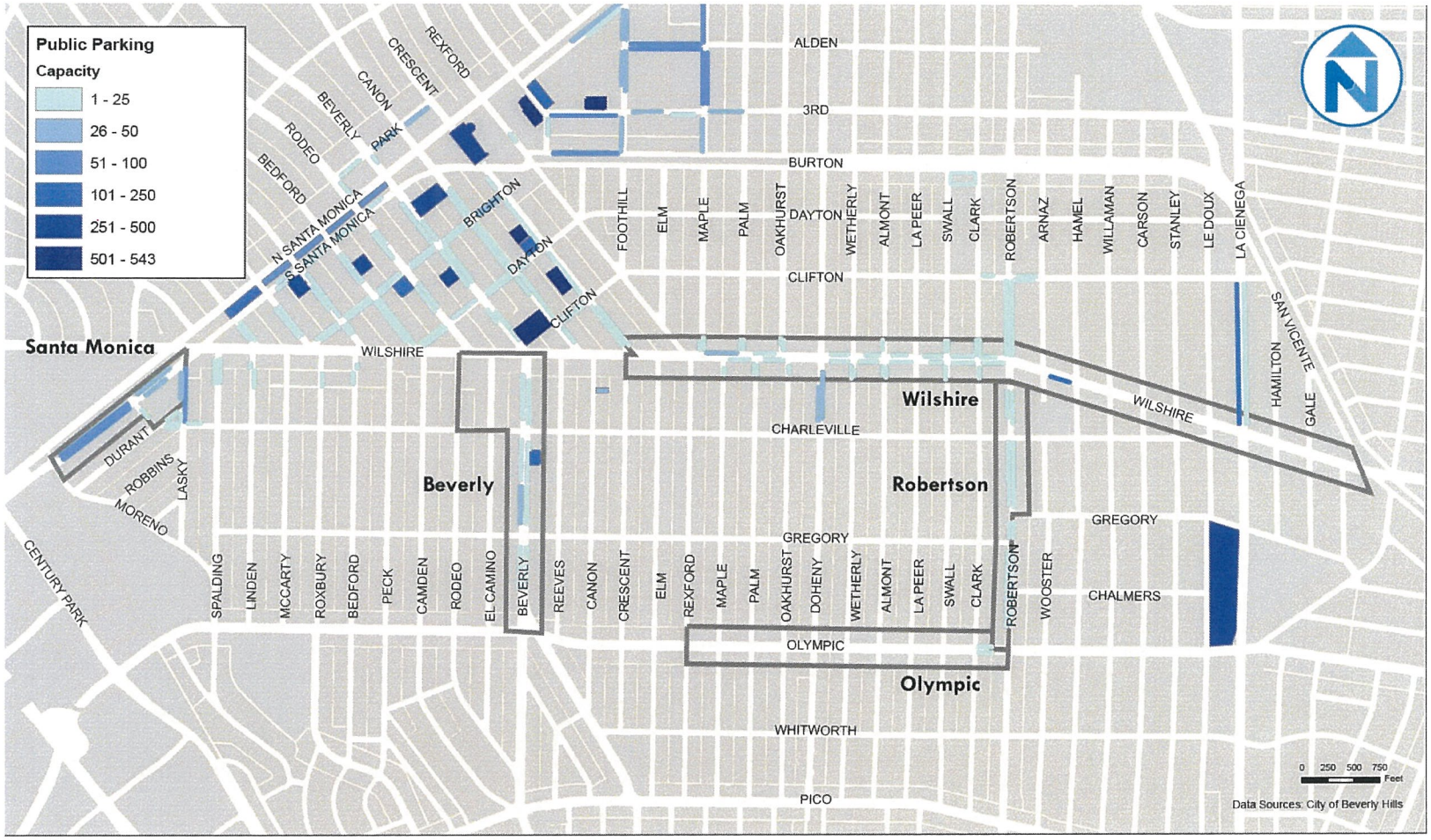
Figure 31: Public Parking in the Potential Expansion Areas



Off-Street Public Parking

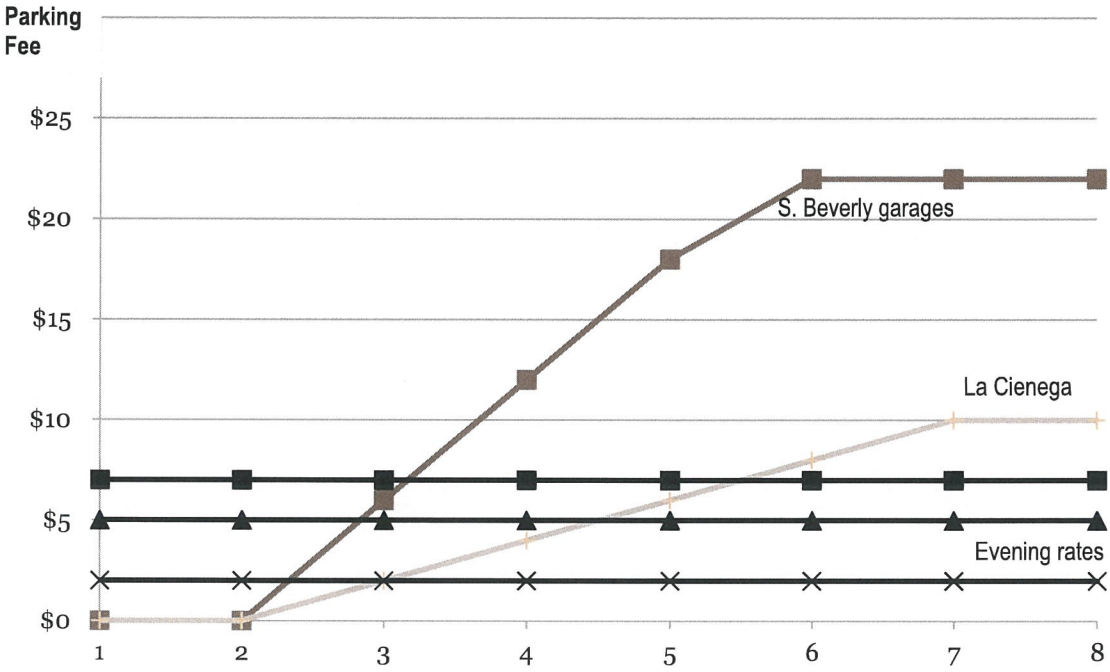
In contrast to the 19 public parking garages within the Business Triangle, there is only one city-operated garage in all five corridors of the expansion areas. This 233-spaces facility is located on South Beverly Drive near Charleville Boulevard. As shown in Figures 32 and 33, the South Beverly garage has a similar pricing structure to city-operated facilities in the Business Triangle, with 2-hours of free parking, followed by an hourly rate of $6 up to a daily maximum of $22.

Figure 32: Public Off-Street Parking Capacity and Pricing in the Expansion Areas

Location	Spaces	Hourly fee	Free parking	Quantity Discounts				Hours (M-F)
				Early bird flat fee	Evening flat fee	Daily max	Monthly rate	
216 S Beverly Drive	233	$6	**2 hours**	-	$5	$22	-	6am–12am
321 S La Cienega Blvd	319	$2	**2 hours**	-	$0	$10	$85	6am–11pm

Source: City of Beverly Hills, Off-Street Parking Information, February 2014

Figure 33: Parking Rates by Duration of Stay at Public Parking Facilities in Beverly Hills

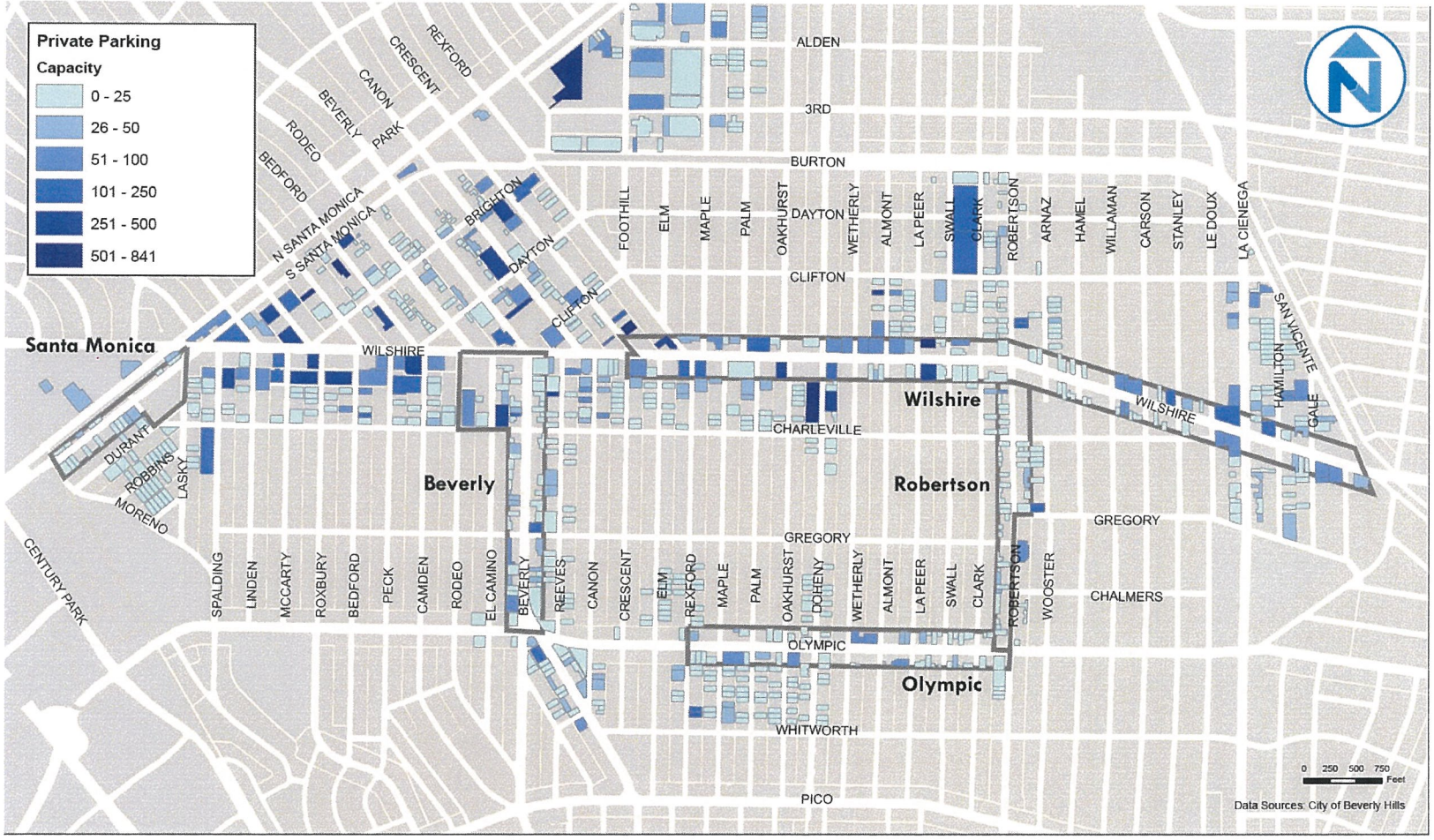


Source: City of Beverly Hills, Nelson\Nygaard, February 2014

Off-Street Private Parking

Given the limited supply of public parking, the main source of parking within the expansion areas is private lots, privately owned garages, and other parking facilities associated with private developments. The total supply of private parking within the expansion areas is 4,891 spaces, 7.5 times the number of public on- and off-street spaces. The location of these facilities is shown in Figure 34.

Figure 34: Private Off-Street Parking in the Potential Expansion Areas



The bulk of these facilities are located along the Wilshire Boulevard, where there are 31 facilities, charging between $4 and $12 per hour up to a daily maximum of between $12 and $21. A substantial number of off-street facilities also exist along South Beverly Drive: there are 9 facilities, charging between $5 and $12.50 per hour up to a daily maximum of between $15 and 36 per day. South Santa Monica Boulevard corridor has two facilities, with hourly rates at $8 to $9 and daily rates at $9 and $23. The other three corridors have no off-street parking facilities, though one could feasibly use facilities at the corner of Wilshire and Robertson for accessing destinations in the northern segment of South Robertson Boulevard.

In addition to paid parking facilities that are noted here, there are a number of surface spaces located in the rear of land uses along each of the corridors. These lots along with paid parking facilities are displayed in Figure 35.

