

M E M O R A N D U M

To: Mike Nilsson
From: Bonnie Nelson and Phil Olmstead
Date: May 5, 2010
Subject: City of Glendale Parking Requirements – Peer Review

Overview

This memorandum provides a summary of the City of Glendale's parking requirements and a peer review of parking requirements in other cities. More specifically, the memorandum first presents a brief overview of minimum parking requirements, outlines their potential impacts and costs, and summarizes some alternatives to minimum parking requirements. Second, the memorandum summarizes Glendale's current minimum parking requirements. Third, the memorandum offers a review of parking requirements for peer cities. This peer review is organized into two primary sections:

- Geographic peers, which enables Glendale to compare itself against municipalities that operate within a similar regional transportation, development, and regulatory environment.
- "Best Practice" Peers, which are provided to give Glendale an idea about how other cities are reassessing their role in parking management.

Finally, the memo gives some initial recommendations for how the City of Glendale might revise its parking requirements and what potential new frameworks the City might explore in regards to managing its parking supply.

Background

Origin of Minimum Parking Requirements

Between the 1940s and 1970s, many cities adopted minimum off-street parking requirements with the intent of preventing the parking demand generated by one land use or property from congesting on-street parking and/or reducing accessibility to adjacent properties and land uses.

Most parking minimum requirements have been derived from trip generation and parking manuals, such as the Institute of Transportation Engineer's *Parking Generation*, which summarizes observations of parking demand data. In many cities, the ITE parking demand numbers provide a "floor" for parking requirements. Residents and merchants in many cities demand that policy makers extract ever increasing parking supply to meet a seemingly limitless demand, as "plenty of free parking" came to be identified with the health of a business district.

Over the years, however, it has been shown that high minimum off-street parking requirements can be an expensive and inefficient way to manage on and off-street parking demand. More importantly, high minimum parking requirements can produce unwanted side effects that are in direct conflict with many cities' goals for an active, pedestrian-oriented, and transit-friendly downtown.

Potential Effects of High Minimum Parking Requirements

Research over the past decades has shown that while high minimum parking standards can provide adequate parking supply in cities, it has also had a number of unintended consequences on not only travel behavior, but also the urban form, character, and transportation efficiency of cities. Some of these documented effects include:

- **Reduced streetscape quality:** A great street is often defined by pedestrian activity, street-facing windows, and interesting facades. Excessive off-street parking located between buildings or at ground level can disrupt the quality of such streetscapes. Driveway cuts can interrupt pedestrian flow on the sidewalks and can create dangerous pedestrian conditions. Finally, and perhaps most importantly, by attempting to provide parking at each site a person visits, pedestrian activity is decreased, and business activity is decreased by avoiding the "casual" visitor seeing something on their path that inspires future visits.
- **Promotion of auto traffic:** Minimum parking requirements are generally set at a level that assumes most people travel by automobile. This effectively creates unlimited supply which leads to a self-fulfilling prophecy where everyone will drive. In Glendale, it also results in substantial unfilled parking spaces, without reducing the overall perception that more parking is needed.
- **Reduced development feasibility:** For small infill projects and historic building retrofits, parking requirements are often so high as to make these projects unattractive or

financially infeasible. Figure 1 below provides typical parking costs depending on type of facility (does not include other indirect or environmental costs, and land costs can vary dramatically by location).

Figure 1. Parking Facility Financial Costs (2007 Dollars)¹

Type of Facility	Land Cost/acre	Annualized Land Cost/space	Annualized Construction Costs	Annual O/M Costs	Total Annual Cost/space	Total Monthly Cost/space
Urban, On-Street	\$1,200,000	\$453	\$543	\$345	\$1,341	\$112
Urban, Surface	\$1,200,000	\$944	\$543	\$575	\$2,062	\$172
Urban, 3-Level Structure	\$1,200,000	\$315	\$1,954	\$575	\$2,844	\$237
Urban, Underground	\$1,200,000	\$0	\$2,714	\$575	\$3,289	\$274
CBD, On-Street	\$6,000,000	\$2,265	\$543	\$460	\$3,268	\$272
CBD, Surface	\$6,000,000	\$4,357	\$543	\$460	\$5,359	\$447
CBD, 4-Level Structure	\$6,000,000	\$1,089	\$2,171	\$575	\$3,835	\$320
CBD, Underground	\$6,000,000	\$0	\$3,776	\$575	\$4,007	\$334

- **Discouraged innovation.** Car-sharing, cash incentives, subsidized transit passes, secure

bike parking, and carpool/vanpool matching services are proven to reduce drive alone trips. If the same amount of parking is still required, however, there is limited incentive to use these programs. The best and most effective demand management programs include both incentives to use alternatives and disincentives to drive. Plentiful free parking is a very strong incentive to continue driving, particularly when use of other modes requires money out of pocket, and the cost of driving is “hidden”.

- **Reduced density.** Even well-designed structured parking takes up physical space that is not available for other uses. Minimum parking requirements can reduce the number of units or floor area by 20 percent or more, thereby preventing a downtown from achieving the density needed for economic health. In Glendale, with larger structures building below ground level parking, each new level of parking comes at an ever higher cost.
- **Diminished economic vitality.** Downtowns depend on pedestrians and a “park once”

system where people park once and walk to various stores for impulse buys. With on-site

parking people drive, park, visit their destination, and go home – eliminating street activity and potential customers.

- **Discouraged mixed use development.** With mixed uses, peak parking times often do not coincide. Minimum parking requirements assume that each use has its own supply of

parking, which does not allow mixed-use projects to share parking in order to offset higher

development costs.

¹ VTPI (2010), *Transportation Cost and Benefit Analysis II – Parking Costs*. (<http://www.vtpi.org/tca/tca0504.pdf>)

In December 2008, before the start of the current recession, Target Corporation did a parking study of 200 stores in a variety of urban and suburban settings and with a wide range of gross receipts to determine their actual parking requirements on the busiest shopping day of the year. The results of that study showed that universally, in virtually every setting, cities were requiring that Target provide 30 percent more parking than they actually needed. This is an example of the worst kind of planning – because Target tends to own the real estate it builds on, requiring Target to provide 30 percent more parking than needed results directly in reduced investment in the store appearance, in other infrastructure or in improvements that could be shared by residents and visitors. Cities often believe they need to maintain high parking requirements to attract retail development, when in fact the opposite may be true.

Alternatives to High Minimum Parking Requirements

Many cities have begun to rethink how they manage their parking supply, especially in their downtown cores. These cities have demonstrated a variety of effective methods for managing on

and off-street parking demand, such as:

- **Parking reduction allowances.** Given the high costs of providing parking, and the wish to reduce parking demand and incentivize certain types of development, many cities have begun to allow for reductions in parking from the established minimums based on certain criteria. For example, numerous cities allow for parking reductions if projects are within a certain distance to transit (usually a ¼ of a mile), provide a level of housing affordability, or are “mixed use.”

- **On-street time limits and demand-responsive pricing.** On-street time limits or parking

meters (with revenue devoted to downtown improvements) are effective tools to prioritize the most attractive curb spaces for customers, and ensure that these are not occupied by

all-day employee parking. Prices that fluctuate based on demand have also proven to be

effective at ensuring at least one open space per block, thereby reducing the need for cruising. The recent implementation of parking stations on North Brand Boulevard have proven to manage demand in that area quite effectively while also increasing revenue.

- **Residential permit parking zones.** Residential permit parking controls prioritize curb spaces for residents in neighborhoods. This avoids concerns about parking spillover that often results in residents requesting that parking in new developments remain unrealistically high.
- **In lieu parking fees.** An in-lieu parking fee gives developers the option to pay a fee *in lieu* of providing some portion of the number of parking spaces ordinarily required by the city’s standards. The fees collected can then be used to build public parking spaces, purchase private spaces for public use, or to support transportation demand management strategies and/or improve overall mobility. Paying the in lieu fee is one way of meeting a minimum parking requirement without actually providing the parking spaces required.
- **Shared Parking:** Shared parking is a crucial tool that can be used to meet a city’s minimum parking requirements. Rather than each separate use on a particular parcel of

land building its own required parking, shared parking arrangements enable different uses to pool their parking resources and reduce the need for off-street spaces. Shared parking is particularly effective for uses that have different peak parking demands, such as a movie theater and general office uses.

