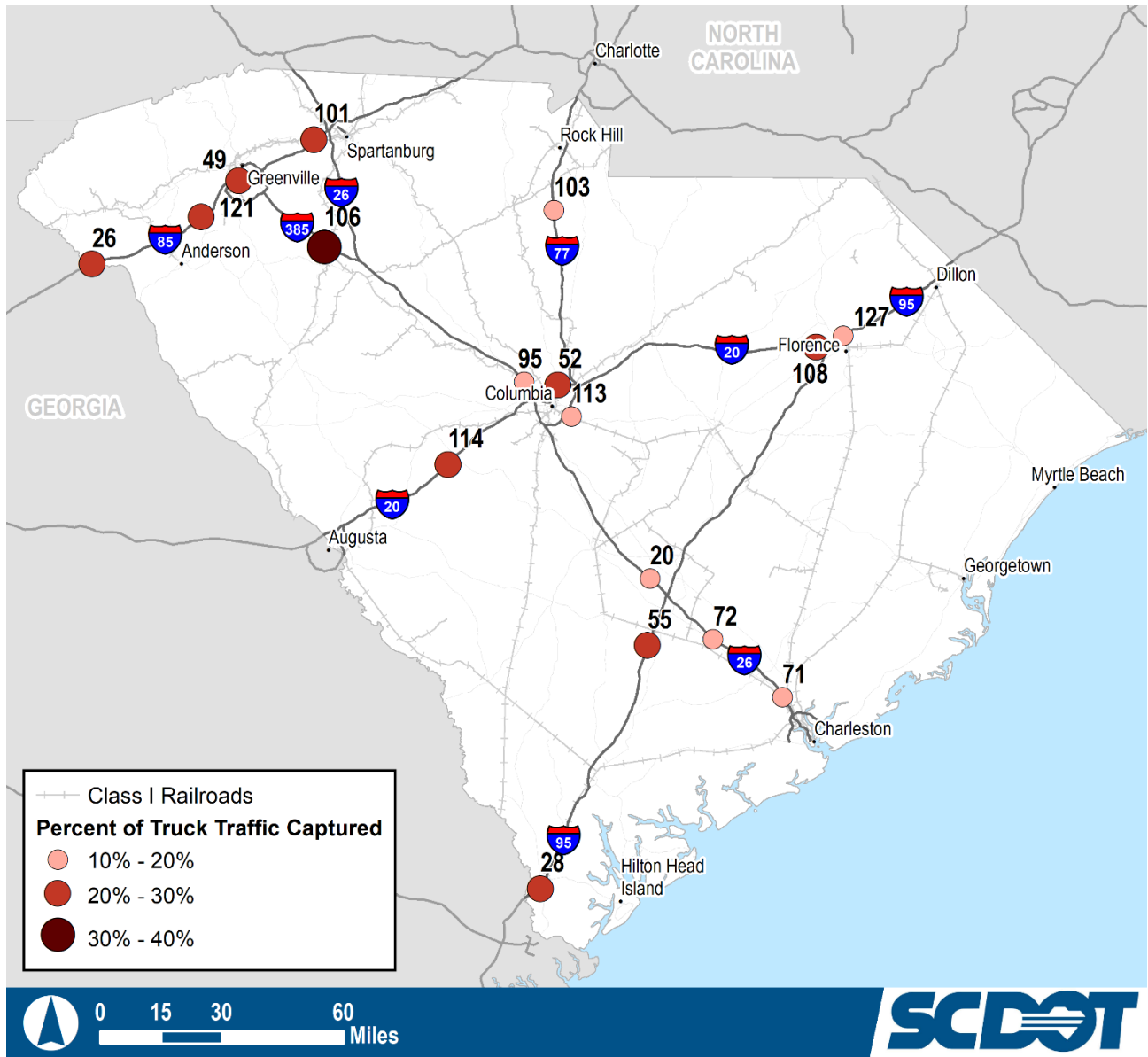
Data Collection and Processing

Truck GPS data from ATRI was used in the analysis of truck parking demand. The ATRI dataset captures GPS coordinates of trucks, generally FHWA Class 8 and higher,² across the country. This source provides a highly detailed picture of where trucks are stopping within South Carolina and can be manipulated to provide information about stop length, location, travel time, and travel direction before and after a stop. While ATRI provides an accurate and rich dataset, it does not represent all trucks traveling through South Carolina.

Figure 3.1 shows a sample of Class 8 and higher truck counts taken at permanent classification count stations in the state and the percentage of ATRI GPS truck counts at those same locations and during the same time periods. Overall, the ATRI data capture between 10 and 40 percent of all FHWA Class 8 and higher trucks on the road at the selected locations.

² FHWA, "Figure C-1 FHWA 13 Vehicle Category Classification," *Traffic Monitoring Guide: Updated October 2016*, https://www.fhwa.dot.gov/policyinformation/tmguides/tmg_fhwa_pl_17_003.pdf.

Figure 3.1 ATRI Data Capture



Source: SCDOT Traffic Analysis and Data Application, <https://scdottrafficdata.drakewell.com/publicmultinodemap.asp>; Cambridge Systematics, Inc. analysis.

The percentage of trucks captured is important as it was used to develop an expansion factor for the GPS data. The GPS data represent a sample of trucks, not the entire population of trucks in South Carolina. Expansion factors are used to scale a sample of observations up to an estimate for the entire population. In this case, an expansion factor would be applied to the sample of observations of parked trucks so that it is representative of the total population of trucks on South Carolina’s Interstate highways. For example, if the average percent capture is 25 percent, it indicates an expansion factor of 4 should be applied to the data. In this scenario, if ATRI data indicate 20 trucks in their database parked at a particular location, it is estimated that approximately 80 trucks, or four times the number of trucks in ATRI’s database, likely parked there. The statewide average of ATRI GPS truck counts is approximately 25 percent; therefore, for this study, an expansion factor of four was used for all locations, except those along I-77 and I-26 south of I-20 (e.g., from

Columbia to Charleston). An expansion factor of five was used along that corridor because based on validation of the data, the ATRI data appeared to capture fewer trucks relative to other Interstate corridors in the state (see **Figure 3.1**).

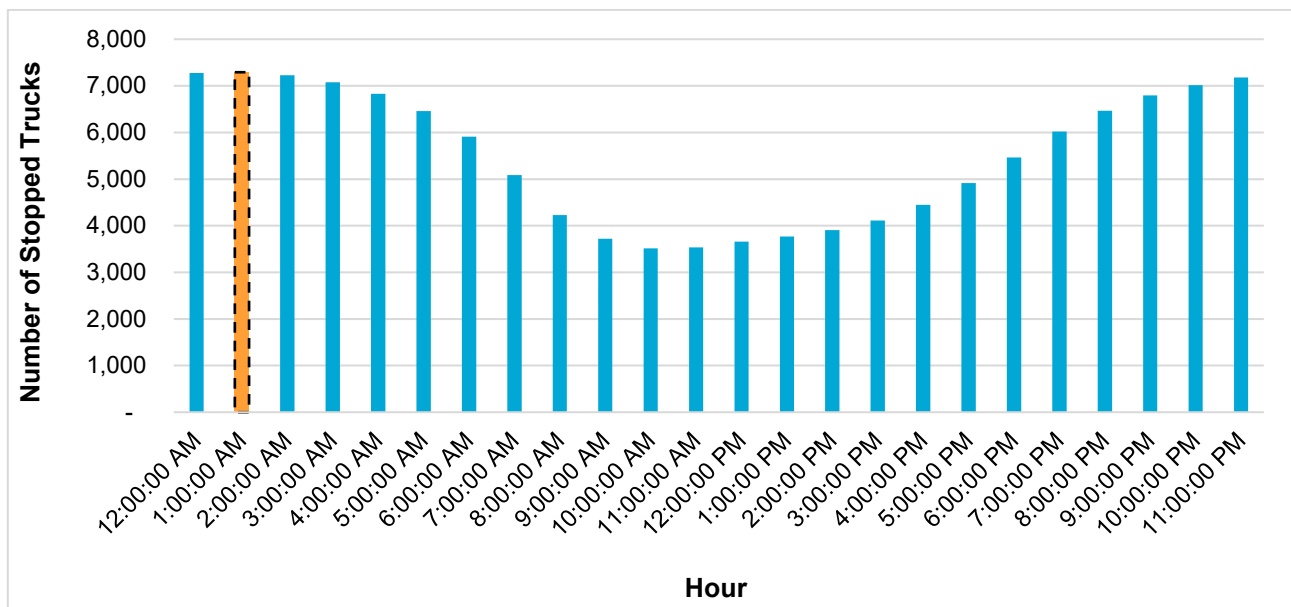
Designated Truck Parking on Interstates

Two categories of truck parking demand were estimated for public and commercial facilities:

1. **24-Hour Demand.** The average 24-hour demand was derived by dividing the total number of trucks parked at a facility by the number of days of data collection.
2. **Peak-Hour Demand.** Peak-hour demand is calculated by first identifying the statewide peak hour (1:00 AM–2:00 AM), and then totaling the trucks parking at a given designated location during that time period.

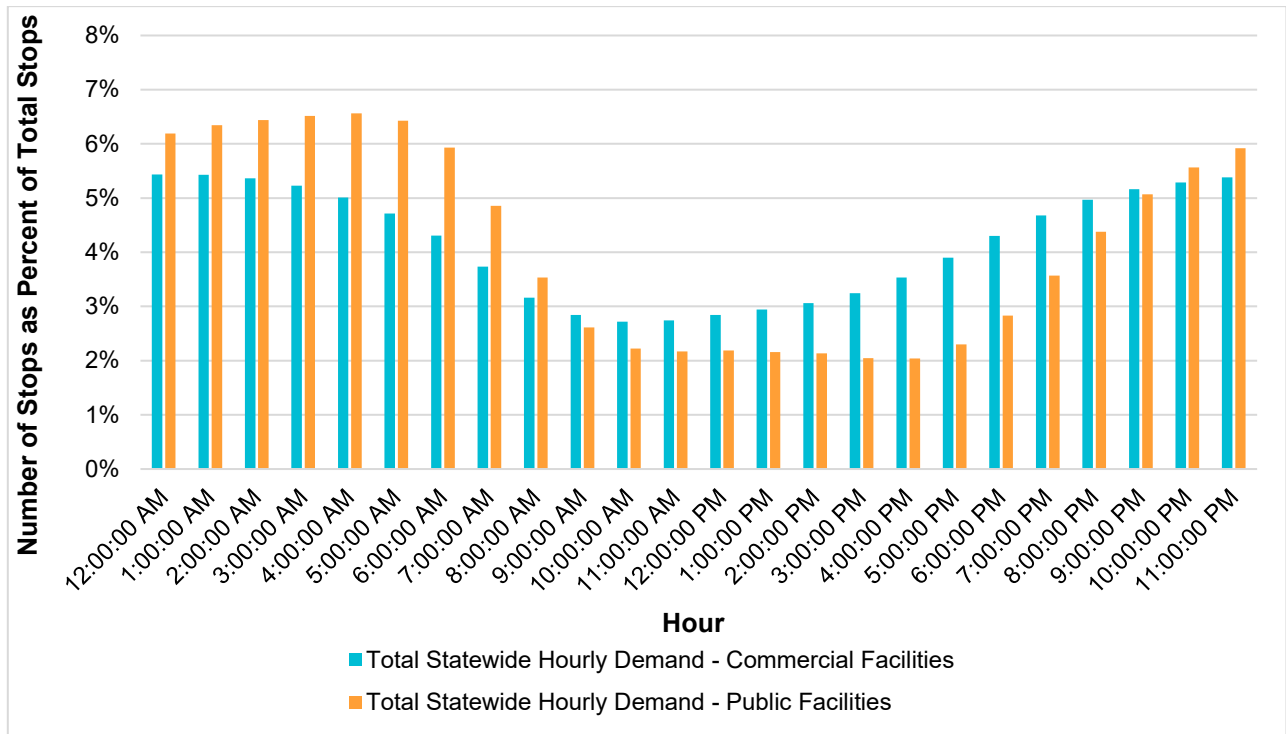
Truck parking demand typically is highest overnight, and facilities often are at or over capacity during these hours. Statewide, the peak hour for truck parking is from 1:00 a.m.–2:00 a.m., as shown in **Figure 3.2**. However, peak demand hours vary by location and by facility type (i.e., public or commercial). **Figure 3.3** shows hourly demand as a percentage of total demand for public and commercial facilities. For commercial facilities, the statewide peak hour occurs from 12:00 a.m.–1:00 a.m.; whereas, public facilities experience their peak from 4:00 a.m.–5:00 a.m. This trend is likely because full-service commercial truck stops are preferred by most truck drivers and, therefore, begin to fill up by late afternoon and early evening. Once they reach capacity drivers seek alternate parking, possibly at public facilities or undesignated areas. For instance, a driver arriving at a commercial facility at 6:00 p.m. will leave at 4:00 a.m. when their 10-hour required rest break is fulfilled. Drivers arriving at a public rest area at 11:00 p.m. will leave at 9:00 a.m. While the statewide peak *hour* for truck parking is from 1:00 a.m.–2:00 a.m., it is important to note that the peak *period* starts at about 9:00 p.m. and extends to 6:00 a.m., as can be seen in **Figure 3.3**.

Figure 3.2 Hourly Truck Parking Demand



Source: ATRI; Cambridge Systematics, Inc. analysis.

Figure 3.3 Hourly Truck Parking Demand by Facility Type



Source: ATRI; Cambridge Systematics, Inc. analysis.

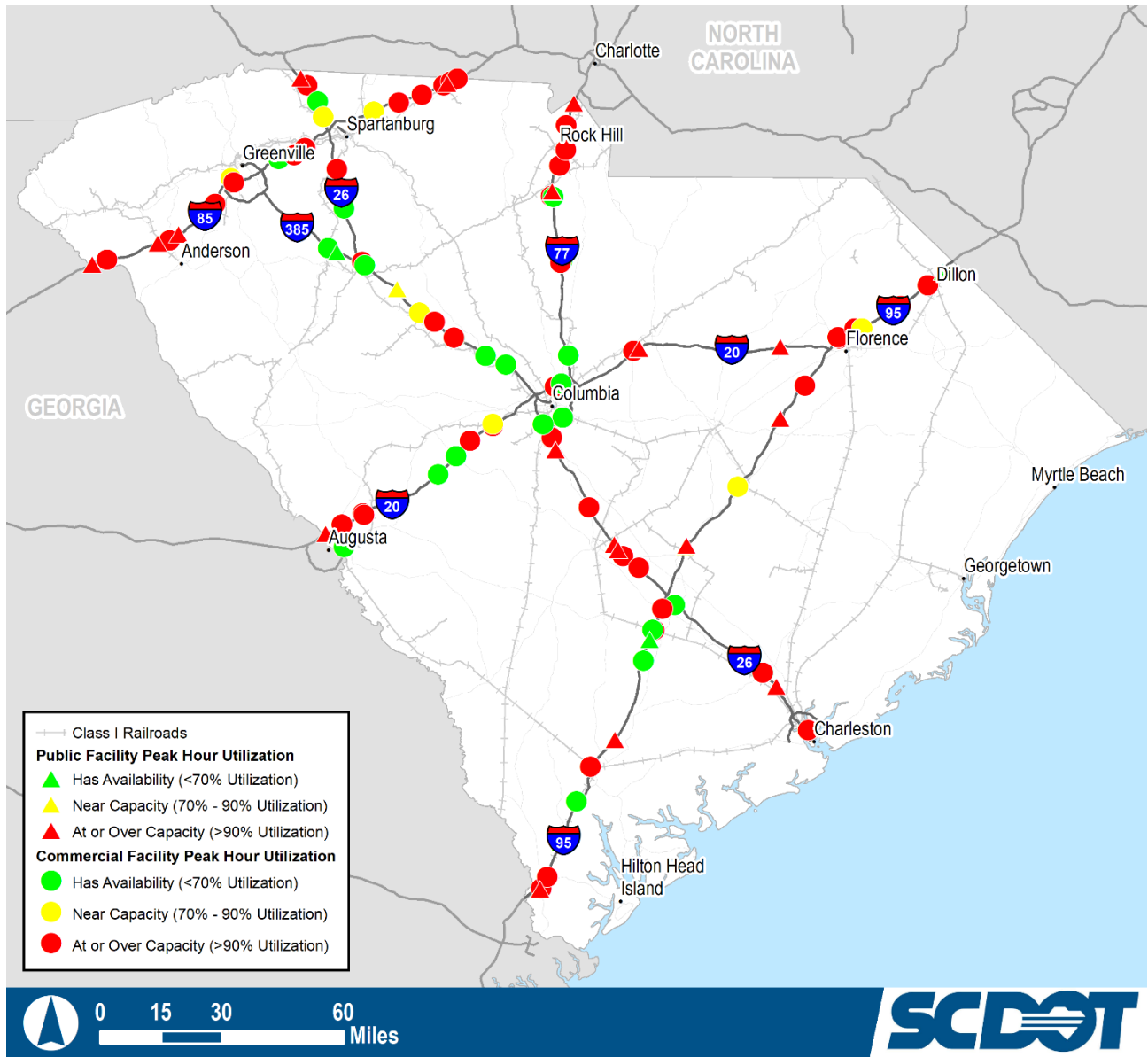
Parking demand at designated locations during the statewide peak hour is shown in **Figure 3.4** and **Table 3.1** and provides details on parking demand by type of facility (public or commercial). Of the 124 total sites with demand data, just under 26 percent of the locations have availability, nearly 10 percent are near capacity, and almost 65 percent are at or over capacity (see **Table 3.1**). Note that “Has Availability” is defined as anything under 70 percent utilization. Over one-quarter of the state’s public sites are near, at, or over capacity. More detail on each public facility is in Appendix A: Truck Parking Capacity by Facility Type and SCDOT District; and district-level information is in Appendix B: SCDOT District Demand Profiles. Overall, these results indicate that, in general, demand exceeds capacity at the statewide level. This is discussed in greater detail in the following paragraphs.

Table 3.1 Truck Parking Demand by Facility Type

Ownership	Has Availability (<70% Utilization)	Near Capacity (70%–89% Utilization)	At or Over Capacity (>90% Utilization)	Total
Commercial	26 (28.9%)	7 (7.9%)	57 (63.3%)	90 (100.0%)
Public	6 (17.6%)	5 (14.7%)	23 (67.7%)	34 (100.0%)
Total	32 (25.8%)	12 (9.7%)	80 (64.5%)	124 (100.0%)

Source: ATRI; Cambridge Systematics, Inc. analysis.

Figure 3.4 Demand at Designated Locations



Source: ATRI; Cambridge Systematics, Inc. analysis.

Table 3.2 shows the truck parking demand by SCDOT District and at the statewide level. Overall, the demand for truck parking exceeds capacity resulting in a statewide peak utilization of approximately 114 percent. At the district level, District 4 generates the highest number of trucks parking at their designated facilities with over 3,600 trucks a day. At about 98 percent peak-hour utilization, only District 5 has enough truck parking to meet demand during peak periods, but only barely so. All other districts have insufficient capacity to meet peak demand. Districts 4 and 7 have the most burdened facilities in terms of peak utilization at 135 percent and 121 percent, respectively.³

³ Utilization in excess of 100 percent is captured by estimating the number of trucks parked in undesigned areas immediately surrounding a designated truck parking facility.

Table 3.2 Demand at Designated Locations by District

District	Number of Locations	Number of Spaces	Daily Demand	Peak-Hour Demand	Peak Utilization (Peak Demand/Supply)
1	24	1,231	2,866	1,362	110.6%
2	17	685	2,388	813	118.7%
3	14	745	1,747	778	104.4%
4	19	1,113	3,656	1,503	135.0%
5	11	941	2,291	919	97.7%
6	20	892	2,232	936	104.9%
7	19	809	2,628	981	121.3%
Total	124	6,416	17,808	7,292	113.7%

Source: ATRI; Cambridge Systematics, Inc. analysis.

As shown in **Table 3.3**, demand at designated locations varies by area type: urban or rural. Nearly three quarters of truck parking capacity is in rural areas with over 13,000 trucks parking in rural South Carolina daily. Peak utilization in urban areas is notably higher than in rural areas, 122 percent versus 111 percent, respectively. This indicates that parking facilities in those areas are considerably capacity constrained.

Table 3.3 Demand at Designated Locations by Area

Area	Number of Locations	Number of Spaces	Daily Demand	Peak-Hour Demand	Peak Utilization (Demand/Supply)
Rural	91	4,671	13,228	5,166	110.6%
Urban	33	1,745	4,580	2,126	121.8%
Total	124	6,416	13,228	7,292	113.7%

Source: ATRI; Cambridge Systematics, Inc. analysis.

Truck parking demand can be classified into five different categories based on the duration of the stop:

- Short Break.** These stops are generally less than 1 hour. The most common reason for this type of stop is to fulfill the HOS-mandated 30-minute rest break within the first 8 hours of driving. Other reasons for a short stop could include stopping for food/restrooms, waiting for traffic conditions to subside, or stopping for a brief safety check and to ensure the load is secure.
- Short Staging.** Staging parking to serve business needs is a type of “medium-term” parking that typically last longer than one hour, but less than four or five hours. It is commonly associated with trucks waiting to pick-up or drop-off a load, but that arrive in the vicinity before their scheduled time; thus, it is most frequently needed in or near urban areas, especially where there are higher concentrations of industrial, warehousing, and commercial properties.
- Long Staging.** Stops between 4 and 8 hours are assumed to be extended staging stops.

4. **10-Hour Rest.** These 10-hour-stops are driven in large part by FMCSA HOS rules that require drivers to have a 10-hour rest break every 24 hours, and a 34-hour break after 7/8 consecutive days on duty.
5. **Long Break.** These are stops that last longer than 14 hours. Many are likely associated with FMCSA HOS requirements for drivers to have a 34-hour break after 7/8 consecutive days on duty.

Across the state, the data indicate that the majority of trucks stopped are on short breaks (see **Table 3.4**). These comprise 43 percent of the data, and their frequency is likely driven by HOS requirements. 10 -hour rest stops were the second most frequently observed stop type with 26 percent of the data falling into that category. Staging stops, both short and long, comprise 18 percent of the data. Long break stops, greater than 14 hours, represent 12 percent of the data.

Table 3.4 Parking Duration at Designated Locations

Duration	Percent Share
% Short Break (< 1 hour)	43.2%
% Short Staging (1–4 hours)	15.5%
% Long Staging (4–8 hours)	3.0%
% 10-Hour Rest (8–14 hours)	26.2%
% Long Break (> 14 hours)	12.1%
Total	100.0%

Source: ATRI; Cambridge Systematics, Inc. analysis.

3.1.2 Undesignated Truck Parking on Interstates

Undesignated parking is truck parking outside of a dedicated truck parking facility, quantified for the purposes of this study as truck parking within Interstate right-of-way. Undesignated parking introduces safety and security risks for drivers, as well as the traveling public. Trucks parked on shoulders and ramps can reduce visibility, damage pavement, and result in crashes. Crashes involving a parked truck will be discussed in Section 3.1.3. Though this study focuses on undesignated parking within SCDOT right-of-way on Interstate highways, it should be noted that most undesignated parking across the country occurs on the shoulders of local streets and on vacant lots.

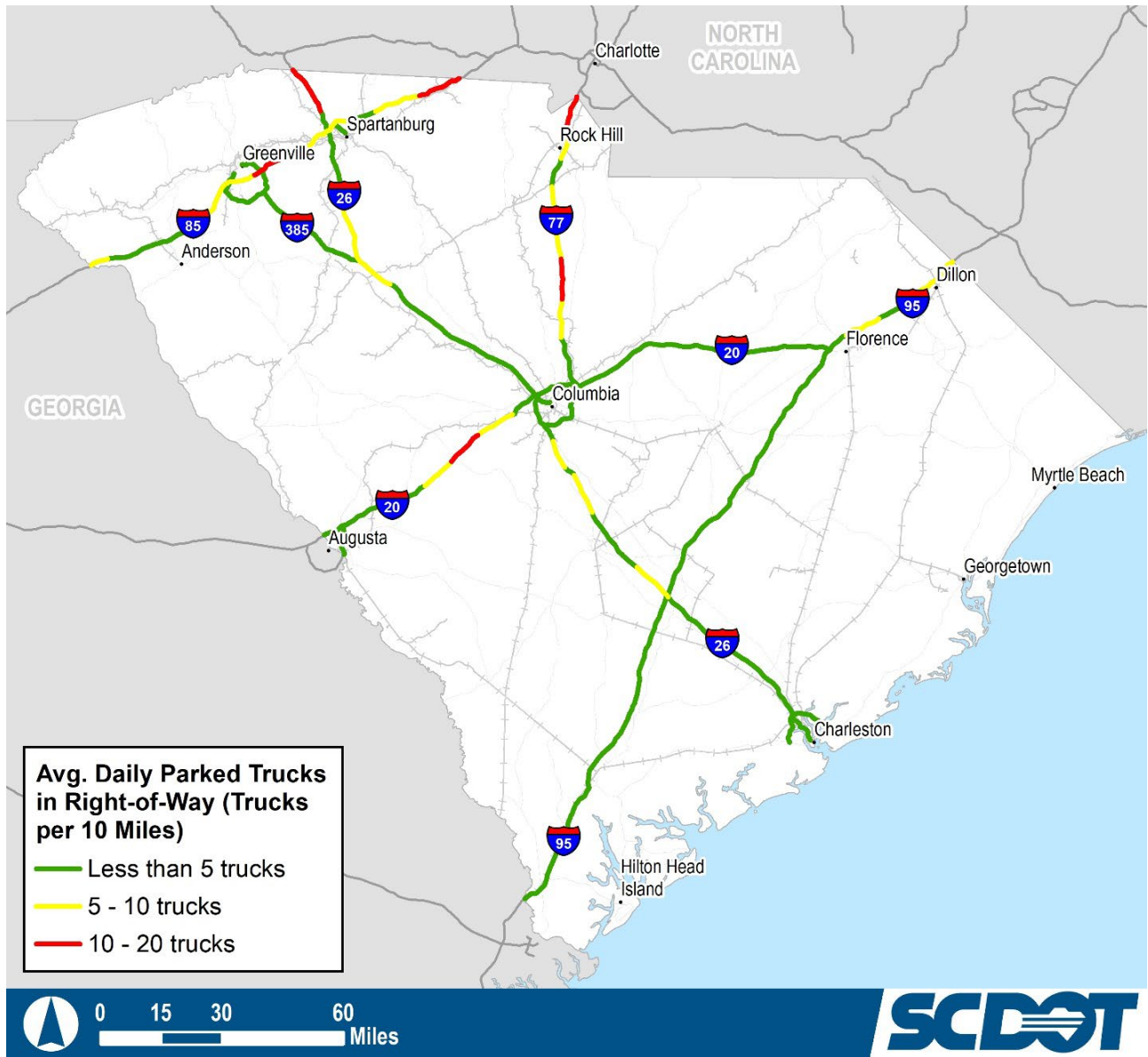
The requirement for drivers to use ELDs, instead of paper logs, also has led to stricter adherence to HOS regulations. Drivers previously had a small margin of error in trip planning while reporting drive time in 15 -minute intervals on paper logs. Today, ELDs log the driver’s activity continuously. There are exceptions for adverse driving conditions or certain personal travel, but generally drivers are now held to a higher standard in time management. Drivers must weigh the risks and benefits of stopping before their hours are used when seeing an available space, continuing to the next rest area in hopes of reaching an available space, or stopping along the roadway on a shoulder or ramp in the event no parking is found in time. Many communities report undesignated parking as an unintended consequence of the ELD mandate during outreach conducted during this plan.

Undesignated Demand Based on Truck GPS Data

The ATRI GPS data was used to determine where undesignated parking is occurring. Because SCDOT does not maintain right-of-way (ROW) Geographic Information System (GIS) shapefiles of Interstate highways, ROW boundaries were manually drawn in GIS using aerial imagery to create polygons that encompass Interstate highway ROW, including ramps and other adjoining parcels with direct on and off access. The ATRI data were then overlaid onto the polygons to identify trucks that parked within the ROW.

As shown in **Figure 3.5** and **Table 3.5**, the highest rates of daily undesignated truck parking along Interstate ROW occurs on portions of I-77, I-85, I-26, and I-20. On an average daily basis, I-77 between the North Carolina state line and the Catawba River near Fort Mill experiences the highest rate of trucks parked in undesignated locations. About 19 trucks per 10 miles were estimated to be parked in the I-77 ROW at this location. As the total length of this portion of the I-77 corridor is about 9 miles long, this translates to about 15 trucks in total estimated to be parked in the ROW on a daily basis. The second highest rate of trucks parked in undesignated locations also occurred on I-77 between the Chester-Fairfield County Line to Old River Rd. near Ridgeway. This portion of the I-77 corridor experiences about 16 trucks per 10 miles parked in the ROW. As the total length of this portion of the I-77 corridor is about 21 miles long, this translates to about 34 trucks in total parked in the ROW on a daily basis.

Figure 3.5 24-Hour Demand at Undesignated Locations



Source: ATRI; Cambridge Systematics, Inc. analysis.

Table 3.5 24-Hour Demand at Undesignated Locations

Highway	Location	Length (Miles)	Average Daily Parked Trucks in ROW (Trucks per 10 Miles)
I-77	SC-NC state line to Catawba River near Fort Mill	9	19
I-77	Chester-Fairfield County Line to Old River Rd. near Ridgeway	21	16
I-85	SC-NC state line to SR 18/N. Limestone St. near Gaffney	29	12
I-85	Between SR 101 and US 276/Laurens Rd. near Greenville	24	12
I-26	SC-NC State Line to Clark Rd. near Spartanburg	12	11
I-20	Aiken-Lexington County Line to Old Charleston Rd. near Gilbert	16	10

Source: ATRI; Cambridge Systematics, Inc. analysis.

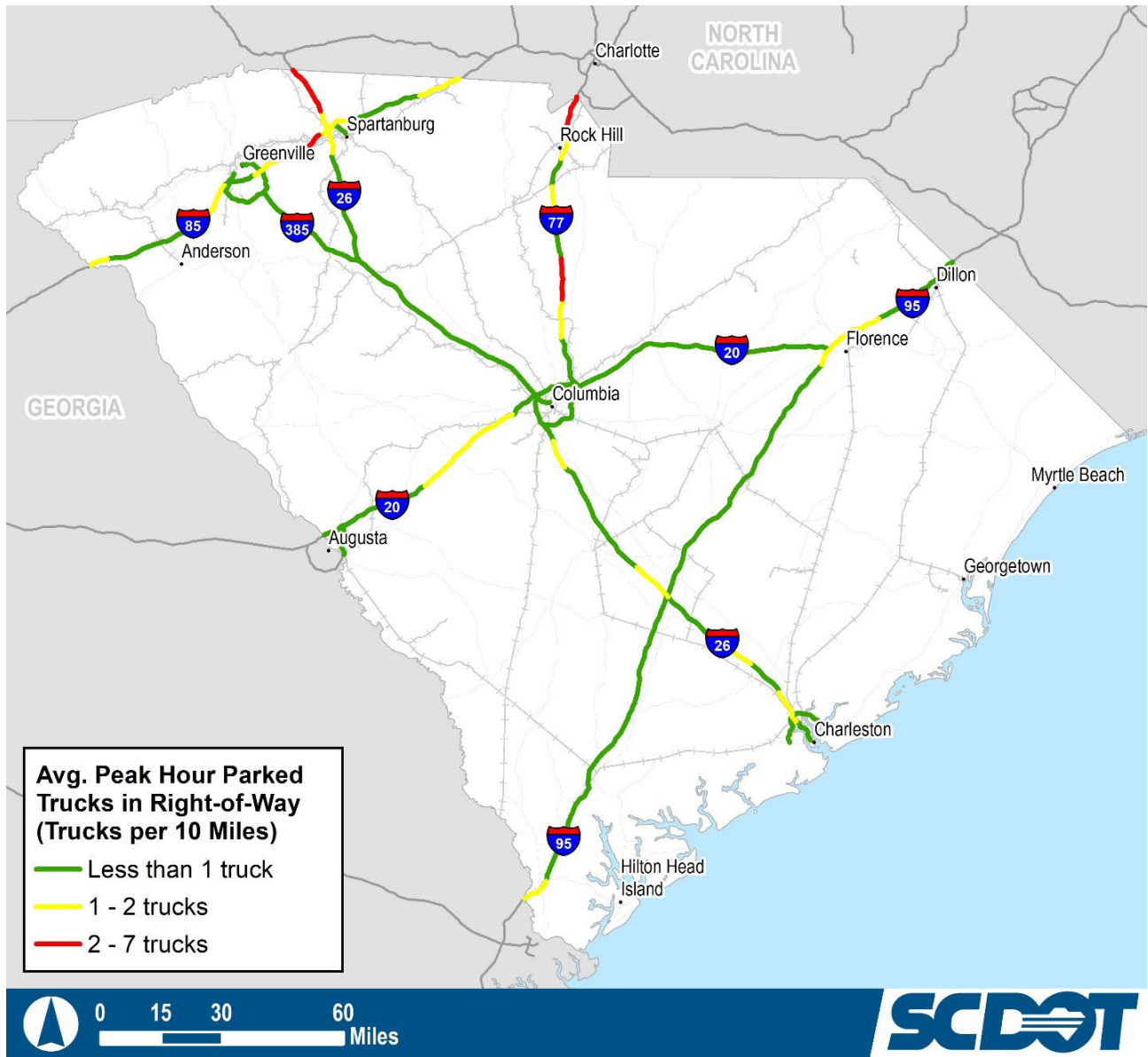
The highest rates of peak hour (i.e., 1:00 a.m. to 2:00 a.m.) undesignated truck parking along Interstate ROW occurs on portions of I-77, I-85, I-26, and I-20 as shown in **Table 3.6** and **Figure 3.6**. On an average daily basis, I-77 between the North Carolina state line and the Catawba River near Fort Mill experiences the highest peak-hour rate of trucks parked in undesignated locations. About 7 trucks per 10 miles were estimated to be parked in the I-77 ROW at this location. This translates to an average of about 6 trucks in total estimated to be parked in the ROW during the peak hour as this portion of the I-77 corridor is about 9 miles long. The second highest rate of trucks parked in undesignated locations also occurred on I-85 between Fort Prince Blvd./SR 129 to Brockman McClimon Rd. near Greer. This portion of the I-85 corridor experiences about 3 trucks per 10 miles parked in the ROW during the peak hour. As the total length of this portion of the I-85 corridor is about 24 miles long, this translates to an average of about 7 trucks in total parked in the ROW during the peak hour.

Table 3.6 Peak-Hour Demand at Undesignated Locations

Highway	Location	Length (Miles)	Average Peak Hour Parked Trucks in ROW (Trucks per 10 Miles)
I-77	SC-NC state line to the Catawba River near Fort Mill	9	7
I-85	SR 129/Fort Prince Blvd. to Brockman McClimon Rd. near Greer	24	3
I-26	SC-NC state line to Clark Rd. near Spartanburg	12	3
I-77	Chester-Fairfield County line to Old River Rd. near Ridgeway	21	2

Source: ATRI; Cambridge Systematics, Inc. analysis.

Figure 3.6 Peak-Hour Demand at Undesignated Locations



Source: ATRI; Cambridge Systematics, Inc. analysis.

The district with the highest number of trucks stopped on the ROW is District 4 with nearly 18 percent of all daily undesignated truck parking in the state, as shown in **Table 3.7**. Districts 3, 7, and 1 closely follow with each having approximately 16 percent of all daily undesignated truck parking statewide. During the peak period, District 3 is estimated to experience the most undesignated truck parking at 29 trucks.

Table 3.7 Demand at Undesignated Locations by District

District	24-Hour Demand	Percent of 24-Hour Demand	Total Peak Demand
1	149	16.0%	24
2	124	13.3%	19
3	150	16.2%	29
4	165	17.8%	26
5	57	6.1%	10
6	135	14.5%	26
7	150	16.1%	26
Total	931	100.0%	161

Source: ATRI; Cambridge Systematics, Inc. analysis.

Across the state, many of the trucks stopped at undesignated locations are stopping for less than one hour. These stops are short breaks for drivers likely trying to meet HOS requirements, making emergency repairs, or checking and securing their load. Stops between one and four hours comprise the majority of trucks parked at undesignated locations. These stops are often related to staging needs—drivers needing a place to park near a pickup or delivery location while they wait for dock access to load or unload. The smaller percentage of longer stops are likely associated with overnight stops to reset daily HOS requirements. **Table 3.8** shows the percentage of undesignated parking stops across the state by varying durations.

Table 3.8 Parking Duration at Undesignated Locations

Duration	Percent Share
% Short Break (< 1 hour)	39.3%
% Short Staging (1–4 hours)	39.8%
% Long Staging (4–8 hours)	8.3%
% 10-hour Rest (8–14 hours)	8.3%
% Long Break (> 14 hours)	4.3%
Total	100.0%

Source: ATRI; Cambridge Systematics, Inc. analysis.

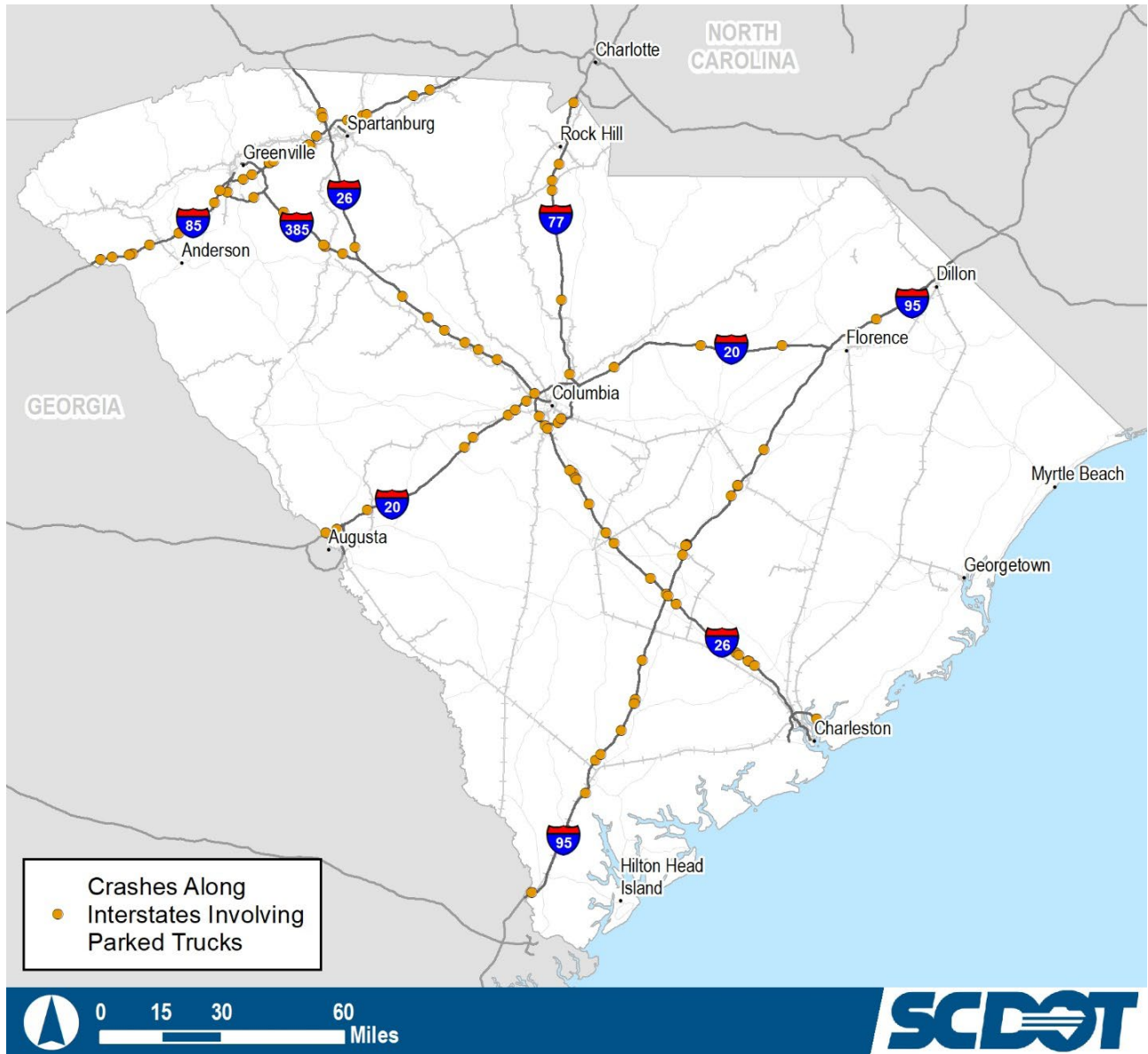
3.1.3 Safety and Other Truck Parking Challenges

This section presents the results of an analysis of historical crash data involving trucks. The purpose of the analysis was to look for possible safety implications related to truck parking. Using data on crashes involving parked trucks, the analysis results provide insight into the consequences of undesignated parking and indicate areas where it is least safe to do so. This section also considers the safety and truck parking needs of oversize/overweight (OS/OW) haulers.

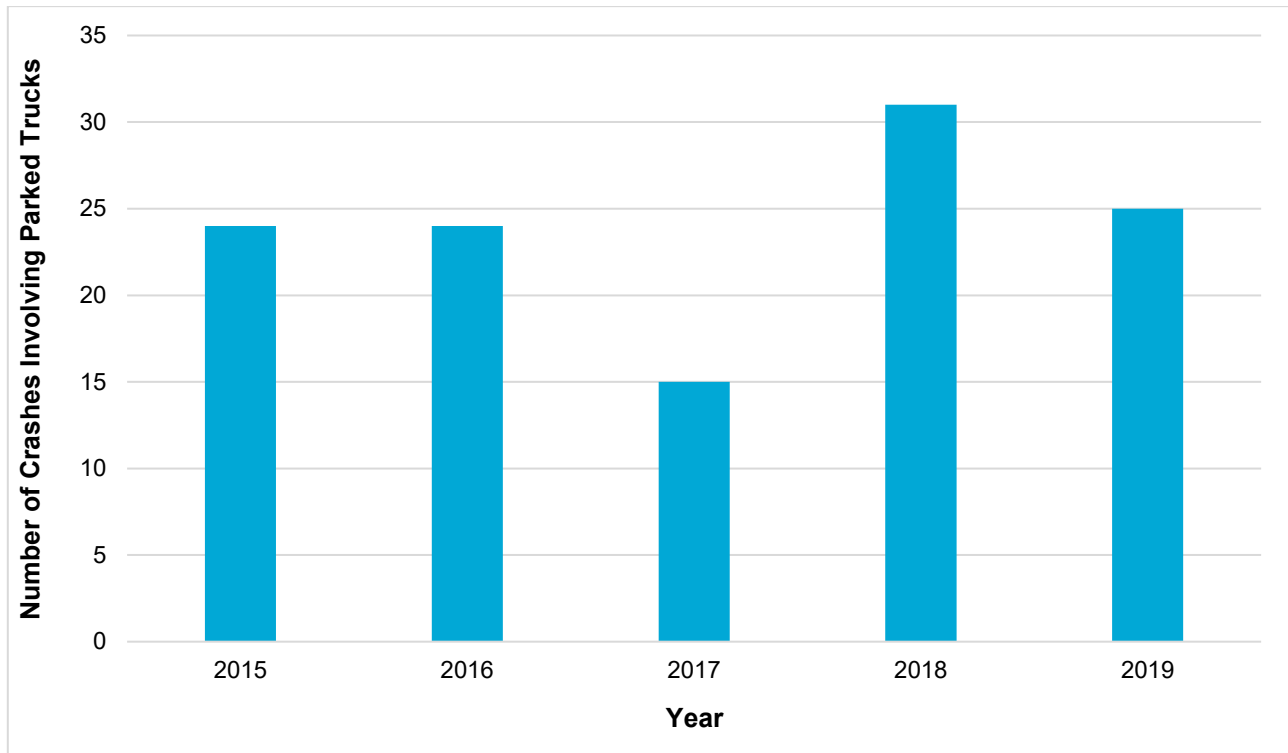
Safety Analysis

For the 2015–2019 time period, there were 119 crashes involving parked trucks on South Carolina Interstate highways (see **Figure 3.7**). As shown in **Figure 3.8**, the most crashes were observed in 2018 with 31 incidents involving parked trucks. The fewest crashes were observed in 2017 with 15 incidents. Overall, the annual trend for crashes involving parked trucks is relatively flat.

Figure 3.7 Crashes Involving Parked Trucks, 2015–2019



Source: South Carolina Department of Transportation.

Figure 3.8 Crashes Involving Parked Trucks by Year, 2015–2019

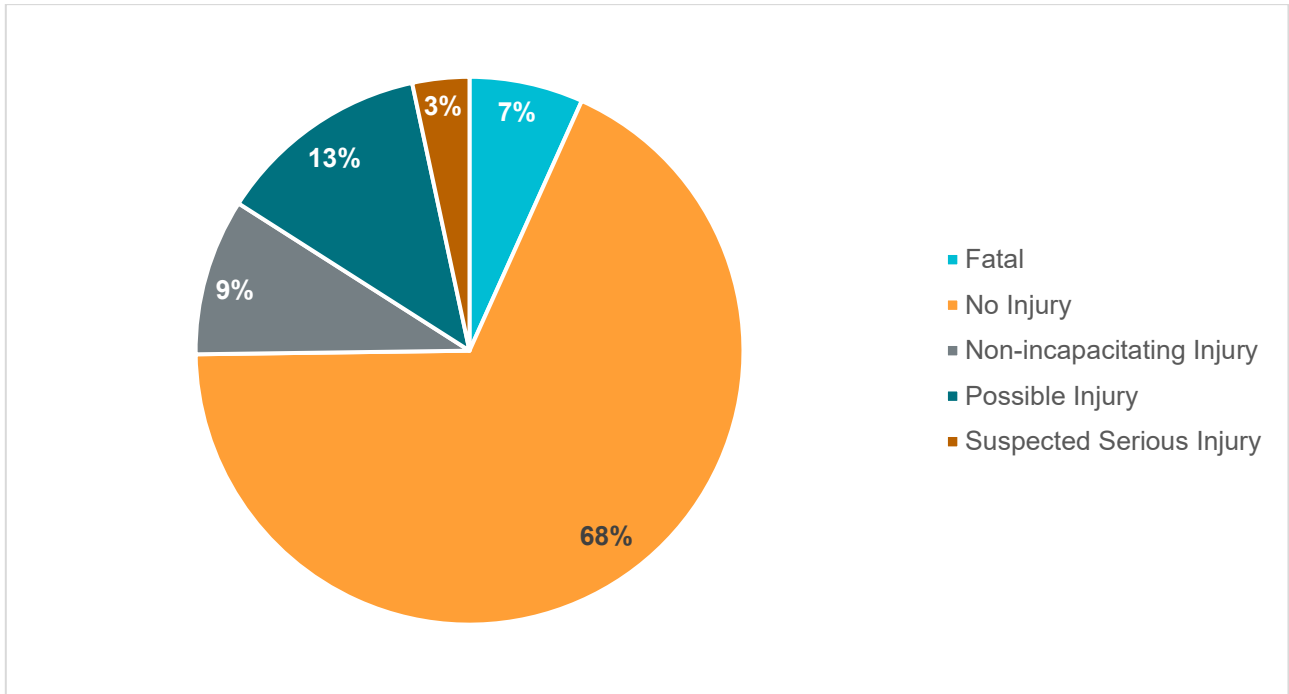
Source: South Carolina Department of Transportation.

As shown in **Figure 3.9**, about two-thirds of crashes involving parked trucks on Interstate highways resulted in no injuries. However, about 10 percent of these crashes did result in a fatality or serious injury. As a point of comparison, between 2014–2018, South Carolina experienced 679,008 total crashes, of which 16,598 were fatal or severe (about 2.4 percent).⁴ This implies that crashes involving parked trucks tend to have more severe outcomes than crashes generally.

Crashes involving parked trucks are broadly distributed throughout the day. Each hour of the day accounts for approximately 2 to 7 percent of all crashes based on the 2015–2019 data. The average across all hours is about 4.2 percent, which translates to a uniform distribution across 24 hours. As shown in **Figure 3.10**, about one-half of all crashes involving parked trucks occurred during daylight. Furthermore, about one-half of fatal and serious injury crashes occurred during daylight. These observations imply that the prevalence of crashes involving parked trucks is not solely driven by time-of-day or dark lighting conditions.

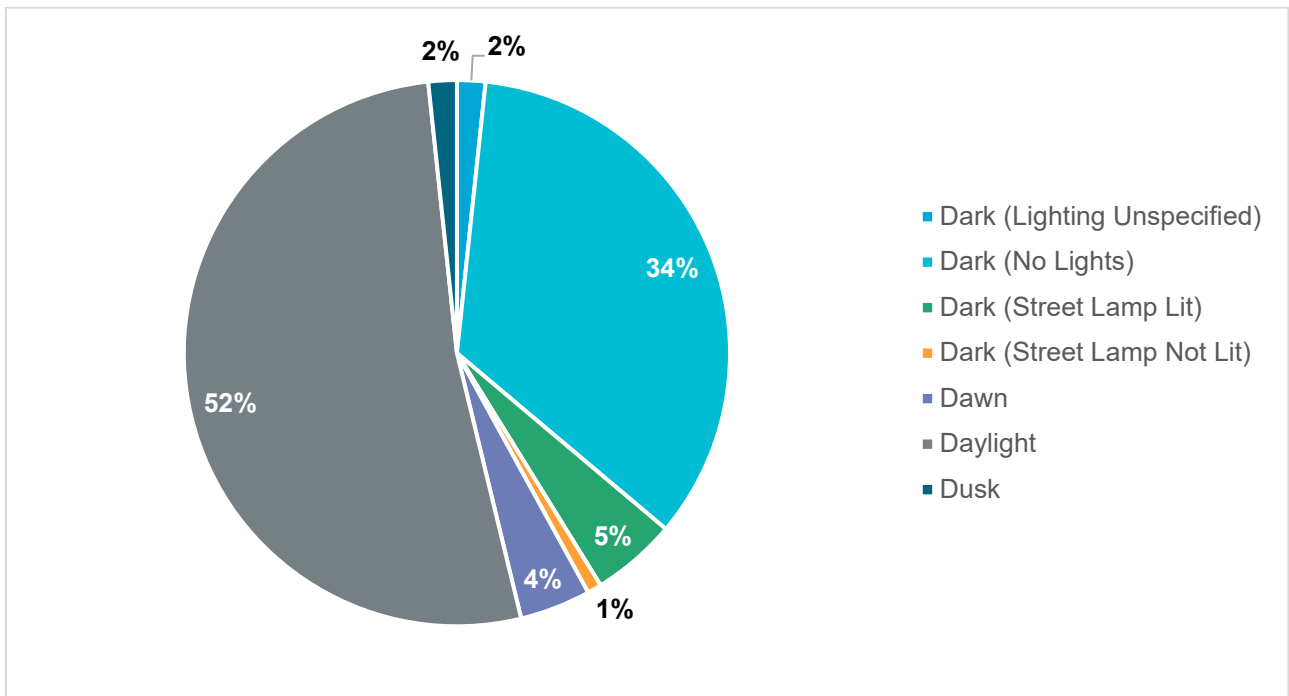
⁴ South Carolina Highway Safety Plan, Fiscal Year 2021, page 58, https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/sc_fy21_hsp.pdf.

Figure 3.9 Severity of Crashes Involving Parked Trucks, 2015–2019



Source: South Carolina Department of Transportation.