Figure 35: Private Off-Street Parking Pricing in the Expansion Areas

Location	Operator	Hourly fee	Free parking	Quantity Discounts				Hours (M-F)
				Early bird flat fee	Evening flat fee	Daily max	Monthly rate	
South Santa Monica Boulevard Corridor								
Beverly Hilton, 9876 Wilshire Blvd	Self Parking	$8				$38.00		24 h
9811 Wilshire Blvd	Allied Parking Services	$9				$9.00		8am-7pm
South Beverly Drive Corridor								
Union Bank, 9460 Wilshire Blvd	Parking Management Services	$5	0.5 h	-	-	$16.25	-	9am-8pm
9454 Wilshire Blvd	Imperial Parking Industries	$8	-	-	-	$20.00	-	6:30am-10pm
9460 Wilshire Blvd	Parking Management Services	$5	0.5 h			$16.25		9am-8pm
150 S. Rodeo Drive	ABM	$7			$3	$17.50		8am-6pm
280 S. Beverly Drive	Parking Management Group	$7	-	-	-	$17.50	-	8am-6pm
300 S. Beverly Drive	Parking Management Group	$6	-	-	-	$15.00	-	8am-6pm
314 S. Beverly Drive	Parking Management Group	$8	-	-	-	$16.00	-	9am-5pm
315 S. Beverly Drive	LAZ Parking	$8	-	-	-	$36.00	-	8am-7pm
350 S. Beverly Drive	ABM	$12.50	-	-	-	$25.00	-	7am-7pm
South Robertson Boulevard Corridor (at Wilshire)								
Wilshire/Robertson Lot, 150 S Clark Dr	Hodes Parking	$6	-	-	-	$13.00	-	8am-5:30pm
8750 Wilshire Blvd	Hodes Parking	$6	-	-	$8	$15.00	-	6:30am-7pm

Location	Operator	Hourly fee	Free parking	Quantity Discounts				Hours (M-F)
				Early bird flat fee	Evening flat fee	Daily max	Monthly rate	
Wilshire Boulevard Corridor								
9320 Wilshire Blvd	ABM	$7.60				$16.50	$175-$225	7am-8pm
9300 Wilshire Blvd	Modern Parking	$7			$6	$15.75	$192	8am-6pm
9250 Wilshire Blvd	Modern Parking	$6	-	-	-	$13.50	-	8am-6pm
9171 Wilshire Blvd	Imperial Parking Industries	$5	-	-	-	$15	-	7am-7pm
Wilshire Palm Office Blg, 9150 Wilshire Blvd	ABM	$7	-	-	$3	$14	-	8am-7pm
9100 Wilshire Blvd	ABM	$9	-	-	$5	$18	-	7:30am-6:30pm
9100 Wilshire Blvd (on Doheny)	ABM	$7.80			$5	$15.60	$150-$198	6am-10pm
9107-9111 Wilshire Blvd	Imperial Parking Industries	$8	-	-	-	$20	-	7am-8pm
9090 Wilshire Blvd	ABM	$7	-	-	-	$14	-	7am-6pm
9101-9111 Parking, 140 S Doheny Dr	Imperial Parking Industries	$7				$14	$150	9am-9pm
Archway Medical Plaza Parking, 9033 Wilshire Blvd	Seton Parking	$5.55	-	-	-	$16.65	-	6am-6pm
9025 Wilshire Blvd	Car Park	$5.55	-	-	$4	$16.65	-	8am-8pm
8942 Wilshire Blvd	ABM							
8901-8929 Wilshire Blvd	Imperial Parking Industries	$4.95	-	-	-	$16.50	-	8am-6pm
8920 Wilshire Blvd	ABM	$8.20	-	-	-	$16.40	-	6am-9pm
8900 Wilshire Blvd		$6	-	$8	-	$14	$185	7am-5pm
Wilshire/Arnaz, 8730 Wilshire Blvd	Hodes Parking	$6	-	-	-	$15	-	7am-6:30pm
8671 Wilshire Blvd	Ace Parking	$6	-	-	-	$10.50	-	9am-5pm
8665 Wilshire Blvd	Standard Parking	$6	-	-	-	$12	$90-$110	7:30am-7:30pm
8641 Wilshire Blvd	Hodes Parking	$6	-	-	-	$15	-	6am-6pm
8530 Wilshire Blvd	ABM	$12	-	-	-	$15	-	8am-7pm
8501 Wilshire Blvd		$5	-	-	-	$10	-	7:30am-10pm
8500 Wilshire Blvd	Imperial Parking Industries	$6	-	-	-	$15	$130-$160	7am-7pm

Location	Operator	Hourly fee	Free parking	Quantity Discounts				Hours (M-F)
				Early bird flat fee	Evening flat fee	Daily max	Monthly rate	
8484 Wilshire Blvd	ABM	$8			$10	$16	$125	7:30am-7pm
8447 Wilshire Blvd	United Valet Parking	$8				$12		8am-7pm
8421 Wilshire Blvd		$6				$12		8am-5pm
8420 Wilshire Blvd		$6				$15		
8383 Wilshire Blvd		$10.5			$8	$21	$150-$250	8am-8pm
The Karrass Building, 8370 Wilshire Blvd		$4				$12		6am-8pm
Olympic Boulevard Corridor								
No facilities								

Source: ParkMe Parking Information, March 2014

EXISTING DEMAND RATIOS

The most useful metric for understanding parking demand is that of *utilization*, or demand ratios, which provide a measure of actual demand under the local conditions and land use context. As shown in Figure 36, there is available parking capacity in each of the potential in-lieu expansion corridors, particularly when one considers private off-street parking supplies.

There is available parking capacity in each of the potential in-lieu expansion corridors, particularly when one considers private off-street parking supplies.

South Beverly Drive has the least available capacity, at 83% occupancy during the peak. This level of peak occupancy is considered target occupancy within the parking industry, and suggests that the right amount of parking is available for existing demand along South Beverly Drive. At this level, however, there is a need for wayfinding aids or pricing tools to ensure that available parking is readily accessible and evenly distributed along the corridor.

Figure 36: Parking Demand Ratios in the Expansion Corridors

Corridor	Private off-street		Public off-street		On-street		TOTAL	
	Capacity	Peak utilization	Capacity	Peak utilization	Capacity	Peak utilization	Capacity	Peak utilization
S Beverly Drive	2,298	81%	233	99%	153	90%	2,684	**83%**
Olympic Blvd	915	61%			8	64%	923	**61%**
S Robertson Blvd	595	67%			89	84%	684	**69%**
S Santa Monica Blvd	257	51%			270	53%	527	**52%**

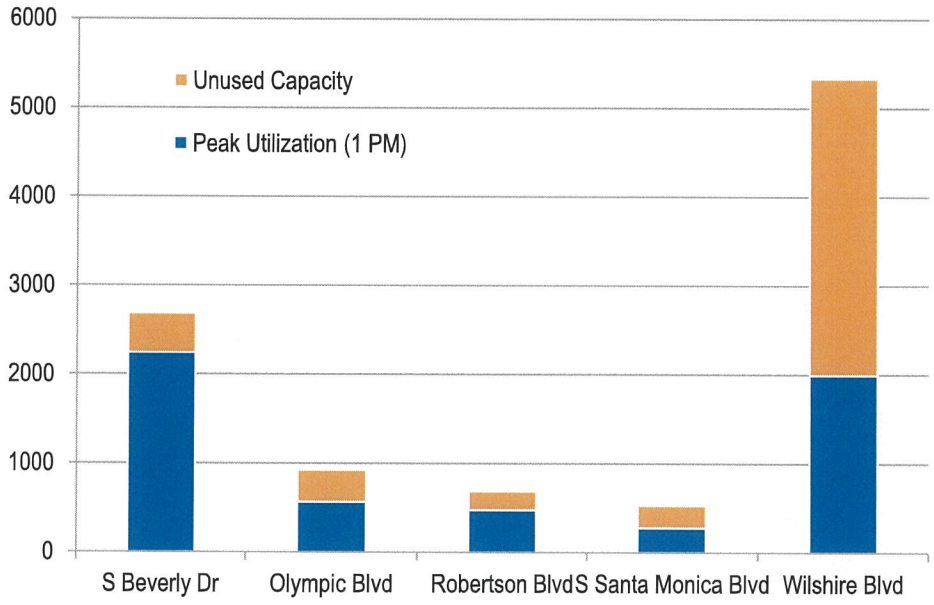
Wilshire Blvd	4,857	40%			476	13%	5,333	**37%**
All expansion areas	8,922	55%	233	99%	996	42%	10,151	**55%**

Sources:City of Beverly Hills, Nelson\Nygaard, March 2014

The corridor with the lowest occupancy rates is Wilshire Boulevard, where there is a great deal of private parking supply (see Figure 37) and more than 60% available capacity even during periods of peak demand. This suggests that the Wilshire Boulevard corridor has been over-provided in terms of parking and most parking remains unused almost all of the time.

The remaining three corridors fall between these two extremes, with peak occupancy rates at 50 – 70% during the peak. The total peak occupancy and parking availability (combining on-street, public and private parking) is illustrated in Figure 37 below.

Figure 37: Peak Parking Occupancy and Availability in the Expansion Corridors

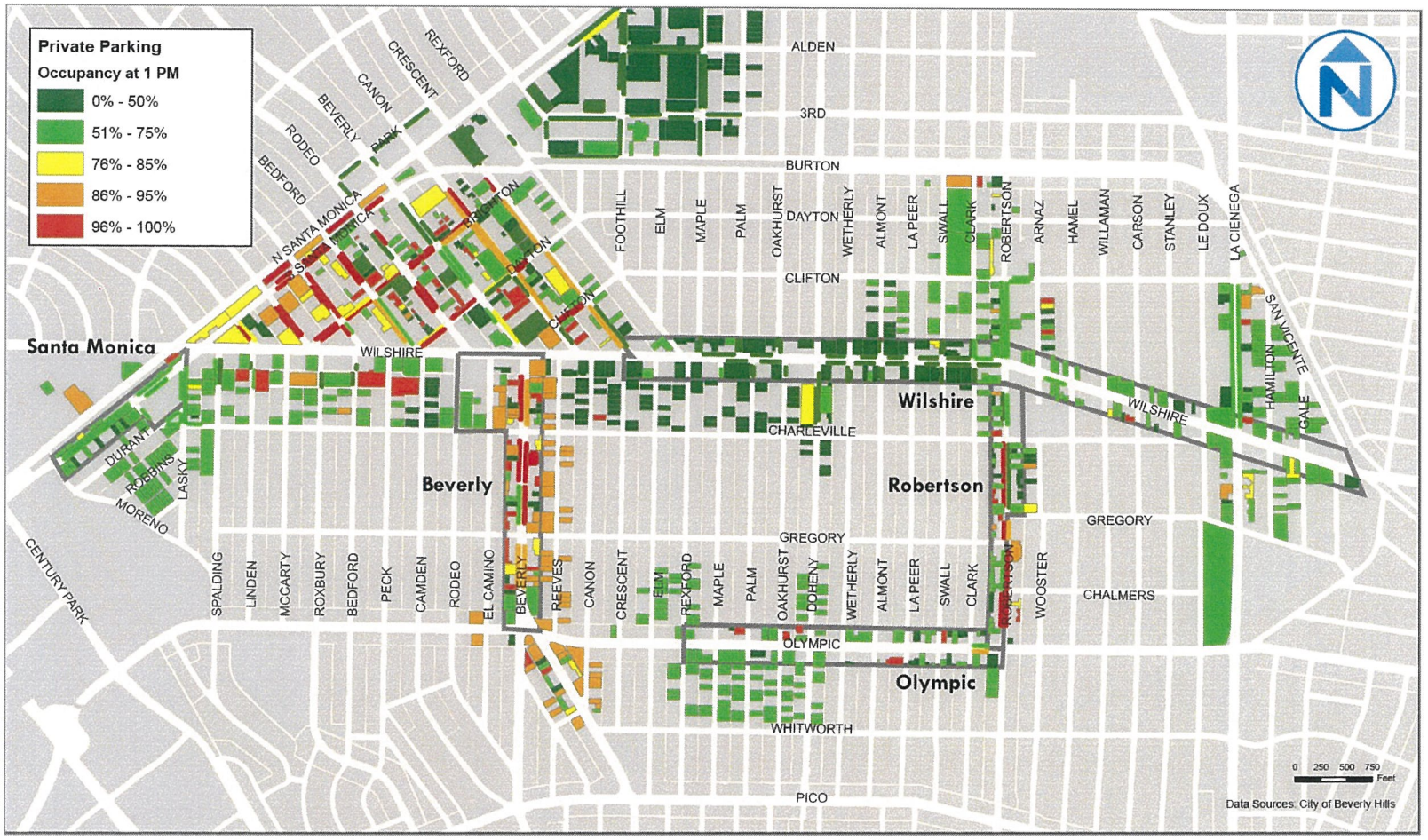


While demand ratio data suggests that there is available capacity along each corridor, the distribution of this demand differs from site to site. As shown below in Figure 38, on-street parking is more limited in the southern end of South Robertson Boulevard, possibly due to less intense land uses or the large number Wilshire Boulevard parking facilities that are available to serve the northern end of the street.

Along South Beverly Drive, private parking (Figure 39) is most constrained near Gregory Way while public and on-street parking (Figure 38) is most constrained near Charleville Boulevard. This differing availability suggests the need for an integrated approach to parking supply and demand along the corridor.

Figure 38: Public Parking Peak Utilization in the Expansion Areas

Figure 39: Private Off-Street Peak Parking Utilization in the Expansion Areas



EXISTING BUILT RATIOS

Calculations of built ratio provide an understanding of the amount of parking that is provided relative to the square footage of built development in the area. They may therefore help to understand the present amount of parking that is provided, which can be used as a basis for adjusting minimum parking requirements and/or introducing blended parking rates.

Built ratios may be calculated in terms of parking spaces per square foot of built development, or as a ratio of the square footage of parking divided by the square footage of built development. Traditionally, built ratios are calculated in relation to the amount of off-street parking that is available within an area. They therefore underestimate the total parking supply (especially if there is angle-parking) because on-street parking is excluded.

In the case of the Beverly Hills expansion areas, the estimated built ratio is based on per space sizes that vary depending upon whether parking is provided in surface lots, below grade or above grade. Assumed per space area is outlined in Chapter 6.