- **Parking Maximums:** Parking maximums limit parking supply at the site level or across an area. Limits imposed by a district or neighborhood are *parking caps*. Either type of maximum can be imposed in addition to or instead of parking minimums. Establishing a maximum allowable amount of parking can prevent excessively large lots, or limit supply based on road capacity or community priorities.

Summary of Glendale Parking Requirements

Figure 2 below shows a summary of the City of Glendale’s minimum parking requirements for selected land use categories. For example, the City of Glendale requires a minimum of 10 parking spaces per 1,000 square feet of floor area for Gyms/Health Clubs, while fast food restaurants require 12.5 spaces per 1,000 square feet of floor area. This list only includes more common commercial land use categories and focuses only on medium to high density residential housing. The full list of Glendale’s parking requirements is available in Appendix A.

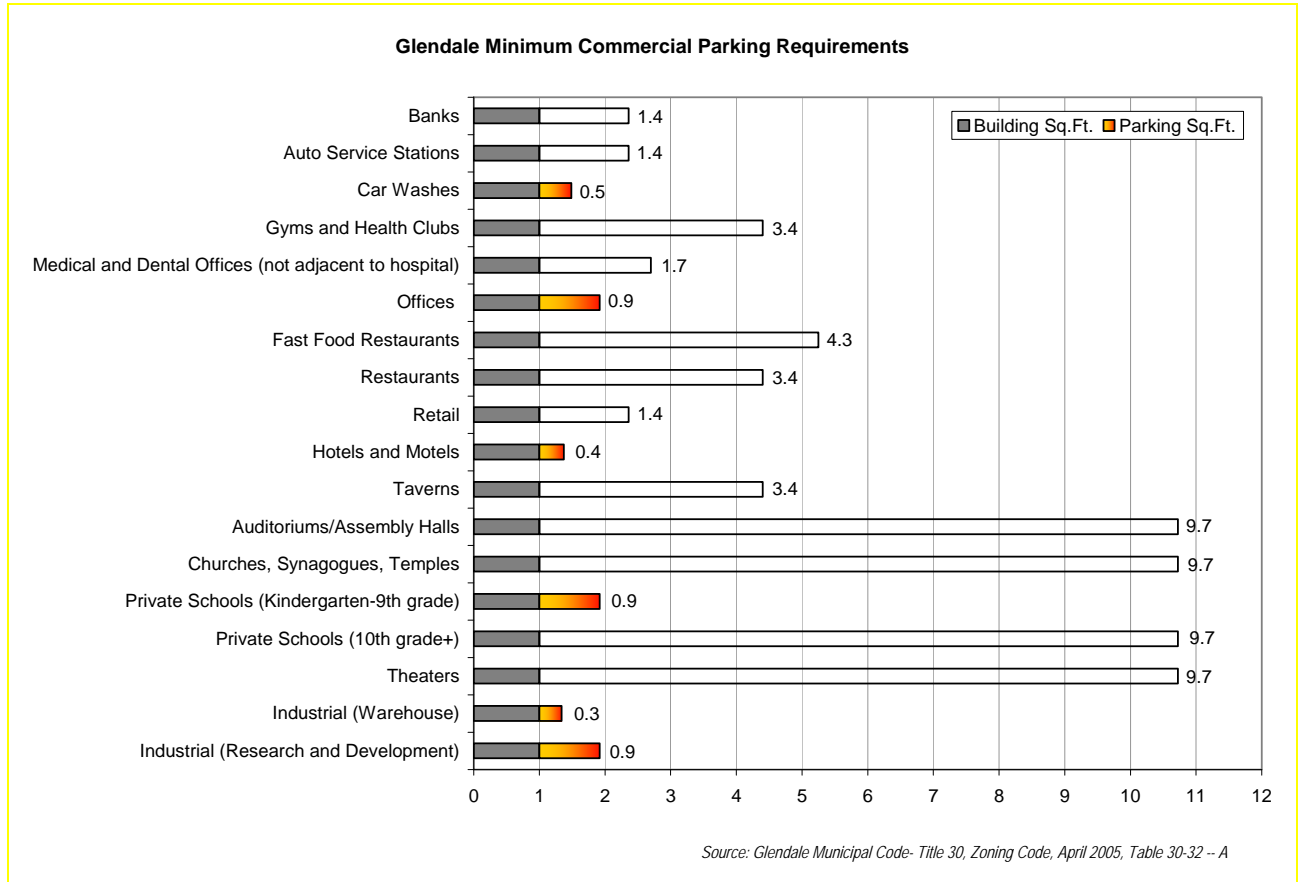
Figure 2. Glendale Minimum Parking Requirements by Land Use²

Land Use Category	Spaces per 1,000 sq. ft.	Additional Description
Moderate to High Density Residential		DSP zone: 1 bedroom – 1.25 spaces, 2 bedrooms + – 2 spaces; Other med/high zones: Gross floor area of dwelling unit: 0 – 3,499 sq. ft.: 2 spaces; 3,500 – 5,999 sq. ft.: 3 spaces; 6,000 – 7,999 sq. ft.: 4 spaces; 8,000 + sq. ft.: 5 spaces
Senior housing		1 space per unit in projects with more than 1 dwelling unit
Live/work housing		3 spaces for first 2,000 sq. ft.; 3 spaces per 1,000 sq. ft. for addl. floor area.
Banks	4	4 per 1000 sq.ft. of customer service area, 2.7 per 1000 sq.ft. office floor area
Auto Service Stations	4	never less than 3 spaces
Car Washes	1.4	never less than 10 spaces
Gyms and Health Clubs	10	
Medical Offices (not near hospital)	5	
Offices	2.7	offices where primary use is treatment of no more than 2 clients at a time
Fast food restaurants	12.5	
Restaurants	10	
Retail	4	
Hotels and Motels	1.1	1 space per guest room
Taverns	10	
Auditoriums/Assembly Halls	28.6	or one space per five fixed seats
Churches, Synagogues, Temples	28.6	where no fixed seats
Private Schools (K-9)	2.7	
Private Schools (10+)	28.6	or one space per five fixed seats
Theaters	28.6	or one space per five fixed seats
Industrial - Warehouse	1	
Industrial - R&D	2.7	

² Glendale Municipal Code – Title 30, Chapter 30.32 – Parking and Loading (http://www.ci.glendale.ca.us/gmc/Zoning_Code/Chapter30-32.pdf)

Figure 3 below offers a slightly different view of Glendale’s parking standards. It shows that the amount of parking required can actually take up more square footage than the use itself. For example, if there is a 1,000 square foot medical office in Glendale, the parking code requires that the medical office is required to build the equivalent of 1,700 square feet of parking, more than one and a half times the square footage of the medical facility.

Figure 3. Comparison of Building Sq. Ft. to Parking Sq. Ft. Required



Peer Review of Parking Requirements

The City of Glendale is not atypical in its minimum parking standards. A survey of its geographic peers reveals that Glendale’s minimum parking requirements are quite similar to its neighboring municipalities. However, other cities have sought to become more “innovative” in their parking management by either significantly reducing minimum requirements, linking parking reductions to incentives, or by eliminating parking minimums altogether. All of these case studies are discussed below.

Geographic Peers

For this analysis minimum parking standards for five geographic peer cities were examined. This analysis does not include all of the land uses listed in the municipal codes for each respective city, but rather it presents a selected sample of residential, commercial, and industrial land uses³ which are common to most cities. Geographic peers include: Burbank, Culver City, Pasadena, Long Beach, and West Hollywood.

³ See Appendix C for a list of cities and links to full parking codes.

Figure 4 provides a summary of parking requirements for these geographic peers⁴. There is some variability between municipal codes in relation to parking requirements by land use. For example, some cities have an expansive and detailed list of land use categories, while others categorize land uses more succinctly. As a result, there was not a perfect correlation across land uses in this peer study. In the cities of Burbank and Long Beach, for example, parking minimums for “live/work” housing are not listed. Furthermore, the metric by which parking minimums are listed also varies. While spaces per square foot of land use is certainly the most common, other standards are based on the number of service bays, guest rooms, seats, employees, classrooms, students, etc. Once again, these standards vary by city.

