

**Department of Transportation
Federal Motor Carrier Safety Administration**

**SUPPORTING STATEMENT – Part B
“Quantifying the Benefits of Creating New Truck Parking Spaces” ICR**

Part B. Collections of Information Employing Statistical Methods

1. DESCRIBE POTENTIAL RESPONDENT UNIVERSE AND ANY SAMPLING SELECTION METHOD TO BE USED.

The project team is using a targeted, self-selection sampling method by distributing the survey to several organizations who have large portions of the truck driver population as members and inviting voluntary participation. The goal is to obtain information about the behaviors and experiences of all commercial truck drivers who use truck parking spaces. The primary variables of interest are how often and how long truck drivers (a) park in unauthorized spaces, (b) stop driving early to find parking, (c) drive off their routes to find parking, and (d) drive past hours-of-service limits to find parking.

The survey will be distributed through ATRI (a subcontractor on this project) and through the OOIDAF outreach channels. ATRI is a not-for-profit research arm of the trucking industry and part of the Trucking Industry Federation which includes the American Trucking Association, 50 State trucking associations and several freight-related groups. OOIDAF represents the interests of over 150,000 small business fleets and professional drivers. ATRI and OOIDAF have the email addresses of truck drivers from the entire range of the trucking industry, covering all sectors, sizes, and regions. Emails encouraging drivers to complete the survey will be sent to relevant ATRI and OOIDAF subscribers or members, including drivers from 50 State trucking organizations. These emails will be specifically directed toward truck drivers to help ensure the survey reaches the intended audience and to reduce responses from individuals not qualified to participate. The emails will contain a SurveyMonkey link for drivers to access and complete the survey. Responses missing too much important information or with nonsensical responses will be regarded as invalid.

Based on similar surveys conducted by ATRI and OOIDAF, the study team estimates that approximately 115,000 truck drivers will receive invitations (directly or indirectly) to complete the survey, and that approximately 1,000 truck drivers will complete the survey.

The study team feels that this approach (a “convenience sample”) is appropriate because of the lack of any specific prior estimates of the value of truck parking spaces and the number of truck drivers needing parking spaces each day, which reduces the need for (and increases the difficulty of) a more sophisticated and complex approach. The survey results can inform future studies by providing baseline estimates of the averages and variances of the variables studied.

2. DESCRIBE PROCEDURES FOR COLLECTING INFORMATION, INCLUDING STATISTICAL METHODOLOGY FOR STRATIFICATION AND SAMPLE SELECTION, ESTIMATION PROCEDURES, DEGREE OF ACCURACY NEEDED, AND LESS THAN ANNUAL PERIODIC DATA CYCLES.

Because of the lack of any specific prior estimates of the value of truck parking spaces, the number of truck drivers needing parking spaces each day, and the primary variables of interest (how often and how long truck drivers (a) park in unauthorized spaces, (b) stop driving early to find parking, (c) drive off their routes to find parking, and (d) drive past hours-of-service limits to find parking), the study team believes that statistical techniques such as a precise sample design or stratification are not necessary and that a “model-based” method would be appropriate. However, the survey will include several questions about driver demographics, carrier characteristics, and vehicle characteristics, which will allow for the statistical weighting of responses, if that is needed for obtaining results that are representative of the entire population of truck drivers. Statistics for the entire population of truck drivers and carriers on variables such as sector, fleet size, vehicle configuration, and employment classification can be obtained from FMCSA, ATRI, and OOIDAF sources and publications (including FMCSA’s Motor Carrier Management Information System (MCMIS), the Vehicle Inventory and Use Survey (VIUS), and ATRI’s data on truck driver demographics¹ to determine appropriate shares among the population of drivers and perform any weighting to the survey results, as needed. For transparency, summary statistics of survey responses, including sectors, driver demographics, and employment classifications, will be released.

Table 6 illustrates the primary variables of interest that will be obtained from the survey and how they will be combined with research on the number of active truck drivers nationwide to arrive at results. These results will then be used in conjunction with other research on the safety and business costs associated with each of these variables to estimate the value of additional truck parking spaces.

Table 6. Primary Variables of Interest.

Variable	Survey Findings	Research Findings	Result
How Often Truck Drivers Park in Unauthorized Spaces	Z average instances per week per driver	N active truck drivers nationwide	$Z * N * 52$ instances per year
How Often Truck Drivers Stop Driving Early to Find Parking	Y average instances per week per driver	N active truck drivers nationwide	$Y * N * 52$ instances per year
How Often Truck Drivers Drive Off Their Routes to Find Parking	X average instances per week per driver	N active truck drivers nationwide	$X * N * 52$ instances per year
How Often Truck Drivers Drive Past Hours-	W average	N active	$W * N * 52$ instances

¹ See the July 2025 report “Evolving Truck Driver Demographics: Issues and Opportunities” (<https://truckingresearch.org/2025/07/new-atrri-research-highlights-evolving-truck-driver-demographics/>)