Figure 40: Parking Built Ratios in the Expansion Corridors

Expansion Corridor	Off-Street Parking Spaces	Built Square Footage	Built Ratio (off-street spaces / 1000 sf)	Built Ratio (sf parking / sf development).
S Beverly Drive	2531	1,034,394	**2.45**	**1.09**
Olympic Boulevard	915	403,007	**2.27**	**1.01**
S Robertson Boulevard	595	205,301	**2.90**	**1.29**
S Santa Monica Boulevard	257	354,893	**0.72**	**0.32**
Wilshire Boulevard	4857	3,258,794	**1.49**	**0.66**
Business Triangle	10,933	6,088,469	**1.80**	**0.80**

Sources:City of Beverly Hills, Nelson\Nygaard, March 2014

As shown in Figure 40, the built ratio of off-street parking in the expansion areas ranges from a low of 0.32 (0.72 spaces per 1000 sf) on South Santa Monica Boulevard to a high of 1.3 (2.9 spaces per 1000 sf) on South Robertson Boulevard. Other built ratios include 0.8 (1.8 spaces per 1000 sf) for Wilshire Boulevard, 1.0 (2.3 spaces per 1000 sf) for Olympic Boulevard, and 1.1 (2.5 spaces per 1000 sf) for South Beverly Drive. A built ratio or more than 1 indicates that more square footage is allocated to parking than the land uses within the area.

A built ratio of more than 1 indicates that more square footage is allocated to parking than to land uses

EXISTING CODE REQUIREMENT COMPARISONS

Beverly Hills' parking requirements were introduced in 1962 and have undergone little change over the past half century.[46] For example, the City's commercial parking requirement of 1 space per 350 square feet of development was established in the 1965 Amendment and has persisted since that time. While the basis of Beverly Hills' original parking requirements is not clear, similar codes were usually based on data from the Institute of Transportation Engineer (ITE)'s *Parking Generation* publication, or similar rates in other cities. In the 1960s, when data was difficult to come by, minimum parking requirements were a proxy for likely parking demand associated with a particular land use.

Today, data is cheap but land and parking in places like Beverly Hills is expensive. Furthermore, the City's minimum parking rates are problematic because they are both out of date and out of context. They are based on data from before 1965, and (in line with ITE data from that era) are probably derived from peak parking demand in isolated, single-use developments in suburban locations with cheap land and free parking. When applied to urban locations such as Beverly Hills' expansion areas the minimum parking requirements can become a self-fulfilling prophecy because they limit the types of development that are feasible and influence the resultingtravel demand (see discussion on feasible FAR in Chapter 8).

When data was difficult to come by, minimum parking requirements were a proxy for likely parking demand... Today, data is cheap but land and parking in places like Beverly Hills is expensive.

Since parking and transportation are derived demands, they help to achieve people's primary goals but these goals could also be met without the need for parking and transportation. For example, if pedestrian facilities are convenient and attractive, people may reach food or social opportunities (primary needs) without the need to drive and park. For this reason, the notion of conflating minimum parking requirements and "parking need" is inaccurate. If businesses are vibrant and there are increasing levels of foot traffic, the city is achieving its goals. At that point, adding more parking to fulfill the minimum parking standard is moot and may be *counterproductive* if it reduces available square-footage, diminishes the streetscape, encourages more vehicular traffic, and discourages certain business initiatives (such as green businesses).

Notwithstanding the above issues, this section provides the ratio of existing off-street parking to the City's parking requirements. Based on this assessment, the ratio of parking supply to code requirements is approximately 50% along South Santa Monica, Olympic, and South Robertson Boulevards, 100% on Wilshire Boulevard and 140% along South Beverly Drive. This is shown in Figure 41.

Figure 41: Parking Built to Code Comparison in the Expansion Corridors

Expansion Corridor	Required Off-Street Spaces	Existing Off-Street Parking Spaces	Code Requirement / Supply	Supply / Code Requirement
S Beverly Drive	1,792 – 1,812	2,531	**0.71 – 0.72**	**140 – 141%**

[46] City of Beverly Hills Ordinance No. 1195 regarding Municipal Code §10-3.2730, 1965

Olympic Boulevard	1,709 – 1,736	915	**1.87 – 1.90**	**53 – 54%**
S Robertson Boulevard	1,100 – 1,127	595	**1.85 – 1.89**	**53 – 54%**
S Santa Monica Boulevard	511	257	**1.99**	**50%**
Wilshire Boulevard	5,015 – 5,063	4,857	**1.03 – 1.04**	**96 – 97%**

Sources:City of Beverly Hills, Nelson\Nygaard, March 2014

In the absence of demand data, this information would lead to the opposite conclusions regarding the location and scarcity of parking. By comparing to code requirements, one might come to the erroneous conclusion that much more parking is needed along South Santa Monica Boulevard, but that South Beverly Drive is already overbuilt with respect to parking. As shown in Figures 35 – 39, however, South Santa Monica still has a large amount of available parking, whereas South Beverly Drive is approaching 85% occupancy. This discrepancy demonstrates the fallacy of using code requirements as either a predictor or indicator of parking need within the City.

FUTURE PARKING REQUIRED UNDER THE CURRENT CODE

While parking requirements are not a good indicator of parking demand, they do indicate the level of parking that would required according to the current Municipal Code. For this reason, we have used the current parking requirements to consider how much additional parking would be required under build out conditions for the expansion corridors according to the current code.

This analysis used County Assessor data on the value of land and the value of improvements in order to identify those parcels that are ripe for redevelopment within the corridors. Those with a ratio of improvements to land of less than 1 were considered ripe for redevelopment, while those with a ratio of 1 or more were considered unlikely to redevelop. Schools were assumed to retain in their present land use regardless of the relative value of improvements to land value.

For this analysis we have included two scenarios. The first scenario calculates that number of additional parking spaces would be required if the corridors were built out to the maximum bulk requirements defined by the City's zoning code, that is an FAR of 2 and building heights of up to 45 feet. The second scenario calculates the number of additional parking spaces that would be required if the corridors were built out to the maximum when one accounts for at or above-grade parking that is required under the Municipal Code. As outlined in Chapter 8, current parking standards reduce the feasible FAR to 1.03 along Robertson Boulevard and 1.19 along the other potential expansion corridors.[47]

Based on the improvements to land ratio, it is possible to add between 1,74 and 2.98 million square feet of development within the potential expansion areas. This level of redevelopment was based on an improvements-to-land ratio of 1.00, that is, where the value of land exceeds the value of improvements and therefore suggests that the property is ripe for redevelopment. Schools and properties in excess of current zoning standards were omitted from the calculation.

For a 30% build out scenario, this translate to a total lot area of 460,000 square feet, or a floor area of between 538,000 and 921,000 square feet of redevelopment (for feasible FAR and FAR respectively). This 30% build out would be associated with between 782 and 1,740 additional net spaces of required parking under the feasible FAR and allowable FAR scenarios respectively. The improvements-to-land ratios associated with 30% build out are extremely low, ranging from 0.1

[47] City of Beverly Hills Municipal Code §10-3-2726, §10-3-2755, §10-3-2730

on Olympic and Wilshire Boulevards to 0.34 on Santa Monica Boulevard. These low IL ratios indicate that redevelopment is extremely ripe for the associated properties. It may also suggest that other factors such as site geometry and parking requirements are limiting redevelopment.

For an 85% build out scenario, the total lot area of redevelopment would be 1.28 million square feet, or a floor area of between and 1.50 and 2.57 million square feet. This redevelopment would be associated with between 2,690 and 5,550 additional net spaces of required parking associated feasible FAR and allowable FAR respectively. The IL ratios associated with this level of redevelopment fall between 0.45 on Robertson Boulevard and 0.80 for Wilshire Boulevard. The above levels of new parking are outlined in Figures 42 and 43. Levels could be reduced under lower minimum parking requirements.

Figure 42: Additional Required Parking Spaces for Build Out in the Expansion Corridors

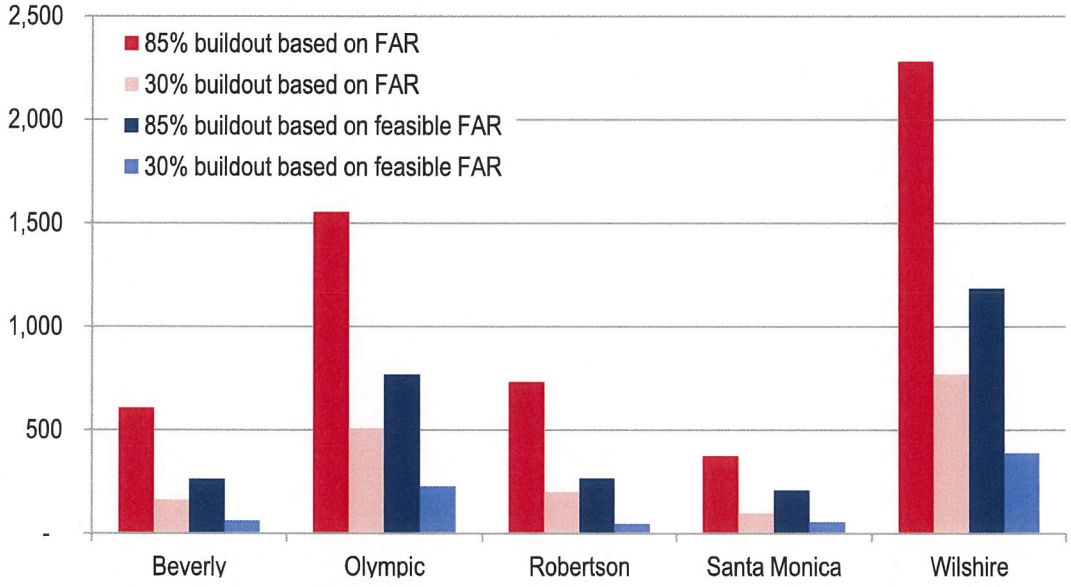


Figure 43: Redevelopment and Additional Required Parking Spaces for Build Out in the Expansion Corridors

Expansion Corridor	30% Build Out			85% Build Out		
	Redeveloped lot area (sf)	Additional required spaces based on FAR 2	Additional required spaces based on feasible FAR	Redeveloped lot area (sf)	Additional required spaces based on FAR 2	Additional required spaces based on feasible FAR
S Beverly Drive	63,244	164	63	174,001	609	264
Olympic Boulevard	121,160	508	228	345,817	1,555	768
S Robertson Boulevard	60,410	200	47	173,734	734	267
S Santa Monica Boulevard	27,389	98	56	80,395	375	210
Wilshire Boulevard	188,208	769	389	508,824	2,282	1,185
TOTAL	460,411	1,739	782	1,282,771	5,554	2,693

Sources: Nelson\Nygaard, Los Angeles County Assessors Office, City of Beverly Hills, March 2014

6 COST AND FEASIBILITY OF EXPANDING THE IN-LIEU PROGRAM AND CONSTRUCTING NEW PUBLIC PARKING IN EXPANSION AREAS

This chapter will consider the financial implications of expanding the in-lieu program, including an analysis of construction and real estate costs associated with building new municipal parking garages and development feasibility analysis for potential new development within the expansion areas.

CURRENT CONSTRUCTION COSTS FOR NEW PARKING FACILITIES

As part of the study of parking capacity in the potential expansion areas of the in-lieu program, the following are cost analyses for several potential parking structure types – surface lot, above grade parking structure, below grade parking structure, and above and below grade parking structures with automated operations. Each parking structure is assumed to be accompanied with retail that fronts the street. As the parcels within the City of Beverly Hills are relatively standard in size, the parking structure cost estimates assume a standard structure footprint that can be sited within four parcels of typical size while taking into account the required setbacks and height limits.

The cost of new parking ranges from $38,000 per space to $86,000 per space for anything other than surface parking.

The construction cost for the parking structures and retail will be comparable from site to site regardless of the location within the Expansion Area. However, the real estate and land costs will vary between South Beverly Drive, South Robertson Boulevard, South Santa Monica Boulevard, Wilshire Boulevard, and Olympic Boulevard. Below is a chart summarizing the parking structure data for each type, and cost breakdowns per square foot and per vehicle stall. The construction cost of new parking ranges from $38,000 per space to $86,000 per space for anything other than surface parking. Following the chart are summaries of each parking structure type with more detailed information, and the assumptions that were taken to derive the costs.

The cost estimates do not take into account unforeseen conditions that may be found on a particular site during the course of site excavation or construction. Any unforeseen conditions that are discovered and that results in additional work or remediation will be an additional cost to

the following estimates. The cost analyses are based on CPI and Engineering Cost Index parameters.

Figure 44: Parking Structure Construction Cost Analysis

Facility Type	Stalls	Floor Levels	Site (sf)	Building Area (sf)	Cost per Square Foot	Cost per Stall	Equivalent Construction Cost
Surface Lot	76	4	24,360	24,360	$19.49	**$6,247**	$475,000
Above Grade Parking Structure	159	4	24,360	76,320	$89.51	**$42,966**	$6,830,000
Below Grade Parking Structure	126	4	24,360	73,710	$147.31	**$86,178**	$10,900,000
Above Grade Parking Structure with Automated Operation	300	4	24,360	76,500	$147.15	**$37,523**	$11,300,000
Below Grade Parking Structure with Automated Operation	270	4	24,360	73,710	$227.33	**$62,060**	$16,800,000
Combination of Above Grade and Below Grade Parking Structure with Automated Operation	300	4	24,360	76,500	$195.26	**$49,792**	$14,900,000

Sources: City of Beverly Hills, Watry Design, March 2014

Surface Lot

For the surface lot cost analysis, the following assumptions were made:

- A 24,360 square foot site (203 feet by 120 feet), the equivalent of combing four adjacent typical sized parcels in the City of Beverly Hills
- Two parking drive aisles, providing two-way traffic and 90 degree parking, with one exit/entrance driveway provided
- An estimated 76 parking stalls
- An efficiency of 321 square feet per parking stall
- Basic landscaping, site lighting, drainage, grading and paving, and parking stall striping
- Overhead and Markup of 15%
- Design Contingency of 10%
- Escalation cost of 4%, based on today's dollar
- A normal current construction market

Based on the above assumptions, we estimate that the surface lot will be approximately $19.49 per square foot, which is a cost per parking stall of $6,247.