There is not a dramatic disparity in the parking regulatory framework between Glendale and its geographic peers, but some similarities and differences do emerge, including:

- Glendale is on the **high end of the parking minimums** for selected land uses.
 - Gyms/Health Clubs: Glendale requires 10 spaces per 1,000 square feet, while Burbank (6 spaces), Culver City (5 spaces), and Pasadena (5 spaces) all require less.
 - Retail: Glendale requires 4 spaces per 1,000 square feet, while all of its geographic peers require less.
- Conversely, Glendale’s **office use requirements are equal to or less** than many of the geographic peers. It should be noted that there is a clear over supply of parking in Glendale’s office uses, as evidenced by the number of private facilities with roof deck parking and absolutely no cars parked on the roof.
- Glendale’s **requirements are comparable for many of the other land uses, notably residential uses**. In Glendale, the medium to high density residential zones, the parking code is as follows:
 - Downtown Specific Plan (DSP) zone: 1 bedroom units – 1.25 spaces, Units of 2 bedrooms or more – 2 spaces, except that only 1 parking space is required for each senior residential unit.
 - Guest parking – ¼ space per unit space for projects of 4 or more units and residential use is more than 80 percent of the entire floor area.
 - ROS, R1R, R1, R-3050, R-2250, R-1650 and R-1250 zones: Gross floor area of dwelling unit: 0 – 3,499 sq. ft.: 2 spaces; 3,500 – 5,999 sq. ft.: 3 spaces; 6,000 – 7,999 sq. ft.: 4 spaces; 8,000 + sq. ft.: 5 spaces.
 - Guest parking: In the PRD zone, 1 uncovered guest space per dwelling unit in addition to enclosed parking spaces.
 - The geographic peer cities have **similar standards for their medium to high density residential zones**, with no city requiring less than 1 space per unit regardless of the size of the unit. Culver City, for example, requires 1 space for its smallest units – studios and 1-bedrooms smaller than 900 square feet.
 - In regards to **guest parking** in higher residential density zones, Glendale is comparable to Burbank, Culver City, and West Hollywood which also require, for

⁴ See Appendix B for a larger view.

developments of a minimum size, 1 space of guest parking for every four units. The City of Pasadena requires 1 guest space for every 10 units for projects with more than 10 units.

- The City of Glendale's geographic peers have **comparable regulations regarding change in use and adaptive reuse**. A common challenge to cities and developers centers around reuses, especially reuses of older buildings which were typically built to lower parking standards. This is a common issue when uses change in intensity or when the use is changed altogether. This specific aspect of parking regulations is important because the amount of parking required can ultimately determine the feasibility of a new project. In the City of Glendale, the parking code requires that with a change or enlargement of an existing building or use "...additional parking and loading spaces shall be provided without diminishing the existing parking provided for the existing use, buildings and/or structures."

In regards to a change in use, the City of Glendale requires that if a building changes to a use that is required to have the same number of parking spaces as the immediately previous use, "...no additional parking spaces shall be required." When a change in use requires more off-street parking, additional parking spaces shall be provided "equal in number to the difference between the total number of spaces required by the new use and the number of spaces required for the immediately previous use." When a change in use requires less off-street parking than the previous use, no additional parking spaces are required.

Like many of its geographic peers, Glendale allows for an exception to their parking requirement rule for very small reuses. Larger reuses, particularly in historic buildings often require an exception to be granted by Council. This is not uncommon among the geographic peers, but a few cities have implemented other policies including:

- In Culver City, additions to single-family homes, duplexes or triplexes that result in no more than four bedrooms per unit are not required to provide additional parking.
- West Hollywood does not require an addition to a structure solely to improve access for disabled persons, or for 1-2 unit buildings. Furthermore, the City does not require additional parking for additions or increases in the floor area within a structure that was built before November 29, 1984, that are 10 percent or less of the existing gross floor area or 250 square feet, whichever is less (not including a bar, nightclub, or outdoor dining area). Finally, West Hollywood allows for a 50 percent reduction in parking for use intensifications that are located close to existing public parking facilities, subject to a number of conditions.
- The City of Denver does not require additional parking for a change in use provided that the new use's parking requirement does not exceed the previous use's parking requirement by more than 25 percent. Furthermore, the City does not have a parking requirement for historic reuses.
- Phoenix allows for parking reductions with adaptive reuse. Specifically, a reduction of up to 50 percent is permitted if the project site is within ¼ mile of an existing public parking facility, a light rail station, or park and ride facility.

It should be noted that other policies such as in lieu fees or parking reduction overlays can be used in conjunction with reuse policies to reduce the need for a new use to physically provide additional parking on site, something which is often impossible.

- Glendale **allows for some basic alternatives to parking minimums**, but the Glendale parking code is less developed in regards to these measures than many of its geographic peers.
 - **In-lieu fees:** Unlike Glendale, several geographic peers, such as Culver City, Pasadena, West Hollywood, and Long Beach, have instituted in-lieu parking fees. The fees are often “politically” rather than “technically” set, and may or may not have provisions for regular updating.
 - **Mixed uses and proximity to transit:** Of Glendale’s geographic peers, Pasadena and West Hollywood are perhaps the most “progressive” in that they allow for parking reductions based on proximity to transit and also allow reductions based on a mix of land uses. For example, the City of Pasadena has established several TOD zones in which parking reductions of 10-25 percent for non-residential uses and lower spaces per unit for residential uses are permitted. In addition, the City of Long Beach allows for parking reductions for senior projects if it is “well-served by public transportation.” As discussed below, Denver, Phoenix, and San Diego have instituted similar regulations.
 - **Affordability:** Reductions for affordability were not found among Glendale’s geographic peers, but Denver and San Diego, as discussed below, allow for parking reductions of 15-20 percent for affordable housing projects.
 - **Tandem Parking:** Another notable difference between Glendale and its peers is in relation to regulations on stacked and tandem parking. Glendale parking code requires independently accessible spaces and only allows tandem parking for parking spaces in excess of minimum requirements. Glendale’s code is silent on stacked parking. By contrast, tandem parking is often allowed for multi-family residential uses and some non-residential uses in all of the peer cities. In Pasadena, for example, multi-family and mixed use projects can have up to 30 percent of parking as tandem spaces. These spaces must be assigned to same unit and have a combined minimum dimension of 9’ x 34’. For non-residential uses in Pasadena up to 75 percent of the total off-street parking spaces provided may incorporate tandem parking and up to 50 percent of the total off-street parking spaces provided may incorporate “triple stack” parking.
 - **Shared Parking:** According to Chapter 30.32.080 of its parking code, the City of Glendale currently allows for shared parking in commercial, mixed use, and industrial zoning districts. The establishment of shared parking between differing uses is subject to a permit process and a number of conditions must be met, including: 1) the distance from the parking site to the applicant's site shall not exceed 1000 feet. However, distances greater than 1,000 feet may be considered if “the primary entrance to the site where the separation remains reasonable for walking or pedestrian-oriented features of the intervening distance make walking between the two sites reasonable.”⁵; and 2) the applicant shall provide evidence of a valid lease or covenant for the off-site parking. In addition, when granting a shared parking permit the City may also impose a number of conditions, including: 1) Design standards, including sound attenuation, security lighting, landscaping, signs relating the parking site to the business; 2) Disabled access from the off-site parking to the subject business; 3) Hours of use; and 4) Use of valet service.

⁵ City of Glendale Municipal Code, Chapter 30.51.040.

All of Glendale's geographic peers allow for shared parking and the regulatory framework for such shared parking arrangements are similar to that of Glendale's. For example, shared parking arrangements are often subject to a permit and common restrictions include separate operating hours and a maximum walking distance between the use and shared parking facility. For example, Culver City requires that shared spaces be within 750 feet, while West Hollywood has a 400 foot maximum between the use and its shared parking facility. The discussion of "best practice" case studies offers further examples of shared parking regulations.