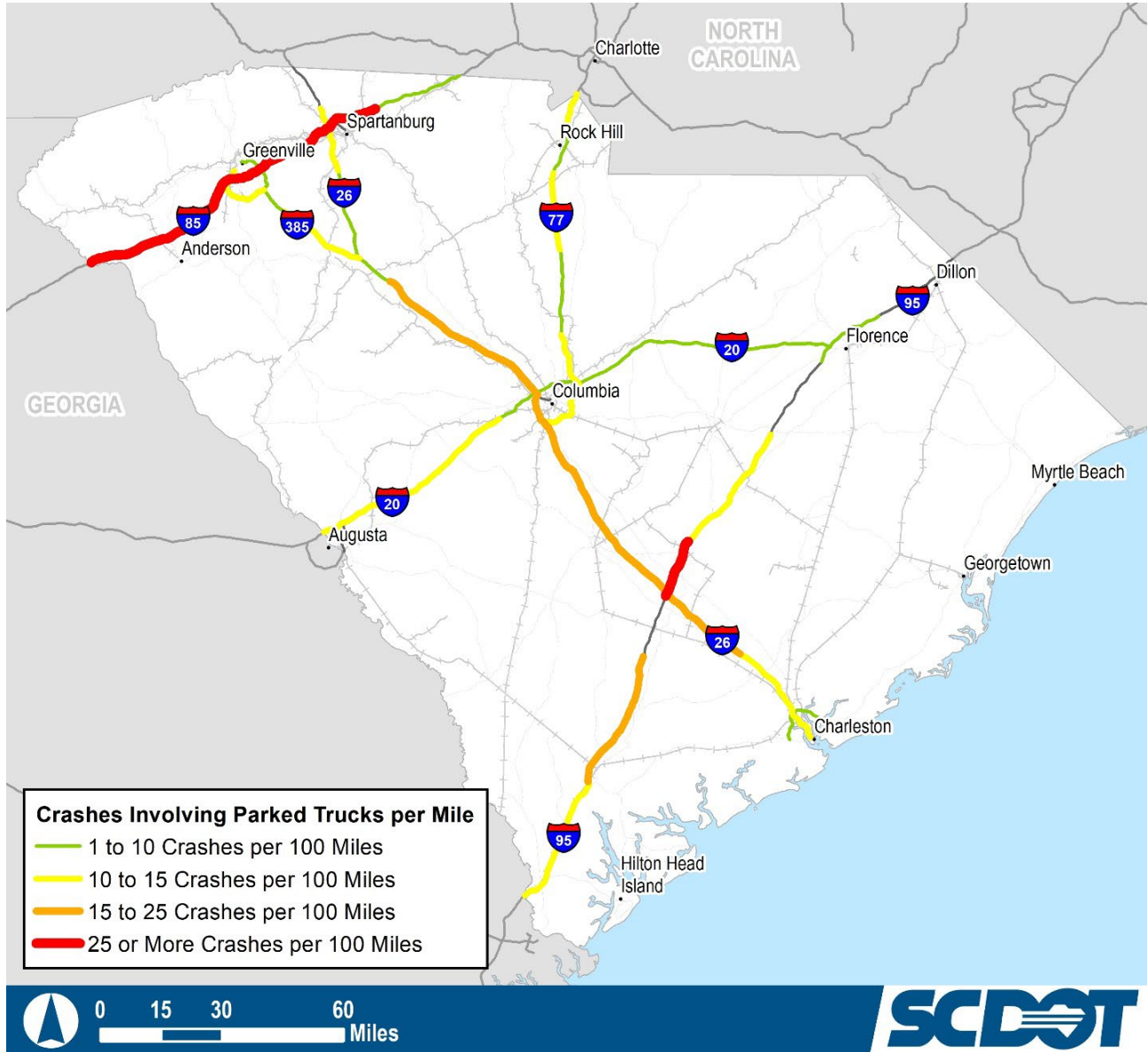
Figure 3.10 Lighting Conditions of Crashes Involving Parked Trucks, 2015–2019



Source: South Carolina Department of Transportation.

In order to compare the safety performance of Interstate highway corridors, it was necessary to determine the crash rates for incidents involving parked trucks. Crash rates were calculated as the total number of incidents involving parked trucks per mile for Interstate highways over the 2015–2019 time period. As shown in **Figure 3.11**, the highest crash rates were observed on I-85 between the Georgia state line and the City of Spartanburg. On this corridor, 5-year total crash rates for incidents involving parked trucks range from about 33 to 48 crashes per 100 miles.

Figure 3.11 Five-Year Total Crash Rates for Incidents Involving Parked Trucks, 2015–2019



Source: South Carolina Department of Transportation; Cambridge Systematics, Inc. analysis.

Other corridors with relatively high rates of incidents involving parked trucks include I-95 between I-26 and Lake Marion in Orangeburg County. This corridor has a 5-year total crash rate of about 40 crashes per 100 miles. Further south, the I-95 corridor through Hampton and Dorchester Counties exhibited a 5-year total crash rate of approximately 20 crashes per 100 miles. I-26 also experienced relatively high rates of incidents involving parked trucks compared to other parts of the state. The I-26 corridor from Dorchester County to Newberry County experienced crash rates that ranged from about 16 crashes per 100 miles in Columbia to approximately 24 crashes per 100 miles near Orangeburg.

Truck Parking Challenges of OS/OW Haulers

Due to the size and weight of their vehicles, OS/OW haulers face unique truck parking challenges compared to motor carriers transporting loads with typical sizes and weights. Because of this, the STPAS explicitly considers the challenges and needs of OS/OW carriers. OS/OW carriers were engaged via one-on-one interviews and an online survey. A summary of their responses is included below.

- **Small Turning Radii.** Space for turning is one of the biggest obstacles faced by OS/OW carriers. For vehicles that can be as large as 150-foot long and 18-foot wide, room for turning was cited by stakeholders as one of the biggest obstacles to finding truck parking.
- **Lack of Dedicated Space for OS/OW Vehicles.** Related to the challenge of lacking adequate space for turning, another challenge is that facilities often lack the space to have a dedicated OS/OW truck parking area. OS/OW typically are not rear-steerable, which makes angled parking (as spaces typically are designed) difficult. Also, OS/OW trucks are prone to being struck by other vehicles due to their size, which makes having dedicated OS/OW parking areas more important. Overall, the design of public rest areas is not conducive to OS/OW truck parking.
- **State and Local Parking Regulations.** Like all motor carriers, OS/OW haulers are impacted by state and local parking regulations, with local governments typically prohibiting overnight parking. OS/OW haulers are further impacted by state regulations that further restrict which routes and what times they may travel. Lack of harmonization between states can sometimes create parking challenges for OS/OW vehicles, especially in cases where travel is disrupted by weather or traffic conditions, for example. In these cases, drivers must find parking in an area that was not previously planned, which is more difficult for an OS/OW vehicle.
- **Challenged Corridors Areas.** Generally, I-95, I-26, and I-77 were identified as corridors where OS/OW truck parking challenges were more pronounced. In addition, the Charleston region and the Port of Charleston specifically were identified as areas with challenges for OS/OW trucks. Interview and survey respondents indicated that there is often insufficient capacity and/or space for OS/OW truck parking in these areas.

3.2 Gap Assessment

This section contains the results of the statewide gap assessment truck parking needs analysis. The gap assessment measures the shortage (the gap) and surplus between truck parking supply and demand across South Carolina. The shortage or surplus of truck parking is the difference between the number of spaces at designated truck parking facilities, as described in Section 3.0; and the demand for parking as captured by the overflow around those facilities and trucks parked on Interstate rights-of-way, as described in

Section 4.0. The gap between supply and demand is presented at a high level in this section and in more detail in Appendix B: SCDOT District Demand Profiles.

Table 3.9 shows the peak-hour shortage or surplus by district. There is a shortage in the majority of districts as only District 5 is estimated to have a small surplus of truck parking capacity. This indicates that at the busiest time of day there is not enough parking for all of the trucks that are trying to park in South Carolina. The statewide shortage is over 1,000 spaces. A significant percentage of that gap is accounted for in District 4. With a deficit of more than 400 truck parking spaces, it accounts for about 40 percent of the statewide deficit of over 1,000 spaces.

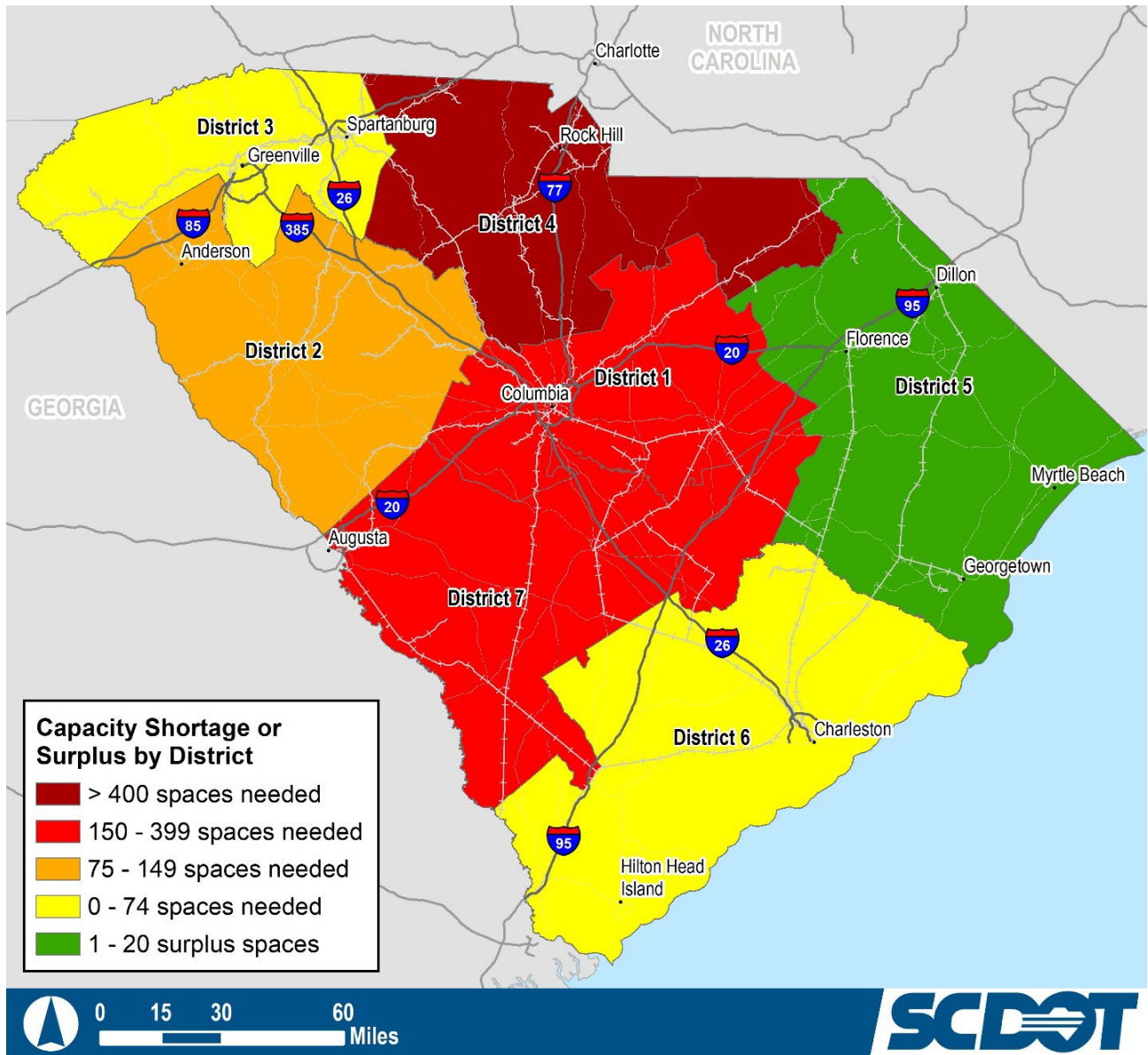
Table 3.9 Peak-Hour Truck Parking Shortage or Surplus by District

District	Parking Supply (Number of Spaces)	Total Peak-Hour Demand (Designated and Undesignated)	Peak Hour Shortage or Surplus	Shortage or Surplus as a Percentage of Supply
1	1,231	1,386	-155	-12.6%
2	685	832	-147	-21.5%
3	745	807	-62	-8.3%
4	1,113	1,529	-416	-37.4%
5	941	929	12	1.3%
6	892	963	-71	-8.0%
7	809	1,007	-198	-24.5%
Total	6,416	7,454	-1,038	-16.2%

Source: ATRI; Cambridge Systematics, Inc. analysis.

The district level view is important to get a sense of a full statewide picture of how truck parking supply is meeting demand, but more localized surpluses and shortages exist within every district. For instance, a designated parking facility with surplus capacity may not be located where the demand is; therefore, a broad-brush assessment of shortages and surpluses at the state and district levels are only general indicators of need. **Figure 3.12** shows truck parking shortages and surpluses by district.

Figure 3.12 Peak-Hour Truck Parking Shortages and Surpluses by Interstate Segment



Source: ATRI; Cambridge Systematics, Inc. analysis.

4.0 Prioritization of Truck Parking Needs

This section prioritizes truck parking needs at the corridor level. The analysis consisted of two factors, both described in Section 3:

- **Demand**—Use the shortage and supply data as an indicator of parking at designated and undesignated locations.
- **Safety**—Uses parked-truck involved collisions as an indication of safety.

The study analysis corridors were first divided into 15–25-mile segments using GIS tools to split segments at natural breaks. In addition, segments do not overlap county or SCDOT district boundaries. Both of the above factors were then summarized by segments and combined into a single score using a weighted formula described below.

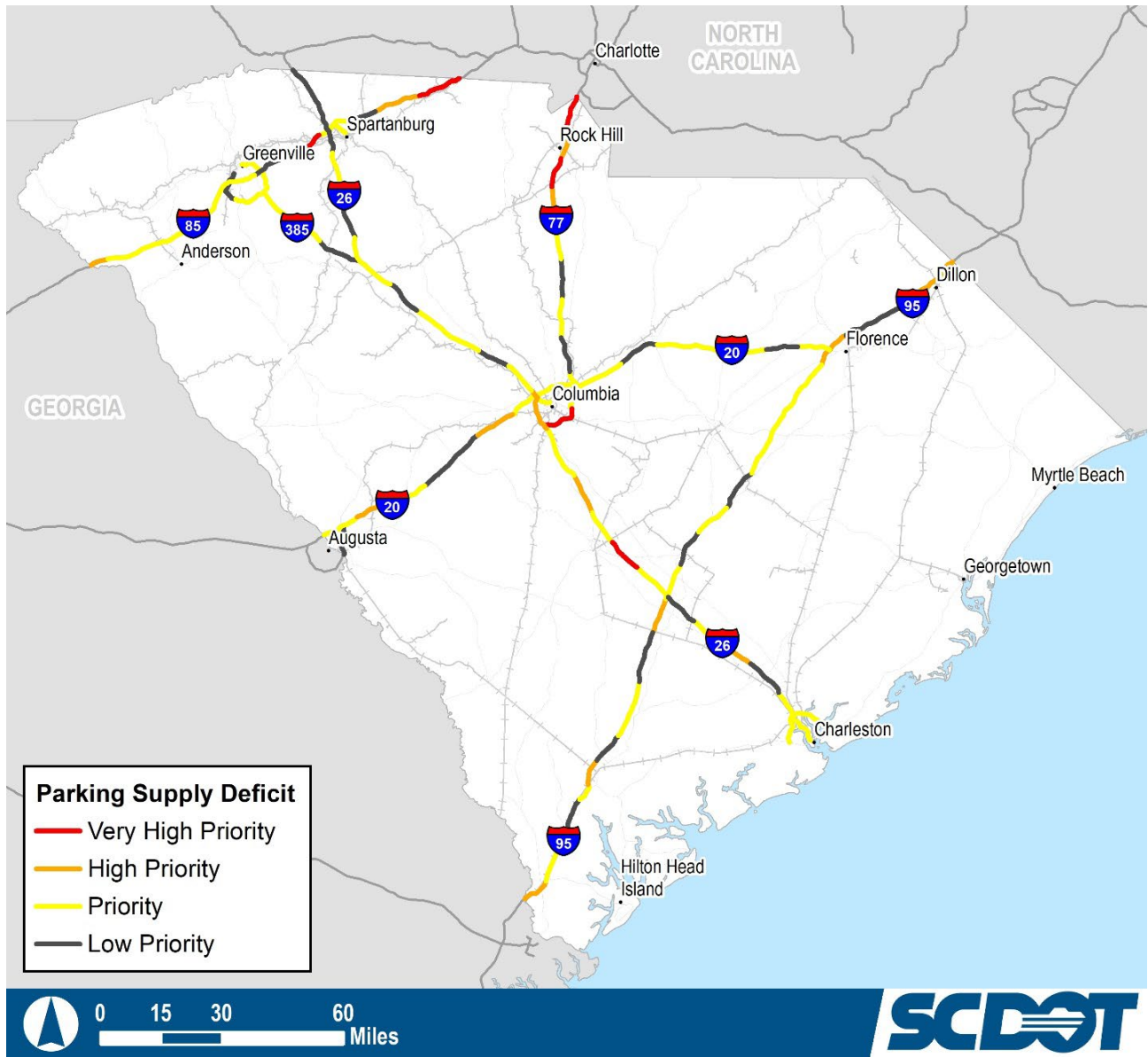
4.1 Prioritized Demand Factor

To estimate the demand for truck parking within each segment, the total number of trucks parked at designated and undesignated locations within the segment at the statewide peak hour was subtracted from the total number of designated truck parking spaces. The deficit or surplus was then normalized by dividing it by the segment length. For example, a 10-mile segment with 20 designated truck parking spaces, 23 trucks parking at designated locations, and 7 trucks parking in the ROW (undesignated parking) would have a deficit of 10 spaces, or 1 space per mile. Segments were then categorized based on the magnitude of their parking supply deficit:

- **Very High Priority**—Segment experiences a more than 3 trucks per mile deficit in parking capacity based on peak-hour demand.
- **High Priority**—Segment experiences a 1 to 3 trucks per mile deficit in parking capacity based on peak-hour demand.
- **Priority**—Segment experiences a 0 to 1 truck per mile deficit in parking capacity based on peak-hour demand.
- **Low Priority**—Segment experiences a surplus in parking capacity based on peak-hour demand.

Figure 4.1 shows the results of this analysis. Segments with the highest need as captured by demand are along I-85 and I-77 near the North Carolina state line. In addition, I-85 between Greenville and Spartanburg and I-77 between I-20 and I-26 near Columbia were determined to have a high need. Note that segments with a surplus are not shown as having a need.

Figure 4.1 Prioritized Demand Factor



Source: Cambridge Systematics, Inc. analysis.

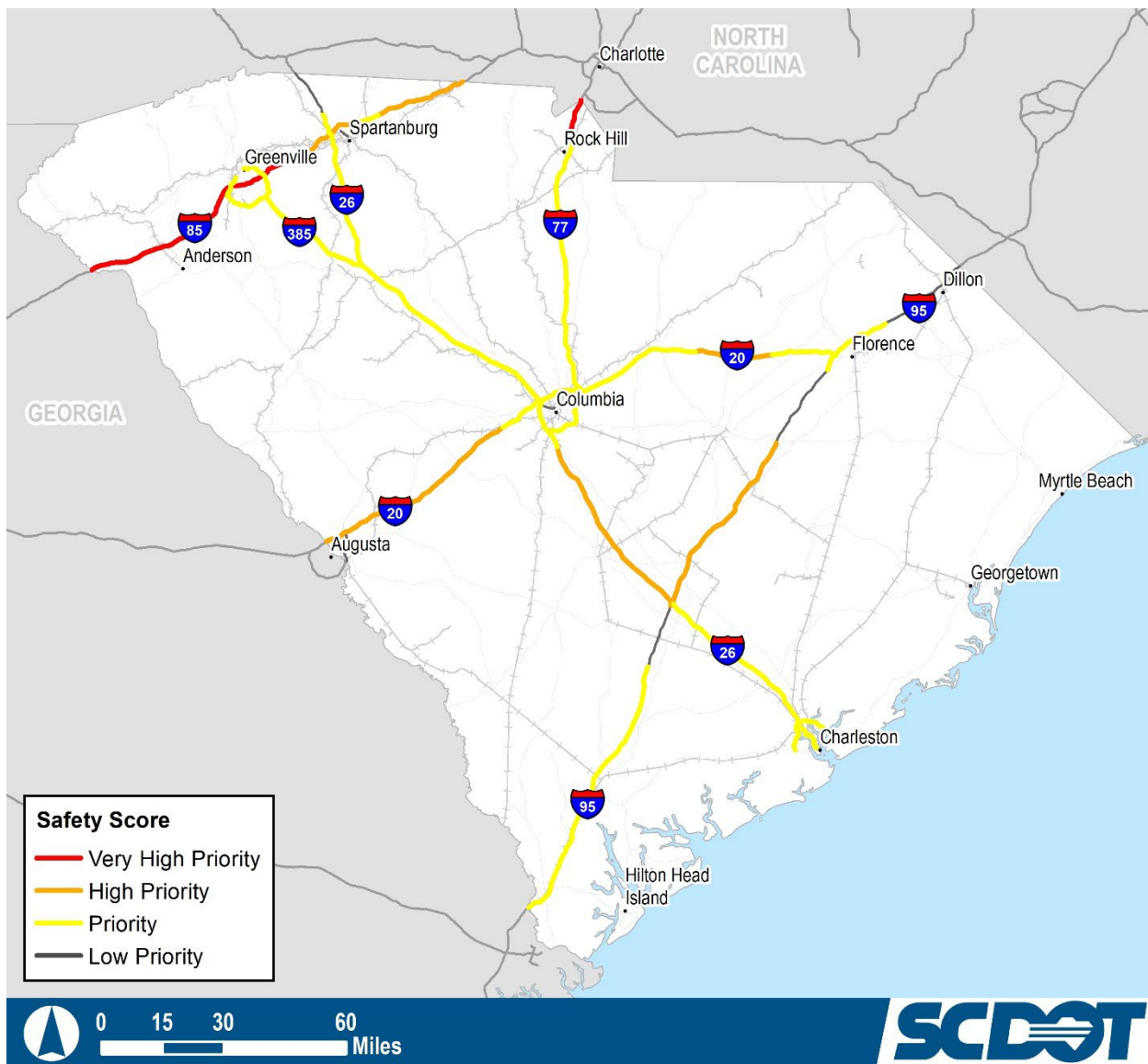
4.2 Prioritized Collision Factor

The Prioritized Collision Factor, along with the Prioritized Demand Factor, serves as an indicator safety at the segment in the combined analysis. Crashes were weighted so that fatal crashes were given 5 points, injury crashes were given 3 points, and all other crashes were given 1 point. The points for each segment were totaled, divided by the length of the segment to normalize the values, and then multiplied by 100. For example, a 10-mile segment with 5 total points would receive a safety score of 50 (i.e., 5 points / 10 miles x 100 = 50). Segments were then categorized based on the magnitude of their safety scores:

- **Very High Priority**—Segment has a safety score greater than 50.
- **High Priority**—Segment has a safety score between 25 and 50.
- **Priority**—Segment has a safety score less than 25, but greater than 0.
- **Low Priority**—Segment has a safety score equal to 0, indicating that it experienced no collisions involving parked trucks.

Figure 4.2 shows the safety scores for South Carolina Interstate highways. Similar to the Parking Demand Factor, only segments with crashes involving parked trucks were categorized as having a safety need. The highest need segments are along I-85 between the Georgia state line and Greenville. Also, I-77 between the North Carolina state line and Rock Hill exhibits a high need based on the safety score.

Figure 4.2 Prioritized Collision Factor



Source: Cambridge Systematics, Inc. analysis.

4.3 Combined Prioritized Score

The Combined Prioritized Score incorporates both factors for a comprehensive view of truck parking needs in the state. For both the demand and safety prioritization factors, segments were awarded points based on their categorization as high, medium, low, or very low priority from their individual analyses (see Sections 3.1):

- **Very High Priority** = 100 points.
- **High Priority** = 67 points.
- **Priority** = 33 points.
- **Low Priority** = 0 points.

The Combined Prioritized Score adds the scores from both prioritization factors, but weights them so that the combined score is scaled from 0 to 100 with 100 indicating the highest need segments and 0 the lowest (see Equation 4.1). Because the Prioritized Demand Factor is considered the most reliable indicator of need, both in terms of truck parking demand and safety, it was weighted at 70 percent. The Prioritized Safety Factor was weighted at 30 percent.

$$\text{Equation 4.1 (Combined Prioritized Score = } 70\% \times \text{Prioritized Demand Factor} + 30\% \times \text{Prioritized Safety Factor)}$$

For example, if a segment was determined to be “High Priority” for safety based on the analysis in Section 3.1, then its Prioritized Safety Factor is equal to 67 points. If that same segment was determined to be “Very High Priority” for truck parking demand based on the analysis in Section 3.1, then its Prioritized Demand Factor is equal to 100 points. Using Equation 4.1, the Combined Prioritized Score for that segment would be 90.1 points (i.e., 90.1 points = 70% x 100 points + 30% x 67 points).

Figure 4.3 maps the results of these combined scores, and **Table 4.1** identifies the segments with the highest combined scores, and thus the highest truck parking needs. Segments with the highest need, as captured by the combined score, are primarily along I-85 and I-77 near the North Carolina and Georgia state lines. In addition, I-77 near the City of Columbia and I-26 in Orangeburg County were determined to have a high need.

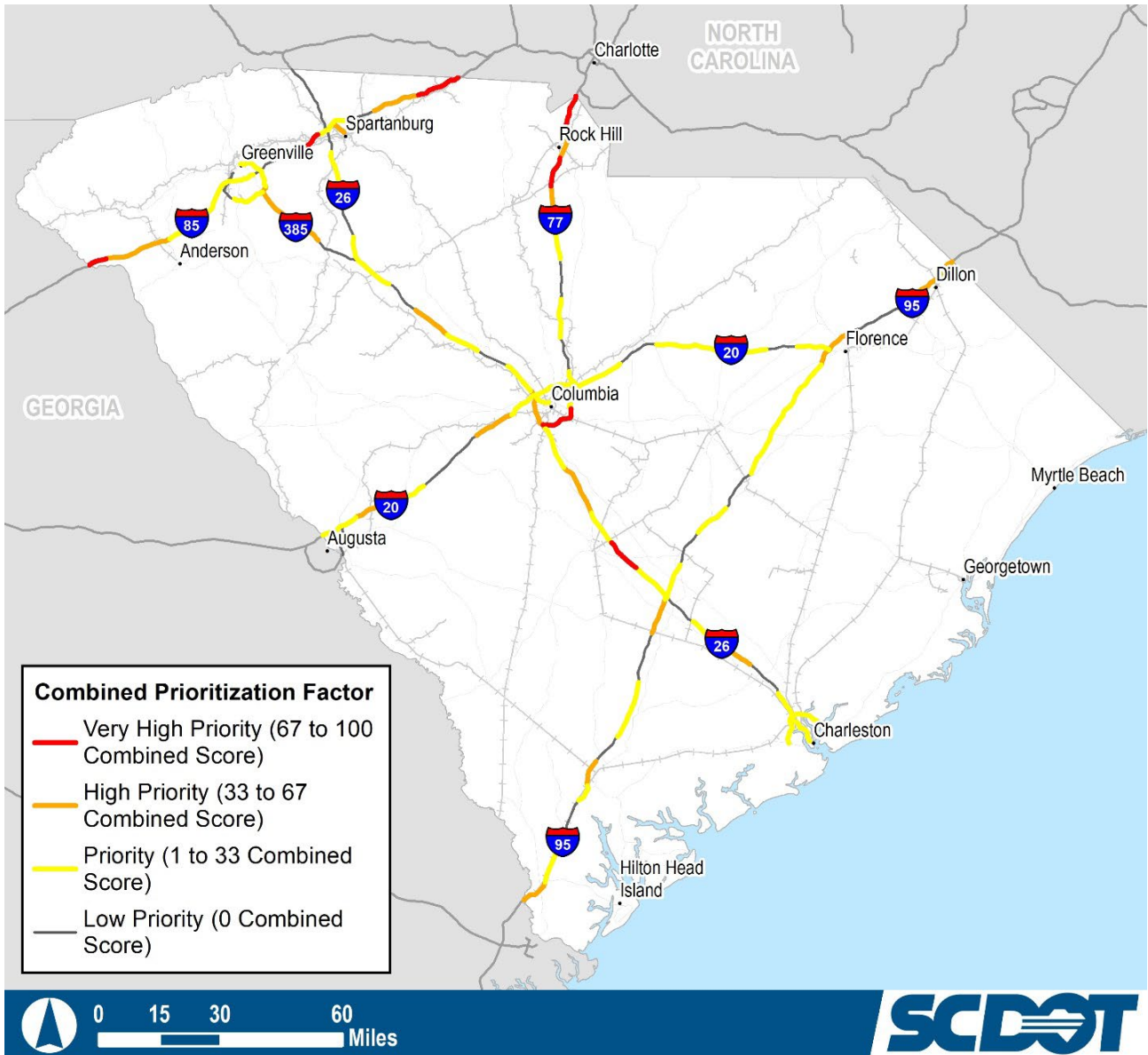
Table 4.1 Highest Need Corridors

Highway	Location	Length (Miles)
I-77	SC-NC state line to Catawba River near the City of Fort Mill	9
I-26	Calhoun County east of US 21	20
I-85	SC-GA state line to Oconee-Anderson County line	37
I-85	Between SR 101 and US 276/Laurens Rd. near the City of Greenville	24
I-85	SC-NC state line to SR 18/N. Limestone St. near the City of Gaffney	29
I-26	East of Jedburg Rd. and west of SR 27 in Berkeley and Dorchester Counties	31

Highway	Location	Length (Miles)
I-77	SR 245/Porter Rd. in York County to Gaston Farm Rd. in Chester County	13
I-77	Between I-26 and SR 760/Fort Jackson Blvd. in the City of Columbia	29
I-26	Between SR 33/Russell St. and Homestead Rd. in Orangeburg County	20

Source: Cambridge Systematics, Inc. analysis.

Figure 4.3 Combined Prioritized Score



Source: Cambridge Systematics, Inc.

5.0 Strategies and Implementation Considerations

South Carolina has several strategies that it may pursue to address its truck parking needs. Broadly, those strategies are grouped into three different categories:

1. **Strategies to Increase Truck Parking Capacity**—Strategies to build new or expand existing facilities.
2. **Strategies to Better Utilize Existing Infrastructure for Truck Parking**—Operational strategies to improve utilization of existing and non-traditional capacity.
3. **Policy and Program Strategies**—Strategies to address regulatory, communication, and knowledge gap hurdles to enhancing capacity. These include strategies to leverage private-sector resources for providing truck parking.

A toolbox of strategies available to SCDOT, by category and the truck driver parking need they satisfy, are listed in **Table 5.1**, with descriptions of each in Section 5.1 through Section 5.3.

Table 5.1 State Strategies to Address Truck Parking Needs




Strategy	10-Hour Rest	2+ Hour Staging	30-Minute Break	Road Closures	Time off
Strategies to Increase Truck Parking Capacity					
Expand and upgrade truck parking at existing SCDOT rest areas and truck parking facilities	✓		✓	✓	
Expand and upgrade truck parking at existing South Carolina Department of Parks, Recreation, and Tourism (SCPRT) Welcome Centers	✓		✓	✓	
Build dedicated, SCDOT maintained, truck parking facilities within highway ROW	✓		✓	✓	
Expand existing commercial vehicle weigh stations to accommodate overnight truck parking	✓		✓	✓	
Strategies to Better Utilize Existing Infrastructure for Truck Parking					
Develop a Truck Parking Information Management System (TPIMS)	✓	✓	✓	✓	✓
Install Static Signs Indicating Upcoming Locations for Truck Parking (pre-TPIMS)	✓	✓	✓	✓	
Policy and Program Strategies in Support of Truck Parking					
Support private-sector deployment of zero emissions fuels (ZEF) at truck parking facilities	✓		✓	✓	
Develop guidelines for integrating truck parking into the SCDOT project development process	✓	✓	✓	✓	
Consider truck parking needs prior to the purchase or sale of ROW	✓	✓	✓	✓	
Consider truck parking needs and the potential for conversion to truck parking prior to the closure of a SCDOT facility	✓	✓	✓	✓	

Strategy	10-Hour Rest	2+ Hour Staging	30-Minute Break	Road Closures	Time off
Reassess public facility designs to accommodate OS/OW vehicles	✓	✓	✓	✓	
Modify the design guidelines for new commercial vehicle inspection facilities to include space for overnight truck parking, where feasible	✓	✓	✓	✓	
Collect truck and car utilization data	✓		✓	✓	
Encourage, educate, and coordinate with local and regional agencies to advance truck parking in their jurisdictions	✓	✓	✓	✓	✓

Source: Cambridge Systematics, Inc.

Section 5.1 through Section 5.3 also include implementation considerations for each of the strategies. Each section leads off with a Summary of Actionable Steps in table format that includes the following information:

- **Lead Agency** is indicated for each, which in most cases is SCDOT, but in some cases a co-lead is noted.
- **Supporting Agencies** are additional agencies in a supporting role.
- **Ease of Implementation** is a comparative and high-level assessment of the complexity of implementing each strategy on a scale of one to three.

- Less difficult 
- Moderately difficult 
- Very difficult 

- **Cost** is a comparative and high-level assessment of the cost of each strategy ranging from no cost to higher cost assumptions, indicated with \$, \$\$, \$\$\$ symbols.
- **Potential Funding Source(s)** are noted in each table and described in Section 6.0.

5.1 SCDOT Strategies and Implementation Considerations to Increase Truck Parking Capacity

Strategies and implementation considerations that SCDOT can take for increasing the number of truck parking spaces are summarized in **Table 5.2**, and includes the steps necessary to complete them; the supporting agencies who would be involved; high-level assessments of the ease of implementation and costs; and potential funding source(s). More detailed information on potential funding sources is included in Section 7.

Table 5.2 Summary of Actionable Steps to Increase Truck Parking Capacity

Actionable Steps	Lead Agency	Supporting Agencies	Ease of Implementation	Cost	Promising Funding Source(s)
Strategy 1. Expand and upgrade truck parking at existing SCDOT rest areas and truck parking facilities.					
1. Identify and prioritize potential sites for a feasibility assessment.	SCDOT	Metropolitan Planning Organizations (MPO), Council of Governments (COG), FHWA		\$\$\$	Federal (STBG, NHFP, HSIP, NHPP, CMAQ, INFRA, RAISE), State
2. Conduct site feasibility assessment and recommendations at priority sites.					
3. Prioritize recommended sites for improvement.					
4. Design and construct projects.					
Strategy 2. Expand and upgrade truck parking at existing SCPRT welcome centers.					
1. Among the state's 8 welcome centers, identify and prioritize potential sites for a feasibility assessment.	SCDOT and SCPRT (co-lead agencies)	FHWA		\$\$\$	Federal (STBG, NHFP, HSIP, NHPP, CMAQ, INFRA, RAISE), State
2. Conduct site feasibility assessment and recommendations at priority sites.					
3. Prioritize recommended sites for improvement.					
4. Design and construct projects.					
Strategy 3. Build dedicated SCDOT-maintained truck parking facilities within highway ROW.					
1. Identify and prioritize potential sites on or near medium- to high-demand corridors for a feasibility assessment.	SCDOT	MPOs, COGs, FHWA		\$\$\$	Federal (STBG, NHFP, HSIP, NHPP, CMAQ, INFRA, RAISE), State
2. Conduct site feasibility assessment and recommendations at priority sites.					
3. Prioritize recommended sites for improvement.					
4. Design and construct projects.					
Strategy 4. Expand existing commercial vehicle weigh stations to accommodate overnight truck parking.					
1. Among the state's 13 weigh stations, identify and prioritize potential sites for a feasibility assessment.	SCDOT and South Carolina Department of Public Safety (SCDPS) (co-lead agencies)	FHWA		\$\$\$	Federal (STBG, NHFP, HSIP, NHPP, CMAQ, INFRA, RAISE), State
2. Conduct site feasibility assessment and recommendations at priority sites.					
3. Prioritize recommended sites for improvement.					
4. Design and construct projects.					

STBG = Surface Transportation Block Grant Program; NHFP = National Highway Freight Program; HSIP = Highway Safety Improvement Program; NHPP = National Highway Performance Program; CMAQ = Congestion Mitigation and Air Quality; INFRA = Infrastructure for Rebuilding America; RAISE = Rebuilding American Infrastructure with Sustainability and Equity.

Source: Cambridge Systematics; WSP.

5.1.1 Expand and upgrade truck parking at existing SCDOT rest areas and truck parking facilities.

Description

It is more cost-effective to expand public facilities that are at or over capacity than constructing new facilities. Existing facilities already have basic amenities (e.g., restrooms, drinking water, vending, etc.), established cleaning services, security, and infrastructure such as utilities and access ramps. Depending on the footprint of the existing facility and the desired amount of new capacity, additional capacity may be able to fit within existing ROW limits or with little ROW acquisition. Other advantages of expanding existing facilities include known demand levels and driver familiarity. At existing facilities, demand is known or could be determined based on observed driver parking behavior. For new facilities, demand would need to be estimated based on observed unauthorized parking behavior, and also on other indirect factors such as total truck volumes. Another advantage of expanding an existing facility is driver familiarity as motor carriers are already aware of the location's existence. Because of these advantages, there is a low risk that new capacity at an existing facility would be underutilized. The primary disadvantages of existing facilities are that they may not be located where capacity is most needed, and there may not actually be sufficient space to add capacity.

In some cases, there may be potential to add spaces without expanding beyond the existing site footprint by changing striping and site flow patterns. In other cases, there may be existing ROW that can be used to expand the physical footprint of these facilities, as well as striping and site flow pattern changes to accommodate more trucks. For high-demand locations, where existing ROW constraints limit opportunities for expansion, SCDOT should consider acquiring additional ROW.

All authorized truck parking locations with a high-capacity need are candidates for expansion, if deemed feasible. Some facilities with medium- or low-capacity need may be underutilized because they do not offer the amenities truck drivers need, or have poor layout, lighting, or signage that, if improved, could attract more drivers to park there and reduce parking in unsafe, unauthorized locations. In some cases, the upgrade will also include an expansion.

Implementation Considerations

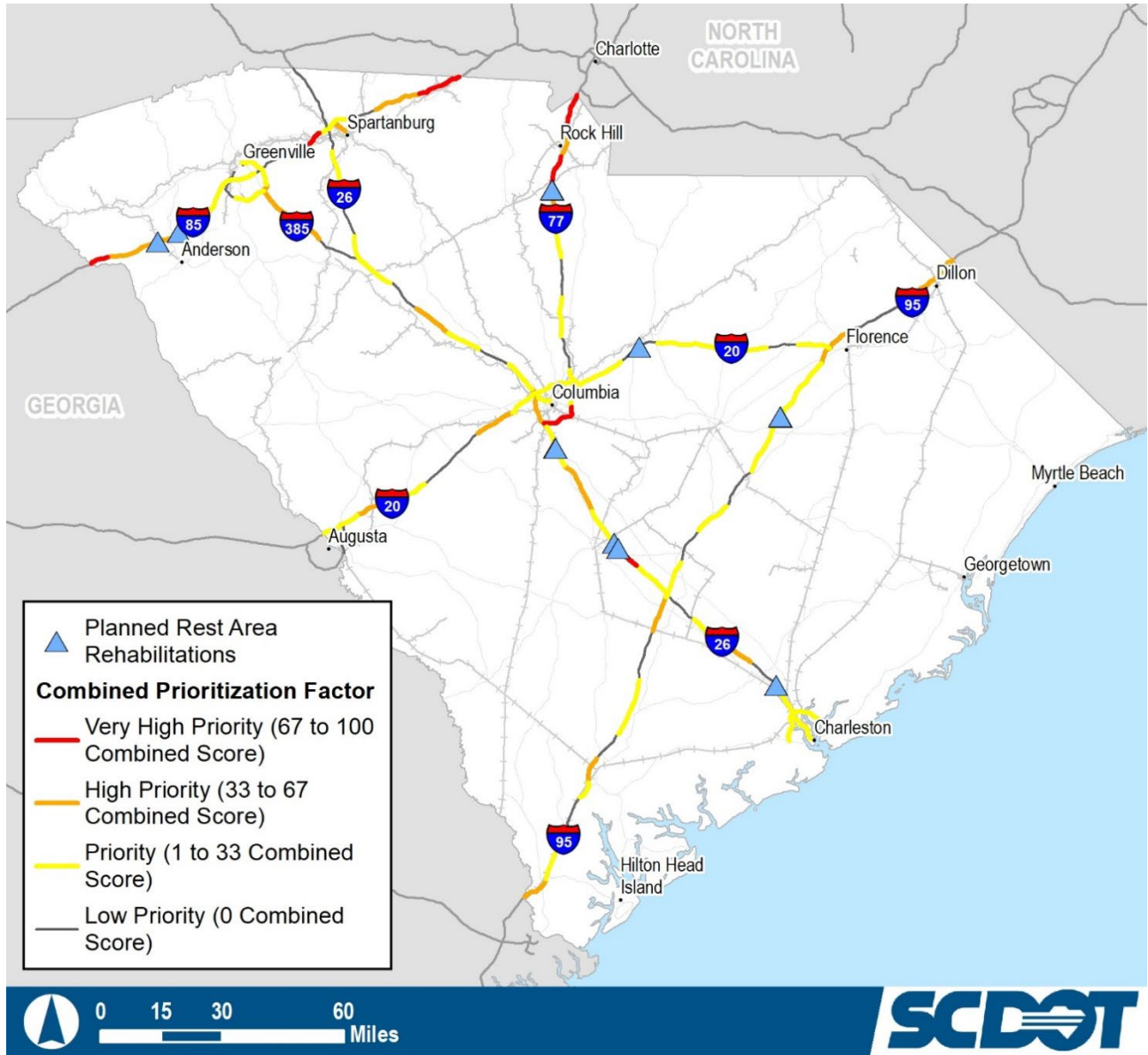
SCDOT has already taken the first step in implementing this strategy. SCDOT has committed \$150 million for rest area rehabilitation throughout the state, a portion of which will go toward expanding the number of truck parking spaces at several rest areas. **Table 5.3** and **Figure 5.1** show those rest areas that are planned for rehabilitation that would be excellent candidates for expanding the number of truck parking spaces. Several of them are at or over capacity during peak periods, and others are located on the highest need corridors in the state such as I-26. They represent a significant step toward closing the gap between demand and capacity. **Table 5.4** shows the remainder of the rest areas planned for rehabilitation.

Table 5.3 Proposed Truck Parking Expansion at Planned Rest Area Rehabilitations

Site	Mile Point	County	District	Peak-Hour Utilization	Corridor Priority Level
Charleston I-26 Rest Area Eastbound	204	Charleston	6	At or over capacity (>90% utilization)	Low Priority
Orangeburg I-26 Rest Area Eastbound	150	Orangeburg	7	At or over capacity (>90% utilization)	Very High Priority
Orangeburg I-26 Rest Area Westbound	152	Orangeburg	7	At or over capacity (>90% utilization)	Very High Priority
Calhoun I-26 Rest Area Westbound	122.5	Calhoun	7	At or over capacity (>90% utilization)	Priority
Calhoun I-26 Rest Area Eastbound	123	Calhoun	7	At or over capacity (>90% utilization)	Priority
Kershaw I-20 Rest Area Westbound	93.5	Kershaw	1	At or over capacity (>90% utilization)	Low Priority
Chester I-77 Rest Area Northbound	65.7	Chester	4	At or over capacity (>90% utilization)	High Priority
Chester I-77 Rest Area Southbound	65.7	Chester	4	At or over capacity (>90% utilization)	High Priority
Anderson I-85 Rest Area Northbound	17	Anderson	2	At or over capacity (>90% utilization)	Priority
Anderson I-85 Rest Area Southbound	24	Anderson	2	At or over capacity (>90% utilization)	Priority
Sumter I-95 Rest Area Northbound	139	Sumter	1	At or over capacity (>90% utilization)	Priority
Sumter I-95 Rest Area Southbound	139	Sumter	1	At or over capacity (>90% utilization)	Priority

Source: SCDOT; Cambridge Systematics.

Figure 5.1 Proposed Truck Parking Expansion at Planned Rest Area Rehabilitations



Source: SCDOT; Cambridge Systematics.

Table 5.4 Additional Planned Rest Area Rehabilitations

Site	Mile Point	County	District	Peak-Hour Utilization	Corridor Priority Level
Newberry I-26 Rest Area Eastbound	63.5	Newberry	2	Near capacity (70%–90% utilization)	Low Priority
Newberry I-26 Rest Area Westbound	63.5	Newberry	2	Has availability (<70% utilization)	Low Priority
Kershaw I-20 Rest Area Eastbound	93.5	Kershaw	1	Near capacity (70%–90% utilization)	Low Priority
Laurens I-385 Rest Area North/South	5.8	Laurens	2	Has availability (<70% utilization)	Low Priority
Colleton I-95 Rest Area Northbound	47	Colleton	6	At or over capacity (>90% utilization)	Low Priority
Colleton I-95 Rest Area Southbound	47	Colleton	6	Has availability (<70% utilization)	Low Priority

Source: SCDOT; Cambridge Systematics.

Once these upgrades are complete, additional rest areas that are nearing capacity or at or over capacity, and that are located in priority and high priority corridors, as shown in **Table 5.5**, could be candidates for expansion. For example, Appendix D.1 shows concept drawings and planning-level cost estimates (based on 2022 dollars) for expanding the dedicated truck parking facilities in Aiken County along I-20 eastbound and westbound. Those facilities are on priority corridors and are at or over capacity. Expanding them could add an additional 147 truck parking spaces to the state’s total supply at an estimated planning-level cost of about \$10 million (based on 2022 dollars). This represents about 14 percent of the state’s estimated 1,038 truck parking space deficit.

Table 5.5 Additional Rest Areas to Consider for Expansion after Initial Rehabilitations are Complete

Site	Mile Point	County	District	Peak-Hour Utilization	Corridor Priority Level
Aiken I-20 Truck Parking Only Eastbound	21	Aiken	7	At or over capacity (>90% utilization)	Priority
Aiken I-20 Truck Parking Only Westbound	21	Aiken	7	At or over capacity (>90% utilization)	Priority
Jasper I-95 Truck Parking Only Southbound	18	Jasper	6	At or over capacity (>90% utilization)	Priority
Jasper I-95 Truck Parking Only Northbound	18	Jasper	6	Near capacity (70%–90% utilization)	Priority
Dorchester I-95 Truck Parking Only Southbound	73	Dorchester	6	Has availability (<70% utilization)	High Priority
Orangeburg I-95 Rest Area Northbound	99	Orangeburg	7	At or over capacity (>90% utilization)	Low Priority

Site	Mile Point	County	District	Peak-Hour Utilization	Corridor Priority Level
Darlington I-20 Truck Parking Only Eastbound	129	Darlington	5	At or over capacity (>90% utilization)	Low Priority
Darlington I-20 Truck Parking Only Westbound	129	Darlington	5	At or over capacity (>90% utilization)	Low Priority

Source: SCDOT; Cambridge Systematics.

A more detailed feasibility assessment (step 2 under this strategy in **Table 5.2**) of each location would be needed to determine site-specific conditions and needs. Sites determined to be not feasible would be dropped from contention, while the remainder would be prioritized based on the demand for truck parking along the corridors containing the sites, safety needs, and other relevant concerns. From there, design and construction activities would begin at the sites in order of priority and as funding is made available.

5.1.2 Expand and upgrade truck parking at existing SCPRT Welcome Centers.

Description

This strategy is identical to the expanding and upgrading truck parking at existing SCDOT rest areas strategy above. However, because the Welcome Centers are managed by a different state agency, the implementation considerations will vary.

Implementation Considerations

SCDOT and SCPRT have an existing partnership where SCDOT owns the state's Welcome Centers, but they are managed by SCPRT. Using this relationship, SCDOT and SCPRT could work together to expand truck parking capacity at Welcome Centers. Similar to expanding rest areas, in most cases, it will be advantageous to the state to expand existing locations instead of building new facilities. Furthermore, all Welcome Centers are candidates for expansion as the demand assessment determined that six of the state's eight welcome centers are over capacity for truck parking, and that all welcome centers are located on corridors with at least moderate truck parking needs. For some welcome centers, it is possible to expand capacity within existing ROW and by modifying striping and site flow patterns (see Appendix D.2). For other welcome centers at high-demand locations where existing ROW or other constraints limit opportunities for expansion, SCDOT should consider acquiring additional ROW.

Not all of the locations identified will be expanded or upgraded. Rather, all identified locations will be considered and will undergo a more detailed feasibility assessment to determine site-specific conditions and needs. Sites determined to be feasible for expansions or upgrades would then be prioritized based on the demand for truck parking along the corridors containing the sites, safety needs, and other relevant concerns. To fully implement this strategy, design and construction activities would begin at the sites in order of priority and as funding is made available.

For illustrative purposes only, concept drawings and planning-level cost estimates are shown in Appendix D.2 for expanding the truck parking at the Hardeeville and Blacksburg Welcome Centers on I-95 in Jasper County and I-85 in Cherokee County, respectively. The cost estimates for these concepts are based on 2022 dollars. The actual site(s) for expansion should be determined following a thorough assessment.

5.1.3 Build dedicated, SCDOT maintained, truck parking facilities within highway ROW.

Description

In some cases, expanding an existing facility is not an option as truck parking might be needed in locations where there are currently no facilities. In these cases, a new truck parking facility would be necessary, an option which might require the purchase of additional ROW. Building a new facility is typically more expensive than expanding an existing facility due to capital costs, including land, ingress and egress, utilities, and amenities. There are two broad options under this category: repurpose closed rest areas and weigh stations; and develop an entirely new facility.

Repurpose Closed Rest Areas and Weigh Stations

Land at these locations may still be publicly owned and prior investments (grading, entrance/exit ramps, electricity, pavement, etc.) can reduce up-front costs. The Missouri DOT provides an example application of this solution as they converted 23 obsolete rest areas and weigh stations to parking spaces for trucks. These facilities typically have minimal amenities (e.g., lighting, graded/paved parking surfaces, restrooms).

Figure 5.2 shows a converted rest area on I-70 in Missouri.

Figure 5.2 Missouri Converted I-70 Rest Area



Source: Missouri DOT Presentation to the Eastern Transportation Coalition, May 1, 2018.

Develop New Facilities

Not every corridor for which there is an identified need for truck parking will have a closed facility on it, or nearby, that can be repurposed for truck parking. In some instances, a closed facility may be proximate, but there may be site or other constraints that limit the amount of truck parking that can be developed there. In those scenarios, SCDOT may consider developing new facilities.

Implementation Considerations

The first step in this strategy would be to identify sites on medium- to high-need corridors for a feasibility assessment. The opportunity sites identified in Appendix A can serve as the candidate sites for the feasibility

assessment, but others may be added, as deemed appropriate by SCDOT. The cost estimates for these concepts are based on 2022 dollars.

From there, SCDOT would perform a feasibility assessment for the selected sites. The site feasibility analysis is required to better understand local conditions, such as presence or lack of utilities, surrounding land use conditions and ownership, exact ROW constraints, and other issues that may make a recommendation unfeasible. For example, a location may be on a high-priority segment, but the site feasibility analysis discovers that there are underground utilities that would make it cost-prohibitive to construct truck parking.

Those sites determined to be feasible for truck parking would continue through the process. Identified sites that are not already owned by SCDOT must go through the ROW process. After developing more detailed data about each site during assessment, including engineering-level cost estimates, SCDOT would then prioritize the sites, identify funding, and add the projects to the State Transportation Improvement Program. As the last step, SCDOT would design and construct the facilities.

Repurpose Closed Rest Areas and Weigh Stations

There are multiple closed rest areas and weigh stations throughout the state, including corridors for which a need for truck parking has been identified. For facilities that the state may consider for closure in the future, truck parking needs should be evaluated before the property is offered for sale or considered for other use. A listing of closed rest areas and weigh stations in areas where truck parking demand is high, and which could potentially be converted to dedicated truck parking is seen in **Table 5.6**. These locations could add approximately 284 truck parking spaces to the state’s supply at an estimated cost of about \$21 million (based on 2022 dollars). This represents about 27 percent of the state’s estimated 1,038 truck parking space deficit. For illustrative purposes only, concept drawings and planning-level cost estimates for converting these sites are shown in Appendix D.3.

Table 5.6 Potential Sites for Conversion of Closed Rest Areas and Weigh Stations which could Potentially be Converted to Dedicated Truck Parking

Site	Mile Point	County	District	Potential Number of Spaces Added	Cost Estimate (2022 Dollars)
I-85 NB Spartanburg	62.5	Spartanburg	3	33	\$2,591,121
I-85 SB Spartanburg	64.8	Spartanburg	3	31	\$2,266,407
I-20 EB Lexington	48.5	Lexington	1	66	\$4,852,647
I-20 WB Lexington	48.5	Lexington	1	61	\$3,872,127
I-85 NB Cherokee County	88.5	Cherokee	4	36	\$3,426,046
I-85 SB Cherokee County	88.9	Cherokee	4	57	\$3,937,425
Total				284	\$20,945,773

Source: SCDOT; WSP; Cambridge Systematics.

Develop New Facilities

Appendix D.3 also includes a concept drawing and planning-level cost estimate for a new facility located at the I-77/I-20 interchange in Lexington County that could add over 80 spaces. This particular site would need a detailed study to determine its feasibility. However, it has significant potential to generate truck parking

benefits as it would be located along a high demand corridor and proximate to freight-intensive land uses in Metro Columbia (e.g., SR 48 corridor south of downtown Columbia, SR 768 corridor between I-77 and US 378). Additionally, it illustrates how larger, vacant parcels within the ROW could be utilized for truck parking if other necessary conditions are met.

