Attitudes about Parking Requirements: 
A Survey of Local Officials

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Abstract

This research seeks to understand local planners’ attitudes and practices concerning parking requirements for workplaces. Parking requirements are receiving increasing attention as a crucial element of transportation and land use policy, and there are many critiques of excessive minimum parking requirements. Researchers and policy makers are advocating that cities rework their parking requirements to serve broader goals concerning transportation, land use, economic development, and sustainability. In 1995, a research team surveyed local jurisdictions in Southern California to understand the perspectives of the planners who create workplace parking requirements. This research replicates the original research design to identify current perceptions and to see if they have changed since 1995. This study was limited to workplace parking issues. The survey was conducted in spring 2013, inviting 169 jurisdictions across Southern California to participate, from which 50 completed surveys were received. Survey responses show that planners continue to see their role as ensuring an “adequate” number of parking spaces are provided, but indicate that determining the appropriate number of spaces is a significant issue. The most common request from developers is to reduce on-site parking supply. Use of precedent and national data sources continues to outpace local utilization surveys in setting requirements. Survey responses show planners’ recognition of the role of parking pricing in parking utilization, but they strongly oppose deregulation of minimum parking requirements. Additional outreach efforts are needed to engage local planners in parking requirement reform, to better understand the technical, policy, and political issues affecting current requirements.
INTRODUCTION

This research is motivated by a concern about outdated local parking requirements and the slow progress in reforming them. Many parking requirements require more parking than is used, wasting land and preventing a parking market from functioning (1). This study surveys local planning officials to provide information about the attitudes and perspectives that underlie local jurisdictions’ parking requirements. Focusing on workplace parking, survey responses shed light on planners’ perspectives, and changes in practices and attitudes that have occurred over time. Although parking requirements are the responsibility of local jurisdictions, parking requirements are of interest to federal, state, and regional agencies because of their impact on transportation, land use, economic development, and the environment.

In 1995, a research team consisting of the coauthor (Willson) and Michael R. Kodama Planning Consultants (MRK) studied southern California cities to provide information on workplace parking requirements and planners’ attitudes about them (2). This study replicates the 1995 survey to assess current attitudes and practices, and to determine if they have changed since that time. Given the popularity of smart growth movements and increased awareness of parking issues brought about by Shoup, we expected to find shifts in perceptions and practices.

Parking requirements: what they are and how they work

Parking requirements are the exclusive domain of local governments and are subject to their concerns (2). Minimum parking requirements include three elements: the land use categories to which parking requirements apply; the basis for the parking ratio; and the number of spaces required per unit of development (3). Parking requirements vary by land use area, taking into account the city’s physical and social environment. Developers then build parking in accordance to the ratios established in zoning ordinances, and in some cases, guidelines of the development industry (2).

Establishing minimum parking requirements

Cities created requirements for off-street parking to ensure that new developments have ample parking, assuming that a lack of parking will generate traffic congestion and cause parking to spill over into surrounding areas (4). However, the increased parking supply brought about by minimum requirements induces automobile dependency, thus increasing regional congestion, fuel consumption, and air pollution (4).

In The High Cost of Free Parking, author Donald Shoup argues that minimum parking regulations create a cycle that encourages transportation by private automobile, which, in turn, pressures public authorities to require more parking. At the time parking requirements were originally developed, however, planners and public officials thought they were good public policy.

Critiques contend that the methods used to determine the required number of parking spaces per land use are “typically arbitrary and ad hoc” (4). Shoup (5) argues that learning how to plan for parking is a skill learned only on the job because planners are not trained in parking requirements. According to Shoup, “Planners supposedly base parking requirements on parking demand, but they act as if this demand were immaculately conceived…Urban planners have no analytic bases for requiring parking in proportion to land use” (6). Supporting this view, a parking stakeholder survey conducted as part of Metropolitan Transportation Commission’s Smart Parking Technical Assistance Program found that none of the respondents thought that their jurisdictions’ standards, or those of the jurisdictions they worked in, “got the parking
requirements ‘right’” (7). Parking minimums commonly require developers to provide more parking than the market demands, lacking flexibility to accommodate a variety of parking needs for different use types and contexts (8).

