

ECONOMIC IMPACT OF CURRENT PARKING STANDARDS ON OFFICE DEVELOPMENTS

by Neil S. Kenig

In today's economic climate, at a time when residential and retail development has slowed considerably, office development is booming. The high costs of construction and financing have made it necessary more than ever to increase the cost-effectiveness of transportation facilities especially in the area of parking space.

However, a significant economic impact is created by the disparity between the actual need for office parking space and the parking requirements established not only by the communities but by the lenders who finance the projects. Current requirements established by many communities and lenders average four parking spaces per 1,000 square feet of gross floor space.

Extensive research and the author's 25 years of practical traffic and parking consulting experience indicate a strong justification for reducing most office parking requirements. Unnecessarily high requirements place an unfair economic burden on developers, which in some cases can reduce the feasibility of the project to a point where the opportunity for development is lost.

Current Zoning Ordinance Parking Requirements

The various requirements for parking currently specified in many zoning ordinances throughout the country designate the problem confronted by site planners, developers, and traffic engineers. An examination of more than 100 ordinances revealed 27 different methods of calculating office parking requirements. In 20 percent of the ordinances there were no specific requirements.

The relatively low office parking requirements in communities such as Chicago, Detroit, Philadelphia, and Pittsburgh are due to the recognition of transit factors. Some of the communities with extremely high requirements are using these requirements to discourage

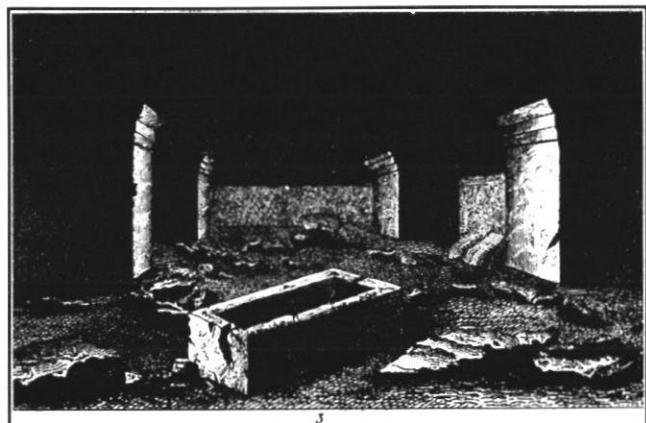
development or at least to maintain control when variances may be sought. Another stumbling block in the development of reasonable office parking requirements is the lender. By and large, one parking space for each 250 square feet of floor area is required. This figure falls in the high range for parking requirements.

In the ideal situation, zoning requirements would be based on local studies of the actual demand for parking space at each type of land-use.

Recommended Parking Space Supply

In order to establish a standard for parking space requirements, it was necessary to update earlier studies of freestanding suburban office developments. Studies were conducted at developments which had little or no transit service or vanpooling and were not substantially affected by traffic factors or parking fees. Peak hours of auto accumulation as well as the occupied gross floor area at the time of each study were determined by on-site surveys.

Several samples at a number of buildings were taken in the morning and afternoon throughout the week to determine any significant variations. Over 130 samples,



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corresponding to more than 17,000,000 square feet of floor area and representing over 45,000 parked vehicles, were obtained to determine a recommended parking supply for suburban office developments.

Based on the results of these studies, a parking requirement of three spaces per 1,000 square feet of gross floor area is recommended as a general parking standard. It is recognized that on occasion this figure might be exceeded. Based on extensive surveys, however, it was exceeded only a few times. In fact, except for one of the major survey inputs at a governmental office building which had a number of carpool vehicles in the lot, the three-space ratio would not have been exceeded.

Economic Implications

The cost of constructing parking facilities is skyrocketing. Recent estimates indicate that the cost of providing a parking space in a well-designed surface lot can be as much as \$2,000. Of even more significance is the cost of above-grade structured parking which ranges between \$4,500 and \$7,000 for an average space of 300 to 350 square feet. The table illustrates the possible costs of providing parking space for a 150,000-square-foot office building. It is assumed that the cost would be \$2,000 per surface space and \$5,000 per structured space, exclusive of land cost. These estimates can be increased or decreased for a specific situation.

TABLE

Parking Requirements	Spaces	Surface Lot Cost	Parking Structure Cost
5.0 spaces per 1,000 sq.ft.	750	\$1,500,000	\$3,750,000
4.0 spaces per 1,000 sq.ft.	600	1,200,000	3,000,000
3.33 spaces per 1,000 sq.ft.	500	1,000,000	2,500,000
Recommended			
3.0 spaces per 1,000 sq.ft.	450	900,000	2,250,000
2.5 spaces per 1,000 sq.ft.	375	750,000	1,875,000
2.0 spaces per 1,000 sq.ft.	300	600,000	1,500,000

The economic effect of obtaining variances or ordinance changes regarding parking design standards (stall widths

and lengths as well as compact car recognition) can sometimes be as dramatic as the reductions obtained in the number of parking spaces required for the ordinance. The combination of both factors can mean the difference between an economically viable project and one that may not succeed.

Some common parking standards today involve 10- by 20-foot and nine- by 20-foot parking stalls. Based on downsizing of cars and an appropriate percentage of compact cars, the following dimensions are recommended for the relatively low turnover of office employee parking:

- Standard size cars — 8.5 feet by 17 feet
- Compact cars — 7.5 feet by 15 feet
- Compact percentage — minimum of 40 percent

Stalls of these dimensions, in comparison to nine by 20-foot stalls, could result in a reduction in parking facility area greater than 15 percent. For the hypothetical case of a 150,000-square-foot building and a parking requirement of 450 spaces, a cost savings of \$130,000 for a surface lot and up to \$340,000 for a parking structure is possible with a change in design standards.

Summary

As indicated previously, it is evident that a majority of the existing parking ordinances are obsolete. The increasing cost of adhering to these ordinances may cause a developer to pass up an opportunity to develop in a particular community. At the other extreme is the parking ordinance that is too lenient.

Major parking problems can be expected to occur in a community, and this may result in the adoption of a parking space requirement that is higher than actually needed. Therefore, it is important that a realistic parking ordinance be considered.

Findings here indicate that parking space demands at suburban office developments are less than three spaces per 1,000 square feet of floor area. In order to accommodate additional volumes, a ratio of three parking spaces per 1,000 square feet of floor area is recommended. In addition, parking design standards should be reviewed and brought into conformance with current vehicle sizes. It is felt that these actions can result in substantial development cost savings.