Above Grade Parking Structure

For the above grade parking structure cost analysis, the following assumptions were made:

- A 24,360 square foot site (203 feet by 120 feet), the equivalent of combing four adjacent typical sized parcels in the City of Beverly Hills
- A total of four parking levels—one level on grade, and three supported levels
- The structural system of the parking structure is cast-in-place concrete, long span, with shear walls acting as the lateral system, and shallow foundations
- A high level of finish
- An estimated 159 parking stalls
- An efficiency of 480 square feet per parking stall
- A total building area of 76,320 square feet, which includes ground level retail fronting the street
- A cold shell ground level retail space of approximately 5,890 square feet
- Overhead and Markup of 15%
- Design Contingency of 10%
- Escalation cost of 4%, based on today's dollar
- A normal current construction market

Based on the above assumptions, we estimate that the above grade parking structure will be approximately $89.51 per square foot, which is a cost per parking stall of $42,966.

Below Grade Parking Structure

For the below grade parking structure cost analysis, the following assumptions were made:

- A 24,360 square foot site (203 feet by 120 feet), the equivalent of combing four adjacent typical sized parcels in the City of Beverly Hills
- A total of three parking levels below grade
- The structural system of the parking structure is cast-in-place concrete, long span, with shear walls acting as the lateral system, and shallow foundations
- A moderate level of finish (finish is focused on the interior, as there is no exterior finish for the below grade structure)
- An estimated 126 parking stalls all below grade (no parking stalls at grade level)
- An efficiency of 585 square feet per parking stall (retail square footage not included in efficiency calculation)
- A total building area of 73,710 square feet, which includes ground level retail fronting the street
- A cold shell ground level retail space of approximately 12,214 square feet (approximately half of the site, allowing for vehicle entrance into the parking structure at the rear of the site)
- Additional cost included for the roof of the retail, as the parking structure is not providing the roof
- A premium was included in the cost of the parking structures' top level (base of the retail) to account for a stronger structural system in order to support the live load of the retail, which is greater than the live load for a parking structure.
- Overhead and Markup of 15%

- Design Contingency of 10%
- Escalation cost of 4%, based on today's dollar
- A normal current construction market

Based on the above assumptions, we estimate that the below grade parking structure will be approximately $147.31 per square foot, which is a cost per parking stall of $86,178.

Above Grade Parking Structure with Automated Operation

For the above grade parking structure with automated operation cost analysis, the following assumptions were made:

- A 24,360 square foot site (203 feet by 120 feet), the equivalent of combing four adjacent typical sized parcels in the City of Beverly Hills
- A total height of four parking levels, the equivalent of a self-park above grade parking structure
- The structural system of the parking structure is cast-in-place concrete, long span, with shear walls acting as the lateral system, and shallow foundations
- A high level of finish
- An estimated 300 parking stalls
- An efficiency of 255 square feet per parking stall
- Four entry/exit portal bays to provide a level of service appropriate for 300 vehicles
- A total building area of 76,500 square feet, which includes ground level retail fronting the street
- A cold shell ground level retail space of approximately 5,890 square feet
- An estimated lump sum amount of $4,000,000 for the mechanical parking system
- Overhead and Markup of 15%
- Design Contingency of 10%
- Escalation cost of 4%, based on today's dollar
- A normal current construction market

Based on the above assumptions, we estimate that the above grade parking structure will be approximately $147.15 per square foot, which is a cost per parking stall of $37,523. The cost per parking stall is lower than the self-park above grade structure due to the greater number of vehicles that the structure can accommodate, i.e. better efficiency. However, the square foot cost is higher in comparison to the self-park structure due to the added cost of the mechanical parking system.

Below Grade Parking Structure with Automated Operation

For the below grade parking structure with automated operation cost analysis, the following assumptions were made:

- A 24,360 square foot site (203 feet by 120 feet), the equivalent of combining four adjacent typical sized parcels in the City of Beverly Hills
- A total depth of three parking levels below grade, the equivalent of the self-park below grade parking structure

- The structural system of the parking structure is cast-in-place concrete, long span, with shear walls acting as the lateral system, and shallow foundations
- A moderate level of finish (finish is focused on the interior, as there is no exterior finish for the below grade structure)
- An estimated 270 parking stalls below grade
- An efficiency of 273 square feet per parking stall
- Four entry/exit portal bays to provide a level of service appropriate for 270 vehicles
- A total building area of 73,710 square feet, which includes ground level retail fronting the street
- A cold shell ground level space of approximately 19,109 square feet that includes the retail and enclosure for the vehicle entry and exit portals in the rear of the site. Additional cost was included for the roof of the retail, as the parking structure is not providing the roof.
- A premium was included in the cost of the parking structures' top level (base of the retail) to account for a stronger structural system in order to support the live load of the retail – which is greater than the live load for a parking structure.
- An estimated lump sum amount of $4,000,000 for the mechanical parking system
- Overhead and Markup of 15%
- Design Contingency of 10%
- Escalation cost of 4%, based on today's dollar
- A normal current construction market

Based on the above assumptions, we estimate that the above grade parking structure will be approximately $227.33 per square foot, which is a cost per parking stall of $62,060. The cost per parking stall is lower than the self-park below grade structure due to the greater number of vehicles that the structure can accommodate, i.e. better efficiency. However, the square foot cost is higher in comparison to the self-park structure due to the added cost of the mechanical parking system

Combination Above Grade and Below Grade Parking Structure with Automated Operation

For the combination above grade and below grade parking structure with automated operation cost analysis, the following assumptions were made:

- A 24,360 square foot site (203 feet by 120 feet), the equivalent of combining four adjacent typical sized parcels in the City of Beverly Hills
- Two levels of parking above grade and two levels of parking below grade
- The structural system of the parking structure is cast-in-place concrete, long span, with shear walls acting as the lateral system, and shallow foundations
- A high level finish for the above grade levels of parking structure, and a moderate level of finish for the below grade levels of parking structure (finish is focused on the interior, as there is no exterior finish for the below grade structure)
- An estimated 300 parking stalls
- An efficiency of 255 square feet per parking stall
- Four entry/exit portal bays to provide a level of service appropriate for 300 vehicles

- A total building area of 76,500 square feet, which includes ground level retail fronting the street
- An estimated lump sum amount of $4,000,000 for the mechanical parking system
- Overhead and Markup of 15%
- Design Contingency of 10%
- Escalation cost of 4%, based on today's dollar
- A normal current construction market

Based on the above assumptions, we estimate that the above grade parking structure will be approximately $195.26 per square foot, which is a cost per parking stall of $49,792.

SUITABILITY ANALYSIS FOR MUNICIPAL PARKING GARAGES

Conceptual drawings were developed to determine the feasibility of providing above grade self-park structured parking within Expansion Areas A and B. Four streets were analyzed: South Robertson Boulevard, South Beverly Drive, South Santa Monica Boulevard, and Olympic Boulevard.

Conceptual Drawings

The conceptual drawings for each location present the ground level floor plan of a parking structure that encompasses four parcels, each parcel being approximately 50 feet wide. A minimum of four parcels are needed in order to provide a parking structure that operates efficiently and satisfies the City's parking regulations for stall sizes, aisle widths, and ramp slopes. Each parking structure also accommodates a retail space of approximately 5,800 square feet that fronts along the street. Vehicle entry and exit access is located in the rear of the structure to take advantage of the rear alley behind each site.

Along with each floor plan a Summation Chart is provided that specifies the overall vehicle stall count for each structure.

Current Land Costs in Expansion Areas

The cost to acquire parking sites for new garages varies by location. Los Angeles County Assessor 2014 data provides the value of land and improvements for recently sold and recorded parcels[48] located in Expansion Areas A and B. Local brokers verified Assessor provided values. As expected, land values are lowest along Olympic Boulevard at $260 per site square foot, and highest along South Beverly Drive at $990 per site square foot. Figure 39 shows the land value per square foot for each corridor in Expansion Areas A and B.

Land values are lowest along Olympic Boulevard at $260 per site square foot, and highest along South Beverly Drive at $990 per site square foot.

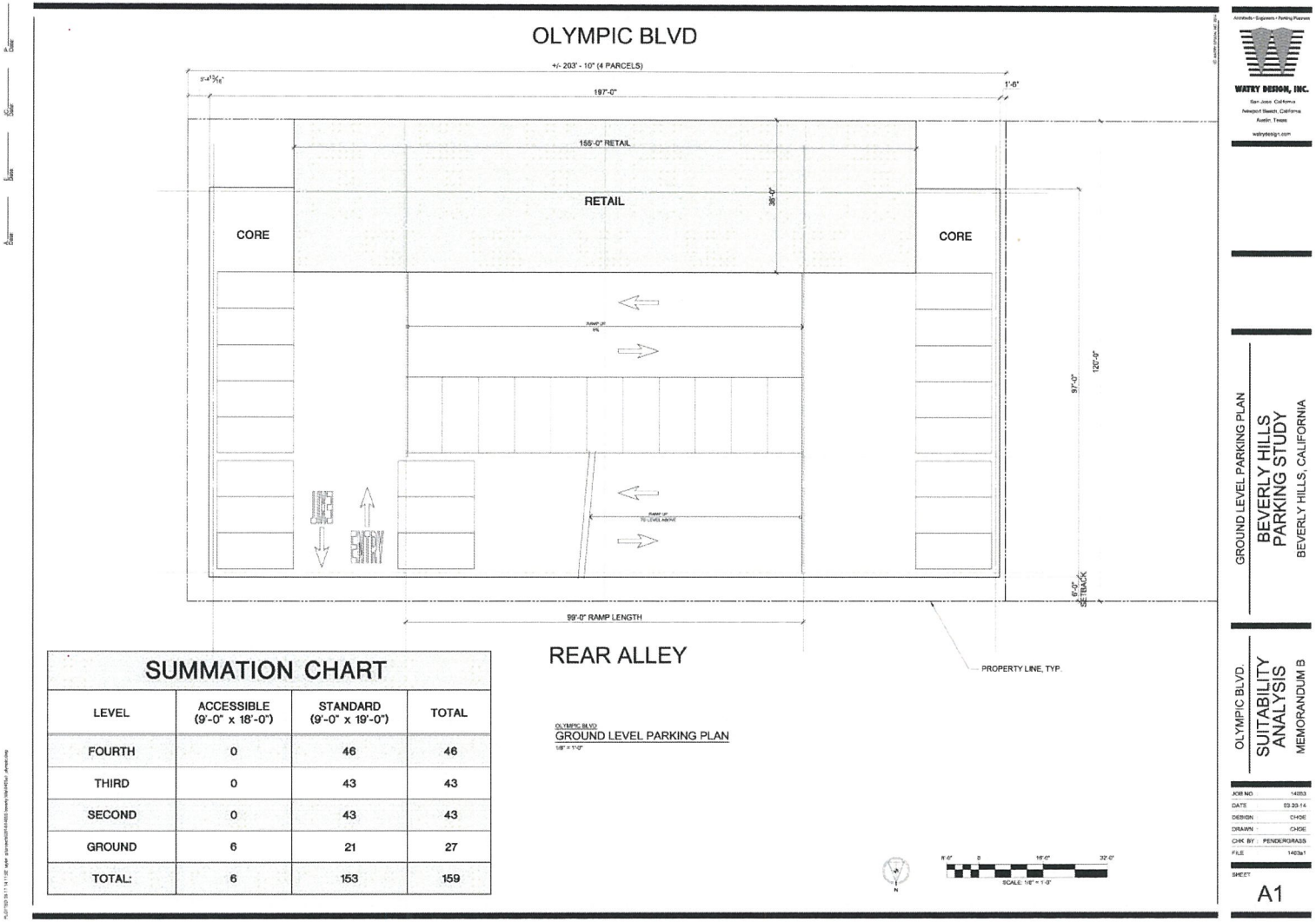
[48] Only properties recorded between 2012 and 2014 were evaluated for land value.

Figure 45: Suitability Analysis

Location	Stalls	Floors	Parcel size (SF)	Land cost by area	Equivalent land cost	Notes on access
Olympic Boulevard	159	4	24,460 (4 parcels)	**$260/ SF**	$6,360,000	Vehicle access at rear alley. Pedestrian access along street.
Robertson Boulevard	152	4	22,228 (4 parcels)	**$420/ SF**	$9,340,000	Vehicle access at rear alley. Pedestrian access along street.
Beverly Drive	159	4	22,000 (4 parcels)	**$990/ SF**	$21,800,000	Vehicle access at rear alley. Pedestrian access along street.
Santa Monica Boulevard	159	4	24,000 (4 parcels)	**$600/ SF**	$14,400,000	Vehicle access at rear alley. Pedestrian access along street.