Figure 4. Parking Requirements by Selected Land Use (Geographic Peers)

Land Use Category	Glendale		Burbank		Culver City		Pasadena		Long Beach		West Hollywood	
	Spaces per 1,000 sq. ft.	Additional Description	Spaces per 1,000 sq. ft.	Additional Description	Spaces per 1,000 sq. ft.	Additional Description	Spaces per 1,000 sq. ft.	Additional Description	Spaces per 1,000 sq. ft.	Additional Description	Spaces per 1,000 sq. ft.	Additional Description
Moderate to High Density Residential		DSP zone: 1 bedroom – 1.25 spaces, 2 bedrooms + – 2 spaces, Guest: ¼ space per unit space for projects of 4 or more units; Other med/high zones: Gross floor area of dwelling unit: 0 – 3,499 sq. ft.: 2 spaces; 3,500 – 5,999 sq. ft.: 3 spaces; 6,000 – 7,999 sq. ft.: 4 spaces; 8,000 + sq. ft.: 5 spaces; Guest: 1 uncovered guest space per dwelling unit.		1.25 spaces per efficiency unit (studio unit that is 500 sq. ft. or less); 1.75 spaces per 1-bedroom unit or studio unit greater than 500 sq. ft.; 2 spaces per unit with 2 or more bedrooms; 2 for condominiums; Guest parking: 1 guest space per 4 units (minimum 2 guest spaces required)		Studio and 1 bedroom (< 900 sq. ft.): 1 space; Studio and 1 bedroom, (> 900 sq. ft.): 2 spaces; 2-3 bedroom units: 2 spaces; 4 bedroom units: 3 spaces; 1 space for every additional bedroom greater than 4; Guest parking: 1 space for every 4 residential units.		Multi-family: 2 covered spaces per unit 650 sq. ft. or larger; 1 covered space per unit less than 650 sq. ft. of net floor area. Developments with 10 units or more shall also provide 1 guest parking space for each 10 units.		0 bedrooms (< 450 sq. ft.): 1 per unit; 1 or more bedrooms (or zero bedrooms, > 451 sq. ft.): 1.5 per unit; 2 bedrooms or more: 2 per unit; Guest parking: 1 space per 4 units		Duplex/Multi-family/Condos: Studio units up to 500 sq. ft.: 1 space; 1 bedroom units and studios larger than 500 sq. ft.: 1.5 spaces for each unit; 2 to 3 bedrooms: 2 spaces; 4 or more bedrooms: 3 spaces; Guest parking: 1 covered space for each 4 units for residential projects of 5 or more units.
Senior housing		1 space per unit in projects with more than 1 dwelling unit	n/a			1 space per unit, plus 1 guest parking space for each 10 units.		Subject to CUP, no less than .50 spaces per unit.		Low rent: 1 space per 2 bedrooms; Market rent: 1 space per 1 bedroom		0.5 space for each unit, plus 1 guest parking space for each 10 units.
Live/work housing		3 spaces for the first 2,000 sq. ft. 3 spaces per 1,000 sq. ft. for any additional floor area.	n/a			Up to 900 sq. ft.: 2 spaces. Greater than 900 up to 1500 sq. ft.: 3 spaces. Greater than 1500 sq. ft.: 4 spaces.	3		n/a		3.5	
Banks	4	4 per 1000 sqft of customer service area, 2.7 per 1000 sqft office floor area	4		4		3		5			4 spaces for 1/2 machines plus 2 spaces for each additional machine over 2
Gyms and Health Clubs	10		6		5		5		4	5 spaces minimum	10	
Medical/Dental Offices (not adjacent to hospital)	5		5		2.86		4		5		3.5	
Offices	2.7	offices where primary use is treatment of no more than 2 clients at a time	3		2.86		3			4 per 1,000 sq. ft. up to 20,000 sq. ft. and 2 per 1,000 GFA for GFA more than 20,000 sq. ft.	3.5	For the first 25,000 sq. ft. plus 3 spaces for each additional 1,000 sq. ft.
Fast food restaurants	12.5		10		4 or 13.3	13.3 w/ tables, 4 w/o tables; never less than 3 spaces	4 or 10	< 1500 sq. ft.: 4 spaces; >2000 sq. ft.: 10 spaces; plus 3 spaces for each 100 sq. ft. of gross floor area in excess of 1,500 sq. ft.	4		n/a	
Restaurants	10		10		2.86 or 10	Less than 1500 sq. ft.: 2.86, with a minimum of 3 spaces. Greater than 1500 sq. ft.: 10 spaces.	10		10		3.5 or 9	1,200 sq. ft. or less, tenant space existing prior to May 2, 2001: 3 spaces; All others: 9 spaces
Retail	4		3.3		2.86		3		4		3.5	
Hotels and Motels	1.1	1 space per guest room		1 space per guest room		1 space per guest room		1 space per guest room		1 space per guest room, plus parking figured separately for other uses, plus 2 loading and unloading spaces.		1 space per guest room
Bars/Taverns	10		10		10		10		20		15	
Auditoriums/Assembly Halls	28.6	or one space per five fixed seats	28.6	where no fixed seats; or one space per five fixed seats	28.6	where no fixed seats; or one space per five fixed seats	10			1 per every 3.3 fixed seats	28	where no fixed seats; 1 space for each 2.5 fixed seats.
Churches, Synagogues, Temples	28.6	where no fixed seats	28.6	where no fixed seats; or 1 space per 5 fixed seats	28.6	where no fixed seats; or 1 space per 5 fixed seats	50	where no fixed seats; or 1 space per 4 fixed seats		1 per every 3.3 fixed seats	14	where no fixed seats; or 1 space per 5 fixed seats
Schools (K-9)	2.7		n/a		5	plus 1.5 spaces per classroom		1.5 spaces per classroom, plus 1 space for every 2 employees and members of the faculty.		2 per classroom, plus 2 loading spaces and auditorium or stadium calculated separately.		1 space per classroom; plus 14 spaces per 1,000 sq. ft. of auditorium assembly area.
Schools (10+)	28.6	or one space per five fixed seats	n/a		28.6			1 space for every 5 students; plus 1 space for every 2 employees and members of the faculty.		7 per classroom, plus auditorium or stadium calculated separately.		10 spaces per classroom; plus 14 spaces per 1,000 sq. ft. of auditorium assembly area.
Theaters	28.6	or one space per five fixed seats	28.6	or one space per five fixed seats	28.6	where no fixed seats; or one space per five fixed seats		1 space per 5 fixed seats (multi-screen); 1 space per 3 fixed seats (single screen)		1 per every 3.3 fixed seats, plus a passenger loading and unloading zone		1 space per 3 seats, plus 6 additional spaces (single screen); 1 space per 5 seats, plus 10 additional spaces (multi-screen)
Industrial - Warehouse	1		1		1	2.86 spaces for additional office space area.	2		2		2	
Industrial - R&D	2.7		2		2.86		2		3		3.5	
Alternatives to Parking Minimus		Glendale		Burbank		Culver City		Pasadena		Long Beach		West Hollywood
In-lieu fees		n/a		n/a		The number of parking spaces may be reduced if the Council authorizes the use of an in-lieu fee to be paid by the applicant towards the development of public parking facilities. The in-lieu fee shall be deposited in a fund for the purpose of acquiring and developing future public parking facilities within the same district or area.		Old Pasadena: Annual fee to fund parking garages. Approximately \$150 per space per year.		In lieu fees may be paid if 1) Site is located in an established parking district or redevelopment project area; 2) Represents the estimated current cost of providing the parking place in the applicable district. Fees updated every 2 years.		In-lieu fee can be paid by the applicant towards the development of public parking facilities. The in-lieu fee shall be paid to the city-wide Parking Improvement Trust Fund. The amount of the fee and time of payment shall be established by Council resolution.
Transit proximity		Parking reduction may be granted for commercial or residential uses proposed adjacent to local or regional mass transit lines or routes based upon parking demand study.		n/a		n/a		Within 1/4 mile of transit: 1) Nonresidential - Office uses (25% reduction), all other nonresidential uses (10% reduction); 2) Residential (mixed use more than 48 units) - 1 space for each unit for units less than 650 square feet to a maximum of 1.25 spaces per unit; and 1.5 spaces for each unit for units 650 square feet or more to a maximum of 1.75 spaces per unit; 3) Garages: Reduction up to 5%, but not more than 10 spaces.		Senior housing: "May further reduce the parking standards to 1 space per 3 bedrooms if...facility...has ample, readily available on-street parking or is well-served by public transportation and a concentration of senior services."		May be granted when the Review Authority determines that a study provided by the applicant, prepared by an independent licensed traffic engineer, justifies the reduction based on documented mass transportation use characteristics of the patrons and employees of the use. Max reduction as determined by Review Authority.
Mixed used		Parking reduction may be granted based upon parking demand study.		n/a		n/a		TOD Zones: 1) Nonresidential - Office uses (25% reduction), all other nonresidential uses (10% reduction); 2) Residential (mixed use more than 48 units) - 1 space for each unit for units less than 650 square feet to a maximum of 1.25 spaces per unit; and 1.5 spaces for each unit for units 650 square feet or more to a maximum of 1.75 spaces per unit; 3) Garages: Reduction up to 5%, but not more than 10 spaces.		n/a		May be granted where the Review Authority determines that a reduction is justified based on hourly parking demand studies published by the Urban Land Institute, or other appropriate source as determined by the Director. Max reduction as determined by Review Authority.
Tandem/Stacked Parking		Independently accessible spaces are required; Tandem is allowed only for parking spaces in excess of minimum requirements. The code is silent on stacked parking.		Residential: Tandem may be used only on projects with < 3 units; Tandem pair must be assigned to a specific unit; Guest parking spaces may not be tandem spaces. Non-residential: Depending on use, Tandem parking spaces may be provided, not more than two (2) cars in depth, and must be approved by Director.		Multi-family residential: Tandem spaces can only be assigned to a single unit, and may count toward the requirement for covered spaces, but may not count as guest space. No more than 2 spaces in depth. Non-residential: Require valet or attendant at all times. No more than 3 spaces in depth.		Multi-family and mixed use projects: Must be assigned to same unit; Up to 30% may be tandem; Two tandem spaces shall have a combined minimum dimension of 9 x 34 feet. Non-residential uses: Up to 75% of the total off-street parking spaces provided may incorporate tandem parking; Up to 50% of the total off-street parking spaces provided may incorporate "triple stack" parking.		Residential: Only for valet parking or for low-income units. Not more than 2 spaces shall be involved in the tandem arrangement; Both spaces shall be assigned to the same dwelling unit; Handicapped and guest parking shall not be in tandem; Not allowed in a parking garage of less than 10 spaces. Industrial: Not more than two (2) spaces; No handicapped; Not more than 25% of spaces.		Residential: Tandem arranged to be no more than two spaces in depth. Non-residential: Tandem requires valet or attendant at all times; No more than 3 spaces in depth.
Shared Parking		Separate uses with overlapping hours of operation, on separate parcels within any commercial, mixed use or industrial zoning district(s), may share parking facilities subject to permit.		May be approved for the shared use of parking for two or more uses occupying one or more structures on a single or adjacent parcel. Shared parking may be counted towards code required off-street parking upon compliance with this section.		2 or more non-residential uses shall be allowed to meet the parking requirements of this Chapter by sharing the same off-street parking facilities, subject to parking study; shared parking spaces shall fall within 750 feet legal walking distance; a City-approved covenant shall be recorded.		Allowed on any site where the hours of operation allow the shared use of parking spaces to occur without conflict. Requires 1) CUP; 2) Allowable walking distances; 3) Contract; 4) Parking study; 5) Shared loading spaces.		Allowed when 2 or more uses share a parking facility and when the hours of their demand for parking do not overlap.		Separate commercial uses with overlapping hours of operation, on separate parcels not more than 400 feet from each other within any commercial zoning district, may jointly use parking facilities, subject to various restrictions.
Affordability		n/a		n/a		n/a		n/a		n/a		n/a
Parking maximums		n/a		n/a		n/a		n/a		n/a		n/a
Other		n/a		n/a		n/a		n/a		n/a		n/a