5.1.4 Expand existing commercial vehicle weigh stations to accommodate overnight truck parking.

Description

This strategy would add truck parking capacity adjacent to existing weigh stations. Commercial vehicle weigh stations are already located throughout the Interstate system and are designed to accommodate freight vehicles. Expanding truck parking at weigh stations would add to the state's capacity at sites that are already designed for truck usage.

However, it should be noted that care must be taken so that additional parking does not interfere with the operations of the weigh station. Most weigh stations include a handful of truck parking spaces for drivers to use while conducting business at the facility or when a truck is temporarily placed out of service. This strategy does not propose that those spaces, or other portions of the existing weigh station footprint, should be converted to overnight parking. Instead, this strategy proposes that a separate lot for long-term parking be developed where sufficient ROW adjacent to a weigh station exists or can be acquired.



Implementation Considerations

The first step to implementing this strategy would be for SCDOT and SCDPS to identify and prioritize which of the state's 13 weigh stations could undergo a feasibility assessment for determining their ability to accommodate overnight truck parking. This step would be guided by the corridor-level needs assessment performed as part of the demand analysis. From there, SCDOT and SCDPS would determine which sites should be expanded, prioritize them according to need and opportunity, and lastly design and construct the expansions.

5.2 SCDOT Strategies and Implementation Considerations to Better Utilize Existing Infrastructure

This section includes technology and operational strategies and implementation considerations for better utilizing existing truck parking infrastructure. Technology programs, in particular, provide drivers with information about existing truck parking, allowing those facilities to be used more effectively. The upfront capital costs and ongoing maintenance costs associated with these strategies are often lower than building new truck parking spaces. Additionally, the time needed for planning and implementation is a fraction of what is needed for construction. For these reasons, technology solutions are often more efficient in meeting immediate needs. **Table 5.7** provides a summary of the proposed strategies and relevant next steps with additional details in the following sections. Each strategy includes information on supporting agencies, ease of implementation, cost, and potential funding sources. More detailed information on potential funding sources is included in Section 7.

Table 5.7 Summary of Actionable Steps to Better Utilize Existing Infrastructure

Actionable Steps	Lead Agency	Supporting Agencies	Ease of Implementation	Cost	Promising Funding Source(s)
Strategy 1. Develop a TPIMS					
1. Develop a Concept of Operations (ConOps) for a TPIMS that covers all public truck parking facilities in the state.	SCDOT	FHWA, MPOs, COGs		\$\$	Federal (ATTIMD, STBG, NHFP, NHPP, INFRA, RAISE), State
2. Apply for competitive grants and secure other Federal and state funding to develop the TPIMS.					
3. Deploy the TPIMS.					
4. Upon successful deployment of the TPIMS, explore the potential to expand the system to include private truck parking facilities.					
5. Coordinate with SCDPS to link enforcement tools to TPIMS real-time utilization data.					
6. Collect passenger vehicle and truck parking utilization data at public facilities on a routine basis.					
Strategy 2. Install Static Signs Indicating Upcoming Locations for Truck Parking (pre-TPIMS).					
1. Identify mile markers where rest area signage (such as Manual on Uniform Traffic Control Devices (MUTCD) D5-1, D5-1a, D5-2, D5-2a, D5-5, or D5-6) is located.	SCDOT	FHWA		\$	Federal (NHFP, NHPP), State
2. Install truck parking signage (such as D9-16) at those same locations.					

ATTIMD = Advanced Transportation Technologies and Innovative Mobility Deployment Program.

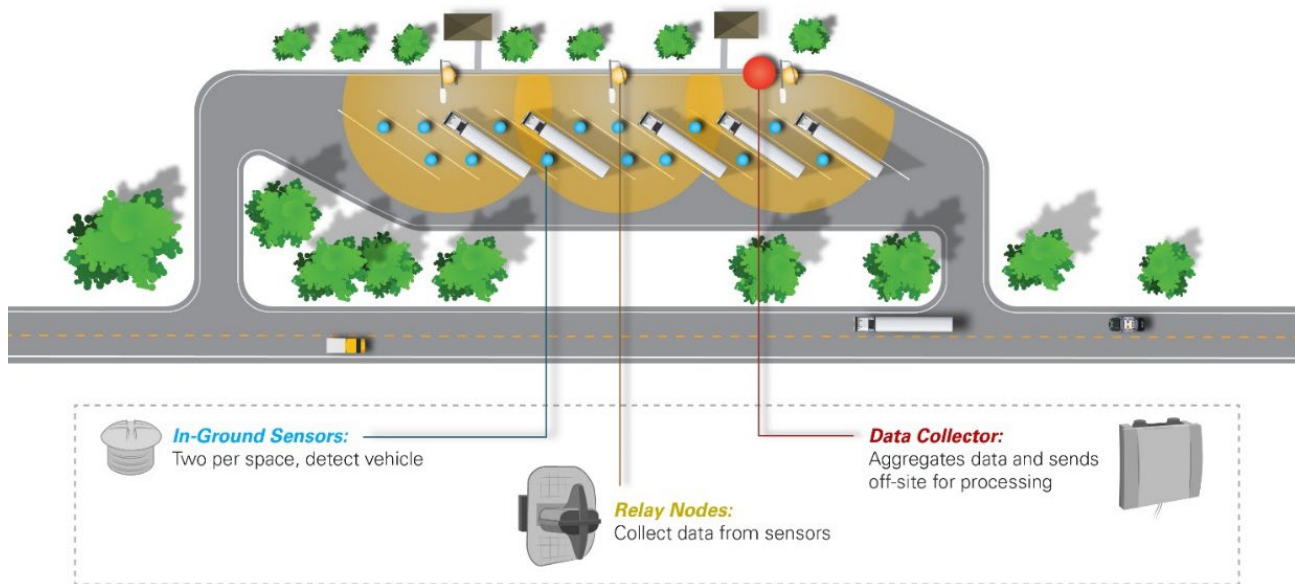
Source: Cambridge Systematics; WSP.

5.2.1 Develop a TPIMS.

Description

A TPIMS would include dynamic signs along the highway alerting drivers of upcoming available parking sites, distances, and the number of currently available spots at each site. These are most commonly deployed at rest areas and other public truck parking facilities; however, when done in partnership with commercial truck stops, the system is more robust and of greater utility to truck drivers. This strategy allows drivers to make better-informed decisions about whether to continue driving or choose available parking nearby despite the loss of driving hours. A typical TPIMS system consists of sensors at parking facilities to detect available (and occupied) spaces, software to monitor, and report on availability; and may include closed-circuit television cameras to provide real-time visual monitoring. **Figure 5.3** provides an example concept. The parking availability is then displayed in real-time on dynamic signs along the highway in advance of the parking sites. While this approach does not add new capacity or additional amenities, it helps drivers to be aware of available spaces on their route.

Figure 5.3 TPIMS Site Concept



Source: Nevada TPIMS Concept of Operations, Nevada DOT, March 2020.

Beyond its core function of providing information on the real-time availability of truck parking spaces, TPIMS also enables other functions to enhance access to truck parking and mitigate its impacts on communities. Two examples include parking utilization data to support planning needs and also real-time availability data to support enforcement of unauthorized parking. These two functions are discussed in greater detail in Sections 5.3.7 and 5.4.1.

Implementation Considerations

Development of a TPIMS ConOps would prioritize locations for TPIMS across the State and consider data collection and information dissemination approaches. The ConOps outlines all components of the TPIMS,

including detection devices, communications systems, information dissemination methods, and agency roles and responsibilities, among others, and should include the following items:

- **Technology concept specification:**
 - Data assessment—Determine data concept, ownership of data, data sharing, data repository, and interaction with potential private-sector truck parking data.
 - Operations assessment—Determine detailed TPIMS operations and maintenance regime.
 - Expected system types, system options, performance goals, cost ranges, and operations regimes for TPIMS implementation options (including annual operations and maintenance).
- **Site descriptions.**
- **System requirements:**
 - Functional requirements.
 - Communications requirements.
 - Interface requirements compatible with SCDOT's existing traffic management system.
 - Non-functional requirements.

Regarding information dissemination methods, information on where to find available truck parking is typically communicated to drivers via roadside signs and mobile applications. A popular option for roadside TPIMS signing is a static blue services sign with fixed destination options that each have a dynamic matrix panel for reporting available parking stalls. This option is widely used by member states of the Mid-America Association of State Transportation Officials (MAASTO).

Websites and mobile applications that disseminate information to drivers should also be a component of the ConOps. These tools complement dynamic signage as a driver accessing these sites would be able to see availability information for multiple facilities, as opposed to just the one they happen to be approaching at the time. In deploying TPIMS, SCDOT could integrate truck parking availability information into its existing Road Information System application or its SC 511 website. Additionally, SCDOT should make the data available via an application programming interface to fleet operators, third-party truck parking application developers, and mapping and traveler information platforms such as Waze and Google maps, to integrate into their own services. For example, the American Truck Parking website pulls the dynamic truck parking availability data from the MAASTO TPIMS programs.

5.2.2 Install Static Signs Indicating Upcoming Locations for Truck Parking (pre-TPIMS).

Description

This strategy is considered a precursor to an electronic TPIMS system and would install roadside signs indicating truck parking locations, distance, and the number of truck parking spots at upcoming locations. These static signs would require very little operation or funding beyond installation. This approach makes more efficient use of existing resources by communicating parking locations to truck drivers in advance,

potentially increasing awareness of underutilized parking. It also would help drivers to make informed choices to balance their HOS requirements with maximizing distance traveled and reduce the need for ad-hoc parking in risky locations, such as Interstate shoulders or on/off ramps.

Implementation Considerations






South Carolina rest areas and welcome centers generally do not have signage indicating that truck parking is provided at those facilities. This strategy would identify the locations where rest area signage (such as MUTCD D5-1, D5-1a, D5-2, D5-2a, D5-5, or D5-6) is located and install truck parking signage (such as D9-16) at those same locations.




In particular, this strategy should be considered along corridors where commercial truck parking facilities routinely reach or overflow capacity, but nearby rest areas or welcome centers typically have space available. An example is the I-95 SB Dillon Welcome Center and the Love's Travel Stop located about 5 miles south along SR 34. The analysis of truck GPS data indicated that the welcome center generally has capacity during peak periods, and that the commercial facility routinely overflows. While some drivers may knowingly bypass parking at the public facility because the commercial facility is preferred, others may not be aware that truck parking is available at the public facility.

5.3 SCDOT Strategies and Implementation Considerations to Advance Policies and Programs

This section includes policy and program strategies and implementation considerations. **Table 5.8** provides a summary of the proposed strategies and relevant next steps with additional details in the following sections. Each strategy includes information on supporting agencies, ease of implementation, cost, and potential funding sources. More detailed information on potential funding sources is included in Section 7.

Table 5.8 Summary of Actionable Steps to Advance Policies and Programs

Actionable Steps	Lead Agency	Supporting Agencies	Ease of Implementation	Cost	Potential Funding Source(s)
Strategy 1. Support private-sector deployment of ZEFs at truck parking facilities.					
1. Develop electric vehicle (EV) Infrastructure Deployment Plan	SCDOT	FHWA		\$	Federal (National Electric Vehicle Formula Program)
2. Administer the funding and program as outlined in the plan					
Strategy 2. Develop guidelines for integrating truck parking into the SCDOT project development process.					
1. Research and document the steps for SCDOT project development process.	SCDOT	FHWA		\$	State
2. Work with SCDOT Districts and Divisions to develop guidelines for integrating truck parking into the project development process.					
Strategy 3. Consider truck parking needs prior to the purchase or sale of ROW.					
1. Integrate truck parking into the guidelines for acquiring or disposing of ROW.	SCDOT	FHWA		\$	State
2. Develop the characteristics of desirable parcels (size, location, truck parking demand, proximity to other parking locations, etc.).					
Strategy 4. Consider truck parking needs and the potential for conversion to truck parking prior to the closure of a SCDOT facility.					
1. Identify public facilities (including welcome centers and weigh stations) that are slated for closure.	SCDOT	SCDPS, SCPRT, FHWA		\$	State
2. Evaluate the sites to determine if they are in high truck parking demand areas and their feasibility for conversion to truck-only parking. Coordinate with SCDPS and SCPRT for identified facilities that are operated by those agencies.					
3. If feasible, and in a high-demand location, then design and construct the sites as converted truck-only parking facilities.					
Strategy 5. Reassess public facility designs to accommodate OS/OW vehicles.					
1. Identify OS/OW needs in design of truck parking (requires staff or consultant expertise).	SCDOT	FHWA		\$	State
2. Integrate these considerations into truck parking design guidelines for rest areas.					
3. Explore need for, and ability to, extend OS/OW requirements to other public facilities.					
4. As rest areas and other public facilities are periodically rehabilitated to be brought up to current standards, also perform the upgrades needed to better serve OS/OW vehicles.					

Actionable Steps	Lead Agency	Supporting Agencies	Ease of Implementation	Cost	Potential Funding Source(s)
Strategy 6. Modify the design guidelines for new commercial vehicle inspection facilities to include space for overnight truck parking, where feasible.					
<ol style="list-style-type: none"> 5. Stand up a joint SCDOT-SCDPS committee charged with identifying the needs and challenges (design and operational) of incorporating overnight parking into new commercial vehicle inspection stations. 6. Gather best practices from states that include overnight parking in their commercial vehicle inspection facilities. 7. Perform outreach with SCDPS inspectors and SCDOT design staff regarding needs and concerns. 8. Develop a set of recommendations for overnight parking and incorporate them into design guidelines. 	SCDOT and SCDPS (co-lead agencies)	FHWA		\$	State
Strategy 7. Collect car and truck utilization data					
<ol style="list-style-type: none"> 1. Upon successful deployment of the TPIMS, begin collecting utilization data on cars and trucks. If the required functionality for storing and accessing this data was not included in the initial development of the TPIMS, then add it. 2. Disseminate the utilization data as part of routine performance reporting and incorporate it into planning activities. 	SCDOT			\$	State
Strategy 8. Encourage, educate, and coordinate with local and regional agencies to advance truck parking in their jurisdictions.					
<ol style="list-style-type: none"> 1. Prepare infographics, presentation materials, and briefing documents for use by city and county staff and elected officials to help them make the case for truck parking actions in their communities. 2. Coordinate on where the need for parking is the greatest and the best approaches for addressing the need. 3. Coordinate on implementation. 	SCDOT	MPOs, COGs, FHWA		\$	State

Source: Cambridge Systematics; WSP.

5.3.1 Support private-sector deployment of ZEFs at truck parking facilities.

Description

Because of the time required to charge a heavy truck in the most economic manner, it makes sense to collocate truck parking with electric truck charging. The Bipartisan Infrastructure Law (BIL) provides funding to private industry, administered by the State, to deploy EV charging and hydrogen/propane/natural gas fueling infrastructure along designated alternative fuel corridors. SCDOT is prohibited from charging fees for the sale of goods and services, including ZEF, at rest areas, as described in Section 111, of Title 23, United States Code, and 23 CFR 752.5.

Implementation Considerations

Under the new National Electric Vehicle Infrastructure (NEVI) Formula Program, each state is required to submit an EV Infrastructure Deployment Plan to the Joint Office of Energy and Transportation that describes how the State intends to use its apportioned NEVI Formula Program funds. SCDOT should develop an EV Infrastructure Deployment Plan, following guidance posted at: <https://driveelectric.gov/>, in order to access funding available under this program for distribution to private industry.

5.3.2 Develop guidelines for integrating truck parking into the SCDOT project development process.

Description

Truck parking needs and considerations should be a routine part of all planning efforts and decisions, including, but not limited to, roadway project development, the purchase or sale of ROW, and decisions regarding public facility closures.

Implementation Considerations

Coordination and communication between SCDOT departments are critical to ensuring that truck parking needs are identified and considered from the earliest possible stages of project development. The SCDOT Preconstruction Project Development Process provides guidance on the process for planning, developing, and designing a project⁵. There are 20 distinct steps in the process, including surveys and initial studies, preliminary design, environmental, utility and railroad coordination, ROW, environmental, final design, construction plans, and letting, among others. SCDOT should evaluate each of the major steps in the Project Development Process for opportunities to incorporate truck parking and freight considerations in general.

5.3.3 Consider truck parking needs prior to the purchase or sale of ROW.

Description

When SCDOT purchases new ROW to expand existing highways or develop new corridors, truck parking needs should be considered. In addition, prior to the sale of any SCDOT ROW, the location should be

⁵<https://www.scstatehouse.gov/CommitteeInfo/HouseTransportationInfrastructureAndManagementAdHocCommittee/October302014Meeting/SCDOT%20Project%20Development%20Process%20Document.pdf>.

checked against truck parking high-needs areas to ensure that potential expansion or new development opportunities are not missed.

Implementation Considerations

The SCDOT Right of Way Department is responsible for the acquisition and disposition of ROW within the agency. Procedures within the Division are documented primarily within four manuals that cover Acquisition, Relocation, Appraisal, and Property Management. These procedures should be evaluated to identify steps that could incorporate truck parking considerations.

In addition, SCDOT should establish characteristics of parcels with potential to alleviate truck parking needs. Defining these attributes is the first step in developing a process for ongoing review of parcels for truck parking suitability prior to acquisition or disposal of ROW. Parcel size, nearby truck parking demand or need, highway access, and other factors could be considered.

5.3.4 Consider truck parking needs and the potential for conversion to truck parking prior to the closure of a SCDOT facility.

Description

Public facilities such as rest areas, maintenance yards, and others may be closed due to under use, aging facilities, or limited funding. These properties could be valuable options for increasing truck parking inventory through conversion to lower cost, truck-only parking facilities. Weigh stations and welcome centers that are planned to be decommissioned provide another opportunity to increase the supply of truck parking.

Implementation Considerations

The first step in this strategy is to identify public facilities that are slated for closure. Next, the site should be evaluated by SCDOT to determine if it is in a high truck parking demand area and its feasibility for conversion to truck-only parking. If so, then the site should be converted. This strategy could be extended to weigh stations and welcome centers. However, coordination with SCDPS and SCPRT is necessary as SCDPS owns and operates weigh stations, and SCPRT operates SCDOT-owned welcome centers.

5.3.5 Reassess public facility designs to accommodate OS/OW vehicles.

Description

Due to the size and weight of their vehicles, OS/OW haulers face unique truck parking challenges compared to motor carriers transporting loads with typical sizes and weights. During the planning and design of new truck parking facilities, or existing facilities slated for renovation, consideration should be given to accommodate the needs of OS/OW vehicles, such as sufficient turning radii and appropriately sized parking spaces. OS/OW are typically not rear-steerable, which makes angled parking (as spaces are typically designed) difficult. Standards also may be considered to provide space for OS/OW vehicles to drop loads so that they may better maneuver. Trucks carrying multiple trailers are sometimes required, either legally or logistically, to drop trailers which another driver picks up at a later time.

Implementation Considerations

The first step in this strategy would be to fully identify and document OS/OW design needs in public parking facility design. SCDOT traffic engineering and roadway design staff would be critical to this first step. Next, the findings of the staff must be integrated into public rest area design guidelines so that newly developed sites and rehabilitated existing sites would be designed to these standards, where feasible. From there, SCDOT should explore the need for, and ability to, extend OS/OW requirements to other public facilities, such as welcome centers and weigh stations. This would require coordination with SCPRT and SCDPS.

5.3.6 Modify the design guidelines for new commercial vehicle inspection facilities to include space for overnight truck parking, where feasible.

Description

If SCDOT and SCDPS successfully expand an existing commercial vehicle weigh stations to accommodate overnight truck parking, and find that it is a viable means of adding truck parking capacity *without disrupting the critical operations of the facility*, then they could consider modifying the design guidelines for new commercial vehicle inspection facilities to include space for overnight parking.

Implementation Considerations

The first step in this strategy item is to stand up a joint SCDOT-SCDPS committee to lead the effort. The committee would be charged with identifying the design and operational needs and challenges of incorporating overnight parking into new commercial vehicle inspection stations. The committee would gather best practices from their own pilot project and from states that already include overnight parking in their commercial vehicle inspection facilities, such as Kentucky. From there, the joint committee would perform internal outreach to a broader group of SCDPS and SCDOT staff regarding their needs and concerns. Lastly, the joint committee would develop a set of recommendations for overnight parking to incorporate into design guidelines.

5.3.7 Collect Truck and Car Utilization Data

Description

This strategy assumes that SCDOT has implemented a TPIMS, as discussed in Section 5.2.1. TPIMS provides truck utilization data at facilities where it is deployed that can be used for performance reporting, evaluating the effectiveness of public investments in truck parking, and providing data to FHWA for future updates to the Jason's Law. Some TPIMS also can collect utilization data on cars and recreational vehicles, allowing SCDOT to know how each rest area or welcome center is being used by vehicle type, time of day, and day of week. These data could inform as to the need for expansion or future renovation plans for more efficient configuration and utilization of parking areas. For instance, if few cars utilize the parking area, SCDOT may have the opportunity to convert some of that space to truck parking. As South Carolina does not allow passenger vehicles to park for longer than two hours, trucks could be allowed to park in those spaces during overnight hours when traffic volumes are typically low.

Implementation Considerations

If the required functionality for storing and accessing utilization data was included in the initial development of the TPIMS, then SCDOT may begin immediately collecting this information. Otherwise, then the functionality must be added. Given that information on utilization is a core component of a TPIMS, adding this functionality may only require setting up a database to store the stream of information coming from the TPIMS and allows SCDOT staff to easily access the data. From there, SCDOT would be able to disseminate the utilization data as part of routine performance reporting and incorporate it into planning and other operational activities.

5.3.8 Encourage, Educate, and Coordinate with Local and Regional Agencies to Advance Truck Parking in their Jurisdictions

Description

Truck drivers prefer to park as close to their pick-up or drop-off location as possible. As local and regional jurisdictions fulfill that need, fewer drivers will need parking along the Interstates at rest areas. A coordinated approach to solving truck will be more effective than SCDOT trying to do it alone. Educating local and regional stakeholders on the need for truck parking and the range of options available to them for addressing it will benefit them and SCDOT.

For instance, one of the largest challenges private truck parking operators face when trying to expand or build new inventory is opposition from residents who do not want trucks parking in their communities. Informed city leaders can help their constituents understand that providing a designated area for trucks to park will reduce the number of trucks that might park in less desirable areas.

Implementation Considerations

To encourage and educate, SCDOT could prepare infographics, presentation materials, and briefing documents for use by city and county staff and elected officials to help them make the case for truck parking actions in their communities. Using information from this Study, SCDOT could coordinate with these same agencies on where the need for parking is the greatest and the best approaches for addressing the need. High need areas may require additional parking within Interstate ROW, led by SCDOT, coupled with local policy and capacity strategies outlined in Section 5.4 below.

5.4 Other Non-SCDOT Strategies to Address Truck Parking Needs

This section focuses on strategies which may be more appropriately led by other state agencies or South Carolina's cities and counties as land use is a significant feature of many of these strategies, which is typically managed by local jurisdictions. In addition, truck parking assessments and strategies should be included in the long-range planning process of MPOs and COGs.

Strategies led by local governments and regional planning agencies are important for addressing truck parking needs along the state-maintained roadway network. Over the long term, if greater amounts of parking are not provided at or near the source of demand, drivers will be left with fewer options for parking in authorized locations. Therefore, encouraging local and regional partners to address truck parking needs on the portions of the roadway network they manage will improve conditions across the entire state.

5.4.1 Use Real-Time Information on Truck Parking Availability to Increase Enforcement of Unauthorized Parking

As alternative strategies for truck parking are implemented, enforcement should become more active in preventing and addressing unauthorized parking, especially in areas with available truck parking. Law enforcement officials are generally reluctant to require drivers parked in unauthorized locations to move if there is no available parking at a nearby authorized location. Real-time information is central to this strategy as parking availability data from TPIMS can be supplied directly to law enforcement. With this information, law enforcement officials can direct drivers parked in unauthorized locations to authorized locations with available spaces.

When risk of enforcement is higher, drivers feel more incentivized to stop at authorized locations, increasing overall interstate safety and facility utilization. Authorized parking is safer and reduces environmental and infrastructure challenges associated with unauthorized parking. SCDOT, local agencies, and enforcement agencies will need to jointly develop recommended enforcement guidelines and requirements. In addition, data sharing guidelines will need to be developed and documented as part of a TPIMS ConOps. If any penalties are to be assessed, this might need to be included in state or local statutes (such as for parking tickets). The primary cost consideration for this policy includes additional public safety/law enforcement training and time allocation for additional enforcement.

5.4.2 Deploy Smart Curbside Management Techniques

Smart urban parking zones can be used to designate multiple purposes over the course of the day for curb areas and other applicable parking locations. Drivers could locate parking within a short time window and close geographic proximity to their destination, reserve a spot for a specific time window, and facilitate payment through a mobile app or other reservation system. This approach aims to make more efficient use of existing curb areas in commercial and industrial areas by communicating both location and availability, and then enabling the ability to reserve spaces. This strategy offers opportunities for cities to partner with private-sector technology developers who are creating the business model and technologies (apps) to facilitate curb area parking solutions to truck drivers. Cities would need to designate curb areas near logistics centers.

While local regulations often discourage on -street truck parking, it can be safely accommodated in the right context, such as locations with sufficiently wide streets, industrial or commercial land uses, lack of bicycle and pedestrian traffic, and distance from sensitive land uses such as schools. Truck drivers already use these spaces for parking, as shown in **Figure 5.4**, and they could be used more efficiently if managed appropriately, including opening the opportunity to allow paid parking similar to the parking meters widely used in cities. This strategy targets urban truck parking needs near existing staging demand, and it is intended to provide short-term parking (less than four hours). Trash receptacles are recommended to prevent littering and mitigate negative impacts on adjacent land uses. This strategy is not well-suited to address longer parking durations due to the lack of amenities and services. Drivers also may have concerns about overnight curbside parking due to real or perceived concerns about safety, security, and crime.

Figure 5.4 Example of Informal Curbside Parking

Source: Google Street View, San Diego, CA, 2021.

The City of Auburn, Washington, designated 4 areas inside industrial zones where truck parking is acceptable and issues parking permits to truck drivers who are residents of the City. The designated curbs are appropriately signed, and truck drivers with the appropriate permit are allowed to leave their truck for a maximum of 72 hours, *without any occupants*, while they are home and off duty-. This is a unique usage of industrial curb space that is appropriate for longer periods because the drivers do not stay with their trucks and, therefore, do not need any services or amenities. This has helped to remove parked trucks from residential areas where drivers typically park when home.

5.4.3 Promote Onsite Parking at Shipper and Receiver Locations

When land use and zoning decisions allow for new commercial and industrial development, but do not account for the increased demands for truck parking, the costs for future mitigation are often passed on to the local jurisdiction. These costs include the cost of providing truck parking and costs associated with safety, congestion, and community disruption. A common reaction is to pass ordinances restricting truck parking, which redistributes the need to another area in the community or a nearby community.

Local ordinances routinely set employee and customer parking requirements for developments; however, onsite truck parking and staging areas are rarely required. In 2017, the Township of Upper Macungie, Pennsylvania, in the Lehigh Valley became a notable exception to this rule. The Township passed a new zoning requirement, which requires one off-street truck parking space for every loading dock at a new warehouse or distribution facility.⁶ The new zoning regulations also mandate one truck staging space (with a 10-foot x 80-foot dimensions) for every 2 loading spaces at a distribution or warehouse facility. Further, the new requirements specified that applicants (developers) must present evidence that parking will be adequate to accommodate expected demand. The language is integrated into the City's general parking code, which applies to the passenger parking requirements for employees and visitors/customers of various land uses.

⁶ Township of Upper Macungie Municipal Code § 27-601, <https://ecode360.com/14517379>.

Counties, cities, and municipalities across the Nation already develop traffic impact assessments and review site plans for new developments. However, these processes do not always consider the specific transportation and truck parking needs generated by freight activity. Traffic impact assessment processes should be reviewed to include anticipated truck volumes at a site and the impacts of staging near the site.

5.4.4 Promote Truck Parking on Unused Private Industrial Properties (Airbnb Approach)

In urban areas, where land is most scarce and expensive, private parking developers may not be able to construct large facilities. However, private industrial property owners may have underutilized land that could be used for shared parking for a fee. This truck parking model is comparable to an Airbnb for truck parking. For example, an unloading staging area may be used during the day for normal operations while providing parking at night. Undeveloped land purchased for future expansion also could be initially developed for parking until the business is ready to otherwise utilize the area. This strategy focuses on urban parking demand and can be effective for vehicle storage. Business security protocols for accessing behind-the-gate spaces, lack of amenities, and land use regulations are likely challenges facing implementation of this strategy.

Vacant lots and excess space are often found in industrial zoned areas, and these spaces could be converted to truck parking areas. Allowing truck parking by property owners should be encouraged by engaging stakeholders, including owners, local agencies, economic development agencies, industrial development agencies, and even chambers of commerce to create strong relationships and look for opportunities to help with truck parking solutions. Local agencies would be responsible for working with industrial landowners to develop policy language, guidelines, and shared use agreements.

5.4.5 Build Public, Dedicated Truck Parking Facilities Outside of Highway ROW

This strategy would construct parking facilities in suburban and urban areas, or near major logistics center(s) closer to a truck drivers' origin or destination points. It could be used for short-term staging, required rest breaks, trailer storage, and could also address the needs of local independent owner-operators by providing parking on a monthly basis for their trucks while they are at home. This addresses key needs by providing parking in the areas of greatest need.

These types of parking facilities would not need to provide fuel, food, and convenience store items available at most truck stops. Instead, they would offer only essential amenities, such as restrooms, water, and vending machines. A driver's lounge and unique services such as cross-docking, and trailer parking could also be provided. Security fencing and gates would also be important in order to secure equipment and loads in cases where the driver might not stay with the truck, as the case for owner-operators parking their investment (truck) while they are off-duty. Assessing modest parking fees for hourly, daily, weekly, or monthly use, as well as fees for specialty services like cross-docking, helps to offset the capital investment and operations and maintenance (O&M) costs. These types of facilities are more applicable for local municipalities or private businesses to implement. Examples of a private facility in Acton, California, and a public facility in Weed, California, are shown in **Figure 5.5**.

Figure 5.5 Example Dedicated Truck Parking Facilities



Source: Google Maps. North is to the top of the images.

Public facilities that are not considered safety rest areas and not located within Interstate ROW, would not fall under the terms of Section 111, of Title 23, United States Code, and 23 CFR 752.5⁷. Therefore, the public operator would be able to charge a fee for parking, zero emission fuels, or other services if necessary to recover a portion of the capital and operating costs.

5.4.6 Build a System of Connected Truck Parking and Staging Lots

A remote parking facility could serve as a staging lot if connected via information systems to the truck drivers' customer and to other short-term staging options close to their customer, as illustrated in **Figure 5.6**. Drivers could "check-in" with their customers at the remote lot and wait there, with access to needed amenities, until their customer is ready to receive them. They could also access information on small staging lots and curbside parking options throughout the region with information on how to reserve space when possible and needed. Using real-time traffic data, the receiving facility could inform the truck driver what time to depart the remote staging lot in order to arrive when they are ready to receive them and direct the driver to the appropriate routing information. GPS signals from the driver's smartphone could enable the receiver to track the driver's progress, be aware of any unforeseen delays, and be prepared to receive them upon arrival.

⁷ <https://www.govinfo.gov/app/details/USCODE-2011-title23/USCODE-2011-title23-chap1-sec111>.

Figure 5.6 Next-Gen System of Connected Truck Parking and Staging Lots



The remote parking facility also could provide ZEF, which combined with information on connected parking options and customer appointment times, could create a next-gen parking facility and system that has a higher probability of securing FHWA grant funding support.

5.4.7 Consider Truck Parking Needs in Emergency Contingency Planning

Under this strategy, SCDPS would identify feasible sites to provide for emergency truck parking during extreme weather conditions, hazardous spills, and other unplanned events that may close roads temporarily, creating a demand for temporary truck parking until the road reopens. Through cooperation with the private sector, facilities with large parking areas and that are generally accessible from Interstate highways, such as shopping malls, sports venues, and fairgrounds, could serve as safe havens for trucks during emergency conditions. SCDPS, with support from SCDOT and local governments, would identify feasible sites and develop guidelines and templates for truck parking agreements with private- and public-sector entities that own large parking facilities. Enabling legislation or Executive Order may be required for this type of public private partnership (P3) and should be confirmed along with any specific guidelines or required circumstances.

5.4.8 Reassess Local Design Standards of Commercial Truck Parking Facilities to Accommodate OS/OW Vehicles

As discussed in Section 5.3.5, OS/OW haulers face unique truck parking challenges compared to motor carriers transporting loads with typical sizes and weights. This strategy encourages local governments to reassess design standards to ensure that minimum standards are met to accommodate OS/OW vehicles. For example, these standards may require minimum turning radii or the provision of OS/OW truck parking

spaces for lots of a certain size. Standards may also be considered to provide space for OS/OW vehicles to drop loads as trucks carrying multiple trailers are sometimes required to drop trailers, which another driver picks up at a later time.

Importantly, this strategy aligns with initiatives at the Federal level as FHWA currently is developing the *Truck Parking Development Handbook* for the purpose of helping communities integrate truck parking in a manner that is compatible with local community development. The Handbook is intended to serve as a resource for local practitioners (e.g., local or MPO planners, city/county engineers, site developers, etc.) who plan for, advocate, and implement truck parking facilities. The Handbook presents tools, design guidance, and case studies suggesting how truck parking can be viewed as a development opportunity and key element of sound local land use practices.

5.5 Strategies and Implementation Considerations to Advance Partnership Approaches

Commercial truck parking facilities provide 87 percent of all parking spaces in the state. As the private sector continues to develop truck parking, the public sector may seek to facilitate and leverage private investments. Because truck parking sits at the nexus of public safety and private goods movement, and because it results in mutual benefits to public and private partners, truck parking development creates a ripe environment for P3. A few of the many plausible partnerships for SCDOT and municipal agencies to consider include:

- Private party designs, builds, finances, operates, and maintains a publicly owned parcel adjacent to a major freight hub.
- Develop parking at a publicly owned parcel that is adjacent to an existing commercial truck parking facility.
- Purchase a parcel adjacent to an existing commercial truck parking facility to construct additional parking.
- Agreement with large existing parking facility that is used on a periodic or seasonal basis, such as a stadium, to be used for truck parking when not in use for its intended purpose.
- Truck parking facility developed by SCDOT on publicly owned parcel within the highway ROW and operated and maintained by a private partner.

This section of the report identifies potential P3 approaches that may be used to implement the strategies presented in Sections 5.1 to 5.4, especially those related to increased truck parking. It begins with a review of effective practices that have been implemented in other parts of the country. It then develops a high-level checklist of key considerations for the assessment of appropriate P3 strategies.

5.5.1 Effective Public-Private Practices for Increased Truck Parking

There are multiple examples of public-private practices for increased truck parking that may be applied to South Carolina. As part of its Truck Parking Working Groups initiative, the National Coalition on Truck Parking identified a number of best practices for enhancing truck parking capacity; some of which specifically focused on P3s. The Coalition recognized that there are opportunities to create P3 arrangements with travel center

operators handling operations and maintenance of the publicly owned facility. However, travel center operators are usually concerned with liability and maintenance costs should an agreement be entered into which creates a potential impediment to the development of truck parking P3s. Examples of truck parking P3s that may serve as models for non-traditional funding agreements to increase the supply of truck parking include:

- **Brainerd Lakes Area Welcome Center.** The Brainerd Lakes Area Welcome Center was funded through a P3 and is sited in the middle of the highway ROW.⁸ The center required special state legislation to create a unique P3 with the Brainerd Chamber, Crow Wing County, Minnesota DOT, Minnesota Department of Natural Resources, and Minnesota State Patrol. A gift shop featuring local products helps financially support the operating costs of the facility. The site provides separate, short-term truck parking, bathrooms, and vending machines. The site is operated as a rest area and has 30 truck parking spaces that are easily accessible from either direction of travel on the highway. Private gas station facilities are located approximately 15 miles from the site that offer additional services, such as gas, food, and some commercial truck services.
- **Virginia Rest Area Sponsorship.** The Virginia DOT entered into agreements with private businesses to sponsor Virginia rest areas and welcome centers to help defray the costs of operation.⁹ For participating private businesses, “Sponsored by” signage is placed at the rest area or welcome center with access provided to an additional 3 onsite locations for advertising. Sponsorship packages are bid out in 12-month contracts with minimum bid prices being set, in part, by annual traffic volumes at the location.¹⁰
- **Decatur, IL Local Fuel Tax.** An example from the City of Decatur, Illinois, provides an approach for city and county governments to partner with the private sector to increase truck parking capacity. The City leveraged revenue from a local fuel tax to help entice Love’s to construct a truck stop in the community.¹¹ The City of Decatur agreed to spend up to \$750,000 in tax revenue to update roads in the area to accommodate trucks. These funds were generated by levying a 5-cent per gallon surcharge at gas stations in the City and a 1-cent per gallon surcharge for diesel. Under the agreement, Love’s agreed to repay the City’s investment in road improvements if the truck stop was not built by May 2019. The facility opened in April 2019 and provides 51 truck parking spaces along with laundry, showers, and other amenities.¹²
- **Utah DOT and the Interstate Oasis Program.** The Interstate Oasis Program was created under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).¹³ An Interstate Oasis is a facility near an Interstate highway, but not within the ROW, which provides products and services to the public, 24-hour access to public restrooms, and parking for automobiles and heavy trucks. Interstate Oases have designated signing, are located no more than 3 miles from an interchange with an Interstate, and allow parking for trucks with a maximum duration limit of 10 hours or more. The

⁸https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/funding_finance_reg/product/public_private_partnerships.pdf.

⁹ Ibid.

¹⁰ https://www.virginiadot.org/business/sponsorships/sponsorships_main.asp.

¹¹ https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/funding_finance_reg/product/public_private_partnerships.pdf.

¹² https://www.wandtv.com/news/new-loves-travel-stop-opens-in-decatur/article_53691bd6-61e6-11e9-a38d-df3ebd6d4ba3.html.

¹³ <https://www.govinfo.gov/content/pkg/FR-2006-10-18/html/E6-17367.htm>.

Interstate Oasis Program allows States to partner with private operators who meet the minimum criteria to provide basic rest area services in exchange for online highway signing and official designation as an Interstate Oasis. This results in expanded free parking and restroom services to supplement the services available at existing rest areas without having to construct and maintain new rest area facilities.

The Utah DOT partnered with several truck stops located at Exits 261, 167, and 135 on I-15 as part of FHWA's Interstate Oasis program.¹⁴ Most of the public-private rest stops replaced old, traditional rest stops that were at the end of their life spans. Under the program, the Utah DOT installs signage to advertise these rest stops as public-private rest stops, and the service stations must agree to be open 24 hours a day, 7 days a week; provide water and large restrooms (with at least 5 stalls); provide extra parking; agree to meet certain standards of cleanliness; and to allow inspections by Utah DOT. The benefit for businesses is more customers, which helps offset higher maintenance costs. The benefit for Utah DOT is limiting the need to build and operate additional public rest areas. However, over the years, the agreements between the rest stop owners and Utah DOT had to be rewritten to include no pressuring of sales, as solicitation at some locations became problematic.

- **Maryland Transportation Authority (MDTA) Travel Plazas Lease and Concession.** The MDTA entered into a 35-year lease and concession agreement with Areas USA for the redevelopment of 2 existing travel plazas using only private funds with a 35-year revenue return (percent of gross operating proceeds) to the MDTA under a revenue-generating contract.¹⁵ Areas USA will operate and maintain the travel plazas through 2047, while the MDTA retains ownership and oversight of the plazas.

5.5.2 Partnership Screening Tool

SCDOT is likely to have a variety of potential opportunities to address truck parking challenges in partnership with either the private-sector or other public-sector entities. These partnership concepts typically vary with respect to the purpose, location, structure, costs, and potential funding sources, so it is often challenging to compare opportunities using similar metrics and advance a clear approach that aligns with organizational priorities and resources. To implement P3 solutions and strategies for enhancing truck parking, it is important for SCDOT to have a consistent and flexible tool to assess the feasibility of potential partnerships through the lens of different priorities and considerations. Such a tool provides an annotated checklist of both high-level and detailed-level considerations to optimize the potential for a successful partnership approach and ultimate delivery of the project. This tool is intended to serve as an ongoing reference guide for SCDOT and its partners to evaluate and develop potential truck parking partnerships.

The screening tool is presented as a framework that is broad enough to be used in a variety of contexts, and also provides more detailed-level considerations that can support informed decision-making. This screening tool is flexible enough to use for an array of potential partnerships, such as long-term property leases, joint development agreements, targeted financial assistance for specific initiatives, and other types of collaborative initiatives between various parties, to enhance truck parking infrastructure. This tool provides a high-level description of the proposed partnership approach, including the potential contractual partners or types of contractual partners. It may also be used to evaluate the type of contractual arrangement under consideration, the potential entities or agencies that would serve as less formal (non-contractual) partners,

¹⁴https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/workinggroups/funding_finance_reg/product/public_private_partnerships.pdf.

¹⁵https://mdta.maryland.gov/MD_I-95_Travel_Plazas/Lease_Agreement.html.

and the potential roles of these partners. Examples of non-contractual partners include nearby private-sector entities that may be impacted by the investment and other regional or local public agencies.

Partnership Screening Tool Framework

The Screening Framework as seen in **Table 5.9** provides general information regarding each of the scenarios, summarizing the type of partnership option SCDOT may be offered by a private partner.

Table 5.9 Description of Screening Framework

Partnership Type	Description
High-Level Partnership	The potential concept of using public funds to develop the basic infrastructure (access, water, electricity) for a site that can be leased to a private-sector entity, which will construct a commercial rest stop and secure parking facility in a location adjacent to a major shipping hub (for example, a port).
Potential Contractual Partners	The implementing public-sector entity would identify a private-sector entity, potentially through a request for proposal process, which would enter a long-term lease for further build-out and long-term management of the property.
Potential Other/ Noncontractual Partners	Other partners include the city and county where the facility would be located. In addition, property owners adjacent to the parking site are partners as they would be impacted by the facility due to their proximity.

Source: WSP Global.

The following Screening Factors are the criteria by which each potential partnership is evaluated. Each factor identifies aspects of the potential partnership that are critical for achievement of SCDOT’s goals.

- **Policy Goals.** For instance, SCDOT’s safety goal, as identified in the Statewide Freight Plan, includes enhanced access to truck parking as a primary objective. Other ancillary goals may arise on a project-by-project basis.
- **Organizational Capacity.** SCDOT’s internal technical ability must match the required oversight and management of the partnership. The greater the oversight and procurement effort required (e.g., design-build-finance-operate-maintain) the greater the needed SCDOT capacity.
- **Legal.** SCDOT could determine if other parties might be able to help with the development or implementation of the proposal. If no such parties are found, SCDOT could decide to pursue potential regulatory changes.
- **Public Support.** External support for any partnership lowers risk of pushback during project conception and implementation. This includes both the private-sector participants and public stakeholders, such as elected officials and local agencies.
- **Risk Allocation.** Every partnership will have a unique risk distribution. For each project, SCDOT will need to determine its risk tolerance and what project elements it would like to keep in-house, and which elements it is comfortable allocating to the private sector (or another public agency).
- **Financial Viability.** SCDOT has potential access to various state and Federal funding sources. In some cases, access to local funds is also available in the form of matching dollars (e.g., 20 percent of total cost)

for projects that are priorities for cities and counties. These sources, together with potential private partner contributions, can assist in funding/financing the capital and operating costs for a proposed project.

The Screening Tool also includes several sub-factors for each of the Screening Factors to help ensure the appropriate level of details for consideration. These are outlined in **Table 5.10**, along with the potential considerations that can help to determine the level of readiness.

Table 5.10 Screening Factors Considerations

Screening Factors	Potential Considerations
Policy Goals	
How well does the proposed partnership address specific truck parking policy goals? For example, how well does the proposed partnership address truck parking objectives with respect to applicable state policies and goals, such as those outlined in the Statewide Freight Plan? ¹	<p>In general, this would focus on partnerships that increase the number of truck parking facilities in areas of greatest need. However, ancillary goals, such as the provision of services that make certain parking facilities more attractive, may also be considered. Moreover, competing considerations, such as land use, environmental impacts, and equity considerations, will need to also be considered.</p> <p>Specifically, for South Carolina, the Statewide plan highlights the following policy goals:</p> <ul style="list-style-type: none"> • Mobility and System Reliability Goal. • Safety Goal. • Infrastructure Condition Goal. • Economic and Community Vitality Goal. • Environmental Goal.
Can the partnership address specific truck challenges that have been identified through planning activities?	Studies, such as this Statewide Truck Parking Assessment Study, identify specific challenges and can help to ensure a more targeted approach to the identification of specific solutions. Alignment with goals or principles can also help to secure more extensive support for a partnership initiative.
Organizational Capacity	
Are there internal champions for the specific partnership within the implementing public entity?	Potential internal champions would be individuals that would have the authority and ability to take ownership over advancement of key elements of the partnership, potentially in both the short term and the long term, depending on the duration of the partnership approach.
Does the implementing public entity have access to sufficient internal and external technical resources to successfully manage the partnership in the public interest?	Depending on the needs of the partnership, this may include internal and external expertise in a variety of disciplines, including, but not limited to, land use planning, site development, real estate transactions, contract development and management, cost estimating, revenue analysis, procurement, project management, and negotiations. If the appropriate level of expertise is not available internally, the need will be to identify potential resources and vehicles to secure external expertise.
Has the implementing public entity established guidelines and regulations for procuring and managing the partnership?	Implementation of a partnership can have a stronger likelihood of success if there are existing guidelines, processes, and templates that are applicable and already commonly used in the organization. If that is not the case, there may also be examples of guidelines and regulations from elsewhere that could be customized for the specific partnership needs.

Screening Factors

Potential Considerations

Legal

Is there legal authority to pursue the proposed partnership?

Depending on the proposed partnership, a range of potential contractual arrangements may be considered. In some cases, these may be explicitly permitted and common under existing legal frameworks. In other cases, it may not be as straightforward and may require additional legal due diligence.

Under 23 U.S.C. 111 facilities located within Interstate ROW, such as rest areas or designated truck parking facilities, are not permitted to charge fees for goods or services. Therefore, a private party operating a truck parking facility within the Interstate ROW would not have a revenue stream to recover costs.

Are there certain legal structures that would be more appropriate for the partnership?

Depending on the types of legal structures that are permitted, there may be a range of potential options. The legal structures and tools that most efficiently and directly address the specific challenges and needs of the partnership are typically the ones that are most appropriate to implement.

Who (individuals/positions) would need to provide approval for this potential partnership, and what would be the parameters?

In some cases, the decision-making and approval processes are internal to the organization and manageable. In other cases, additional external reviews and approvals may be needed, which could impact the feasibility of the proposed partnership.

Public Support

Can sufficient support from the appropriate local and regional stakeholders be achieved to pursue the project?

Like a wide range of other infrastructure projects, engagement of local communities, businesses, organizations, and other impacted parties is critical to ensure that concerns and even opposition is resolved or at least addressed sufficiently, such that proceeding with development of the project is reasonable and feasible.

Can sufficient political support be achieved for delivering the project?

Depending on the types of external reviews and approvals that may be needed for the potential partnership, it may be necessary to identify and align political support for the initiative.

Risk Allocation

Would the partnership provide cost-effective opportunities for appropriate allocation of key risks between the partners?

It is important to consider whether a partnership can help create greater overall efficiencies than other implementation strategies. Efficiencies can often be achieved if certain roles are allocated to parties that have the unique ability to implement the specific project components in a faster and/or less costly manner.

What would be key responsibilities that the implementing public entity could retain? What are the associated risks?

In an assessment of potential responsibility and risk allocation to the public sector, it is important to identify those roles that fit most squarely in the public sector's areas of expertise and capability. Depending on the project, this may include responsibilities for certain environmental processes, third-party coordination, and management of governmental approvals.

What would be the key responsibilities that the implementing public entity would seek to allocate to a partner? What are the associated risks?

In an assessment of potential responsibility and risk allocation to the private sector, it is important to identify those roles that fit most squarely in the private sector's (or another public agency's) areas of expertise and capability. Depending on the project, this may include responsibilities for certain revenue-generating features, operational strategies, and coordination between various private contractors.

Financial Viability

What are the near-term and long-term cost requirements?

It is important to achieve a realistic estimate of the anticipated costs to all potential partners relatively early in the process. This could include, but is not limited to, the costs of permitting, financing, design, construction, operations, and maintenance.

Screening Factors

Potential Considerations

Would the results of the partnership's efforts potentially include scenarios that could involve revenue generation?

This is particularly critical for projects that lack sufficient support from existing sources and may be a major go/no-go factor for projects that could not advance without new additional funding sources. This could include, but is not limited to, funding from rentals, fees, sales, and advertisements, depending on the specific elements of the partnership.
Under 23 U.S.C. 111 facilities located within State Highway System ROW, such as rest areas or designated truck parking facilities, are not permitted to charge fees for goods or services. Therefore, a private party operating a truck parking facility with the Interstate ROW would not have a revenue stream to recover costs.

Are there Federal, state, or local funding sources that can support the cost requirements?

Depending on the type of partnership and the types of infrastructure investments involved, the funding needs may align with the eligibility for certain Federal, state, or local sources (or a combination of these public sources). Since funding availability and eligibility for various programs is ever-changing, a current understanding of both near-term and long-term resources is important for this sub-factor.

Would the potential partner be responsible for providing any funding sources that can support the cost requirements?

In addition to existing sources (such as Federal, state, or local funding) or new sources (such as revenues from rentals, fees, sales, and advertisements), it may be possible for certain partnership opportunities to attract potential investors. If this is the case for a partnership, it will also be important to determine what a potential investor would want in exchange for their upfront funding contribution, such as certain long-term fees or revenue-sharing arrangements.


Source: WSP Global.

¹ https://www.scdot.org/Multimodal/pdf/SC_MTP_Freight_Plan_FINAL.pdf.

As illustrated below, the partnership can be rated against each factor and sub-factor as either Promising (green), Neutral (yellow), or Potentially Challenging (red), depending on an initial assessment of the key factors and considerations.

Promising: In general, this rating can be assigned to factors in which the proposed partnership concept appears to have more strengths overall and faces very few weaknesses or challenges in that particular factor category. For instance, a partnership that is “promising” in the factor category of “Public Support” has been observed to have extensive and active community support and is expected to raise very few concerns from a political perspective. It is more likely that the partnership will have a strong natural base of public support from the outset. However, this does not necessarily mean that this is an “easy” factor category for the partnership. In most cases, some resources should be dedicated to ensure that this “promising” status is sustained throughout the life of the initiative. In fact, a partnership that is particularly “promising” in the area of “Public Support” may be able to leverage this strength to counteract weaknesses or challenges in other factor areas, such as “Financial Viability.”

Neutral: In general, this rating can be assigned to factors in which the proposed partnership concept appears to have a balanced set of strengths and relatively manageable weaknesses or challenges. For instance, a partnership that is “neutral” in the factor category of “Public Support” may have minimal initial active community support, but also does not appear to have significant community opposition. In some cases, it may be perceived as a relative blank slate from the “Public Support” perspective, particularly for projects that may not attract significant community or political attention. While some resources should be dedicated to ensuring that this “neutral” status does not take a negative turn into the “potentially challenging” zone, it is less likely that there will be significant community or political opposition.

- 
Potentially Challenging: In general, this rating can be assigned to factors in which the proposed partnership concept appears to already have significant weaknesses or face major challenges to implementation. For instance, a partnership that is “potentially challenging” in the factor category of “Public Support” may have already attracted significant negative community or political attention. Assignment of “potentially challenging” to “Public Support” during the screening process would reflect an early understanding that significant resources will be necessary to overcome specific community or political challenges. The use of “potentially” in this rating is purposeful in that it indicates that the dedication of significant time and energy may be effective in helping the partnership to overcome certain weaknesses and the community or political opposition can potentially be reduced over time.

For specific partnership projects, this use of a simple set of ratings can inform a high-level screening, comparison, and prioritization between different types of projects. In a resource-constrained environment, such a Screening Tool can be critical to ensure that existing resource capacity can be leveraged in an optimal manner across the full portfolio of potential partnerships, helping to ensure that less time and energy are wasted on initiatives that are generally more “challenging” across the board. A simple table with example projects, as illustrated in **Table 5.11**, could be used to visually prioritize candidate partnerships. The table counts the total number of neutral or potentially challenging factors for each sample project. Projects with a greater total number of neutral or potentially challenging factors would receive a lower priority as they would require more time and resources.

