# Parking | A LIVABILITY FACT SHEET

Parking a car in the United States is pricey however you choose to look at it.

Cars sit unused 95 percent of the time, and although motorists park for free in 99 percent of the places they go, the costs for the parking is being incurred by businesses and government. In three out of 10 car rides to nearby destinations, studies show that drivers spend three to eight minutes looking for a parking spot. [1]

Since the average American household has 1.9 automobiles,[2] many municipalities require two covered parking spaces for each single- and two-family dwelling. Most cities also require off-street parking spaces — up to four parking spaces for every 1,000 square feet of office space.[3] In low-density settings with no transit options, parking can take up more than 50 percent of the land used in a development.[4]

"The cost of all parking spaces in the United States exceeds the value of all cars and may even exceed the value of all roads," says UCLA urban planning researcher Donald Shoup.[5] The opportunity cost can be high as well, since each parking space can reduce the number of new housing units, businesses and social, recreational or other activities by 25 percent.[6]

About 96 percent of the financial cost of parking is bundled into rents and housing costs, higher prices in stores, and myriad other charges. Only about 4 percent of the cost is covered by pay-as-you-go parking, such as metered parking. In fact, if drivers paid for parking as they used it, the total expense of operating a vehicle would roughly double.[7]

Off-street parking is the most expensive type of parking. Each space typically uses 300 to 350 square feet, costs between $3,000 and $27,000 to build and about $500 a year to maintain and manage.[8]

On-street parking is more efficient and can be a revenue generator. If a single on-street parking space turns over frequently — about 12 to 15 uses a day — it brings in as much as $300,000 in revenues to nearby businesses.[9]

**"The cost of all parking spaces in the United States exceeds the value of all cars and may even exceed the value of all roads."**


**On-street parking, such as the kind seen on this Seattle block, is the most beneficial type. Head-out angled parking is the safest and easiest method since drivers have stopped traffic before backing into a spot and can see oncoming traffic when pulling out. In addition, loading is more convenient and separated from moving traffic.**

AARP® Real Possibilities

Walkable and Livable Communities Institute

# Myth-Busting!

## "There isn't enough parking in busy areas."

In Raleigh, N.C., there are about 40,000 parking spots downtown, of which approximately 9,000 are in parking decks managed by the city. The use of these decks is below 60 percent on most days and the city carries more than $100 million in debt for them.[10]

A study of office buildings in 10 California cities found that the peak parking demand averaged only 56 percent of capacity. In another study, peak-parking demand at nine suburban office parks near Philadelphia and San Francisco averaged only 47 percent of capacity and no office park had a peak parking demand greater than 60 percent of capacity.[11]

## "We need parking minimums."

Most cities in the U.S. include parking minimums in their zoning codes, but minimum requirements are causing more off-street parking to be built than needed. This causes excessive development costs. Where excess parking is not used, empty spaces can be a blight within a shopping area or a neighborhood.

Eliminating or reducing off-street parking requirements allows developers more flexibility in the amount of parking they provide and how they provide it. This change removes a barrier to new investments, especially in downtowns and transit centers, and potentially makes the final product more affordable.[12]

## "Free parking brings customers to our store."

Given a choice, consumers usually prefer free parking, but they ultimately pay for parking through higher taxes and retail prices and reduced wages and benefits.

The choice is actually between paying for parking directly or indirectly.[13]

In Portland, Ore., property values and customer volume in parking-restricted areas near transit stations are higher than in other areas.