Sources: City of Beverly Hills, Watry Design, March 2014

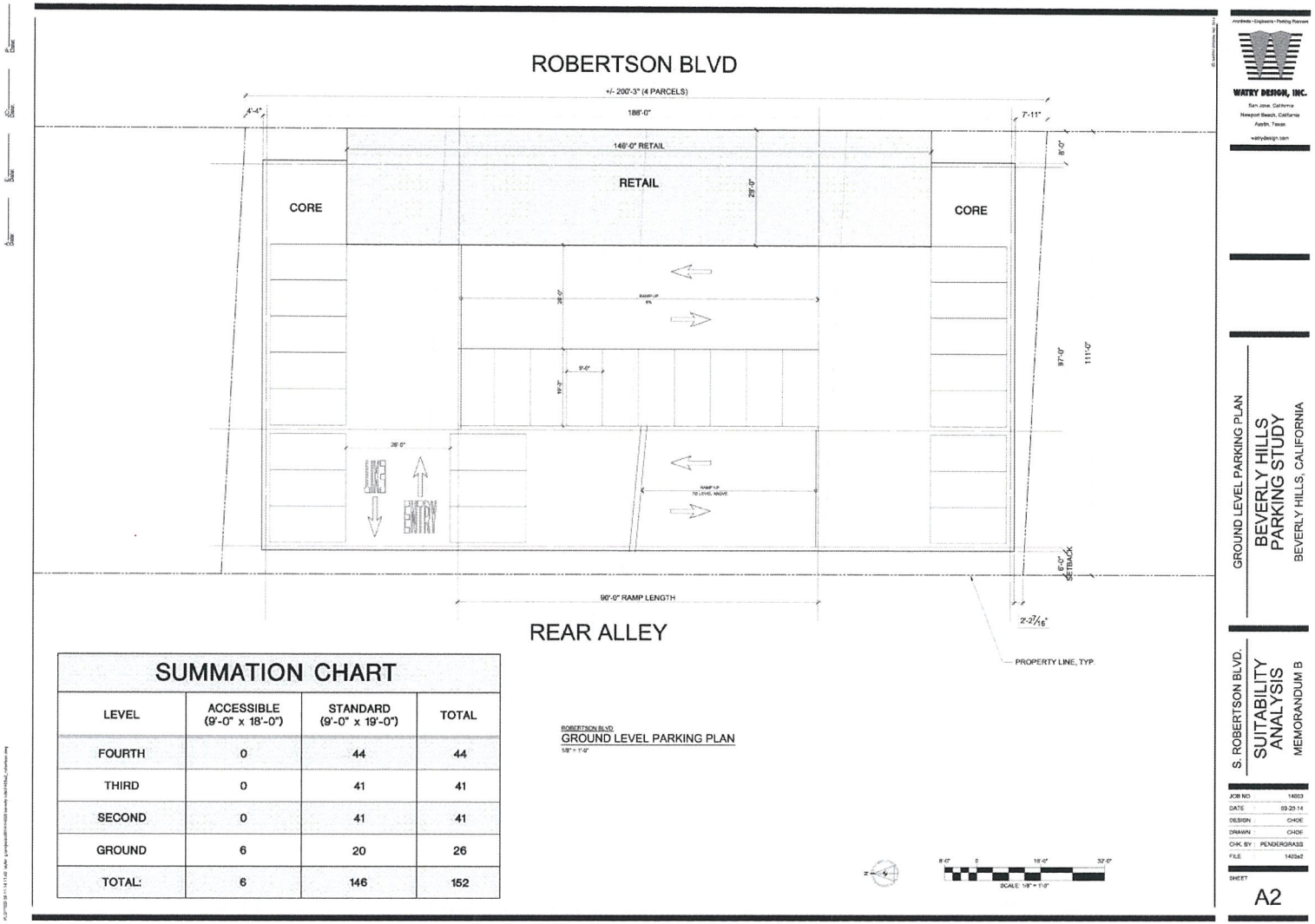
Figure 46: Conceptual Ground Level Floor Plan for New Parking Structure on Olympic Boulevard



SUMMATION CHART

LEVEL	ACCESSIBLE (9'-0" x 18'-0")	STANDARD (9'-0" x 19'-0")	TOTAL
FOURTH	0	46	46
THIRD	0	43	43
SECOND	0	43	43
GROUND	6	21	27
TOTAL:	6	153	159

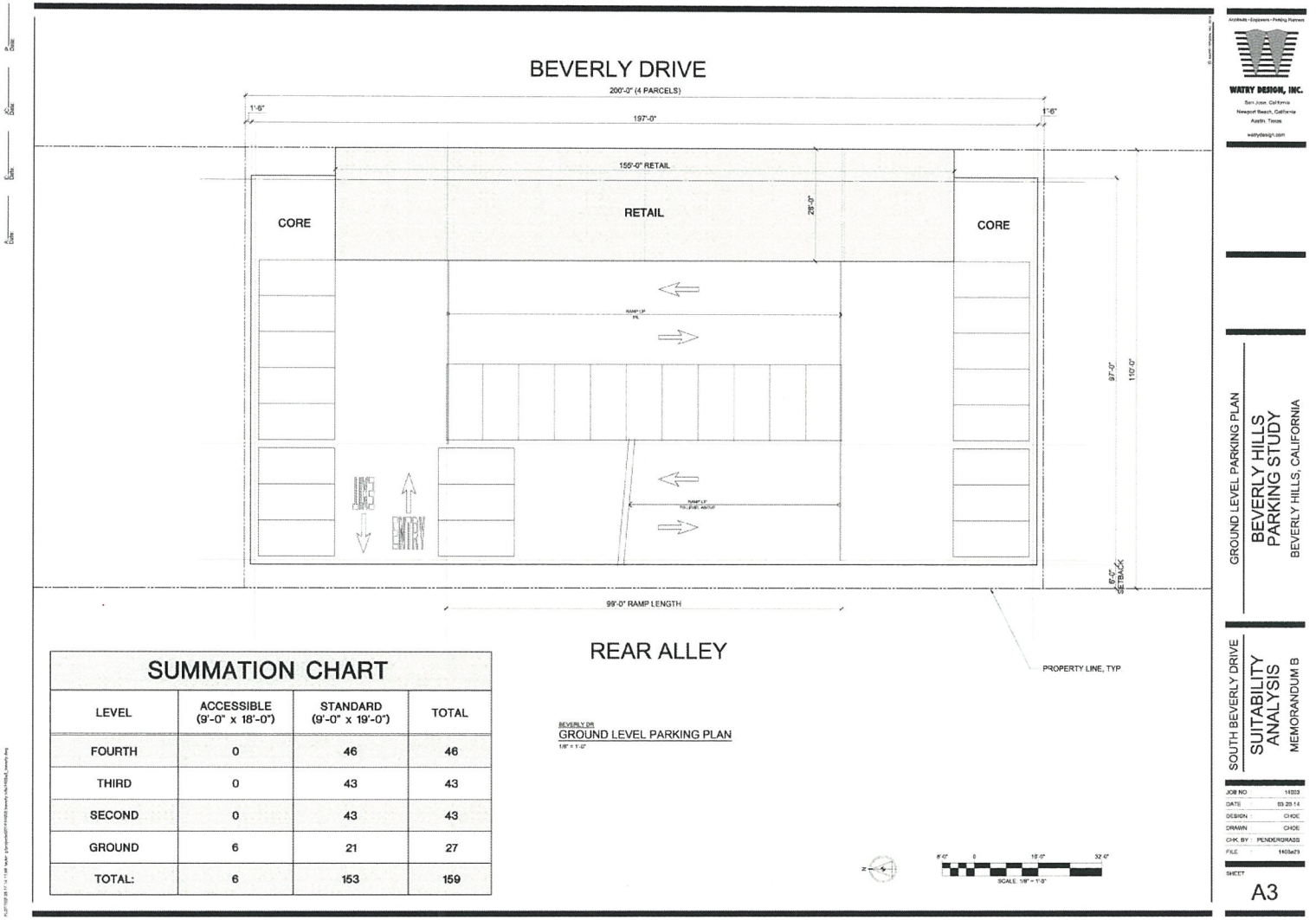
Figure 47: Conceptual Ground Level Floor Plan for New Parking Structure on Robertson Boulevard



SUMMATION CHART

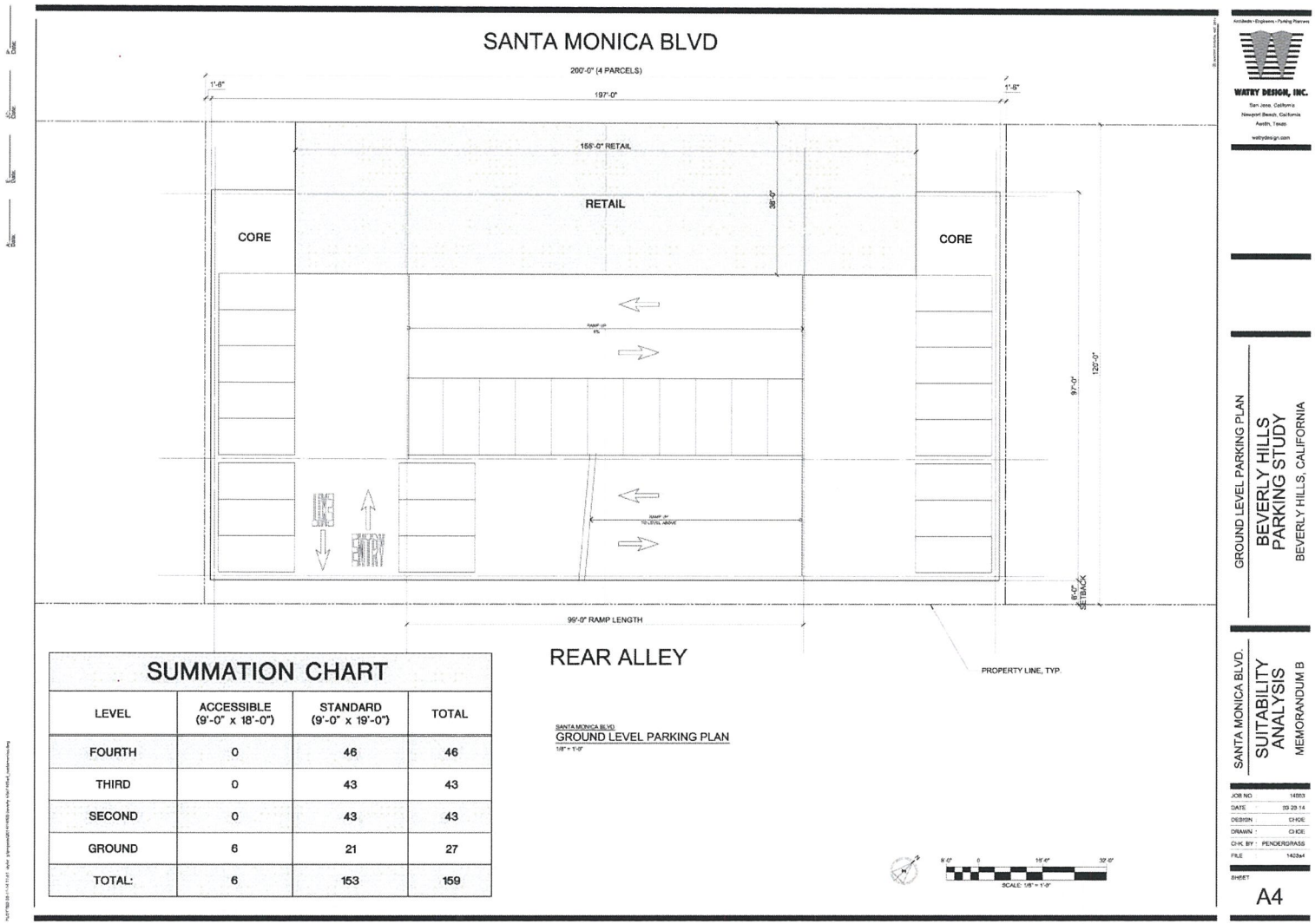
LEVEL	ACCESSIBLE (9'-0" x 18'-0")	STANDARD (9'-0" x 19'-0")	TOTAL
FOURTH	0	44	44
THIRD	0	41	41
SECOND	0	41	41
GROUND	6	20	26
TOTAL:	6	146	152

Figure 48: Conceptual Ground Level Floor Plan for New Parking Structure on Beverly Drive



SUMMATION CHART			
LEVEL	ACCESSIBLE (9'-0" x 18'-0")	STANDARD (9'-0" x 19'-0")	TOTAL
FOURTH	0	46	46
THIRD	0	43	43
SECOND	0	43	43
GROUND	6	21	27
TOTAL:	6	153	159

Figure 49: Conceptual Ground Level Floor Plan for New Parking Structure on Santa Monica Boulevard



SUMMATION CHART			
LEVEL	ACCESSIBLE (9'-0" x 18'-0")	STANDARD (9'-0" x 19'-0")	TOTAL
FOURTH	0	46	46
THIRD	0	43	43
SECOND	0	43	43
GROUND	6	21	27
TOTAL:	6	153	159

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DEVELOPMENT FEASIBILITY AND PRO FORMA ANALYSIS

In order to understand the implications of the current parking requirements on areas where the City wants to encourage new development, this analysis uses local market and construction cost data to determine the financial feasibility of new mixed-use construction located on Robertson and Olympic Boulevards. Development feasibility analysis provides a basis for understanding whether a developer would be attracted to the site to construct new uses under existing zoning and parking requirements, given current market conditions. In this case, a residual land value calculation indicates whether the value of new development, based on net operating income, is greater than the cost of development plus the land value and a reasonable developer profit, and thereby able to attract a developer to build the desired project types.