Variable	Survey Findings	Research Findings	Result
of-Service Limits to Find Parking	instances per week per driver	truck drivers nationwide	per year
How Long Truck Drivers Park in Unauthorized Spaces	V average hours per week per driver	N active truck drivers nationwide	V*N*52 hours per year
How Long Truck Drivers Stop Driving Early to Find Parking	U average hours per week per driver	N active truck drivers nationwide	U*N*52 hours per year
How Long Truck Drivers Drive Off Their Routes to Find Parking	T average hours per week per driver	N active truck drivers nationwide	T*N*52 hours per year
How Long Truck Drivers Drive Past Hours-of-Service Limits to Find Parking	S average hours per week per driver	N active truck drivers nationwide	S*N*52 hours per year

Each of these variables will naturally have corresponding mean and variance estimators, which will also be calculated, using the following formulas:

$$\bar{x} = \frac{\sum_{i=1}^n x_i}{n}$$

$$s^2 = \frac{\sum_{i=1}^n (x_i - \bar{x})^2}{(n-1)}$$

Where x represents each of the variables of interest (as listed in Table 6), and n is the number of valid survey responses.

The variables, as listed in Table 6, do not address a few important issues (for example, distinctions between short-term parking and overnight parking, possible complexities regarding the applicability of the estimated number of active truck drivers nationwide due to vacations and seasonal adjustments, and people who respond to the survey being more likely to be concerned with truck parking, etc.), but it generally illustrates how the survey results will be used, in conjunction with findings from other research. Some of the uncertainty about these issues can be addressed by comparing the results from this project with analogous results from other truck parking studies, when available.

3. DESCRIBE METHODS TO MAXIMIZE RESPONSE RATE AND TO DEAL WITH THE ISSUES OF NON-RESPONSE.

The project team is using several approaches to maximize the response rate for the survey. First, the team will promote the survey through industry-specific channels and trusted organizations by distributing it through ATRI and OOIDAF, who have each conducted dozens of surveys related to truck parking. Second, the team is tailoring the messaging to target the intended audience of truck drivers. Third, the messaging for the news alerts with the survey link will emphasize that the findings of the survey will benefit their profession, as the ultimate goal is to enhance truck parking availability and safety. Fourth, the team will ensure that the online survey is mobile-friendly so that more drivers can participate in the survey. Finally, the team will send an additional message about the survey approximately halfway through the data collection period, to encourage people who have not yet responded to do so.

In spite of these efforts to increase responses, non-response bias could still occur, but there are some actions that could compensate for this bias or help determine how problematic it is. If survey respondents exhibit significant differences from the entire population of truck drivers and carriers on variables such as sector, fleet size, vehicle configuration, and employment classification, weighting the responses might compensate for this problem.

Some results of this project can be compared to the results of other truck parking reports. (For example, a New Jersey study found that 75 percent of long-haul truck drivers routinely detour more than 5 miles to obtain parking,² and a frequently cited report found that truck drivers parked an average of 56 minutes early rather than risking not being able to find parking down the road.³) Although many of these reports and surveys only cover specific States, and their surveys also likely suffered from non-response bias and imprecisely stated results, comparing this project's results to other published results will provide information that could help identify issues such as non-response bias.

The truck parking shortage affects virtually all truck drivers, with a 2020 survey finding that 98 percent of truck drivers reported problems finding safe parking,⁴ so although non-response bias is a concern, it is not likely to have a significant impact on the validity of this survey's results.

4. DESCRIBE TESTS OF PROCEDURES OR METHODS TO BE UNDERTAKEN.

Pilot testing of the web-based survey will be conducted on a variety of portable online devices and web browsers to ensure it functions on as many platforms as possible. A data analyst will review the pilot survey responses to verify that responses are being recorded

² North Jersey Transportation Planning Authority. "[Study Quantifies NJ's Truck Parking Shortage](https://www.njtpa.org/Newsroom/NJTPA-News/NJTPA-Update-Blog/2025/April-2025/Study-Quantifies-NJ%E2%80%99s-Truck-Parking-Shortage.aspx)" (<https://www.njtpa.org/Newsroom/NJTPA-News/NJTPA-Update-Blog/2025/April-2025/Study-Quantifies-NJ%E2%80%99s-Truck-Parking-Shortage.aspx>).

³ Caroline Boris and Rebecca Brewster. "A Comparative Analysis of Truck Parking Travel Diary Data" (<https://journals.sagepub.com/doi/full/10.1177/0361198118775869>)

⁴ U.S. Federal Highway Administration "Jason's Law Commercial Motor Vehicle Parking Survey and Comparative Assessment" (https://ops.fhwa.dot.gov/Freight/infrastructure/truck_parking/coalition/2020/mtg/jasons_law_results.pdf)

properly.

5. PROVIDE NAME AND TELEPHONE NUMBER OF INDIVIDUALS WHO WERE CONSULTED ON STATISTICAL ASPECTS OF THE INFORMATION COLLECTION AND WHO WILL ACTUALLY COLLECT AND/OR ANALYZE THE INFORMATION.

Andrew Fain will be the main person responsible for collecting, analyzing, and summarizing the information collected through this survey.

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The following individuals have reviewed the technical aspects of this research plan:

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