

Appendix O VMT Analysis

Appendices

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TECHNICAL MEMORANDUM

To: Elizabeth Kim
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Date: February 22, 2022

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Subject: ***Vehicle Miles Traveled (VMT) Analysis for the Brea 265 Specific Plan, Brea***

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As requested, Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit this Vehicle Miles Traveled (VMT) Analysis Technical Memorandum for the proposed Brea 265 Specific Plan (herein after referred to as “Project”) in the City of Brea, Orange County, California. This Technical Memorandum presents the VMT screening criteria, analysis methodology, significance thresholds and VMT analysis. It should be noted that the approach and methodology outlined in this Technical Memorandum is consistent with the *City of Brea Transportation Impact Analysis (TIA) Guidelines (dated September 2020)*, which provides additional detail on the language and analysis procedures described in this Technical Memorandum.

The Brea 265 Specific Plan is a master planned residential community consisting of 260.7 acres located in the City of Brea and unincorporated Orange County; although not a part of the Specific Plan, an additional 1.4 acres of open space located on the northeast corner of Valencia Avenue and Rose Drive has been included this resulting in a total overall acreage of 262.1 acres. The proposed Project is generally located east of the State Route (SR) 57 Freeway and north of SR-90 (Imperial Highway), towards the eastern portion of the City and is surrounded by existing residential neighborhood communities, the Brea Sports Park and Carbon Canyon Regional Park. The Specific Plan area is bisected by Valencia Avenue which runs in a north-south direction, and by Lambert Road which runs in an east-west direction. The Project site is located to the south of Lambert Road/Carbon Canyon Road, north of Rose Drive, east of Valencia Avenue and west of Carbon Canyon Regional Park. Of the 217.7 acres located within unincorporated Orange County, 123.2 acres is currently designated as “Hillside Residential”, and 94.5 acres is designated as “Low Density Residential” land use in the City’s General Plan. The 43-acre portion of the Project that is located within the City is designated as “Hillside Residential”.

The following sections of this Technical Memorandum present the Project description, City of Brea’s VMT screening criteria, analysis methodology, thresholds, VMT analysis and results.

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PROJECT DESCRIPTION

The proposed Project is a master planned residential community of low-density, medium-density, and high-density residential neighborhoods, parks, recreational amenities, and open space within thirteen (13) planning areas (PA) of the proposed specific plan. The Project will include a mix of approximately 1,100 residential dwelling units on 197.5 acres, up to 15.1 acres of parks/recreations uses, including up to 13 acres of Sports Park uses adjacent to the existing Brea Sports Park and a 2.1-acre Trail Staging Area, and 47.5 acres of open space/slopes. The proposed Project allows for a fire station and police substation on a 1.0-acre site on the northwest corner of Lambert and Valencia. Inclusion of 2.0 acres of Master Plan Right-of-way results in a total project acreage of 262.1 acres. Affordable housing units are also included as part of the total dwelling units proposed for the Project. The proposed Project would be phased and constructed based on market conditions. The proposed land uses would be linked together by an extensive trail network that will connect to the Tracks at Brea and other regional systems, as well as to the adjacent neighborhoods and off-site parks, open space, and surrounding employment centers and retail venues.

Per the Project's development tabulation, two (2) residential land use categories are proposed and consists of 450 "low density" DU, and 650 "medium density" DU, with 15.1 acres of parks/recreations uses, including up to 13-acres of Sports Park uses adjacent to the existing Brea Sports Park and a 2.1-acre Trail Staging Area. From review of the Project's details, the above-referenced land uses translate to the development of 450 single family detached DU, and 650 single family attached DU (i.e. townhomes, row homes, detached cluster homes, attached motorcourt homes, etc.). The proposed Sports Park component of the Project is essentially an expansion of the existing Brea Sports Park, that together will provide the Brea community and new residents of the Project with recreational opportunities.

Figure 1 presents a vicinity map for the Project site. **Figure 2** presents an existing aerial of the Project site. **Figure 3** presents the proposed land uses by area for the proposed Project, prepared by *KTGY Architecture Planning*.

PROJECT SCREENING CRITERIA

Project screening is used to determine if a project will be required to conduct a detailed VMT analysis. The following section discusses the various screening methods outlined in the *City of Brea Transportation Impact Analysis (TIA) Guidelines (dated September 2020)*, and outlines whether the Project will screen-out of further analysis, either in its entirety, or partially based on individual land uses.