Methodology

Financial feasibility analysis uses current real estate market and construction data to determine whether a developer would be willing to undertake new development, using the following analytical steps:

- **Development Program:** Nelson/Nygaard, BAE, and the City of Beverly Hills formulated development programs for each prototype project based on actual parcel sizes located along Robertson Boulevard and Olympic Boulevard. The development programs include a description of the site area, development density, mix of uses and unit types, and parking requirements. Assumptions about how parking requirements would be fulfilled are reflected in allocations of parking to new surface parking spaces, spaces in above-grade parking podiums/structures, and underground parking spaces.
- **Cost Assumptions:** The analysis uses data from RS Means and local developers for each prototype project to estimate hard and soft construction costs for the development program, including on- and off-site costs, land costs, financing costs, and required developer rates of return. RS Means publishes construction cost estimates for different building types, with adjustment factors to reflect localized conditions. Parking cost estimates are based on the Parking Development Cost Analysis included in this chapter. Development costs are reported by building component (i.e., office, retail, restaurant, residential).
- **Revenue and Project Value Assumptions:** Data from Costar and local brokers provide the basis for revenue estimates for each prototypical project. Rental and sales revenue estimates are based on current market conditions in each corridor, and are used to calculate the value of completed projects by capitalizing net operating income (revenues less operating expenses) using market capitalization rates applicable to the real estate product category.
- **Residual Land Value:** To determine the residual land value, the pro forma model calculates the amount by which the total value of the completed project exceeds the total development cost, including required developer returns. If the residual land value is positive and equal to higher than the corridor's market land value, a developer would be attracted to the project. A negative residual land value, or value that is positive, but still lower than corridor's market land value, indicates that some level of subsidy would be required to attract a developer to the project under current economic conditions.

BAE prepared a series of static pro formas to conduct this feasibility analysis. A static pro forma uses the assumptions described above to calculate the residual land value of the site without

accounting for the time value of money (i.e., inflation and discount rates). Instead, a static pro forma relies on capitalization rates determined in the market to account for the total value of the development if purchased outright at the time of analysis. This is the same method that is used by developers to screen potential projects for feasibility. The pro formas for each of the prototype projects are appended to this report as Appendix D.

Prototype Projects

The City of Beverly Hills, Nelson/Nygaard, and BAE conceptualized the following three prototype projects. Associated development envelopes, parking requirements, building heights, and other requirements are taken from the City's zoning code and other relevant regulations. Each prototype project consists of two or three parcels that are considered in aggregate and evaluated under current parking requirements. Figure 50 summarizes the specifications of the three prototype projects.

Figure 50: Development Prototypes

Location/ Use	Robertson Office/Retail	Robertson Office/Restaurant	Olympic Rental Residential/Retail
Current Parking Requirements			
Parcel Size	16,350	16,350	12,480
FAR	1.06	0.60	1.14
Total Gross Area (Sq.Ft.)	41,250	41,910	35,310
Office (Sq.Ft.)	11,500	6,500	n/a
Retail/Restaurant (Sq.Ft.)	5,750	3,250	4,730
Residential (Sq.Ft.)	n/a	n/a	9,460
Residential Units	n/a	n/a	11
DU/Acre	n/a	n/a	3.15
Number of Stories	3	3	3
Parking Spaces	50	67	44
Parking (sf)	24,000	32,160	21,120

Robertson Boulevard: Office/Retail

This project consists of three parcels on Robertson Boulevard that, combined as a single project, would contain 11,500 gross square feet of office space, approximately 7,750 gross square feet of ground-floor retail, and 50 parking spaces. The office space has an assumed efficiency factor of 90 percent, resulting in approximately 10,350 rentable square feet. The same 90 percent efficiency factor is applied to the retail space as well, netting approximately 5,175 rentable square feet.

Parking requirements are one space per 350 gross office and retail square feet, all of which would need to be provided in an above ground parking structure, due to parcel size which makes underground facilities technically infeasible.

Robertson Boulevard: Office/Restaurant

This project consists of the same three Robertson Boulevard parcels considered in aggregate. Under this prototype, the site would be developed as office over restaurant space. Combined as a single project, this site would contain 6,500 gross square feet of office space, approximately 3,250 gross square feet of ground-floor restaurant, and 67 parking spaces. The office space has an assumed efficiency factor of 90 percent, resulting in approximately 5,850 rentable square feet. The same 90 percent efficiency factor is applied to the restaurant space as well, netting approximately 2,925 rentable square feet. The reduced development size compared to the office/retail prototype results from increased parking requirements for restaurant compared to retail uses.

Parking requirements are one space per 350 gross office and back of house restaurant square feet. The bar and dining area of restaurant space requires one parking space per 45 gross square feet. Due to the size of the site, all of the required spaces would need to be provided in an above ground parking structure.

Olympic Boulevard: Retail/Rental Residential

This project consists of two parcels on Olympic Boulevard that, combined as a single project, would contain 4,730 gross square feet of ground-floor retail, 11 rental residential units, and 44 parking spaces. The retail space has an assumed efficiency factor of 90 percent, resulting in approximately 4,494 rentable square feet.

The rental residential project component contains six studio units measuring 600 square feet per unit, five one-bedroom units measuring 1,000 square feet per unit, and 200 square feet of open space per unit that would be located on the roof. The units have an efficiency factor of 90 percent to accommodate circulation.

Parking requirements are one space per 350 gross retail square feet, one space per studio residential unit, and two spaces per one bedroom residential unit, per City of Beverly Hills parking requirements. Due to the site's size, all parking spaces would need to be provided in an above ground parking structure.

Key Assumptions

The analysis uses market data from CoStar, a commercial real estate data vendor, and construction cost data from RS Means as the basis for modeling development feasibility. Interviews with City of Beverly Hills planning staff, local brokers, and developers complement this data and provide additional insights into current development and market conditions in Beverly Hills. These data are input into the pro forma model as assumptions to generate the findings of this analysis. Below are some of the key assumptions used for each type of development tested.

All Development Types

The following key assumptions were used for all development types and do not change significantly by use.

- **Development Size and Above Grade Parking:** All analyzed scenarios assumed a above grade parking due to the difficulty associated with assembling enough parcels to develop subterranean facilities. If a larger number of parcels were to be assembled, this might enable development to an FAR of 2 with subterranean parking. The tradeoff is the higher parking construction costs, larger number of parking spaces required, and the greater difficulty of assembling at least four parcels.
- **Parking Costs:** Per the findings in the Parking Structure Construction Cost Analysis contained within this chapter, the analysis assumes that underground parking costs $86,180 per stall, while podium or above ground structured parking costs $42,970 per stall, and new surface parking costs $6,250 per space.
- **Financing Costs:** The analysis assumes that developers can obtain financing for 60 percent of the total costs and will be charged two percent in loan fees and a seven percent annual interest rate.
- **Developer Profit:** This analysis assumes that developers would not be attracted to a project unless they could earn a 10 percent return on costs, excluding land costs. At the height of the market in 2006, developers required a 12 percent return on costs to undertake a project, while during the great recession, their required rate of return dropped to eight percent. This analysis uses a return-on-costs requirement that falls in the middle of the range.

Office Uses

The following assumptions specifically apply to office uses. Changes in market conditions and their corresponding assumptions could significantly impact development feasibility.

- **Parking Ratios**: This analysis assumes that new office development would require one parking space per 350 gross square feet.
- **Development Costs:** Based on current data from RS Means and interviews with local developers, this analysis assumes that office construction hard costs range from $155 to $183 per gross square foot, delivering a warm shell with an additional $65 per leasable square foot in tenant improvements (TIs). Office construction costs vary by the size of the development, because larger developments can spread fixed construction costs over more square footage; thus developing a 5,800 square foot building would cost more on a per square foot basis than developing a 12,600 square foot building.
- **Net Operating Income:** According to Costar, office space along Robertson Boulevard commands rental rates of approximately $4.00 per square foot per month, full service. Assuming that new space can command a premium from existing space, this analysis assumes that new office space could receive $4.15 per month on a full service basis. Interviews with local developers and data from BOMA's 2013 Experience Exchange Report indicate that operating expenses would be approximately $12 per square foot for newly built Beverly Hills Class A office space.

Retail/Restaurant Uses

The following assumptions specifically apply to retail and restaurant uses. Changes in market conditions and their corresponding assumptions could significantly impact development feasibility.

- **Parking Ratios:** This analysis assumes that new retail and back of house restaurant development would require one parking space per 350 gross square feet, while bar and dining restaurant space would require one space per 45 square feet.
- **Development Costs:** Based on current data from RS Means and interviews with local developers, this analysis assumes that ground floor retail construction hard costs range from $101 to $109 per gross square foot with an additional $55 per leasable square foot in TIs, while ground floor restaurant construction hard costs range from $166 to $182 per gross square foot with an additional $55 per leasable square foot in TIs. Retail and restaurant construction costs vary by the size of the development, because larger developments can spread fixed construction costs over more square footage; thus developing a 3,000 square foot building would cost more on a per square foot basis developing a 7,600 square foot building.
- **Net Operating Income:** Market data from CoStar on similar properties within the Robertson Boulevard corridor of Beverly Hills show that ground floor retail in a mixed-use project can charge approximately $3.95 per square foot per month on a triple net basis. For restaurant uses, the assumed rental rate is higher at $5.25 per rentable square foot per month on a triple net basis.

Residential Uses

The following assumptions specifically apply to residential uses. Changes in market conditions and their corresponding assumptions could significantly impact development feasibility.

- **Development Costs:** Based on current data from RS Means and interviews with local developers, this analysis assumes that residential construction hard costs range from $133 to $140 per gross square foot with an additional $5,000 for appliances per rental unit. As with commercial uses, larger developments have a lower cost per square foot than smaller developments that cannot take advantage of economies of scale.
- **Rental Unit Prices:** The analysis uses rental rates from other studio and one-bedroom units advertised on Craigslist to project rental revenues from new apartment development along Olympic Boulevard. Rents range from $1,400 per month for a studio to $3,600 per month for a 3-bedroom unit and average $2.30 per square foot of living space.

Findings

As Figure 51 shows below, under current parking requirements and market conditions, all of the prototype developments are infeasible. Mixed-use office with retail would require the least amount of subsidy, compared to mixed-

In order to realize desired development on Robertson and Olympic Boulevards, office and retail lease rates would have to increase approximately 40% and/or the City could reduce parking requirements.

use office with restaurant, which would require the largest subsidy due to the higher amounts of parking required for restaurant uses. In order to realize desired development on Robertson and Olympic Boulevards, office and retail lease rates would have to increase approximately 40 percent and/or the City could reduce parking requirements, either through a parking in-lieu fee, reduced parking requirements, or a combination of both.

Figure 51: Development Feasibility

Location/ Use	Robertson Office/Retail	Robertson Office/Restaurant	Olympic Rental Residential/Retail
Current Parking Requirements			
Project Value	$10,444,260	$6,697,240	$6,514,079
Development Costs	($7,649,273)	($7,126,498)	($5,557,499)
Developer Profit	($764,927)	($712,650)	($555,750)
Residual Land Value	$2,030,060	($1,141,909)	$400,830
Residual Land Value/Sq.Ft.	$124	($70)	$32
Market Land Value/ Sq.Ft.	$420	$420	$260
Feasible?	No	No	No

Feasibility Under a Parking In-Lieu Fee Alternative

If the City of Beverly Hills expands its in-lieu fee program to include the Robertson Boulevard and Olympic Boulevard corridors, thereby allowing developers to pay a parking in-lieu fee per required retail or restaurant parking space, it could lower development costs and incentivize development, thereby reducing the subsidy required to realize desired uses along the Robertson Boulevard and Olympic Boulevard corridors. In order to test the sensitivity of parking requirements compared to a parking in-lieu fee, this analysis tests the financial feasibility of the three prototype developments under a parking in-lieu fee alternative.

Development Prototypes

Under a parking in-lieu fee alternative, developers would be able to pay $28, 285 per retail and restaurant space rather than build parking within their development projects.[49] As office and residential uses are not eligible to pay parking in-lieu fees under the current program, this analysis assumes that only retail and restaurant uses would be eligible for an expanded parking in-lieu fee program.

[49] This is the lowest parking in-lieu that the City charges under its current in-lieu fee program. The analysis uses this fee amount to reflect that land values are lower along Robertson and Olympic Boulevards than in the Golden Triangle.

As Figure 52 shows, not only is the parking in-lieu fee less expensive than building structured parking, it would also allow developers to use more of the parcel for revenue generating uses, compared to under existing parking requirements, thereby getting closer to the allowable FAR.

Figure 52: Development Prototypes under Parking In-Lieu Fee Alternative

Location/ Use	Robertson Office/Retail	Robertson Office/Restaurant	Olympic Rental Residential/Retail
Parking In-Lieu Fee Alternative			
Parcel Size	16,350	16,350	12,480
FAR	1.28	1.28	1.82
Total Gross Area (sf)	40,200	40,200	35,250
Office (sf)	14,000	14,000	n/a
Retail/Restaurant (sf)	7,000	7,000	7,590
Residential (sf)	n/a	n/a	15,180
Residential Units	n/a	n/a	17
DU/Acre	n/a	n/a	4.87
Number of Stories	3	3	3
Parking Spaces	40	40	26
Parking (sf)	19.200	19,200	12,480

Findings

Under a parking in-lieu fee, feasibility improves for all uses. This is due to a combination of factors:

- More space can be used for revenue generating uses than if the site also had to accommodate on-site parking;
- Larger developments can take advantage of economies of scale to achieve a lower construction cost per square foot than smaller development; and
- The parking in-lieu fee per space is less expensive than the cost of building a parking space.

As Figure 53 shows, the parking in-lieu fee alone does not make the prototype developments feasible. However, if the City charges restaurant users the same rate for a parking in-lieu fee for new development as it currently charges for expanding an existing restaurant ($11,675 per space), then the residual land value would improve to $178 per square foot, requiring a less drastic change in market conditions and/or reduced subsidy to attract a developer.