**Spaces can be more available if regulated and priced to prioritize short stays instead of all-day parking.**

**In Seattle, Wash., head-out angled parking provides motorists with a clear view before proceeding.**


1. Shoup, D. The University of California Transportation Center, Berkeley, Calif. (1997) "The High Cost of Free Parking." *Journal of Planning Education and Research,* Vol. 17, pp 3-20, UCTC No. 351. http://www.uctc.net/papers/351.pdf.
2. U.S. Department of Transportation. (1990) Nationwide Personal Transportation Survey
3. Shoup, D. The University of California Transportation Center, Berkeley, Calif. (1997) "The High Cost of Free Parking." *Journal of Planning Education and Research,* Vol. 17, pp 3-20, UCTC No. 351. http://www.uctc.net/papers/351.pdf
4. U.S. Environmental Protection Agency. (January 2006) Parking Spaces / Community Places Finding the Balance through Smart Growth Solutions. EPA 231-K-06-001. http://www.epa.gov/smartgrowth/pdf/EPAParkingSpaces06.pdf
5. Shoup, D. 1999, abstracted from Journal) *Instead of Free Parking.* http://shoup.bol.ucla.edu/InsteadOfFreeParking.pdf
6. Transform. (2002) *Housing Shortage/ParkingSurplus.* http://www.transformca.org/files/reports/housing-shortage-parking-surplus.pdf
7. Durning, A. Sightline Institute. (August 2013) "Parking Karma." Sightline Daily: News & Views for a Sustainable Northwest. http://dailysightline.org/2013/08/28/parking-karma/
8. Litman, T. Victoria Transport Policy Institute. (August 2013) Transportation Cost and Benefit Analysis I: Parking Costs. http://www.vtpi.org
9. Shoup, D. 1999, abstracted from Journal) *Instead of Free Parking.* http://shoup.bol.ucla.edu/InsteadOfFreeParking.pdf
10. Wig, J. "The State of Parking in Downtown Raleigh." (June 2013) Raleigh Public Record. http://bit.ly/1oyfwhf
11. Shoup, D. The University of California Transportation Center, Berkeley, Calif. (1997) "The High Cost of Free Parking." Reprinted from *Journal of Planning Education and Research,* Vol. 17, pp. 3-20, UCTC No. 351. http://www.uctc.net/papers/351.pdf
12. Metropolitan Transportation Commission. (June 2012) *Parking Code Guidance: Case Studies and Model Provisions.* http://bit.ly/1kGsaLY
13. Municipal Research and Services Center. "Parking Demand and Pricing." Retrieved March 9, 2014: http://www.mrsc.org/about.aspx

# How To Get It Right

**Parking policies and programs can come in many shapes and sizes. Try the following:**

## Unbundled parking

When selling a townhouse, condo or other living unit, a developer can be given permission to rent or sell parking spaces separately. This arrangement often reduces the number of cars a homeowner chooses to own and store. For a parking deck, this can amount to more than $27,000 per space.[14]

## Parking in-lieu fees

Consider allowing developers to pay a fee in lieu of providing parking. For example, Palo Alto, Calif., allows developers to pay the city $17,848 for each parking space that's not provided. The city then uses the fee revenue to provide publicly owned parking spaces nearby.

## Shared parking

Public parking spaces can allow shared use among different private and/or public sites that have peak parking demands at different times. Shared public parking is more efficient than single-use private parking because fewer spaces are needed to meet the total peak parking demand in the vicinity. Large numbers of peak parking spaces are no longer needed for every site.

## Appropriate variances

A community should work with developers to encourage on-street parking in lieu of off-street parking. For example, parking variances can be granted in exchange for developer- or business-installed bicycle parking, which is a beneficial trade-off since 12 bicycles can fit into one vehicle parking space.

## Incentives to reduce demand

Policies should allow the developer to reduce the demand for parking rather than increase its supply. When good transit services are available, a program allowing employees to trade in their parking passes for cash is a means to reduce demand. Another tool is "location-efficient housing." Residents and employees in such areas tend to drive less, rely more on alternative forms of transportation and enjoy better transportation options than those who live or work in less accessible areas.[15] This can be calculated to reduce parking demand. Other practices to reduce demand for parking include using existing spaces more efficiently, targeting different types of users, sharing parking between uses with different peak demands, and shifting the cost of parking from the general public onto the users.[16]

## Public/private partnerships

Investments made jointly by the public and private sectors can be used to help pay for parking. These partnerships can reduce the public sector's direct debt burden while also providing needed infrastructure. ParkIndy, a for-profit corporation, manages parking in Indianapolis, saving the city $3 million per year and eliminating its financial risk. Indianapolis hopes to net around $600 million over the life of the contract.

## The ideal parking garage

Mixed-use garages that provide ground-level retail, then two or three stories of parking, and condos or apartments on the top floor, can provide an immediate supply, then permit reductions over time. As the need for parking declines some or many of the parking spaces can be converted into offices or living units.

## Reduced impact of surface parking lots

Reduce parking stalls to 8 feet wide for low-turnover spaces and dedicate a certain percentage to compact cars. With careful design it's possible to get in two rows of 90-degree parking plus service lanes within a 54-foot-wide parking area. Consider minimum landscaping requirements of 15 percent, a lot of tree canopy, rain gardens, bioswales, pavers or other pervious materials when practicable, and treat all water on site. Green space should be edges separating the lot from adjacent streets or landscaped sections that break up the lot.

## Better building design

To improve the streetscape consider dedicating the first floor of public parking structures to retail use. Developers can undertake infill projects without assembling large sites to accommodate on-site parking, and architects have greater freedom to design better buildings in a more pedestrian-friendly environment.