Project components that screen-out are assumed to have no significant impact on transportation.

Step 1: Transit Priority Area (TPA) Screening

The *City of Brea Transportation Impact Analysis (TIA) Guidelines (dated September 2020)* states that:

- Projects located within a TPA¹ may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may NOT be appropriate if the project:
 1. Has a Floor Area Ratio (FAR) of less than 0.75;
 2. Includes more parking for use by residents, customers, or employees of the project than required by the City;
 3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the City of Brea, with input from the Southern California Association of Governments [SCAG]); or
 4. Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

Based on currently available transit service in the City of Brea, there are no identified TPA's in the vicinity of the Project.

Based on the above, the Project does not screen-out of further analysis since it is not located in a TPA.

Step 2: Low VMT Area Screening

Based on the *City of Brea Transportation Impact Analysis (TIA) Guidelines (dated September 2020)*, residential and office projects located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary as presented in *Attachment C Low VMT Area Map*.

Based on the above, the Project does not screen-out of further analysis since it is not located in a low VMT area per the Low VMT Area Map since it currently is within unincorporated Orange County and not presented in the Map for the City of Brea.

¹ A TPA is defined as a half mile area around an existing major transit stop or an existing stop along a high-quality transit corridor. Per the *Pub. Resources Code, § 21064.3* - 'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. Further, per the *Pub. Resources Code, § 21155* - For purposes of this section, a 'high-quality transit corridor' means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

Step 3: Project Type Screening

The *City of Brea Transportation Impact Analysis (TIA) Guidelines (dated September 2020)* states that:

- The following uses can be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:
 - Local parks
 - Local-serving retail uses less than 50,000 square feet
 - Community institutions (public libraries, fire stations, local government)
 - Affordable, supportive, or transitional housing
 - Project generating less than 110 daily vehicle trips

It should be noted that the Sports Park component of the Project does screen-out of further analysis and thus this project component is assumed to have no significant impact on transportation since it falls under the “local park” category. It should be noted that this was excluded as a model input.

*Further, it should be noted that the residential components of the Project do not screen-out since they do not fall within the categories listed above and they are anticipated to generate more than 110 daily vehicle trips as presented in **Table 1**.*

VEHICLE MILES TRAVELED (VMT) ANALYSIS METHODOLOGY

As required by the *City of Brea Transportation Impact Analysis (TIA) Guidelines (dated September 2020)*, projects that do not screen-out through the steps above shall complete a full VMT analysis and forecasting through the Orange County Traffic Analysis Model (OCTAM) to determine if the Project is anticipated to have a significant VMT impact. This analysis shall include both “Project generated VMT” for the project TAZs and “Project effect on VMT” estimates under the four scenarios listed below:

- Baseline Conditions
- Baseline Plus Project
- Cumulative No Project
- Cumulative Plus Project

Based on the above, a full VMT analysis utilizing OCTAM has been conducted to determine the VMT for the Project and for the City of Brea and will provide the following:

- Project-generated VMT per Service Population
- Link-level Boundary Citywide VMT per Service Population

VEHICLE MILES TRAVELED (VMT) IMPACT THRESHOLDS

As previously discussed, a project that does not meet the screening criteria will require preparation of a detailed transportation analysis. The project VMT will be evaluated in order to determine if the project is expected to cause a significant transportation impact. The VMT significance criteria as stated in the *City of Brea Transportation Impact Analysis (TIA) Guidelines (dated September 2020)* is detailed below.

- A project would result in a significant project-generated VMT impact if either of the following conditions are satisfied:
 - The baseline² or cumulative³ project-generated VMT per service population exceeds the City of Brea General Plan Buildout VMT per service population.
- The project's effect on VMT would be considered significant if it resulted in either of the following conditions to be satisfied:
 - The baseline or cumulative link-level boundary Citywide VMT per service population increases under the plus project condition compared to the no project condition.

Please note that the cumulative no project scenario reflects the adopted Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS); as such, if a project is consistent with the SCAG RTP/SCS, then the cumulative (project effect on VMT) shall be considered less than significant subject to consideration of other substantial evidence.

