Appendix N Parking Analysis

Appendices

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MERCURY & BERRY RESIDENTIAL PROJECT
PARKING ANALYSIS
City of Brea, California

Prepared for:

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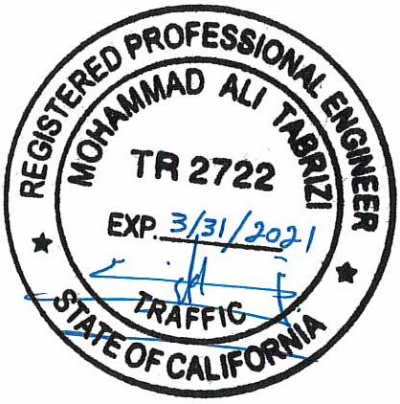

March 18, 2019

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1.0 Introduction

1.1 Purpose of Report & Study Objectives

The purpose of this parking analysis is to determine the required number of parking spaces to adequately serve the proposed Mercury & Berry Residential Project.

1.2 Project Site Location & Description

The proposed Mercury & Berry Residential Project is planned to consist of a total of 114 units of multi-family residential with the following breakdown:

- 84 Studio residential dwelling units; and
- 26 one-bedroom residential dwelling units; and
- 4 two-bedroom residential dwelling units.

The currently vacant project site is located on the southeast corner of the Berry Street / Mercury Lane intersection in the City of Brea. Existing land uses in the area mainly consist of industrial/office uses.

The proposed project is planned to provide a total of 118 on-site parking spaces. Additionally, the proposed project is planned to provide a total of 114 bicycle parking spaces.

Exhibit A shows the project location. Exhibit B shows the project site plan.

As part of the proposed project, a Master Plan with updated parking requirements is being proposed for adoption. The proposed Master Plan would adopt the following requirements for the number for required parking spaces:

Table A
Proposed Master Plan Required Parking

Land Use	Parking Required (Spaces)
Studio	1 space per unit
One-Bedroom	1 space per unit
Two Bedroom	2 space per unit
Guest Parking	0 space per unit
Bicycle Parking	New vehicle parking spaces required for the multi-family residential development may be substituted, with the exception of handicapped parking spaces, by bicycle parking at a ratio of one (1) off-street vehicle parking space for every five (5) bicycle parking spaces provided. The reduced number of vehicle parking spaces shall not exceed ten (10) percent of the total number of required spaces.

Table B shows the proposed project parking capacity to be provided and the parking required per the proposed Master Plan:

Table B
Project Parking Capacity Planned to be Provided per Proposed Master Plan

Land Use	Quantity	Units	Parking Required (Spaces)
Studio	84	Dwelling Units	84
One-Bedroom	26	Dwelling Units	26
Two Bedroom	4	Dwelling Units	8
Guest Parking [4]	--	--	0
		Total	**118**
Credit for Bicycle Parking (114 Bicycle Spaces Credited as 5 Bicycle Spaces counting as 1 Vehicle Space up to 10% of Total Required Parking)			-11.8
		Vehicle Parking Required per Proposed Master Plan	**106.2**
		Total (Rounded)	**107**
		Vehicle Parking Provided	**118**
		Vehicle Parking Surplus/Shortage	**11**
		Adequate Vehicle Parking Provided?	**Yes**

As shown in table B, based on the proposed Master Plan, the proposed project is required to provide a total of 118 vehicle parking spaces.

As also shown in Table B, since the proposed project is planned to provide a total of 118 vehicle spaces plus 114 bicycle parking spaces, based on the proposed Master Plan, the proposed project is forecast to provide more than adequate vehicle parking capacity.

1.3 Methodologies

Parking requirements for various land uses are typically determined based on the City's Municipal Code. However, since the proposed project is considered unique in nature due to the following factors, the parking requirements for the project can be different than what is required for a typical residential use:

- The relatively small size of most of the units;
- Affordable housing classification; and
- Proximity to Downtown Brea (approximately 2,000 feet away from Downtown).

Additionally, the project site is in close proximity to various transit and bus stations located near Downtown Brea.

The above factors could potentially result in a reduced parking demand for the proposed project in comparison to a typical residential use.