14. Litman, T. Victoria Transport Policy Institute. (August 2013) *Transportation Cost and Benefit Analysis II – Parking Costs.* http://www.vtpi.org/tca/tca0504.pdf
15. Litman, T. Victoria Transport Policy Institute. (Updated December 2010) TDM Encyclopedia-Location Efficient Development and Mortgages: Taking Advantage of Consumer and Transportation Benefits at Accessible Locations. http://www.vtpi.org/tdm/tdm22.htm
16. Chicago Metropolitan Agency for Planning. (April 2012) Parking Strategies to Support Livable Communities. http://1.usa.gov/1i9o4XY
17. McCahill, C., Garrick, N. (February 2013) "Cars and Robust Cities are Fundamentally Incompatible." *The Atlantic, CITYLAB.* http://www.citylab.com/commute/2013/02/cars-and-robust-cities-are-fundamentally-incompatible/4651/

# Success Stories

### Oakland, California: Fruitvale Transit Village

A large mixed-use mixed-income development grew out of community resistance to the Bay Area Rapid Transit system's plan to build a parking garage between the Fruitvale BART station and the Latino neighborhood's commercial center.

The local Unity Council worried the structure would hasten the decline of the already distressed neighborhood. BART withdrew the plan and agreed to work with the neighborhood on an alternative, so the parking garage was built nearby on Union Pacific Railroad property. The Fruitvale Transit Village now links the neighborhood and BART station with a pedestrian corridor and plazas lined with shops, offices, apartments and community services. The village includes a clinic, child development center, senior center and library, all within walking distance.

### Calgary, Alberta, Canada: Downtown

The city of Calgary has determined that 24 parking spaces per 100 jobs is the right ratio.

Calgary charges market prices for its downtown parking spots, which range from a pricey $700 to $900 per month. Rates are adjusted each year to assure balanced supply and use. This pricing practice has helped fuel a resurgence of more compact living, growing the economy in and around the downtown and resulting in miles of new trails, world class pedestrian and bicycle bridges, and rebuilt transit platforms that move trains more efficiently.

### A Tale of Three Cities: Less is More

Since 1980, Berkeley, Calif., as well as the Massachusetts town of Arlington and city of Cambridge, began limiting their surface parking spaces. Research shows that the number of people and jobs has climbed, as have incomes. Less parking has enabled the urban fabric to stitch back together with more room for shops, restaurants, jobs and other things that make cities great. The extra parking isn't needed since people are driving less, living close to the urban core where nearly 30 percent walk or bike to work.[17]

## WHY IT MATTERS

### BIG MONEY FOR FREE PARKING

**$105 billion to $310 billion***
**NASA budget: $18.56 billion**
**National defense budget: $705.6 billion**
**Federal education spending: $65.5 billion**

### PARKING IS WORTH *MORE THAN CARS*

**Estimated annual average value of parking for one vehicle: $12,000**

**Average depreciated construction value of roads, per vehicle: $6,542**

**Approximate average value of one U.S. vehicle: $5,507**

* The indirect costs to Americans based on assumptions about the number of parking spots nationwide and those spots' building and operating costs in 2011 dollars. Those figures equaled to 1.2 to 3.7 percent of total U.S.. economic output. Source: myparkingsign.com/blog/free-parking, citing "Changing the Future" by Donald Shoup , The High Cost of Free Parking (2nd Ed) pp. 589-605, American Planning Association.

## RESOURCES


1. **Instead of Free Parking.** Donald Shoup. UCLA. http://shoup.bol.ucla.edu/InsteadOfFreeParking.pdf
2. **Parking Best Practices and Strategies for Supporting Transit Oriented Development in the San Francisco Bay Area.** MTC. (June 2007) http://www.mtc.ca.gov/planning/smart_growth/parking/parking_seminar/Toolbox-Handbook.pdf
3. **Parking Code Guidance: Case Studies and Model Provisions.** MTC. (June 2012) http://bit.ly/1kGsaLY
4. **Parking Spaces/Community Places Finding the Balance through Smart Growth Solutions.** EPA. (January 2006) http://www.epa.gov/smartgrowth/pdf/EPAParkingSpaces06.pdf
5. **Walkable 101: Head-Out Angled Parking.** WALC Institute. Video. http://www.walklive.org/project/videos/
6. **Housing Shortage, Parking Surplus.** Report. (July 2002) Transform.
7. **Principles of Urban Retail Planning and Development,** Chapter 8: Parking. (2012) Congress for New Urbanism. http://bit.ly/1mYPpPp
8. **Cruising for Parking.** Transport Policy, Vol. 13, No. 3, 2006. Donald Shoup. http://shoup.bol.ucla.edu/Cruising.pdf



**AARP LIVABLE COMMUNITIES**

Mail: 601 E Street NW, Washington, DC 20049
Email: livable@aarp.org
Online: aarp.org/livable

**WALKABLE AND LIVABLE COMMUNITIES INSTITUTE**

Mail: 2023 E. Sims Way #121, Port Townsend, WA 98368
Email: community@walklive.org
Online: walklive.org