



SFRP

State
Freight & Rail
Plan

Truck Parking

DRAFT

Introduction

Trucks can operate anywhere there is a road, making them the most flexible means of transport in the nation’s supply chain. Trucks move more goods in Missouri than any other mode, with 55% of all goods moved by truck in 2023, increasing to 59% by 2043.

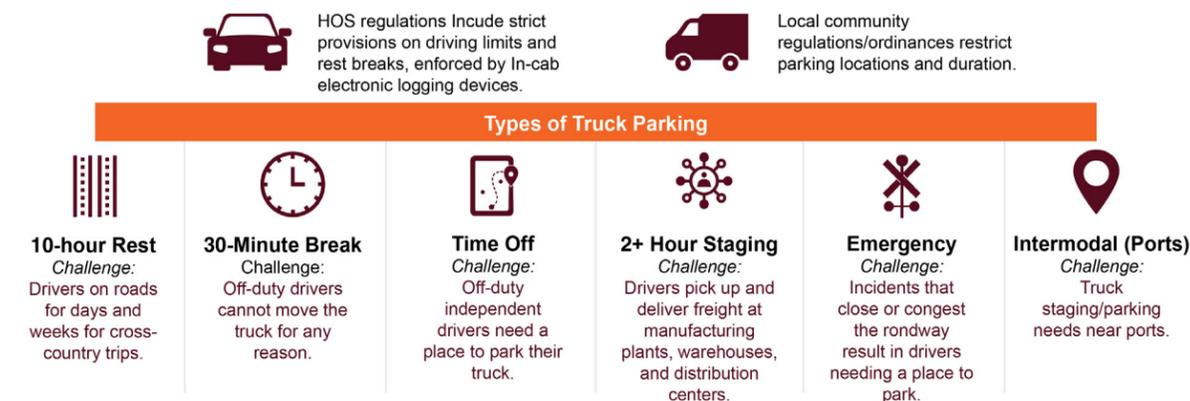
For an industry that is known for movement, it can be surprising that one of a truck driver’s most critical tasks is finding a safe, convenient place to park for rest and breaks with only one dedicated parking space for every 11 trucks in the United States (U.S.), the demand for truck parking far exceeds the supply. To read the full analysis, see the **4.02 Truck Parking Technical Memorandum** and associated appendices.

Why Truck Parking is Needed:

Federal Hours of Service (HOS) regulations exist to prevent driver fatigue. They limit the time a driver can operate prior to mandatory rest periods. As a result, drivers often park well before their full hours are spent, foregoing productivity to remain in compliance, as shown in **Figure 1**.

State roadside accommodations and privately owned truck stops offer parking spaces, but drivers often find these locations filled beyond capacity. Some turn to parking on highway ramps and shoulders, local streets and other unauthorized locations.

Figure 1 – Common Reasons Truck Drivers Need to Park



Source: Modified from Texas Department of Transportation (TxDOT)¹

¹ TxDOT, “El Paso/Far West Texas Truck Parking Action Plan,” accessed August 19, 2025, <https://www.txdot.gov/content/dam/docs/division/tpp/actionplan-truck-parking-el-paso-west-texas.pdf>.

Truck Parking Analysis

This study’s data-driven approach updates Missouri’s rural interstate truck parking supply and demand information. As seen in **Table 1**, 8,925 truck parking spaces were identified on Missouri’s rural interstate corridors and on U.S. Route 36.

