

APPENDIX J
SHARED PARKING STUDY



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July 26, 2019

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*Re: Mixed-Use Ocean Avenue Project Shared Parking Study
Santa Monica, CA
Walker Project 37-8867.00*

Dear Ms. Larmore

Walker is pleased to submit the following report summarizing Walker's parking reduction and shared parking analysis for the Mixed-Use Ocean Avenue Project.

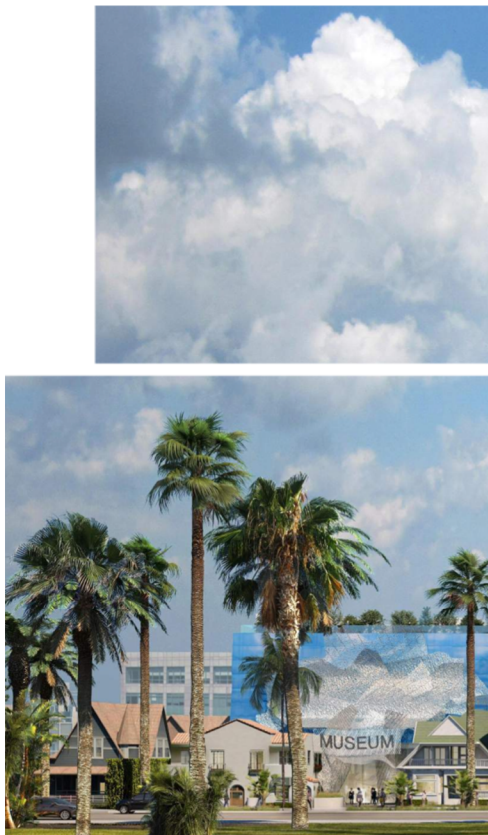
We appreciate the opportunity to be of service to you on this project. If you have any questions or comments, please do not hesitate to call.

Sincerely,

WALKER CONSULTANTS

A handwritten signature in black ink, appearing to read "Jeff Weckstein", with a long horizontal flourish extending to the right.

Jeff Weckstein
Parking Consultant



BUILDING ENVELOPE
CONSULTING
FORENSIC RESTORATION
PARKING DESIGN
PLANNING

Shared Parking Study

Mixed-Use Ocean Avenue Project

Santa Monica, CA

July 26, 2019

Prepared for:
Harding Larmore Kutcher & Kozal, LLP
Worthe Real Estate Group



WALKER
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TABLE OF CONTENTS

EXECUTIVE SUMMARY	II
BACKGROUND	2
SCOPE OF ANALYSIS	5
WALKER CONSULTANTS	5
SHARED PARKING ANALYSIS	7
METHODOLOGY	7
ANALYSIS	7
STEP 1: GATHER AND REVIEW PROJECT DATA	7
STEP 2: SELECT PARKING RATIOS	8
STEP 3: SELECT PRESENCE FACTORS	9
STEPS 4 AND 5: ADJUST DEMAND FOR MODAL SPLIT AND PERSONS PER CAR	10
STEP 6: ADJUST DEMAND FOR CAPTIVE FACTORS	11
STEP 7: CALCULATE REQUIRED PARKING SPACES FOR EACH SCENARIO	13
LOCAL ZONING ORDINANCE REQUIREMENTS	17
FUTURE PARKING DEMAND	17
SHARED PARKING ANALYSIS – ALTERNATIVE SCENARIO	20

TABLES AND FIGURES

Table 1: Proposed Mixed-Use Ocean Avenue Project Land Use Mix	8
Table 2: Base Parking Ratios	9
Table 3: Drive Ratio Adjustments	11
Table 4: Non-Captive Adjustments	12
Table 5: Shared Parking Demand Summary	13
Table 6: Weekday Shared Parking Demand	14
Table 7: Weekend Shared Parking Demand	15
Table 8: Maximum Parking Allowed under Zoning Ordinance	17
Table 9: Alternative Scenario - Shared Parking Demand Summary	20
Table 10: Alternative Scenario - Weekday Shared Parking Demand	21
Table 11: Alternative Scenario - Weekend Shared Parking Demand	22
Figure 1: Mixed-Use Ocean Avenue Project – Site Plan	3
Figure 2: Mixed-Use Ocean Avenue Project	4
Figure 3: Parking Demand by Hour, Weekday	16
Figure 4: Parking Demand by Hour, Weekend	16
Figure 5: Walker’s Projection of Future United States Parking Demand	19

EXECUTIVE SUMMARY

The Mixed-Use Ocean Avenue project is a planned mixed-use development located on the northeast corner of the Ocean Avenue/Santa Monica Boulevard intersection in the City of Santa Monica. The development consists of 36,110± square feet (sf) of retail/dining space (including outdoor dining), a 35,500± square foot cultural amenity, 100 apartment dwelling units, a 120-room hotel with ancillary meeting and spa space, and a small public observation deck. While the proposed project's parking area is still at a conceptual design level, the current plans show 285± striped parking spaces with additional capacity for stacking in the aisles through use of valet/attendants.

Walker uses the ULI/ICSC *Shared Parking* methodology. The Urban Land Institute (ULI), International Council of Shopping Centers (ICSC) and Institute of Transportation Engineers (ITE) and the Parking Consultants Council of the National Parking Association all endorse this approach as the best way to determine parking needs for mixed-use projects and are currently working on the 3rd Edition of *Shared Parking*. For this project we are employing a DRAFT version of the 3rd Edition Excel model, which is expected to go to print in the summer of 2019. While not the final published model, it represents the best opinion of the leading parking consultants in the US as of this writing.

Our key findings are:

- If all residential parking is reserved and separate from the shared parking supply (but unbundled), the peak period of design day parking demand is expected to occur on weekdays, later in the day (approximately 6:00PM), during which 278+ parking spaces are recommended to serve the development. The weekend peak is also at approximately 6:00 PM, during which 272+ parking spaces are recommended to serve the development.
- If the market-rate residential parking is assumed as part of the shared parking supply and only the parking for the affordable residential is assumed as reserved and separate from the shared parking supply, the peak period of design day parking demand is expected to occur on weekdays, later in the day (approximately 6:00PM), during which 274+ parking spaces are recommended to serve the development. The weekend peak is also at approximately 6:00 PM, during which 267+ parking spaces are recommended to serve the development.
- Based on Walker's review of the City of Santa Monica zoning code, a maximum of 385 spaces are allowed under the parking maximums in the Downtown Community Plan Area.
- The project's striped parking supply of 285 spaces, plus its ability to accommodate additional vehicles through stacking, is sufficient to meet the project's projected weekday peak demand of 278 spaces and weekend peak demand of 272 spaces with all residential parking assumed to be reserved and also the project's lesser weekday and weekend peak with the market-rate residential parking assumed as part of the shared supply.

It is noted that in this analysis, we have assumed that the hotel parking is shared with the development. Additionally, this analysis utilizes the base ratios in the ULI 3rd Edition Shared Parking Model except in the scenario where the residential parking is assumed to be reserved and separate this analysis utilizes the City's allowable parking maximums for the residential component.

The table below summarizes the results of the base shared parking analysis.

Shared Parking Demand Summary					
Weekday			Weekend		
Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand
6 PM	Late December		6 PM	Late December	
Customer/Visitor		163	Customer		153
Employee/Resident		54	Employee/Resident		58
Reserved		61	Reserved		61
Total		278	Total		272

The table below summarizes the results of the alternative shared parking analysis which assumes no reserved parking is provided for the market rate residential and the Walker/ULI base parking ratios for multi-family residential have been utilized as a starting point for the market-rate residential rather than the City's parking maximums.