Hence, to determine the required parking for this unique project, this analysis evaluates the forecast parking demand of the project utilizing the following various methodologies and sources:

- Parking required based on the City of Brea Municipal Code;
- Parking required based on the *Institute of Transportation Engineers (ITE) Parking Generation Manual (January 2019)*;
- Parking required based on another project located in the City of Brea (Central Park Village); and
- Parking required based on other studies and published sources from other cities and agencies.

Location Map

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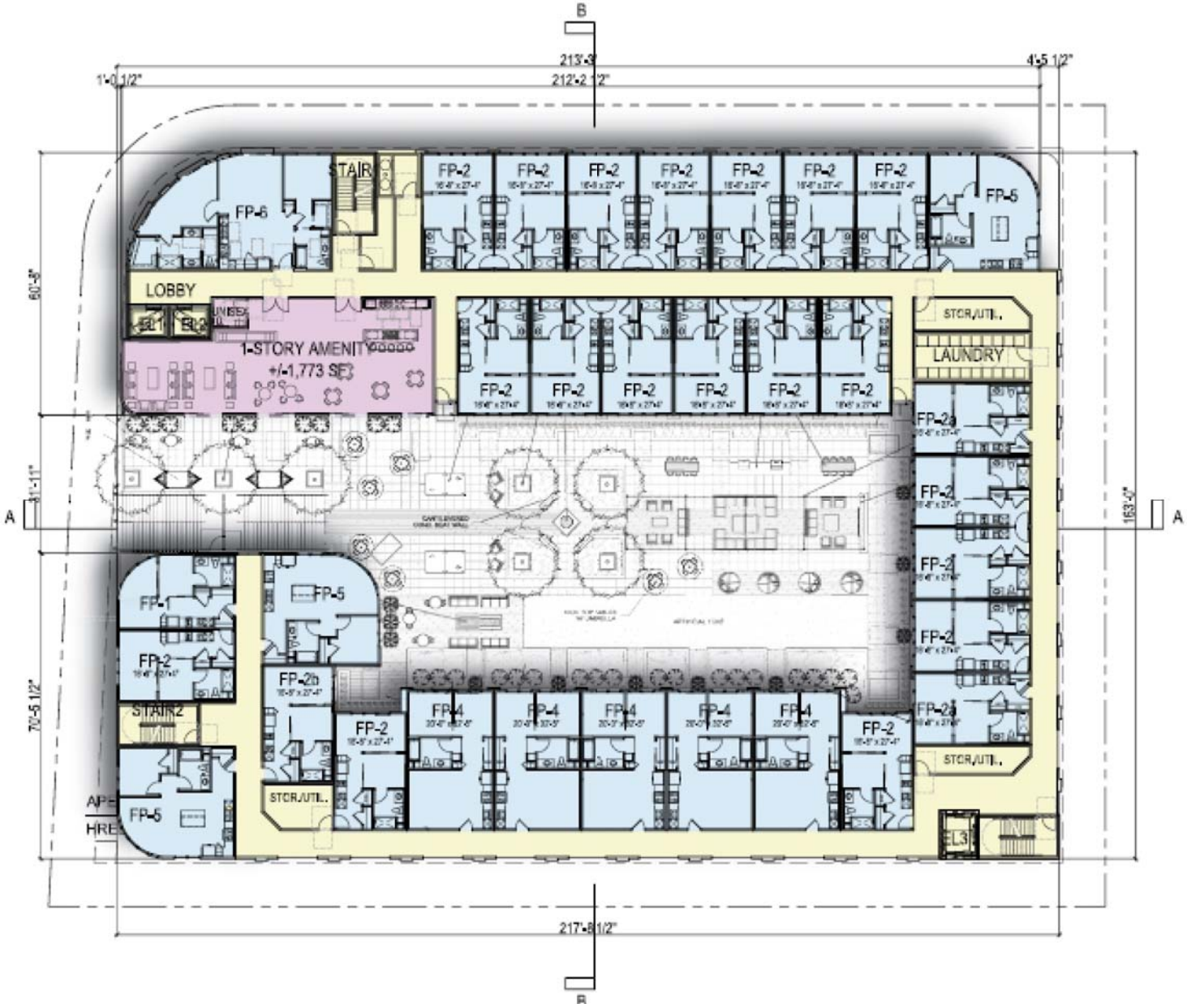
Site Plan