Moving towards reform
Parking requirements have received more scrutiny as policy makers understand the relationship with land utilization and automobile dependency. The call to reform workplace parking requirements has been brought about by recognized mismatches between parking demand and minimum requirements, opportunities for providing access in other ways, including shared parking, ridesharing, transit, and non-automobile modes such as walking and biking.

Moving ahead with parking reform requires policy-makers to balance priorities among many stakeholders. There are misperceptions between city staff and developers about what the other party wants or needs. Some planners believe that developers would avoid building parking if it was left to them, hence the need for parking requirements, while surveys of parking stakeholders show that a perception among city staff is that “developers want to build more parking than is needed, whereas developers (at least of infill projects) say they are always trying to build less parking” (7). Minimum parking requirements overlook the important link between transportation and land use; however, “planners and elected officials have begun to realize that parking requirements can put the brakes on what they want to promote and accelerate what they want to prevent” says Shoup (6). Excess minimum parking requirements serve as barriers to smart growth practices and efficient transit because transit providers must compete with free parking and serve low-density areas dominated by surface parking lots (2).

Parking requirement reform can create more successful commercial and business districts, reduce costs for employers and developers, provide more housing and transportation choices for residents and employees, and reduce emissions (9). In simple terms, parking requirements should be reformed to meet a city’s needs by “subsidizing people and places, not parking and cars” (10). As cities progress towards sustainable, livable communities, tools to reform parking requirements will become essential in ensuring successful future parking policy.

RESEARCH DESIGN AND METHODOLOGY
This research provides survey information on planners’ attitudes, motivations, and practices concerning local jurisdictions’ workplace parking requirements. The project is a replication of a study conducted in 1995 to assess current conditions and track changes. Southern California was selected as a study area because of its size, diversity, and influence on nationwide trends. Survey participation was directed towards southern California planning directors or senior planning managers who are familiar with their jurisdiction’s planning and parking issues. This research focuses on planners because “they draft the ordinances, they direct attention to problems and opportunities, and they know most about the stakeholder perspectives” (2).

The literature suggests that parking requirements are often based on “rules of thumb” rather than actual parking utilization data and policy deliberation (1). A survey was selected as the best method to systematically capture these rules of thumb (2). In fall of 1995, the surveyors contacted all local jurisdictions in the southern California region and completed surveys for 138 out of 150 local jurisdictions (2).

This follow up study is conducted through an electronic survey of planning officials in the population of Southern California cities (n = 169). Participants were drawn from the California Book of Lists, a publication of planning officials and relevant contact information
provided by the Governor’s Office of Planning and Research in the state of California (11). This study surveys planners from city jurisdictions only.

Survey questions focus on local planners’ perspectives on parking requirements for office, manufacturing, warehouse, and medical buildings. The survey instrument is primarily based on rating scale questions. In most cases, the survey instrument was designed to keep consistency across questions in order to compare the results with the 1995 findings. Because the response rate between the 1995 and 2013 surveys is quite different, preliminary comparisons between the two time periods are made but no statistical claims about significant differences are presented. As part of an ongoing study effort, the number of 2013 responses will be enhanced through follow-up surveys.

Participants were first sent an e-mail requesting their participation in an online survey. The email included a brief overview of the project’s purpose, directions, and a link to the online survey instrument. Responses were recorded through SurveyMonkey. Follow-up telephone calls were conducted, as necessary, to increase the number of respondents. Completed surveys were received from 50 of 169 possible respondents (29.6% of total sample). Almost half of the respondents were planning directors/community development directors (48%). Other respondents included senior planners/planning managers (25%), and associate/assistant planners (27%). The Cal Poly Pomona Institutional Review Board reviewed and approved the research protocol for this research involving human subjects under protocol 13 – 035.