Shared Parking Demand Summary					
Weekday			Weekend		
Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand
6 PM	Late December		6 PM	Late December	
Customer/Visitor		165	Customer		161
Employee/Resident		102	Employee/Resident		99
Reserved		7	Reserved		7
Total		274	Total		267



01 Background

BACKGROUND

Harding Larmore Kutcher & Kozal, LLP, on behalf of Worthe Real Estate Group, has retained Walker Consultants to prepare a shared parking study for the proposed Mixed-Use Ocean Avenue project in Santa Monica, CA. The project's specific land uses are described as follows:

- 12,040± square feet of retail space.
- 24,070± square feet of restaurant space, inclusive of outdoor dining space.
- 35,500± square feet of cultural amenity space.
- 120-key hotel with ancillary meeting, banquet, and spa space
- 100± apartment dwelling units.

While the proposed project's parking area is still at a conceptual design level, the current plans show approximately 285 striped parking spaces with additional capacity for stacking in the aisles through use of valet/attendants.

The development site is located on the northeast corner of the Ocean Avenue/Santa Monica Boulevard intersection in the heart of Downtown Santa Monica. The site is generally surrounded by commercial and mixed-use development to the north and east, and Ocean Park to the south and west. Figure 1 and Figure 2 demonstrate the proposed site plan and conceptual rendering of the Mixed-Use Ocean Avenue Project.

This parking analysis is intended to provide a projection of the peak parking demand for the Mixed-Use Ocean Avenue development, and to strike a balance to provide parking so that on all but the busiest days the development parks itself, without relying on excess capacity that may be available in the City of Santa Monica public parking system, and without the Project having excess capacity that ends up competing with the public parking system for parkers.

Figure 1: Mixed-Use Ocean Avenue Project – Site Plan

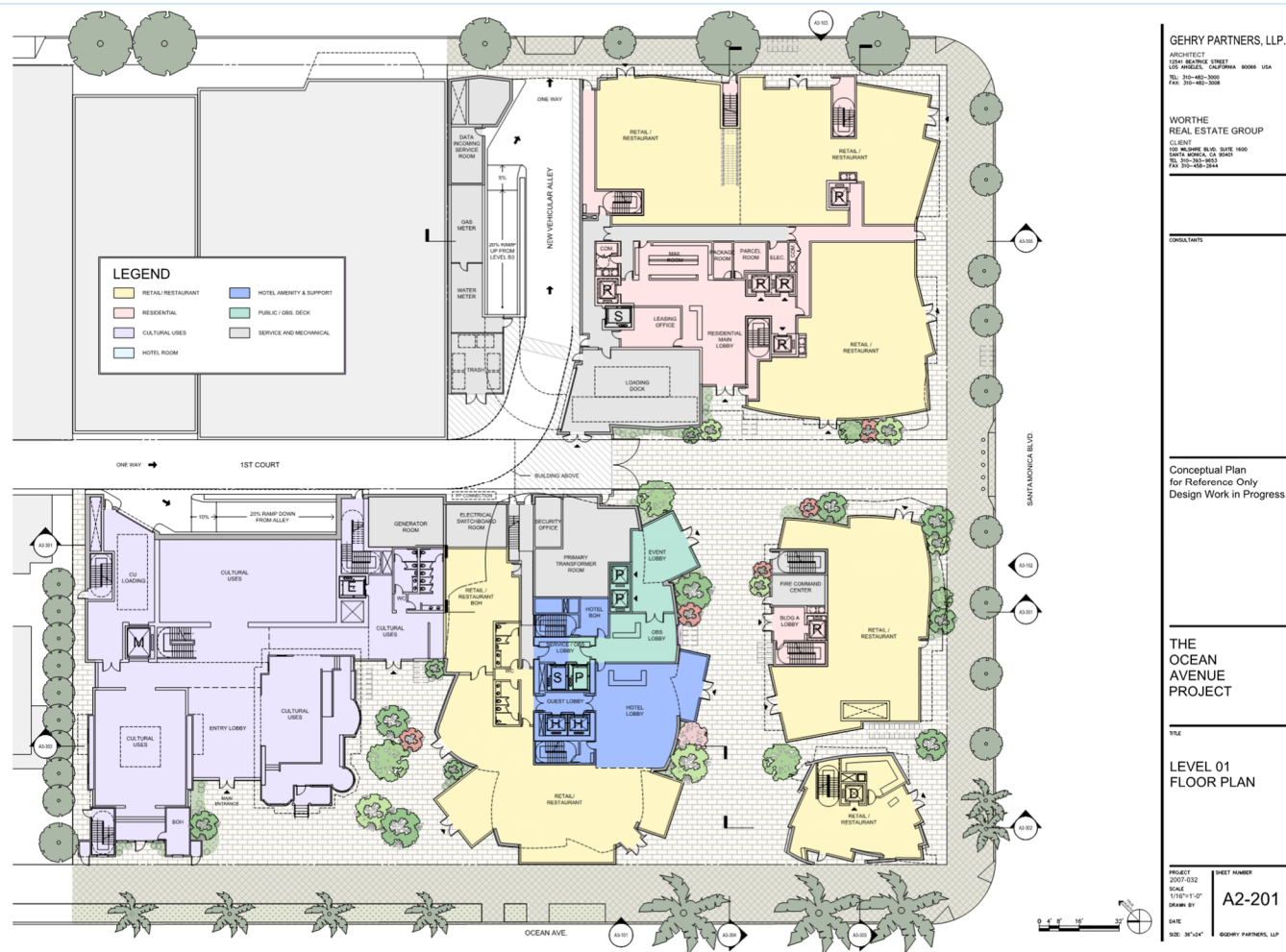


Image Courtesy: Gehry Partners, LLP (Architect) 2019.

Figure 2: Mixed-Use Ocean Avenue Project



Image Courtesy: Gehry Partners, LLP (Architect) 2019

SCOPE OF ANALYSIS

Walker Consultants has been retained to provide this parking analysis by Harding Larmore Kutcher & Kozal, LLP and Worthe Real Estate Group. This report summarizes the findings from Task 1 of the analysis including the following:

1. Review local codes to identify minimum and/or maximum parking requirements of the City if any, including requirements for shared parking analysis.
2. Identify means of transportation to work from the most recent data set available from the US Census Bureau and/or American Community Survey. Also identify area walkability scores and nearby transit availability.
3. Prepare a shared parking model for the project. Project hourly parking demand generated by the proposed land uses accounting for local market conditions.
4. Comment on trends in parking demand generation and shared parking analysis, including the proposed modifications in the Third Edition of Shared Parking. While this will represent Walker's professional opinion at the present time, it will reflect the input of leading parking professionals serving on the update committee.
5. Discuss potential for reduction in parking in the future due to 1) ride-hailing and 2) autonomous cars, and the marriage of the two. Discuss appropriate provisions for future changes in parking demand in the initial parking design, including but not limited to need for passenger loading.
6. Document methodology, assumptions and findings in a draft report in electronic format (PD) and submit via email for review and comment.
7. Meet/teleconference with the project team and obtain one set of consolidated comments from HLKK and Worthe Real Estate Group.
8. Prepare and submit final report, in electronic format (PDF)

WALKER CONSULTANTS

Walker Parking Consultants/Engineers, Inc., a Michigan corporation (DBA, Walker Consultants), is the world's largest professional services firm that specializes in solving parking problems for a variety of owner groups including airports, colleges and universities, healthcare institutions, municipalities, and real estate developers. Founded in 1965, Walker currently has a staff of over 300 registered engineers, architects, planners, consultants, technicians, administrative, and support personnel capable of serving clients nationwide and internationally from offices in 19 US cities plus one in the United Arab Emirates.

