2 Executive Circle
Suite 250
Irvine, CA 92614
949.825.6175 T
949.825.5939 F
www.llgengineers.com

Pasadena
Irvine
San Diego

August 21, 2024

Mr. Tim O'Brien
Legacy Partners
5141 California Avenue, Suite 100
Irvine, CA. 92617

LLG Reference: 2.22.4668.1

Subject: **Traffic Circulation Assessment for the Proposed Hive Apartments Project**
Costa Mesa, California

Dear Mr. O'Brien:

Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit the following parking demand analysis related to the proposed Hive Live Residential Project located on the west side of Susan Street, between Sunflower Avenue and South Coast Drive in the City of Costa Mesa (the "Project"). The Project proposes the development of 1,050 multifamily dwelling units within three (3) five-story apartments buildings with a total proposed parking supply of 1,751 parking spaces. Based on the proposed 1,736 on-site residential parking spaces (plus 15 retail spaces) for the 1,050 dwelling units and 1,397 bedrooms, results in a parking supply ratio of ***1.65 parking spaces per dwelling unit*** or ***1.24 parking spaces per bedroom***.

PROJECT DESCRIPTION

Existing Development

The existing development on the site consists of 172,176 (SF) office use within three (3) buildings and the entitled development consists of 80,000 SF of office use on the portion of the Project site currently occupied with a professional football training field.

Proposed Project

The proposed Project will consist of demolishing the existing office buildings and football training field to construct 1,050 multifamily dwelling units within three (3) five-story apartments buildings of which approximately 44 dwelling units will be affordable. In addition, 3,692 SF of ground floor retail is proposed in Building A. ***Figure 1*** presents the proposed site plan for the Project, prepared by Architects Orange, which shows the proposed apartment development.

David S. Shender, PE
John A. Boarman, PE
Richard E. Barretto, PE
Keil D. Maberry, PE
KC Yellapu, PE
Dave Roseman, PE
Shankar Ramakrishnan, PE

An LG2WB Company Founded 1966

Specifically, each building will be comprised of the following residential spaces:

Building A [Supply: 521 residential parking spaces (*1.65 spaces per DU*)]:

- Studios: 41 Units
- One Bedrooms: 154 Units
- Two Bedrooms: 120 Units
- Retail: 3,692 SF

Building B [Supply: 572 parking spaces (*1.65 spaces per DU*)]:

- Studios: 57 Units
- One Bedrooms: 186 Units
- Two Bedrooms: 103 Units

Building C [Supply: 643 parking spaces (1.65 spaces per DU)]:

- Studios: 43 Units
- One Bedrooms: 222 Units
- Two Bedrooms: 124 Units

It should be noted that the reserved resident spaces will be unbundled and allocated during leasing, which will generally include one (1) parking space per dwelling unit plus an additional one (1) parking space the two bedroom units, if requested.

CODE PARKING REQUIREMENTS

The code parking calculation for the proposed Project is based on the City's requirements as outlined in *Chapter VI. OFF-STREET PARKING STANDARDS; Article 1. Residential Districts, Section 13-85 and Article 2. Non-Residential Districts, Section 13-89: Parking Required* of the Municipal Code. The City's Municipal Code specifies the following parking requirements:

- Multi-Family Residential: 1 tenant covered parking space per unit and 0.5 tenant open parking space per unit for Bachelor; 1.0 tenant open parking space per unit for 1 Bedroom; 1.5 tenant open parking spaces per unit for 2 Bedrooms; 2.5 tenant open parking spaces per unit for 3 Bedrooms or more. Open parking can be reduced by 0.25 space per unit for one (1) bedroom and larger units if the covered parking is provided within either a carport or a parking structure. Guest parking may be reduced to 0.25 space per unit for each unit above fifty (50) in a large residential development.
- Retail/Offices/Establishments where food or beverages are served with a maximum of 300 SF of public area: 4 spaces per 1,000 SF with a minimum of 6

spaces. Note that the outdoor patio seating area(s) shall be added to the gross floor area of the building for purposes of determining the required parking.