**ANALYSIS OF SURVEY RESPONSES**

Survey questions asked about frequent workplace parking issues, the rationale for minimum parking requirements, modification of requirements, and sources used in determining requirements. Respondents were presented with answer categories and were allowed to select more than one response in certain questions. They were also asked to rank the importance when multiple responses were allowed. Tallies are shown in two ways: the percentage of times a response category was ranked as most important, and the percentage of times a response category was ranked 1st, 2nd or 3rd most important. The survey concluded with a series of six statements evaluating planners’ attitudes on a Likert scale.

**Workplace Parking Issues**

Table 1 shows that the most frequent workplace parking issue is “determining the appropriate number of spaces”. Two responses tied for the next most common first ranked issue – parking undersupply, and parking overspill into neighborhoods. Only 7 percent of respondents identified parking oversupply as the most important issue. Other responses included overspill into commercial properties, land-use intensification, environmental impacts, and urban design impacts.
TABLE 1 Workplace Parking Issues

Question: What are the most important workplace parking issues in your community?

<table>
<thead>
<tr>
<th>Issue</th>
<th>Number of Times 2013</th>
<th>Number of Times 1995</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ranked 1st, 2nd, or 3rd</td>
<td>Ranked 1st</td>
</tr>
<tr>
<td>Determining appropriate number of spaces</td>
<td>67% (30)</td>
<td>29% (13)</td>
</tr>
<tr>
<td>Overspill into neighborhoods</td>
<td>53% (24)</td>
<td>18% (8)</td>
</tr>
<tr>
<td>Land-use intensification increases parking demand</td>
<td>51% (23)</td>
<td>11% (5)</td>
</tr>
<tr>
<td>Parking undersupply</td>
<td>29% (13)</td>
<td>18% (8)</td>
</tr>
<tr>
<td>Urban design impacts</td>
<td>29% (13)</td>
<td>7% (3)</td>
</tr>
<tr>
<td>Overspill into other commercial properties</td>
<td>27% (12)</td>
<td>0% (0)</td>
</tr>
<tr>
<td>Parking oversupply (too much parking)</td>
<td>18% (8)</td>
<td>7% (3)</td>
</tr>
<tr>
<td>No parking issues</td>
<td>13% (6)</td>
<td>7% (3)</td>
</tr>
<tr>
<td>Environmental impacts</td>
<td>7% (3)</td>
<td>4% (2)</td>
</tr>
<tr>
<td>Other</td>
<td>7% (3)</td>
<td>26% (31)</td>
</tr>
</tbody>
</table>

Note: n = 45 in 2013 survey; n = 116 in 1995 survey

The survey results show that concern about the “appropriate amount” is prominent. This comes from the assumption by respondents that it is their job to ensure sufficient off-site parking supply, rather than seeing it as managing on-street parking resources and allowing private transactions to determine off-site parking. The 2013 responses indicate more attention to parking supply questions than in 1995, which may lead to the use of more rigorous methods. Concerns about parking overspill and undersupply are also frequently stated. The issue of land use intensification may reflect a trend towards increased employee density in new office layouts and work arrangements. The “Other” category responses included storm water retention and groundwater contamination, ADA upgrades, retrofitting older developments, and shared parking agreements.

A comparison with the original 1995 survey shows that the most common first ranked response to workplace parking issues then was that there were no major issues (2). The next most frequent response was parking undersupply. Only 10 percent of respondents ranked “determining an appropriate number of spaces” as the most important issue. Comparing past results to present attitudes, planners continue to be concerned with parking undersupply, but there has been a shift from not identifying major issues to a concern with accurately determining the appropriate number of parking spaces. This may reflect increased recognition of the importance of data and policy considerations in setting parking requirements.