Particularly relevant to this scope of services, Walker's Mary Smith was the principal author of the Second Edition of *Shared Parking*, published by the Urban Land Institute and International Council of Shopping Centers in 2005, and is currently leading the preparation of the Third Edition, to be published by the same two organizations and the National Parking Association's Parking Consultants Council later this spring.



02 Shared Parking Analysis

SHARED PARKING ANALYSIS

Shared parking analysis, in accordance with *Shared Parking* is the generally accepted methodology for determining the appropriate parking supply for a mixed-use development. Shared parking is the use of a parking space by vehicles generated by more than one land use. The ability to share parking spaces is the result of two conditions:

- Variations in the accumulation of vehicles by hour, by day or by season at the individual land uses.
- Relationships among the land uses that result in visiting multiple land uses on the same auto trip.

For example, restaurants have peak parking needs during the evening and weekends, while hotels and residential land uses have peak parking needs overnight.

Although the ULI methodology for shared parking analysis was developed in the early 1980s, the concept of shared parking was already well established: a fundamental principle of downtown planning from the earliest days of the automobile has always been to share parking resources rather than to have each use or building have its own parking. The resurgence of many central cities resulting from the addition of vibrant residential, retail, restaurant and entertainment developments continues to rely heavily on shared parking for economic viability. In addition, mixed-use projects in many different settings have benefited from shared parking. There are numerous benefits of shared parking to all parties to development, including the community at large, not the least of which is the environmental benefit of significantly reducing the square feet of parking (usually in surface lots) provided to serve the development.

As a result of this analysis, Walker provided a projection of the peak parking demand for the proposed Mixed-Use Ocean Avenue development based on the projected peak hour of design day parking demand. This does not represent the maximum ever generated by the development. In Walker's experience, designing a parking system for the absolute peak busiest day of the year leads to overbuilding of parking spaces. Similarly, one does not build for an average day and have insufficient supply for the peak (if not multiple) hours on 50 percent of the days in a year. The peak in this analysis refers to the "design day" or "design hour," one that recurs frequently enough to justify providing spaces for that level of parking activity. The 85th percentile of peak-hour observations is generally recommended by *Shared Parking*, except for retail shopping, for which the 20th highest hour of the year is employed.

METHODOLOGY

The first edition of *Shared Parking* was published in 1983 and then updated in 2005. The Third Edition is currently being finalized and is expected to go to print in May 2019. In accordance with the Second and Third Editions of *Shared Parking*, parking demand is analyzed separately for employees/residents and customers/guests to improve the reliability of the projections, as well as the tools for parking management planning. The succeeding sections of this portion of the study will follow the steps in order.

ANALYSIS

STEP 1: GATHER AND REVIEW PROJECT DATA

HLKK provided a plan for the various components of the project. Table 1 summarizes the proposed land uses and quantities used for input into the Shared Parking Model.

For the hotel, there is event space planned, which we have assumed will have peak activity on weekend evenings using hotel banquet rates, but with meetings and conferences on weekdays which can result in a higher demand for parking on weekdays at hotels. For the “cultural amenity”, given the size of the space, we have assumed it is a museum-type facility.

We have also included the outdoor patio space as part of the restaurant square footage, based on our experience.

The hotel pool and pool deck have not been included in the shared parking analysis since they are for hotel guests only and are not projected to independently generate parking demand.

Similarly, the planned observation deck is intended as public open space that is unlikely to independently generate traffic or parking demand, likely being visited by hotel patrons and other visitors who are already in Downtown Santa Monica for other attractions.

Table 1: Proposed Mixed-Use Ocean Avenue Project Land Use Mix

Land Use	Quantity	
Retail	12,040	sf GLA
Fine/Casual Dining	12,035	sf GLA
Fast Casual/Fast Food/Food Court/Food Halls	12,035	sf GLA
Cultural Amenity	35,500	sf GLA
Hotel Spa	4,400	sf GLA
Hotel-Leisure	120	keys
Meeting/Banquet (50 to 100 sq ft/key)	8,700	sf GLA
Residential, Apartments - Market Rate		
Studio Efficiency	12	units
1 Bedroom	46	units
2 Bedrooms	17	units
3+ Bedrooms	8	units
Residential, Apartments - Affordable		
1 Bedroom	9	units
2 Bedrooms	6	units
3 Bedrooms	2	units

Source: HLKK, Walker Consultants, 2019.

STEP 2: SELECT PARKING RATIOS

Walker employed the *Shared Parking* base parking ratios for most of the land uses as previously discussed, as seen in **Table 2**. The one exception is the base ratios for the market rate and affordable residential housing units, for which the allowable parking maximums for the Downtown Community Plan Area contained in the City of Santa Monica Zoning Code have been utilized as the base ratio. The assumption for the base shared parking analysis is that the proposed project is planning to provide unbundled, reserved residential parking, up to the amount allowed in the Zoning Code.

Table 2: Base Parking Ratios

Land Use	Weekday		Weekend	
	Visitor/ Guest	Employee/Resident	Visitor/ Guest	Employee/Resident
Retail	1 space per 345 sq. ft.	1 space per 1429 sq. ft.	1 space per 313 sq. ft.	1 space per 1250 sq. ft.
Fine/Casual Dining	1 space per 75 sq. ft.	1 space per 444 sq. ft.	1 space per 66 sq. ft.	1 space per 400 sq. ft.
Fast Casual/Fast Food/Food Court/Food Halls	1 space per 81 sq. ft.	1 space per 500 sq. ft.	1 space per 79 sq. ft.	1 space per 500 sq. ft.
Cultural Amenity	1 space per 250 sq. ft.	1 space per 2500 sq. ft.	1 space per 222 sq. ft.	1 space per 2000 sq. ft.
Hotel Spa	1 space per 333 sq. ft.	1 space per 667 sq. ft.	1 space per 333 sq. ft.	1 space per 667 sq. ft.
Hotel	1 space per guest room	0.15 space per guest room	1 space per guest room	0.15 space per guest room
Meeting/Banquet (50 to 100 sq ft/key)	1 space per 54 sq. ft.	1 space per 697 sq. ft.	1 space per 106 sq. ft.	1 space per 697 sq. ft.
Residential, Market Rate				
Studio Efficiency	1 space per 15 units	0.5 space per unit	1 space per 15 units	0.5 space per unit
1 Bedroom	1 space per 15 units	0.5 space per unit	1 space per 15 units	0.5 space per unit
2 Bedrooms	1 space per 15 units	1 space per unit	1 space per 15 units	1 space per unit
3+ Bedrooms	1 space per 15 units	1 space per unit	1 space per 15 units	1 space per unit
Residential, Affordable				
Studio Efficiency	1 space per 30 units	0.25 space per unit	1 space per 30 units	0.25 space per unit
1 Bedroom	1 space per 30 units	0.25 space per unit	1 space per 30 units	0.25 space per unit
2 Bedrooms	1 space per 30 units	0.5 space per unit	1 space per 30 units	0.5 space per unit
3+ Bedrooms	1 space per 30 units	0.5 space per unit	1 space per 30 units	0.5 space per unit

Source: Walker Consultants, 2019.