Table 2, attached, presents the code parking requirements for each of the three (3) apartment buildings. As shown, application of City parking ratios to ***Building A*** results in a total parking requirement of 708 parking spaces. With a proposed Building A parking supply of 536 spaces, a theoretical code shortfall of 172 spaces is calculated. Next as shown, application of City parking ratios to ***Building B*** results in a total parking requirement of 743 parking spaces. With a proposed Building B parking supply of 572 spaces, a theoretical code shortfall of 171 spaces is calculated. Next as shown, application of City parking ratios to ***Building C*** results in a total parking requirement of 843 parking spaces. With a proposed Building C parking supply of 643 spaces, a theoretical code shortfall of 200 spaces is calculated. Lastly as shown at the bottom of Table 2, the total parking requirement is 2,294 parking spaces and with a proposed total parking supply of 1,751, a theoretical code shortfall of 543 spaces is calculated. However, based on industry standards, recent residential development in the region, and our experience/Engineering judgment, City Code significantly overstates the amount of parking that is needed to support this multifamily residential project.

PARKING DEMAND ANALYSIS

Table 3A through ***3C*** summarizes the proposed parking demand analysis allocation for the proposed Project by building based on industry and jurisdictional standards, similar approved projects not currently built, and similar residential projects developed by the Developer.

Table 3A
Building A Parking Demand Summary

Project Description	Size	Recommended Parking Ratio	Spaces
Hive Apartments Building A			
▪ Studio Units	41 units	1.0 spaces per unit	41
▪ One Bedroom Units	154 units	1.0 spaces per unit	154
▪ Two Bedroom Units	120 units	2.0 spaces per unit	240
▪ Guest Parking	315 units	0.25 spaces per unit	79
		Residential Subtotal	***514***
▪ Retail	3,692 SF	4 spaces per 1,000 SF	15
Total Building A Residential & Retail Parking Demand			**529**

As shown in *Table 3A*, the total recommended parking demand, which would correlate to a minimum recommended parking supply, is 529 parking spaces, which includes the retail parking demand that will share parking demand with the resident guest parking supply. The recommended residential parking demand of 514 parking spaces equates to a composite ratio of 1.63 spaces per dwelling unit for the 315 dwelling units within Building A. With the proposed Building A parking supply of 536 spaces, a surplus of seven (7) parking spaces is forecast.

Table 3B
Building B Parking Demand Summary

Project Description	Size	Recommended Parking Ratio	Spaces
Hive Apartments Building B			
▪ Studio Units	57 units	1.0 spaces per unit	57
▪ One Bedroom Units	186 units	1.0 spaces per unit	186
▪ Two Bedroom Units	103 units	2.0 spaces per unit	206
▪ Guest Parking	346 units	0.25 spaces per unit	87
Total Building B Residential Parking Demand			**536**

As shown in *Table 3B*, the total recommended parking demand, which would correlate to a minimum recommended parking supply, is 536 parking spaces. The recommended residential parking demand of 536 parking spaces equates to a composite ratio of 1.55 spaces per dwelling unit for the 346 dwelling units within Building B. With the proposed Building B parking supply of 572 spaces, a surplus of 36 parking spaces is forecast.

Table 3C
Building C Parking Demand Summary

Project Description	Size	Recommended Parking Ratio	Spaces
Hive Apartments Building C			
▪ Studio Units	43 units	1.0 spaces per unit	44
▪ One Bedroom Units	222 units	1.0 spaces per unit	222
▪ Two Bedroom Units	124 units	2.0 spaces per unit	248
▪ Guest Parking	389 units	0.25 spaces per unit	97
Total Building C Residential Parking Demand			**611**

As shown in *Table 3C*, the total recommended parking demand, which would correlate to a minimum recommended parking supply, is 611 parking spaces. The recommended residential parking demand of 611 parking spaces equates to a composite ratio of 1.57 spaces per dwelling unit for the 389 dwelling units within Building C. With the proposed Building C parking supply of 643 spaces, a surplus of 32 parking spaces is forecast.