Best Practice Cities

Academic research and empirical parking studies have begun to highlight many of the challenges presented by high parking minimums, such as increased costs, inefficient use of valuable land, and decreased quality of streetscapes. Parking occupancy studies have shown that parking minimums are in excess of real demand. As shown in Figure 5, Nelson\Nygaard has reviewed the parking supply and demand in four main street districts of smaller cities and towns with low- to moderate-densities and relatively little transit service. This analysis found that the actual parking demand is much lower than standard estimates of parking demand that most cities minimum parking requirements are based on.

The parking demand in the four districts varies between 1.6 and 1.9 spaces per 1,000 square feet of non-residential built area – though most cities, such as Glendale, require 3 to 4 spaces. It

should be noted that the drive alone rate varies widely between these four cities, from 61 percent in Chico to 80 percent in Palo Alto. Three of the four investigated districts have transit ridership of below 4 percent, with the fourth, Santa Monica, at just 11 percent. By comparison, the drive alone commute rate for the City of Glendale is 78 percent and the transit commute rate is 4 percent. The results show that even small cities with high drive alone mode splits can accomplish reduced parking minimums based on measured demand – and that most parking minimums are in excess of real demand. Furthermore, this demonstrates that aggregate parking demand within a main street district is often far below the total amount required for each respective property and land use.

Figure 5. Occupied Spaces per 1,000 Sq. Ft. of Non-Residential Use

City	Population (2008)	Mode Split (2000 Census)							Occupied Spaces per 1,000 sq. ft.
		Drove Alone	Carpool	Transit	Bicycle	Walked	Other	Worked at Home	
Chico	83,569	61%	12%	1%	11%	13%	1%	1%	1.7
Palo Alto	63,370	80%	9%	4%	3%	3%	1%	0%	1.9
Santa Monica	87,935	74%	11%	11%	1%	2%	1%	0%	1.8
Kirkland, WA	47,024	77%	12%	4%	0%	2%	1%	4%	1.6
Glendale (2008 ACS)	195,505	78%	8%	4%	<1%	4%	3%	2%	N/A

As a result of a push to better match parking demand and supply, numerous cities are revising their approach to parking management, beginning with parking minimums, but also including shared parking strategies and incentives based on density, mixed-use projects, as well as transit and non-motorized amenities. Figure 6, and the discussion below, summarizes how some cities have approached their parking challenges.

Figure 6. Parking Requirements by Selected Land Use (Best Practice Peers)