STEP 3: SELECT PRESENCE FACTORS

After the Project's land uses have been quantified and base parking ratios have been applied to these land use quantities, adjustments are made to account for parking demand variability by hour of day and month of year. These time-based adjustments are referred to as a "presence" adjustment.

Presence is expressed as a percentage of the peak hour demand on a design day for both time of day and month of the year. The fact that parking demand for each component may peak at different times generally means that fewer parking spaces are needed for the project than would be required if each component were a freestanding development.

Based on Walker's understanding of the land use program and experience with similar projects, Walker deems the adjustments included in the *Shared Parking* Model for time of day are appropriate for the Mixed-Use Ocean Avenue Project. The weekday and weekend period of peak demand is projected to occur at approximately 6:00PM. Similarly, the adjustments for time of year are appropriate for the Project. The weekday and weekend period of peak demand is projected to occur in Late December, driven by the proposed Cultural Amenity which was analyzed as a museum use. Based on the recent publication of *Shared Parking*, museum uses have a noticeable peak between Christmas and New Year's.

STEPS 4 AND 5: ADJUST DEMAND FOR MODAL SPLIT AND PERSONS PER CAR

Each land use was evaluated and assigned a drive ratio for daytime and evenings on weekdays and weekends. The reason that driving ratio, rather than modal split, must be used is that it is applied against a “parking ratio” that reflects the number of cars parked at a stand-alone land use where nearly all persons arrive by car, and thus already reflects persons per car.

Walker utilized 2013-2017 American Community Survey (ACS) 5-year estimates. Per the ACS data, the means of transportation to work for workers in Census Tract 7019.02 is 71.6%, when driving alone (SOV) and carpooling is combined. We note that Santa Monica is known to be a bicycle- and micro-mobility friendly locale, with significant and ongoing investments in bike infrastructure and amenities, as well as other mobility solutions such as e-bikes and e-scooters.

To supplement the ACS means of transportation, Walker researched the Walk Score at the project site. The site has a score of 93/100, and is classified as “walker’s paradise,” a transit score of 80/100 (Excellent) and a bike score of 66 (bikeable).¹

The area is served by the Los Angeles Metropolitan Transit Agency (Metro) as well as the City of Santa Monica Big Blue Bus. There is a bus stop on the southeast corner of the Ocean Avenue/Santa Monica Boulevard intersection, across the street from the project site that provided access to several bus routes including Big Blue Bus Route 8, Metro Route 33, Metro Rapid 704, Metro Rapid 733, Metro Route 534 and Metro Route 4 (early AM, evening and night-owl only).

Access to an additional dozen+ bus lines is available approximately 0.25 miles northeast of the project site at the Santa Monica Boulevard/4th Avenue intersection including Big Blue Bus Lines, 1, 2, 3, 4, 5, 7, 9, 18, 20, Rapid 3, Rapid 7 and Rapid 10 and Metro Lines Rapid 704 and Rapid 720. The Downtown Santa Monica station including the Metro Expo light-rail line is approximately 0.50 miles walking distance from the site.

Walker projects that current transit availability in the area will have a significant impact on the mode share serving the Mixed-Use Ocean Avenue Project. Walker applied a 60% drive ratio to service employees of all uses in including retail, dining, and hotel employees since service employees typically drive to work at a much lower rate than office employees.

¹ www.walkscore.com

Table 3: Drive Ratio Adjustments

Land Use	Driving Adjustments			
	Weekday		Weekend	
	Daytime	Evening	Daytime	Evening
Retail (<400 ksf)	70%	70%	70%	70%
Employee	60%	60%	60%	60%
Fine/Casual Dining	70%	70%	70%	70%
Employee	60%	60%	60%	60%
Fast Casual/Fast Food/Food Court/Food Halls	70%	70%	70%	70%
Employee	60%	60%	60%	60%
Cultural Amenity	70%	70%	70%	70%
Employee	60%	60%	60%	60%
Hotel Spa	70%	70%	70%	70%
Employee	60%	60%	60%	60%
Hotel-Leisure	35%	35%	35%	35%
Hotel Employees	60%	60%	60%	60%
Meeting/Banquet (50 to 100 sq ft/key)	45%	45%	45%	45%
Employee	60%	60%	60%	60%
Residential, Apartments - Market Rate				
Studio Efficiency	100%	100%	100%	100%
1 Bedroom	100%	100%	100%	100%
2 Bedrooms	100%	100%	100%	100%
3+ Bedrooms	100%	100%	100%	100%
Visitor	70%	70%	70%	70%
Residential, Apartments - Affordable				
Studio Efficiency	100%	100%	100%	100%
1 Bedroom	100%	100%	100%	100%
2 Bedrooms	100%	100%	100%	100%
3+ Bedrooms	100%	100%	100%	100%
Reserved	100%	100%	100%	100%
Visitor	70%	70%	70%	70%

Source: Walker Consultants, 2019.

STEP 6: ADJUST DEMAND FOR CAPTIVE FACTORS

A shared parking analysis recognizes that people often visit two or more establishments within the same development site, without increasing their on-site parking use. A “captive market” refers to people already within a site (for example hotel guests who patronize the adjacent restaurants). However, in a beach or downtown location, the definition is broader because much of the retail and restaurant and other use patronage is likely not only from on-site hotel guests, but visitors for whom the beach or Downtown area is their primary destination. This broader definition has been referred to by some in transportation planning as “district capture.” Given the large crowds on busy beach, as well as other primary attractors in the area such as the 3rd Street Promenade, Santa Monica Place and several other hotels, it is reasonable to assume that the businesses and cultural amenity within the Project will capture a significant amount of patronage from people for whom businesses within the Project are not their primary destination. Given the large numbers of people present in the area, we assume that some district capture effect is reasonable in the case of most of the Project’s uses.

The Noncaptive ratio is an estimate of the percentage of parkers at a land use in a mixed-use development or district who are not already counted as being parking at another of the land uses. The term "captive" has been borrowed from market researchers to describe people who are already present in the immediate vicinity and are likely patrons of a second use. However, the parking adjustment will not be precisely the same as the captive adjustments for either market researchers or traffic engineers. The key to non-captive adjustments is thinking through whether a car would already be counted as parked at another land use at the specific time a person patronizes the primary use. For example, employees in a complex or district who are counted as parked at another land use, will not generate any parking demand when they patronize a coffee store, deli or shop for a few minutes while on a break. The car of a resident of the Project would be counted as being parked at the residence, even when the resident is going to have dinner in the complex.

Captive market adjustments have been taken in accordance with our understanding of the proposed development program, as well as Walker's professional judgment and experience. Note that when applied to parking demand, we use the percent of customers who are "non-captive." Thus if 10% of a restaurants patronage at noon on a weekday is captive, the adjustment to parking is 90%.