Table 1 – Missouri’s Truck Parking Supply by Corridor, 2025

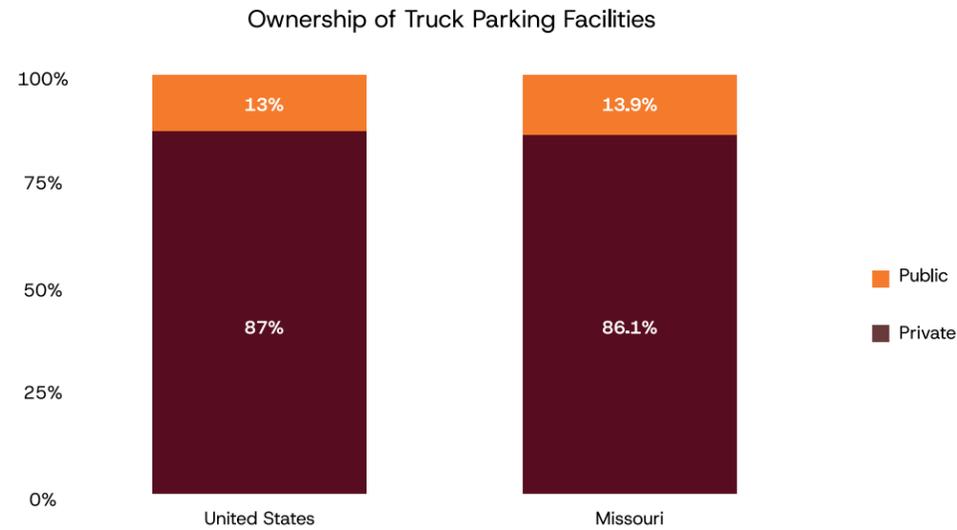
Corridor	Number of Truck Parking Facilities		Number of Truck Parking Spaces		Total Truck Parking Spaces	
	Public	Private	Public	Private		
I-29	7	10	169	450		
I-35	8	11	143	521		
I-44	12	23	375	2,592		
I-49	1	15	15	877		
I-55	8	19	255	1,150		
I-57	1	2	16	124		
I-70	10	20	250	1,961		
I-155	1	0	11	0		
U.S. 36	2	0	16	0		
TOTAL	50	100	1,250	7,675		8,925

Source: GFT Analysis of MoDOT Data and Truck Parking Websites and Applications, 2025.

Privately owned truck stops provide most of Missouri’s truck parking spaces. The public/private ownership split in Missouri mirrors the nationwide split. In the U.S., 87% of truck parking spaces are privately owned, while that figure for Missouri’s rural interstates is 86.1%, as shown in **Figure 2** and **Figure 3**.²

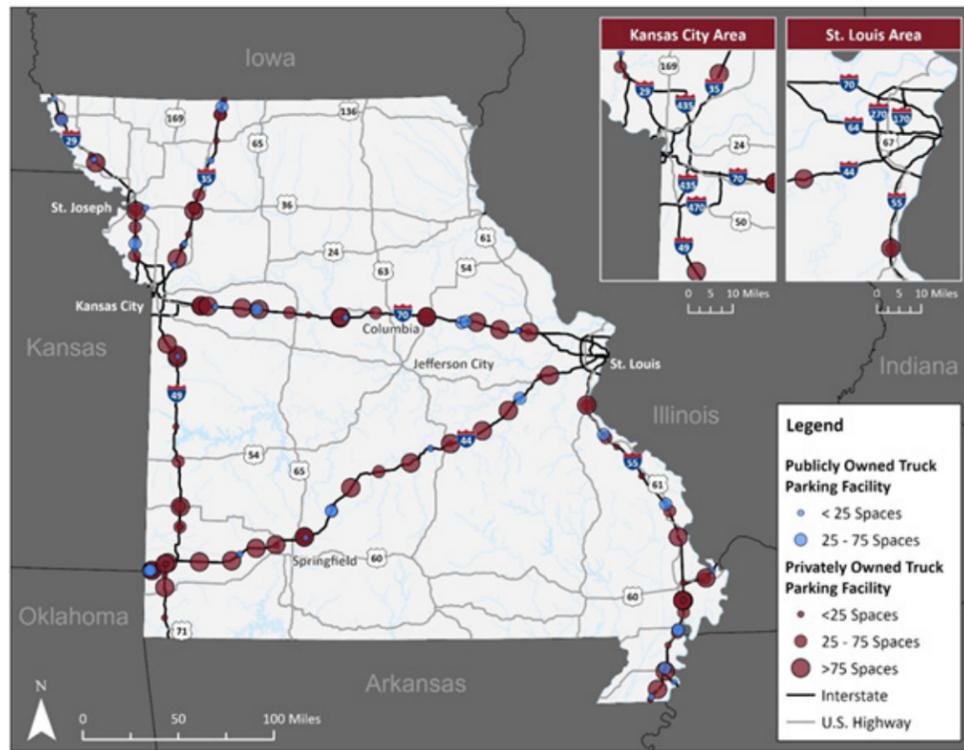
² Federal Highway Administration (FHWA), Office of Freight Management, “Jason’s Law Commercial Motor Vehicle Parking Survey and Comparative Assessment,” December 1, 2020, <https://www.txdot.gov/content/dam/docs/division/tpp/actionplan-truck-parking-el-paso-west-texas.pdf>.