Focusing to the predominant land use in the Project, multi-family residential, the following three methods were utilized in this analysis to justify the recommended parking demand and therefore the parking supply provided for the multi-family housing component of the proposed Project:

a. Comparative Method #1 (using industry and jurisdictional standards)
b. Comparative Method #2 (using multi-family residential ratios approved for projects that have not yet been built)
c. Comparative Method #3 (using empirical ratios derived from a parking demand survey recently conducted in May 2023 at 580 Anton Boulevard Apartments)

Individual multi-family residential projects and local settings have unique parking and tripmaking characteristics that may not be well represented in typical city code requirements. There are increasing concerns among parking/traffic engineering and planning experts that citywide code parking ratios and parking minimums are outdated, and that the "one-size-fits-all" approach to estimating parking requirements may not reflect actual, more current and realistic parking needs, operations, and management.

There is also the issue of "perceived" versus "actual" parking deficiencies. Perceived inadequacies in parking standards are often related to older multi-family developments built to outdated standards instead of newer market-rate housing projects built to current code. This underscores the importance of keeping parking standards current, and which "right size" required supply by being responsive to changing markets, demographics, decline in car ownership patterns, mobility/travel mode choices, creation of live/work/play environments and mixed-use settings, parking management strategies (i.e., unbundling parking), and emerging technologies.

Comparative Method #1 [using industry (ULI) standards]

Table 4 presents the proposed Project recommended parking ratios for multi-family residential (per resident and per guest) were compared against industry standards

developed by Urban Land Use (ULI) and contained in the *Shared Parking Manual (3rd Edition)*.

As shown in the bottom portion of *Table 4,* the proposed Project's recommended composite parking ratio is 1.58 spaces per unit while application of ULI's residential ratios per dwelling unit by bedroom type for the proposed Project, results in a composite ratio of 1.29 parking spaces per unit. This comparison illustrates that the proposed Project recommended parking demand and composite parking ratio is greater than the recommended composite parking ratio recommended by ULI, which is a highly respected parking reference.

Table 4
Proposed Project vs. ULI Parking Requirements for Multifamily Residential

		Proposed Project Parking Demand		ULI Shared Parking (3rd Ed) Residential	
Project	Dwelling Units	Ratio	Spaces	Ratio	Spaces
Multi-Family Residential					
Studio (13%)	141	1 sp/unit	141	0.85 sp/unit	120
1-Bedroom (54%)	562	1 sp/unit	562	0.90 sp/unit	506
2-Bedroom (33%)	347	2.0 sp/unit	694	1.65 sp/unit	573
Total Resident:	**1,050**		**1397**		**1199**
Resident Guest Parking					
Studio (13%)	141	0.25 sp/unit	36	0.15 sp/unit	21
1-Bedroom (54%)	562	0.25 sp/unit	141	0.15 sp/unit	84
2-Bedroom (33%)	347	0.25 sp/unit	87	0.15 sp/unit	52
Total Guest:	**1,050**		**264**		**157**
Total Proposed/Required		--	**1661**	--	**1356**
Composite Parking Ratio (spaces per unit)		--	**1.58**	--	**1.29**

In addition, based on the ITE *Parking Generation Manual, 5th Edition* Land Use: 221 – Multifamily Housing (Mid-Rise), the 85th percentile parking demand ratio is 1.47 spaces per dwelling unit, which is less than the Project's recommended parking demand ratio of 1.58 spaces per dwelling unit.

Comparative Method #2 [using multi-family residential ratios approved for projects that have not yet been built]

Other data points that are noteworthy, are the multi-family residential ratios that have been approved for projects that have not yet been built. For example, the City of Brea approved a composite parking ratio of 1.30 spaces per unit for the Brea Plaza

Shopping Center Project based on empirical studies of other comparable sites in the City. This ratio is below the proposed Project's parking supply ratio of 1.65 spaces per unit.

Comparative Method #3 [using empirical ratios derived from the survey recently conducted at 580 Anton Boulevard Apartments]

In order to supplement the Comparative Methods #1 and #2, a parking demand survey was conducted in May 2023 at 580 Anton Boulevard Apartments, which is considered to be comparable to the proposed multi-family residential component of the Project, and is located in a similar setting at the northeast corner of the Avenue of the Arts and Anton Boulevard intersection in the South Coast Metro area of the City of Costa Mesa. ***Table 5*** presents the results of the parking demand surveys performed on Wednesday, May 10, 2023 and Saturday, May 20, 2023, and indicates empirical parking ratios of 1.28 and 1.24 spaces per occupied unit were derived, respectively. These empirical ratios from 580 Anton Apartments are consistent with the ULI composite ratio of 1.29 spaces per unit from *Table 4*, which is considered to be an appropriate parking ratio for estimating the parking needs of the multi-family residential component of the Project.