B
213'-9"
212'-2 1/2"
1'-0 1/2"
4'-5 1/2"
STAIR
FP-6
FP-2
FP-5
LOBBY
1-STORY AMENITY
+/-1,773 SF
STOR./UTIL.
LAUNDRY
FP-2a
FP-1
FP-2b
FP-4
STAIR2
EL3
60'-8"
41'-11"
70'-5 1/2"
163'-0"
A
217'-8 1/2"

N

2.0 Parking Required Per the City Municipal Code

The City of Brea Municipal Code has guidelines and requirements for determining the amount of parking capacity required to serve various land use types, including residential uses.

Based on the City's Municipal Code, each one-bedroom residential unit is required to have one and three-quarter spaces per unit. Each two-bedroom unit is required to provide two parking spaces per unit. One of the spaces required for each unit needs to be in a garage or a three-sided carport.

For sites with five or more units, in addition to the parking requirement stated above, the site should also provide 0.2 guest parking spaces per unit. A maximum of 25% of the required uncovered parking spaces can be compact.

Table A shows the required parking capacity for the proposed project based on the City of Brea Municipal Code.

Some jurisdictions allow for a certain amount of bicycle and motorcycle parking to count towards the parking requirements for projects. However, the City of Brea Code does not include such provisions.

Table C
Project Parking Required Per City of Brea Municipal Code

Land Use	Quantity	Units	Parking Required (Spaces)
Studio [1]	84	Dwelling Units	126
One-Bedroom [2]	26	Dwelling Units	45.5
Two Bedroom [3]	4	Dwelling Units	8
Guest Parking [4]	--	--	22.8
		Total	**179.5**
		Total (Rounded)	**180**
		Vehicle Parking Provided	**118**
		Vehicle Parking Surplus/Shortage	**- 62**

Notes:

1 Based on the City's Municipal Code, each studio unit is required to provide one and a half parking spaces per unit. One of the spaces required for each unit needs to be in a garage or a three-sided carport.

2 Based on the City's Municipal Code, each one-bedroom unit is required to have one and three-quarter parking spaces per unit. One of the spaces required for each unit needs to be in a garage or a three-sided carport.

3 Based on the City's Municipal Code, each two-bedroom unit is required to provide two parking spaces per unit. One of the spaces required for each unit needs to be in a garage or a three-sided carport.

4 For sites with five or more units, in addition to the parking requirement stated above, the site should also provide 0.2 guest parking spaces per unit. A maximum of 25% of the required uncovered parking spaces can be compact.

As shown in Table C, based on the City of Brea Municipal Code, the proposed project is required to provide a total of 180 parking spaces.

As also shown in Table C, since the proposed project is planned to provide a total of 118 parking spaces, based on the City's Municipal Code, the proposed project is forecast to have a parking deficiency of 62 parking spaces.

However, the parking requirements from the City's Municipal Code are a general requirement that might not account for potentially unique characteristics of the proposed project including affordability, proximity to Downtown, and the relatively small size of most

of the residential units. As shown in the subsequent sections of this report, affordable housing itself can have a significant effect on parking demand.

Additionally, as previously noted, some jurisdictions allow for a certain amount of bicycle and motorcycle parking to count towards the parking requirements for projects. However, the City of Brea Code does not include such provisions.

3.0 Parking Required Per ITE Parking Generation Manual

The *Institute of Transportation Engineers (ITE) Parking Generation Manual* is a widely-utilized published source for determination of parking demand. The Manual contains parking requirement and rates for a various land uses based on empirical data and observations of existing sites.

When compared to the relatively older established sources such as the Municipal Code data, the ITE Manual has been updated very recently in January 2019 and is expected to represent more up to date data reflecting recent parking dynamics such as the use of rideshare (Uber, Lyft, delivery services, etc.) and other elements affecting parking demand.