Figure 2 – Ownership of Truck Parking Facilities in the United States and in Missouri



Source: FHWA; MoDOT, Truck Parking Websites and Applications; GFT Inventory Analysis, 2025.

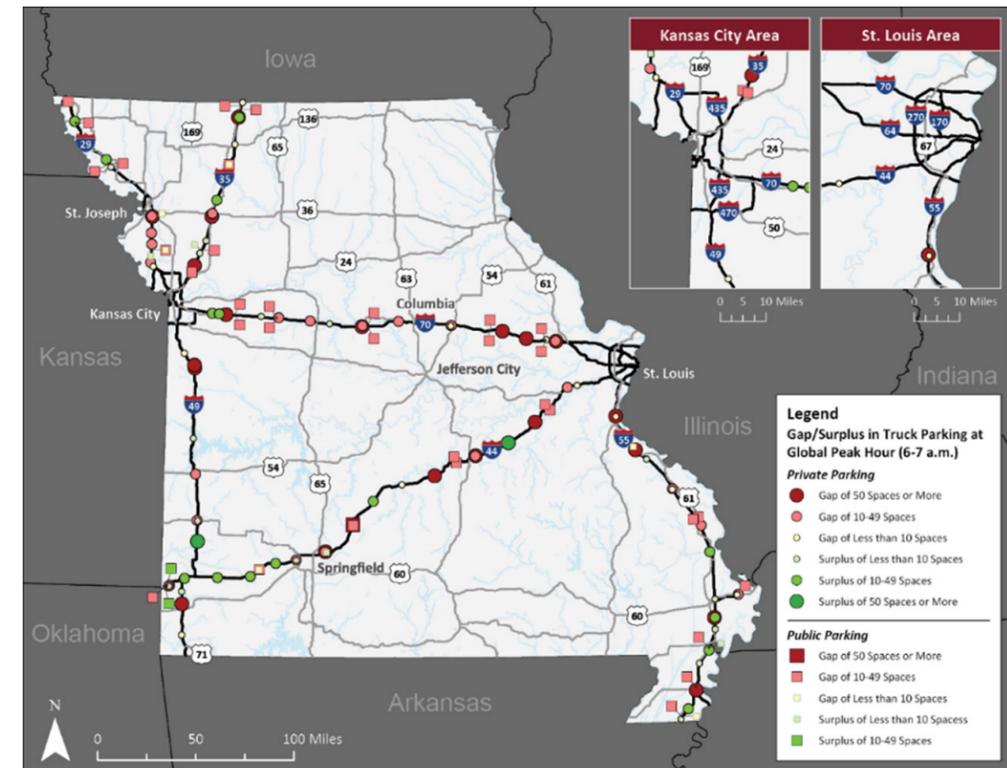
Figure 3 – Missouri’s Truck Parking Supply Locations and Spaces, 2024



Source: MoDOT, Truck Parking Websites and Applications; GFT Inventory Analysis; CDM Smith Demand Analysis, 2025.

In Missouri, truck parking demand exceeds supply between midnight and 11 a.m. The peak hour of demand is 6 to 7 a.m. As depicted in Figure 4, at this hour, 87.5% of public truck parking areas are at or exceed capacity. During the peak hour at private facilities, 61% are at or above capacity. Of I-70 private parking, 85% of lots are at least 90% full.