Table 5
580 Anton Boulevard Apartments Parking Demands

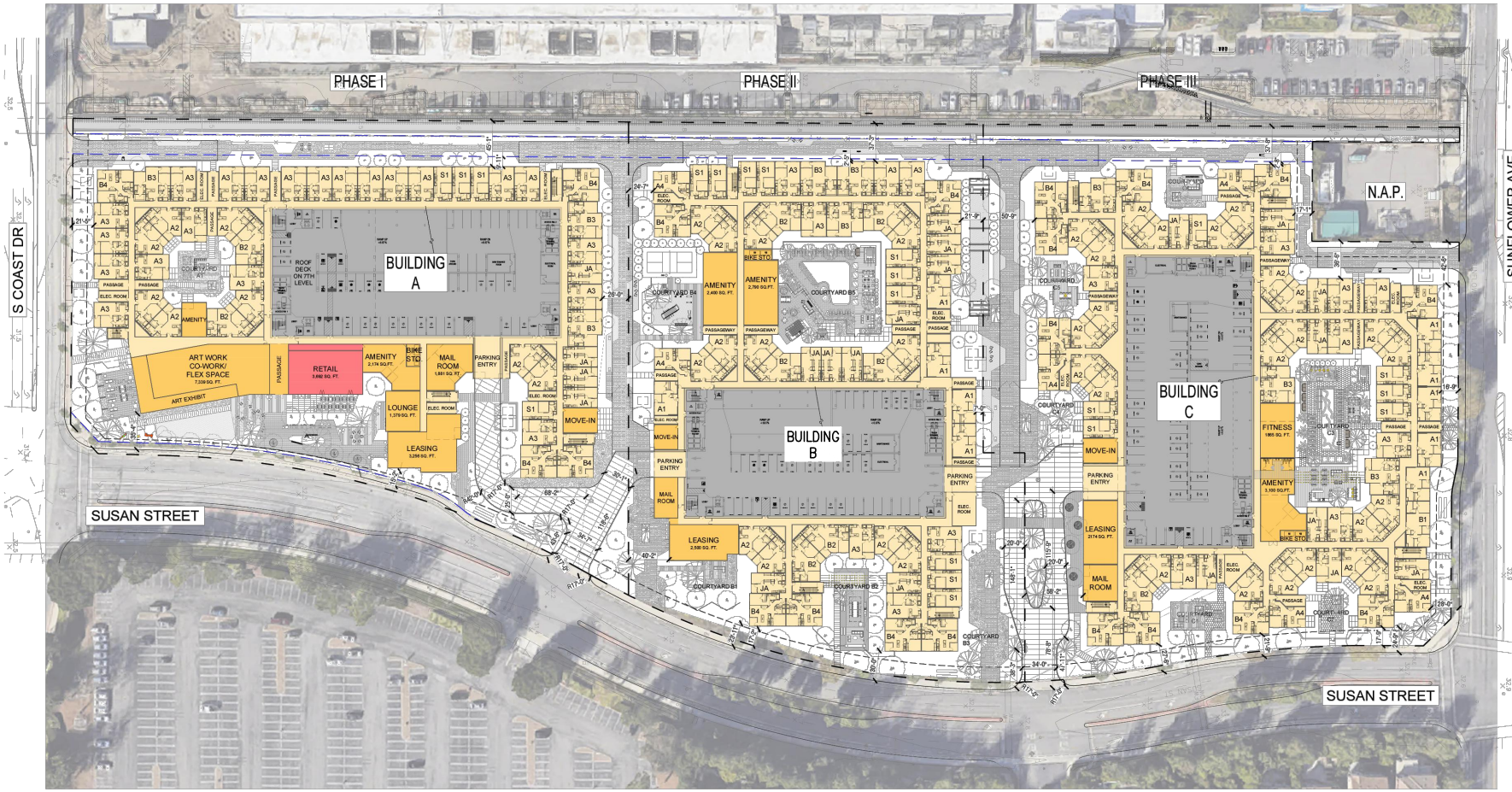
Time of Day	Parking Demand	
	Wed, May 10, 2023	Sat, May 20, 2023
6:00 PM	209	238
7:00 PM	214	240
8:00 PM	238	235
9:00 PM	263	259
10:00 PM	270	264
11:00 PM	284	272
12:00 AM	295	288
1:00 AM	297	288
2:00 AM	**298**	288
3:00 AM	296	**290**
Peak Demand	**298**	**290**
Occupied Units	**233**	**233**
Parking Ratio (spaces per occupied unit)	**1.28**	**1.24**