Figure 53: Development Feasibility under Parking In-Lieu Fee Alternative

Location/ Use	Robertson Office/Retail	Robertson Office/Restaurant	Olympic Rental Residential/Retail
Current Parking Requirements			
Project Value	$12,714,752	$14,424,824	$10,514,995

Development Costs	($8,580,337)	($13,291,684)	($7,656,665)
Developer Profit	($858,034)	($1,329,168)	($765,666)
Residual Land Value	$3,276,381	($196,029)	$40,028
Residual Land Value per Square Foot	$200	($12)	$168
Market Land Value per Square Foot	$420	$420	$260
Financially Feasible?	No	No	No

In general, lowering the in-lieu fee alone would not be sufficient to incentivize new development. Although the mixed-use office/retail and rental residential/retail uses show positive land values, they are considerably lower than market land values along Robertson and Olympic Boulevards.

In order for these development prototypes to become feasible, markets would have to improve along the Robertson Boulevard and Olympic Boulevard corridors, in addition to the expansion of the parking in-lieu fee program. In addition to rising rents, another way the market could improve (from a developer feasibility standpoint) is if the cost for developers to acquire property declines. Based on conversations with City staff, it has been a number of years since developers have undertaken new construction in the Robertson and Olympic Boulevard areas that are the subject of this study. It is possible that the real estate sales transactions which established the market land values referenced above were premised on development expectations that are no longer valid. Given the fact that this pro forma analysis has shown such a large gap between residual land values for likely project types and the market values set by recent sales, it is possible that future land sales prices would be significantly lower, as land sales prices should reflect the economic utility of the property being purchased. Unless there are alternative uses of the property which are much more lucrative than the development prototypes modeled herein, the real estate market should eventually correct itself and land prices should decline. However, property owners will likely need to see significantly higher land values than the residual land values calculated for the different development scenarios, in order to have sufficient financial motivation to sell their property to developers.

In the meantime, the City could also consider reducing parking requirements for retail and other land uses as a tool for incentivizing development along these corridors, which would further reduce parking costs and improve development feasibility, regardless of whether parking is constructed on-site or an in-lieu fee is paid.

Feasibility Under an Automated Parking Alternative

In addition to expanding the existing in-lieu fee program, the City could allow parking to be developed in automated parking facilities. According to Watry Design, automated parking facilities require considerably less space per parking stall than standard garages, which translates into reduced costs per parking space. In addition, the reduction in required space per stall would

allow the developer to use more of its parcel for revenue-generating uses, thereby generating more revenue and getting closer to the allowable FAR. Thus, compared to existing parking requirements, allowing property owners to deliver parking in an automated garage would improve feasibility from baseline (existing) conditions. Whether an automated garage would improve development feasibility more or less than a parking in-lieu fee will depend on a variety of factors, including the relative number of spaces that could be delivered off-site under an expanded parking in-lieu fee program.

In order to update the code to allow developers to count parking spaces in automated garaged toward their parking requirements, the City would need to better understand the potential traffic and congestion impacts related to queuing on the street to get into the automated spaces, as well as any potential impacts to public garages and/or public safety from malfunctioning garages.

7 INDUSTRY BEST PRACTICES

This chapter provides a review of industry best practices from cities that have managed their parking to alleviate localized inefficiencies while spurring economic growth. The strategies described in this chapter are informed by a search of published articles, online sources, unpublished documents from cities or agencies with similar programs in their downtowns or commercial districts, and Nelson\Nygaard's previous experience with similar cities.

Historically, "solving the parking problem" often meant increasing the supply of free or underpriced parking. Unfortunately, constantly increasing the supply of a finite but underpriced commodity encourages inefficient overconsumption of that commodity. Providing "adequate" parking is therefore impossible when it is given away for free because the market for parking is not operating in a competitive and sustainable manner. Where parking is free, people will drive more, repark their car more often, use transit less, and walk less than is desirable or necessary.

This market inefficiency also degrades the quality of "place" due to increased traffic congestion, decreased foot traffic and business vitality, and degradation of the streetscape associated with frequent driveways and a large parking footprint. Parking provision is therefore only one tool available for managing parking demand and supply, and—more importantly—creating vibrant places. Studies of travel demand and elasticity highlight other factors that affect parking and travel demand, including land use density, distance to key destinations or events, land use mix, streetscape design, transportation system redundancy (or the availability of different routes and modes with comparable travel times), and pricing.[50] Complex interactions between these factors (and wider social and economic conditions) affect the attractiveness of a place as well as the demand for parking and different modes of transportation.

A holistic package of parking and transportation demand management tools is needed to produce great places that are attractive to new development, vibrant for businesses, walkable for customers, and healthy for local residents, with appropriate levels of parking. Managing parking is one of the most effective tools for managing traffic congestion and its environmental impacts, even when densities are relatively low and major investments in other modes have not been made. Parking management can also have a significant impact on commute mode choice, which translates directly to reductions in auto congestion and improved livability of commercial districts and adjacent neighborhoods.

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[50]There is a considerable body of research on the topic of parking and travel demand elasticity, but key articles include:

Cervero, R. and Kockelman, K. "Travel Demand and the 3Ds: Density, Diversity, and Design." *Transportation Research Part D: Transport and Environment*, Volume 2, Issue 3, 1997, pp. 199-219.

Shoup, D. "Cruising for Parking." *Transport Policy*, Volume 13, Issue 6, November 2006, pp. 479–486.

As Beverly Hills continues to evolve, its parking needs will change as well. This chapter provides descriptions and case studies of industry best practices for alternative programs that aim to correctly price parking, provide new parking facilities, and raise funds for new parking. These strategies utilize policies and programs that will enable more efficient utilization of existing supply, while alleviating parking congestion in certain areas.

IN-LIEU PARKING FEE

An in-lieu parking fee gives developers the option to pay a fee "in-lieu" of providing a portion of the number of parking spaces ordinarily required by a city's zoning ordinance.

Why implement it?

In-lieu fees are particularly appropriate for creating great places and undertaking adaptive reuse projects (to renovate and reuse historic buildings for something other than their original purpose) when these projects would be neither financially attractive nor architecturally feasible if forced to provide all required spaces on-site. An in-lieu fee can therefore encourage new development of the highest architectural and urban design quality as well as redevelopment of vacant, underutilized, dilapidated, and historic buildings in a downtown—often spurring a more successful and walkable district with a unique character and identity.

An in-lieu fee can encourage new development of the highest architectural and urban design quality

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. In addition, since the fees can be used to pay for spaces in public facilities, in-lieu fees are a good mechanism to facilitate shared parking between uses, thereby maximizing use of existing parking supply and forgoing the need to construct costly new parking facilities.

How will it work?

An in-lieu fee allows developers to undertake their developments without the required parking provision, by paying a fee "in-lieu" of parking. For example, a 3,500 square-foot restaurant that is required by municipal code to provide one parking space per 350 square feet of floor area would need to have 10 parking spaces on-site. However, a developer or restaurant owner may feel that only six spaces are needed on-site, and could therefore pay a per-space fee to make up for the remaining four spaces.

In-lieu fees are typically structured as either a fixed one-time fee per space or an annual fee per space. The one-time option provides upfront payments to the city at a time that closer aligns with parking impact, though the payment is unlikely to result in new parking supply until well after the impact. On the other hand, the annual payment option provides flexibility to the developer or lessee, as well as a steady income stream to the city so long as the business remains operational.

The in-lieu fees that are collected can then be used to build public parking spaces, purchase or lease private spaces for public use, support transportation demand management (TDM) strategies

that reduce trips, and improve overall mobility and access to the site. An in-lieu fee can also 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.

What are the challenges?

In-lieu fees present certain challenges. First, setting the level of the in-lieu fee is complicated. The fee should be high enough to generate revenue for needed parking and mobility projects. If the fee is set too low then it will not be able to fund projects to replace parking or reduce the demand for parking in a timely manner. On the other hand, the fee should not be set so high that a developer would simply rather build parking themselves. In this case, the city is also unlikely to generate a sufficient stream of revenue to fund parking and parking demand projects. In some cases, the fee may even be cost-prohibitive for developers, which may lead to empty storefronts or cancelled projects—thereby reducing the economic vitality and regeneration of the city.

Secondly, the success of an in-lieu fee is highly dependent on the overall health of the development market. If no projects are being built, then there is no chance for payment of in-lieu fees. If a city is seeking to finance new public parking facilities, in-lieu fees may not be the most stable revenue source.

In-lieu fees in selected California cities

Beverly Hills' in-lieu parking fee ranges from $11,675 per space for restaurant expansions to $47,007 per parking space for new construction on Rodeo Drive. As discussed in Chapter 3, the average fee over the life of the program has been $33,000 (adjusted to 2014 dollars). As shown in Figure 54, this fee is somewhat higher than other California cities, which often falls between $10,000 and $25,000 per space, with annual adjustment based on the CPI. On the other hand, Beverly Hills' in-lieu fee is lower than Palo Alto's fee of $67,100, which was designed to cover 100% of the cost of parking construction in that city. Unlike Beverly Hills' lease option (which is only available for restaurant expansions by lessees), most cities charge a one-time, per-space fee.

While many cities have in-lieu fee programs, they have mixed success in generating the amount of revenue required to actually build additional parking. This is the result of the challenge of setting an in-lieu fee high enough to account for construction costs of parking but low enough to ensure that the fee is still economically attractive to developers. Since cities have struggled to achieve this balance, the result is a limited amount of parking revenue. Given that in-lieu fees are inherently tied to the development market, most fee programs have not generated substantial amounts of revenue in recent years.

Additionally, most cities dedicate revenue to fund construction, operation, or maintenance of parking facilities, yet there are a few cities (such as Ventura and recently, Santa Monica) that also use in-lieu fee revenue to fund other mobility programs.

Figure 54: In-Lieu fees in selected California cities[51]

City	Fee Amount	Fee Adjustment	Fee Revenue Expenditures	Year Initiated
Beverly Hills	Rodeo: $47,007.40 Beverly: $37,605.80 Other CBD: $28,284.60 Restaurant expansion: $11,675	Annually based on CPI (not to exceed 10%)	Used to construct parking garages on city owned lands and in partnership with private development	1978
Culver City	Case-by-case based on assessed value for specified land use (parking lease is $80 per space per year)	Based on LA County assessed property value	Held in a fund for development of public parking facilities (but so far developers have opted to lease private spaces instead of participating in the in-lieu program)	N/A
Davis	$8,000 $4,000 (Central Commercial & Mixed Use)	As-needed	Held in consolidated off-site parking fund program for construction of public parking resources and parking structures downtown	1970's
Emeryville	$7,300	As-needed	Dedicated to construct parking. No revenue has been generated by the fee.	1993
Hermosa Beach	$29,500	As-needed	Used for construction of parking garages	1980's
Huntington Beach	$27,350	Annually based on CPI (not to exceed 3%)	Used to provide additional parking opportunities or reduce parking demand downtown (shuttles, valet parking, bike valet, street re-striping), and design/engineering costs for new parking	1993
Millbrae	$13,391	Annually based on CPI	Used to improve parking in the city's commercial district. Has been used to enhance and modify the city's three municipal lots and re-stripe the downtown area	1987
Mountain View	$26,000	As needed based on cost of construction	Used to construct parking garages in downtown, provide shared parking facilities	1988
Palo Alto	$67,100	Annually based on construction cost index	Used for construction of public parking spaces within the assessment district	1995
Old Pasadena	$151.07 per space per year	Annually based on CPI	Used to build parking garages	1987
Pismo Beach	$36,000	As-needed	Used for parking improvements inc. property acquisition, construction, lot lease fees, maintenance and downtown paid parking	2005

[51] Fee amounts based on most recent data available.

City	Fee Amount	Fee Adjustment	Fee Revenue Expenditures	Year Initiated
San Luis Obispo	New construction: $17,072 Change of use: $4,100	Annually based on CPI	Placed in Parking Enterprise Fund for operations, maintenance and new construction of parking facilities	1987
Santa Monica	$1.50 per square foot per year (expires 2016, $20,000 thereafter)	Annually based on CPI	Flexible use of fee for new construction, leasing private spaces, restriping, trip reduction measures and contributions to TMA	Mid-1980s
Ventura	$24,445	N/A	Funds parking and transportation management strategies contained in the Downtown Parking Management Plan.	N/A
Walnut Creek	$26,537 per space, 90% for 1st space, 75% for 2nd space, 50% for 3rd space, 25% for remainder.	Annually based on Construction Cost Index	Construction of new parking in the downtown area.	1975
West Hollywood	$382.50 per parking credit per year	Annually based on CPI	Held in Parking Improvement Fund for maintenance and repair on public parking, and construction of new parking facilities	2012 change

Old Pasadena Parking Credit Program[52]

In recent years, Old Pasadena has gained a reputation for being a pedestrian-friendly, vibrant downtown that combines a mix of uses with easy access by the automobile. Yet much of the area's success can be attributed to its parking management policies that have spawned a wide variety of streetscape improvements and new opportunities for increased transit ridership and development.

Old Pasadena was not always so prosperous. In the 1970s, much of Pasadena's downtown had been slated for redevelopment, as the decaying neighborhood had become the city's "Skid Row." In 1987, the city's "Parking Credit Program" was established to allow property owners to enter into a contract with the city in order to buy "zoning parking credits" in lieu of constructing additional parking spaces to satisfy minimum parking requirements.

Similar to Beverly Hills' in-lieu lease option, the parking credit program allowed new in-fill projects to make use of existing public parking for a modest annual fee. The fee was set at a very low rate ($50 per space in 1987) to encourage business development. The fee has increased

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[52] References:

City of Pasadena (2002), Old Pasadena Zoning Credit Parking Program Guidelines.

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Litman, Todd, Parking Management Best Practices. Institute for Transportation Engineers.