Table 4: Non-Captive Adjustments

Land Use	Non-Captive Adjustments			
	Weekday		Weekend	
	Daytime	Evening	Daytime	Evening
Retail (<400 ksf)	25%	25%	40%	40%
Employee	100%	100%	100%	100%
Fine/Casual Dining	25%	35%	25%	35%
Employee	100%	100%	100%	100%
Fast Casual/Fast Food/Food Court/Food Halls	25%	30%	25%	30%
Employee	100%	100%	100%	100%
Cultural Amenity	40%	40%	40%	40%
Employee	100%	100%	100%	100%
Hotel Spa	10%	10%	10%	10%
Employee	100%	100%	100%	100%
Hotel-Leisure	100%	100%	100%	100%
Hotel Employees	100%	100%	100%	100%
Meeting/Banquet (50 to 100 sq ft/key)	60%	60%	70%	70%
Employee	100%	100%	100%	100%
Residential, Apartments - Market Rate				
Studio Efficiency	100%	100%	100%	100%
1 Bedroom	100%	100%	100%	100%
2 Bedrooms	100%	100%	100%	100%
3+ Bedrooms	100%	100%	100%	100%
Visitor	100%	100%	100%	100%
Residential, Apartments - Affordable				
Studio Efficiency	100%	100%	100%	100%
1 Bedroom	100%	100%	100%	100%
2 Bedrooms	100%	100%	100%	100%
3+ Bedrooms	100%	100%	100%	100%
Visitor	100%	100%	100%	100%

Source: Walker Consultants, 2019.

STEP 7: CALCULATE REQUIRED PARKING SPACES FOR EACH SCENARIO

The model calculates the parking demand 18 hours a day for weekdays, Saturdays and Sundays for each of 12 months, plus a special period between Christmas and New Year's Day. In the latter period, office and other professional employment parking is reduced, while retail/dining/entertainment is high.

Table 5 below summarizes the Shared Parking analysis for weekdays and weekends, while Table 6 provides the detail for weekdays and Table 7 presents the weekend analysis.

Table 5: Shared Parking Demand Summary

Shared Parking Demand Summary					
Weekday			Weekend		
Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand
6 PM	Late December		6 PM	Late December	
	Customer/Visitor	163		Customer	153
	Employee/Resident	54		Employee/Resident	58
	Reserved	61		Reserved	61
Total		278	Total		272

Source: Walker Consultants, 2019.

The overall peak is projected to occur on a weekday in Late December at approximately 6:00 PM, at which time 278± parking spaces are recommended to serve the development. On a weekend, the peak hour is at 6:00 PM, with 272± parking spaces recommended. The project's striped parking supply of 285± spaces, plus its ability to accommodate additional vehicles through stacking, is sufficient to meet the project's projected weekday peak demand of 278 spaces and weekend peak demand of 272 spaces.

This base analysis has assumed the residential parking will be segregated and reserved for resident, provided as an unbundled option for those residents who desire it, up to the amount allowed in the Zoning Code. Page 20 of this report discusses an alternative scenario where the market-rate residential parking is assumed to be shared with the commercial parking pool.

This analysis has not assumed that hotel parking is segregated and reserved. Changing this assumption would increase the number of parking spaces recommended to serve the development.

This parking analysis is intended to provide a projection of the peak parking demand for the proposed Mixed-Use Ocean Avenue development, and to strike a balance to provide parking so that on all but the busiest days the development parks itself. Although this shared parking study assumes that the project's parking demand will be satisfied through on-site parking, it is important to note that Santa Monica has several public parking structures disbursed throughout its Downtown. Notably, data provided by Downtown Santa Monica indicates in Q4 2018 the two closest public structures to the Project, P4 and P6, had an average daily peak occupancy of 80% & 64% respectively.²

² https://www.downtownsm.com/files/dtsm-q4-market-report-january-2019_30672.pdf

Table 6: Weekday Shared Parking Demand

Land Use	Project Data		Weekday					Weekday		
			Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand
	Quantity	Unit						6 PM	Late December	
Retail (<400 ksf)	12,040	sf GLA	2.90	70%	25%	0.51	sf GLA	90%	70%	4
Employee			0.70	60%	100%	0.42		100%	80%	4
Fine/Casual Dining	12,035	sf GLA	13.25	70%	35%	3.25	sf GLA	95%	96%	36
Employee			2.25	60%	100%	1.35		100%	100%	17
Fast Casual/Fast Food/Food Court/Food Halls	12,035	sf GLA	12.40	70%	30%	2.60	sf GLA	85%	100%	27
Employee			2.00	60%	100%	1.20		90%	100%	13
Cultural Amenity	35,500	sf GLA	4.00	70%	40%	1.12	sf GLA	60%	87%	21
Employee			0.40	60%	100%	0.24		75%	97%	7
Hotel Spa	4,400	sf GLA	3.00	70%	10%	0.21	sf GLA	75%	100%	1
Employee			1.50	60%	100%	0.90		100%	100%	4
Hotel-Leisure	120	keys	1.00	35%	100%	0.35	keys	85%	100%	36
Hotel Employees	120	keys	0.15	60%	100%	0.09	keys	85%	100%	4
Meeting/Banquet (50 to 100 sq ft/key)	8,700	sf GLA	15.50	45%	60%	4.19	sf GLA	100%	100%	36
Employee	8,700	sf GLA	1.28	60%	100%	0.77	sf GLA	50%	100%	4
Residential, Market Rate										
Studio Efficiency	12	units	0.00	100%	100%	0.00	units	60%	95%	-
1 Bedroom	46	units	0.00	100%	100%	0.00	units	60%	95%	-
2 Bedrooms	17	units	0.00	100%	100%	0.00	units	60%	95%	-
3+ Bedrooms	8	units	0.00	100%	100%	0.00	units	60%	95%	-
Reserved	100%	res spaces	0.65	100%	100%	0.65	res spaces	60%	100%	54
Visitor	83	units	0.07	70%	100%	0.05	units	100%	95%	2
Residential, Affordable										
1 Bedroom	9	units	0.00	100%	100%	0.00	units	60%	95%	-
2 Bedrooms	6	units	0.00	100%	100%	0.00	units	60%	95%	-
3+ Bedrooms	2	units	0.00	100%	100%	0.00	units	60%	95%	-
Reserved	100%	res spaces	0.37	100%	100%	0.37	res spaces	60%	100%	7
Visitor	17	units	0.03	70%	100%	0.02	units	100%	95%	0
								Customer/Visitor		163
								Employee/Resident		54
								Reserved		61
								Total		278

Source: Walker Consultants, 2019.