Additionally, when compared to the City's Municipal Code which has an overall general requirement for residential use and a "one fits all" approach, the ITE Manual breaks down the residential land uses into a number of categories based on factors such as density, height, location, affordability, etc.

Furthermore, the ITE manual breaks down the parking requirement for weekday conditions, Saturday conditions, and Sunday conditions.

Parking generation for the proposed project has been evaluated utilizing the ITE Parking Generation Manual's Affordable Housing land use category.

Based on the ITE Parking Generation Manual, affordable housing includes all multifamily housing that is rented at below market rate to households that include at least one employed member. Eligibility to live in affordable housing can be a function of limited household income and/or resident age.

Most of the studied sites were conducted at locations where 100 percent of the units were affordable, with some sites that had at least 75 percent affordable units. The data utilized for this analysis is based on the observed sites located in a general urban/suburban setting.

Table A shows the required parking capacity for the proposed project based on the ITE Parking Generation Manual (January 2019) based on the number of dwelling units. The data is broken down into weekday conditions, Saturday conditions, and Sunday conditions.

Table D
Project Parking Required Per ITE Parking Generation Manual
Based on Dwelling Units

Day of Week	Average Rate	Parking Required (Spaces)
Weekday Conditions (114 Dwelling Units)	0.99 Spaces per Dwelling Unit	112.86
Saturday Conditions (114 Dwelling Units)	0.79 Spaces per Dwelling Unit	90.06
Sunday Conditions (114 Dwelling Units)	0.96 Spaces per Dwelling Unit	109.44
Maximum Overall Parking Demand		**112.86**
Total (Rounded)		**113**
Vehicle Parking Provided		**118**
Vehicle Parking Surplus/Shortage		**5**
Vehicle Adequate Parking Provided?		**Yes**

Notes:

Source: Institute of Transportation Engineers (ITE) Parking Generation Manual (5th Edition, January 2019).

As shown in Table D, based on ITE Parking Generation Manual and the number of dwelling units, the proposed project is required to provide a total of 113 parking spaces.

As also shown in Table D, since the proposed project is planned to provide a total of 118 parking spaces, based on ITE Parking Generation Manual and the number of dwelling units, the proposed project is forecast to provide adequate parking capacity.

Table E shows the required parking capacity for the proposed project based on the ITE Parking Generation Manual (January 2019) based on the number of bedrooms. The data is broken down into weekday conditions, Saturday conditions, and Sunday conditions.

Table E
Project Parking Required Per ITE Parking Generation Manual
Based on Number of Bedrooms

Day of Week	Average Rate	Parking Required (Spaces)
Weekday Conditions (118 Bedrooms)	0.54 Spaces per Bedroom	63.72
Saturday Conditions (118 Bedrooms)	0.27 Spaces per Bedroom	31.86
Sunday Conditions (118 Bedrooms)	0.53 Spaces per Bedroom	62.54
Maximum Overall Parking Demand		**62.72**
Total (Rounded)		**63**
Vehicle Parking Provided		**118**
Vehicle Parking Surplus/Shortage		**55**
Vehicle Adequate Parking Provided?		**Yes**

Notes:

Source: Institute of Transportation Engineers (ITE) Parking Generation Manual (5th Edition, January 2019).

As shown in Table E, based on ITE Parking Generation Manual and the number of bedrooms, the proposed project is required to provide a total of 63 parking spaces.

As also shown in Table E, since the proposed project is planned to provide a total of 118 parking spaces, based on ITE Parking Generation Manual and the number of bedrooms, the proposed project is forecast to provide adequate parking capacity.

4.0 Parking Required Per Central Park Village

This section evaluates the parking for the proposed project utilizing data from the Central Park Village Project located at 300-400 block of West Central Avenue in the City of Brea. The Central Park Village Project consists of a mix of residential uses, retail, and offices. Parking for the proposed Central Park Village project was evaluated in the *Parking Study for Central Park Village Project (KOA Corporation, November 2010)*.

The proposed project is not a mixed use product. However, the proposed project's vicinity to Downtown Brea and other uses could potentially result in similar parking dynamics.

Additionally, the project site is in close proximity to various transit and bus stations located near Downtown Brea.