It is our understanding that the Project is consistent with the adopted Regional Transportation Plan Sustainable Communities Strategy (RTP/SCS), thus the cumulative impacts are considered to be less than significant. Further, it should be noted that the cumulative analysis is provided for informational purposes only.

² The Baseline Year for the current OCTAM 5.0 is 2016.

³ The Cumulative Year for the current OCTAM 5.0 is 2045.

Further, it should be noted that no phasing analysis has been conducted since it is not required per the City Guidelines.

VEHICLE MILES TRAVELED (VMT) ANALYSIS

Summarized in the section below are the VMT per Service Population values utilizing OCTAM for the City of Brea and the proposed Project. According to OCTAM, the Project is located in Traffic Analysis Zones (TAZs) 43, 52 and 53 (*Table 1* details the residential components and the corresponding TAZs) and the Project development totals were converted into Socio-Economic Data (SED) and inputted into OCTAM. *Figure 4* presents the TAZ Map from OCTAM.

VMT Impact Threshold for Project-Generated VMT

As shown below, the City of Brea General Plan buildout VMT per Service Population was calculated to be 30.1 VMT per Service Population. When compared to this figure, the Project baseline Project-generated VMT per Service Population is **13.11%** (TAZ 42), **33.62%** (TAZ 52) and **5.37%** (TAZ 53) below the City of Brea General Plan Buildout VMT per Service Population threshold and the cumulative Project-generated VMT per Service Population is **11.33%** (TAZ 42), **39.77%** (TAZ 52) and **4.49%** (TAZ 53) below the City General Plan Buildout VMT per Service Population threshold. Based on the criteria outlined in this report and the table below, the Project is not anticipated to have a Project-generated VMT impact.

Baseline Project-Generated VMT per Service Population			
Description	Project	City of Brea General Plan Buildout	Compared to Thresholds (City of Brea)
TAZ 43	26.1	30.1	13.11% Lower
TAZ 52	20.0	30.1	33.62% Lower
TAZ 53	28.4	30.1	5.37% Lower
Cumulative Project-Generated VMT per Service Population			
Description	Project	City of Brea General Plan Buildout	Compared to Thresholds (City of Brea)
TAZ 43	26.6	30.1	11.33% Lower
TAZ 52	18.1	30.1	39.77% Lower
TAZ 53	28.7	30.1	4.49% Lower

VMT Impact Threshold for Project’s Effect on VMT

As shown below, the proposed Project baseline link-level Citywide VMT per Service Population is **6.36%** below the “no Project” condition link-level Citywide VMT per

Service Population threshold and cumulative link-level Citywide boundary VMT per Service Population is **5.36%** below the “no Project” condition link-level Citywide VMT per Service Population threshold. Based on the criteria outlined in this report, the Project link-level VMT per Service Population will not increase under the “plus Project” condition when compared to “no Project” condition and thus, the Project’s effect on VMT is not anticipated to be significant.

Link-Level Boundary Citywide VMT per Service Population			
Description	No Project Scenario	Plus Project Scenario	Compared to Thresholds (No Project Scenario)
Baseline	15.42	14.44	6.36% Lower
Cumulative	14.55	13.77	5.36% Lower

It should be noted that as previously mentioned and according to the *City of Brea Transportation Impact Analysis (TIA) Guidelines (dated September 2020)*, if a project is consistent with the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), then the cumulative impacts shall be considered less than significant. Since, the proposed Project is consistent with the RTP/SCS, the cumulative impacts are considered to be less than significant and the cumulative analysis is provided for informational purpose only.

It is noted that the Project-Generated VMT/SP for TAZ 52 for baseline and cumulative conditions, is 33.62% and 39.77% lower than the City of Brea General Plan Buildout VMT/SP, respectively, which is considered reasonable for the reasons listed below:

- The Olinda Elementary School enrollment is included in the service population calculation and its effect results in a reduction to the VMT per service population value.
- The Olinda Elementary School helps reduce the VMT since the residents of TAZ 52 drive a shorter distance.
- There is a major employment center just south of the Project site which also promotes shorter distances to be driven for employment.
- The VMT/SP under the base conditions (without Project) for TAZ 52 is significantly lower than the City of Brea General Plan Buildout VMT/SP.
- The Project population-density increases from 4.46 to 11.54 because of the multi-family homes. Population is included in the service population calculation and its effect results in a reduction to the VMT per service population value.