Table 5.11 Example High-Level Screening

Screening Factors	Project A	Project B	Project C	Project D	Project E	Project F	Project G
Policy Goals							
Organizational Capacity							
Legal							
Public Support							
Risk Allocation							
Financial Viability							
Number of Neutral and Potentially Challenging Factors	5	4	3	1	2	6	6

Source: WSP Global.

It is important to note that, while this tool can help inform decisions regarding the allocation of resources to projects that might have greater potential of success, it can be equally important for identifying strengths, weaknesses, and potential mitigation measures that may improve the overall prospects of certain projects. The relative ratings for a partnership may change over the life of the initiative, depending on the resources that have been dedicated to ensuring that certain strengths are amplified and certain challenges are addressed in an effective manner.

5.5.3 Use the P3 screening tool to assess the feasibility of potential partnerships

Several of the truck parking strategies have a public-private element. Because of the challenges presented by P3s, an important action is to use a screening tool to assess the feasibility of potential partnership approaches through the lens of different priorities and considerations. Key steps in this strategy include:

1. Evaluate potential partnership approaches by using screening tool.
2. Pilot priority partnership(s).
3. Explore developing an ongoing partnership program.

In the first step, SCDOT would use the screening tool to evaluate potential partnership approaches. Across each of the screening factors, this step would determine if the P3 under consideration is Promising, Neutral, or Potentially Challenging. The next step would be to demonstrate the feasibility of the P3 using a pilot project. Pilot projects can be an effective, low-risk method to test new approaches before making a full investment. If successful, then the last step would be to fully implement the P3 by developing an ongoing partnership program.

The full Partnership Screening Tool is shown in **Table 5.12**.

Table 5.12 Partnership Screening Tool

Scenario Information			
High-Level Partnership Description	This section of the framework describes the partnership.		
Potential Contractual Partners	This section of the framework identifies the public and private partners.		
Potential Other/Non-Contractual Partners	This section of the framework identifies non-contractual partners that may be impacted by the project.		
Examples	This section of the framework identifies any relevant examples of similar partnerships from South Carolina or other states.		
Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Policy Goals			
How well does the proposed partnership address specific truck parking policy goals?		Promising, Neutral, or Potentially Challenging	
Can the partnership address specific truck challenges that have been identified through planning activities?		Promising, Neutral, or Potentially Challenging	
Organizational Capacity			
Are there internal champions for the specific partnership within the implementing public entity?		Promising, Neutral, or Potentially Challenging	
Does the implementing public entity have access to sufficient internal and external technical resources to successfully manage the partnership in the public interest?		Promising, Neutral, or Potentially Challenging	
Has the implementing public entity established guidelines and regulations for procuring and managing the partnership?		Promising, Neutral, or Potentially Challenging	
Legal			
Is there legal authority to pursue the proposed partnership?		Promising, Neutral, or Potentially Challenging	
Are there certain legal structures that would be more appropriate for the partnership?		Promising, Neutral, or Potentially Challenging	

Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Who (individuals/positions) would need to provide approval for this potential partnership, and what would be the parameters?		Promising, Neutral, or Potentially Challenging	
Public Support			
Can sufficient support from the appropriate local and regional stakeholders be achieved to pursue the project?		Promising, Neutral, or Potentially Challenging	
Can sufficient political support be achieved for delivering the project?		Promising, Neutral, or Potentially Challenging	
Risk Allocation			
Would the partnership provide cost effective opportunities for appropriate allocation of key risks between the partners?		Promising, Neutral, or Potentially Challenging	
What would be key responsibilities that the implementing public entity could retain? What are the associated risks?		Promising, Neutral, or Potentially Challenging	
What would be the key responsibilities that the implementing public entity would seek to allocate to a partner? What are the associated risks?		Promising, Neutral, or Potentially Challenging	
Financial Viability			
What are the near term and long-term cost requirements?		Promising, Neutral, or Potentially Challenging	
Would the results of the partnership's efforts potentially include scenarios that could involve revenue generation?		Promising, Neutral, or Potentially Challenging	
Are there Federal, state or local funding sources that can support the cost requirements?		Promising, Neutral, or Potentially Challenging	
Would the potential partner be responsible for providing any funding sources that can support the cost requirements?		Promising, Neutral, or Potentially Challenging	

Source: WSP Global.

Appendix E contains four scenarios that demonstrate how the Screening Tool can be used for specific opportunities in the future. The scenarios represent plausible partnership types that may be available to SCDOT as it considers potential truck parking partnerships in the coming years. They include:

1. Develop parking at a publicly owned parcel adjacent to an existing commercial truck parking facility.
2. Purchase a parcel adjacent to an existing commercial truck parking facility to construct additional parking.
3. Agreement with large existing parking facility that is used on a periodic or seasonal basis, such as a stadium, to be used for truck parking when not in use for its intended purpose.
4. Truck parking facility developed by SCDOT on publicly owned parcel within the highway ROW and operated and maintained by a private partner.

6.0 Funding Options to Address Truck Parking Needs

Truck parking solutions can draw on several funding sources at the Federal, state, and local levels. This section of the report describes the relevant Federal, state, and local level funding that is available to support future truck parking projects and planning.

6.1 Federal

Section 1401 of Public Law 112-141 (MAP21), commonly referred to as "Jason's Law," established eligibility for a range of facilities to provide for commercial motor vehicle parking. These facilities, located on the National Highway System (NHS), provide safe parking for truck drivers and enhances- public safety by ensuring drivers are well rested. Prior research by the FMCSA indicates that fatigue is a factor in approximately 13 percent of large truck involved crashes.¹⁶ Eligible activities under Jason's Law include:

- Constructing rest areas with truck parking.
- Constructing public truck parking facilities adjacent to truck stops and travel plazas.
- Opening existing facilities such as inspection and weigh stations and park-and-ride facilities to accommodate truck parking.
- Promoting the availability of publicly or privately provided truck parking on the NHS using intelligent transportation systems (ITS) or other means.
- Constructing turnouts along the NHS for truck parking.
- Making capital improvements to seasonal public truck parking facilities to allow the facilities to remain open year-round.
- Improving the geometric design of interchanges on the NHS to improve access to truck parking facilities.

6.1.1 Federal Formula Fund Programs

The following Federal formula fund programs may be used to support the truck parking projects described above:

- **Surface Transportation Block Grant Program (STBG)** provides funding for truck parking facilities eligible under Section 1401 (Jason's Law) in MAP-21.¹⁷ Eligible activities for funding are listed in Section 6.1 of this report.
- **National Highway Freight Program (NHFP)** provides formula funds to states to improve the condition and performance of the National Highway Freight Network (NHFN) under 23 U.S.C. 167. Eligible activities include truck parking facilities and real-time traffic, roadway condition, and multimodal

¹⁶ <https://www.fmcsa.dot.gov/safety/research-and-analysis/large-truck-crash-causation-study-analysis-brief>.

¹⁷ <https://www.govinfo.gov/content/pkg/BILLS-112hr4348enr/pdf/BILLS-112hr4348enr.pdf>.

transportation information systems. The NHFP funds are eligible for use on the Primary Highway Freight System or NHFN, or for projects that improve safety, mobility, or efficiency on those systems.

- **National Highway Performance Program (NHPP)** funds may be obligated for a project on an eligible facility that supports progress toward the achievement of national performance goals for improving infrastructure condition, safety, congestion reduction, system reliability, or freight movement on the NHS per 23 U.S.C. 119. Eligible projects include highway safety improvements on the NHS, which may include truck parking per 23 U.S.C. 148.
- **Highway Safety Improvement Program (HSIP)** provides funding for truck parking, provided the need for truck parking is consistent with the State Strategic Highway Safety Plan developed under 23 U.S.C. 148 and the project corrects or improves a roadway feature that constitutes a hazard to road users or addresses a highway safety problem.
- **Congestion Mitigation and Air Quality (CMAQ)** funds may be eligible for the construction of truck stop electrification systems that reduce the need for trucks to idle under 23 U.S.C. 149, but is not eligible for construction of truck parking. Eligibility must be determined in consultation with the U.S. Environmental Protection Agency (EPA) based upon the likelihood that the associated emissions reduction would benefit a nonattainment or maintenance area.
- **National Electric Vehicle Formula Program.** Strategically deploys EV charging infrastructure and establishes an interconnected network to facilitate data collection, access, and reliability. Funded projects must be located along designated alternative fuel corridors. States must submit a plan to USDOT describing planned use of funds. It requires USDOT to designate national EV charging corridors to support freight and goods movement.

6.1.2 Federal Discretionary Grant Programs

In addition to formula funding programs, there also are several grant opportunities for truck parking projects, including the following:

- **Infrastructure for Rebuilding America (INFRA)** Grant program is a multiyear discretionary grant program in the Fixing America's Surface Transportation (FAST) Act to fund critical freight and highway projects. Eligible projects include highway freight projects on the National Highway Freight Network, highway projects on the NHS and other specified intermodal freight projects. The INFRA Grant can cover up to 60 percent of the total project cost. Formerly known as the Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) Grant. Florida DOT received funding for its TPIMS, which detects available truck parking and collects data at over 70 public facilities in Florida, via a \$10.8 million FASTLANE grant in 2016. Florida DOT's TPIMS project is the only truck parking project that has received FASTLANE/INFRA grant funding.
- **Rebuilding American Infrastructure with Sustainability and Equity (RAISE)** Transportation Discretionary grants program (formerly known as the Better Utilizing Investments to Leverage Development (BUILD) and Transportation Investment Generating Economic Recovery (TIGER) grant program) provides capital funding directly to any public entity, including municipalities, counties, port authorities, Tribal governments, and MPOs, including multimodal and multijurisdictional projects that are difficult to fund through traditional Federal programs. These grants are intended to support innovative projects that generate economic development and improve access to reliable, safe, and affordable

transportation and are not specifically focused to freight needs. TIGER funds have been used in the past to support truck parking projects, most notably the 2015 award of \$25 million to the DOTs of Kansas, Indiana, Iowa, Kentucky, Michigan, Minnesota, Ohio, and Wisconsin for a Regional TPIMS. The system launched in 2019 and covers more than 150 parking sites on 9 high-volume corridors. 18 FY2018 grants included funding for two truck-parking areas on I-80 in Wyoming as part of the “I-80 Winter Freight Improvement Project.” Funding can be used for 100 percent of project costs in rural areas and for up to 80 percent of costs in urban areas.¹⁹

- **Advanced Transportation Technologies and Innovative Mobility Deployment Program (ATTIMD) (formerly Advanced Transportation and Congestion Management Technologies Deployment, or ATCMTD)** Program provides Federal Funding to eligible entities to develop model deployment sites for large-scale installation and operation of advanced transportation technologies to improve safety, efficiency, system performance, and infrastructure return on investment. Though truck parking is not explicitly stated as an eligible activity, the funds may be used towards transportation management technologies, data collection systems, pricing/payment systems, or other technologies that support truck parking activities. In 2021 the grant focus area included racial equity, environmental justice and access to opportunity, including programs that support EV charging. Texas, which is part of the I-10 Corridor Coalition with California, Arizona, and New Mexico, won \$6.8 million in ATCMTD funding to outfit public rest areas with a truck parking availability system in 2019.
- **Safe Streets and Roads for All.** Support local initiatives to prevent transportation-related death and serious injury on roads and streets (commonly referred to as “Vision Zero” or “Toward Zero Deaths” initiatives). Eligible entities are MPOs; Political subdivisions of a state (e.g., local governments); and Tribal governments. This program requires considering, among other factors, the likelihood of a project significantly reducing or eliminating fatalities and serious injuries involving various road users, including pedestrians, bicyclists, public transportation users, motorists, and commercial operators.
- **Charging and Fueling Infrastructure.** Deploys EV charging and hydrogen/propane/natural gas fueling infrastructure along designated alternative fuel corridors and in communities. Eligible projects include the acquisition and installation of publicly accessible EV charging or alternative fueling infrastructure; operating assistance (for the first 5 years after installation); and acquisition and installation of traffic control devices. There is a 50-percent set-aside to install EV charging and alternative fueling infrastructure on public roads or in other publicly accessible locations, such as parking facilities at public buildings, schools, and parks.
- **Innovative Technology Deployment (ITD)** Program (formerly known as Commercial Vehicle Information Systems and Networks (CVISN)) provides an additional funding source for truck parking projects through the FMCSA High-Priority—ITD Grant. Historically, the ITD Program has focused on commercial vehicle enforcement with funds supporting three deployment areas: electronic credentialing, safety information exchange, and electronic screening. The fiscal year (FY) 2018 through 2021 grant cycles highlight truck parking as a priority project area for states that have achieved Core Compliance in

¹⁸ <https://www.fleetowner.com/driver-management/real-time-truck-parking-data-aims-strengthen-midwest-freight-corridors>.

¹⁹ Rural areas are those outside of a U.S. Census defined “Urbanized Area” which consists of a densely settled territory with a population of 50,000 people or more.

the Program.²⁰ Projects should demonstrate real-time truck parking availability information dissemination to drivers using dynamic message signs, interactive voice recognition, smartphone applications, or other proven technology. Projects are funded at an 85 percent Federal/15 percent state match level. Washington DOT's Traffic Operations Division, in collaboration with the University of Washington STAR Lab, received a \$2.3M ITD grant in 2021 to deploy TPIMS at existing weigh stations and rest areas along I-5 and I-90 (470 stalls at 28 locations).

- **Accelerated Innovation Deployment (AID)** Demonstration program provides funding as an incentive for eligible entities to accelerate the development and adoption of innovation in highway transportation. The AID Demonstration program is one initiative under the FHWA Technology and Innovation Deployment Program providing funding and other resources to offset the risk of trying an innovation. Approximately \$10 million in funding was made available for FY2021 for between 10 and 15 AID demonstration grants, totaling no more than \$1 million per fiscal year. Projects must involve any phase of a highway transportation project between project planning and project delivery, including planning, financing, operation, structures, materials, pavements, environment, and construction. In addition to the FASTLANE grant award, Florida DOT was awarded an AID grant for \$1 million in 2015 to deploy its real-time TPIMS.
- **Diesel Emissions Reductions Act (DERA)** Clean Diesel Funding Assistance Program provides up to \$100 million annually through 2024 in competitive grant funding through the U.S. EPA. The Program solicits proposals nationwide for projects that achieve significant reductions in diesel emissions in terms of tons of pollution produced and exposure, particularly from fleets operating in areas designated by the Administrator as poor air quality areas. Grant funds may be used for clean diesel projects, including EPA-verified technologies; idle-reduction technologies; aerodynamic technologies and low-rolling resistance tires; and early engine, vehicle, or equipment replacements. Historically, this grant funding has been used for truck parking activities, including truck stop electrification (see Figure 6.1), truck fleet replacement, and other truck parking activities.

Figure 6.1 Truck Stop Electrification



Source: Boston Metropolitan Planning Organization.

²⁰ As of April 2018, all states in the I-95 Corridor Coalition are Core Compliant, except for the District of Columbia, New Hampshire, Pennsylvania, Rhode Island, and Vermont. <https://www.fmcsa.dot.gov/information-systems/itd/itd-current-status>.

6.2 State

SCDOT uses the Statewide Transportation Improvement Program (STIP) as SCDOT's seven-year plan to guide transportation project development. It covers all projects and program areas receiving Federal, state, and local funding, including pavements, bridges, upgrades, freight, safety, CMAQ, transportation alternatives program (TAP), railroad crossings, planning, State Infrastructure Bank payments, preventative maintenance and operations, and public transportation. The document is generally scheduled for updating every three years and is revised on a continual basis to reflect the latest program and project information. The SCDOT Commission, as well as the FHWA and Federal Transit Administration (FTA), approve the STIP. Funding in the STIP comes from a variety of Federal and state sources, as described below:

- **Federal funds.** Revenues collected from Federal motor fuel taxes are deposited in the Federal Highway Trust Fund. These funds are appropriated by Congress through the Federal-Aid Highway Programs and distributed to each state.
- **State Highway Fund.** The State Highway Fund consists of gasoline user fees, diesel user fees, tolls, and interest.
- **Other State Funds.** Infrastructure Maintenance Trust Fund, South Carolina Transportation Infrastructure Bank, Non-Federal Aid Highway Fund, state portion of "C" Program funds.

7.0 Conclusions

The STPAS revealed several key insights that may be used to help meet South Carolina's truck parking needs. Key findings include the following:

- **Inventory.** In total, there are over 6,400 truck parking spaces provided at public and commercial facilities in South Carolina. There are 90 commercial truck stops in South Carolina with 10 or more spaces, with a combined total of nearly 5,592 spaces. There are 34 public parking facilities (including rest areas, truck parking areas, and welcome centers), which have a total of 824 spaces (about 13 percent of the statewide capacity). The Colleton I-95 Rest Area (North) is the largest public truck parking facility in the state with 57 spaces.
- **Shortage of Truck Parking.** There is a statewide shortage of truck parking needed to meet peak-period demand of over 1,000 spaces. With a deficit of over 400 spaces, District 4 accounts for about 40 percent of the 1,000+ space statewide shortage.
- **High-Priority Corridors.** I-77, I-26, and I-85 contain the highest need corridors in the state. In particular, I-77 from the South Carolina-North Carolina state line to the Catawba River in York County, I-26 east of US 21 in Calhoun County, and I-85 from the South Carolina-Georgia state line to Oconee-Anderson County line are priority locations for addressing truck parking needs.
- **Potential Solutions.** About one-fourth of the more than 1,000 truck space deficit may be met through the conversion of closed rest areas and weigh stations already owned by SCDOT to dedicated truck parking facilities. The closed facilities included in the study could add approximately 284 truck parking spaces to the state's supply. Along with the state's planned investment in rest area rehabilitations (which will add capacity in some locations) and the potential to add truck parking spaces to other existing rest areas and welcome centers, South Carolina can substantially close the gap between demand and supply. Additionally, South Carolina has several options for further enhancing access to truck parking and improving the utilization of public and commercial facilities.

Along with these key findings, there are also some early actions that SCDOT may take to enhance truck parking throughout the state. These include truck parking expansions as part of rest area upgrades, applying for Federal grants, and integrating truck parking considerations into SCDOT decision-making. Early actions include the following:

- **Pursue Truck Parking Expansion as part of Rest Area Upgrades.** The \$150 million commitment SCDOT has already made to upgrade rest area across the state, including expanding the number of truck parking spaces at up to 12 of those, is a significant step forward and should be the Department's primary truck parking focus until additional resources, financial and human, are available to proceed with other capital investments.
- **Apply for Federal Grant Funding.** While the rest area upgrades are being developed, SCDOT should also apply for grant funding to support deployment of a statewide TPIMS. As noted in Section 5.2.1, the first step should be to develop a TPIMS ConOps to prioritize locations for TPIMS across the state and consider data collection and information dissemination approaches. The ConOps outlines all components of the TPIMS, including detection devices, communications systems, information dissemination methods, and agency roles and responsibilities, among others. The ConOps will provide

the bulk of the technical narrative needed to complete the grant, and indicate to USDOT the state's readiness and commitment to this project, thereby improving the odds of being awarded the funding. In the past, other states and coalitions of states have successfully received TPIMS funding from the RAISE, ATTIMD, and ITD grants.

SCDOT also could consider submitting a Charging and Fueling Infrastructure grant application to fund the development of a truck parking facility that offers alternative fuel charging. Because of the time required to charge a heavy truck in the most economic manner, it makes sense to co-locate truck parking with electric truck charging. Therefore, the development of a truck EV charging facility also serves as a truck parking lot, potentially funded from a Charging and Fueling Infrastructure grant.

To date, electrification of drayage vehicles appears to have early traction, thereby, making this type of facility best suited somewhere near the Port of Charleston. Building off of the Interstate ROW avoids conflicts with Section 111, of Title 23, United States Code, and 23 CFR 752.5, which prohibit over-the-counter sales of merchandise in public facilities located within the Interstate ROW and at all rest areas.

- **Integrate Truck Parking into all Decision-Making Processes.** To ensure truck parking needs receive Department-wide attention, these three policy recommendations (described in detail in Section 5.3.2 through Section 5.3.4) could be implemented immediately: 1) develop guidelines for integrating truck parking into the SCDOT project development process; 2) consider truck parking needs prior to the purchase or sale of ROW; and 3) consider truck parking needs and the potential for conversion to truck parking prior to the closure of a SCDOT facility.

Appendix A. Truck Parking Capacity by Facility Type and SCDOT District

Table A.1 Summary of Parking Spots by Commercial or Public Facility

Map ID#	Highway	Mile Marker	Facility Type	Name	Number of Parking Spaces
CF_1	I-20	5	Gas Station	Fuel City #032	25
CF_2	I-20	11	Gas Station	Circle K #2703117	100
CF_3	I-20	11	Truck Stop	Pilot Travel Centers #4568	56
CF_4	I-20	33	Gas Station	Circle K	100
CF_5	I-20	39	Truck Stop	Hill View Truck Stop	100
CF_6	I-20	44	Truck Stop	44 Truck Stop	30
CF_7	I-20	51	Truck Stop	Love's Travel Stops #424	100
CF_8	I-20	51	Truck Stop	Pitt Stop #15	20
CF_9	I-20	70	Truck Stop	Flying J Travel Plaza #712	178
CF_10	I-20	71	Truck Stop	TA Columbia North #262	78
CF_11	I-20	71	Truck Stop	SAV-A-TON	10
CF_12	I-20	92	Truck Stop	Pilot Travel Centers #346	60
CF_13	I-20	116	Gas Station	Interstate Shell	56
CF_14	I-20	116	Truck Stop	Pilot Travel Centers #4581	50
CF_15	I-26	5	Truck Stop	Pilot #884 - The Pantry	25
CF_16	I-26	10	Truck Stop	Hot Spot #2013	150
CF_17	I-26	15	Gas Station	Circle K	25
CF_18	I-26	28	Gas Station	Kangaroo Express #3416	25
CF_19	I-26	38	Truck Stop	Shell Hot Spot #6004	56
CF_20	I-26	52	Truck Stop	Pilot Travel Centers #061	25
CF_21	I-26	54	Gas Station	QuikTrip #1178	20
CF_22	I-26	72	Gas Station	Shell Blimpie Corner	10
CF_23	I-26	76	Truck Stop	Love's Travel Stops #396	100
CF_24	I-26	82	Truck Stop	Kangaroo Express #3441	15
CF_25	I-26	82	Truck Stop	Pilot Travel Centers #4580	75
CF_26	I-26	91	Gas Station	Rainbow Gas Garden #12	20
CF_27	I-26	97	Truck Stop	Corner Pantry/Exxon	10
CF_28	I-26	115	Truck Stop	Pilot Travel Centers #338	90
CF_29	I-26	115	Truck Stop	Corner Pantry	20
CF_30	I-26	119	Gas Station	Kangaroo Depot Pantry #3272	10
CF_31	I-26	119	Gas Station	Pitt Stop #36	40
CF_32	I-26	139	Truck Stop	Pilot Travel Centers #4579	25
CF_33	I-26	154	Truck Stop	Love's Travel Stops #326	50
CF_34	I-26	159	Truck Stop	Pilot Travel Centers #060	100

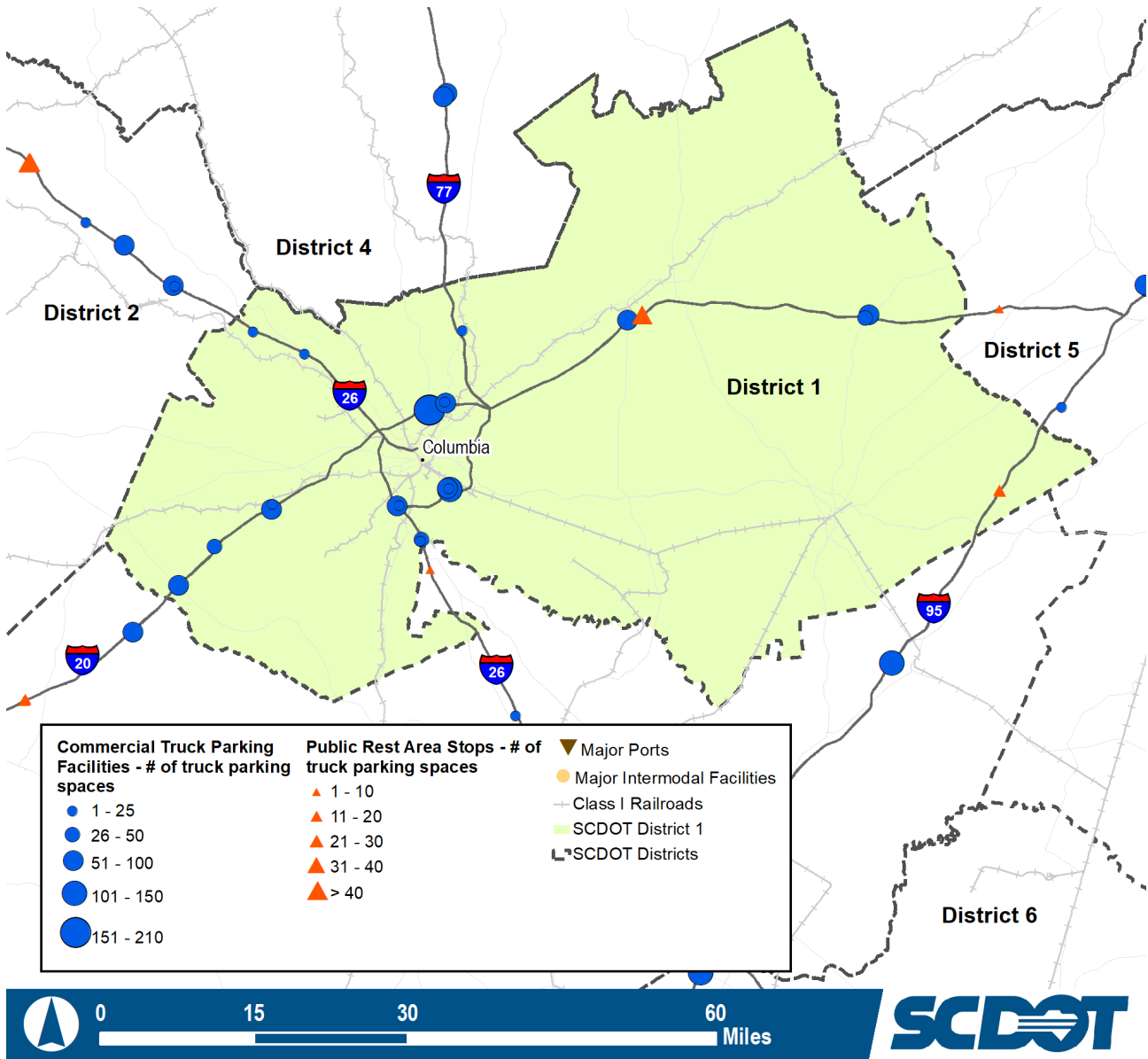
Map ID#	Highway	Mile Marker	Facility Type	Name	Number of Parking Spaces
CF_35	I-26	172	Truck Stop	Enmarket #892/EZ Store	55
CF_36	I-26	194	Truck Stop	Flying J #1068	60
CF_37	I-26	194	Truck Stop	Spinx	10
CF_38	I-26	199	Truck Stop	Kangaroo Express #3871	45
CF_39	I-26	199	Truck Stop	Pilot Travel Centers #064	10
CF_40	I-26	218	Gas Station	Kangaroo Express	10
CF_41	I-77	5	Truck Stop	Love's Travel Stops #657	92
CF_42	I-77	5	Truck Stop	Petro Columbia	134
CF_43	I-77	5	Gas Station	Pitt Stop #35	25
CF_44	I-77	24	Gas Station	Pitt Stop #3 Texaco	10
CF_45	I-77	48	Truck Stop	Grand Central Station	100
CF_46	I-77	48	Truck Stop	Pilot Travel Center #4578	100
CF_47	I-77	65	Gas Station	Crenco Food Stores #2	50
CF_48	I-77	65	Gas Station	QuikTrip	10
CF_49	I-77	73	Gas Station	Crenco Food Stores	20
CF_50	I-77	73	Gas Station	Flying J Travel Plaza #714	141
CF_51	I-77	77	Truck Stop	Pilot Travel Centers #4567	30
CF_52	I-77	83	Truck Stop	Love's Travel Stops #333	44
CF_53	I-77	88	Gas Station	QuikTrip #1092	15
CF_54	I-85	4	Truck Stop	Love's Travel Stops #387	92
CF_55	I-85	21	Gas Station	Energy Market BP #4021	10
CF_56	I-85	21	Gas Station	QuikTrip #1106	20
CF_57	I-85	32	Gas Station	Hickory Point	25
CF_58	I-85	35	Truck Stop	Pilot Travel Centers #063	90
CF_59	I-85	44	Gas Station	Citgo Corner Mart #38	10
CF_60	I-85	44	Gas Station	Spinx Exxon Subway 138	7
CF_61	I-85	56	Gas Station	Spinx #121 (Amoco)	16
CF_62	I-85	60	Gas Station	QuikTrip #1110	15
CF_63	I-85	63	Truck Stop	Pilot Travel Centers #310	70
CF_64	I-85	63	Truck Stop	TA Spartanburg	187
CF_65	I-85	83	Truck Stop	Westar Travel Plaza	100
CF_66	I-85	90	Truck Stop	Pilot Travel Centers #453	100
CF_67	I-85	90	Gas Station	Quick Trip #1120	18
CF_68	I-85	96	Truck Stop	Kangaroo Express #3438	14
CF_69	I-85	102	Truck Stop	Flying J Travel Plaza #711	200
CF_70	I-85	104	Truck Stop	Love's Travel Stops #397	94
CF_71	I-85	106	Truck Stop	Pilot Travel Center #4566	110
CF_72	I-95	5	Truck Stop	Pilot Travel Center #4569	90
CF_73	I-95	8	Truck Stop	Joker Joe's El Cheapo	25
CF_74	I-95	28	Gas Station	Tiger Express #11	15

Map ID#	Highway	Mile Marker	Facility Type	Name	Number of Parking Spaces
CF_75	I-95	28	Truck Stop	Loves Travel Stop #740	68
CF_76	I-95	68	Gas Station	Circle C Travel Plaza	100
CF_77	I-95	77	Truck Stop	Pilot Travel Centers #493	118
CF_78	I-95	77	Gas Station	Rainbow Gas Garden # 8	10
CF_79	I-95	82	Truck Stop	Pilot Travel Center #4576	114
CF_80	I-95	119	Truck Stop	TA Manning	114
CF_81	I-95	150	Gas Station/Travel Center	Florence Travel Plaza	10
CF_82	I-95	164	Truck Stop	Pilot Travel Centers #337	90
CF_83	I-95	164	Truck Stop	TA Florence SC	77
CF_84	I-95	169	Truck Stop	Petro Florence	210
CF_85	I-95	170	Truck Stop	Pilot Travel Centers #062	75
CF_86	I-95	181	Truck Stop	Flying J Travel Plaza #713	200
CF_87	I-95	181	Truck Stop	Pilot Travel Centers #4584	112
CF_88	I-95	190	Truck Stop	Love's Travel Stops #371	120
CF_89	I-385	9	Truck Stop	S & H Truck Stop	40
CF_90	I-520	17	Gas Station	Circle K	11
RA_1	I-20	1	Welcome Center	N. Augusta	22
RA_2	I-20	21	Truck Parking Area	Aiken	12
RA_3	I-20	21	Truck Parking Area	Aiken	12
RA_4	I-20	48.5	Closed Parking Area	Lexington	NA
RA_5	I-20	48.5	Closed Parking Area	Lexington	NA
RA_6	I-20	93.5	Rest Area	Kershaw County	42
RA_7	I-20	93.5	Rest Area	Kershaw County	28
RA_8	I-26	3	Welcome Center	Landrum	22
RA_9	I-26	9.5	Closed Parking Area	Spartanburg	NA
RA_10	I-26	9.5	Closed Parking Area	Spartanburg	NA
RA_11	I-26	43	Closed Parking Area	Spartanburg	NA
RA_12	I-26	43	Closed Parking Area	Spartanburg	NA
RA_13	I-26	63.5	Rest Area	Kinards (Newberry County)	48
RA_14	I-26	63.5	Rest Area	Kinards (Newberry County)	48
RA_15	I-26	84.5	Closed Parking Area	Newberry	NA
RA_16	I-26	88.2	Closed Parking Area	Newberry	NA
RA_17	I-26	123	Rest Area	Gaston (Calhoun County)	8
RA_18	I-26	150	Rest Area	Orangeburg County	18
RA_19	I-26	152	Rest Area	Orangeburg County	45
RA_20	I-26	201.8	Closed Rest Area	Berkeley	NA
RA_21	I-26	204	Rest Area	I-26 East Rest Area	18
RA_22	I-77	65.7	Rest Area	Richburg (Chester County) Rest Area	15
RA_23	I-77	65.7	Rest Area	Richburg (Chester County) Rest Area	15
RA_24	I-77	89	Welcome Center	Fort Mill	15

Map ID#	Highway	Mile Marker	Facility Type	Name	Number of Parking Spaces
RA_25	I-85	1	Welcome Center	Fair Play	37
RA_26	I-85	17	Rest Area	Anderson Rest Area NB	22
RA_27	I-85	24	Rest Area	Anderson Rest Area SB	27
RA_28	I-85	64.5	Closed Parking Area	Spartanburg	NA
RA_29	I-85	88.5	Closed Rest Area	Cherokee	NA
RA_30	I-85	88.9	Closed Rest Area	Cherokee	NA
RA_31	I-85	103	Welcome Center	Blacksburg	22
RA_32	I-95	4	Welcome Center	Hardeeville Welcome Center	46
RA_33	I-95	18	Truck Parking Area	Jasper	20
RA_34	I-95	18	Truck Parking Area	Jasper	20
RA_35	I-95	47	Rest Area	Yemassee (Colleton County)	49
RA_36	I-95	47	Rest Area	Yemassee (Colleton County)	57
RA_37	I-95	73.8	Truck Parking Area	Dorchester	20
RA_38	I-95	99	Welcome Center	Santee	18
RA_39	I-95	99	Rest Area	Santee (Orangeburg County)	17
RA_40	I-95	139	Rest Area	Sumter County Rest Area	14
RA_41	I-95	139	Rest Area	Sumter County Rest Area	14
RA_42	I-95	171.7	Closed Rest Area	Florence	NA
RA_43	I-95	171.7	Closed Rest Area	Florence	NA
RA_44	I-95	195	Welcome Center	Dillon	35
RA_45	I-385	5.8	Rest Area	Laurens	18
RA_46	I-26	122.5	Rest Area	Gaston (Calhoun County)	8
RA_47	I-20	129	Truck Parking Area	Wilkes Crossroads (Darlington County)	6
RA_48	I-20	129	Truck Parking Area	Wilkes Crossroads (Darlington County)	6

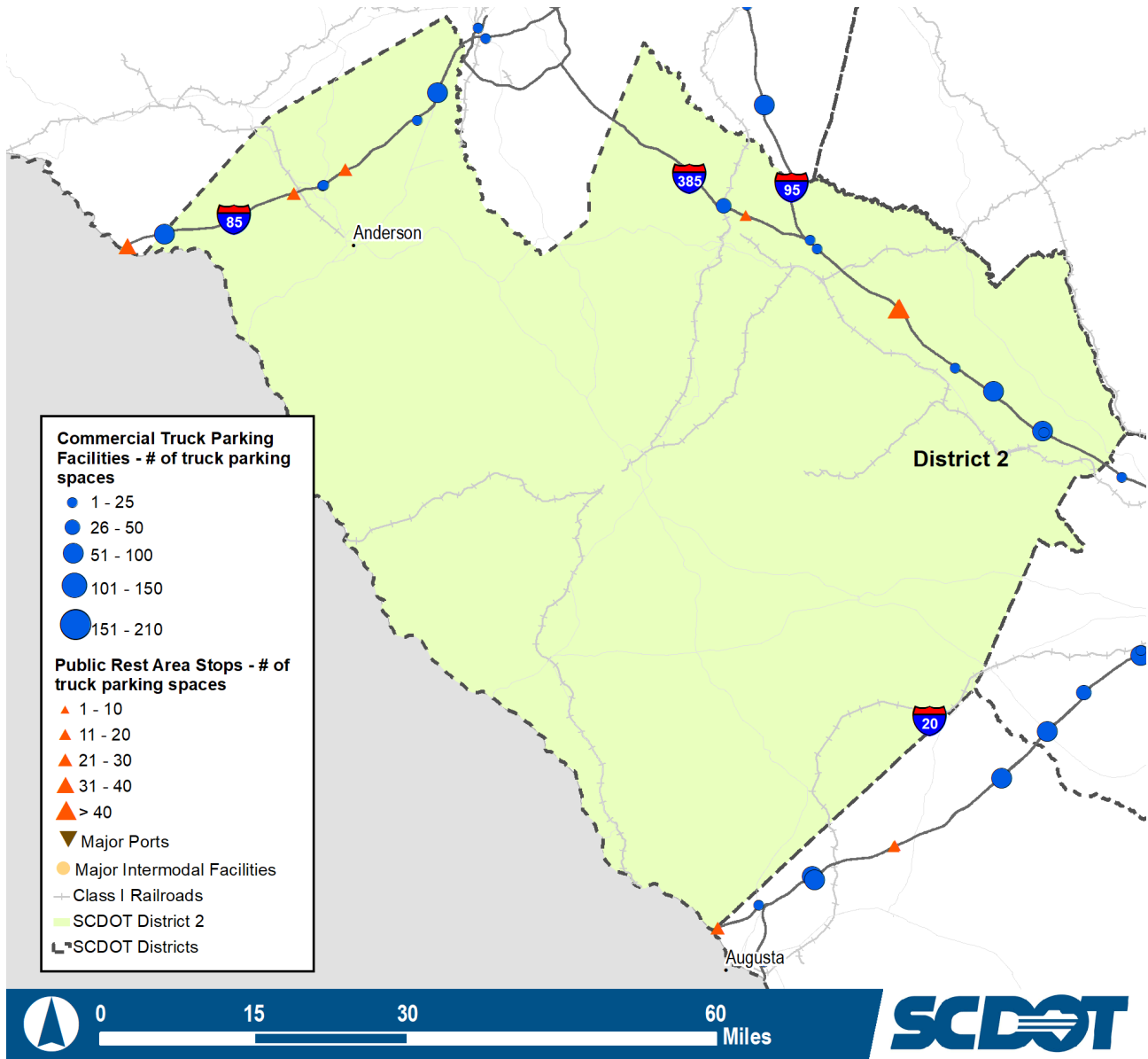
Source: WSP Global.

Figure A.1 District 1—Truck Parking Facilities



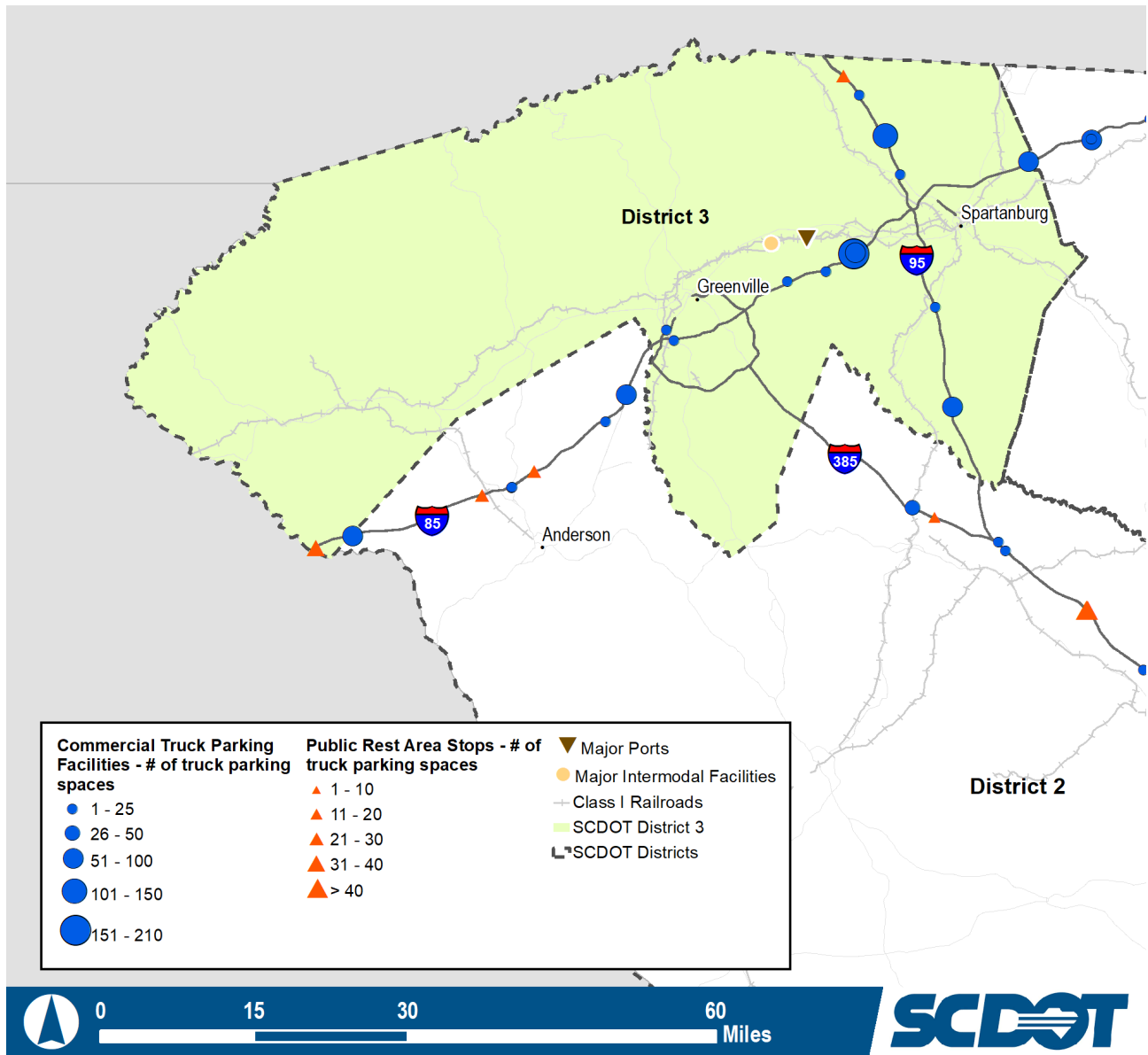
Source: WSP Global.

Figure A.2 District 2—Truck Parking Facilities



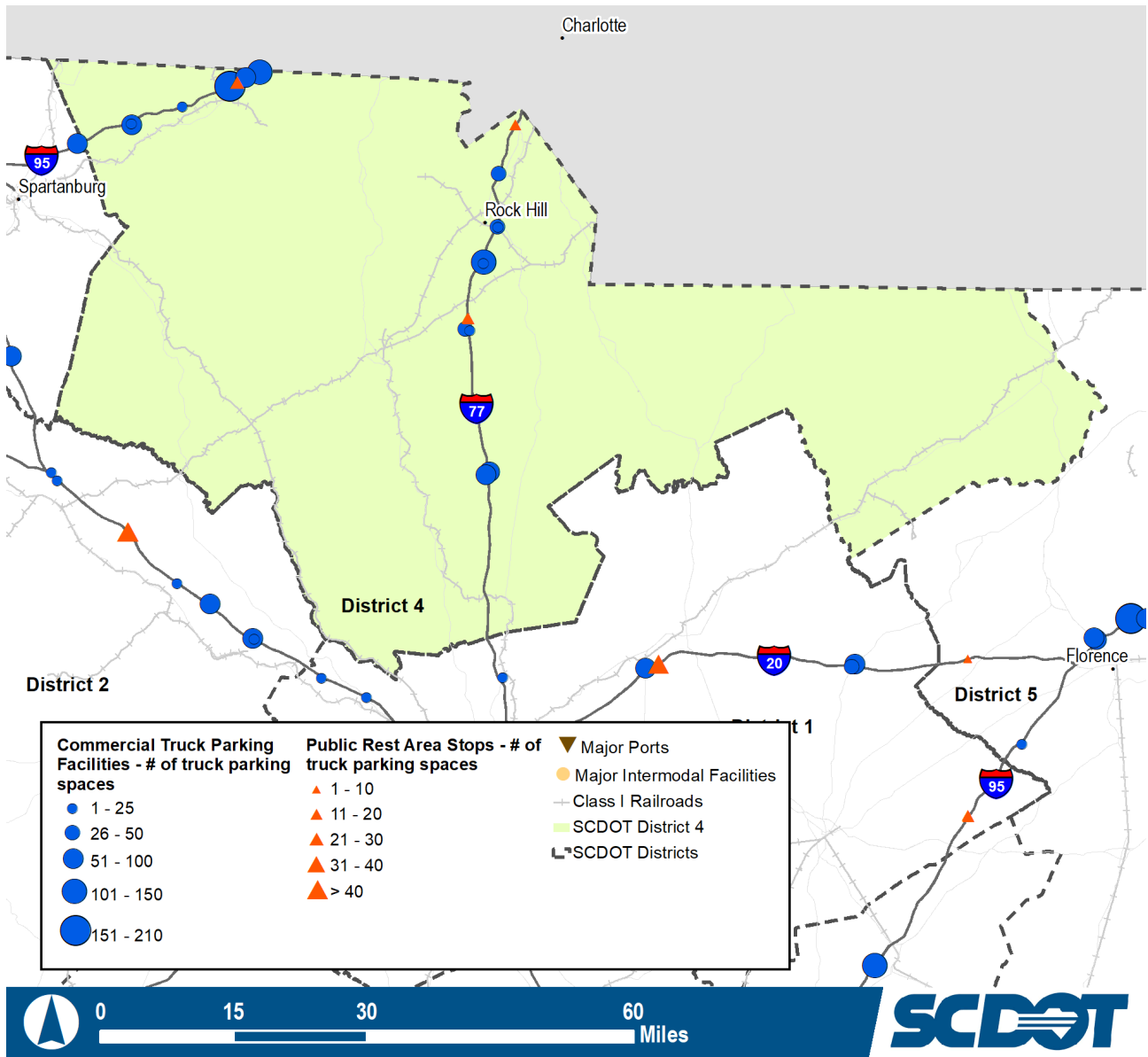
Source: WSP Global.

Figure A.3 District 3—Truck Parking Facilities



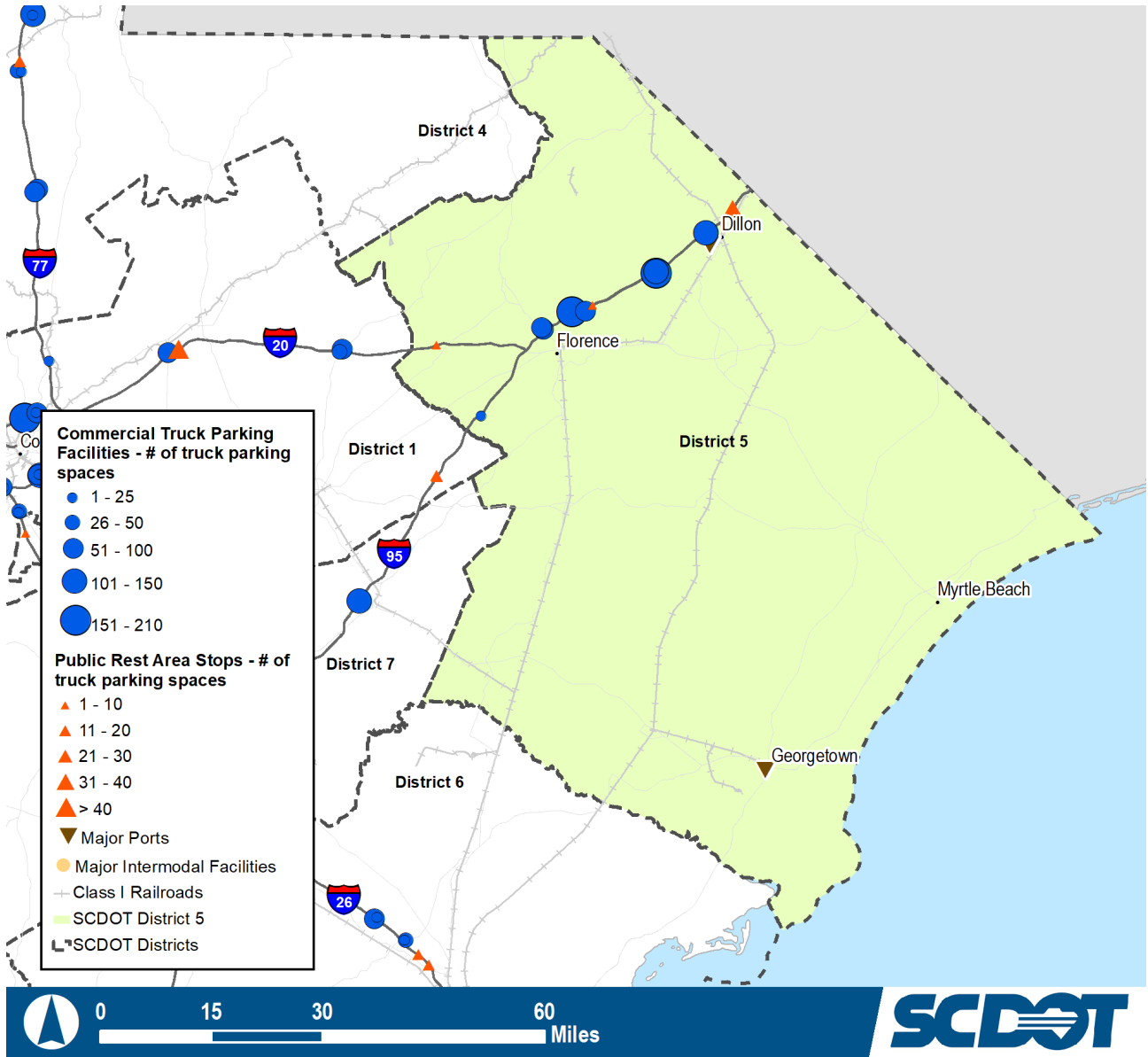
Source: WSP Global.

Figure A.4 District 4—Truck Parking Facilities



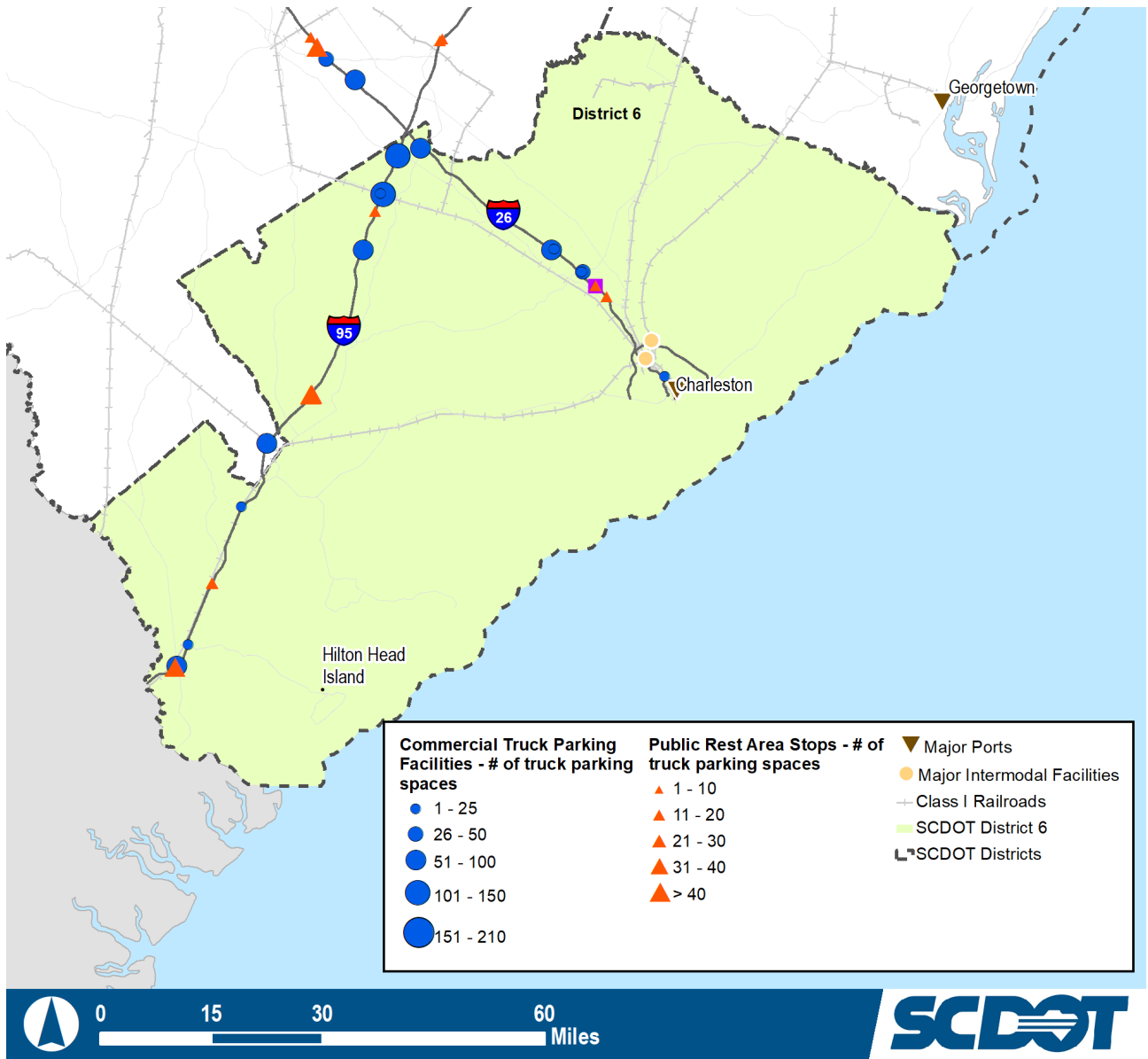
Source: WSP Global.

