

REPORT OF THE PROJECT COMMITTEE ON PARKING

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Those of you who were in Oklahoma two years ago may recall a local statement about parking congestion in that city. This was not impressive to many of us when it was possible to park within 1½ blocks of the best downtown hotels. This is particularly true when 3 to 4 blocks is as close to destinations as many people are able to park under any circumstances in many other cities. That the people in Oklahoma City consider they have a parking problem, as well as those in larger cities, would make it appear that the parking problem is purely relative.

The basic considerations leading to the selection of a research group in the Department of Traffic and Operations to study parking problems at that time are even more apparent now with the return of unrestricted peacetime use of the automobile.

Reports from time to time from meetings on parking problems throughout the country indicate that our efforts will eventually furnish some of the facts which are needed. There are indications, too, that more information is needed than we have been able to obtain.

Indications that the program of the committee is in line with current problems were found at a conference held in Spokane, Washington, some months ago to discuss the needs for a parking study in that city. Three members of the Merchant's Downtown Parking Association participated in the discussion. This is what they wanted to know about parking in the Central business district:

1. The number of parking spaces

presently available at the curb and off the street in each block.

2. The demand for parking spaces in each block.
3. The present rate of turnover in the use of space
4. Where should new off-street facilities be provided - not where can they be provided?
5. Will long-time or short-time parkers use them?
6. What rates should be charged?
7. Can the proposed facilities be economically justified?

Retailers in cities would like to know what proportion of their customers, who shop in person, come in their own automobiles, what proportion of their car-owner customers is deterred from making more frequent trips because of parking congestion, and how many of their exclusively mail and phone customers within personal shopping distance would come to the store if there were convenient parking space.

The work of the committee has been directed toward the development of facts which will provide the basis for planning parking facilities properly integrated with streets and with the demands of the individual buildings, stores, or other traffic generators in the congested business district.

At the 26th annual meeting, the program of this committee was developed for 1947:

1. To evaluate parking habits of drivers
2. To determine the desirable location of off-street facilities

3. To design the capacity of those facilities for the demand.
4. To determine the amount of parking generated by the creation or improvement of a parking facility
5. To study the integration of transit operations and the location of parking facilities
6. To appraise and develop methods for obtaining these facts
7. To apply these facts to zoning ordinances, building codes, regulations dealing with parking and truck deliveries and pickups.

A study of the trip purposes and lengths of time people park in the downtown area indicates a sizeable group of "errand" parkers--business, shopping, or other purposes, who park less than one-half hour. Many of these even park less than 15 minutes. Offstreet parking even one block distance would be inconvenient for this group, taking as much or more time to park and walk to the destination than it does to do the errand. It does not, therefore, seem that complete elimination of curb parking can be recommended but that curb parking should be reserved for this type of use.

A full parking lot with cars in aisles is no measure of where the drivers would have liked to park their cars. Actual destination of persons after they leave their parked cars is the best information which can be used without question for determination of location of new facilities. Block by block comparisons between usage of existing facilities and the demand for space, where such information is available, invariably show a considerable disparity in the location of supply with respect to demand.

Fringe parking is a solution to the parking problem frequently cited and has been tried in many cities. An over-all transportation plan in a city involves the integration of mass transit units with not only the street development plan but also with private motor vehicle operation.

Since the 1946 meeting it has been possible to make a preliminary appraisal of several modified procedures of the direct interview type of study for obtaining information on parking needs. This basic method (described in the 1945 Proceedings of the Highway Research Board) has been used in more than 25 cities.¹ It involves the observation of each parking facility in the business district for an 8- or 10-hour period and the interviewing of each user of parking space during the stated period.

One of the questions most often asked in discussing the analysis of data obtained from these parking studies is "How much parking will be generated by the creation or improvement of a parking facility at this location?" Present methods obtain facts concerning current usage and demand for space block by block for those who now drive downtown and park their cars. The program of this committee on this point has been directed to the study of newly developed facilities to determine how many of the users are new users. In Baltimore, for

¹ Portsmouth, N. H.; Providence and Pawtucket, R. I.; New Haven, Conn.; Baltimore, Md.; Harrisburg and Reading, Pa.; Toledo and Cleveland, Ohio; Charlotte, N. C.; Atlanta and Athens, Ga.; Jacksonville, Fla.; Nashville, Knoxville, and Chattanooga, Tenn.; Alexandria, Monroe, and Lake Charles, La.; Albert Lea, Minn.; Wichita, Kans.; Corpus Christi, Texas; Portland, Ore.; Seattle, Spokane, and Walla Walla, Washington.

example, 34 percent of the users of the fringe lot developed by the Baltimore Transit Company had not previously driven cars downtown. Hence it must be assumed that this volume was generated by the development of the lot.

Other factors will influence the volume of parking generated, such as improved transit service, improved expressway and arterial routes, and improved traffic control on city streets. Living costs can influence the amount of money in the family pocketbook for parking and for operating the family car.

If parking facilities are developed in a plan integrated with other urban improvements, it appears logical to develop them in stages, basing the primary plan on current facts. As each element in the program is developed, it should be evaluated for generated usage modifying plans for subsequent elements before they are constructed.

In an effort to reduce the amount of work involved in studies of this type, a series of 25-percent samples was taken by using the records of all interviews obtained in an actual completed study (described in the 1945 Proceedings of the Highway Research Board).

These samples for curb parking were selected uniformly throughout the area.

First method - Alternate sides of parallel streets.

Second method - One curb face in four of every block.

Third method - All curb faces of one block out of every four blocks

Fourth method - One fourth of the spaces in each time restriction class.

The samples were selected in two ways for offstreet facilities.

First method - One fourth of the spaces, distributed uniformly according to location of the facility.

Second method - One fourth of the spaces, distributed uniformly according to rate structure of the facility.

In general these sampling procedures proved to be reliable when studying the parking habits of drivers. If, for example, parking information classified according to trip purpose, length of time parked, or kind of parking used, is desired, a 25-percent sample can be obtained which will be reasonably accurate in comparison with similar classifications of other 25-percent samples or of 100 percent of the information.

When similar procedures were applied to information classified according to destinations of the parkers--this is the demand for space, not where the car was parked such erratic patterns appeared as to raise questions as to use of any sample for the selection of a location for a facility.

Facts obtained from studies made thus far have not been used to establish or to revise zoning ordinances, building codes, or regulations dealing with parking and truck deliveries and pickups. Nor should they be. More data are needed and more analysis of existing information must be made. It has been possible to summarize existing ordinances, codes, and regulations. Mr. Levin has developed a paper to present this summary for trucks.

To those of you who have information available which will add to the case history experience of the committee, you may be sure it will be a welcome contribution. It is only by the assembly of many individual cases that generalizations can be made for practical application. Only in this way is your committee able to do its part in the Research Program of the Department of Traffic and Operations.