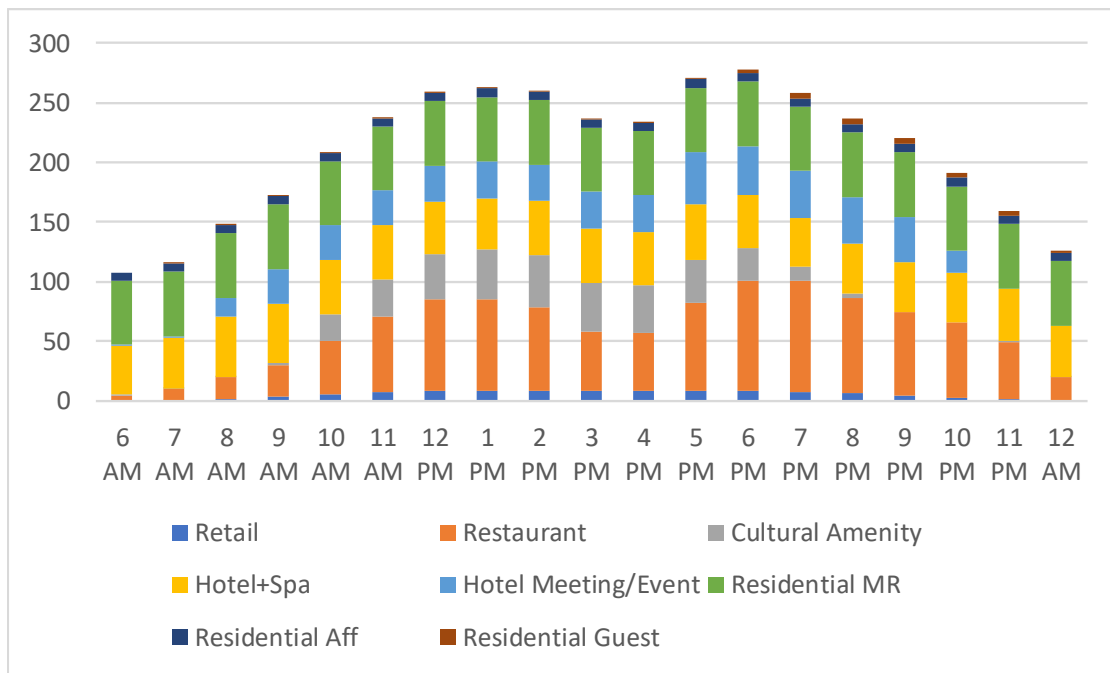
Table 7: Weekend Shared Parking Demand

Land Use	Project Data		Weekend					Weekend		
			Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand
	Quantity	Unit						6 PM	Late December	
Retail (<400 ksf)	12,040	sf GLA	3.20	70%	40%	0.90	sf GLA	75%	70%	6
Employee			0.80	60%	100%	0.48		85%	80%	4
Fine/Casual Dining	12,035	sf GLA	15.25	70%	35%	3.74	sf GLA	90%	96%	39
Employee			2.50	60%	100%	1.50		100%	100%	19
Fast Casual/Fast Food/Food Court/Food Halls	12,035	sf GLA	12.70	70%	30%	2.67	sf GLA	85%	100%	27
Employee			2.00	60%	100%	1.20		90%	100%	13
Cultural Amenity	35,500	sf GLA	4.50	70%	40%	1.26	sf GLA	60%	72%	19
Employee			0.50	60%	100%	0.30		75%	82%	7
Hotel Spa	4,400	sf GLA	3.00	70%	10%	0.21	sf GLA	75%	100%	1
Employee			1.50	60%	100%	0.90		100%	100%	4
Hotel-Leisure	120	keys	1.00	35%	100%	0.35	keys	85%	100%	36
Hotel Employees	120	keys	0.15	60%	100%	0.09	keys	85%	100%	4
Meeting/Banquet (50 to 100 sq ft/key)	8,700	sf GLA	7.98	45%	70%	2.51	sf GLA	100%	100%	22
Employee	8,700	sf GLA	1.28	60%	100%	0.77	sf GLA	50%	100%	7
Residential, Market Rate										
Studio Efficiency	12	units	0.00	100%	100%	0.00	units	0%	95%	-
1 Bedroom	46	units	0.00	100%	100%	0.00	units	50%	95%	-
2 Bedrooms	17	units	0.00	100%	100%	0.00	units	50%	95%	-
3+ Bedrooms	8	units	0.00	100%	100%	0.00	units	50%	95%	-
Reserved	100%	res spaces	0.65	100%	100%	0.65	res spaces	50%	100%	54
Visitor	83	units	0.07	70%	100%	0.05	units	100%	95%	2
Residential, Affordable										
1 Bedroom	9	units	0.00	100%	100%	0.00	units	50%	95%	-
2 Bedrooms	6	units	0.00	100%	100%	0.00	units	50%	95%	-
3+ Bedrooms	2	units	0.00	100%	100%	0.00	units	50%	95%	-
Reserved	100%	res spaces	0.37	100%	100%	0.37	res spaces	50%	100%	7
Visitor	17	units	0.03	70%	100%	0.02	units	100%	95%	0
								Customer		153
								Employee/Resident		58
								Reserved		61
								Total		272

Source: Walker Consultants, 2019.

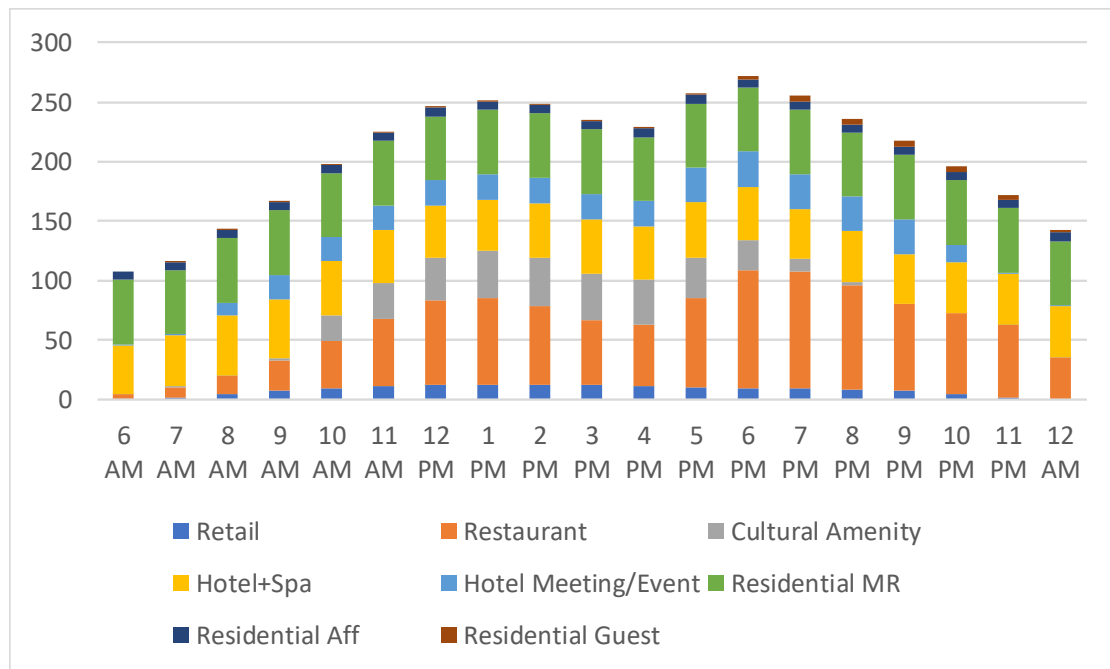
Figure 3 and **Figure 4** present the parking demand by time of day for weekdays and weekends.

Figure 3: Parking Demand by Hour, Weekday



Source: Walker Consultants, 2019.

Figure 4: Parking Demand by Hour, Weekend



Source: Walker Consultants, 2019.

LOCAL ZONING ORDINANCE REQUIREMENTS

Walker reviewed the City of Santa Monica zoning code (article 9 “Planning and Zoning”, Division 3 “General Regulations,” Chapter 9.28 “Parking, Loading, and Circulation”) to evaluate parking requirements for the Mixed-Use Ocean Avenue site.³ The site is within the Downtown Community Plan Area which specifies parking maximums for land uses as opposed to minimum parking requirements.

Based on the land use program provided and the City of Santa Monica zoning code, Walker calculated the minimum parking requirement for the project. Table 8 summarizes the calculations, resulting in a maximum of 369 spaces allowed. The zoning code also allows for the sharing of parking between the uses of a mixed-use project.