Land Use Category	Glendale		Denver		San Diego		Phoenix		Central Petaluma	
	Spaces per 1,000 sq. ft.	Additional Description	Spaces per 1,000 sq. ft.	Additional Description	Spaces per 1,000 sq. ft.	Additional Description	Spaces per 1,000 sq. ft.	Additional Description	Spaces per 1,000 sq. ft.	Additional Description
Moderate to High Density Residential		DSP zone: 1 bedroom – 1.25 spaces, 2 bedrooms + – 2 spaces, Guest: ¼ space per unit space for projects of 4 or more units; Other med/high zones: Gross floor area of dwelling unit: 0 – 3,499 sq. ft.: 2 spaces; 3,500 – 5,999 sq. ft.: 3 spaces; 6,000 – 7,999 sq. ft.: 4 spaces; 8,000 + sq. ft.: 5 spaces; Guest: 1 uncovered guest space per dwelling unit.		Multiple unit dwelling: 1.5 spaces per unit. In certain zones, 1 space per unit.		Studio (< 400 sq. ft.): 1.25; 1 bedroom/studio (>400 sq. ft.): 1.5; 2 bedrooms: 2.0; 3-4 bedrooms: 2.25; 5+ bedrooms 2.25; Condo conversion – 1 bedroom or studio (> 400 sq. ft.): 1.0; 2 bedrooms: 1.25; 3+ bedrooms: 1.5		1.3 spaces per efficiency unit and 1.5 spaces per 1 or 2 bedroom unit and 2 spaces per 3 or more bedroom unit. 1.0 space per unit of less than 600 square feet regardless of number of bedrooms; Guest parking was not listed for multi-family residential.		Residential: 1 space per unit
Senior housing		1 space per unit in projects with more than 1 dwelling unit		1 space per 3 units.		1 space per dwelling unit.	n/a			Lodging: 1 space per unit
Live/work housing		3 spaces for the first 2,000 sq. ft. 3 spaces per 1,000 sq. ft. for any additional floor area.	n/a		n/a		n/a			All other uses: 1 space per 300 sq. ft. of building area
Banks	4	4 per 1000 sq/ft of customer service area, 2.7 per 1000 sq/ft office floor area	3.3		3.3		n/a			The above codes were part of a transition plan towards the elimination of all parking minimums in Central Petaluma. These codes were in effect from June 2003 to January 1, 2008, at which time all of the minimum parking requirements for Central Petaluma sunset.
Auto Service Stations	4	never less than 3 spaces						2 spaces per service bay		
Car Washes	1.4	never less than 10 spaces						1 space per 3 non-office employees and 1 space per 300 sq.ft. of office and sales area and 2 space per 24 feet of wash bay		
Gyms and Health Clubs	10		5		5		6.67			
Medical/Dental Offices (not adjacent to hospital)	5		2		4		5			
Offices	2.7	offices where primary use is treatment of no more than 2 clients at a time	2		3.3			< 50,000 sq. ft.: 3.3; 50,000 to 250,000 sq. ft.: 3.5; 250,001 to 600,000 sq. ft.: 3.2; 600,001 to 1,000,000 sq. ft.: 2.8; > 1,000,000 sq. ft.: 2.7		
Fast food restaurants	12.5		5		2.5 to 15	varies by zoning district	20			
Restaurants	10		5		2.5 to 15	varies by zoning district	20			
Retail	4		5		1 to 5	varies by zoning district		Less than 50,000 sq. ft.: 3.3; 50,000 to 350,000 sq. ft.: 4.0; Greater than 350,000: 4.5		
Hotels and Motels	1.1	1 space per guest room	1.67			1 per guest room; w/ Conference Area: 10.0 per 1,000 sq.ft.		1 space per guest room		
Bars/Taverns	10		5		2.5 to 15	varies by zoning district	20			
Auditoriums/Assembly Halls	28.6	or one space per five fixed seats	5		30	where no fixed seats; 1 space for each 3 fixed seats.	16.7			
Churches, Synagogues, Temples	28.6	where no fixed seats		Parking shall be provided in an amount equal to 1/4 of the area which the use is located.	30	where no fixed seats; 1 per 3 seats; or 1 per 60 inches of pew space		1 space per 3 seats or 1 space per 58 lineal inches of pew space		
Schools (K-9)	2.7			10 spaces plus one (1) off-street parking space for each classroom.		2.0 per classroom if no assembly area or 30 per 1,000 sq. ft. assembly area		1 space per 3 employees		
Schools (10+)	28.6	or one space per five fixed seats		1 off-street parking space for each employee plus 1 off-street parking space per 6 students.		1 per 5 students at maximum occupancy		1 space per 3 employees; 1 space per 5 high school, college, or university students.		
Theaters	28.6	or one space per five fixed seats	5		50	where no fixed seats; 1-3 screens: 1 per 3 seats; 4+ screens: 1 per 3.3 seats		1 space per 3.5 seats		
Industrial - Warehouse	1			Parking shall be provided in an amount equal to 1/10 of the area which the use is located.	1.5			0 to 150,000 sq. ft.: 1 space; 150,001 to 500,000 sq. ft.: 5 spaces; 500,001 and greater sq. ft.: 4 spaces		
Industrial - R&D	2.7			Parking shall be provided in an amount equal to 1/4 of the area which the use is located.	2.5		n/a			
Alternatives to Parking Minimums	Glendale		Denver		San Diego		Phoenix		Central Petaluma	
In-lieu fees	n/a		n/a		n/a		n/a		\$20,000 per space, adjusted annually.	
Transit proximity	Parking reduction may be granted for commercial or residential uses proposed adjacent to local or regional mass transit lines or routes based upon parking demand study.		Mixed use-zones within 1/4 mile of the outer boundary of a rail station are subject to a parking space reduction of up to 25%.		Allows for 15% reduction for uses within a Transit Area Overlay Zone.		TOD 1 and 2: Residential/Multi-family – 25% reduction if within 1,320 feet from a light rail station. 10% reduction if greater than 1,320 feet from a light rail station. Commercial – 15% reduction if within 1,320 feet of a light rail station. 5% reduction if greater than 1,320 feet from a light rail station.		n/a	
Mixed used	Parking reduction may be granted based upon parking demand study.		Mixed use-zones within 1/4 mile of the outer boundary of a rail station are subject to a parking space reduction of up to 25%. Upon the submission of a formal transportation/trip reduction plan among other requirements, parking spaces are subject to reductions of 26-50%.		n/a		Urban-residential zones: Residential: One space for each one-bedroom or less residential dwelling unit and 1.5 spaces for each unit with two or more bedrooms. Non-residential: 3.3 spaces per 1,000 sq. ft.		n/a	
Tandem/Stacked Parking	Independently accessible spaces are required; Tandem is allowed only for parking spaces in excess of minimum requirements. The code is silent on stacked parking.		May be allowed within all mixed use districts, based on the following criteria: 1) proposed development minimizes dependence on the car, is transit-oriented with housing units within 1/4 mile of a transit stop, has units that are within 1/4 mile of retail or community services, and creates a pedestrian friendly environment; 2) there is adequate on-street parking and pedestrian connections.		Residential: Only allowed in certain districts; At least one of the two parking spaces shall be enclosed; Both spaces assigned to the same dwelling unit. Commercial: Limited to employee parking spaces; Restaurant valet; and B&Bs.		Tandem is permitted for multi-family developments up to 20%. Shall have dimensions measuring a minimum of 9.5 x 18 feet each parking space.		n/a	
Shared Parking	Separate uses with overlapping hours of operation, on separate parcels within any commercial, mixed use or industrial zoning district(s), may share parking facilities subject to permit.		In mixed use zones, upon submission of a shared parking plan, parking spaces are subject to reductions of 26-50%.		Multiple Dwelling Unit Residential Uses: Up to 25% of the parking spaces may be unassigned and eligible for shared parking. In all zones except single unit residential zones, shared parking may be approved through a Building Permit.		City has a "shared parking model" that allows a reduction in parking requirements if the land uses in the development can share parking. Up to 15% reduction. Reductions from the City's parking requirements greater than 15% and up to 30% must obtain a use permit.		Where 2 or more use on the same site have distinct peak parking usage periods, a reduction in the required number of parking spaces may be allowed. Approval shall require a recorded covenant. Possible options for determining shared parking arrangements include the ULI "Shared Parking."	
Affordability	n/a		Up to 20% reduction.		Allows for 15% reduction for low-income projects and other SDHC developments.		n/a		n/a	
Parking maximums	n/a		n/a		Has established maximums for certain uses.		No minimums in Downtown or Warehouse zones.		Minimums eliminated.	
Other	n/a		n/a		n/a		Parking reductions given for TDM programs, ped friendly design, adaptive reuse, and on-site recycling containers.		Use of permeable parking surfaces and reduction of run-off allows for up to 20% reduction.	

- **Denver:** The City of Denver's parking requirements recognize that different developments in different contexts perform differently, and that parking requirements cannot be applied in a one-size-fits-all manner. Instead, local planners have taken a progressive approach to parking and have outlined parking requirements that reflect not only a specific type of land use, but the interaction of land uses. This has been codified through the designation of off-street parking requirements for mixed-use districts.

In addition to setting parking standards that are more appropriate for particular types of land uses, the City of Denver has also recognized the value of districts that have close proximity to public transportation and demonstrate other factors that may reduce the need for parking spaces. These standards may be able to reduce the total number of parking spaces by up to 50 percent in select districts. The factors that contribute to these additional reductions include:

- Access to transit: Mixed use-zones within ¼ mile of the outer boundary of a rail station are subject to a parking space reduction of up to 25 percent.
- Shared Parking Analysis/Trip Reduction Strategy: Upon the submission of a formal transportation/trip reduction plan among other requirements, parking spaces are subject to reductions of 26-50 percent.
- Affordable Housing: Parking requirements associated with affordable housing may be reduced up to 20 percent.