Figure A.5 District 5—Truck Parking Facilities



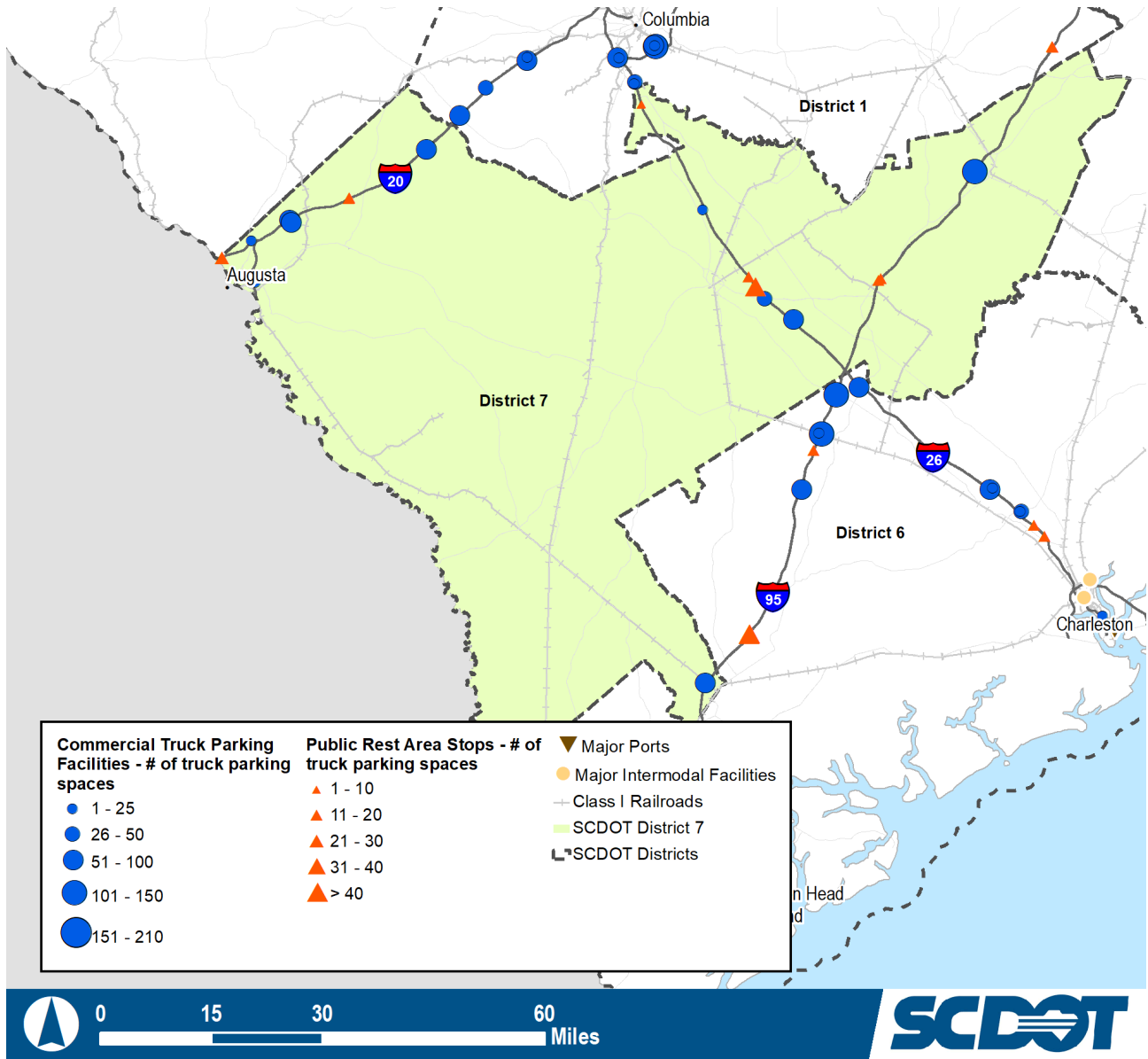
Source: WSP Global.

Figure A.6 District 6—Truck Parking Facilities



Source: WSP Global.

Figure A.7 District 7—Truck Parking Facilities



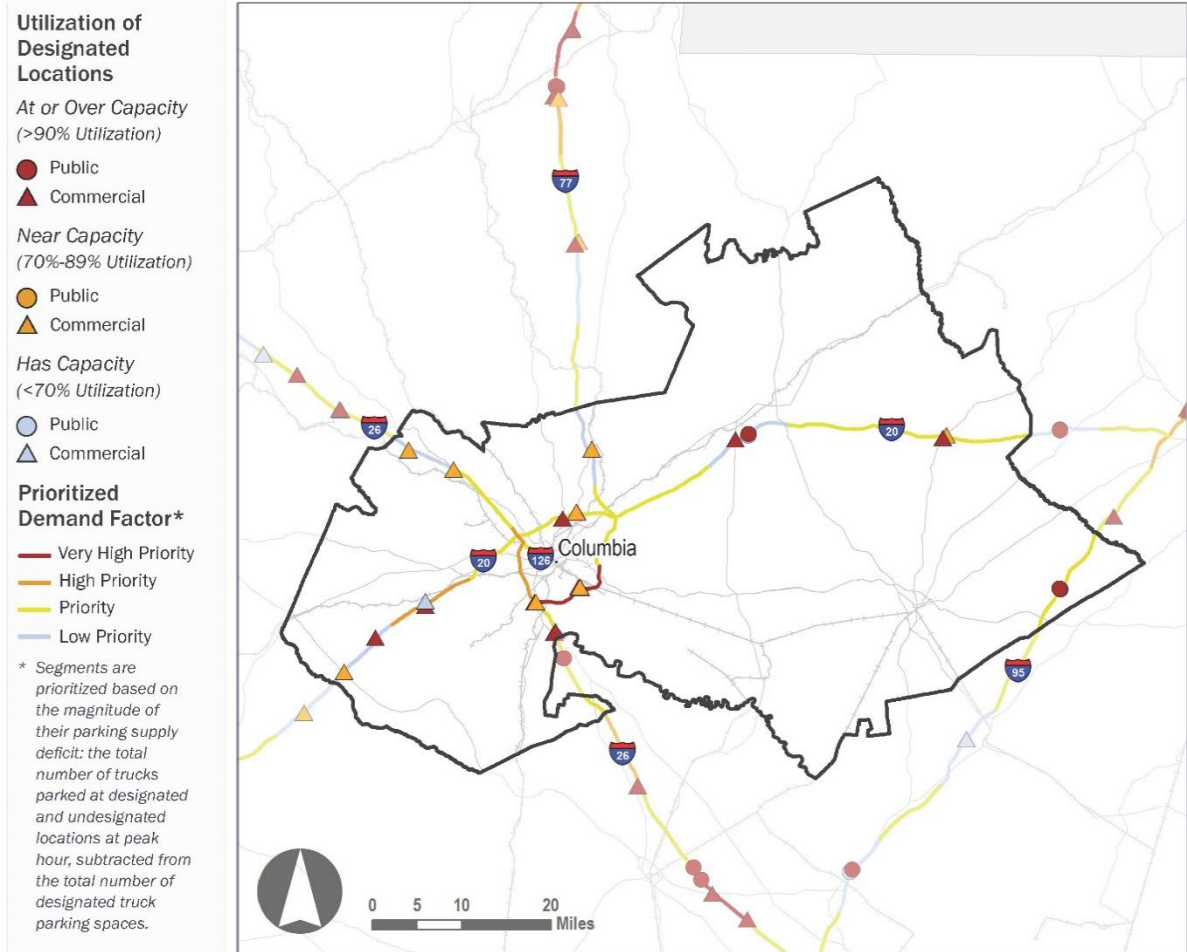
Source: WSP Global.

Appendix B. SCDOT District Demand Profiles

Figure B.1 District 1



Prioritized Truck Parking Need



Number of Locations Nearing, At or Over Capacity*

16

Number of Locations with Available Capacity*

8

Truck Parking at Designated Locations and in Undesignated Areas

	Number of Locations	Number of Spaces	Number of Parked Trucks	Shortage/Surplus of Spaces
Commercial Locations (e.g., truck stops)	20	1,133	1,267	-134
Public Locations (e.g., rest areas)	4	98	95	3
Undesignated Parking Within Right-of-way	-	-	24	-24
Total	24	1,231	1,386	-155

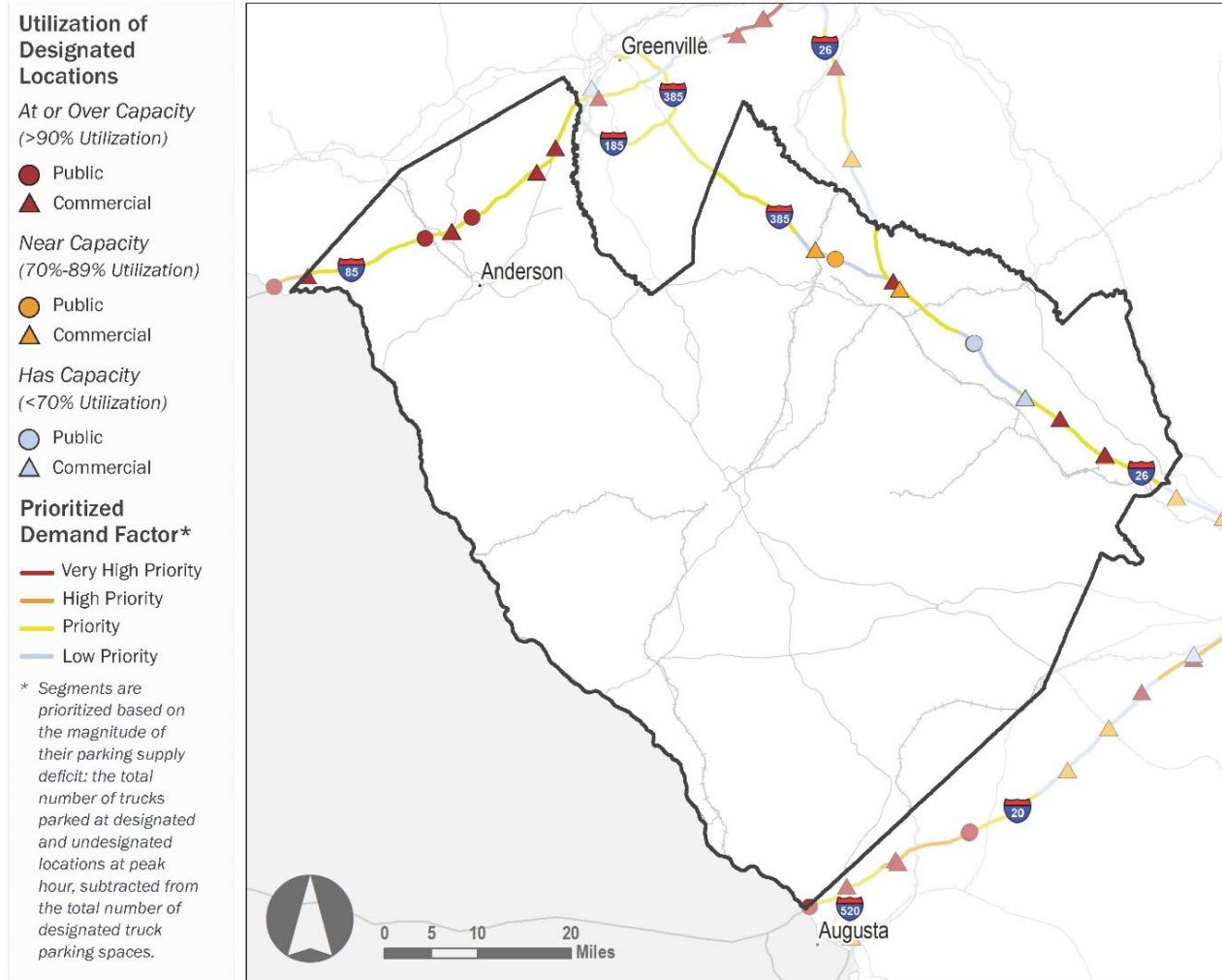
Weekday average at 1:00 AM - 2:00 AM (statewide peak hour)

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Figure B.2 District 2



Prioritized Truck Parking Need



Truck Parking at Designated Locations and in Undesignated Areas

Number of Locations Nearing, At or Over Capacity*
11

Number of Locations with Available Capacity*
6

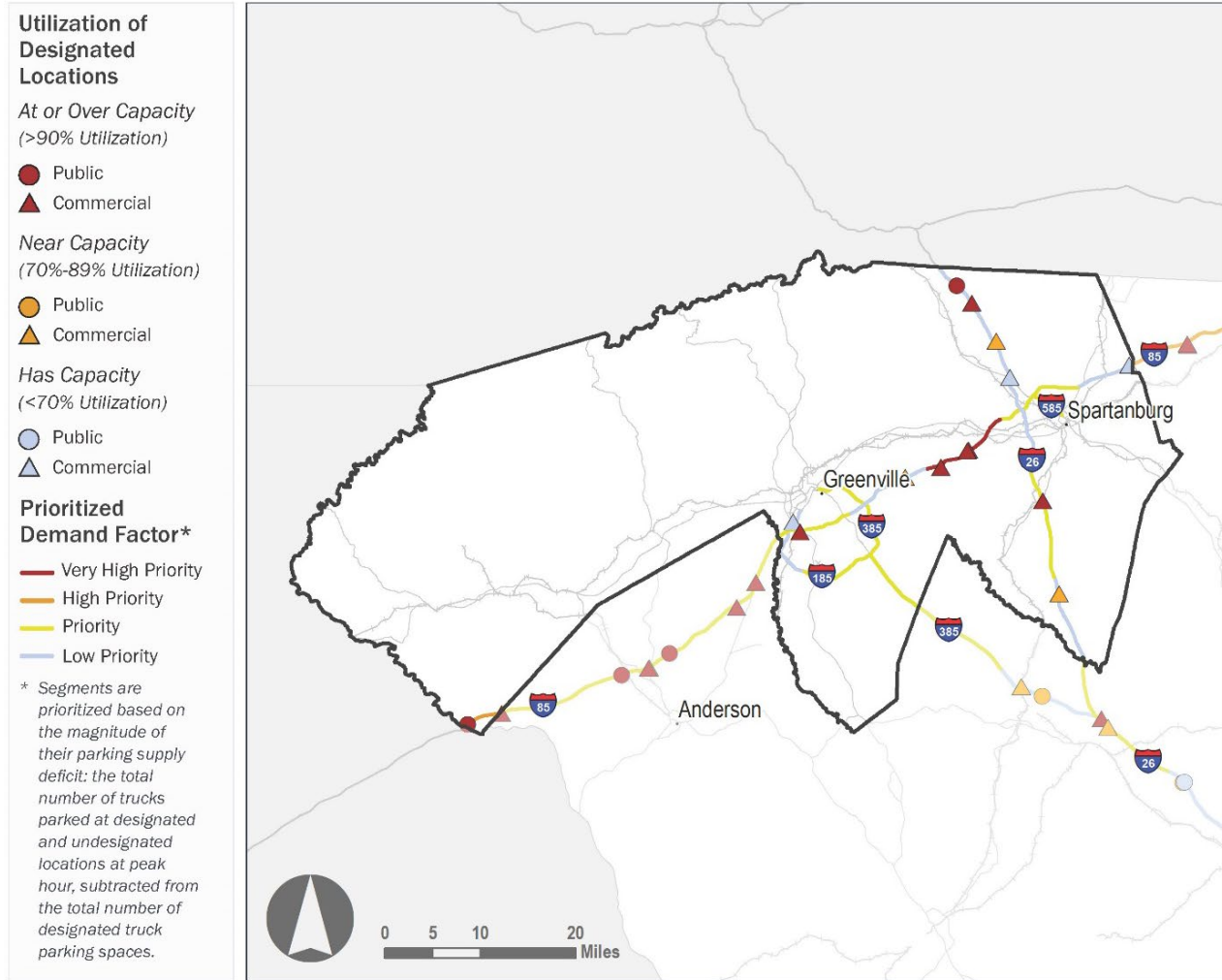
	Number of Locations	Number of Spaces	Number of Parked Trucks	Shortage/Surplus of Spaces
Commercial Locations (e.g., truck stops)	12	522	663	-141
Public Locations (e.g., rest areas)	5	163	150	13
Undesignated Parking Within Right-of-way	-	-	19	-19
Total	17	685	832	-147

Weekday average at 1:00 AM – 2:00 AM (statewide peak hour)

Figure B.3 District 3



Prioritized Truck Parking Need



Number of Locations Nearing, At or Over Capacity*
11

Number of Locations with Available Capacity*
3

Truck Parking at Designated Locations and in Undesignated Areas

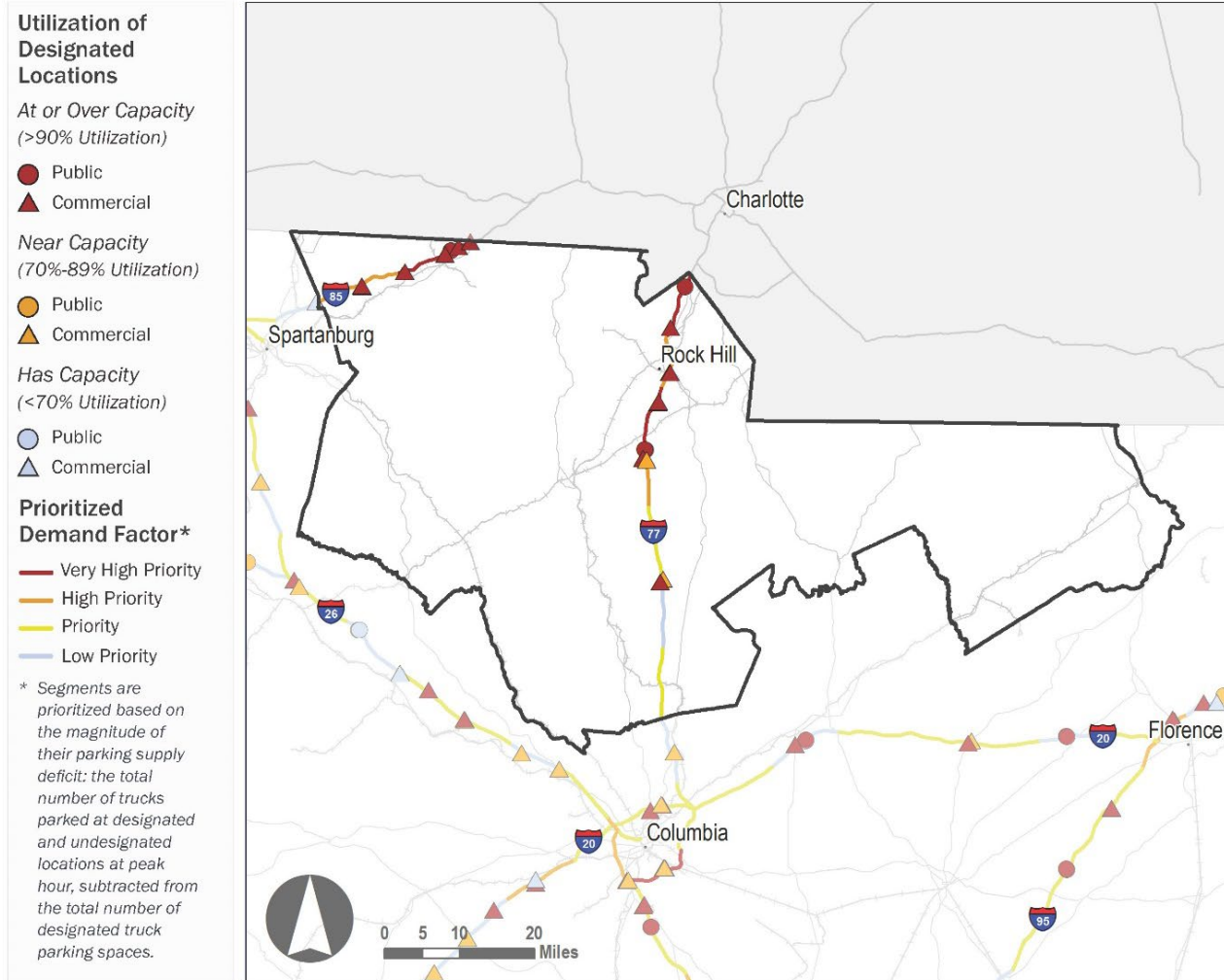
	Number of Locations	Number of Spaces	Number of Parked Trucks	Shortage/Surplus of Spaces
Commercial Locations (e.g., truck stops)	12	686	699	-13
Public Locations (e.g., rest areas)	2	59	79	-20
Undesignated Parking Within Right-of-way	-	-	29	-29
Total	14	745	807	-62

Weekday average at 1:00 AM – 2:00 AM (statewide peak hour)

Figure B.4 District 4



Prioritized Truck Parking Need



Number of Locations Nearing, At or Over Capacity*

17

Number of Locations with Available Capacity*

2

Truck Parking at Designated Locations and in Undesignated Areas

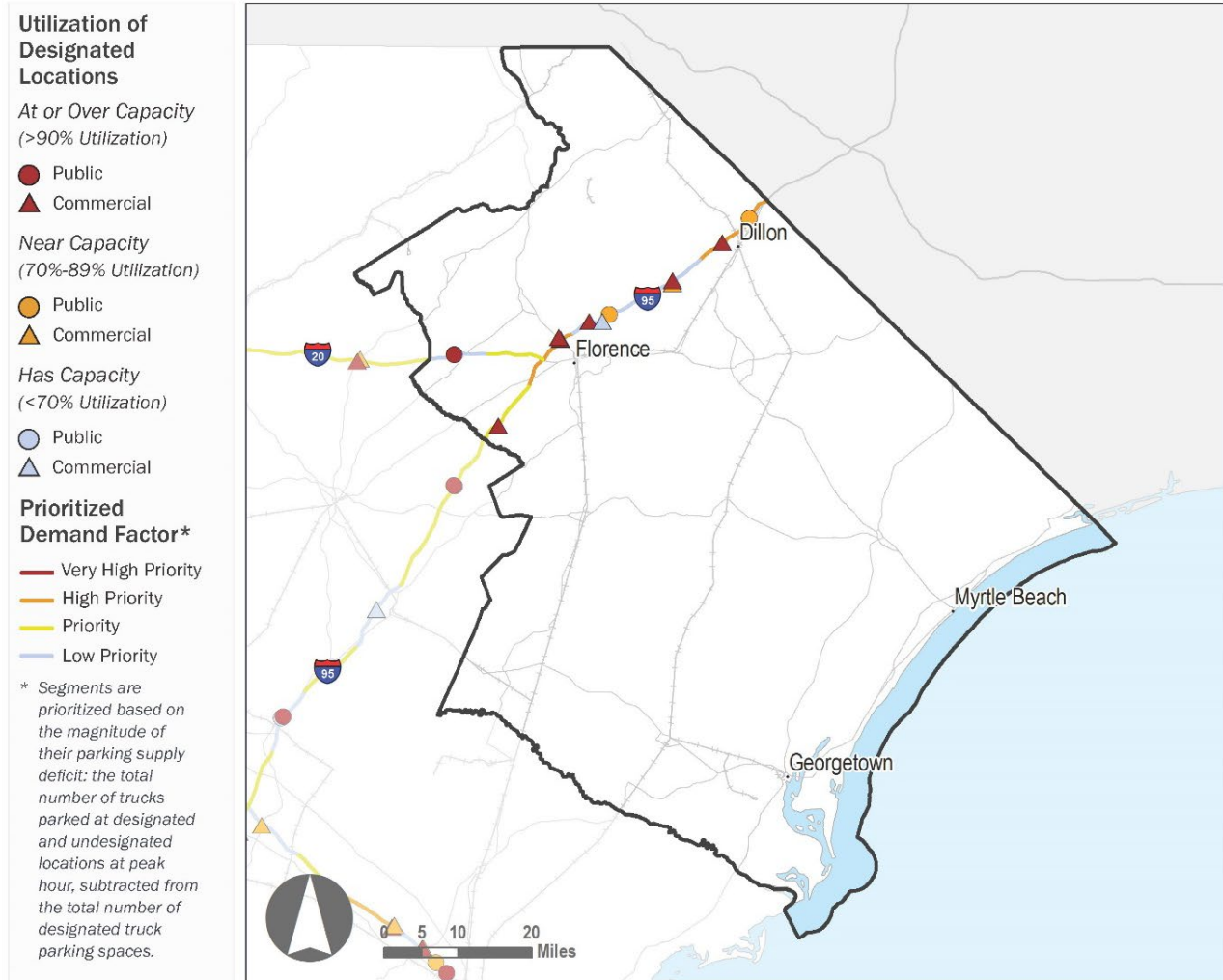
	Number of Locations	Number of Spaces	Number of Parked Trucks	Shortage/Surplus of Spaces
Commercial Locations (e.g., truck stops)	15	1,046	1,393	-347
Public Locations (e.g., rest areas)	4	67	110	-43
Undesignated Parking Within Right-of-way	-	-	26	-26
Total	19	1,113	1,529	-416

Weekday average at 1:00 AM – 2:00 AM (statewide peak hour)

Figure B.5 District 5



Prioritized Truck Parking Need



Number of Locations Nearing, At or Over Capacity*

9

Number of Locations with Available Capacity*

2

Truck Parking at Designated Locations and in Undesignated Areas

	Number of Locations	Number of Spaces	Number of Parked Trucks	Shortage/Surplus of Spaces
Commercial Locations (e.g., truck stops)	8	894	877	17
Public Locations (e.g., rest areas)	3	47	42	5
Undesignated Parking Within Right-of-way	-	-	10	-10
Total	11	941	929	12

Weekday average at 1:00 AM – 2:00 AM (statewide peak hour)

Figure B.6 District 6



Prioritized Truck Parking Need

Utilization of Designated Locations

At or Over Capacity (>90% Utilization)

- Public
- ▲ Commercial

Near Capacity (70%-89% Utilization)

- Public
- ▲ Commercial

Has Capacity (<70% Utilization)

- Public
- △ Commercial

Prioritized Demand Factor*

- Very High Priority
- High Priority
- Priority
- Low Priority

* Segments are prioritized based on the magnitude of their parking supply deficit: the total number of trucks parked at designated and undesignated locations at peak hour, subtracted from the total number of designated truck parking spaces.



Number of Locations Nearing, At or Over Capacity*

11

Number of Locations with Available Capacity*

9

Truck Parking at Designated Locations and in Undesignated Areas

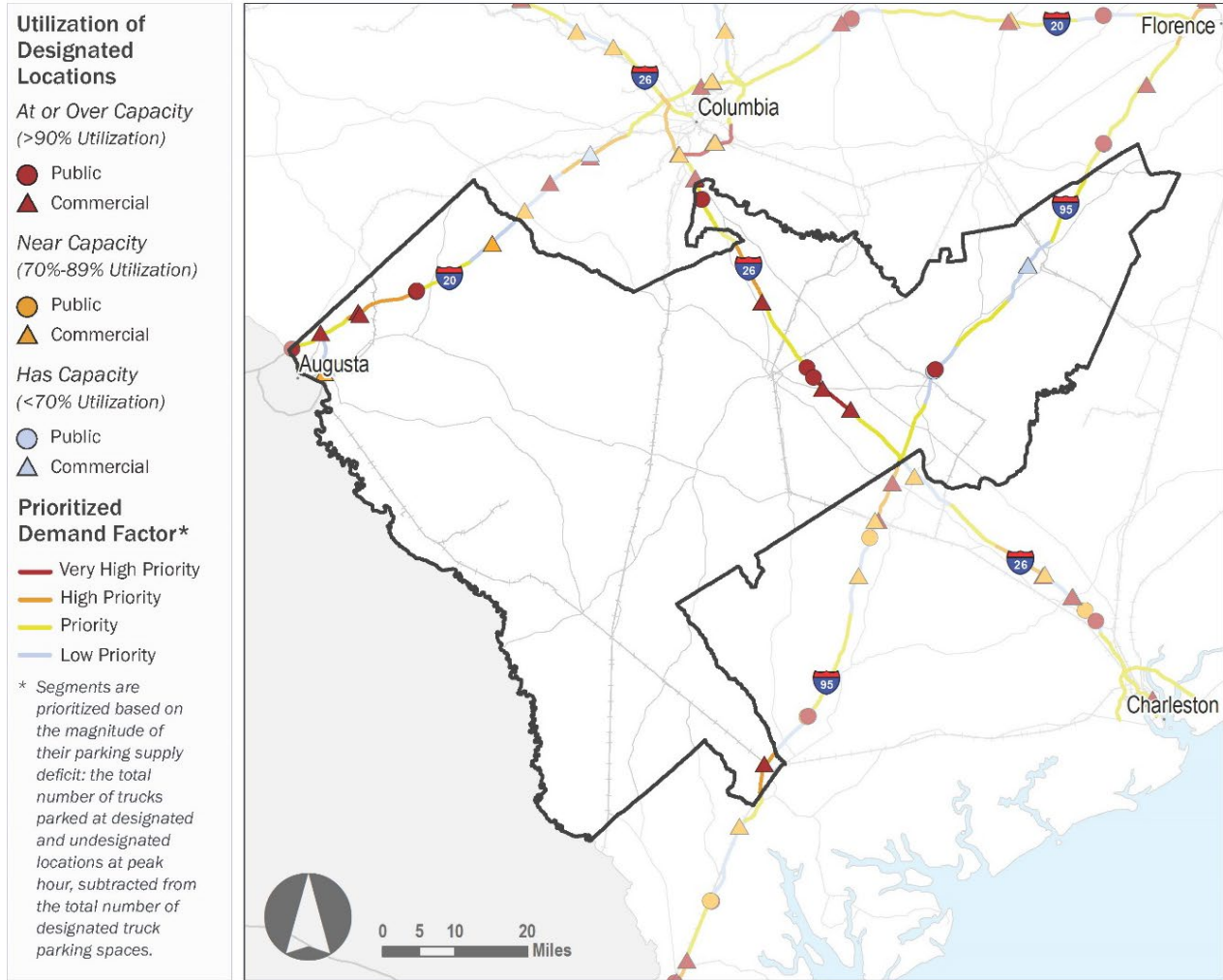

	Number of Locations	Number of Spaces	Number of Parked Trucks	Shortage/Surplus of Spaces
Commercial Locations (e.g., truck stops)	13	662	725	-63
Public Locations (e.g., rest areas)	7	230	212	18
Undesignated Parking Within Right-of-way	-	-	26	-26
Total	20	892	963	-71

Weekday average at 1:00 AM – 2:00 AM (statewide peak hour)

Figure B.7 District 7



Prioritized Truck Parking Need

Number of Locations Nearing, At or Over Capacity*

17

Number of Locations with Available Capacity*

2

Truck Parking at Designated Locations and in Undesignated Areas

	Number of Locations	Number of Spaces	Number of Parked Trucks	Shortage/Surplus of Spaces
Commercial Locations (e.g., truck stops)	10	649	772	-123
Public Locations (e.g., rest areas)	9	160	209	-49
Undesignated Parking Within Right-of-way	-	-	26	-26
Total	19	809	1,007	-198

Weekday average at 1:00 AM - 2:00 AM (statewide peak hour)

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Appendix C. Public Truck Parking Facility Profiles

Figure C.1 Sumter I-95 Rest Area (North)

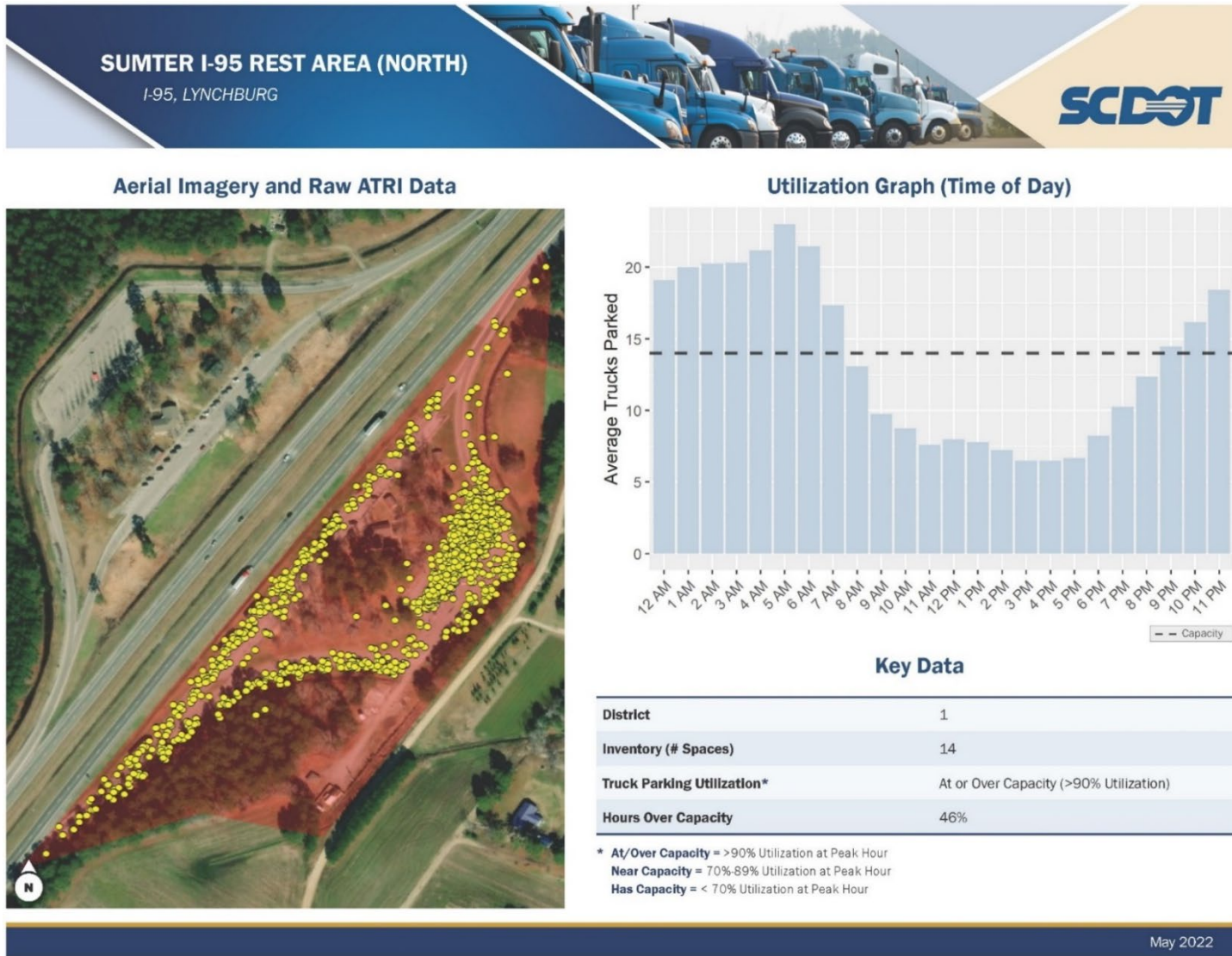


Figure C.2 Sumter I-95 Rest Area (South)

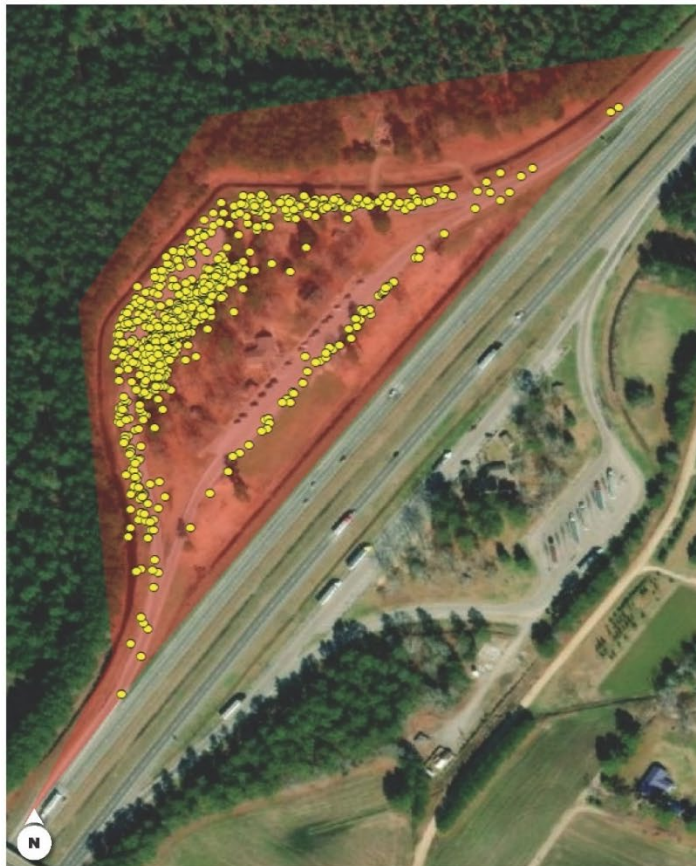


SUMTER I-95 REST AREA (SOUTH)

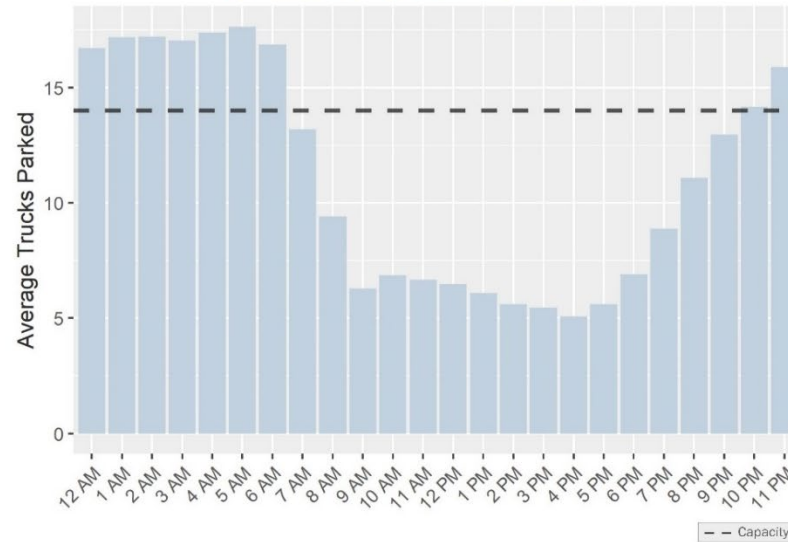
I-95, LYNCHBURG



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	1
Inventory (# Spaces)	14
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	38%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

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Figure C.3 Kershaw I-20 Rest Area (East)



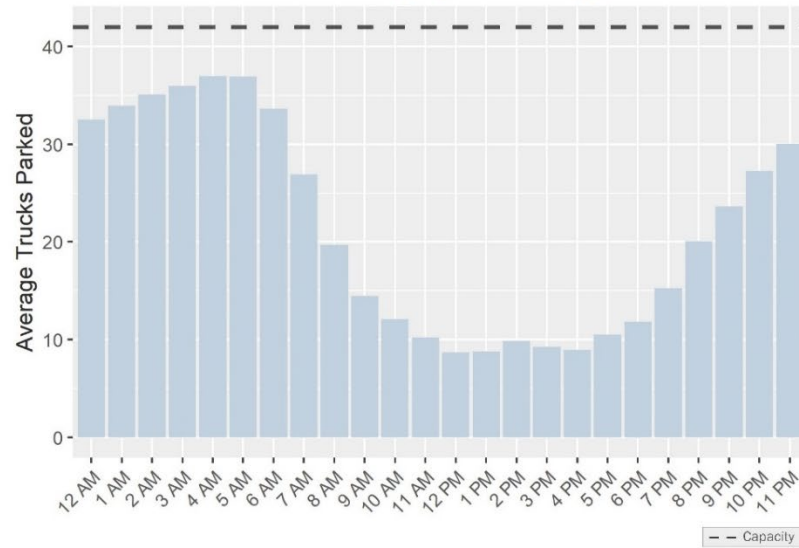
KERSHAW I-20 REST AREA (EAST)
I-20, LUGOFF



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	1
Inventory (# Spaces)	42
Truck Parking Utilization*	Near Capacity (70% - 90% Utilization)
Hours Over Capacity	0%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

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Figure C.4 Kershaw I-20 Rest Area (West)



KERSHAW I-20 REST AREA (WEST)

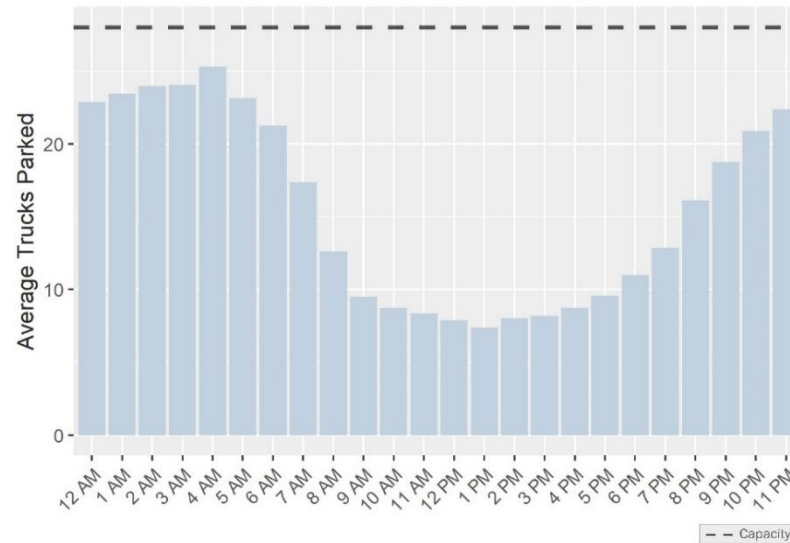
I-20, LUGOFF



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	1
Inventory (# Spaces)	28
Truck Parking Utilization*	Near Capacity (70% - 90% Utilization)
Hours Over Capacity	0%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

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Figure C.5 Newberry I-26 Rest Area (West)



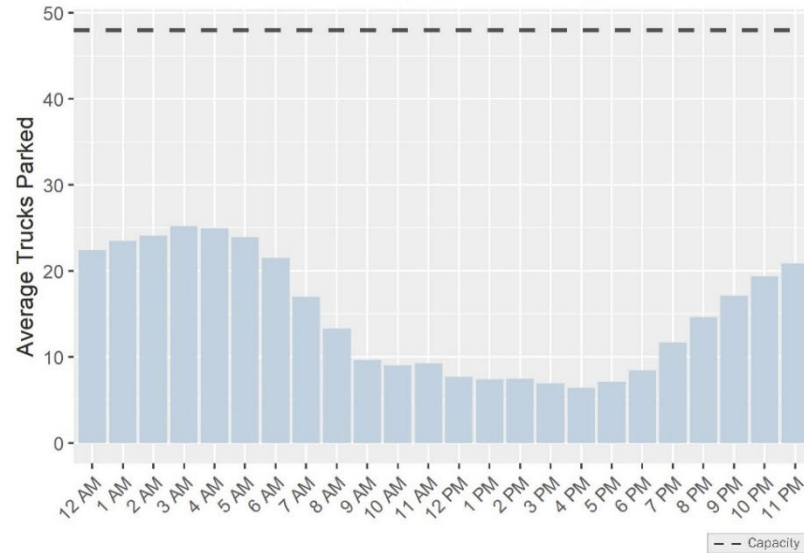
NEWBERRY I-26 REST AREA (WEST)
I-26, KINARDS



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	2
Inventory (# Spaces)	48
Truck Parking Utilization*	Has Availability (<70% Utilization)
Hours Over Capacity	0%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

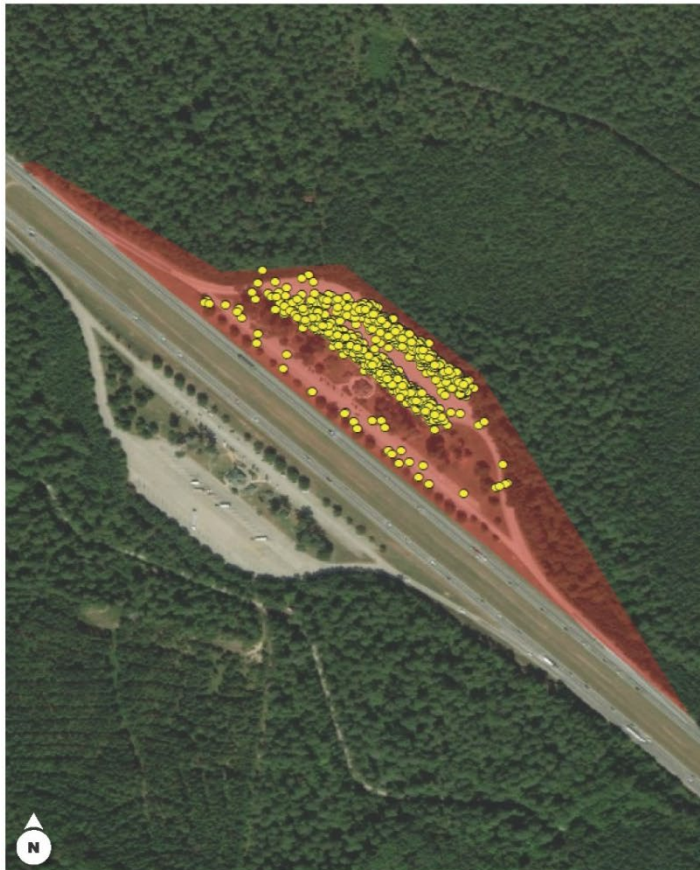
Figure C.6 Newberry I-26 Rest Area (East)



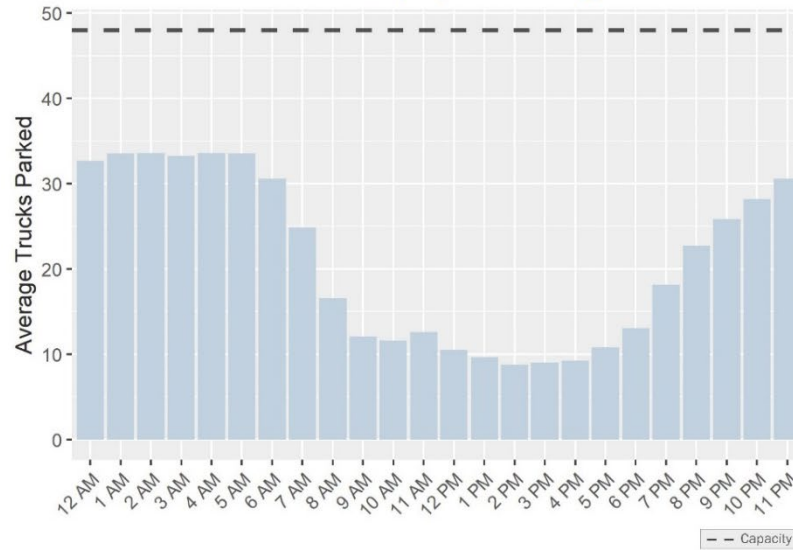
NEWBERRY I-26 REST AREA (EAST)
I-26, KINARDS



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	2
Inventory (# Spaces)	48
Truck Parking Utilization*	Has Availability (<70% Utilization)
Hours Over Capacity	0%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

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Figure C.7 Anderson I-85 Rest Area (North)



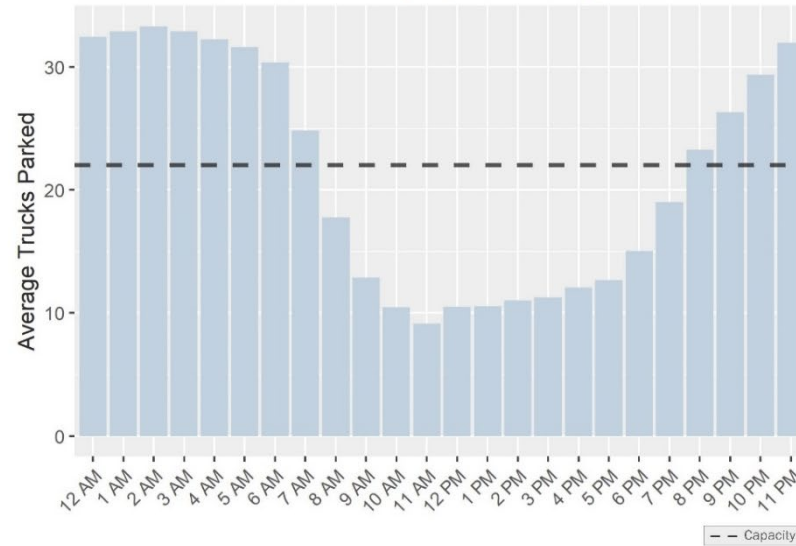
ANDERSON I-85 REST AREA (NORTH)
I-85, ANDERSON



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	2
Inventory (# Spaces)	22
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	50%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

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Figure C.8 Anderson I-85 Rest Area (South)



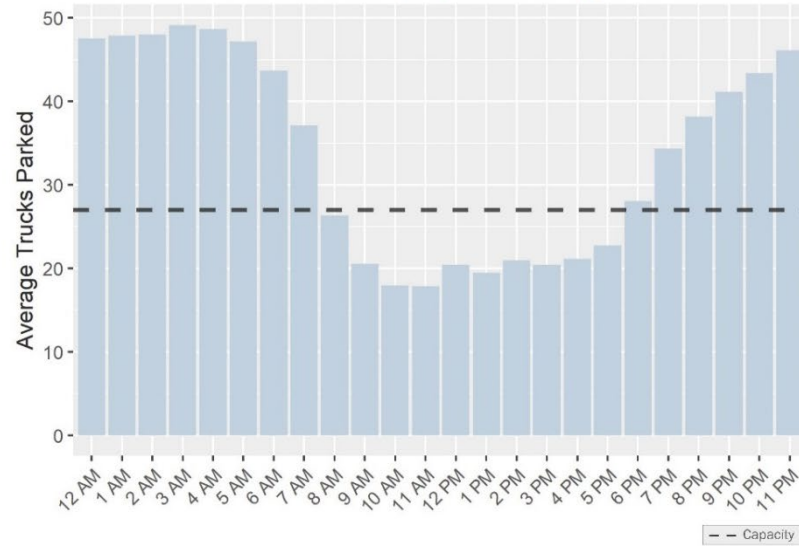
ANDERSON I-85 REST AREA (SOUTH)
I-85, NORTHLAKE



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	2
Inventory (# Spaces)	27
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	58%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

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Figure C.9 Laurens I-385 Rest Area (North/South)



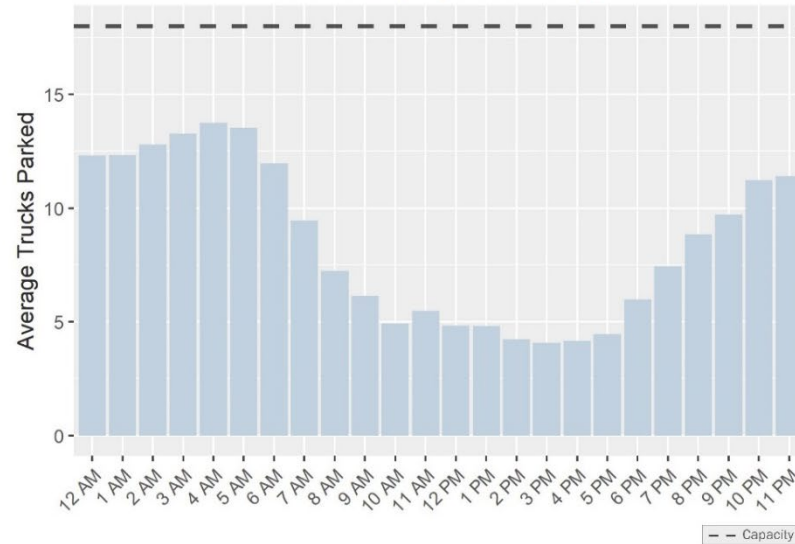
**LAURENS I-385 REST AREA
(NORTH/SOUTH)**
I-385, LAURENS



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	2
Inventory (# Spaces)	18
Truck Parking Utilization*	Has Availability (<70% Utilization)
Hours Over Capacity	0%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