Table 8: Maximum Parking Allowed under Zoning Ordinance

Local Zoning Requirement				
Land Use	Quantity		Parking Maximum	Maximum Spaces
Retail	12,040	sf GLA	1 space per 300 sq. ft. ¹	40
Fine/Casual Dining	12,035	sf GLA	1 space per 300 sq. ft. ¹	40
Fast Casual/Fast Food/Food Court/Food Halls	12,035	sf GLA	1 space per 300 sq. ft. ¹	40
Cultural Amenity	35,500	sf GLA	1 space per 500 sq. ft.	71
Hotel Spa	4,400	sf GLA	1 space per 300 sq. ft.	15
Hotel-Leisure	120	keys	0.5 spaces per guest room	60
Meeting/Banquet (50 to 100 sq ft/key)	8,700	sf GLA	1 space for each 250 sq. ft.	35
Residential, Apartments - Market Rate				
Studio Efficiency	12	units	0.5 space per unit	6
1 Bedroom	46	units	0.5 space per unit	23
2 Bedrooms	17	units	1 space per unit	17
3+ Bedrooms	8	units	1 space per unit	8
Residential, Apartments - Affordable				
1 Bedroom	9	units	0.25 space per unit	3
2 Bedrooms	6	units	0.5 space per unit	3
3 Bedrooms	2	units	0.5 space per unit	1
Residential Market Rate Guest Parking	83	units	1 space per 15 units	6
Residential Affordable Guest Parking	17	units	1 space per 30 units	1

Total Parking Maximum 369

1 = Parking maximum ratio assumes that all retail and restaurant space is greater than 5,000 sf; the parking maximum for rental spaces that are less than 5,000 sf is 1 space per 500 square feet.

Source: Walker Consultants, 2019. City of Santa Monica Zoning Code

FUTURE PARKING DEMAND

Many planners and consultants expect that using driverless ride-hailing (with or without transit for some trips) will cost significantly less than owning a personal vehicle in the future. We employ the airport term for Uber and

³ City of Santa Monica Code of Ordinances
<https://www.qcode.us/codes/santamonica/>

Lyft, which is Transportation Network Companies (TNC), as many other players including Waymo, Ford and GM are poised to enter this market. Some project up to a 90% reduction in parking required, with some expecting the shift to occur by 2030. Those same folks are strongly recommending that most if not all parking structures should be designed for future adaptive reuse, by which they mean easy conversion to other uses.

That scenario of 90% or more reduction in parking would take a significant change in auto ownership, with most residents of an area giving up cars and using ride-hailing and/or transit for all trips. Some cite, among other trends, that Lyft estimated that approximately 250,000 of their users gave up their cars in 2017 alone, which seems significant until you realize it is a little more than 1% of its 23 million users, and only 1/10 of 1% of the cars on the road in the US.⁴ Others cite “urbanization”, in which increased density will make car free living feasible.

More recently, a number of management consultants, auto experts and other academics have projected that the impact on vehicle ownership will be significantly less than a 90% reduction and that it would occur on a much longer time frame than 2030, with more and more skeptics expecting that fully autonomous vehicles won’t be available for “decades.” It is true however, that L4 autonomy is now available, which means that a vehicle is able to operate driverless, but only in a very limited area that has been thoroughly mapped in its programming (i.e., it knows exactly where a traffic signal head is to be able to read it) and also only in good weather conditions. To our knowledge, no manufacturer has solved all weather conditions of snow and rain.

A study recently released by Cal DOT⁵ posits that there will be impact of autonomous TNCs in the next decade, but once fully-autonomous vehicles are available to the public, the majority of vehicles will still be privately owned.

We have evaluated the impact on parking demand based on sales and other projections by international business and auto consultancies. We rely primarily on a McKinsey study⁶, which projects that 10% of all passenger vehicles sold in 2030 will be to ride-hailing services, resulting in a potential reduction in private vehicle auto sales by 2.3 private vehicles sold per TNC vehicle sold. This would reduce overall vehicle sales by about 5 million vehicles, or about 25% of sales in 2030. However, there are 260 million cars on the road today, and millions more sold between now and 2030 that will be on the road for 10 to 20 years after that. We don’t expect maximum impact on parking until 2050 and even then, for it to fall in the range of 10 to 40% reduction **nationally**. Our model results in about 1/3 of vehicles owned by TNCs and 2/3 owned by private individuals by 2050. The TNC vehicles would comprise 72% of VMT, and private vehicles 28%. Therefore, we believe our high scenario is truly a maximum impact scenario.

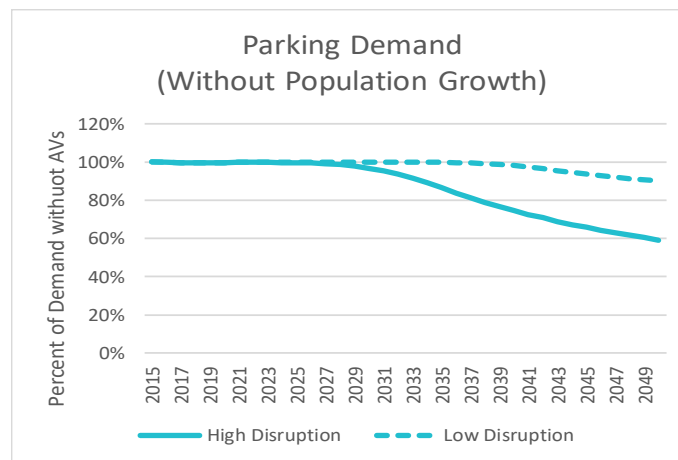
The graph below is for the average reduction in parking--again we stress--nationally. In other words, the reduction for the average building in the US is 40% at the high scenario. There will be more impact in downtowns and where residential density is high, and less in rural areas. The impact will also vary by land use. Further once autonomous vehicles are available to private individuals, they will be able to drop the passengers and park farther away, particularly if parking is paid.

⁴ <https://techcrunch.com/2018/01/16/lyft-says-nearly-250k-of-its-passengers-ditched-a-personal-car-in-2017/>

⁵ Gordon et al, 2018. The Future of Autonomous Vehicles: Lessons from the Literature on Technology Adoption. Cal DOT: CA 17-2796-3.

⁶ <http://www.mckinsey.com/industries/high-tech/our-insights/disruptive-trends-that-will-transform-the-auto-industry>

Figure 5: Walker's Projection of Future United States Parking Demand



Source: Walker Consultants, 2018.

Because the proposed Project will have a fixed quantity of land uses that will not grow in capacity over time with population growth, we do not include population growth in this graph. Due to the size, location and density of Santa Monica, we would expect this project to more likely follow our high disruption scenario, with a small impact expected by 2030, and perhaps only a 40% reduction in parking demand by 2050. For further discussion we can provide white papers documenting the development of our opinions.

Another factor is that L2/3 autonomy, i.e., a specific set of functions that allow autonomous parking, will be available long before L5 cars are driving around public streets. Autonomous parking means that the driver and passenger can get out of the vehicle and send the car off to park itself in the lot or structure. Because the car doors do not have to open at the parking stall, we expect to be able to park roughly 4 cars in 3 stalls.

This means that even without extensive driverless ride-hailing, the parking capacity will go up as the parking demand may be going down!

There are two main reasons that we raise this issue at this time. The first is that, due to the potential reduction of parking demand of 40% by 2050, as well as autonomous parking, we strongly recommend providing the minimum acceptable number of spaces at opening day. The second is that we cannot recommend extensive design for future adaptive reuse, which typically adds 30% or more to the initial cost of construction.

