Parking

INTRODUCTION

Parking is an often overlooked factor of the urban design equation. In the typical American downtown, between 30 and 40 percent of land is consumed by parking spaces.[1]   According to the 1990 Personal Transportation Survey, parking is free for 99 percent of all automobile trips.[2] As a result, individuals have an incentive to make single occupancy trips at any time of the day. These decisions have enormous social and environmental costs that are often ignored. While each individual may be acting rationally, the collective outcome is most decidedly irrational; this is evidenced in the increased traffic congestion and all its attendant costs, sprawling urban environments, increased vehicle miles traveled, and clogged streets due to cruising for parking. In addition, though drivers perceive parking to be "free," parking is actually enormously expensive. Parking expert Donald Shoup has noted that, "[We] don't pay for parking in our role as motorists, but in all our other roles – consumers, investors, workers, residents, and taxpayers – we pay a high price. Even people who do not own a car have to pay for 'free parking.'"[3]

The costs of parking are tremendous and go largely unnoticed. Newer, multi-level parking structures can cost in excess of $30,000 per space. While open parking lots are relatively inexpensive, there is an obvious land-use cost involved as the land could be put to more valuable use. Since there are many more parking spaces than there are cars, conservative estimates tell us that the parking supply is worth at least twice as must as the total value of the nation's vehicle stock.[4] In addition, the average price of a multi-level or underground structure exceeds the average price of a new car. When maintenance and construction are added together, each structure parking spaces costs at least $125.00 a month.[5] Additionally, it is estimated that the average structure parking space has an external cost of $117.00, which comprises negative externalities like emissions and congestion.[6]

The challenges presented are often the result of municipal zoning codes that require developers to provide minimum parking. Minimum requirements in turn are due to demand assumptions which often fail to account for alternative means of transportation. Failure to implement alternatives results in the aggregate financial, social and environmental costs.

Communities are now addressing these costs through model codes designed to limit car use and parking demand. While some communities are new to model code adoption, communities from California to Germany are actively reducing car use and parking demand by refocusing development on model parking codes.[7] As a result, developers are building more sustainable urban environments where hidden parking costs are diffused and eliminated.

IMPLICATIONS OF NOT ADDRESSING THE ISSUE

- Inconsistency between the market value of on-street parking versus off-street parking, leading to:
  - Financial loss to municipalities for failure to charge market value for on-street parking, where market value is set by off-street parking
  - Increased traffic congestion and gasoline use due to cars cruising for free or cheaper on-street parking
- Duplicative resources spent to provide minimum parking for each business in the zoned area, where several of the businesses do not have the actual parking demand assumed by the minimum parking standards, leading to:
  - Financial loss for developers and businesses in creating and providing parking where the actual demand does not meet the perceived demand
  - Financial losses are then passed on to consumers
  - Urban sprawl due to increased amounts of land dedicated to meet the perceived demand
- Urban sprawl where destinations and developments are separated by increasing amounts of land dedicated to surface parking, leading to:
  - Reinforced behavior that multiple trips will be needed to reach each destination
  - Inefficiencies in travel between destinations
  - Environmental loss due to meeting perceived demands for surface parking created by increased urban sprawl
  - Environmental health concerns due to watershed issues where surface parking replaces natural drainage and runoff systems

GOALS FOR PARKING

- Identify the barriers developers and municipalities face when setting and enforcing parking standards
- Identify alternative parking standards based on model practices
- Create model codes that eliminate minimum parking standards; encourage alternative means of transportation; and reduced need for single occupancy trips
- Create incentives for developers to adopt model parking practices in order to build sustainable urban environments

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[1] Gibbons, John. *NonPoint Education for Municipal Officials, Vol. 5*.
[2] The 1990 Nationwide Personal Transportation Survey.
[3] Shoup, Donald. *The High Cost of Free Parking*. Chicago, IL: APA Planners Press, 2005. p. 2
[4] Ibid., 209
[5] Ibid., 210
[6] Ibid., 191
[7] Housing plus Mobility - Wohnen plus Mobilität.