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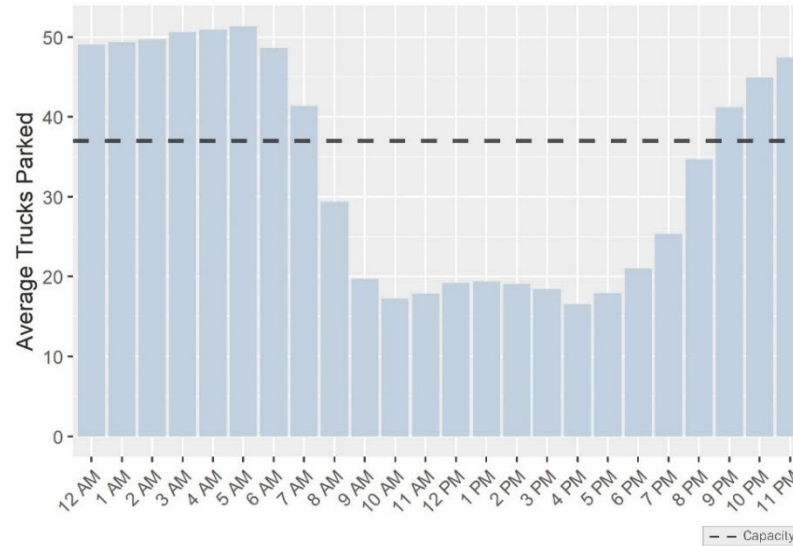
Figure C.10 Oconee I-85 Welcome Center (North)



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	3
Inventory (# Spaces)	37
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	46%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

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Figure C.11 Spartanburg I-26 Welcome Center (East)



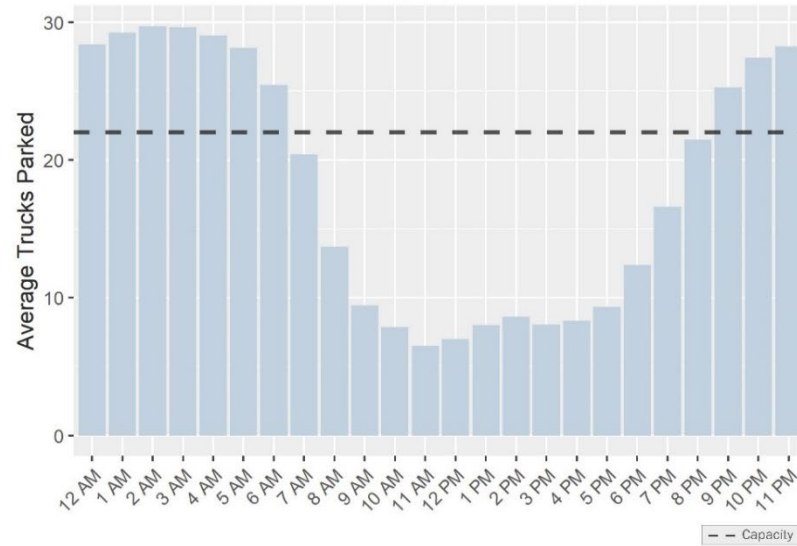
SPARTANBURG I-26 WELCOME CENTER (EAST)
I-26, LANDRUM



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	3
Inventory (# Spaces)	22
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	42%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

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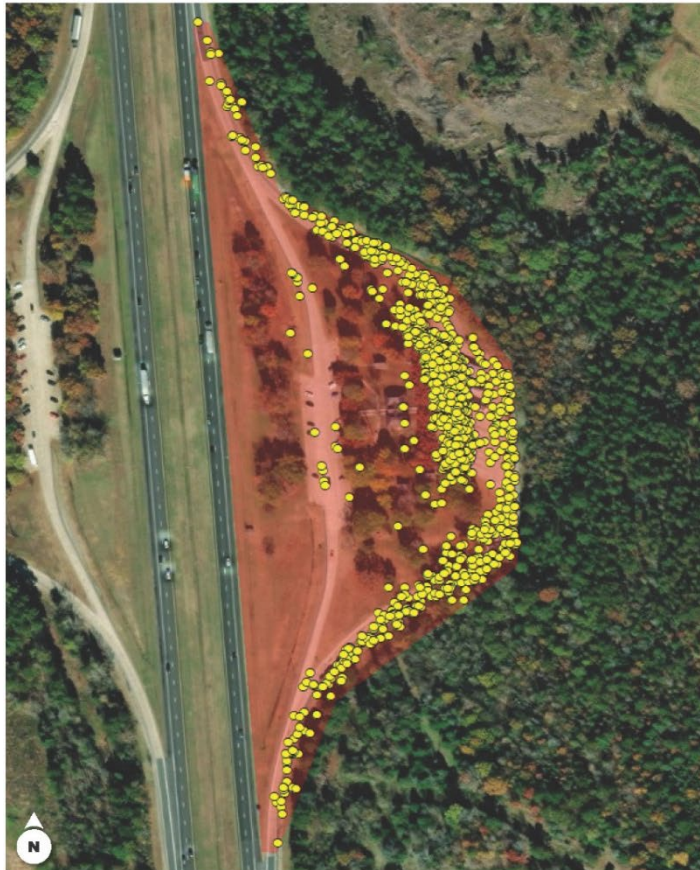
Figure C.12 Chester I-77 Rest Area (North)



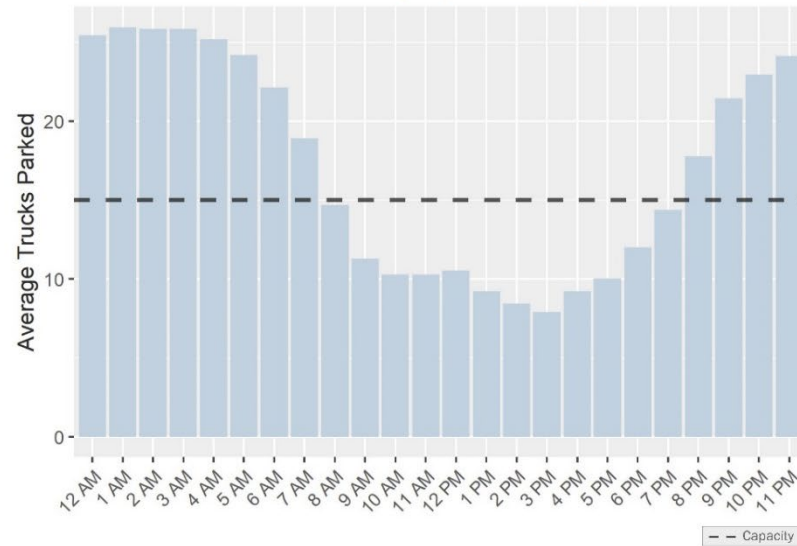
CHESTER I-77 REST AREA (NORTH)
I-77, LANDO



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	4
Inventory (# Spaces)	15
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	50%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

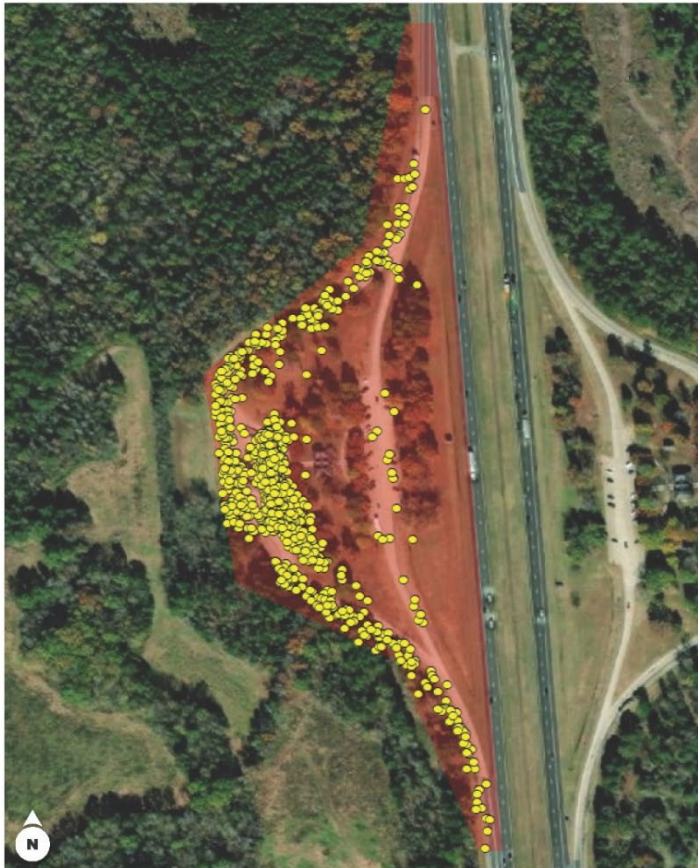
Figure C.13 Chester I-77 Rest Area (South)



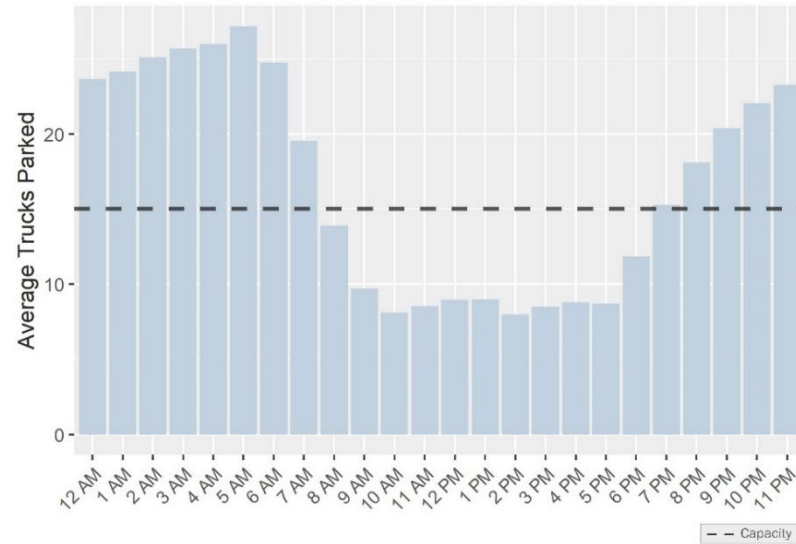
CHESTER I-77 REST AREA (SOUTH)
I-77, LANDO



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	4
Inventory (# Spaces)	15
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	54%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

Figure C.14 York I-77 Welcome Center (South)



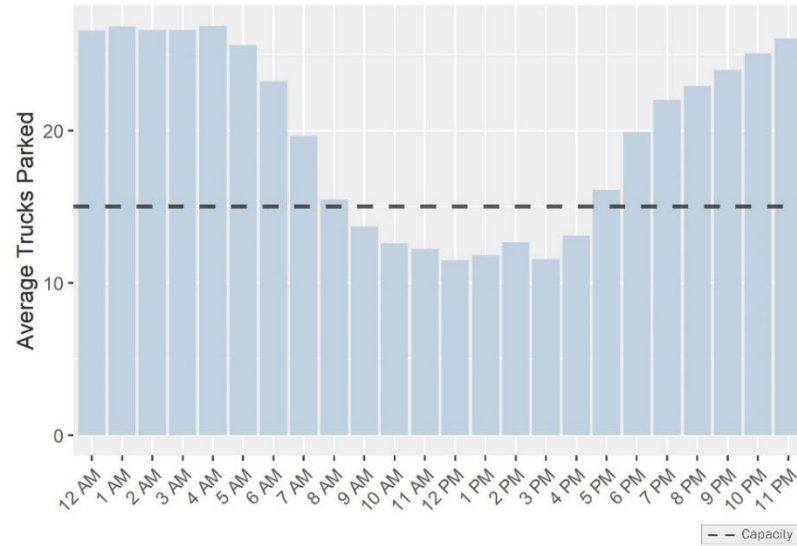
YORK I-77 WELCOME CENTER (SOUTH)
I-77, FORT MILL



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	4
Inventory (# Spaces)	15
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	67%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

Figure C.15 Cherokee I-85 Welcome Center (South)



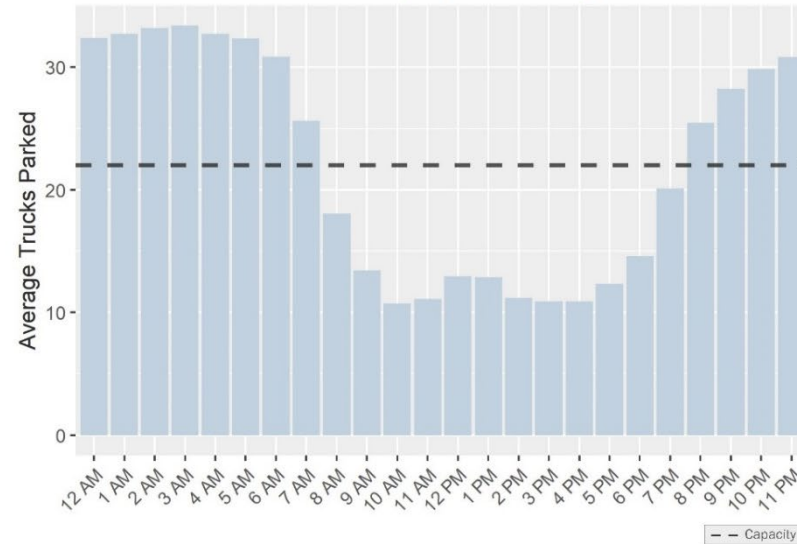
CHEROKEE I-85 WELCOME CENTER (SOUTH)
I-85, BLACKSBURG



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	4
Inventory (# Spaces)	22
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	50%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

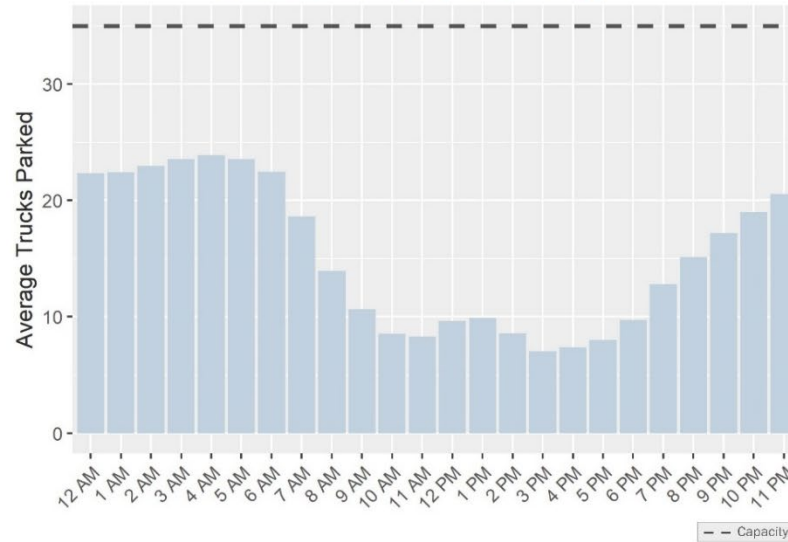
Figure C.16 Dillon I-95 Welcome Center (South)



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	5
Inventory (# Spaces)	35
Truck Parking Utilization*	Has Availability (<70% Utilization)
Hours Over Capacity	0%

* At/Over Capacity = >90% Utilization at Peak Hour
 Near Capacity = 70%-89% Utilization at Peak Hour
 Has Capacity = < 70% Utilization at Peak Hour

May 2022

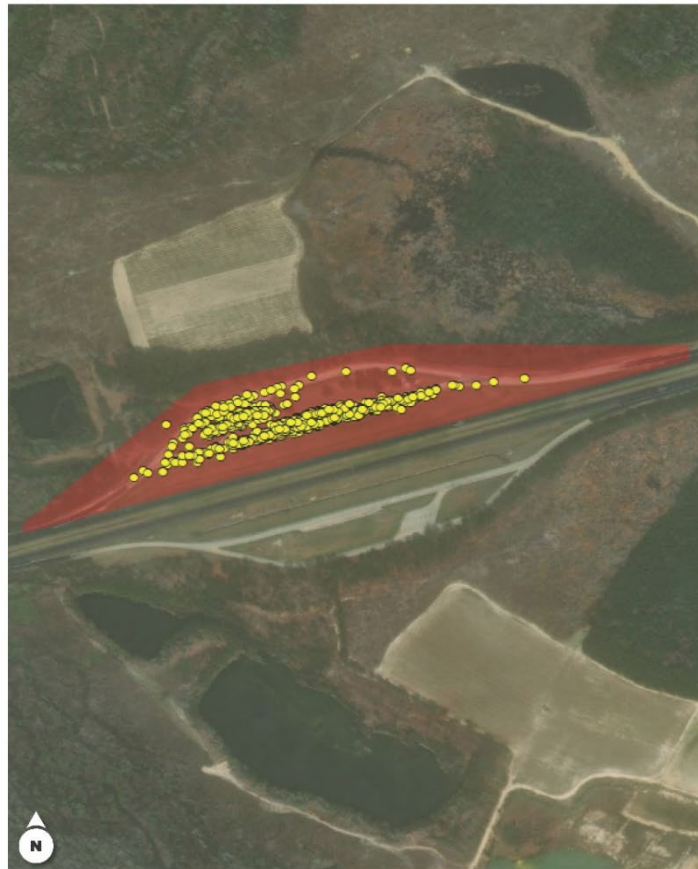
Figure C.17 Darlington I-20 Truck Parking Only Area (West)



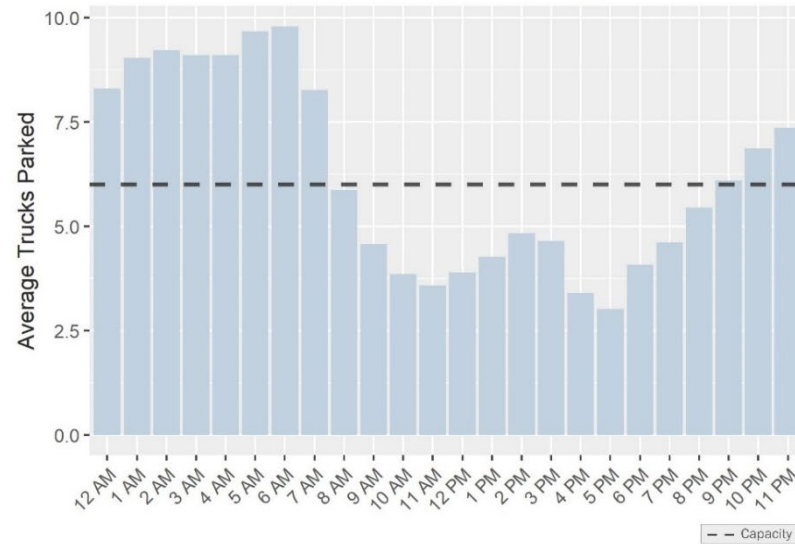
**DARLINGTON I-20 TRUCK
PARKING ONLY (WEST)**
I-20, WILKES CROSSROADS



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	5
Inventory (# Spaces)	6
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	46%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

Figure C.18 Darlington I-20 Truck Parking Only Area (East)



DARLINGTON I-20 TRUCK PARKING ONLY (EAST)

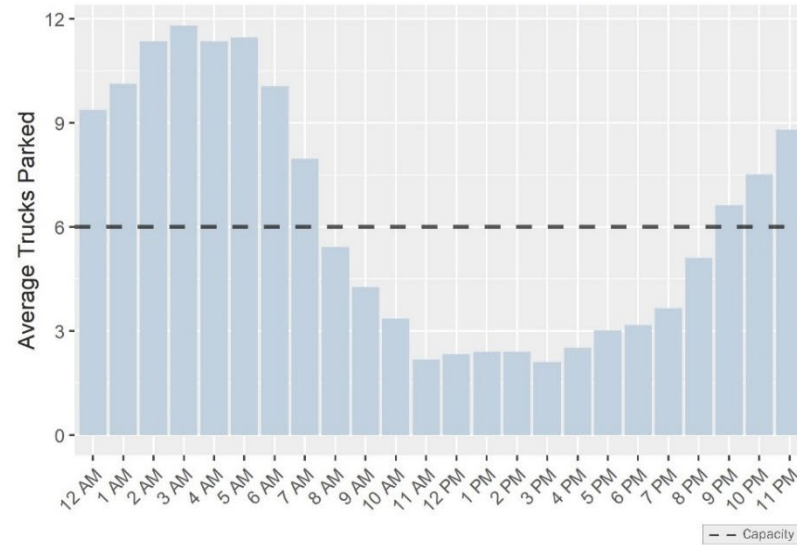
I-20, WILKES CROSSROADS



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	5
Inventory (# Spaces)	6
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	46%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

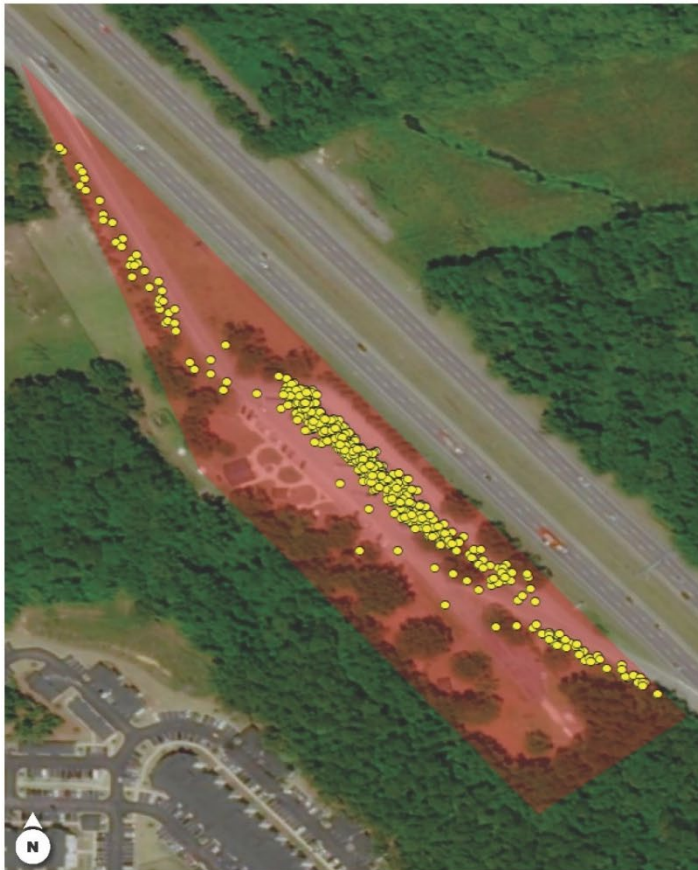
Figure C.19 Charleston I-26 Rest Area (East)



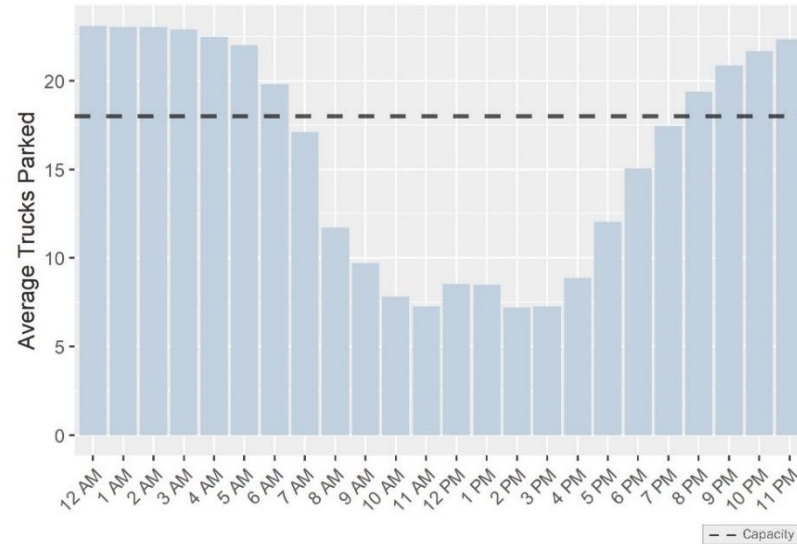
CHARLESTON I-26 REST AREA (EAST)
I-26, LADSON



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	6
Inventory (# Spaces)	18
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	46%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

Figure C.20 Jasper I-95 Welcome Center (North)



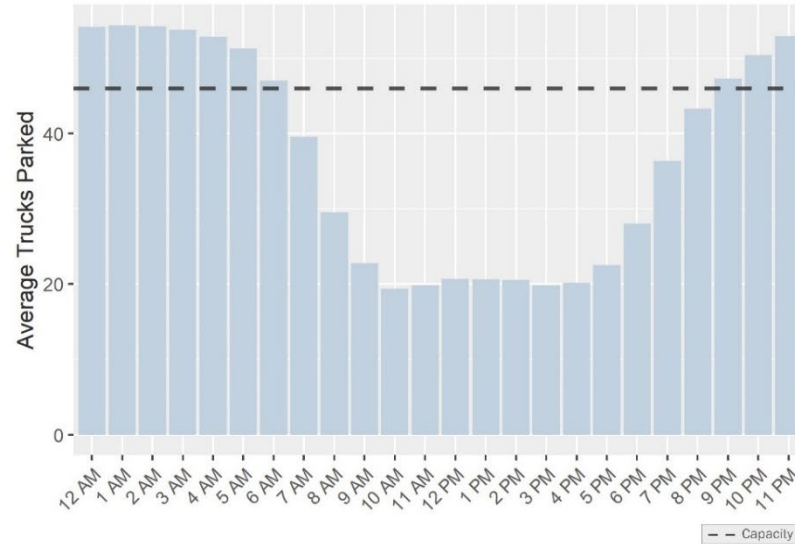
JASPER I-95 WELCOME CENTER (NORTH)
I-95, HARDEEVILLE



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	6
Inventory (# Spaces)	46
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	42%

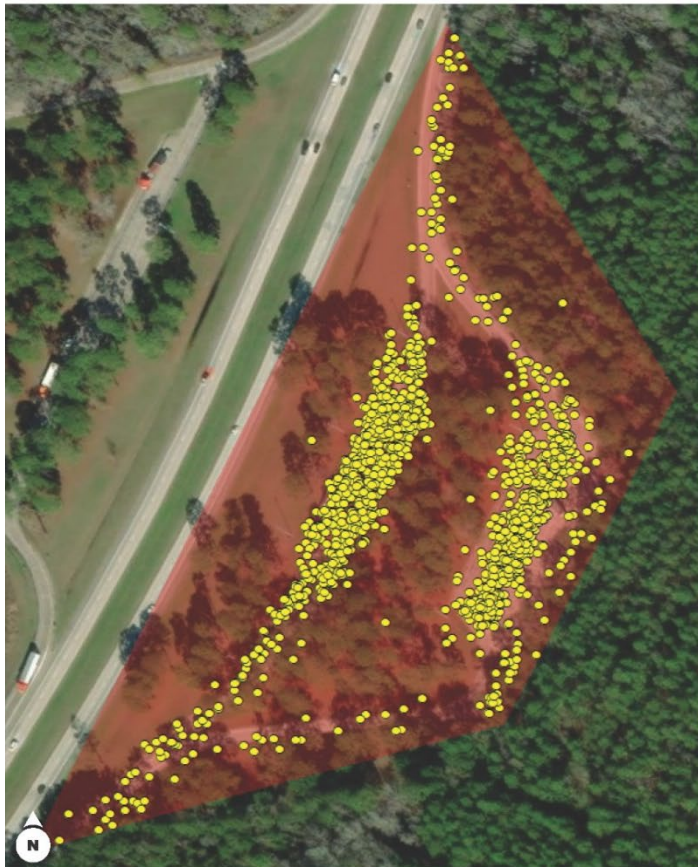
* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

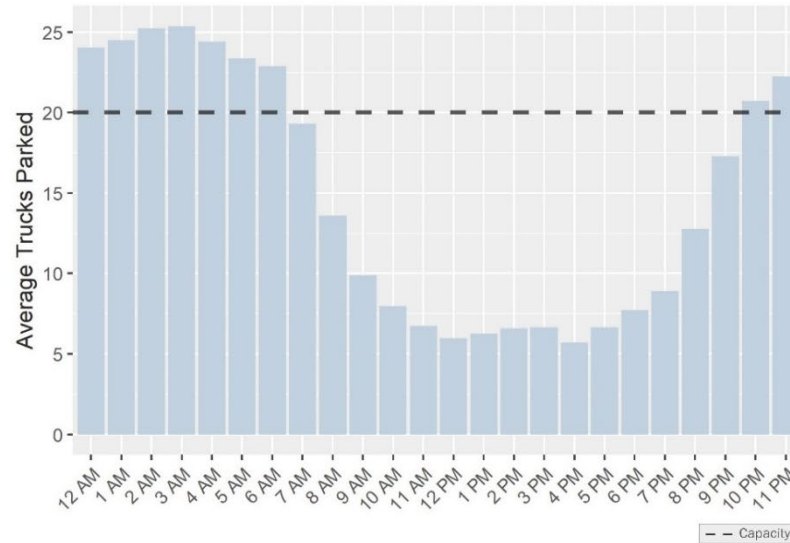
Figure C.21 Jasper I-95 Truck Parking Only Area (North)



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	6
Inventory (# Spaces)	20
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	38%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

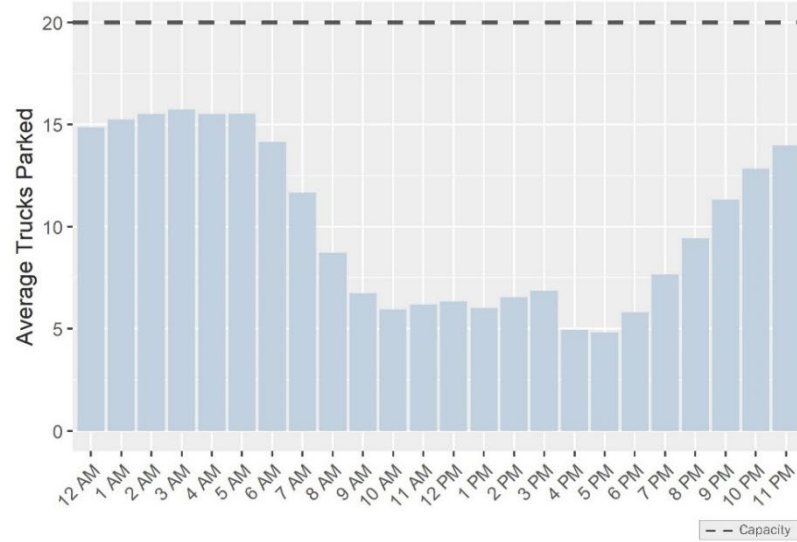
Figure C.22 Jasper I-95 Truck Parking Only Area (South)



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	6
Inventory (# Spaces)	20
Truck Parking Utilization*	Near Capacity (70% - 90% Utilization)
Hours Over Capacity	0%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

Figure C.23 Colleton I-95 Rest Area (South)



COLLETON I-95 REST AREA (SOUTH)

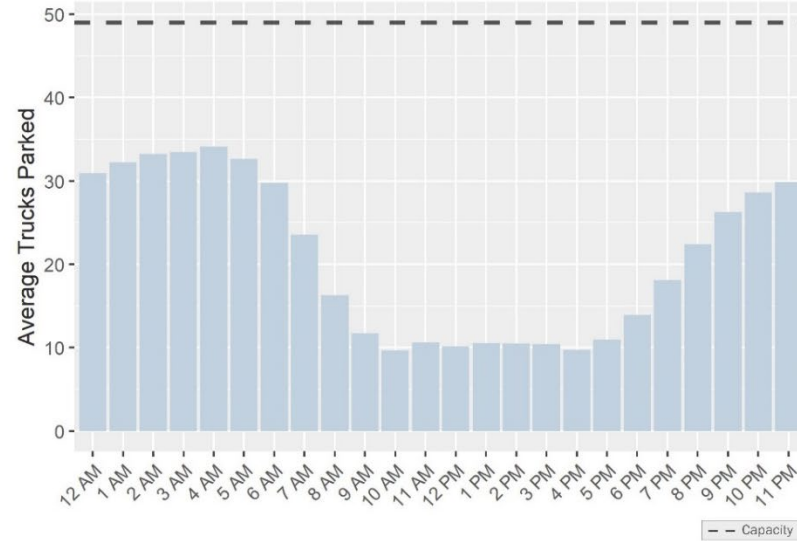
I-95, YEMASSEE



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	6
Inventory (# Spaces)	49
Truck Parking Utilization*	Has Availability (<70% Utilization)
Hours Over Capacity	0%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

Figure C.24 Colleton I-95 Rest Area (North)

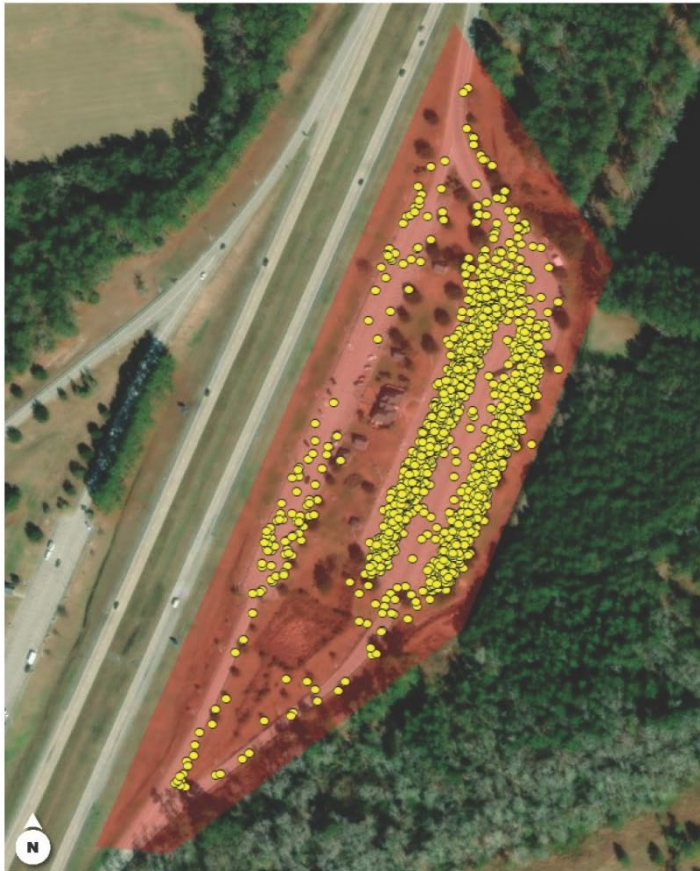


COLLETON I-95 REST AREA (NORTH)

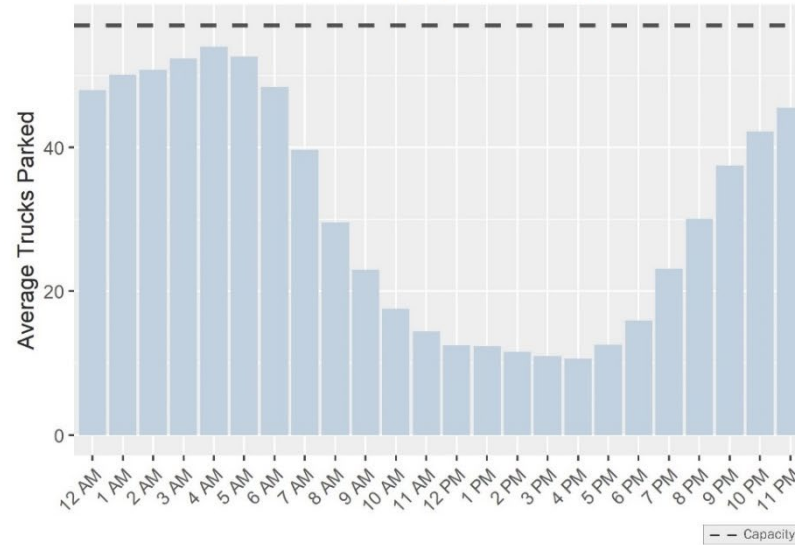
I-95, YEMASSEE



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	6
Inventory (# Spaces)	57
Truck Parking Utilization*	Near Capacity (70% - 90% Utilization)
Hours Over Capacity	0%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

Figure C.25 Dorchester I-95 Truck Parking Only Area (South)



DORCHESTER I-95 TRUCK PARKING ONLY (SOUTH)

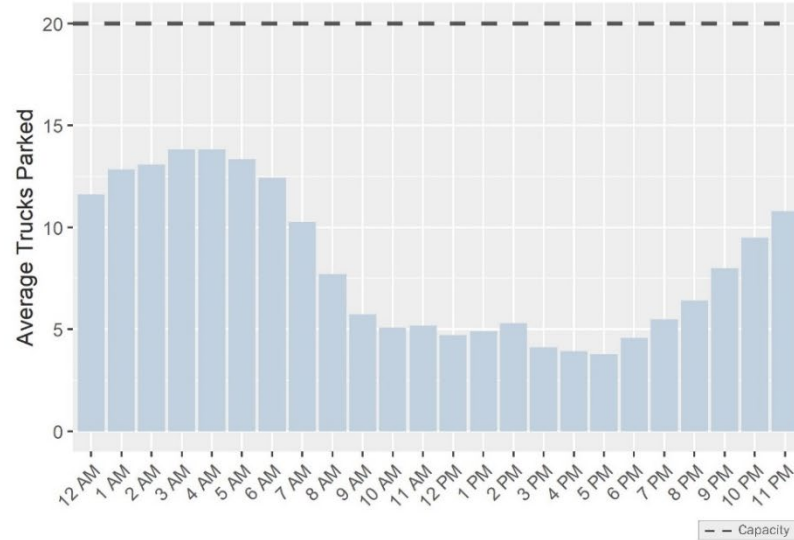
I-95, ST. GEORGE



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	6
Inventory (# Spaces)	20
Truck Parking Utilization*	Has Availability (<70% Utilization)
Hours Over Capacity	0%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

Figure C.26 Aiken I-20 Welcome Center (East)



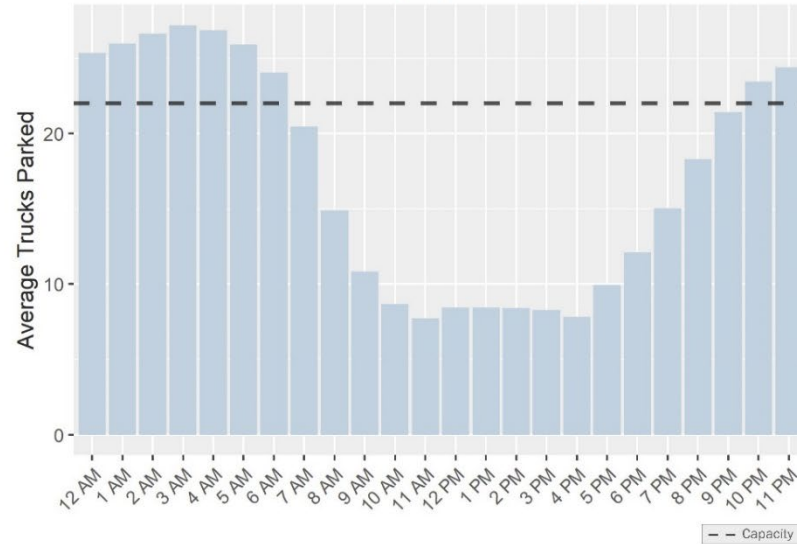
AIKEN I-20 WELCOME CENTER (EAST)
I-20, NORTH AUGUSTA



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	7
Inventory (# Spaces)	22
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	38%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

Figure C.27 Aiken I-20 Truck Parking Only Area (East)



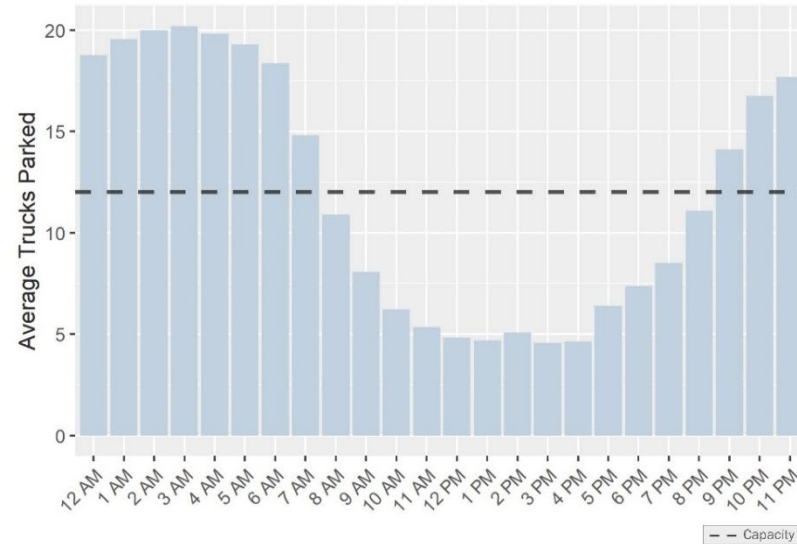
AIKEN I-20 TRUCK PARKING ONLY (EAST)
I-20, AIKEN



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	7
Inventory (# Spaces)	12
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	46%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

Figure C.28 Aiken I-20 Truck Parking Only Area (West)



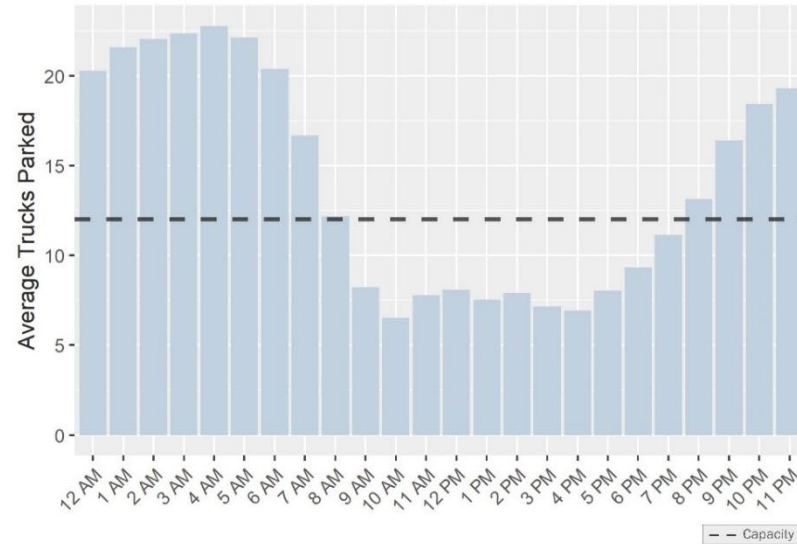
AIKEN I-20 TRUCK PARKING ONLY (WEST)
I-20, AIKEN



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	7
Inventory (# Spaces)	12
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	54%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

Figure C.29 Calhoun I-26 Rest Area (East)



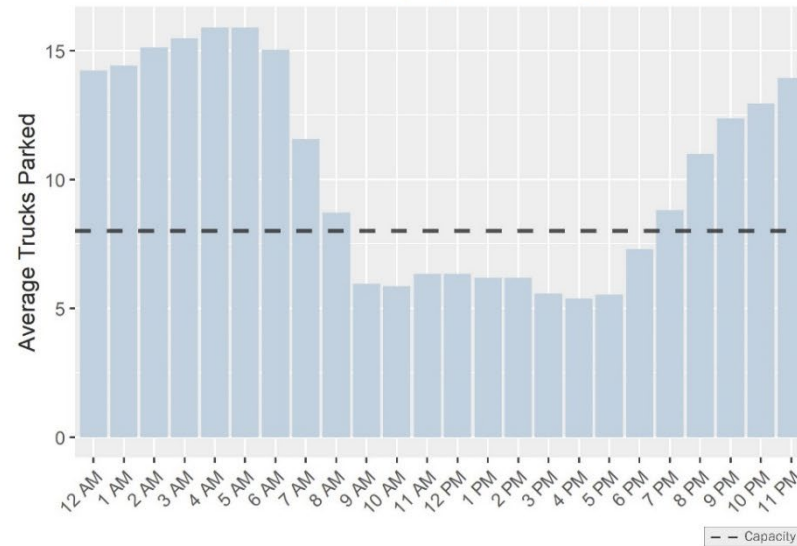
CALHOUN I-26 REST AREA (EAST)
I-26, GASTON



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	7
Inventory (# Spaces)	8
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	58%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

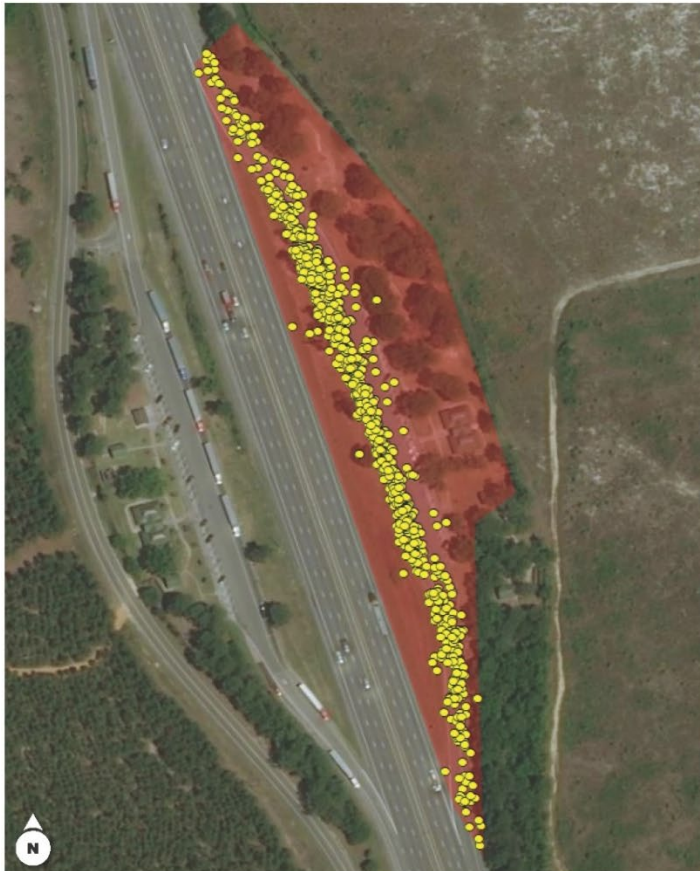
Figure C.30 Calhoun I-26 Rest Area (West)



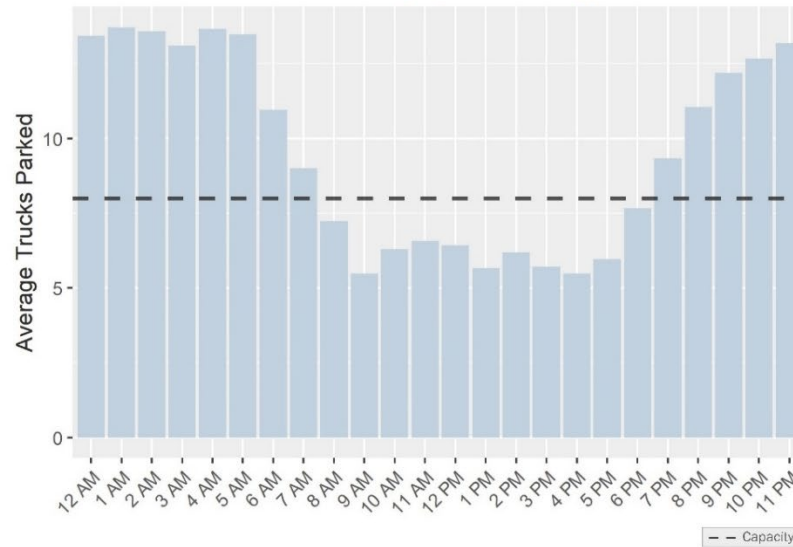
CALHOUN I-26 REST AREA (WEST)
I-26, GASTON



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	7
Inventory (# Spaces)	8
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	54%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

Figure C.31 Orangeburg I-26 Rest Area (East)



ORANGEBURG I-26 REST AREA (EAST)

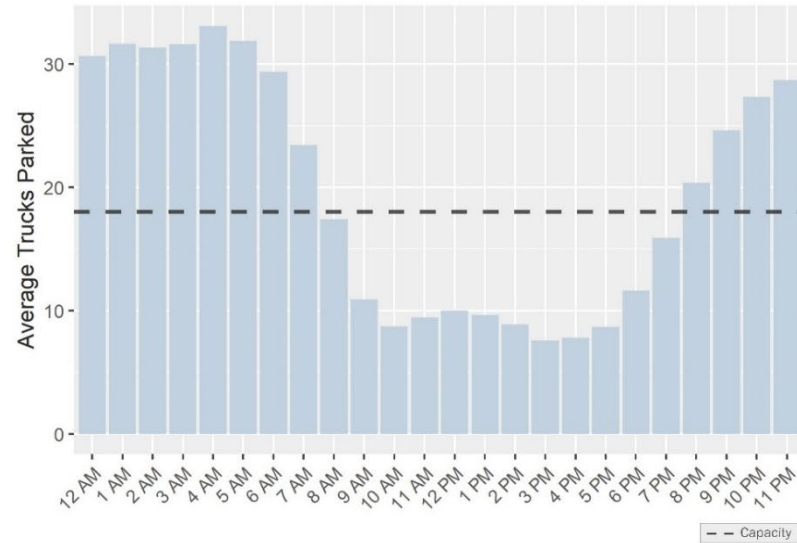
I-26, WILKINSON HEIGHTS



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	7
Inventory (# Spaces)	18
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	50%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

Figure C.32 Orangeburg I-26 Rest Area (West)



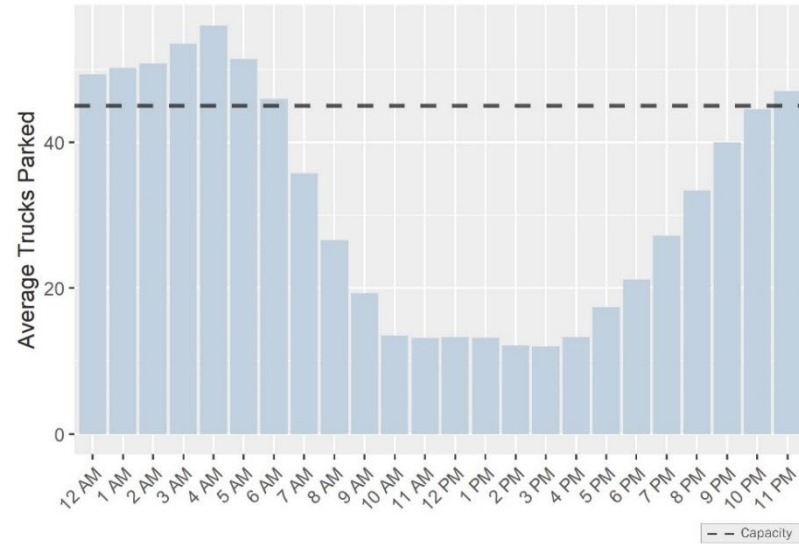
ORANGEBURG I-26 REST AREA (WEST)
I-26, WILKINSON HEIGHTS



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	7
Inventory (# Spaces)	45
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	33%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

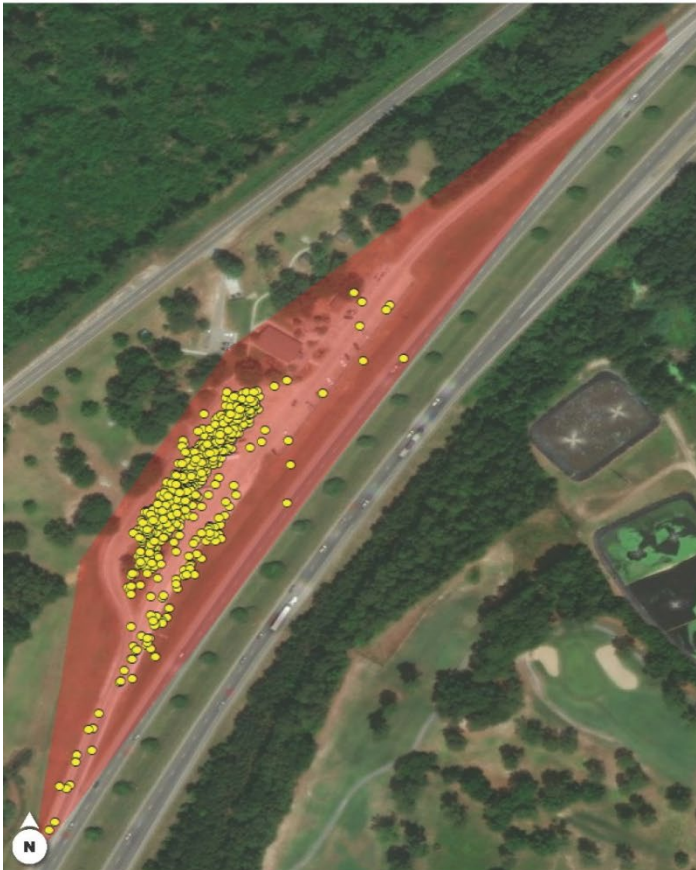
Figure C.33 Orangeburg I-95 Welcome Center (South)