We also note that some of the on-street parking can easily be converted to zones for passenger drop off around the proposed Project site to accommodate demand from TNCs and future autonomous parking. In addition, we encourage providing bicycle parking facilities and amenities for employees and residents to reduce parking demand.

SHARED PARKING ANALYSIS – ALTERNATIVE SCENARIO

Walker has prepared an alternative shared parking scenario that includes the following deviations from the base shared parking analysis previously discussed:

- Parking for the market rate residential units would be included/provided in the general pool of parking provided by the project.
 - In this scenario the Walker/ULI Shared Parking Model base ratios for multi-family houses were utilized as the starting point for parking demand rather than the City of Santa Monica code maximums. The Walker/ULI base parking rates (inclusive of guest parking) are:
 - Studio units – 0.95 spaces per unit
 - 1-bedroom units – 1.0 spaces per unit
 - 2-bedroom units – 1.75 spaces per unit
 - 3-bedroom units – 2.6 spaces per unit.
 - Parking for affordable units would continue to be separately marked and reserved for the affordable units only, provided at the allowable code maximum.

Table 9 below summarizes the alternative scenario Shared Parking analysis for weekdays and weekends, while Table 10 provides the detail for weekdays and Table 11 presents the weekend analysis.

Table 9: Alternative Scenario - Shared Parking Demand Summary

Shared Parking Demand Summary					
Weekday			Weekend		
Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand
6 PM	Late December		6 PM	Late December	
Customer/Visitor		165	Customer		161
Employee/Resident		102	Employee/Resident		99
Reserved		7	Reserved		7
Total		274	Total		267

Source: Walker Consultants, 2019.

The overall peak for the alternative scenario, assuming market rate residential parking is included in the development shared pool as opposed to being gated and reserved for residents only, is projected to occur on a weekday in Late December at approximately 6:00 PM, at which time 274± parking spaces are recommended to serve the development. On a weekend, the peak hour is at 6:00 PM, with 267± parking spaces recommended. The project's striped parking supply of 285± spaces, plus its ability to accommodate additional vehicles through stacking, is sufficient to meet the project's projected weekday peak demand of 274 spaces and weekend peak demand of 267 spaces in the alternative scenario.

This alternative scenario analysis has assumed the market rate residential parking will be part of the development's overall shared parking pool, while the affordable residential parking will be segregated and reserved for residents, provided as an unbundled option for those residents who desire it, up to the amount allowed in the Zoning Code.

This analysis has not assumed that hotel parking is segregated and reserved. Changing this assumption would increase the number of parking spaces recommended to serve the development.

Table 10: Alternative Scenario - Weekday Shared Parking Demand

Land Use	Project Data		Weekday					Weekday		
			Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand
	Quantity	Unit						6 PM	Late December	
Retail (<400 ksf)	12,040	sf GLA	2.90	70%	25%	0.51	sf GLA	90%	85%	4
Employee			0.70	60%	100%	0.42		100%	95%	5
Fine/Casual Dining	12,035	sf GLA	13.25	70%	35%	3.25	sf GLA	95%	95%	35
Employee			2.25	60%	100%	1.34		100%	100%	17
Fast Casual/Fast Food/Food Court/Food Halls	12,035	sf GLA	12.40	70%	30%	2.60	sf GLA	85%	95%	25
Employee			2.00	60%	100%	1.19		90%	100%	13
Cultural Amenity	35,500	sf GLA	4.00	70%	40%	1.12	sf GLA	60%	100%	24
Employee			0.40	60%	100%	0.24		75%	100%	7
Hotel Spa	4,400	sf GLA	3.00	70%	10%	0.21	sf GLA	75%	100%	1
Employee			1.50	60%	100%	0.90		100%	100%	4
Hotel-Leisure	120	keys	1.00	35%	100%	0.35	keys	85%	100%	36
Hotel Employees	120	keys	0.15	60%	100%	0.09	keys	85%	55%	2
Meeting/Banquet (50 to 100 sq ft/key)	8,700	sf GLA	15.50	45%	60%	4.19	sf GLA	100%	100%	36
Employee	8,700	sf GLA	1.28	60%	100%	0.77	sf GLA	50%	90%	4
Residential, Market Rate										
Studio Efficiency	12	units	0.85	81%	100%	0.69	units	60%	100%	5
1 Bedroom	46	units	0.90	81%	100%	0.73	units	60%	100%	20
2 Bedrooms	17	units	1.65	81%	100%	1.34	units	60%	100%	14
3+ Bedrooms	8	units	2.50	81%	100%	2.03	units	60%	100%	10
Visitor	83	units	0.10	70%	100%	0.07	units	100%	100%	4
Residential, Affordable										
Reserved	100%	res spaces	0.37	100%	100%	0.37	res spaces	60%	100%	7
Visitor	17	units	0.03	70%	100%	0.02	units	100%	100%	0
										Customer/Visitor 165
										Employee/Resident 102
										Reserved 7
										Total 274

Source: Walker Consultants, 2019.

Table 11: Alternative Scenario - Weekend Shared Parking Demand

Land Use	Project Data		Weekend					Weekend		
			Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand
	Quantity	Unit						6 PM	Late December	
Retail (<400 ksf)	12,040	sf GLA	3.20	70%	40%	0.90	sf GLA	75%	85%	6
Employee			0.80	60%	100%	0.48		85%	95%	5
Fine/Casual Dining	12,035	sf GLA	15.25	70%	35%	3.74	sf GLA	90%	95%	39
Employee			2.50	60%	100%	1.49		100%	100%	19
Fast Casual/Fast Food/Food Court/Food Halls	12,035	sf GLA	12.70	70%	30%	2.67	sf GLA	85%	95%	26
Employee			2.00	60%	100%	1.20		90%	100%	13
Cultural Amenity	35,500	sf GLA	4.50	70%	40%	1.26	sf GLA	60%	100%	27
Employee			0.50	60%	100%	0.30		75%	100%	8
Hotel Spa	4,400	sf GLA	3.00	70%	10%	0.21	sf GLA	75%	100%	1
Employee			1.50	60%	100%	0.90		100%	100%	4
Hotel-Leisure	120	keys	1.00	35%	100%	0.35	keys	85%	100%	36
Hotel Employees	120	keys	0.15	60%	100%	0.09	keys	85%	55%	2
Meeting/Banquet (50 to 100 sq ft/key)	8,700	sf GLA	7.98	45%	70%	2.51	sf GLA	100%	100%	22
Employee	8,700	sf GLA	1.28	60%	100%	0.77	sf GLA	50%	90%	6
Residential, Market Rate										
Studio Efficiency	12	units	0.85	81%	100%	0.69	units	0%	100%	4
1 Bedroom	46	units	0.90	81%	100%	0.73	units	50%	100%	17
2 Bedrooms	17	units	1.65	81%	100%	1.34	units	50%	100%	12
3+ Bedrooms	8	units	2.50	81%	100%	2.03	units	50%	100%	8
Visitor	83	units	0.10	70%	100%	0.07	units	100%	100%	4
Residential, Affordable										
Reserved	100%	res spaces	0.37	100%	100%	0.37	res spaces	50%	100%	7
Visitor	17	units	0.03	70%	100%	0.02	units	100%	100%	0
										Customer 161
										Employee/Resident 99
										Reserved 7
										Total 267

Source: Walker Consultants, 2019.