- The areas surrounding TAZ 52 are yellow (VMT/SP below City average) as presented in the *Attachment C Low VMT Area Map*.

Further, it should be noted that the model was developed, validated and adopted by OCTA. The VMT/SP for the three (3) Project TAZs in the base model (without the addition of the Project) are below the average city VMT/SP. The Project VMT/SP characteristics are similar to the TAZ VMT/SP characteristics. It should be noted that the VMT is per SP and not total VMT, hence with the addition of the Project, the service population driving per day change is nominal.

ACTIVE TRANSPORTATION AND PUBLIC TRANSIT ANALYSIS

According to the *City of Brea Transportation Impact Analysis (TIA) Guidelines (dated September 2020)* potential impacts to public transit, pedestrian facilities and travel, and bicycle facilities and travel can be evaluated using the following criteria:

- A significant impact occurs if the project conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decreases the performance or safety of such facilities.

It should be noted that the proposed Project is consistent with the adopted policies, plans, or programs regarding active transportation or public transit facilities. Further, the proposed Project will not decrease the performance or safety of such facilities and does not have the potential to conflict with existing or proposed facilities supporting these travel modes.

Thus, based on the above, the Project is not anticipated to result in a significant impact on the City's active transportation facilities, the public transit system, or the safety of residents and patrons of those facilities and services.

CONCLUSION

Consistent with the *City of Brea Transportation Impact Analysis (TIA) Guidelines (dated September 2020)* and based on the VMT methodology, criteria, guidelines, thresholds and results outlined in this Technical Memorandum, the Project is not anticipated to result in a significant VMT impact nor will the Project's effect on VMT be considered significant under baseline or cumulative conditions. Furthermore, the Project is not anticipated to result in a significant impact on the City's active transportation facilities, the public transit system, or the safety of residents and patrons of those facilities and services.

Elizabeth Kim
February 22, 2022
Page 9



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

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TABLE 1
PROJECT TRIP GENERATION RATES AND FORECAST⁴

Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
<u>Trip Generation Rates:</u>							
▪ 210: Single Family Detached Housing (TE/DU)	9.43	26%	74%	0.70	63%	37%	0.94
▪ 215: Single Family Attached Housing (TE/DU)	7.20	31%	69%	0.48	57%	43%	0.57
▪ 220: Multifamily Housing (Low-Rise ⁵) (TE/DU)	6.74	24%	76%	0.40	63%	37%	0.51
▪ 488: Soccer Complex (TE/Field) ⁶	71.33	61%	39%	0.99	66%	34%	16.43
<u>Proposed Project Zone 1 (TAZ 43):</u>							
▪ Single Family Homes (105 DU)	990	19	55	74	62	37	99
<u>Proposed Project Zone 2 (TAZ 52):</u>							
▪ Multifamily/Single Family Attached (507 DU)	3,650	75	168	243	165	124	289
▪ Sports Park (6 soccer fields)	<u>428</u>	<u>4</u>	<u>2</u>	<u>6</u>	<u>65</u>	<u>34</u>	<u>99</u>
<i>Zone 2 Subtotal</i>	<i>4,078</i>	<i>79</i>	<i>170</i>	<i>249</i>	<i>230</i>	<i>158</i>	<i>388</i>
<u>Proposed Project Zone 3 (TAZ 53):</u>							
▪ Single Family Homes (345 DU)	3,253	63	179	242	204	120	324
▪ Multifamily/Single Family Attached (143 DU)	1,030	21	48	69	46	36	82
<i>Zone 3 Subtotal</i>	<i>4,283</i>	<i>84</i>	<i>227</i>	<i>311</i>	<i>250</i>	<i>156</i>	<i>406</i>
Total Proposed Project	9,351	182	452	634	542	351	893