Participants were further asked, “Do current minimum parking requirements result in an appropriate level of parking for workplaces?” Responses were based on an answer scale of “almost always,” “most of the time,” “about half the time,” “sometimes,” “seldom,” and “don’t know.” A majority of 2013 respondents seem satisfied with current workplace parking requirements: 22 percent of respondents said “almost always” and 53 percent of respondents answered “most of the time”. However, comparing 1995 and 2013 survey results shows more dissatisfaction with current parking requirements: 24 percent of respondents in 2013 compared to only 10 percent in 1995 (2). Note that the responses may reflect either problems with parking oversupply or concerns about parking undersupply.

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Rationale for Minimum Parking Requirements

Table 2 shows that the reason for establishing minimum parking requirements for workplaces was overwhelmingly to “ensure an adequate number of spaces”, especially in the 2013 responses. This response has a certain circular logic, and hints at a lack of reflection on why an “adequate number of spaces” is desired and what “adequate” means. The next most frequent responses were to avoid spillover parking on local streets and adjacent properties. Other responses included to “ensure economic success of the project” and to “treat all developers the same way.” No 2013 respondents rated “maintain traffic circulation” as the most important reason. The “other” responses mentioned establishing parking maximums versus minimums and stand-alone project requirements. Comparisons between the 1995 and 2013 responses are limited because there was a large share of “other” responses in the 1995 sample.

### TABLE 2. Rationale for Minimum Parking Requirements

**Question**: Why does your jurisdiction establish minimum parking requirements for workplaces?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number of Times Ranked 1st, 2nd, or 3rd</th>
<th>Number of Times Ranked 1st</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure an adequate number of spaces</td>
<td>93% (38)</td>
<td>38% (65)</td>
</tr>
<tr>
<td>Avoid spillover parking on local streets</td>
<td>73% (30)</td>
<td>29% (50)</td>
</tr>
<tr>
<td>Avoid spillover parking on adjacent properties</td>
<td>61% (25)</td>
<td>8% (14)</td>
</tr>
<tr>
<td>Ensure economic success of project</td>
<td>29% (12)</td>
<td>2% (4)</td>
</tr>
<tr>
<td>Treat all developers the same way</td>
<td>27% (11)</td>
<td>NA</td>
</tr>
<tr>
<td>Maintain traffic circulation</td>
<td>15% (6)</td>
<td>12% (21)</td>
</tr>
<tr>
<td>Don't know</td>
<td>0% (0)</td>
<td>NA</td>
</tr>
<tr>
<td>Other</td>
<td>5% (2)</td>
<td>11% (18)</td>
</tr>
</tbody>
</table>

Note: n = 41 in 2013 survey; n = 134 in 1995 survey

NA = not available

When participants were asked, “Do minimum parking requirements have the effect of limiting project density (as opposed to FAR, building coverage, or setback requirements),” just less than half (49%) of respondents said yes: 20 percent responded “almost always” and 29 percent said “most of the time.” This suggests that some minimum parking requirements have an unstated function, which is limiting density. Present attitudes suggest that slightly fewer planners think minimum parking requirements limit project density when compared to the 57 percent that responded “almost always” or “most of the time” in 1995 (2). Good public policy suggests development intensity limits should be decided in an explicit manner, rather than through parking requirements.

Modification of Requirements

Respondents were asked if developers seek changes to standard workplace minimum requirements. The majority of 2013 responses suggest that developers do not commonly seek changes: 46 percent of respondents said “sometimes,” and 34 percent said “seldom.” Yet developer compliance with parking requirements cannot be relied on to indicate agreement with those requirements, since it possible that some developers would provide a different amount of parking but to do not want to subject the project to discretionary review and controversy. Only 12% of respondents suggest that developers seek changes “almost always” or “most of the time”.

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Paper revised from original submittal.
In 1995, most respondents said that their jurisdictions sometimes deal with developers seeking parking changes.  