PARKING

KEY STATISTICS:

- Thirty to forty percent of urban land is consumed by parking spaces[8]
- Parking is free for ninety-nine percent of all automobile trips[9]
- Parking charges are the key to short and long term reduction in automobile traffic congestion[10]
- Parking structure spaces average $125.00 per month when accounting for construction and maintenance expenses[11]
- Case Study: SAFECO: Providing alternative commute and parking options for employees resulted in a company saving of $230,000 per year after the cost of alternative incentives versus cost of building additional parking[12]

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		ACHIEVEMENT LEVELS (note: higher levels generally incorporate actions of lower levels)				
		Bronze (Good)	**Silver (Better)**	**Gold (Best)**	**References/Commentary**	**Code Examples/Citations**
Figure 1: *The 2,000-home Quartier Vauban development outside Freiburg, Germany, promotes a car-free lifestyle. Caption:ABCNews.com.* **Figure 2***: SFpark pilot projects enable the city of San Francisco to better manage and identify actual parking and transit needs which include demand-responsive pricing.*	**Remove Obstacles**	▪ Establish parking requirements based on local surveys of average occupancy rather than peak demand ▪ Unbundle parking requirements from individual residential units ▪ Require new or significant redevelopments to examine the feasibility of shared parking plans	▪ Establish parking reduction standards to baseline trip and parking generation ▪ Allow for purchase of parking credits for existing or proposed parking spots instead of building required parking	▪ Eliminate minimum off street parking standards ▪ Allow for car-free developments in commercial, residential and mixed use districts	▪ Local surveys will reflect the actual parking demand, preventing excessive supply ▪ Unbundling parking allows for optional contract by need ▪ Shared parking recognizes principle of captive market, to collectively provide for actual demand ▪ San Francisco, CA, Ordinance 129-06 (Liveable City Downtown Reform, amended city planning code to eliminate minimum off street parking) Available online. Retrieved January 11, 2011.	**Bronze** ▪ City and County of San Francisco, CA, Unbundled Parking, *City and County of San Francisco Municipal Code Planning Code* (Art. 1.5 Sec. 167). Available online. Retrieved January 11, 2011. ▪ South Carolina Department of Health and Environmental Control, *Shared Parking Model Ordinance*. Available online. Retrieved January 11, 2011. **Silver** ▪ City of Chattanooga, TN, Reduction Standard, *Chattanooga Zoning Regulations* (Art.V. 1705). Available online. Retrieved January 11, 2011. **Gold** ▪ London, UK, Car-Free Contract and ordinance language, Available online. Retrieved January 11, 2011. ▪ City of San Francisco, CA, Elimination of minimum parking requirements: San Francisco Planning Code. Available Online. Retrieved January 11, 2011.

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[8] Gibbons, John. *NonPoint Education for Municipal Officials, Vol. 5*.

[9] The 1990 Nationwide Personal Transportation Survey.

[10] Derry, Clark Williams. (2008). *Fighting Congestion, RAND-style*, from Gristmill, December 19, 2008..Web site: http://gristmill.grist.org/story/2008/12/18/162810/49?source=weekly. Retrieved 1-5-09.

[11] Shoup, Donald. *The High Cost of Free Parking*. Chicago, IL: APA Planners Press, 2005. P 10.

[12] Environmental Protection Agency. *Parking Spaces, Community Places: Finding a Balance through Smart Growth Solutions. Retrieved November 7, 2008*.

