

NCHRP

SYNTHESIS 317

NATIONAL
COOPERATIVE
HIGHWAY
RESEARCH
PROGRAM

Dealing with Truck Parking Demands

A Synthesis of Highway Practice

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NCHRP SYNTHESIS 317

Dealing with Truck Parking Demands

A Synthesis of Highway Practice

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Systematic, well-designed research provides the most effective approach to the solution of many problems facing highway administrators and engineers. Often, highway problems are of local interest and can best be studied by highway departments individually or in cooperation with their state universities and others. However, the accelerating growth of highway transportation develops increasingly complex problems of wide interest to highway authorities. These problems are best studied through a coordinated program of cooperative research.

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The members of the technical committee selected to monitor this project and to review this report were chosen for recognized scholarly competence and with due consideration for the balance of disciplines appropriate to the project. The opinions and conclusions expressed or implied are those of the research agency that performed the research, and, while they have been accepted as appropriate by the technical committee, they are not necessarily those of the Transportation Research Board, the National Research Council, the American Association of State Highway and Transportation Officials, or the Federal Highway Administration of the U.S. Department of Transportation.

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FOREWORD

*By Staff
Transportation
Research Board*

Highway administrators, engineers, and researchers often face problems for which information already exists, either in documented form or as undocumented experience and practice. This information may be fragmented, scattered, and unevaluated. As a consequence, full knowledge of what has been learned about a problem may not be brought to bear on its solution. Costly research findings may go unused, valuable experience may be overlooked, and due consideration may not be given to recommended practices for solving or alleviating the problem.

There is information on nearly every subject of concern to highway administrators and engineers. Much of it derives from research or from the work of practitioners faced with problems in their day-to-day work. To provide a systematic means for assembling and evaluating such useful information and to make it available to the entire highway community, the American Association of State Highway and Transportation Officials—through the mechanism of the National Cooperative Highway Research Program—authorized the Transportation Research Board to undertake a continuing study. This study, NCHRP Project 20-5, “Synthesis of Information Related to Highway Problems,” searches out and synthesizes useful knowledge from all available sources and prepares concise, documented reports on specific topics. Reports from this endeavor constitute an NCHRP report series, *Synthesis of Highway Practice*.

The synthesis series reports on current knowledge and practice, in a compact format, without the detailed directions usually found in handbooks or design manuals. Each report in the series provides a compendium of the best knowledge available on those measures found to be the most successful in resolving specific problems.

PREFACE

This report of the Transportation Research Board is designed to assist transportation agency administrators in identifying those practices that have been used to manage the increasing demand for truck parking. The emphasis is on identifying successful and innovative strategies that have been implemented by transportation agencies, as well as potential strategies yet to be deployed. The report examines the legislative authority governing the provision of truck parking by state transportation agencies, including federal requirements and selected state laws, to provide a framework for action. An analysis is provided of the demand for truck parking. Several case studies are discussed.

Information for this report was derived primarily from a detailed survey questionnaire that was distributed to highway maintenance engineers in all 50 states, the District of Columbia, and Puerto Rico. Responses were received from 24 transportation agencies. In several instances, the maintenance engineers supplemented their survey responses with additional documentation, including reports on the nature and magnitude of the truck parking problem, as well as master plans for documenting state strategies designed to address parking deficiencies. A literature review was also undertaken. The amount of literature on this subject is not extensive, but is adequate enough to provide the necessary background on the topic and reinforce conclusions drawn from the survey responses and interviews.

A panel of experts in the subject area guided the work of organizing and evaluating the collected data and reviewed the final synthesis report. A consultant was engaged to collect and synthesize the information and to write this report. Both the consultant and the members of the oversight panel are acknowledged on the title page. This synthesis is an immediately useful document that records the practices that were acceptable within the limitations of the knowledge available at the time of its preparation. As progress in research and practice continues, new knowledge will be added to that now at hand.

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Crawford F. Jencks, Manager, National Cooperative Highway Research Program, assisted the NCHRP 20-5 Committee and the Synthesis staff.