CONCLUSION

Based on the three (3) comparative methods described above and a recommended composite parking demand ratio of 1.58 parking spaces per unit (1,661 residential parking spaces for 1,050 units), the proposed parking supply of 1,736 residential parking spaces (1.65 spaces per unit) plus 15 retail parking spaces for a total of 1,751 parking spaces will adequately accommodate the parking demand for the proposed 1,050-unit (1,397 bedrooms) Hive Live Apartment Project.

We appreciate the opportunity to provide this Technical Memorandum. Should you have any questions regarding the memorandum, please contact us at (949) 825-6175

Attachments



n:\4600\2234668 – hive apartments, costa mesa\dwg\4668 f-1.dwg LDP 14:15:55 08-21-2024 aguilar

SOURCE: ARCHITECTS ORANGE

LLG

N NO SCALE

FIGURE 1

PROPOSED SITE PLAN

HIVE APARTMENTS, COSTA MESA

TABLE 2
CITY CODE PARKING REQUIREMENTS
HIVE LIVE APARTMENTS, COSTA MESA

Project Description	Units/SF	City of Costa Mesa Code Parking Ratio		Total City Code Requirement
		Covered	Open[1]	
Building A (536 Parking Spaces)				
▪ Studios	41 Units	1.00/ Unit	0.50/ Unit	62
▪ One Bedrooms	154 Units	1.00/ Unit	0.75/ Unit	270
▪ Two Bedrooms	120 Units	1.00/ Unit	1.25/ Unit	270
▪ Guest	315 Units	0.5/ Unit[2]		91
▪ Retail	3,692 SF	1/250 SF		15
Building A Subtotal				***708***
Building A Parking Supply				***536***
Building Surplus/Deficiency (+/-)				***-172***
Building B (572 Parking Spaces)				
▪ Studios	57 Units	1.00/ Unit	0.50/ Unit	86
▪ One Bedrooms	186 Units	1.00/ Unit	0.75/ Unit	326
▪ Two Bedrooms	103 Units	1.00/ Unit	1.25/ Unit	232
▪ Guest	346 Units	0.5/ Unit[2]		99
Building B Subtotal				***743***
Building B Parking Supply				***572***
Building B Surplus/Deficiency (+/-)				***-171***
Building C (643 Parking Spaces)				
▪ Studios	43 Units	1.00/ Unit	0.50/ Unit	65
▪ One Bedrooms	222 Units	1.00/ Unit	0.75/ Unit	389
▪ Two Bedrooms	124 Units	1.00/ Unit	1.25/ Unit	279
▪ Guest	389 Units	0.5/ Unit[2]		110
Building C Subtotal				***843***
Building C Parking Supply				***643***
Building C Surplus/Deficiency (+/-)				***-200***
Project Total City Code Requirement				**2,294**
Project Total Parking Supply				**1,751**
Total Project Parking Surplus/Deficiency (+/-)				**-543**

1 Source: Municipal Code Chapter VI. OFF-STREET PARKING STANDARDS: Open parking can be reduced by 0.25 spaces per unit for one (1) bedroom and larger units if the covered parking is provided within either a carport or a parking structure.

2 Source: Municipal Code Chapter VI. OFF-STREET PARKING STANDARDS: Guest parking may be reduced to 0.25 space per unit for each unit above fifty (50) in a large residential development.