These reductions are subject to analysis of project location, shared parking opportunities, trip reduction plans among other submissions to the zoning administrator.

In addition, the City of Denver also has a unique approach to parking requirements for change in uses and historic reuses among the case studies provided. More specifically, Denver does not require additional parking for a change in use provided that the new use's parking requirement does not exceed the previous use's parking requirement by more than 25 percent. Furthermore, the City does not have a parking requirement for historic reuses, namely "...structures designated for preservation or for contributing structures in districts designated for preservation...beyond the number of parking spaces required for the land use and located on site as of August 1, 2007."

- **San Diego:** The City of San Diego has likewise implemented a number of innovative approaches to its management of parking. First, and foremost, San Diego allows parking reductions for all of its land use categories if the project site is within a Transit Area Overlay Zone. This reduction is 15 percent off of the basic minimum requirement. Second, San Diego has established parking maximums for almost all of its residential and commercial uses. These maximums are usually in the range of 5.5 to 6.5 spaces per 1,000 square feet of use, roughly 2-5 times the basic parking minimums.

Third, parking minimums are considerably lower in the Centre City Planned District. For example, a market rate living unit in the Centre City only requires .5 spaces per unit. Below market rate housing at 50 percent of AMI only requires .2 spaces, while less than 40 percent AMI does not require any parking spaces. Finally, San Diego permits a 15 percent parking reduction for dwelling units limited to occupancy by very low income households and development covered by an agreement with the San Diego Housing Commission.

- **Phoenix:** The City of Phoenix has revised its approach to parking management with a number of innovative practices:
 - First, Phoenix has established a “shared parking model” that allows a reduction in parking requirements if the land uses in the development can share parking. Guidelines to determine the feasibility of shared parking are outlined in the Shared Parking Model, a tool developed by the City. A reduction of up to 15 percent from the City’s parking requirements may be granted by the Development Services Department Traffic Engineer. Reductions from the City’s parking requirements greater than 15 percent and up to 30 percent must obtain a use permit as authorized by the zoning administrator.

In addition to parking reductions to accommodate shared parking, the City’s Zoning Ordinance lists the following criteria that can be considered in granting parking reductions:

- *Density.* “The Zoning Administrator or Board of Adjustment may grant a request to reduce the otherwise applicable parking requirements for buildings in excess of four (4) stories or forty-eight feet in height” through a use permit process.⁶
- *Mixed uses.* The Zoning Ordinance provides for parking reductions for projects located in an area in a “Village Core” as part of the currently-adopted City of Phoenix General Plan.⁷ Meeting the Village Core criteria appears to be largely predicated on the project having higher-than-average incidence of internal trip capture and higher-than-average use of alternative modes.
- *Amenities/infrastructure for multiple transportation modes.* Another criteria for being granted parking reductions are site planning and urban design features that provide accommodation for pedestrians, carpools, and transit passengers.
- *Transit service.* The Zoning Ordinance makes provisions for parking reductions where “[t]ransit service available within one-quarter mile of the site with rush hour frequencies of thirty (30) minutes or less.”⁸
- *Pedestrian-friendly design.* The Zoning Ordinance allows parking reductions if “[t]he area fits the criteria for a level 2 pedestrian area as outlined in the Maricopa Association of Governments’ *Pedestrian Area Policies and Design Guidelines*.”⁹
- *Transportation demand management/trip reduction.* Finally, the Zoning Ordinance allows parking reductions if “[t]he business participates in a transportation management association that sponsors trip reduction programs.”¹⁰

⁶ City of Phoenix Zoning Ordinance, Section 702.A.5.d. – Reductions for Buildings Higher than Four Stories. Accessed at www.municode.com/Resources/gateway.asp?pid=13534&sid=3.

⁷ City of Phoenix Zoning Ordinance, Section 702.A.5.e. – Reductions in Village Cores. Accessed at www.municode.com/Resources/gateway.asp?pid=13534&sid=3.

⁸ City of Phoenix Zoning Ordinance, Section 702.A.5.b. – Shared Parking Model. Accessed at www.municode.com/Resources/gateway.asp?pid=13534&sid=3.

⁹ Ibid. and the Maricopa Association of Governments’ *Pedestrian Area Policies and Design Guidelines* document is available at www.mag.maricopa.gov/detail.cms?item=4906.

¹⁰ Ibid.

- Second, the City of Phoenix has eliminated all parking minimums in its Downtown Core and Warehouse Districts.
- Third, Phoenix has established TOD zones where significant parking reductions are permitted based on proximity to transit. For residential and multi-family uses a 25 percent parking reduction is allowed if within ¼ of a mile of a light rail station. If the project is farther than ¼ of a mile a 10 percent reduction is allowed. For commercial uses, 15 and 5 percent reductions are permitted.
- Fourth, the City of Phoenix grants parking reductions with the provision of recycling containers. Commercial and multi-family developments may reduce the number of required parking spaces when recycling containers are provided on-site.
- Finally, Phoenix allows for parking reductions with adaptive reuse. Specifically, a reduction of up to 50 percent is permitted if the project site is within ¼ mile of an existing public parking facility, a light rail station, or park and ride facility. If the use is an outdoor dining area accessory to a restaurant, outdoor dining areas up to a maximum of 500 square feet and not exceeding 25 percent of the primary building's ground level gross floor area, shall not be subject to additional required parking.
- **Central Petaluma:** In 2003, the City of Petaluma adopted the Central Petaluma Specific Plan¹¹, which provides specific land use and development regulations for nearly 400 acres within the geographic heart of the city, adjacent to downtown. The Plan envisions Central Petaluma as a place where a wide range of new employment, housing, shopping, and entertainment activities develop in relative proximity to one another within a lively urban environment. As part of the Central Petaluma *SmartCode* development regulations, parking requirements and standards were overhauled. Several “alternative parking arrangements” were adopted, including shared on-site parking, the waiver of parking requirements based certain conditions, and the reduction of minimums with payment of a parking in-lieu fee of \$20,000 per space. In addition, a four-and-a-half year transition plan was made towards the elimination of all parking minimums by January 1, 2008. During that time, parking minimums were simplified dramatically to 1 space per unit for all residential and lodging uses, and 3.3 spaces per 1,000 square feet for all other uses.

The Central Petaluma district was also unique among the case studies in this analysis because it also allows for parking reductions based on a mitigation of water pollution and stormwater run-off. Central Petaluma’s *SmartCode* permits a reduction of up to 20 percent if a parking site uses permeable surfaces. Proportional reductions are also permitted if only a fraction of a parking site has permeable surfaces. For example, if only half of the parking area is covered with a permeable surface, then only a 10 percent reduction of the parking requirement shall be granted; if only one-quarter of the parking area is permeable, only a 5 percent reduction shall be granted. The number of parking spaces may also be reduced by up to 20 percent if it is determined that the design of the site’s parking will capture and treat at least 90 percent of the parking area’s first flush rain on-site. Specific treatments can include filter beds, subsurface infiltration basins, or vegetated swales.

- **Old Pasadena:** In 1993 Old Pasadena make significant changes to how it managed its parking supply. First, the City installed parking meters and created a parking benefit district, in which all the revenue generated was spent on public investments in the district. A relatively high rate of \$1 per hour (including Sundays and evenings) was agreed. The City provided \$5 million in bond funding for street furniture, trees, tree grates and historic

¹¹ See the full plan at <http://cityofpetaluma.net/cdd/cpsp.html>

lighting fixtures, with the meter revenue stream used to repay the debt. Old Pasadena also established in-lieu parking fee and residential parking permit program. In addition, minimum parking requirements were reduced by 25 percent in Old Pasadena.

