Appendix D2 Parking Study

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October 11, 2013

Mr. Joe Flanagan
Red Oak Investments
2101 Business Center Drive, Suite 230
Irvine, CA 92612

LLG Reference: 2.13.3373.1

Subject: **Parking Study for 125 Baker Street Apartments**
Costa Mesa, California

Dear Mr. Flanagan:

As requested, Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit this Parking Study for the proposed 125 Baker Street Apartment project in the City of Costa Mesa, California. This study has been prepared to determine whether the proposed parking supply could adequately meet the project's parking needs.

The apartment complex project that was evaluated in the *Revised Traffic Impact Analysis Report for the 125 Baker Street Apartments, prepared by LLG, dated July 18, 2013*, included 240 units, with 547 spaces in a six-level parking structure. That project description has since been refined, and the project, as now proposed, consists of 238 units with 452 structured spaces (translating to a parking ratio of 1.90 spaces per unit).

CITY CODE AND NCMSP RATIOS

The City's Municipal Code specifies the following parking requirements for residential uses:

- studio units – 1 covered space, 0.5 open space and 0.5 guest space
- one-bedroom units – 1 covered space, 1.0 open space and 0.5 guest space
- two-bedroom units – 1 covered space, 1.5 open space and 0.5 guest space
- three-bedroom units – 1 covered space, 2.5 open space and 0.5 guest space
- Open parking can be reduced by 0.25 space per unit for one-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 50 in a large residential development.

As part of the prior project application (and as approved by the City), the 547-space supply was calculated based solely upon the direct application of the City Code parking ratios for 240 units. By dividing the 547-space requirement by the 240 units proposed, a "blended" ratio of 2.28 spaces per unit is derived. This resultant parking ratio (based strictly on City Code calculation) is conservative, and likely overestimates the potential parking needs of the project, as discussed in the next section.

In addition to City Code ratios, the City has adopted other ratios for residential uses as part of the North Costa Mesa Specific Plan (NCMSP). The NCMSP ratios are as follows:

- Tenants – 1.5 to 2.0 parking spaces per unit
- Guests – 0.5 parking spaces per unit for the first 50 units, and 0.25 parking spaces for each unit above 50

Applying the NCMSP ratios (presuming 1.5 spaces per unit for tenants) to the proposed 238 units yields a total requirement of 429 spaces. Dividing this 429-space requirement by the 238 units corresponds to a blended ratio of 1.80 spaces per unit, which is significantly less than the blended ratio derived from strict application of standard City Code ratios (2.28 spaces per unit).

COMPARISON OF PARKING RATIOS

Notwithstanding the requirements of City Code, the actual parking requirements for multifamily residential uses have been found to be significantly less than the City's own Code requirement. This aspect is illustrated by LLG's previous field studies of actual parking demand at existing sites similar to the project, in addition to parking demand/empirical ratio compilations from other sources.

Table 1 presents a comparison of parking ratios from various sources, and underscores the fact that the ratio of 2.28 spaces per unit derived from the project's prior application is significantly greater than all of the peak parking ratios compiled.

The upper portion of *Table 1* presents nine comparable sites in Costa Mesa, Irvine, Orange, Fullerton, Santa Ana, Monrovia, and Pasadena. This array of peak parking rates yields an average ratio of 1.33 spaces per unit, an 85th percentile ratio of 1.47 spaces per unit, and a maximum ratio of 1.75 spaces per unit (based on the 580 Anton Boulevard multifamily residential project in Costa Mesa).

Parking Generation (4th Edition) published by the Institute of Transportation Engineers (ITE), and *Shared Parking* (2nd Edition) published by the Urban Land Institute (ULI), as well as other reference materials for the cities of Ontario and

Rancho Cucamonga, San Bernardino County, and Riverside County, provide peak parking ratios for apartment complexes, as summarized in the middle portion of *Table 1*. These parking ratios range from 1.20 spaces per unit (average ratio per ITE) to 1.66 spaces per unit (field studies in Ontario and Rancho Cucamonga).

Based on the above, a ratio of 1.75 spaces per unit is recommended for application to the project. It is a solid demand factor, is consistent with the ratio applied to the 580 Anton Boulevard project in the City, and includes a parking contingency of 19% relative to the 85th percentile ratio derived from comparable sites.

PROJECT PARKING SUPPLY VERSUS DEMAND

The bottom portion of *Table 1* estimates the project's parking needs based on the application of the average, 85th percentile, and maximum parking rates from comparable sites. For the 238 units as now proposed, it is estimated that the average demand would be 317 spaces, the 85th percentile demand would be 350 spaces, and the maximum demand would be 417 spaces.

Comparing the maximum demand of 417 spaces against the proposed supply of 452 spaces in the structure yields a surplus of 35 spaces.

CONCLUSION

As indicated previously, dividing the proposed supply of 452 spaces by the 238 units translates to the project's "supply provision" ratio of 1.90 spaces per unit. This ratio exceeds the minimum allowed per the NCMSP (1.80 spaces per unit), the ratio recently approved by the City for the 580 Anton Boulevard project (1.75 spaces per unit), and also the maximum empirical ratio derived from comparable sites (1.48 spaces per unit). Based on these findings, it is concluded that the proposed parking supply is more than sufficient to meet the projected peak parking demand

We appreciate the opportunity to provide this analysis. Should you have any questions, please call us at 949.825.6175.

Sincerely,
Linscott, Law & Greenspan, Engineers

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TABLE 1
PARKING SUMMARY
125 Baker Street Apartments, Costa Mesa

Comparable Site or Reference	Tenant & Guest Peak Parking Ratio (spaces per DU)
1 580 Anton Boulevard, Costa Mesa (proposed 250-unit mid-rise residential building)	1.75
2 Main Street Village [a] 2555 Main Street, Irvine	1.42
3 279-unit apartment complex, Irvine [b]	1.36
4 403-unit apartment complex, Irvine [b]	1.29
5 460-unit apartment complex, Orange [b]	1.40
6 183-unit apartment complex, Fullerton [b]	1.10
7 250-unit apartment complex, Santa Ana [b]	0.94
8 Paragon at Old Town [a] 700 S. Myrtle Avenue, Monrovia	1.48
9 Trio Apartments [a] 44 N. Madison Avenue, Pasadena	1.22
Average:	**1.33**
85th Percentile:	**1.47**
Maximum:	**1.75**
ITE *Parking Generation* , 4th Edition Low/Mid-Rise Apartment (Urban)	
Average:	**1.20**
85th Percentile:	**1.61**
ULI *Shared Parking* : Residential (Rental) Units	**1.65**
Field Studies in Ontario and Rancho Cucamonga [c]	**1.58 - 1.66**
American Community Survey (ACS) in Ontario [c]	**1.62**
Household Surveys in San Bernardino and Riverside [c]	**1.45**
Parking Calculation Using Empirical Rates Above (238 DUs for 125 Baker Street Apartments)	
Average Demand (1.33 x 238 DUs):	**317**
85th Percentile Demand (1.47 x 238 DUs):	**350**
Maximum Demand (1.75 x 238 DUs):	**417**

Notes:

[a] Source: *Parking Demand Analysis for the Proposed Fifth Avenue/Huntington Drive Mixed-Use Project City of Monrovia, California* , prepared by LLG, Oct. 2012

[b] Source: *Parking Study for AMLI Orange Apartment Project* , prepared by IBI Group, Nov. 2012

[c] Source: *Parking Reform Made Easy* , Richard W. Willson, 2013