Planners were further asked to rank the top changes, if any, that developers seek to standard workplace minimum requirements. Table 3 shows that “supplying less than code requirements” was the most common modification, followed by “fulfilling code requirements with off-site covenants.” These responses suggest that requirements are higher than the development community views as appropriate given a market assessment of the appropriate parking supply. In 1995, using off-site covenants was the most common change sought by developers, followed by reductions based on shared parking.

**TABLE 3. Modification of Requirements**  
*Question: If developers seek changes to standard workplace minimum requirements, rank the top changes.*

<table>
<thead>
<tr>
<th></th>
<th>Number of Times Ranked 1st, 2nd, or 3rd</th>
<th>Number of Times Ranked 1st</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplying less than code requirements</td>
<td>32 (84%)</td>
<td>17 (45%)</td>
</tr>
<tr>
<td>Reductions based on shared parking arrangements</td>
<td>31 (82%)</td>
<td>11 (29%)</td>
</tr>
<tr>
<td>Fulfilling code requirements with off-site covenants</td>
<td>19 (50%)</td>
<td>3 (8%)</td>
</tr>
<tr>
<td>Developers do not seek changes</td>
<td>12 (32%)</td>
<td>5 (13%)</td>
</tr>
<tr>
<td>Reductions based on travel demand management programs</td>
<td>7 (18%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Supplying more than code requirements</td>
<td>4 (11%)</td>
<td>1 (3%)</td>
</tr>
<tr>
<td>Other</td>
<td>6 (16%)</td>
<td>NA</td>
</tr>
</tbody>
</table>

Note: n = 38 in 2013 survey; detailed 1995 results unavailable for comparison
NA = not available

**Sources of Information on Parking Demand**

Table 4 summarizes the sources of information that planners typically use to set minimum requirements for workplaces. Slightly over half of the respondents ranked the use of current standards as the most common source. However, a greater number of respondents survey nearby cities to inform minimum parking requirements overall. Another commonly used source is the Institute of Transportation Engineer’s Parking Generation Informational Report. The “other” responses included parking usage studies and in-house parking counts for various land uses.

Surveying nearby cities and using ITE’s Parking Generation Manual are commonly criticized because those ratios may not reflect local parking utilization patterns or local goals and policies; national averages are particularly problematic for urban conditions with more transit, density, mixed land uses, and parking pricing. Overall, the survey results show insufficient use of local parking utilization studies.
Comparing 2013 and 1995 results suggests a broader use of information sources of all types. This could produce better triangulation of data sources to estimate expected parking utilization in new development.

Planners were also asked, “What trends affect your expectations for workplace parking requirements in the future?” Common responses include employee density in workplaces, the use of transit, non-motorized transportation such as bicycling and pedestrians, and land use mixing and intensification. Other responses were carpooling, travel demand management, and climate change regulation.

**ATTITUDES**

To better understand planners’ attitudes and their involvement in developing and implementing local parking regulations, the survey presented six statements in which respondents indicated “strong agreement,” “agreement,” “neutrality,” “disagreement,” or “strong disagreement.” The number of responses agreeing or disagreeing with the statements is summarized in Table 5.

Survey results show agreement with that statement that parking charges reduce the level of solo driving. Just over half (53%) of respondents agree or strongly agree, less than the 69 percent in agreement in 1995 (2).

There was agreement that developers should be allowed to use underutilized parking development to fulfill parking requirements. Current attitudes align with past results: 62 percent were in agreement in 1995, which slightly increased to 68 percent in agreement today (2).

Thirty-eight percent of planners were in agreement with the statement that free parking is a right of employment, compared to 53 percent in agreement in the 1995 survey results (2). This change in perspective is a welcome recognition of the role of parking pricing may lead to more support of parking pricing strategies or minimum parking requirement reductions.

Planners agreed with the statement that on-street parking should be priced to manage its use. An increase from the 1995 results (47%) to present attitudes (60%) implies a growing
understanding of the ability to regulate on-street parking with parking management programs and pricing strategies.