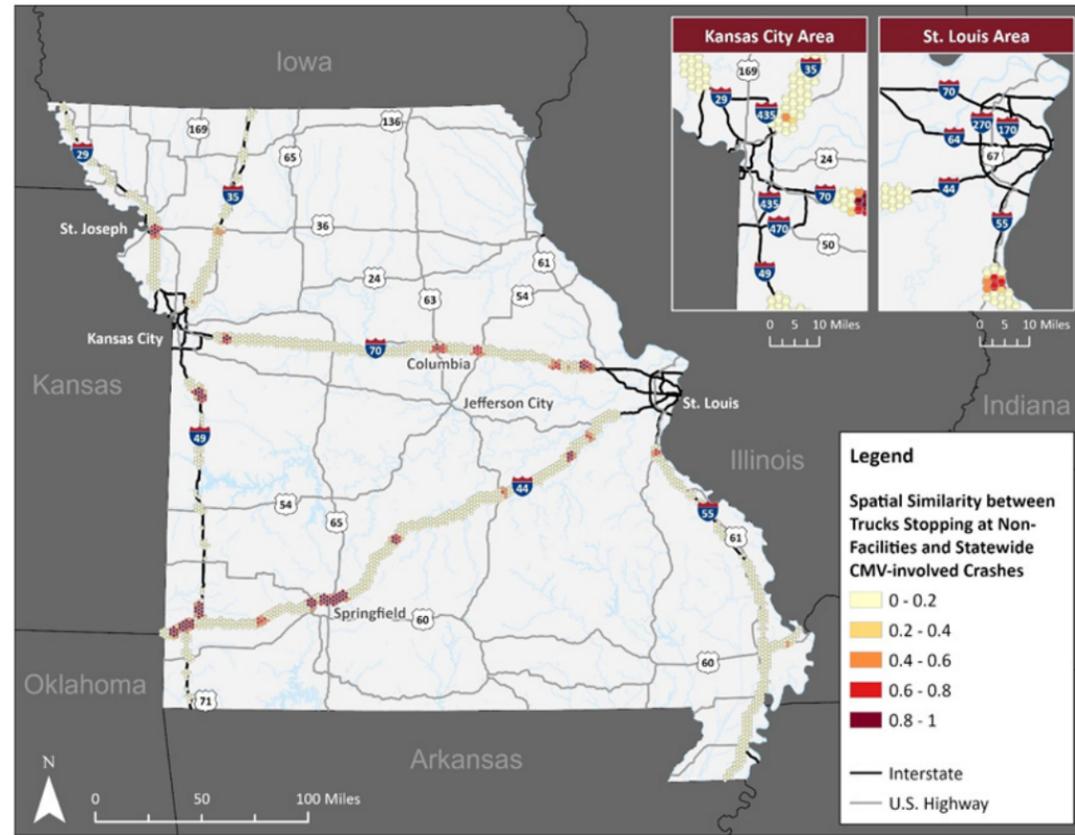
Figure 4 – Public and Private Truck Parking Global Peak Hour Gap and Surplus



Source: MoDOT, Truck Parking Websites and Applications; GFT Inventory Analysis, 2025; CDM Smith Demand Analysis, 2025.

Safety hotspots shown in Figure 5, are the result of comparing the sites of crashes involving commercial motor vehicles with the locations of often used, non-facility truck parking areas such as shoulders and ramps. Where the correlation is strong, additional truck parking supply has the potential to reduce fatigue, and parked truck-related crashes.

Figure 5 – Statewide Similarity of Non-Facility Parking Demand Hot Spots and 2020–2024 Commercial Motor Vehicle Involved Crash Hot Spots



Source: American Transportation Research Institute (ATRI), 2024; MoDOT Commercial Motor Vehicle (CMV) Involved Crash Data, 2020-2024; GFT Inventory Analysis; CDM Smith Demand Analysis, 2025.



Source: MoDOT

Truck Parking Outreach

While data captures truck parking behavior, engaging with drivers broadens the understanding of truck parking issues. MoDOT connected with truck drivers through a web-based survey and spoke with drivers and industry experts to gather additional information and to confirm findings.



Source: MoDOT

Trends Affecting Future Truck Parking

Increasing Freight Volumes

An increasing share of the growing freight volume forecasted for Missouri indicates parking supply gaps will also increase from 875 public spaces in 2024 to 1,450 spaces in 2050 and from 2,542 private spaces in 2024 to 5,010 spaces in 2050.

Connected and Autonomous Vehicles

Connected and Autonomous Vehicles (CV/AV) technologies are rapidly advancing in the private sector and research institutions. Benefits of connected vehicle technology include safety, reliability and mobility, modernization of infrastructure and sustainability through reduced idling and eco-friendly travel choices.