Kolozsvari, Douglas and Shoup, Donald (2003), "Turning Small Change into Big Changes," Access, 23, pp 2-7.

Shoup, Donald (2005). The High Cost of Free Parking.

following yearly CPI adjustments and was $146.53 per space per year in 2008, which is still far below the market cost to build a new parking space. This fee structure allows developers to avoid financing problems due to high up-front costs, but has created some revenue collection issues, particularly where properties change owners.

Pasadena's Parking Credit Program, however, is not a typical in-lieu fee program. As described by Former Pasadena Development Administrator, Marsha Rood, each parking credit is "an entitlement to apply parking spaces in a publicly available garage towards parking requirements for development." The city issues 1.5 parking credits per space in the public garages, and therefore credits are limited. When existing parking reserves are completely subscribed on a shared basis, the credits are no longer available.

The program therefore depends upon the availability of some public parking in the vicinity. According to Marsha Rood, "without the parking structures, revitalization of Old Pasadena would not have happened— period." For the Beverly Hills expansion areas, it is conceivable that the City could implement a similar program involving shared parking arrangements with private parking operators or owners of private lots. However, if no public or private garages are available (such as on Robertson Boulevard), this model may not be applicable until after nearby public or private parking facilities are developed.

Since its inception, the Parking Credit Program has been particularly important in allowing adaptive reuse of historic buildings that were built without parking, where minimum parking requirements would be triggered by a change in use. Since few of the buildings in this historic part of the city have off-street parking, this removed a major barrier to adaptive reuse. 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.

As a result of these policies, Old Pasadena has been revived. Stefanos Polyzoides, a local architect and urban designer and co-founder of the Congress for the New Urbanism, attributes much of the success of Old Pasadena to the "rules that allowed development to go forward with less than the traditional parking requirements. This has encouraged pedestrian activity in Old Pasadena, giving it a dynamic pedestrian environment."

Evidence of this revival is seen in sales tax revenue, which increased more than tenfold over 10 years, to more than $2 million per year in 1999. By contrast, sales tax revenue at the adjacent shopping mall, Plaza Pasadena, which provided free parking, stagnated. The mall was "turned inside out" and converted to mixed uses in 2001. Its blank walls were changed to storefronts that resemble those in Old Pasadena, while hundreds of apartments were added on top.

Revenue generated by parking credits has also helped to maintain and operate Old Pasadena's four public parking facilities. Although the parking credit revenues provide only 5% of the funding needed to operate the garages, they do provide the link between the waiver in minimum parking requirements and the availability of public parking for a variety of uses. The City's public parking structures provide almost 1,600 parking spaces, with 90 minutes of free parking followed by $2 per hour up to a maximum of $6 per day. This provides spaces for visitors who are unwilling to pay the $1 per hour charge for metered spaces.

Since the early 2000s, additional public parking spaces have been added to the general credit pool (approximately 102 spaces/153 credits at the One Colorado development), and dependent on demand for credits, more public spaces may be added in the future. As of 2009, 67 credits were available to eligible applicants.

Parking scholar Donald Shoup calculates that the Parking Credit program reduced the cost to the developer of parking provision for adaptive reuse projects to just 2.5% of the cost of on-site provision. This strategy represents an innovative way to mitigate limiting parking minimum requirements.

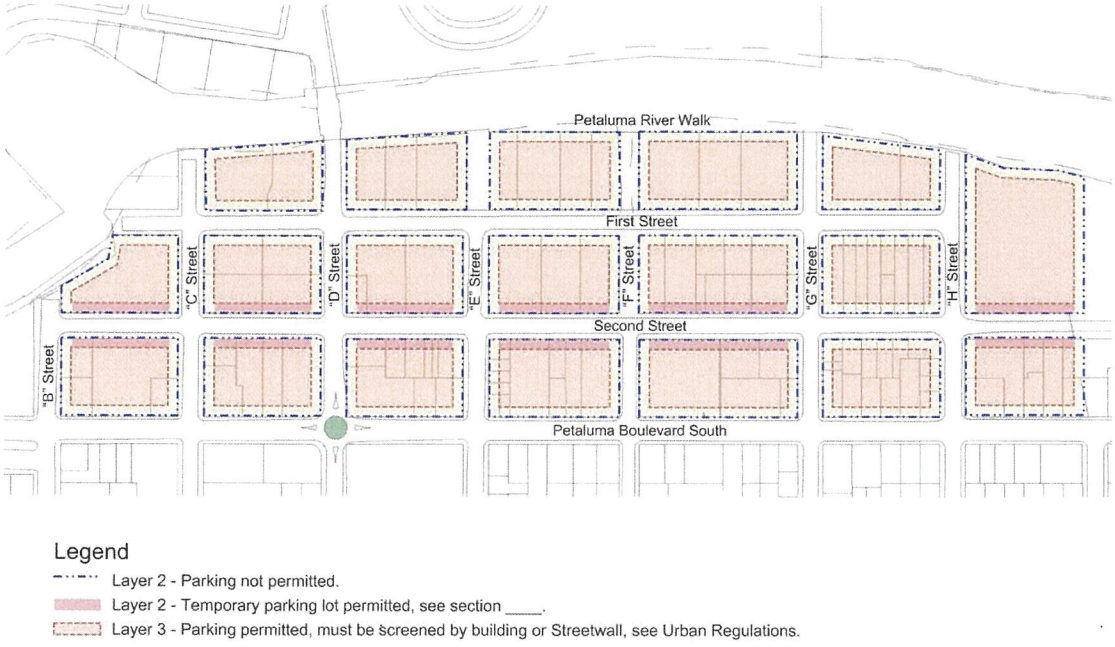
Petaluma's In-Lieu Fee and Sunset of Minimum Parking

In June 2003, Petaluma, California, adopted a development code for approximately 400 acres of the central city. Revitalization of the area, a mixture of partly vacant historic buildings, tired strip malls, abandoned car dealerships, riverfront warehouses, and greenfield parcels, had been difficult. The existing code was largely designed to produce single-use, auto-oriented, conventional suburban development.

The newly adopted code was the first example in the nation of implementing a New Urbanist SmartCode. Originally developed by Duany Plater-Zyberk & Company, an architecture and planning firm based in Miami, Florida, the SmartCode aimed to create walkable neighborhoods using a form-based code, and zoning categories that were linked to their urban or rural character or "rural-urban transect". All zones allowed for mixed development, and emphasized human-scale, pedestrian facilities and streetscape design.

As part of Petaluma's Central Petaluma Specific Plan, the SmartCode was designed to provide "...a system for ensuring that the design of the public realm and the design of private buildings are rigorously coordinated, and are focused on the pedestrian experience. It defines what is essentially a "kit of parts", with instructions, for building an urban district..." Like many zoning codes, the SmartCode included guidance on location of parking, size of parking spaces, specifications on access to parking, and requirements for lighting and surfacing for parking lots.

Figure 55: Form-based parking restrictions from the Petaluma SmartCode



In addition, the Petaluma SmartCode outlined two policies to improve parking in central Petaluma. These policies were designed to accomplish the goal of maximizing opportunities for

shared parking by encouraging structured parking facilities (Policy 4.1) and establishing procedures such as in-lieu fees for financing structured parking facilities (Policy 4.2).

Although the Code identified baseline parking minimum requirements, it introduced a phase-out of the requirements (§ 6.10.030). It also permitted waivers or reductions in minimum parking space requirements under the following circumstances:

- Alternative parking arrangements including payment of a parking in-lieu fee of $20,000 per parking space (with annual fee adjustments), waiving the right to protest the formation of a parking district, or providing some other fair share contribution;
- Shared on-site parking where two or more uses on the same site have distinct and different peak parking usage periods;
- Quantitative information (such as sales receipts or land use standards from other cities) provided by the applicant that documents the need for fewer spaces;
- Off-hour use if it is determined that the site operates exclusively after the evening peak demand period when sufficient on-street parking will be available; and
- Reductions in water pollution and stormwater run-off for sites that are surfaced with permeable paving (eligible for a fraction of a 20% reduction in minimum parking requirement).

Perhaps the most striking element of Petaluma's SmartCode parking requirement was its inclusion of a sunset clause—a specific date on which the required parking minimums expired (§ 6.10.070). According to this clause, central Petaluma has not had any minimum parking requirements for any land use since January 1, 2008.[53] Development teams may include as much or as little parking as they wish, so long as they comply with building-form requirements. The amount of parking provided is therefore no longer dictated by the government, but guided by what development teams think that lenders, buyers, tenants, and the community will accept. This reduction, and eventual abolition, of minimum parking requirements has proven to be a key element of Downtown Petaluma's success.

The specific geometry of Downtown Petaluma is more akin to a downtown district such as the Business Triangle than a linear corridor such as that of the potential expansion areas. Form-based code requirements are highly suitable for linear corridors, however, because community members from adjacent residential areas have a more accurate sense of potential development in the area. If coupled with a shift away from use-based requirements (such as parking requirements that are linked to specific land uses), this approach is likely to be more attractive to developers since there is less of an administrative burden on new development so long as the form-based requirements are met.

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[53] Study references: SmartCode Central. http://www.smartcodecentral.org/
City of Petaluma (2003). Central Petaluma Specific Plan, adopted June 2, 2003.

PARKING IMPACT FEE

An impact fee differs from an in-lieu because an in-lieu fee is optional, whereas an impact fee is not. Many communities throughout California are increasingly relying on transportation-specific impacts fees to ensure that the costs of transportation infrastructure and services necessary to support new development are not borne disproportionately by existing residents, businesses, or property-owners. Instead, the developer pays a fee and passes along the costs to future owners and tenants of the development.

The power to exact impact fees for development arises from the City's police power to protect public health, safety, and welfare. Various types of impact fees are used to fund a variety of public facilities and services including roads, pedestrian facilities, transit service expansions, parking facilities, parks, schools, public art, and libraries. However, there must be a nexus between the impact for which the fee is charged and the type of project on which the fee is spent. This nexus is determined by a nexus study that is conducted in relation to the fee.

A Parking Impact Fee allows a city to collect revenue from new developments that are driving the demand for additional parking and its associated impacts. The cost of required parking is normally embedded in the cost of development, but impact fees expose the true cost of parking spaces and allow cities to express the parking requirements in terms comparable to municipal impact fees. [54]

Why implement it?

Development impact fees are a widely used, well-accepted practice in California. They offer an efficient way to pay for new infrastructure, help sustain job growth in local economies, and contribute to economic prosperity. Above all, impact fees are one of the most efficient and effective ways to create a link between new development and the impacts it will have on the community.

Parking impact fees offer cities a revenue stream that can be used to fund a variety of transportation improvements which can help to mitigate or offset parking impacts. By law, these fees cannot simply go to a city's general fund, but must be specifically allocated to transportation and parking projects. California cities have used revenue from parking impact fees to finance:

- Additional public parking supplies
- Parking management and shared parking programs to increase the efficiency of how existing parking supplies are used
- Enhanced transit services, bicycle facilities and pedestrian infrastructure to encourage a shift from driving to other modes
- Transportation demand management (TDM) programs that reduce trips and parking demand
- Commuter subsidies and shuttles that reduce

Impact fees are one of the most efficient and effective ways to create a link between new development and the impacts it will have on a community.

[54] Shoup, Donald (1999) Instead of Free Parking. Access 5, Fall 1999

commuter trips and parking demand

How will it work?

Each parking space facilitates a certain number of vehicle trips with impacts on regional congestion and greenhouse gas emissions. A parking impact fee could be assessed based on a local nexus study quantifying these impacts. The provision of matching grants to cities that opt to pilot such a per-space municipal parking impact fee could lay the ground work for eventual implementation of a region-wide parking fee—a concept that could provide benefits along jurisdictional borders such as Robertson Boulevard.

The California Mitigation Fee Act[55] requires cities to make certain findings and conduct a nexus study in order to establish an impact fee. These findings must identify the purpose of the fee and the use to which the fee is to be put. It must also determine how there is a reasonable relationship (nexus) between the fee's use and the type of development project on which the fee is imposed.

The required nexus study is typically the venue by which the exact fee amount is determined. The methodology for determining the impact fee can vary from city to city, but generally involves a growth projection based on various land use scenarios, a synthesis of costs for potential capital projects and transportation programs to be funded by the fee, a traffic analysis to determine peak-hour vehicle trips, trip generation rates and impacts, and a final determination of fees by land use.

In terms of parking impact fees, the fee level could potentially be determined by the parking demand (spaces per 1,000 square feet) and a proportion of the cost to provide parking spaces. The parking impact fee would be charged on the basis of the square footage of a particularly land use, and not the number of parking spaces. Funds generated by the fee would then be placed into a mobility fund to be used to finance the planning, design, construction, and implementation of needed parking- and transportation-related facilities, improvements, and programs.

What are the challenges?

Impact fees are exactions that require a finding of a nexus between the type of exaction and the projects toward which funds are allocated. This requirement adds legal, planning, and administrative costs to the process of implementing impact fees. In particular, the City would need to undertake a nexus study to ensure that there is a reasonable relationship between the Parking Impact Fee and the projects for which the fee is used.

Since passage of Proposition 218 in 1996, many fees now equate with taxes, which means that they also require a vote of property owners. This requirement adds further cost, time and difficulty to the process of establishing impact fees in California cities.

Impact fees in selected California cities

Until a nexus study is conducted, it is difficult to determine the level of a potential impact fee. As seen in Figure 56, impact fees in Californian cities vary dramatically. Many impact fees are for uses other than parking or trip reduction. Impacts fees on new housing are often used for road capacity expansion, schools, and parks that serve new populations associated with development.

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[55] Government Code Section 66000 *et seq.*