Information on current practice was provided by many highway and transportation agencies. Their cooperation and assistance are appreciated.

DEALING WITH TRUCK PARKING DEMANDS

SUMMARY

It is nationally recognized that commercial motor vehicle operators frequently cannot find adequate, safe parking for rest purposes. Many state departments of transportation are experiencing a heavy demand for commercial vehicle parking at rest areas, one that exceeds capacity. These rest areas are intended for short-term safety breaks; however, there continues to be a need for longer-term parking services in high-use corridors. Private truck stops often provide facilities that allow drivers to use them for longer-term stays to obtain adequate rest. For many of these private truck stops, demand also exceeds capacity. The purpose of this synthesis is to assist transportation agency administrators in identifying those practices that have been used to manage the increasing demand for commercial motor vehicle parking. The emphasis is on identifying successful and innovative strategies that have been implemented by transportation agencies as well as potential strategies that have yet to be deployed.

The primary data sources for this synthesis report are responses to a detailed survey questionnaire distributed to highway maintenance engineers in all states, the District of Columbia, and Puerto Rico. A review of the literature provided information that supplemented the survey data and provided background information.

Legislative authority plays a significant role in managing commercial vehicle parking. The development of parking spaces along the public roadway system of the United States has closely paralleled the development of the Interstate highway system. As originally conceived, public rest areas were designed to provide temporary rest locations for the traveling public. As the motor carrier industry has expanded, however, many public rest areas serve as long-term parking locations for long-haul commercial drivers, resulting in significant overcrowding.

Public rest areas were never meant to compete with the commercial vehicle parking industry. Legislative restrictions were placed on the amount of services provided at public rest areas to limit commercialization. A number of states, however, have expressed an interest in expanding public and private cooperation in the provision of parking and services to leverage investment dollars and improve services.

Several states have active and ongoing rest area master planning activities designed to improve services and expand parking availability. Many of these states recognize the need to address the aging infrastructure at the rest areas, through reconstruction and redevelopment of existing sites.

The synthesis conveys the magnitude of commercial vehicle parking demand and supply for the nation, including the number of public rest area spaces and spaces available at commercial truck stops and plazas. An evaluation of supply and demand indicates that a number of states are experiencing severe shortages of roadside commercial vehicle parking. These states are located throughout the nation and include those with large populations and traffic volumes as well as those with lower populations and traffic volumes. Indeed, it appears

that the extent of the parking shortfall will require a dramatic increase in supply along with improved management of existing resources.

States have implemented a number of alternative approaches to manage a growing demand for commercial vehicle parking. Several case studies are presented, and strategies are outlined. The strategies developed by these states generally have been effective in managing increasing parking demand. These include

- Expanding or improving public rest areas,
- Educating or informing drivers about available spaces, and
- Making better use of the private sector and private truck spaces.

Overall, it was found that no single entity is responsible for providing parking facilities, most parking supply is located in commercial truck parking lots and plazas, and the overcrowding problem concentrates in public rest areas. The data also point to the need for a multifaceted approach to meet the nationwide demand for effective truck parking.

Furthermore, additional research could clarify the reasons for the imbalance between truck parking supply and demand. Factors to be considered include poor accessibility to private supply due to poor geometric design; lack of information concerning the availability of spaces; and a lack of security at private locations, which inhibits their use by truckers.

Abbreviations used without definition in TRB Publications:

AASHO	American Association of State Highway Officials
AASHTO	American Association of State Highway and Transportation Officials
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
IEE	Institute of Electrical and Electronics Engineers
ITE	Institute of Transportation Engineers
NCHRP	National Cooperative Highway Research Program
NCTRP	National Cooperative Transit Research and Development Program
NHTSA	National Highway Traffic Safety Administration
SAE	Society of Automotive Engineers
TCRP	Transit Cooperative Research Program
TRB	Transportation Research Board
U.S.DOT	United States Department of Transportation