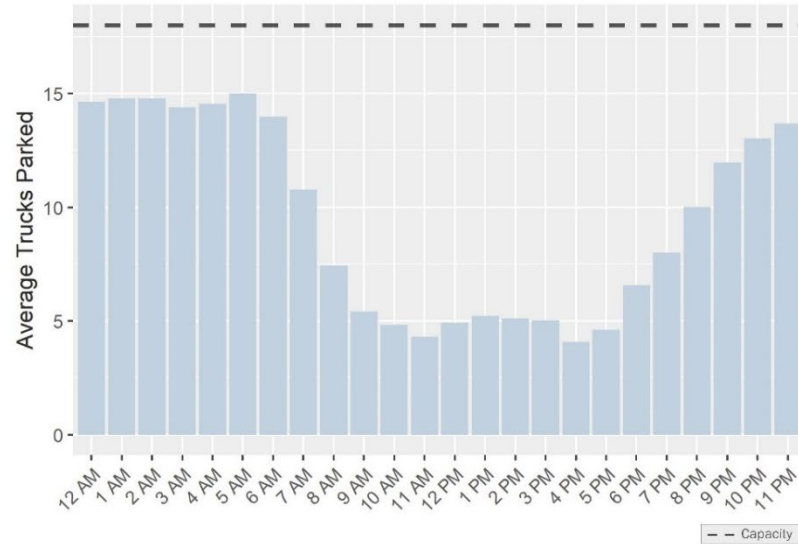
ORANGEBURG I-95 WELCOME CENTER (SOUTH)
I-95, SANTEE



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	7
Inventory (# Spaces)	18
Truck Parking Utilization*	Near Capacity (70% - 90% Utilization)
Hours Over Capacity	0%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

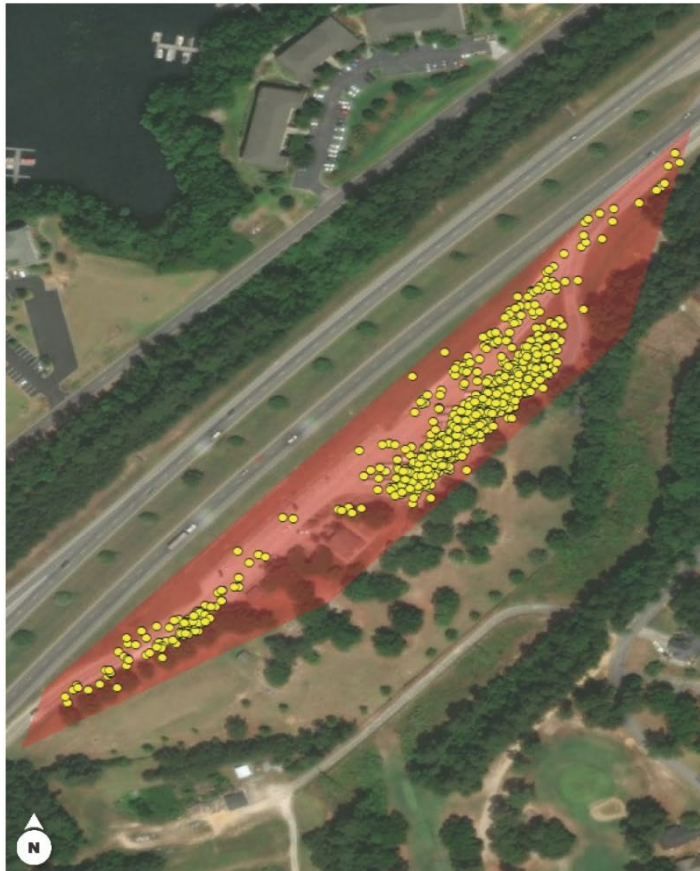
Figure C.34 Orangeburg I-95 Rest Area (North)



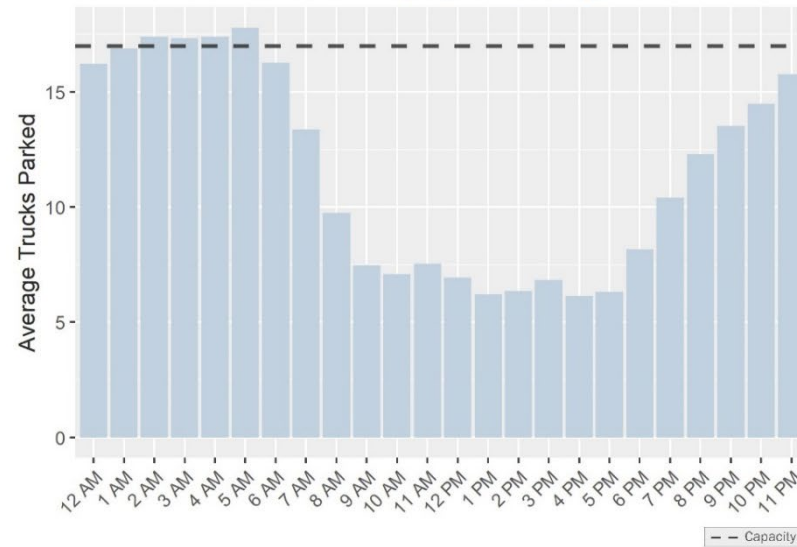
ORANGEBURG I-95 REST AREA (NORTH)
I-95, SANTEE



Aerial Imagery and Raw ATRI Data



Utilization Graph (Time of Day)



Key Data

District	7
Inventory (# Spaces)	17
Truck Parking Utilization*	At or Over Capacity (>90% Utilization)
Hours Over Capacity	17%

* **At/Over Capacity** = >90% Utilization at Peak Hour
Near Capacity = 70%-89% Utilization at Peak Hour
Has Capacity = < 70% Utilization at Peak Hour

May 2022

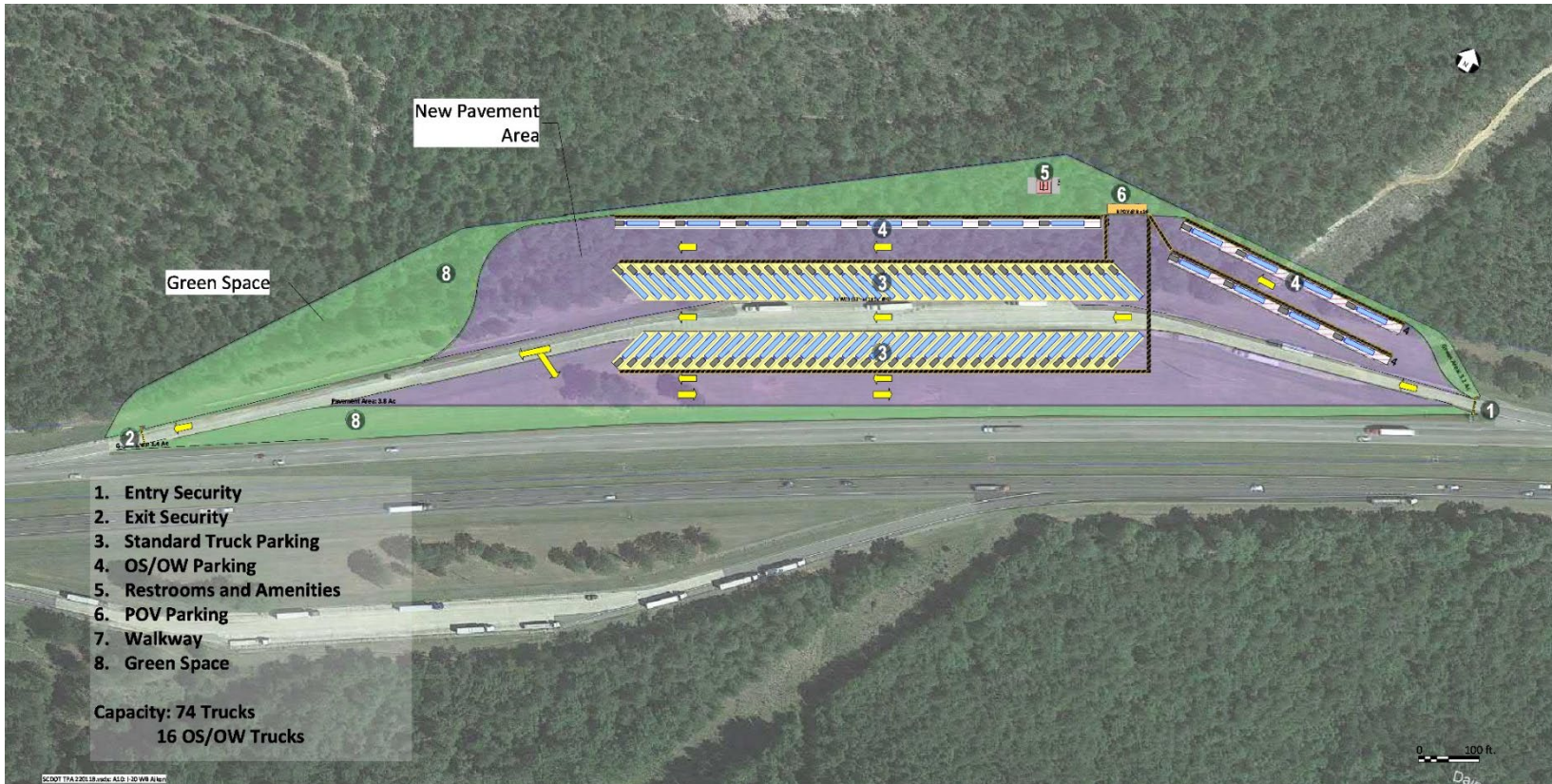
Appendix D. Truck Parking Concept Drawings and Cost Estimates

D.1 Rest Area and Truck Parking Facility Expansions

It is more cost-effective to expand public facilities that are at or over capacity than constructing new facilities. Existing facilities already have established cleaning services, security, and infrastructure, such as utilities and access ramps. Depending on the footprint of the existing facility and the desired amount of new capacity, additional capacity may be able to fit within existing ROW limits or with little ROW acquisition. Other advantages of expanding existing facilities include known demand levels and driver familiarity. At existing facilities, demand is known or could be determined based on observed driver parking behavior. Another advantage of expanding an existing facility is driver familiarity as motor carriers are already aware of the location's existence. Because of these advantages, there is low risk that new capacity at an existing facility would be underutilized.

SCDOT has already taken the first step in implementing this strategy as it has committed \$150 million for rest area upgrades throughout the state, including expanding the number of truck parking spaces at several rest areas. For illustrative purposes only, concept drawings and planning-level cost estimates are shown for expanding the Aiken I-20 Eastbound and Westbound Truck Parking Areas. The cost estimates for these concepts are based on 2022 dollars.

Figure D.1 I-20 WB Aiken—Concept Drawing



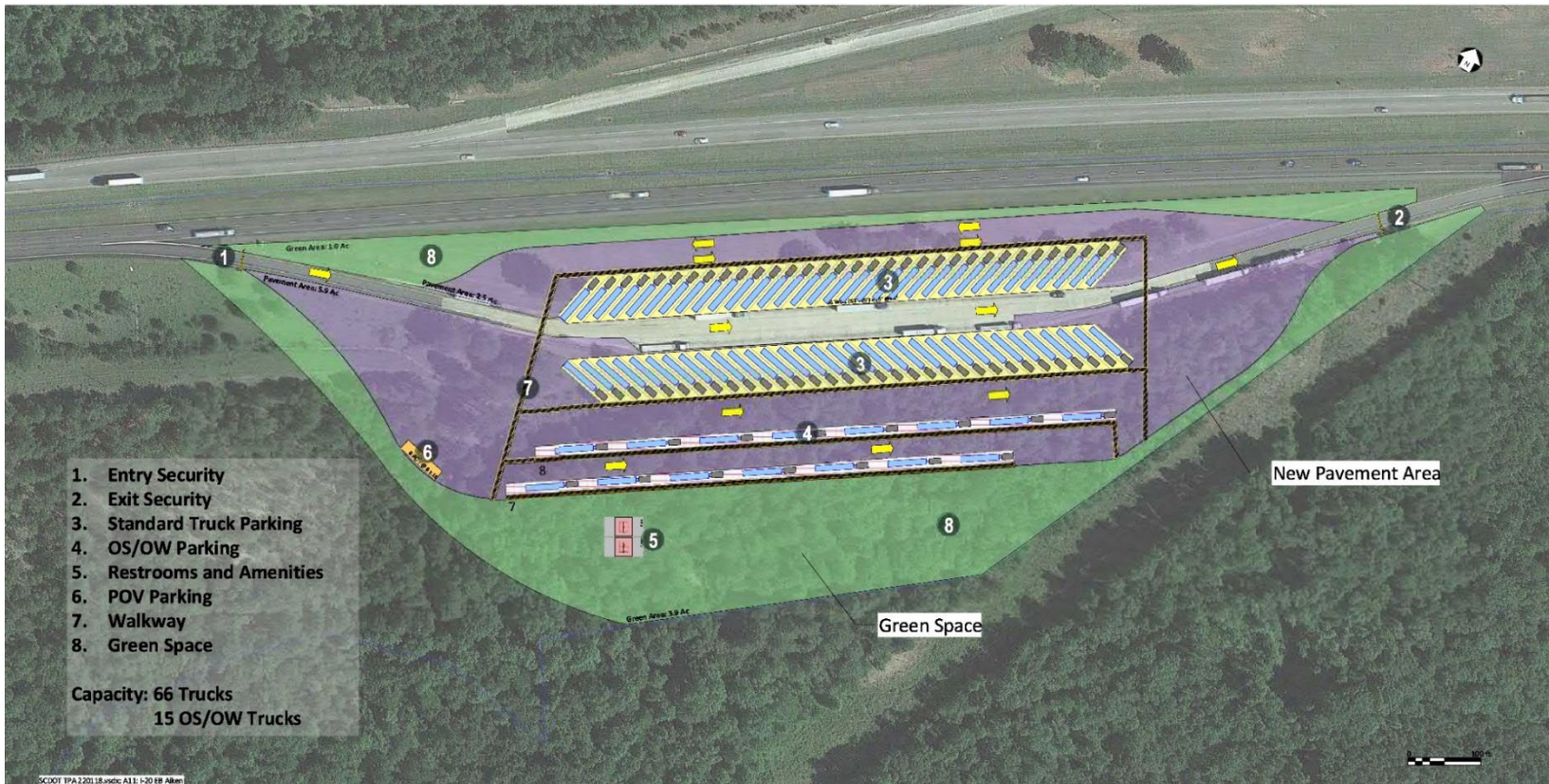
Source: WSP.

Table D.1 I-20 WB Aiken—Cost Estimate

Item No.	Location	Quantity	UOM	Unit Price (\$)	Cost (\$)
1	Clear—Grub—Level	13.68	Acre	\$10,126.28	\$138,527.51
2	Low Voltage Conduit				
	4" PVC Conduit	4,560	LF	\$21.67	\$98,815.20
	Low voltage power conductors	4,560	LF	\$4.81	\$21,933.60
3	Substation for 2 to 5 MVA	1	LS		\$ –
4	HM Pole .5M Lumens	17	LS	\$36,000.00	\$612,000.00
5	AC Pavement for Container				
	12" Pavement w/ 145 lbs/cf Asphalt	43,935	SY	\$65.00	\$2,855,775.00
6	AC Pavement Rehab	0	SY	\$52.00	\$ –
7	Lift Gate with Kiosk	2	LS	\$50,000.00	\$100,000.00
8	Chain Link Boundary Fence		LF	\$16.50	\$ –
9	Green Space				
	Sodding	22,265	SY	\$12.00	\$267,180.00
	Plantings	46	EA	\$123.70	\$5,690.20
	Irrigation System	4.6	Acre	\$15,000.00	\$69,000.00
10	Walkway	13,180	LF	\$0.30	\$3,954.00
11	Water Closet				
	ADA Stall = 7.5' x 7.5'	8	EA	\$12,000.00	\$96,000.00
12	Parking Striping	13,670	LF	\$0.53	\$7,245.10
13	Base Cost			Base Cost:	\$4,276,120.61
	Contingency			Contingency:	120%
14	Total Cost w/20% Contingency			Total Cost:	\$5,131,344.73
15	Cost/Acre			Cost/Acre	\$375,098.30

Source: WSP.

Figure D.2 I-20 EB Aiken—Concept Drawing



Source: WSP.

Table D.2 I-20 EB Aiken—Cost Estimate

Item No.	Location	Quantity	UOM	Unit Price (\$)	Cost (\$)
1	Clear—Grub—Level	13.31	Acre	\$10,126.28	\$134,780.79
2	Low Voltage Conduit				
	4" PVC Conduit	3,368	LF	\$21.67	\$72,984.56
	Low voltage power conductors	3,368	LF	\$4.81	\$16,200.08
3	Substation for 2 to 5 MVA	1	LS		\$ –
4	HM Pole .5M Lumens	14	LS	\$36,000.00	\$504,000.00
5	AC Pavement for Container				
	12" Pavement w/ 145 lbs/cf Asphalt	40,860	SY	\$65.00	\$2,655,900.00
6	AC Pavement Rehab	0	SY	\$52.00	\$ –
7	Lift Gate with Kiosk	2	LS	\$50,000.00	\$100,000.00
8	Chain Link Boundary Fence	4,220	LF	\$16.50	\$69,630.00
9	Green Space				
	Sodding	23,577	SY	\$12.00	\$282,924.00
	Plantings	49	EA	\$123.70	\$6,061.30
	Irrigation System	4.87	Acre	\$15,000.00	\$73,050.00
10	Walkway	13,910	LF	\$0.30	\$4,173.00
11	Water Closet				
	ADA Stall = 7.5' x 7.5'	8	EA	\$12,000.00	\$96,000.00
12	Parking Striping	12,374	LF	\$0.53	\$6,558.22
13	Base Cost			Base Cost:	\$4,022,261.95
	Contingency			Contingency:	120%
14	Total Cost w / 20% Contingency			Total Cost:	\$4,826,714.34
15	Cost/Acre			Cost/Acre	\$362,638.19

Source: WSP.

D.2 Welcome Center Expansions

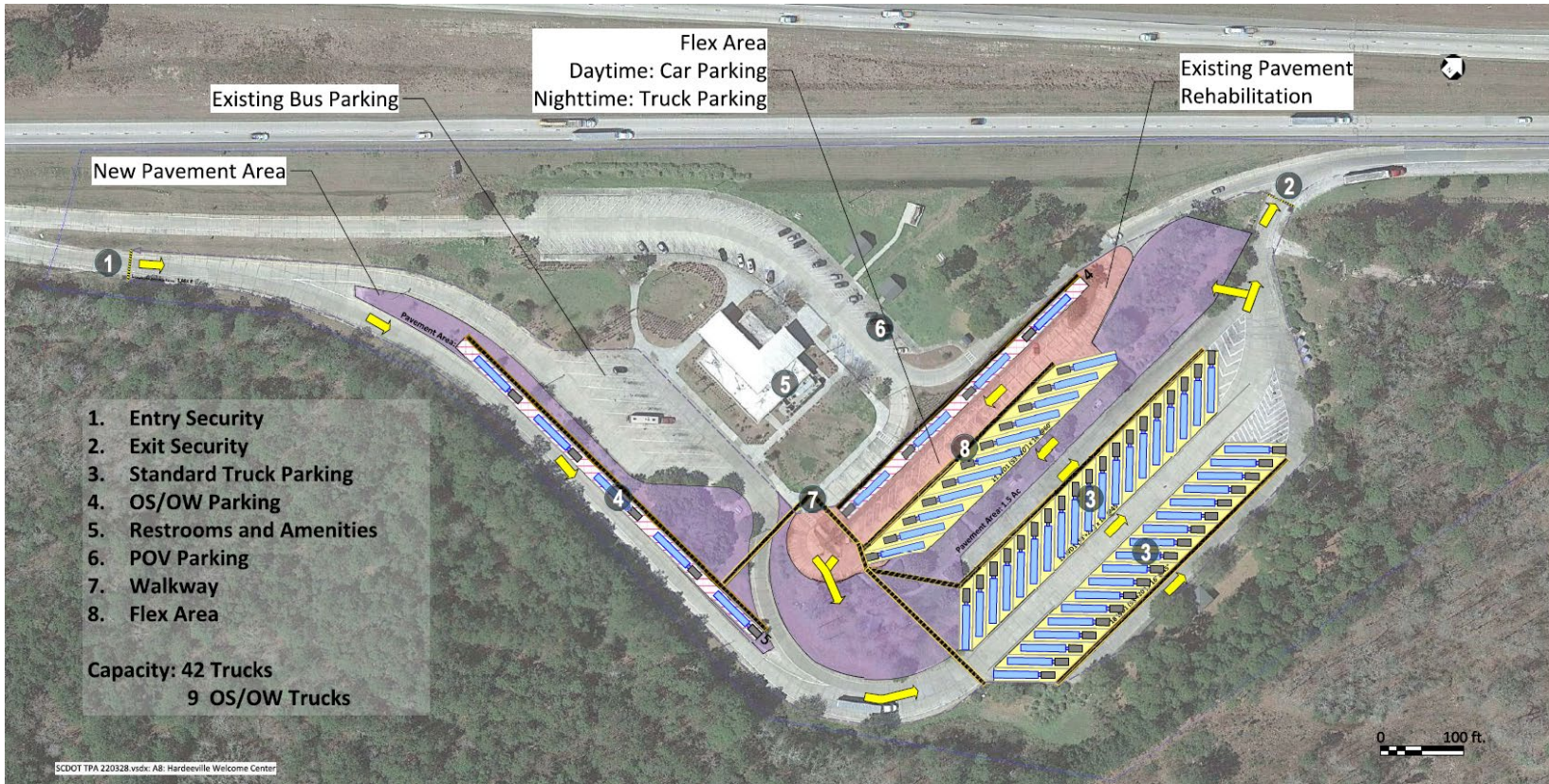
This strategy is identical to expanding and upgrading truck parking at existing SCDOT rest areas; however, because the welcome centers are managed by a different state department, the implementation considerations will vary.

For this strategy, SCDOT should partner with SCPRT to expand truck parking capacity at welcome centers. Similar to expanding rest areas, in most cases, it will be advantageous to the state to expand existing locations instead of building new facilities. Furthermore, all welcome centers are candidates for expansion as the demand assessment determined that six of the state's eight welcome centers are over capacity for truck parking, and that all welcome centers are located on corridors with at least moderate truck parking needs. For some welcome centers, it is possible to expand capacity within existing ROW and by modifying striping and site flow patterns. For other welcome centers at high-demand locations where existing ROW or other constraints limit opportunities for expansion, SCDOT should consider acquiring additional ROW.

Not all of the locations identified will be expanded or upgraded. Rather, all identified locations would be considered and would undergo a more detailed feasibility assessment to determine site-specific conditions and needs. Sites determined to be feasible for expansions or upgrades would then be prioritized based on the demand for truck parking along the corridors containing the sites, safety needs, and other relevant concerns. To fully implement this strategy, design and construction activities would begin at the sites in order of priority and as funding is made available.

For illustrative purposes only, concept drawings and planning-level cost estimates are shown for expanding the truck parking at the Hardeeville and Blacksburg Welcome Centers on I-95 in Jasper County and I-85 in Cherokee County, respectively. The cost estimates for these concepts are based on 2022 dollars. The actual site(s) for expansion should be determined following a thorough assessment.

Figure D.3 Jasper I-95 Welcome Center (North)—Concept Drawing



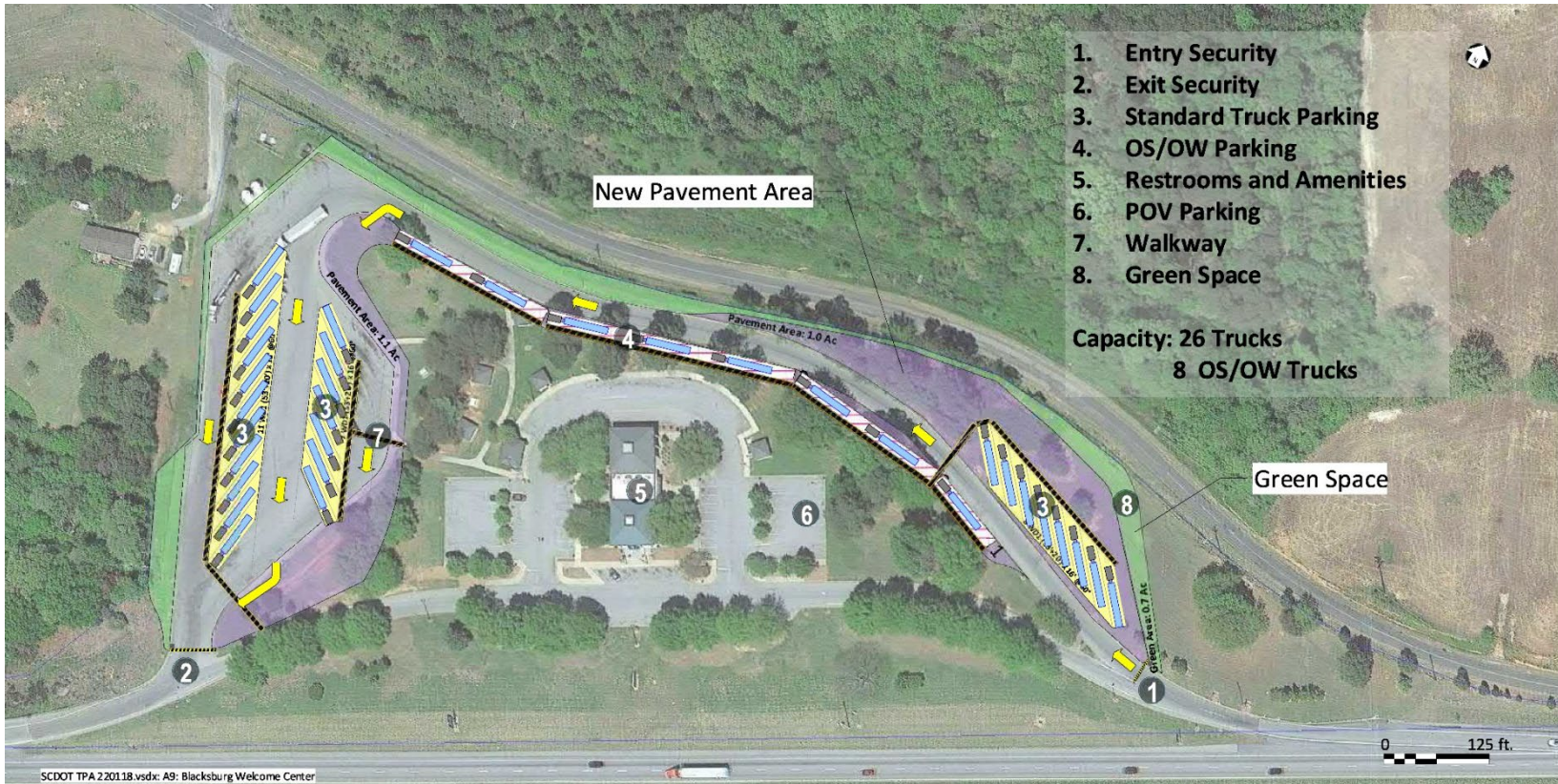
Source: WSP.

Table D.3 Jasper I-95 Welcome Center (North)—Cost Estimate

Item No.	Location	Quantity	UOM	Unit Price (\$)	Cost (\$)
1	Clear—Grub—Level	2.16	Acre	\$10,126.28	\$21,872.76
2	Low Voltage Conduit				
	4" PVC Conduit	0	LF	\$21.67	\$ –
	Low voltage power conductors	0	LF	\$4.81	\$ –
3	Substation for 2 to 5 MVA	0	LS		\$ –
4	HM Pole .5M Lumens	0	LS	\$36,000.00	\$ –
5	AC Pavement for Container				
	12" Pavement w/ 145 lbs/cf Asphalt	10,450	SY	\$65.00	\$679,250.00
6	AC Pacement Rehab	4,986	SY	\$52.00	\$259,272.00
7	Lift Gate with Kiosk	2	LS	\$50,000.00	\$100,000.00
8	Chain Link Boundary Fence	3,664	LF	\$16.50	\$60,456.00
9	Green Space				
	Sodding	0	SY	\$12.00	\$ –
	Plantings	0	EA	\$123.70	\$ –
	Irrigation System	0	Acre	\$15,000.00	\$ –
10	Walkway	9,740	LF	\$0.30	\$2,922.00
11	Water Closet				
	ADA Stall = 7.5' x 7.5'	0	EA	\$12,000.00	\$ –
12	Parking Striping	8,979	LF	\$0.53	\$4,758.87
13	Base Cost			Base Cost:	\$1,128,531.63
	Contingency			Contingency:	120%
14	Total Cost w / 20% Contingency			Total Cost:	\$1,354,237.96
15	Cost/Acre			Cost/Acre	\$626,962.02

Source: WSP.

Figure D.4 Cherokee I-85 Welcome Center (South)—Concept Drawing



Source: WSP.

Table D.4 Cherokee I-85 Welcome Center (South)—Cost Estimate

Item No.	Location	Quantity	UOM	Unit Price (\$)	Cost (\$)
1	Clear—Grub—Level	3.08	Acre	\$10,126.28	\$ 31,188.94
2	Low Voltage Conduit				
	4" PVC Conduit	0	LF	\$21.67	\$ –
	Low voltage power conductors	0	LF	\$4.81	\$ –
3	Substation for 2 to 5 MVA	0	LS		\$ –
4	HM Pole .5M Lumens	0	LS	\$36,000.00	\$ –
5	AC Pavement for Container				
	12" Pavement w/ 145 lbs/cf Asphalt	10,180	SY	\$65.00	\$661,700.00
6	AC Pavement Rehab	0	SY	\$52.00	\$ –
7	Lift Gate with Kiosk	2	LS	\$50,000.00	\$100,000.00
8	Chain Link Boundary Fence	2,006	LF	\$16.50	\$33,099.00
9	Green Space				
	Sodding	3,365	SY	\$12.00	\$40,380.00
	Plantings	7	EA	\$123.70	\$ 865.90
	Irrigation System	0.7	Acre	\$15,000.00	\$10,500.00
10	Walkway	6,530	LF	\$0.30	\$1,959.00
11	Water Closet				
	ADA Stall = 7.5' x 7.5'	0	EA	\$12,000.00	\$ –
12	Parking Striping	6,486	LF	\$0.53	\$3,437.58
13	Base Cost			Base Cost:	\$883,130.42
	Contingency			Contingency:	120%
14	Total Cost w / 20% Contingency			Total Cost:	\$1,059,756.51
15	Cost/Acre			Cost/Acre	\$344,076.79

Source: WSP.

D.3 Build Dedicated, SCDOT Maintained, Truck Parking Facilities within Highway ROW

In some cases, expanding an existing facility is not an option as truck parking might be needed in locations where there currently are no facilities. In these cases, a new truck parking facility would be necessary, which might require the purchase of additional ROW. One option under this category is to repurpose closed rest areas and weigh stations. There are multiple closed rest areas and weigh stations throughout the state, including corridors for which a need for truck parking has been identified.

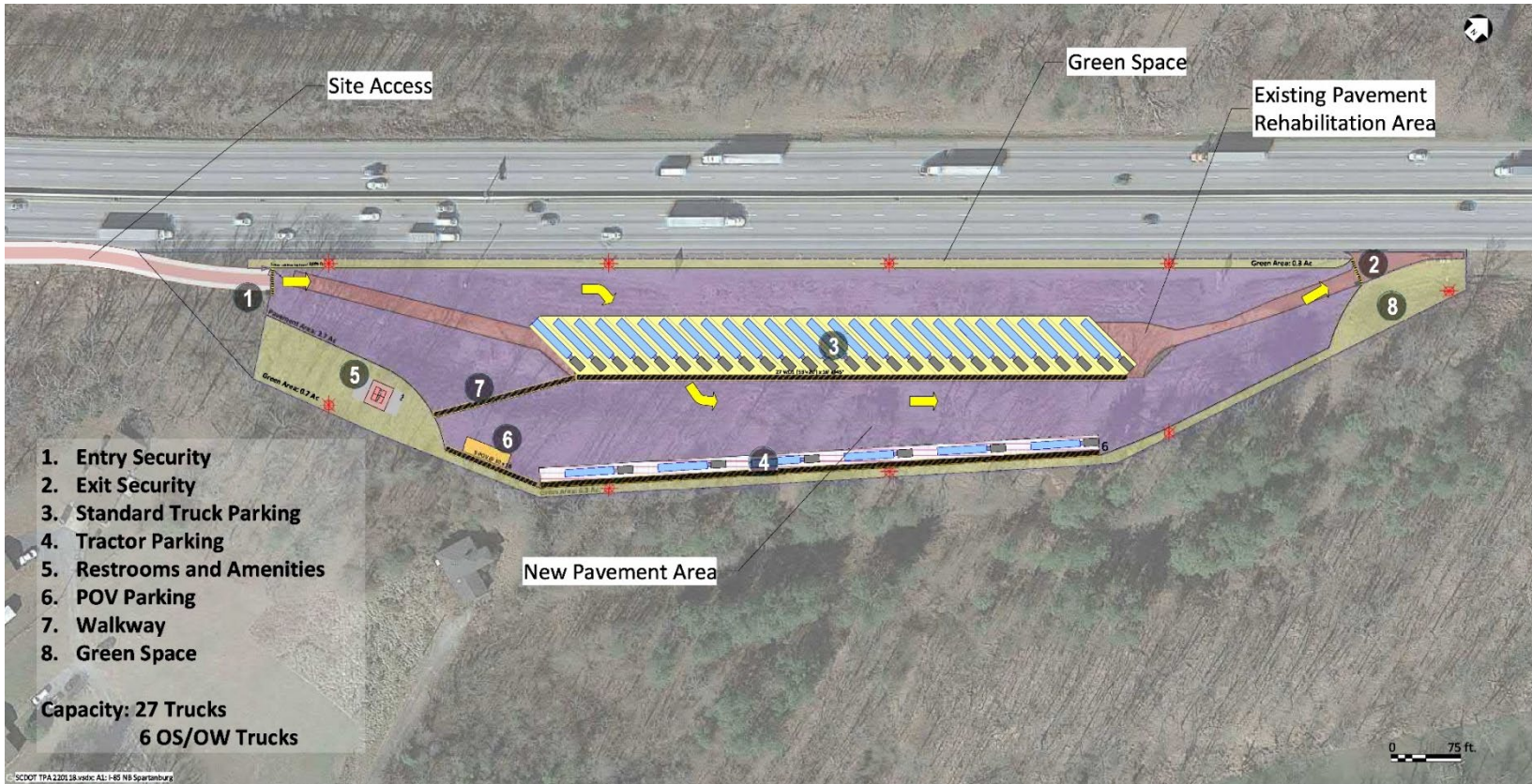
A set of potential sites of closed rest areas and weigh stations that could be converted to dedicated truck parking are listed in **Table D.5**. For illustrative purposes only, concept drawings and planning-level cost estimates for converting these sites are shown below. A concept drawing and planning-level cost estimate is also shown for a new facility located at the I-77/I-20 interchange in Lexington County. This particular site would need a detailed study to determine its feasibility. However, it has significant potential to generate truck parking benefits as it would be located along a high-demand corridor and proximate to freight-intensive land uses in Metro Columbia (e.g., SR 48 corridor south of downtown Columbia, SR 768 corridor between I-77 and US 378). Additionally, it illustrates how larger, vacant parcels within the ROW could be utilized for truck parking if other necessary conditions are met. The cost estimates for these concepts are based on 2022 dollars. The actual site(s) for expansion should be determined following a thorough assessment.

Table D.5 Potential Sites for Dedicated Truck Parking Facilities

Site	Potential Number of Spaces Added
I-85 NB Spartanburg	33
I-85 SB Spartanburg	31
I-20 EB Lexington	66
I-20 WB Lexington	61
I-77/I-20 Interchange	84
I-85 NB Cherokee County	36
I-85 SB Cherokee County	57
Total	368

Source: SCDOT; Cambridge Systematics.

Figure D.5 I-85 NB Spartanburg—Concept Drawing



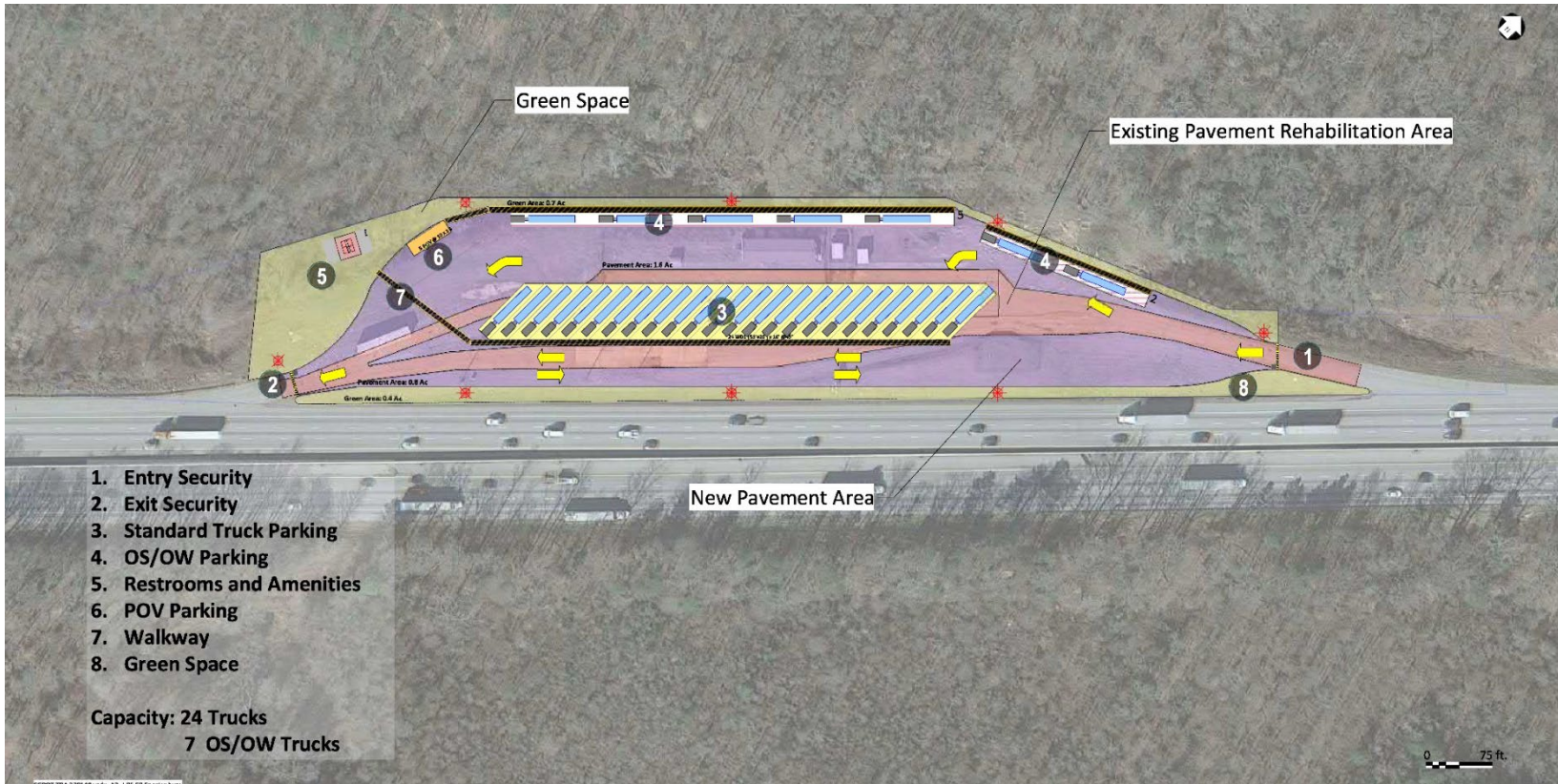
Source: WSP.

Table D.6 I-85 NB Spartanburg—Cost Estimate

Item No.	Location	Quantity	UOM	Unit Price (\$)	Cost (\$)
1	Clear—Grub—Level	4.7	Acre	\$10,126.28	\$47,593.52
2	Low Voltage Conduit				
	4" PVC Conduit	2,516	LF	\$21.67	\$54,521.72
	Low voltage power conductors	2,516	LF	\$4.81	\$12,101.96
3	Substation for 2 to 5 MVA	1	LS		\$ -
4	HM Pole .5M Lumens	9	LS	\$36,000.00	\$324,000.00
5	AC Pavement for Container				
	12" Pavement w/ 145 lbs/cf Asphalt	17,925	SY	\$65.00	\$1,165,125.00
6	AC Pavement Rehab	5,435	SY	\$52.00	\$282,620.00
7	Lift Gate with Kiosk	2	LS	\$50,000.00	\$100,000.00
8	Chain Link Boundary Fence	2,885	LF	\$16.50	\$47,602.50
9	Green Space				
	Sodding	4,765	SY	\$12.00	\$57,180.00
	Plantings	10	EA	\$123.70	\$1,237.00
	Irrigation System	1	Acre	\$15,000.00	\$15,000.00
10	Walkway	5,210	LF	\$0.30	\$1,563.00
11	Water Closet				
	ADA Stall = 7.5' x 7.5'	4	EA	\$12,000.00	\$48,000.00
12	Parking Striping	5,138	LF	\$0.53	\$2,723.14
13	Base Cost			Base Cost:	\$2,159,267.84
	Contingency			Contingency:	120%
14	Total Cost w / 20% Contingency			Total Cost:	\$2,591,121.40
15	Cost/Acre			Cost/Acre	\$551,302.43

Source: WSP.

Figure D.6 I-85 SB Spartanburg—Concept Drawing



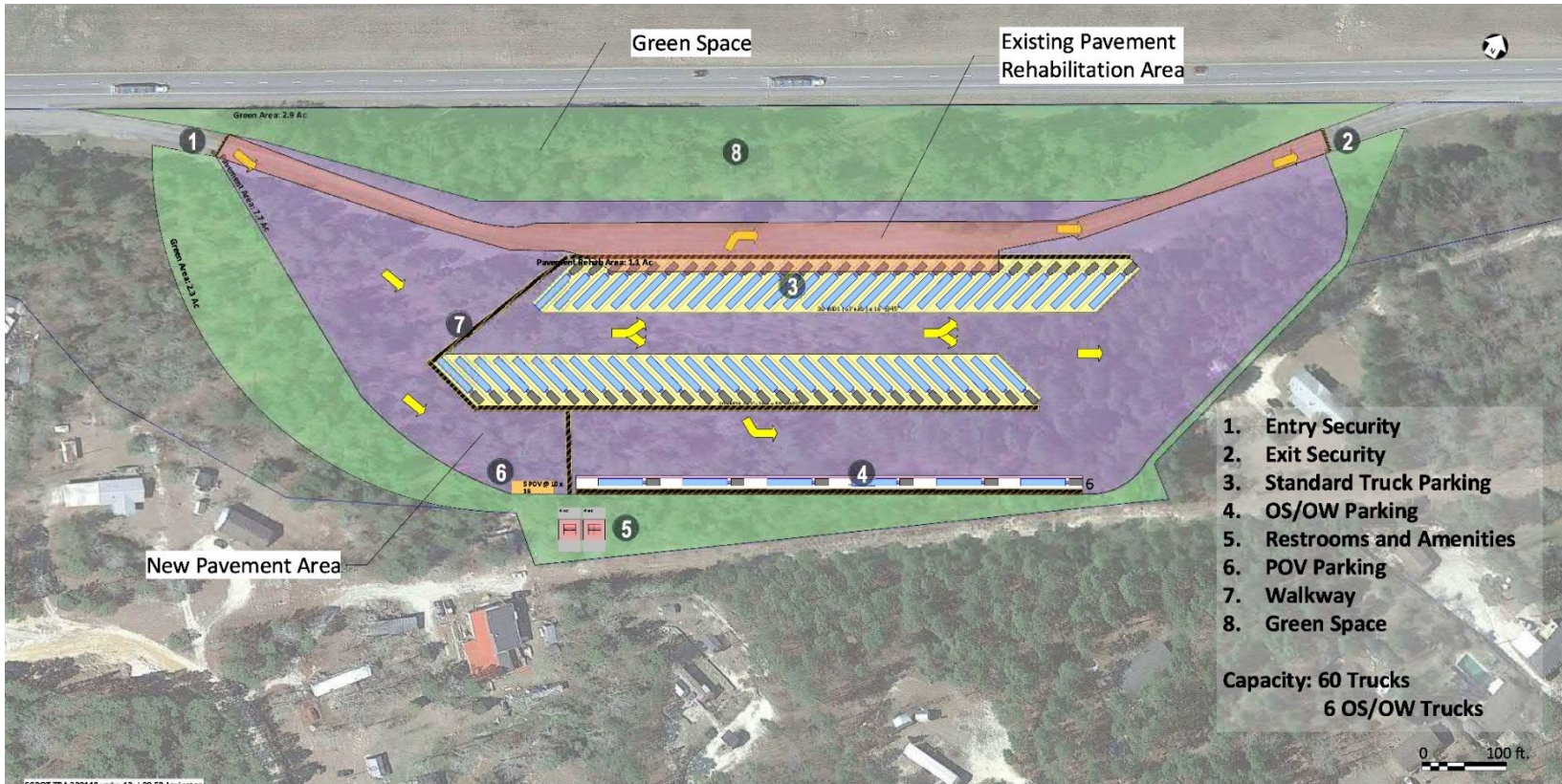
Source: WSP.

Table D.7 I-85 SB Spartanburg—Cost Estimate

Item No.	Location	Quantity	UOM	Unit Price (\$)	Cost (\$)
1	Clear—Grub—Level	3.91	Acre	\$10,126.28	\$39,593.75
2	Low Voltage Conduit				
	4" PVC Conduit	2,136	LF	\$21.67	\$46,287.12
	Low voltage power conductors	2,136	LF	\$4.81	\$10,274.16
3	Substation for 2 to 5 MVA	1	LS		\$ –
4	HM Pole .5M Lumens	8	LS	\$36,000.00	\$288,000.00
5	AC Pavement for Container				
	12" Pavement w/ 145 lbs/cf Asphalt	13,360	SY	\$65.00	\$868,400.00
6	AC Pavement Rehab	6,775	SY	\$52.00	\$352,300.00
7	Lift Gate with Kiosk	2	LS	\$50,000.00	\$100,000.00
8	Chain Link Boundary Fence	2,795	LF	\$16.50	\$46,117.50
9	Green Space				
	Sodding	5,565	SY	\$12.00	\$66,780.00
	Plantings	12	EA	\$123.70	\$1,484.40
	Irrigation System	1.15	Acre	\$15,000.00	\$17,250.00
10	Walkway	5,170	LF	\$0.30	\$1,551.00
11	Water Closet				
	ADA Stall = 7.5' x 7.5'	4	EA	\$12,000.00	\$48,000.00
12	Parking Striping	4,971	LF	\$0.53	\$2,634.63
13	Base Cost			Base Cost:	\$1,888,672.56
	Contingency			Contingency:	120%
14	Total Cost w / 20% Contingency			Total Cost:	\$2,266,407.08
15	Cost/Acre			Cost/Acre	\$579,643.75

Source: WSP.

Figure D.7 I-20 EB Lexington—Concept Drawing



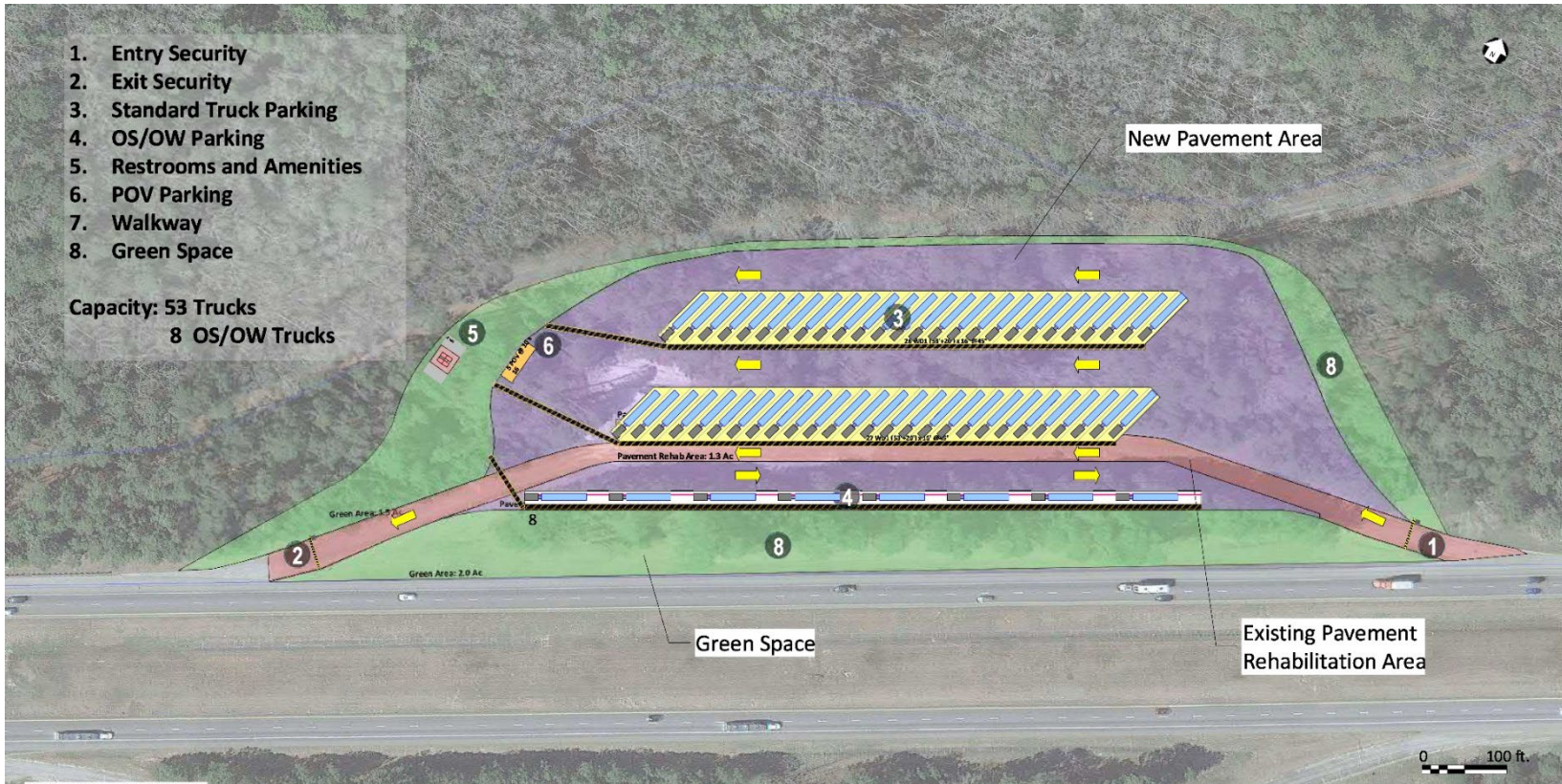
Source: WSP.

Table D.8 I-20 EB Lexington—Cost Estimate

Item No.	Location	Quantity	UOM	Unit Price (\$)	Cost (\$)
1	Clear—Grub—Level	12.9	Acre	\$10,126.28	\$130,629.01
2	Low Voltage Conduit				
	4" PVC Conduit	3,142	LF	\$21.67	\$68,087.14
	Low voltage power conductors	3,142	LF	\$4.81	\$15,113.02
3	Substation for 2 to 5 MVA	1	LS		\$ –
4	HM Pole .5M Lumens	13	LS	\$36,000.00	\$468,000.00
5	AC Pavement for Container				
	12" Pavement w/ 145 lbs/cf Asphalt	37,150	SY	\$65.00	\$2,414,750.00
6	AC Pavement Rehab	5,550	SY	\$52.00	\$288,600.00
7	Lift Gate with Kiosk	2	LS	\$50,000.00	\$100,000.00
8	Chain Link Boundary Fence	4,076	LF	\$16.50	\$67,254.00
9	Green Space				
	Sodding	25,260	SY	\$12.00	\$303,120.00
	Plantings	52	EA	\$123.70	\$6,432.40
	Irrigation System	5.22	Acre	\$15,000.00	\$78,300.00
10	Walkway	8,330	LF	\$0.30	\$2,499.00
11	Water Closet				
	ADA Stall = 7.5' x 7.5'	8	EA	\$12,000.00	\$96,000.00
12	Parking Striping	9,600	LF	\$0.53	\$5,088.00
13	Base Cost			Base Cost:	\$4,043,872.57
	Contingency			Contingency:	120%
14	Total Cost w / 20% Contingency			Total Cost:	\$4,852,647.09
15	Cost/Acre			Cost/Acre	\$376,174.19

Source: WSP.