There was both agreement and disagreement with the statement that current parking policies require developers to oversupply parking; however, a more even distribution between agreement and disagreement is found in the 2013 responses. In 1995, only 36% agreed with the statement, while 47 percent of respondents disagreed (2). Comparatively, there is a more even distribution of perceptions.

Consistent with past attitudes, current survey results show a strong disagreement with the statement that developers should be allowed to determine the supply of parking over local jurisdictions. There are a number of possible reasons for this view: that developers will strategically undersupply parking to lower projects costs, that developers cannot accurately determine the number of parking spaces to provide for projects, or that higher parking requirements provide leverage for negotiating for other public benefits. While cases of successful deregulations exist in urban areas across the country, most of local planners surveyed want to maintain their authority over parking supply.
TABLE 5 Survey Responses to Attitudinal Questions

<table>
<thead>
<tr>
<th>A. Parking charges reduce the level of solo driving and parking at a workplace.</th>
<th>Agree or Strongly Agree</th>
<th>Disagree or Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>53% (21)</td>
<td>69% (93)</td>
<td>18% (7)</td>
</tr>
</tbody>
</table>

| B. Developers should be allowed to fulfill some of their parking requirements by using underutilized parking developments that are close by. | 68% (27) | 62% (84) | 15% (6) | 24% (32) |

| C. Free parking at a workplace is a right of employment. | 38% (15) | 53% (72) | 30% (12) | 25% (34) |

| D. On-street parking should be priced to manage its use. | 60% (24) | 47% (64) | 15% (6) | 31% (42) |

| E. Current parking policies require developers to oversupply parking. | 43% (17) | 36% (49) | 45% (18) | 47% (63) |

| F. Developers should determine the amount of parking to be provided in projects, not local jurisdictions. | 10% (4) | 10% (14) | 83% (33) | 84% (114) |

Note: n = 40 in 2013 survey; n = 129 in 1995 survey. Row totals do not sum to 40 and 129 and percents do not total to 100 because they exclude responses of "neutral" or "don't know."

CONCLUSION

The survey findings offer insights on the prospects for the reform of parking requirements. Planners are concerned about determining the “appropriate” amount of parking, a sign that there may be interest in better methods for determining requirements. Survey results show recognition that parking pricing strategies affect parking demand and a decline in the share of planners who believe that free parking is a right of employment. These perspectives offer hope that local jurisdictions will establish parking policy that is more consistent with planning goals.

Local jurisdictions continue to use ad hoc methods to determine the amount of parking spaces needed per unit of land use; however, survey findings show that more cities conduct their own parking utilization studies. Yet there remains much work to be done on creating stronger technical and policy rationale for minimum parking requirements.

Planners think that minimum parking requirements are justified to ensure that “adequate” parking is provided and to avoid spillover onto local streets and adjacent properties. Other research has shown that minimum parking requirements encourage automobile dependency and negatively affect the urban fabric of the region, but these perspectives are not prominent in survey responses. Local jurisdictions continue to assert that it is their responsibility to determine the amount of parking provided by developer, not the developers themselves. In that respect, the survey results do not show support for eliminating minimum requirements, despite that fact that the core areas of many large cities are doing this.
Moving forward with parking reform requires a reconceptualization of public and private roles in transportation and access, and a debate about the respective roles of parking versus other travel modes in local zoning ordinances. Often this discussion is most effective when parking requirement reform is linked to a broader planning vision. Local jurisdictions may also wish to consider parking requirement reform as part of a comprehensive package of innovative transportation measures such as car share programs, unbundled parking, on-street parking permits, parking pricing, and shared parking.

Attention to parking is at a high point in both scholarship and community activism, so there may be more support for revisiting parking requirements than ever before. The first step towards reform is admitting there is a problem. This research shows mixed results on whether planners think status quo parking requirements are a problem. This suggests a role for education and roles for regional, state, and federal agencies in prodding local governments to consider parking requirement reform.
REFERENCES