The *Parking Study for Central Park Village Project (KOA Corporation, November 2010)* included study of other sites to establish appropriate parking rate for the various uses, including residential multi-family. The residential land uses studied as part of the *Parking Study for Central Park Village Project (KOA Corporation, November 2010)* do not appear to be affordable housing. Typically, affordable housing results in lower parking demand.

The following site was studied and observed as part of the *Parking Study for Central Park Village Project (KOA Corporation, November 2010):*

- *Golden Palms Plaza:* located at the southwest corner of Shaefer Avenue and Roswell Avenue in the City of Chino, it comprises of a mix of residential, office, and retail uses. Based on the observations, an observed parking rate of 0.92 spaces per dwelling unit was recorded. This included a 0.12 rate increase on top of 0.80 to account for turnover of parking spaces.

Table F shows the required parking capacity for the proposed project based on the observations conducted at the Golden Palms Plaza and documented in the *Parking Study for Central Park Village Project (KOA Corporation, November 2010).*

Table F
Project Parking Required Based on
Observed Rates Documented in Parking Study for Central Park Village

Number of Dwelling Units	Observed Rate	Parking Required (Spaces)
114 Dwelling Units	0.92 Spaces per Dwelling Unit	104.88
	Total (Rounded)	**105**
	Vehicle Parking Provided	**118**
	Vehicle Parking Surplus/Shortage	**13**
	Vehicle Adequate Parking Provided?	**Yes**

Notes:

Source: *Parking Study for Central Park Village Project (KOA Corporation, November 2010)*.

As shown in Table F, based on the observations conducted at the Golden Palms Plaza and documented in the *Parking Study for Central Park Village Project (KOA Corporation, November 2010)*, the proposed project is required to provide a total of 105 parking spaces.

As also shown in Table F, since the proposed project is planned to provide a total of 118 parking spaces, based on the observations conducted at the Golden Palms Plaza and documented in the *Parking Study for Central Park Village Project (KOA Corporation, November 2010)*, the proposed project is forecast to provide adequate parking capacity.

5.0 Parking Required Per Other Studies & Published Sources

Research has been performed to determine the appropriate parking rate for affordable housing based on research and publications from other agencies that have conducted studies on this subject.

The following documents were reviewed:

- *Technical Memo Regarding Multi-Family Parking Demand Rates (City of Palo Alto Planning & Transportation Commission, May 9, 2018):* observed parking rate of 0.55 spaces per bedroom for affordable housing. The Technical Memo was based on the *City of Palo Alto Multi-Family Parking Demand Rates Study (Fehr & Peers, April 2018).* **Utilizing this rate, the proposed project would require 65 parking spaces, well below the planned 118 spaces to be provided.**

- In 2011, the City of San Diego conducted a parking study for affordable housing in various contexts throughout the City. The study documented rates for 21 housing developments to derive a City-wide parking demand model. The parking study concluded that parking demand for affordable housing is about one half of typical rental units. **Utilizing this data, the proposed project would require half of what is required based on the City Code, previously shown in Table A, or 112 parking spaces, below the planned 118 spaces to be provided.**

- In 2015 Fehr & Peers conducted a parking study in conjunction with a trip generation study for the Los Angeles Department of City Planning. The study surveyed a total of 42 affordable housing sites inside and outside Transit Priority Areas. The study compared the observed parking demand rates to the Los Angeles Municipal Code parking requirements. All observed parking demand rates were lower than the Municipal Code requirements and ranged from 0.44 up to 0.85 spaces per dwelling unit. **Utilizing this data, the proposed project would require between 51 and 97 parking spaces, well below the planned 118 spaces to be provided.**

- Based on review of the San Diego Affordable Housing Parking Study (Wilbur Smith Associates, December 2011), the following are minimum required parking for affordable housing set by various agencies:

    - City of Boulder, CO: 1.0 space for studio or one bedroom and 1.0 space for two bedroom units. **Utilizing this rate, the proposed project would require 114 parking spaces, below the planned 118 spaces to be provided.**

    - Denver, CO: 0.8 space for studio or one bedroom and 1.0 space for two bedroom units. **Utilizing this rate, the proposed project would require 92 parking spaces, well below the planned 118 spaces to be provided.**