Figure D.8 I-20 WB Lexington—Concept Drawing



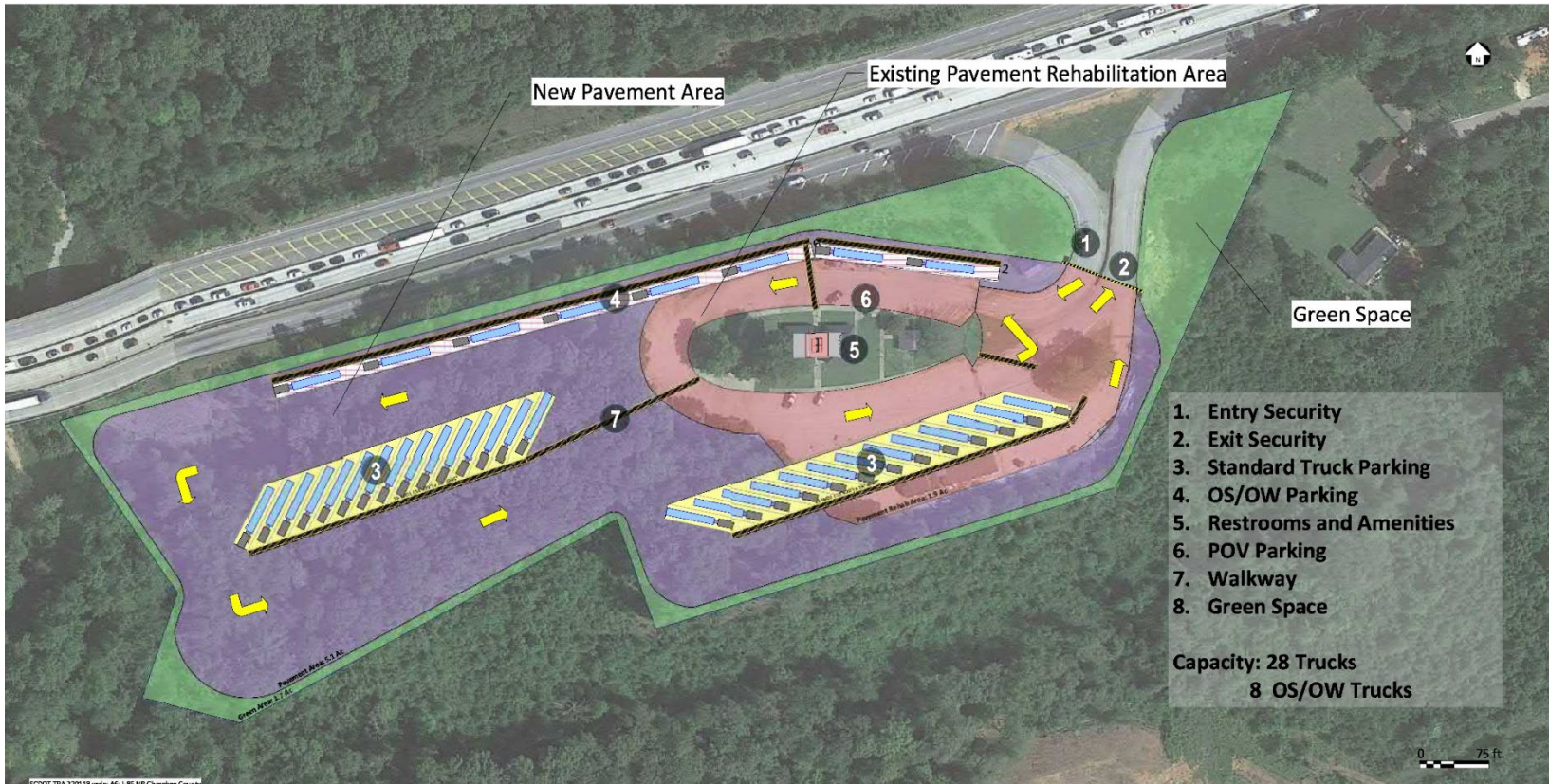
Source: WSP.

Table D.9 I-20 WB Lexington—Cost Estimate

Item No.	Location	Quantity	UOM	Unit Price (\$)	Cost (\$)
1	Clear—Grub—Level	9.16	Acre	\$10,126.28	\$92,756.72
2	Low Voltage Conduit				
	4" PVC Conduit	2,881	LF	\$21.67	\$62,431.27
	Low voltage power conductors	2,881	LF	\$4.81	\$13,857.61
3	Substation for 2 to 5 MVA	1	LS		\$ –
4	HM Pole .5M Lumens	12	LS	\$36,000.00	\$432,000.00
5	AC Pavement for Container				
	12" Pavement w/ 145 lbs/cf Asphalt	27,540	SY	\$65.00	\$1,790,100.00
6	AC Pavement Rehab	6,090	SY	\$52.00	\$316,680.00
7	Lift Gate with Kiosk	2	LS	\$50,000.00	\$100,000.00
8	Chain Link Boundary Fence	3,500	LF	\$16.50	\$57,750.00
9	Green Space				
	Sodding	16,790	SY	\$12.00	\$201,480.00
	Plantings	35	EA	\$123.70	\$4,329.50
	Irrigation System	3.47	Acre	\$15,000.00	\$52,050.00
10	Walkway	8,350	LF	\$0.30	\$2,505.00
11	Water Closet				
	ADA Stall = 7.5' x 7.5'	8	EA	\$12,000.00	\$96,000.00
12	Parking Striping	9,117	LF	\$0.53	\$4,832.01
13	Base Cost			Base Cost:	\$3,226,772.11
	Contingency			Contingency:	120%
14	Total Cost w / 20% Contingency			Total Cost:	\$3,872,126.54
15	Cost/Acre			Cost/Acre	\$422,721.24

Source: WSP.

Figure D.9 I-85 NB Cherokee County—Concept Drawing



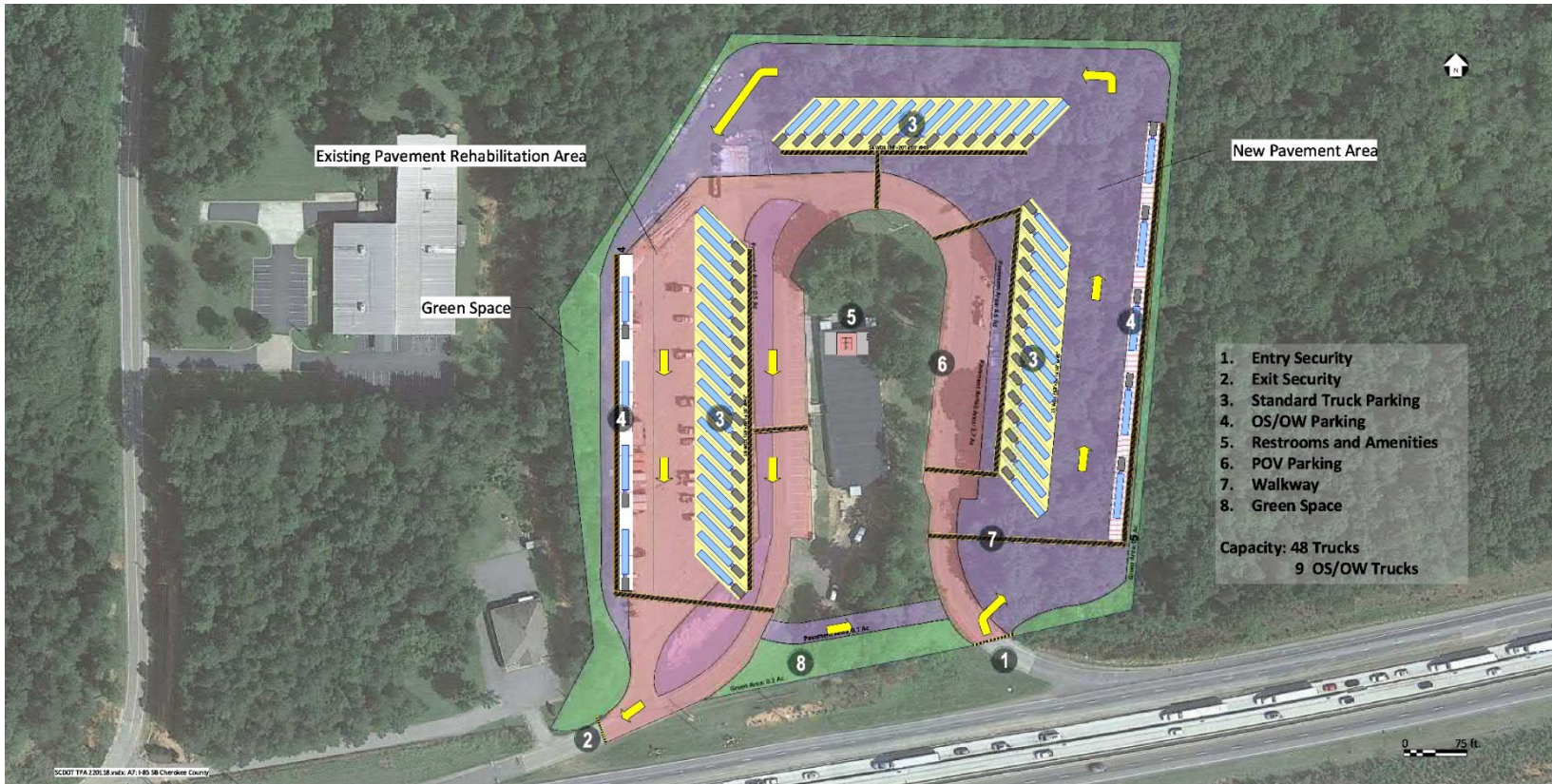
Source: WSP.

Table D.10 I-85 NB Cherokee County—Cost Estimate

Item No.	Location	Quantity	UOM	Unit Price (\$)	Cost (\$)
1	Clear—Grub—Level	5	Acre	\$10,126.28	\$50,631.40
2	Low Voltage Conduit				
	4" PVC Conduit	2,448	LF	\$21.67	\$53,048.16
	Low voltage power conductors	2,448	LF	\$4.81	\$11,774.88
3	Substation for 2 to 5 MVA	0	LS		\$ –
4	HM Pole .5M Lumens	10	LS	\$36,000.00	\$360,000.00
5	AC Pavement for Container				
	12" Pavement w/ 145 lbs/cf Asphalt	24,627	SY	\$65.00	\$1,600,755.00
6	AC Pavement Rehab	9,437	SY	\$52.00	\$490,724.00
7	Lift Gate with Kiosk	2	LS	\$ 50,000.00	\$100,000.00
8	Chain Link Boundary Fence	3,551	LF	\$16.50	\$58,591.50
9	Green Space				
	Sodding	8,087	SY	\$12.00	\$97,044.00
	Plantings	17	EA	\$123.70	\$2,102.90
	Irrigation System	1.67	Acre	\$15,000.00	\$25,050.00
10	Walkway	6,730	LF	\$0.30	\$2,019.00
11	Water Closet				
	ADA Stall = 7.5' x 7.5'	0	EA	\$12,000.00	\$ –
12	Parking Striping	6222	LF	\$0.53	\$3,297.66
13	Base Cost			Base Cost:	\$2,855,038.50
	Contingency			Contingency:	120%
14	Total Cost w / 20% Contingency			Total Cost:	\$3,426,046.20
15	Cost/Acre			Cost/Acre	\$685,209.24

Source: WSP.

Figure D.10 I-85 SB Cherokee County—Concept Drawing



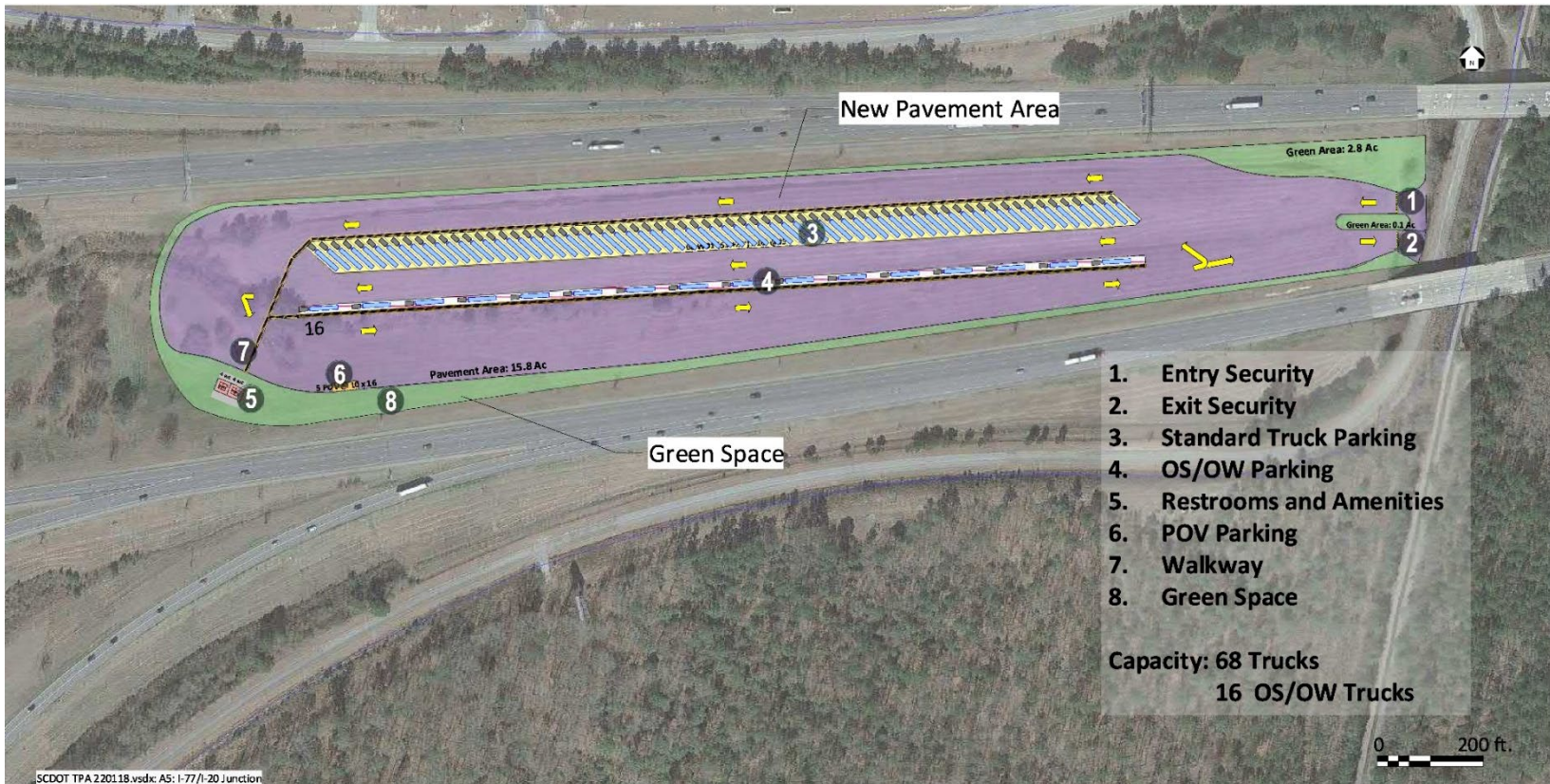
Source: WSP.

Table D.11 I-85 SB Cherokee County—Cost Estimate

Item No.	Location	Quantity	UOM	Unit Price (\$)	Cost (\$)
1	Clear—Grub—Level	5.23	Acre	\$10,126.28	\$52,960.44
2	Low Voltage Conduit				
	4" PVC Conduit	2,063	LF	\$21.67	\$44,705.21
	Low voltage power conductors	2,063	LF	\$4.81	\$9,923.03
3	Substation for 2 to 5 MVA	0	LS		\$ –
4	HM Pole .5M Lumens	10	LS	\$36,000.00	\$360,000.00
5	AC Pavement for Container				
	12" Pavement w/ 145 lbs/cf Asphalt	25,345	SY	\$65.00	\$1,647,425.00
6	AC Pavement Rehab	17,990	SY	\$52.00	\$935,480.00
7	Lift Gate with Kiosk	2	LS	\$50,000.00	\$100,000.00
8	Chain Link Boundary Fence	2,318	LF	\$16.50	\$38,247.00
9	Green Space				
	Sodding	5,553	SY	\$12.00	\$66,636.00
	Plantings	12	EA	\$123.70	\$1,484.40
	Irrigation System	1.15	Acre	\$15,000.00	\$17,250.00
10	Walkway	9,680	LF	\$0.30	\$2,904.00
11	Water Closet				
	ADA Stall = 7.5' x 7.5'	0	EA	\$12,000.00	\$ –
12	Parking Striping	7,873	LF	\$0.53	\$4,172.69
13	Base Cost			Base Cost:	\$3,281,187.77
	Contingency			Contingency:	120%
14	Total Cost w / 20% Contingency			Total Cost:	\$3,937,425.33
15	Cost/Acre			Cost/Acre	\$752,853.79

Source: WSP.

Figure D.11 I-77/I-20 Interchange (New Opportunity Site)—Concept Drawing



Source: WSP.

Table D.12 I-77/I-20 Interchange (New Opportunity Site)—Cost Estimate

Item No.	Location	Quantity	UOM	Unit Price (\$)	Cost (\$)
1	Clear—Grub—Level	18.6	Acre	\$10,126.28	\$188,348.81
2	Low Voltage Conduit				
	4" PVC Conduit	5,000	LF	\$21.67	\$108,350.00
	Low voltage power conductors	5,000	LF	\$4.81	\$24,050.00
3	Substation for 2 to 5 MVA	1	LS		\$ –
4	HM Pole .5M Lumens	21	LS	\$36,000.00	\$756,000.00
5	AC Pavement for Container				
	12" Pavement w/ 145 lbs/cf Asphalt	76,290	SY	\$65.00	\$4,958,850.00
6	AC Pavement Rehab	0	SY	\$52.00	\$ –
7	Lift Gate with Kiosk	2	LS	\$50,000.00	\$100,000.00
8	Chain Link Boundary Fence	5,272	LF	\$16.50	\$86,988.00
9	Green Space				
	Sodding	13,770	SY	\$12.00	\$165,240.00
	Plantings	28	EA	\$123.70	\$3,463.60
	Irrigation System	2.84	Acre	\$15,000.00	\$42,600.00
10	Walkway	12,300	LF	\$0.30	\$3,690.00
11	Water Closet				
	ADA Stall = 7.5' x 7.5'	8	EA	\$12,000.00	\$96,000.00
12	Parking Striping	12,751	LF	\$0.53	\$6,758.03
13	Base Cost			Base Cost:	\$6,540,338.44
	Contingency			Contingency:	120%
14	Total Cost w / 20% Contingency			Total Cost:	\$7,848,406.13
15	Cost/Acre			Cost/Acre	\$421,957.32






Source: WSP.






Appendix E. Public-Private Partnership Scenario Analysis






E.1 Scenario 1: Existing Public Parcel Adjacent to Commercial Facility





Table E.1 Scenario 1 Summary

Scenario Information	
High-Level Partnership Description	This project scenario uses public funds to construct additional parking on a parcel adjacent to a commercial truck stop, which could include clearing and paving the parcel, installing lighting, and other onsite and offsite improvements. This parcel could then be maintained by the private owner of the adjacent truck parking facility who would benefit from the additional truckers using their facilities (food, gas, showers, etc.).
Potential Contractual Partners	Contractual partners include private owners of the parcel and the adjacent truck parking facility that maintain the publicly constructed truck parking on the publicly owned parcel of land.
Potential Other/Non-Contractual Partners	Potential other non-contractual partners could include local jurisdiction where the facility would be located or additional, adjacent site owners that maybe impacted by the proximity and the increased traffic to the commercial truck facility.
Examples	<p>In <u>Weed, California</u>, two municipal truck-only parking lots were leased and constructed by the City of Weed totaling 30 spaces beside a Pilot truck parking facility. Drivers have access to the amenities offered at several nearby restaurants and a Pilot Travel Center. The parking is free up to 72 hours and potentially longer with special permission from the City of Weed.</p> <p>In <u>Wamsutter, Wyoming</u>, the Wyoming Department of Transportation (DOT) developed 43 truck parking spaces adjacent to an existing truck stop that offers food and shelter. This project has reduced negative economic impacts stemming from improvised truck parking throughout Wamsutter.</p> <p>In Fernley, Nevada, the Nevada DOT leased a parcel of land adjacent to a commercial truck stop, for a token amount, and built a truck parking lot on the parcel. Nevada DOT operated and maintained the adjacent parking lot for a short time before turning it over to the new owner of the truck stop after it was sold. The new owner now maintains the Nevada DOT-built parking lot.</p>

Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Policy Goals			
How well does the proposed partnership address specific truck parking policy goals?	The partnership supports the creation of more secure off-street parking opportunities for trucks, with no ongoing O&M costs.	Promising/Neutral 	Identify specific policy goals that may be emphasized by the use of publicly owned land and the off-loading of maintenance via private partnership, potentially via contractual requirements.
Can the partnership address specific truck challenges that have been identified through planning activities?	The partnership will remove some of the trucks parked in undesignated areas because no designated parking exists where it is needed.	Promising/Neutral 	Conduct additional assessment of local truck parking needs to confirm that the proposed approach can solve the most critical challenges.
Organizational Capacity			
Are there internal champions for the specific partnership within the implementing public entity?	At this point in the process, a specific champion or champions may not be identified for this development of a parcel adjacent to an existing truck parking facility initiative, but it will be important for ensuring that the initiative is implemented as effectively as possible.	Neutral 	Work with internal staff to confirm how this initiative may align with existing agency goals and responsibilities in an effort to identify certain key champions that would be focused on eliminating internal and external barriers to implementation.
Does the implementing public entity have access to sufficient internal and external technical resources to successfully manage the partnership in the public interest?	While it seems like there may be individuals within the implementing public entity that have the expertise to manage the construction portion, they may not have sufficient access or bandwidth to survey and select viable parcels of land. It will be important to understand and address the staffing constraints that exist.	Neutral 	Determine the coordination that would likely be required between various departments of the implementing public entity (i.e., real estate and construction). Identify external resources that could assist with coordination and/or supplement current staffing.
Has the implementing public entity established guidelines and regulations for procuring and managing the partnership?	While specific guidelines may not exist, it is possible that there are guidelines and regulations for related types of initiatives, which can help support development of targeted guidelines.	Neutral 	Determine if the public agency has guidelines/regulations that could be applied directly or modified for this specific initiative.

Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Legal			
Is there legal authority to pursue the proposed partnership?	Assuming that the implementing public entity has the ability to partner with the private sector for maintenance of public property by the private sector, this should be possible. However, issues of fairness and competitiveness with other truck stops need to be considered and clarified.	Promising 	Assign legal staff to confirm that the legal authority exists. If it is not entirely clear for this specific initiative, determine what might be needed to clarify the legal authority as soon as possible.
Are there certain legal structures that would be more appropriate for the partnership?	If the legal authority exists, there may already be examples of legal structures, such as certain maintenance agreements, that are most appropriate from the perspective of the implementing public entity.	Promising 	Assign legal staff to identify any similar legal structures.
Who (individuals/positions) would need to provide approval for this potential partnership, and what would be the parameters?	This project would likely require local planning approval to confirm use of site and legal approval of the contractual agreement between the public entity and the private counterparty.	Neutral 	Assign staff to reach out to local area planners and legal staff to develop a potential contractual agreement.
Public Support			
Can sufficient support from the appropriate local and regional stakeholders be achieved to pursue the project?	Assuming that the initiative addresses key truck parking challenges that are potentially concerning to local and regional stakeholders, there could be significant support for the initiative. One potential concern may relate to the specific siting of the property and the potential perceived impacts on adjacent properties or local communities, likely citing concern of increased traffic and noise. If this emerges as a potential issue, it will be critical to focus significant outreach efforts on the adjacent property and community stakeholders.	Promising/Neutral  	Conduct outreach to key stakeholders and communities to determine their potential level support for the initiative. If there are initial stakeholder concerns, begin to formulate strategies for addressing these.



Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Can sufficient political support be achieved for delivering the project?	In many ways, this could align with the local and regional support. If it appears that there is positive local and regional interest in the initiative, political support may follow. Even with local and regional support, internal and external decision-makers may have not prioritized or fully understood the initiative and delay needed approvals.	Promising/Neutral  	Work with internal staff to prepare regular staff reports and briefing materials about the initiative. As the initiative progresses, staff will share increasingly detailed levels of information with key decision-makers.
Risk Allocation			
Would the partnership provide cost-effective opportunities for appropriate allocation of key risks between the partners?	If the initiative finds a parcel adjacent to an interested private truck parking facility, the partnership could allocate project risks through an advantageous maintenance agreement. The maintenance agreement could delegate maintenance responsibilities to the private partner with control mechanisms to enforce key performance indicators required by the public entity.	Promising 	Work with staff to determine risk transfer opportunities and appetite. After determining the desired risk allocation, take a survey of all viable publicly owned parcels and engage in outreach activities to receive early feedback and gauge private interest in the initiative.
What would be key responsibilities that the implementing public entity could retain? What are the associated risks?	The public entity could be responsible for providing initial funding, enforcing the terms of the agreement, while maintaining ownership of the underlying property. Unanticipated costs may affect the public entity's ability or willingness to provide additional funding for the project.	Promising 	Conduct technical due diligence and financial analysis using conservative assumptions and adjust scope as needed to fit within the public entity's budget.
What would be the key responsibilities that the implementing public entity would seek to allocate to a partner? What are the associated risks?	The private partner would be responsible for all aspects of operating and maintaining the parking facility, increasing services and staff to accommodate the larger customer base, as needed, as well as the maintenance of the adjacent parcel. Poor performance can reduce the revenue of the private partner.	Promising 	Develop contract requirements and specifications and share with potential private partners for feedback.






Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Financial Viability			
What are the near-term and long-term cost requirements?	Near term, the upfront investment in property infrastructure may be significant, depending on the size and existing conditions of the property. However, there could be some publicly owned parcels adjacent to truck parking that would require minimal clearing and paving and lighting infrastructure installed, potentially making it a low-cost alternative to other scenarios. Long term, costs for this initiative should be low as all maintenance responsibilities would be allocated to the private partner.	Promising/Neutral 	Conduct a survey of all publicly owned parcels adjacent to truck parking facilities and conduct an initial assessment of the potential magnitude of infrastructure investment costs that may be needed for the parcel.
Would the results of the partnership's efforts potentially include scenarios that could involve revenue generation?	This partnership is unlikely to generate revenue for the public entity. However, a reservation fee could be charged to user of the truck parking facility if this is something in which the private partner could be interested and already does for the existing truck parking facility. This gate fee could be shared between the public and private partner via contractual agreement.	Potentially Challenging 	Conduct private-sector outreach activities to receive early feedback and gauge industry interest in the initiative and the additional gate fee sharing arrangement.
Are there Federal, state or local funding sources that can support the cost requirements?	Potential Federal funding sources include Surface Transportation Block Grants, National Highway Freight Program, and Highway Safety Improvement Program National Highway Performance Program.	Neutral/Potentially Challenging 	Assign staff to determine if this project would be eligible for any Federal funding programs
Would the potential partner be responsible for providing any funding sources that can support the cost requirements?	Under the current suggested scenario, the potential private partner would not provide any funding sources. However, depending on the interest by the private partner incentivized by the size of the parcel and potential additional customers to the private partner, perhaps a private partner could be open to providing some funding sources.	Neutral 	Conduct private-sector outreach activities to receive early feedback and gauge industry interest in the initiative and the additional potential private funding of the project.




E.2 Scenario 2: New Public Parcel Adjacent to Commercial Facility




Table E.2 Scenario 2 Summary




Scenario Information	
High-Level Partnership Description	This project scenario uses public funds to first purchase, and then construct additional parking on a parcel, which could include clearing and paving the parcel and installing lighting. This parcel could then be maintained by the private owner of the adjacent truck parking facility who would benefit from the additional truckers using their facilities (food, gas, bathrooms, showers, etc.). This scenario is very similar to Scenario 2, except the parcel is not already publicly owned.
Potential Contractual Partners	Contractual partners include private owners of the adjacent truck parking facility that maintain the publicly constructed truck parking on the publicly owned parcel of land.
Potential Other/Non-Contractual Partners	Potential other non-contractual partners could include local jurisdiction where the facility would be located or additional, adjacent site owners that maybe impacted by the proximity and the increased traffic to the commercial truck facility.


Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Policy Goals			
How well does the proposed partnership address specific truck parking policy goals?	The partnership supports the creation of more secure off-street parking opportunities for trucks, but will likely not generate revenue for SCDOT.	Promising/Neutral 	Identify specific policy goals that may be emphasized by the use of publicly owned land and the off-loading of maintenance via private partnership, potentially via contractual requirements.
Can the partnership address specific truck challenges that have been identified through planning activities?	The partnership would not increase future maintenance costs for SCDOT while still addressing truck parking needs.	Promising/Neutral 	Conduct additional assessment of local truck parking needs to confirm that the proposed approach can solve the most critical challenges.

Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Organizational Capacity			
Are there internal champions for the specific partnership within the implementing public entity?	At this point in the process, a specific champion or champions may not be identified for this development of a parcel adjacent to an existing truck parking facility initiative, but it will be important for ensuring that the initiative is implemented as effectively as possible.	Neutral 	Work with internal staff to confirm how this initiative may align with existing agency goals and responsibilities to identify certain key champions that would be focused on eliminating internal and external barriers to implementation.
Does the implementing public entity have access to sufficient internal and external technical resources to successfully manage the partnership in the public interest?	While it seems like there may be individuals within the implementing public entity that have the expertise to manage the construction portion, they may not have sufficient access or bandwidth to survey and select viable parcels of land. It will be important to understand and address the staffing constraints that exist.	Neutral 	Determine the coordination that would likely be required between various departments of the implementing public entity (i.e., real estate and construction). Identify external resources that could assist with coordination and/or supplement current staffing.
Has the implementing public entity established guidelines and regulations for procuring and managing the partnership?	While specific guidelines may not exist, it is possible that there are guidelines and regulations for related types of initiatives, which can help support development of targeted guidelines.	Neutral 	Determine if the public agency has guidelines/regulations that could be applied directly or modified for this specific initiative.
Legal			
Is there legal authority to pursue the proposed partnership?	Assuming that the implementing public entity has the ability to partner with the private sector for maintenance of public property by the private sector, this should be possible.	Promising 	Assign legal staff to confirm that the legal authority exists. If it is not entirely clear for this specific initiative, determine what might be needed to clarify the legal authority as soon as possible.
Are there certain legal structures that would be more appropriate for the partnership?	If the legal authority exists, there may already be examples of legal structures, such as certain maintenance agreements, that are most appropriate from the perspective of the implementing public entity.	Promising 	Assign legal staff to identify any similar legal structures.

Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Who (individuals/positions) would need to provide approval for this potential partnership, and what would be the parameters?	<p>This project would likely require local planning approval to confirm use of site and legal approval of the contractual agreement between the public entity and the private counterparty.</p> <p>Approvals may also be needed for the actual purchase of the property required for the project.</p>	<p>Neutral</p> 	<p>Assign staff to reach out to local area planners and legal staff to develop a potential contractual agreement. Staff should also review the processes for public purchase of property.</p>
Public Support			
Can sufficient support from the appropriate local and regional stakeholders be achieved to pursue the project?	<p>Assuming that the initiative addresses key truck parking challenges that are potentially concerning to local and regional stakeholders, there could be significant support for the initiative. One potential concern may relate to the specific siting of the property and the potential perceived impacts on adjacent properties or local communities, likely citing concern of increased traffic and noise. If this emerges as a potential issue, it will be critical to focus significant outreach efforts on the adjacent property and community stakeholders.</p>	<p>Promising/Neutral</p> 	<p>Conduct outreach to key stakeholders and communities to determine their potential level support for the initiative.</p> <p>If there are initial stakeholder concerns, begin to formulate strategies for addressing these.</p>
Can sufficient political support be achieved for delivering the project?	<p>In many ways, this could align with the local and regional support. If it appears that there is positive local and regional interest in the initiative, political support may follow. Even with local and regional support, internal and external decision-makers may have not prioritized or fully understood the initiative and delay needed approvals.</p>	<p>Promising/Neutral</p> 	<p>Work with internal staff to prepare regular staff reports and briefing materials about the initiative. As the initiative progresses, staff will share increasingly detailed levels of information with key decision makers.</p>

Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Risk Allocation			
<p>Would the partnership provide cost-effective opportunities for appropriate allocation of key risks between the partners?</p>	<p>If the initiative finds a parcel adjacent to an interested private truck parking facility, the partnership could allocate project risks through an advantageous maintenance agreement. The maintenance agreement could delegate maintenance responsibilities to the private partner with control mechanisms to enforce key performance indicators required by the public entity.</p>	<p>Promising </p>	<p>Work with staff to determine risk transfer opportunities and appetite. After determining the desired risk allocation, take a survey of all viable publicly owned parcels and engage in outreach activities to receive early feedback and gauge private interest in the initiative.</p>
<p>What would be key responsibilities that the implementing public entity could retain? What are the associated risks?</p>	<p>The public entity could be responsible for providing initial funding, enforcing the terms of the agreement, while maintaining ownership of the underlying property. Unanticipated costs may affect the public entity's ability or willingness to provide additional funding for the project.</p>	<p>Promising </p>	<p>Conduct technical due diligence and financial analysis using conservative assumptions and adjust scope as needed to fit within the public entity's budget.</p>
<p>What would be the key responsibilities that the implementing public entity would seek to allocate to a partner? What are the associated risks?</p>	<p>The private partner would be responsible for all aspects of operating and maintaining the parking facility, increasing services and staff to accommodate the larger customer base as needed, as well as the maintenance of the adjacent parcel. Poor performance can reduce the revenue of the private partner.</p>	<p>Promising </p>	<p>Develop contract requirements and specifications and share with potential private partners for feedback.</p>


Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Financial Viability			
What are the near-term and long-term cost requirements?	First, SCDOT must invest in purchasing the property, which may be a sizable upfront investment. The long-term benefits must outweigh this initial cost. Next, the upfront investment in property infrastructure may be significant, depending on the size and existing conditions of the property. However, there could be some publicly owned parcels adjacent to truck parking that would require minimal clearing, paving, and lighting infrastructure installed, potentially making it a low-cost alternative to other scenarios. Long term, costs for this initiative should be low as all maintenance responsibilities would be allocated to the private partner.	Neutral 	Seek out land purchasing costs. Conduct a survey of all publicly owned parcels adjacent to truck parking facilities and conduct an initial assessment of the potential magnitude of infrastructure investment costs that may be needed for the parcel.
Would the results of the partnership's efforts potentially include scenarios that could involve revenue generation?	This partnership is unlikely to generate revenue for the public entity. However, a gate fee could be charged to user of the truck parking facility for access to the truck parking facilities if this is something in which the private partner could be interested and already does for the existing truck parking facility. This gate fee could be shared between the public and private partner via contractual agreement.	Potentially Challenging 	Conduct private-sector outreach activities to receive early feedback and gauge industry interest in the initiative and the additional gate fee sharing arrangement.
Are there Federal, state, or local funding sources that can support the cost requirements?	Many Federal funding sources may be options, including Surface Transportation Block Grants, National Highway Freight Program funds, and Highway Safety Improvement Funds.	Promising 	Identify which of the available funding sources is best fit for the project purpose.







Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Would the potential partner be responsible for providing any funding sources that can support the cost requirements?	Under the current suggested scenario, the potential private partner would not provide any funding sources. However, depending on the interest by the private partner incentivized by the size of the parcel and potential additional customers to the private partner, perhaps a private partner could be open to providing some funding sources.	Neutral 	Conduct private-sector outreach activities to receive early feedback and gauge industry interest in the initiative and the additional potential private funding of the project.






E.3 Scenario 3: Allow Truck Parking at Large Parking Lots when not in Use




Table E.3 Scenario 3 Summary




Scenario Information	
High-Level Partnership Description	Some parking facilities that are only used on a periodic or seasonal basis, such as a stadium, fairgrounds, etc., could be made available for truck parking when not in use for their intended purpose. This is especially applicable for emergency truck parking needs when highways are closed temporarily, such as due to inclement weather. This partnership scenario assumes an agreement between SCDOT and the facility owner/operator, whereby, the facility allows trucks to park during specified periods, and SCDOT agrees to install temporary signage, trash receptacles, and portal facilities, as appropriate, and to provide snow removal or other services and facilities, as needed, during the time trucks are allowed to park.
Potential Contractual Partners	The owners and/or operators of the existing facilities
Potential Other/Non-Contractual Partners	Service providers (e.g., restroom facilities, snow removal, etc.).
Examples	As an example, when I-80 over Donner Pass in California is closed due to snow, California DOT works with Gold County to provide parking at a fairground in Auburn, CA, approximately 60 miles west of the Pass. California DOT provides plowing at the fairgrounds and allows trucks a safe place to park prior to being stuck on the highway (which has limited public and private truck parking inventory prior to the Pass). Trucks may also park at the Boreal Ski Resort after 11:00 p.m.


Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Policy Goals			
How well does the proposed partnership address specific truck parking policy goals?	The partnership supports the creation of more secure off-street parking opportunities for truck drivers and has the potential to increase parking supply in densely populated areas in a short timeline. This partnership avoids land acquisition costs from SCDOT by utilizing existing parking facilities. The partnership allows SCDOT to comply with existing land use/zoning restrictions.	Promising 	Work with internal staff to formulate and confirm agency goals related to generating parking supply within existing private facilities. Conduct feasibility studies to forecast truck parking demand, elaborate design concepts, formulate parking requirements, and assess the business case for the private partner and SCDOT.

Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Can the partnership address specific truck challenges that have been identified through planning activities?	The additional parking will save drivers' time in finding safe parking locations within a densely populated urban area. This partnership will allow drivers to access additional rest stops near city centers and industrial hubs, generating time savings from congested highways.	Promising/Neutral  	Conduct additional local study of parking needs and associated challenges to confirm local concerns are adequately expressed and assessed.
Organizational Capacity			
Are there internal champions for the specific partnership within the implementing public entity?	If not designated, SCDOT will be required to appoint a designated office to arrange the planning and contractual requirements to implement the project.	Promising/Neutral  	Work with internal staff to propose a project organization structure to be approved by agency management. Prepare a working document to confirm project organization and agency capacity to implement and manage the agreement.
Does the implementing public entity have access to sufficient internal and external technical resources to successfully manage the partnership in the public interest?	SCDOT will require technical assistance for the planning and negotiation of the project's contract terms with the existing facility owner/operators. Internal technical resources are sufficient for SCDOT to address truck parking-related specifications and requirements, but additional external resources will be required to evaluate the final scope, capacity, and management of the partnership. External resources include, but are not limited to, counsel, financial planning, and contract negotiation.	Neutral 	The organizational capacity document will assess the need for technical resources to implement the project. Procurement of external resources associated with planning tasks.
Has the implementing public entity established guidelines and regulations for procuring and managing the partnership?	SCDOT must first develop guidelines and regulations to procure services and infrastructure related to truck parking. In its simplest form, SCDOT may sign a long-term service agreement or intergovernmental agreement with the facility owner/operator to reserve and adapt some parking spaces to truck drivers.	Neutral 	Work with procurement, public works, legal, and routine inspections staff to determine and/or confirm applicable regulation to be applied to the partnership agreement.

Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Legal			
Is there legal authority to pursue the proposed partnership?	Assuming SCDOT possesses the legal authority to pursue long-term leases and service contracts, there should be a legal framework to implement this project.	Neutral/Potentially Challenging 	Assign legal staff to confirm that legal authority exists.
Are there certain legal structures that would be more appropriate for the partnership?	Long-term leases or intergovernmental agreements may be likely to be best suited to serve the partnership's structure, allowing SCDOT and the partner to define specific usage requirements and any potential restrictions.	Promising/Neutral 	Assign legal staff to confirm that legal authority exists and to determine the appropriate structure.
Who (individuals/positions) would need to provide approval for this potential partnership, and what would be the parameters?	This project would likely require local planning approval to confirm use of site and legal approval of the contractual agreement between the partners.	Neutral 	Assign staff to reach out to local area planners and legal staff to develop a potential contractual agreement.
Public Support			
Can sufficient support from the appropriate local and regional stakeholders be achieved to pursue the project?	For the partnership to secure local and regional support, it will need to address concerns regarding pedestrian safety and security issues, as well as any potential environmental concerns surrounding the expanded usage of the parking facility. However, in many cases, the usage may not have significant impacts beyond those that already occur due to existing uses.	Neutral/Potentially Challenging 	Work with internal staff to prepare regular educational materials about the initiative.
Can sufficient political support be achieved for delivering the project?	Political support can be achieved as long as local and regional concerns are addressed.	Neutral 	Work with internal staff to prepare regular staff reports and briefing materials about the initiative.

Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Risk Allocation			
<p>Would the partnership provide cost-effective opportunities for appropriate allocation of key risks between the partners?</p>	<p>The partnership could allow the cost-effective usage of an existing facility in an optimal location, which would mitigate the risks associated with SCDOT acquiring land and developing new facilities. However, the shared usage could present significant risk of there is not a clear delineation and definition of roles, responsibilities, and rights to access at certain times. For this reason, it will be critical to ensure that any contractual structure includes a clear division of responsibilities between SCDOT and the owner/operator of the existing facility.</p>	<p>Promising</p> 	<p>Conduct an internal risk workshop to confirm the risk profile of the agreement.</p>
<p>What would be key responsibilities that the implementing public entity could retain? What are the associated risks?</p>	<p>Key responsibilities retained by SCDOT may include designing and operating (inhouse or via an external contract) a reservation system and maintaining information platforms in place for truck drivers to be advised of notices from SCDOT, including notification of times when the facility is available. SCDOT is also likely to be responsible for certain maintenance and security elements that would be required specifically for the truck parking usage of the facility.</p>	<p>Neutral</p> 	<p>Conduct technical due diligence and financial analysis using conservative assumptions and adjust scope, as needed, to fit within the public entity's budget.</p>
<p>What would be the key responsibilities that the implementing public entity would seek to allocate to a partner? What are the associated risks?</p>	<p>The partner would be required to make the facility available at the agreed-upon times to truck parking and may share some aspects of the required specifically for the truck parking usage of the facility, perhaps for a predetermined fee.</p>	<p>Promising</p> 	<p>Develop contract requirements and specifications and review with potential partner.</p>






Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Financial Viability			
What are the near-term and long-term cost requirements?	<p>As compared with other projects, the near-term costs are likely to be lower since they would not include the significant capital costs associated with land acquisition, planning, design, and construction of a new facility.</p> <p>Near-term cost requirements include upfront infrastructure upgrades and adaptations to truck parking needs, including, but not limited to, signaling, pavement, security, and site amenities. Long-term cost requirements include rehabilitation and maintenance of the upgrades, in addition to potential reservation systems and inspections.</p>	<p>Promising</p> 	<p>Conduct feasibility analysis of costs and evaluate alternative design concepts. Incorporate feasibility results to high-level financial model of the proposed agreement.</p>
Would the results of the partnership's efforts potentially include scenarios that could involve revenue generation?	<p>The partnership may have limited opportunities for revenue generation in favor of SCDOT.</p>	<p>Potentially Challenging</p> 	<p>Conduct research to assess revenue generating potential of associated services to new parking demand.</p>
Are there Federal, state, or local funding sources that can support the cost requirements?	<p>Limited funding sources currently are available for this partnership, particularly since most of the costs are associated with long-term operations and maintenance. Funding sources might become available related to the potential installation of electric charging equipment and infrastructure if that becomes part of any upgrades to the facility.</p>	<p>Potentially Challenging</p> 	<p>While the initial capital costs of this project are limited, investigate whether any Federal, state, or local programs may be helpful in defraying the initial costs of set-up, which might include installation of electric charging equipment and infrastructure.</p>





Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Would the potential partner be responsible for providing any funding sources that can support the cost requirements?	There is likely to be limited potential for the partner to share some of the costs to adapt its existing operations to truck parking. However, the partner's provision of usage of the existing facility in a desirable location could potentially count as an in-kind contribution to the arrangement, which does have value to SCDOT. The usage of the existing facility could help SCDOT to avoid the cost of constructing a new facility.	Potentially Challenging/Neutral 	While the partner is less likely to contribute funding sources, the value of limited usage of the existing property should be assessed and considered as a potentially significant contribution that has value for SCDOT.





E.4 Scenario 4: Publicly Developed Facility Operated and Maintained by a Private Party


Table E.4 Scenario 4 Summary

Scenario Information	
High-Level Partnership Description	This project scenario develops a publicly owned parcel within the highway ROW for a truck parking facility. Public funds could be used to construct additional parking on a parcel, which could include clearing and paving the parcel and installing lighting. This parcel could then be maintained by the private owner of the adjacent truck parking facility who would benefit from the additional truckers using their facilities (food, gas, bathrooms, showers, etc.).
Potential Contractual Partners	Public and private funds would likely be used to develop this site likely resulting in a public private partnership, where the contractual partners include private developers with a long-term concession to operate and maintain the facility on the publicly owned parcel of land.
Potential Other/Non-Contractual Partners	Other potential non-contractual partners could include local jurisdiction, where the facility would be located or additional, adjacent site owners that maybe impacted by the proximity and the increased traffic to the commercial truck facility.
Examples	In <u>Brainerd, Minnesota</u> , a welcome center was developed in highway ROW contracted through a P3. Special state legislation between Brainerd Chamber, Crow Wing County, Minnesota DOT, Minnesota Department of Natural Resources, and Minnesota State Patrol was required to create this unique P3. The site offers 30 truck parking spaces accessible from either direction of travel, bathrooms, vending machines, and a gift shop that helps offset the cost of operating and maintaining the site.

Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Policy Goals			
How well does the proposed partnership address specific truck parking policy goals?	The partnership supports the creation of more secure off-street parking opportunities for trucks and could generate revenue for SCDOT.	Promising/Neutral 	Identify specific policy goals that may be emphasized using publicly owned land and the off-loading of maintenance via private partnership, potentially via contractual requirements.
Can the partnership address specific truck challenges that have been identified through planning activities?	The partnership could address the current challenge of identifying affordable options for the provision of services for trucks in the vicinity of major shipping hubs.	Promising/Neutral 	Conduct additional assessment of local truck parking needs to confirm that the proposed approach can solve the most critical challenges.
Organizational Capacity			
Are there internal champions for the specific partnership within the implementing public entity?	At this point in the process, a specific champion or champions may not be identified for this development of a parcel adjacent to an existing truck parking facility initiative, but it will be important for ensuring that the P3 initiative is implemented as effectively as possible.	Neutral 	Work with internal staff to confirm how this initiative may align with existing agency goals and responsibilities to identify certain key champions that would be focused on eliminating internal and external barriers to implementation.
Does the implementing public entity have access to sufficient internal and external technical resources to successfully manage the partnership in the public interest?	While it seems like there may be individuals within the implementing public entity that have the expertise to manage the construction portion, they may not have the legal expertise needed to address the legal issue of a revenue generating P3 in a public ROW. It will be important to understand and address the legal constraints that exist.	Potentially Challenging 	Determine the legal team that would likely be required to vet and implement this initiative and identify external resources that could assist with this effort.
Has the implementing public entity established guidelines and regulations for procuring and managing the partnership?	While specific guidelines may not exist, it is possible that there are guidelines and regulations for related types of P3 initiatives which can help support development of targeted guidelines.	Neutral/Potentially Challenging 	Determine if the public agency has guidelines/regulations that could be applied directly or modified for this specific initiative.

Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Legal			
Is there legal authority to pursue the proposed partnership?	At this time, it is understood there is no legal authority to pursue a revenue generating P3 within the Interstate ROW. Specifically, 23 U.S.C. 111 is interpreted to prohibit commercial activity in Interstate Highway rest areas as a condition of Federal funding. However, as seen in the example provided for Brainard, MN, at the beginning of this example, it may be possible to implement a commercial facility within a US highway ROW, or just outside a US highway or Interstate ROW.	Potentially Challenging 	Assuming that the legal constraint is primarily a Federal one, it will be important to work with partners and advocates at the Federal level to determine whether there may be flexibility for facilities within a US highway ROW, or just outside a US highway or Interstate ROW. It will be important to conduct legal due diligence and have clear Federal direction as to whether the restrictions apply to any Federal aid highway or just those on the Interstate system.
Are there certain legal structures that would be more appropriate for the partnership?	If a revenue generating partnership in the ROW would eventually be permitted at the Federal level, there are a number of existing projects that could provide examples for contractual structures.	Promising 	Assign legal staff to review similar contracts used in other jurisdictions and determine how they may be customized for the specific location and project.
Who (individuals/positions) would need to provide approval for this potential partnership, and what would be the parameters?	Assuming that a revenue generating partnership in the ROW would eventually be permitted at the Federal level, a formal contractual arrangement would likely require the appropriate state-level approvals.	Neutral 	Assign legal staff to determine the appropriate processes for approval of a P3 contract at the state level.
Public Support			
Can sufficient support from the appropriate local and regional stakeholders be achieved to pursue the project?	If the initiative addresses key truck parking challenges that are potentially concerning to local and regional stakeholders, there could be significant support for the initiative. One potential concern may relate to the specific siting of the property and the potential perceived impacts on adjacent properties or local communities. If this emerges as a potential issue, it will be critical to focus significant outreach efforts on the adjacent property and community stakeholders.	Promising/Neutral 	Conduct outreach to key stakeholders and communities to determine their potential level support for the initiative. If there are initial stakeholder or community concerns, begin to formulate strategies for addressing these.

Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Can sufficient political support be achieved for delivering the project?	In many ways, this could align with the local and regional support. If it appears that there is positive local and regional interest in the initiative, political support may follow. Even with local and regional support, a revenue generating P3 in public ROW may delay needed approvals.	Potentially Challenging 	Work with internal staff to prepare regular staff reports and briefing materials about the initiative. As the initiative progresses, staff will share increasingly detailed levels of information with key decision makers.
Risk Allocation			
Would the partnership provide cost-effective opportunities for appropriate allocation of key risks between the partners?	If the initiative draws sufficient market interest to generate a competitive procurement process, the partnership could allocate project risks through an advantageous P3 Agreement. The P3 agreement could delegate operational and maintenance responsibilities to the private partner with control mechanisms to enforce key performance indicators required by the public entity.	Promising 	Work with staff to determine risk transfer opportunities and appetite. After determining the desired risk allocation, conduct market outreach activities to receive early feedback and gauge private interest in the initiative.
What would be key responsibilities that the implementing public entity could retain? What are the associated risks?	The public entity could be responsible for providing initial funding, enforcing the terms of the P3 agreement, while maintaining ownership of the underlying property. Unanticipated costs may affect the public entity's ability or willingness to provide additional funding for the project.	Promising 	Conduct technical due diligence and financial analysis using conservative assumptions and adjust scope as needed to fit within the public entity's budget.
What would be the key responsibilities that the implementing public entity would seek to allocate to a partner? What are the associated risks?	The private partner could be responsible for all aspects of delivery of the parking facility, including designing, constructing, financing, setting and collection of parking fees, and management of complementary services. Poor performance can reduce the revenue of the private partner.	Promising 	Develop contract requirements and specifications and share with potential private partners for feedback.

Screening Factors	Narrative Detail	Preliminary Evaluation	Recommendations for Next Steps
Financial Viability			
What are the near-term and long-term cost requirements?	<p>Near term, the upfront investment in property infrastructure may be significant, depending on the size and existing conditions of the public ROW. However, these costs can be shared with the private partner.</p> <p>Long-term costs for this initiative would be reflected by the type of P3 agreement with the private partner. If the P3 agreement is the outcome of a competitive procurement, there could be some long-term savings and efficiencies gained than if the public entity developed this initiative on its own.</p>	<p>Promising/Neutral</p> 	<p>Conduct industry outreach to potential partners to determine if cost-sharing for the development of the facility is feasible. Develop an estimate of the extra revenue that may be generated for the adjacent commercial facility as a baseline for determining if a cost-sharing agreement is feasible.</p>