Finally, the city's "Parking Credit Program" allows property owners in Old Pasadena to pay a fee in lieu of satisfying minimum parking requirements on-site. The fee is collected annually, rather than as a lump sum which is common in many other cities, allowing developers to avoid financing problems. The fee is set at an extremely low rate (\$146.53 per year per space in 2008). In 2002, the criteria were tightened, with eligibility limited to designated historic buildings, and buildings that would require additional parking following rehabilitation or a change in use. In-lieu fee revenue helped to fund two public parking structures, which total 1,567 spaces, and provided a public contribution to a private structure that is open to the public. One space has been built for every 1.5 parking credits awarded; fewer spaces are required since spaces are shared between uses.

Finally, more and more cities are taking the next step in regards to minimum parking requirements and eliminating them in certain areas, often downtowns, or for the jurisdiction as a whole. Eliminating parking requirements would not mean that no new parking would be constructed. Rather, it would mean that market forces would determine the appropriate level of supply, based on market demands. Minimum parking requirements could be waived anywhere where there are measures in place to combat parking spillover, but especially in mixed-used areas and in proximity to major transit corridors. The list below is a sampling of municipalities that have no parking minimums:

- **Stuart, FL** eliminated all on-site parking requirements, which were preventing developers from renovating existing buildings. After four years, the number of downtown businesses had risen by 348 percent, and the town was able to lower its tax rate.
- **Greenville, SC** has no parking minimums even though the downtown drive alone commute mode split is 99 percent.
- **Carmel, CA** prohibits off-street parking spaces in the central commercial land use district. This policy reduces the need for curb cuts in sidewalks and the interference with free pedestrian traffic flow that would result from driveways.
- **Eugene, OR** introduced maximum parking standards to promote dense mixed-use development. It also abolished minimum parking requirements in several districts.
- **Spokane, WA** eliminated minimum downtown parking requirements and introduced parking maximums. On certain streets, surface parking is prohibited between the street and buildings, and at least 50 percent of parking structure frontage must have street-level retail, office, or civic uses.

- **Portland, OR** established parking maximums, and eliminated parking minimums for residential developments. This was done in response to a shift in Portland Metro's Regional Parking Policy in 1999, which mandated a region-wide reduction in per capita parking spaces. Portland also established an ordinance which eliminates minimum parking requirement for sites located less than 500 feet from a transit street with 20-minute peak hour service.
- Other cities where parking minimums have been eliminated, in downtowns or across the whole municipality, include: Coral Gables, FL; Fort Myers, FL; Fort Pierce, FL; Milwaukee, WI; Olympia, WA; San Francisco, CA; Seattle, WA; Ventura, CA; Philadelphia, PA; Cleveland, OH.

Concepts for Further Evaluation

Based on the review of geographic and best practice peers, the following concepts should be considered as Glendale seeks to revise its parking regulations.

- **Institute a parking in-lieu fee.** As discussed above, an in-lieu parking fee gives developers the option to pay a fee in lieu of providing some portion of the number of parking spaces ordinarily required by the city's zoning ordinance. The fee could be structured as either a fixed one-time fee per space or an annual fee per space. The fees collected can then be used to build public parking spaces, purchase private spaces for public use, or to support transportation demand management strategies and/or improve overall mobility in the downtown area. An in-lieu fee could encourage new development of the highest architectural and urban design quality as well as the redevelopment of vacant, underutilized, historic, and/or dilapidated buildings downtown.

In-lieu fees have many benefits for both cities and developers. The fees provide flexibility for developers. If providing all of the required parking would be difficult or prohibitively expensive for developers, then they have the option to pay the fee instead. This is particularly useful for historic buildings, which often have limited parking included at the facility. By eliminating the requirement for on-site parking, in-lieu fees make it easier to restore historic buildings. An in-lieu fee ordinance can be combined with other techniques for meeting parking requirements including the use of shared parking, tandem or valet parking or stacked parking to encourage better management of parking spaces provided on and off-site.

Numerous cities discussed in this peer review have instituted in-lieu fees including Culver City, Old Pasadena, Long Beach, West Hollywood, and Central Petaluma, although these in-lieu fees are not necessarily ideal. Other examples of "model" in-lieu fees are provided in Appendix E, and in Nelson\Nygaard's August 2008 in-lieu fee memo, which offers more detailed recommendations.

- **Allow for parking reductions "as of right" for mixed use projects and projects in close proximity to transit. Permit additional reductions if combined with a TDM program.** Research has demonstrated that individuals living in higher density areas or in close proximity to transit drive less and own fewer vehicles¹². Consequently, the demand for off-street parking is diminished with such projects and cities should provide parking reductions to not only encourage and support alternatives to driving, but also to reduce project development costs and make projects more feasible. The City of Glendale does allow for such reductions, but they are discretionary allowances subject to detailed and

¹² John Holtzclaw (2000). "As Seen From the Air. Convenient Neighborhood, Skip the Car." <http://www.sierraclub.org/sprawl/transportation/holtzclaw-awma.pdf>

costly parking studies and review processes. Following the examples set by Pasadena, Denver, San Diego, and Phoenix, the City of Glendale could grant any project within ¼ of a mile to a transit station a guaranteed 15-25 percent reduction in parking requirements depending on the use.

The City could also allow for additional reductions if the residential project or commercial/industrial use submits a formal trip reduction or TDM plan. As discussed in Nelson Nygaard's April 2010 TDM memo, various TDM measures have been proven to reduce single occupancy travel and the demand for parking. For example, the City of Denver allows for parking space reductions of up to 25 percent for projects within ¼ of a mile to transit station, but also permits reductions of 26-50 percent upon the development of a transportation/trip reduction plan.

- **Revise existing shared parking regulations.** The City of Glendale currently allows for shared parking, but its regulations could be revised to allow for additional flexibility and guaranteed parking reductions. As outlined above, shared parking works best when uses with different peak demand periods share spaces thereby reducing the number of spaces needed to meet the combined peak parking demands. Shared parking also has the benefit of encouraging drivers to park once and visit multiple sites on foot rather than driving to and parking at each site. This reduces vehicle traffic and increases foot traffic, creating a safer pedestrian environment.

All of the cities in this peer review have shared parking regulations, but some are more “progressive” than others and offer certain practices that Glendale should explore further. For example, in mixed use zones in Denver parking spaces are subject to reductions of 26-50 percent upon submission of a shared parking plan. In San Diego, multiple dwelling residential uses are allowed to have up to 25 percent of the parking spaces unassigned and eligible for shared parking with adjacent uses. The City of Phoenix has perhaps the most advanced shared parking model, which essentially allows for 15-30 percent reductions in parking requirements if a project can demonstrate shared parking.

- **Revise existing tandem/stacked parking regulations.** Tandem parking is an effective tool for reducing the need to construct additional off-street spaces and enabling more efficient use of existing facilities. The City of Glendale currently allows for tandem parking, but its regulations are strictly limited to parking spaces only “in excess of minimum requirements.” The Glendale parking code is silent on stacked parking.

Glendale should revise its tandem parking requirements to allow for greater flexibility and more widespread use of this parking management tool. First, Glendale could allow tandem spaces to count against parking minimums, as is the case in Culver City. Second, Glendale could permit a high percentage of off-street spaces to incorporate tandem parking, such as Pasadena's 30 percent allowance for mixed-use projects and 75 percent allowance for non-residential uses. Finally, Glendale could allow for stacked parking like Pasadena, which permits up to 50 percent of off-street tandem parking to incorporate “triple stack” parking.

- **Consider reduced or eliminated parking minimums in higher density zones with good transit service, such as the Entertainment District.** As outlined above, more and more jurisdictions are eliminating parking minimums altogether. These cities have found that minimum parking requirements are in conflict with their desire to create more dense, vibrant, and walkable communities, while the costs and externalities associated with parking minimums are just too high. This does not mean that these cities will not continue to build parking, but it simply means that market forces will determine the appropriate level of supply. While the City of Glendale might not be willing to eliminate all of its parking

minimums, it can concentrate such efforts in areas where there are measures in place to combat parking spillover, such as mixed-used areas in proximity to major transit corridors, or in the proposed Entertainment District. In addition to all of the examples provided above, the City of Phoenix has eliminated all parking minimums in its Downtown and Industrial zones.