    - Los Angeles, CA: 1.0 space for studio or one bedroom and 1.0 space for two bedroom units. **Utilizing this rate, the proposed project would require 114 parking spaces, below the planned 118 spaces to be provided.**

    - Pasadena, CA: 1.0 space for studio or one bedroom and 2.0 spaces for two bedroom units. **Utilizing this rate, the proposed project would require 118 parking spaces, equivalent to the planned 118 spaces to be provided.**

    - San Leandro, CA: 1.0 space for studio or one bedroom and 1.0 space for two bedroom units. **Utilizing this rate, the proposed project would require 114 parking spaces, below the planned 118 spaces to be provided.**

    - Santa Barbara, CA: 1.0 space for studio or one bedroom and 1.0 space for two bedroom units. **Utilizing this rate, the proposed project would require 114 parking spaces, below the planned 118 spaces to be provided.**

    - Santa Clara, CA: 0.75 space for studio, 1.0 space for one bedroom and 1.5 spaces for two bedroom units. **Utilizing this rate, the proposed project would require 95 parking spaces, below the planned 118 spaces to be provided.**

In summary, based on the observed field data and research conducted on affordable housing parking demand by various agencies, the proposed project would require anywhere between 51 and 118 parking spaces.

Since the proposed project is planned to provide a total of 118 parking spaces, based on other conducted studies and published data for affordable housing parking demand, the proposed project is forecast to provide adequate parking capacity.

6.0 Findings & Conclusions

The purpose of this parking analysis is to determine the required number of parking spaces to adequately serve the proposed Mercury & Berry Residential Project.

The proposed Mercury & Berry Residential Project is planned to consist of a total of 114 units of multi-family residential with the following breakdown:

- 84 Studio residential dwelling units; and
- 26 one-bedroom residential dwelling units; and
- 4 two-bedroom residential dwelling units.

The currently vacant project site is located on the southeast corner of the Berry Street / Mercury Lane intersection in the City of Brea. Existing land uses in the area mainly consist of industrial/office uses.

The proposed project is planned to provide a total of 118 on-site parking spaces.

Exhibit A shows the project location. Exhibit B shows the project site plan.

As part of the proposed project, a Master Plan with updated parking requirements is being proposed for adoption. The proposed Master Plan would adopt the following requirements for the number for required parking spaces:

Proposed Master Plan Required Parking

Land Use	Parking Required (Spaces)
Studio	1 space per unit
One-Bedroom	1 space per unit
Two Bedroom	2 space per unit
Guest Parking	0 space per unit
Bicycle Parking	New vehicle parking spaces required for the multi-family residential development may be substituted, with the exception of handicapped parking spaces, by bicycle parking at a ratio of one (1) off-street vehicle parking space for every five (5) bicycle parking spaces provided. The reduced number of vehicle parking spaces shall not exceed ten (10) percent of the total number of required spaces.

The following Table shows the proposed project parking capacity to be provided and the parking required per the proposed Master Plan:

Project Parking Capacity Planned to be Provided per Proposed Master Plan

Land Use	Quantity	Units	Parking Required (Spaces)
Studio	84	Dwelling Units	84
One-Bedroom	26	Dwelling Units	26
Two Bedroom	4	Dwelling Units	8
Guest Parking [4]	--	--	0
Total			**118**
Credit for Bicycle Parking (114 Bicycle Spaces Credited as 5 Bicycle Spaces counting as 1 Vehicle Space up to 10% of Total Required Parking)			-11.8
Vehicle Parking Required per Proposed Master Plan			**106.2**
Total (Rounded)			**107**
Vehicle Parking Provided			**118**
Parking Surplus/Shortage			**11**
Adequate Parking Provided?			**Yes**

As shown, based on the proposed Master Plan, the proposed project is required to provide a total of 118 vehicle parking spaces.

As also shown, since the proposed project is planned to provide a total of 118 vehicle spaces plus 114 bicycle parking spaces, based on the proposed Master Plan, the proposed project is forecast to provide more than adequate vehicle parking capacity.

Exhibit A shows the project location. Exhibit B shows the project site plan.