If CV/AVs grow to dominate highway freight, the ability to operate on a nearly 24-hour basis could reduce demand for traditional truck parking. However, experts say that day is many years away, due to remaining technological challenges, variation among states' laws and regulations and a forecasted growth in trucking demand that could require the use of both traditional and autonomous vehicles.

Truck Parking Management Systems

Making best use of the existing parking spaces is the aim of Truck Parking Information Management System (TPIMS) and Truck Parking Availability Systems (TPAS) efforts. Many states are piloting technology-based solutions. Some early TPIMS/TPAS adopter states identified issues related to reliability and long-term maintenance.

Missouri trucking industry stakeholders consistently noted a preference for a significant increase in the truck parking inventory prior to implementation of an electronic system. Until parking spaces are added, monitoring other states' efforts can help the Missouri Department of Transportation (MoDOT) find best practices and technologies, should it decide to commit to a TPIMS/TPAS system.

Regional Distribution and Nearshoring of Supply Chains

The explosive growth of e-commerce and supply chain disruptions attributed to the COVID-19 pandemic reshaped long-

established national and international trade patterns. Sourcing goods from Canada, Mexico, Central America, the Caribbean and South America combats risks associated with cultural variation and long transport times.

Mexico passed China as the largest U.S. trading partner in 2023.³

Missouri's central location helps attract logistical businesses. From Missouri, goods can arrive from and reach more than half of the continental U.S. in one day's drive. Most other states are reachable in less than two.⁴ As regional distribution centers rise, demand for staging parking near the facilities grows. Overnight parking is also in high demand as long-haul traffic moves through Missouri to and from international gateways at the

Canadian and Mexican borders and Gulf ports.

Cargo Theft in Trucking

The U.S. Department of Homeland Security estimates nationwide annual cargo theft losses of \$15-35 billion.⁵ Organized theft groups, criminal organizations that target freight carried by rail and truck, are responsible for the great majority of the loss.

Cargo is mainly exposed to theft during transit and handoffs like at warehouses, carrier terminals, parking lots and truck stops. Missouri is not a hotspot for cargo theft according to law enforcement officers and stakeholders contacted as part of this study. As cargo thieves are quick to adapt their methods, this might not remain the case.

³ U.S. Census Bureau, "Top Trading Partners – December 2023," accessed June 11, 2025, <https://www.census.gov/foreign-trade/statistics/highlights/top/top2312yr.html>.

⁴ Missouri Missouri Partnership, "Missouri is a Booming Epicenter of Commerce," accessed June 11, 2025, <https://missouripartnership.com/why-missouri/perfect-location/>.

⁵ U.S. Immigration and Customs Enforcement (ICE), "Operation Boiling Point," Last modified August 25, 2025, <https://www.ice.gov/about-ice/hsi/news/hsi-insider/op-boiling-point>.

Innovations to Address the Truck Parking Gap

Enterprising businesses are addressing the truck parking issue. These range from parking management companies monetizing some previously free parking spaces, to private landowners' creation of parking-only facilities, to third-party apps that allow drivers to crowd-share parking availability information.

Public-private partnerships also allow the public and private sectors to contribute their unique strengths to address the truck parking shortage. State DOTs or local government entities can provide land, regulatory support and initial funding for parking projects. Private companies bring innovation, management expertise and funding to the table.

Good lighting counters feelings of vulnerability. “If you don’t feel safe, you won’t rest well — and that affects performance.”

— Driver interview

Key Points

Staging needs are most critical in metropolitan areas, however industrial and logistical centers in rural Missouri draw significant commercial truck traffic.

Drivers and safety officers listed features and amenities they appreciate:

- Lighting for visibility and security
- Weather warning systems and shelters
- Angled, pull-in/pull-through parking
- Curb-free parking areas
- Vault toilets — when use frees funding for more truck parking spaces
- Maximized space especially, for truck parking and dedicated areas for large loads
- Promotion of weigh stations as parking areas
- Longer acceleration and deceleration lanes

- More truck parking in/near urban areas

Industry parking concerns include:

- Industrial areas and distribution centers with little or no parking within/nearby
- Mixed responses regarding TPIMS and TPAS

Best practices identified by these groups include:

- The Kentucky Transportation Cabinet’s “Rest Havens” at several weigh stations
- Indiana and Ohio’s thoughtfully rebuilt rest areas