	Create Incentives					
 Figure 3: *Illustration of Santa Monica Shared Parking.* Citation online.		- Create parking benefit districts - Promote feasibility of shared parking plans through "captive market" parking requirements to eliminate duplicative parking requirements for business ancillary to a main or adjacent building - Offer density bonuses for transportation demand management programs that include transit passes, car/bike sharing, van pools, work-at-home, and other options - Implement parking cash out programs[13]	- Encourage and recognize car sharing programs, transit passes and other employee incentives to reduce automobile use - Reduced parking requirements for proximity to transit, bicycle facilities, pedestrian facilities - Reduce parking requirements for mixed use and transit-oriented developments - Grant credit for on-street parking adjacent to development. - Create incentives for structured parking (e.g., do not count structured parking against FAR or height limits)	- Reduce development review time and processing costs, create tax incentives, and design assistance for car-free developments - Reduce parking requirements and provide enhanced transit, bicycle facilities, and pedestrian facilities	**Bronze** - Parking benefit districts should be small enough to create the incentive to charge for curb parking, but large enough to efficiently spend revenue - Allow increased meter revenue to stay in the parking benefit district and go to City's general fund **Silver** - In lieu parking options, allow for alternative means of transportation in exchange for reduced employer-provided parking **Gold** - Local Government Commission, *Executive Summary to Smart Growth Zoning Guides: A Resource Guide,* Available online. Retrieved January 11, 2011.	**Bronze** - City of Austin,TX, *Parking Benefit District Pilot Program.* Available online. Retrieved January 11, 2011. - South Carolina Department of Health and Environmental Control, Captive Market Parking, *Shared Parking Model Ordinance,* Available online. Retrieved January 11, 2011. - South Carolina Department of Health and Environmental Control. *Shared Parking Model Ordinance.* Available online. Retrieved January 11, 2011. - Denver, CO, Density bonus for implementing a transportation demand management program **Silver** - County of San Bernardino, CA, Proximate Transit and Reduction, 2007 *Development Code* (83.11.050), Available online. Retrieved January 11, 2011. - Eugene, OR, In mixed use and TOD areas, city will reduce or eliminate on-site parking requirements - Austin, TX, Minimum off-street parking requirements can be reduced based on adjacent on-street parking, or on car-sharing programs or provision of shower and locker facilities - Laramie, WY, gives credit for on-street parking - Orange County (Orlando), FL, does not count structured parking towards allowed FAR or height

[13] *Parking Cash Out* means that commuters who are offered subsidized parking are also offered the cash equivalent if they use alternative travel modes—Shoup 2005

Figure 4: *City of Pleasanton's ride share program, pRide, offers city employees cash out options for using alternative means of transportation to commute to work.* Citation online.

Enact Standards					
▪ Set maximum parking requirements ▪ Permit shared parking ▪ Permit street parking on all streets except major inter-urban thoroughfares	▪ Municipal recognition of automobile sharing programs ▪ Set street parking fees to market value established for off street parking ▪ Unbundle parking from individual residential units in multi-family development to reduce housing costs	▪ Provide Employers with alternatives to mandatory parking requirements (e.g., transit passes, parking cash out) ▪ Calculate standards on the basis of all available parking within proximity	**Bronze** ▪ Maximum parking requirements prevent unnecessary parking development ▪ Shared parking reduces the total combined parking requirements when multiple forms of building use share one or more established parking spaces **Silver** ▪ Municipal recognition of automobile sharing programs reduces individual automobile use in exchange for parking provisions (participating individuals have incentive to couple trips into single trips and schedule use, thereby reducing unnecessary individual automobile travel)	**Bronze** ▪ Shared parking, see: Duany, Andres, Sandy Sorlien, and William Wright. *SmartCode V. 9 and Manual.* New Urban Publications, 2008. ▪ South Carolina Department of Health and Environmental Control, *Shared Parking Model Ordinance.* Available online Retrieved January 11, 2011. **Silver** ▪ City and County of San Francisco, CA, *City and County of San Francisco Municipal Code Planning Code* (Art. 1.5 Sec. 166). Available online. Retrieved January 11, 2011. **Gold** ▪ City of Pleasanton, CA, Ride Program, (Employer in-lieu options), Available online. Retrieved January 11, 2011.