Parking requirements for various land uses are typically determined based on the City's Municipal Code. However, since the proposed project is considered unique in nature due to the following factors, the parking requirements for the project can be different than what is required for a typical residential use:

- The relatively small size of most of the units;
- Affordable housing classification; and
- Proximity to Downtown Brea (approximately 2,000 feet away from Downtown).

The above factors could potentially result in a reduced parking demand for the proposed project in comparison to a typical residential use.

Hence, to determine the required parking for this unique project, this analysis evaluates the forecast parking demand of the project utilizing the following various methodologies and sources:

- Parking required based on the City of Brea Municipal Code;
- Parking required based on the *Institute of Transportation Engineers (ITE) Parking Generation Manual (January 2019)*;
- Parking required based on another project located in the City of Brea (Central Park Village); and
- Parking required based on other studies and published sources from other cities and agencies.

Parking Required Per the City Municipal Code:

Based on the City of Brea Municipal Code, the proposed project is required to provide a total of 224 parking spaces.

Since the proposed project is planned to provide a total of 118 parking spaces, based on the City's Municipal Code, the proposed project is forecast to have a parking deficiency of 106 parking spaces.

However, the parking requirements from the City's Municipal Code are a general requirement that might not account for potentially unique characteristics of the proposed project including affordability, proximity to Downtown, and the relatively small size of most of the residential units. As shown in the subsequent sections of this report, affordable housing itself can have a significant effect on parking demand.

Additionally, as previously noted, some jurisdictions allow for a certain amount of bicycle and motorcycle parking to count towards the parking requirements for projects. However, the City of Brea Code does not include such provisions.

Parking Required Per ITE Parking Generation Manual & Dwelling Unit Count:

Based on ITE Parking Generation Manual and the number of dwelling units, the proposed project is required to provide a total of 113 parking spaces.

Since the proposed project is planned to provide a total of 118 parking spaces, based on ITE Parking Generation Manual and the number of dwelling units, the proposed project is forecast to provide adequate parking capacity.

Parking Required Per ITE Parking Generation Manual & Bedroom Count:

Based on ITE Parking Generation Manual and the number of bedrooms, the proposed project is required to provide a total of 63 parking spaces.

Since the proposed project is planned to provide a total of 118 parking spaces, based on ITE Parking Generation Manual and the number of bedrooms, the proposed project is forecast to provide adequate parking capacity.

Parking Required Per Central Park Village:

Based on the observations conducted at the Golden Palms Plaza and documented in the *Parking Study for Central Park Village Project (KOA Corporation, November 2010)*, the proposed project is required to provide a total of 105 parking spaces.

Since the proposed project is planned to provide a total of 118 parking spaces, based on the observations conducted at the Golden Palms Plaza and documented in the *Parking Study for Central Park Village Project (KOA Corporation, November 2010)*, the proposed project is forecast to provide adequate parking capacity.

Parking Required Per Other Studies & Published Sources:

Based on the observed field data and research conducted on affordable housing parking demand by various agencies, the proposed project would require anywhere between 51 and 118 parking spaces.

Since the proposed project is planned to provide a total of 118 parking spaces, based on other conducted studies and published data for affordable housing parking demand, the proposed project is forecast to provide adequate parking capacity

Conclusions:

Based on the City of Brea Municipal Code, the proposed project is required to provide a total of 224 parking spaces.

Since the proposed project is planned to provide a total of 118 parking spaces, based on the City's Municipal Code, the proposed project is forecast to have a parking deficiency of 106 parking spaces.

However, the parking requirements from the City's Municipal Code are a general requirement that might not account for potentially unique characteristics of the proposed project including affordability, proximity to Downtown, and the relatively small size of most of the residential units. As shown in the subsequent sections of this report, affordable housing itself can have a significant effect on parking demand.

After accounting for the unique characteristics of the proposed project, especially, the affordable housing element, data from other research, observations, and publications,

show a forecast parking demand that can be expected to be significantly less than a typical multi-family housing project, with an estimated parking demand of between 51 and 118 spaces, depending on the source utilized. Hence, the 118 parking spaces planned to be provided by the proposed project, are forecast to be adequate to serve the proposed project.