QUICKNOTES

Parking Management

Parking management refers to the set of policies, strategies, and tools that communities can employ to more effectively and efficiently manage parking supply while producing ancillary benefits, including improved quality of user experience, increased revenue generation, and more walkable environments.

For many years, communities have used minimum off-street parking requirements as their primary parking management strategy. These parking minimums, defined through the local zoning code, define a minimum number of parking spaces that must be provided by each land use based on a ratio of spaces to floor area, dwelling units, or employees (e.g., 4.0 spaces per 1,000 square feet of gross leasable area of space in a shopping center, 2.0 spaces per single family dwelling unit—or, for a slightly more interesting example, one parking space per 10 nuns).

Minimum parking requirements ensure a sufficient supply of free or low-cost parking, even at times of peak demand. However, parking management based exclusively on minimums can result in an oversupply of parking, which creates costs for users and communities. Having too much parking increases the cost of both residential and commercial space, and it reduces the amount of developable space. The cost is absorbed by all users, including those who do not own or operate cars. An oversupply of parking can also encourage car ownership and driving.

WHY MANAGE PARKING?

Parking is a resource, and parking management strategies seek to more efficiently manage this resource. Broadly, parking management strategies either focus on parking supply (e.g., parking minimums or maximums) or parking demand (e.g., performance pricing).

Parking management strategies can result in a range of benefits for communities. On average, over 30 percent of traffic in downtown areas is generated by vehicles looking for curb parking, contributing to traffic congestion, air pollution, and stress for drivers (Shoup 2011b). Good parking management can reduce traffic related to parking. It can also result in a reduction of trips, a corresponding reduction in vehicle miles traveled, and an improved user experience. Finally, a thoughtful approach to parking management will minimize the overall amount of space needed for parking and the total land area used for parking facilities.

CONSIDER ADDING PARKING MAXIMUMS

Parking minimums stipulate a defined minimum number of parking spaces that a developer must provide on-site, with no upper limit. Parking maximums do the opposite, defining the maximum number of spaces that a developer can build. Parking maximums reduce the overall amount of parking and can result in other benefits, such as reduced impervious surface cover and more walkable environments.

Numerous cities, both large and small, have eliminated parking minimums in defined areas—often downtowns. Many communities have also adopted parking maximums in addition to their parking minimums. Cities with parking maximums include Milwaukee, Portland (Oregon), and San Francisco.

CONSIDER SHARED PARKING

Different land uses often see different levels of activity at different times of day or during different times of the week (e.g., offices during the day and restaurants in the evening). Shared parking can help better

A solar-powered multispace parking meter in Ann Arbor, Michigan. (Credit: Dwight Burdette / Creative Commons 3.0)

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balance parking supply in an area with actual demand. Communities can encourage shared parking in multiple ways. In some cities, developers have the option of contributing to a fund that supports shared parking facilities (e.g., such as a municipal garage), instead of providing required spaces on-site. Some other cities reduce minimum parking requirements based on the proximity of a given use to shared parking facilities. And many communities have added provisions to their codes that allow multiple uses with different peak demand times to share parking facilities without having to provide the full amount of spaces required for each individual use.

Shared parking can promote "park once" environments, meaning drivers can park in one location and walk from place to place, visiting multiple businesses or running multiple errands on one trip. As a result, less land area is used for parking, making more land area available for developable space, which, in turn, allows higher density development.

CONSIDER DEMAND-SIDE SOLUTIONS

Demand-side solutions have two basic goals: altering or reducing the demand for parking through interventions that promote bicycle, pedestrian, or transit access; and maximizing the efficient usage of existing spaces.

The most common demand-side solution is to charge a fee for parking. Having to pay to park incentivizes using other modes of transportation. While most communities use flat hourly or monthly rates, some cities have embraced variable pricing to maximize the efficiency of existing spaces. With variable pricing, parking rates vary based on the time of day or proximity to popular destinations. Some communities have gone a step further with demand-responsive pricing, which uses occupancy data to make rate adjustments in real time.

Other demand-side solutions include special taxes on parking facilities or on employer parking subsidies; transportation demand management programs that encourage or require employers to offer transit benefits or cash instead of parking subsidies; and public investments in transit, bicycle, or pedestrian infrastructure.

CONSIDER NEW TECHNOLOGIES

New technologies offer opportunities for improved parking management. These include technologies that facilitate user experience, as well as applications that provide for improved data collection, revenue collection, and management of the parking system.

On the user side, there are smartphone apps that help locate available parking spots, allow drivers to pay for parking, and alert them when they need to add more money to their meter.

On the parking management side, technologies include smart parking meters, which allow payment to be collected by a range of payment methods. Paired with magnetic sensors that provide data on when spaces are occupied, smart meters can provide up-to-date data for parking officers, and user apps, as well as for demand-responsive pricing.

CONCLUSION

Effective use of parking management strategies can reduce the need for parking while also improving user experience. When adopting parking management policies or programs, it is important to consider factors that may affect parking demand, such as local residential and employment densities, whether or not transit service is locally available, and community goals of implementing new parking management strategies.

FURTHER READING

Published by the American Planning Association

Litman, Todd. 2006. *Parking Management Best Practices*. Chicago: American Planning Association. Available at www.planning.org/store/product/?ProductCode=BOOK_APMB.

Planning Advisory Service. 2009. *Parking Solutions*. PAS Essential Info Packet No. 24. Chicago: American Planning Association. Available at www.planning.org/pas/infopackets.

Shoup, Donald. 2011a. *The High Cost of Free Parking. Chicago*: American Planning Association. Available at www.planning.org/store/product/?ProductCode=BOOK_A64965.

Shoup, Donald. 2011b. "Yes, Parking Reform Is Possible." *Planning*, October. Available at www.planning.org/planning/2011/oct.

Other Resources

"Parking Management: Strategies for More Efficient Use of Parking Resources." 2013. In *TDM Encyclopedia*. Victoria, British Columbia: Victoria Transport Policy Institute. Available at www.vtpi.org/tdm/tdm28.htm.