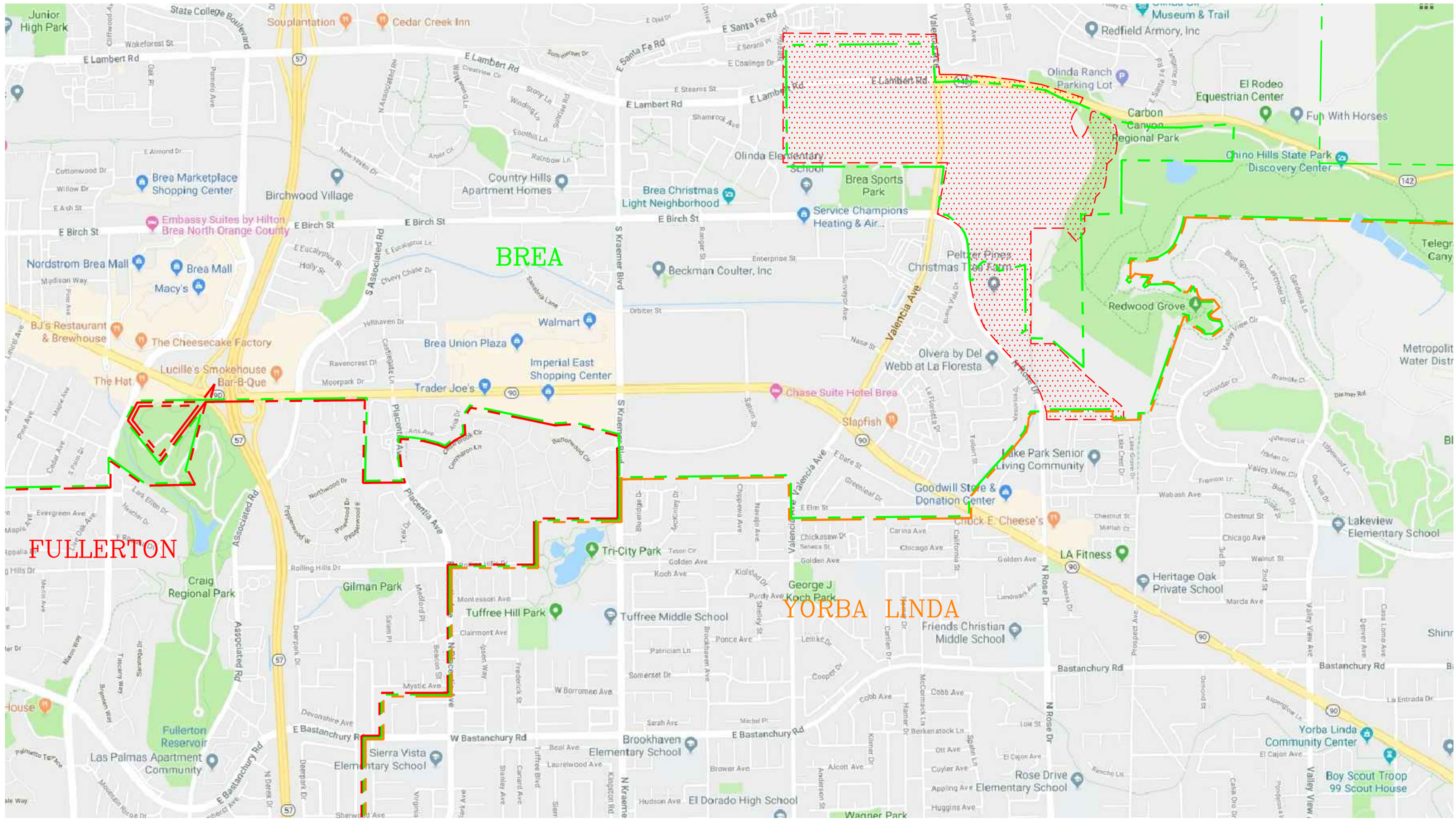
Notes:

TE/DU = Trip End per Dwelling Unit

⁴ Source: *Trip Generation*, 11th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2021).

⁵ Low-Rise Multifamily Housing consists of buildings that are less than 3 levels.

⁶ A soccer complex is an outdoor facility that is used for non-professional soccer games. It may consist of multiple fields. The size of each field within the land use may vary to accommodate games for different age groups. On-site amenities may include stadium seating, a fitness trail, an activities shelter, aquatic center, picnic grounds, basketball and tennis courts, and a playground.



SOURCE: GOOGLE
 KEY
 [Red dotted pattern] = PROJECT SITE

FIGURE 1

VICINITY MAP
 BREAs 265 SPECIFIC PLAN, BREAs



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SOURCE: GOOGLE
KEY

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FIGURE 2

EXISTING SITE AERIAL
BREA 265 SPECIFIC PLAN, BREA



NO SCALE

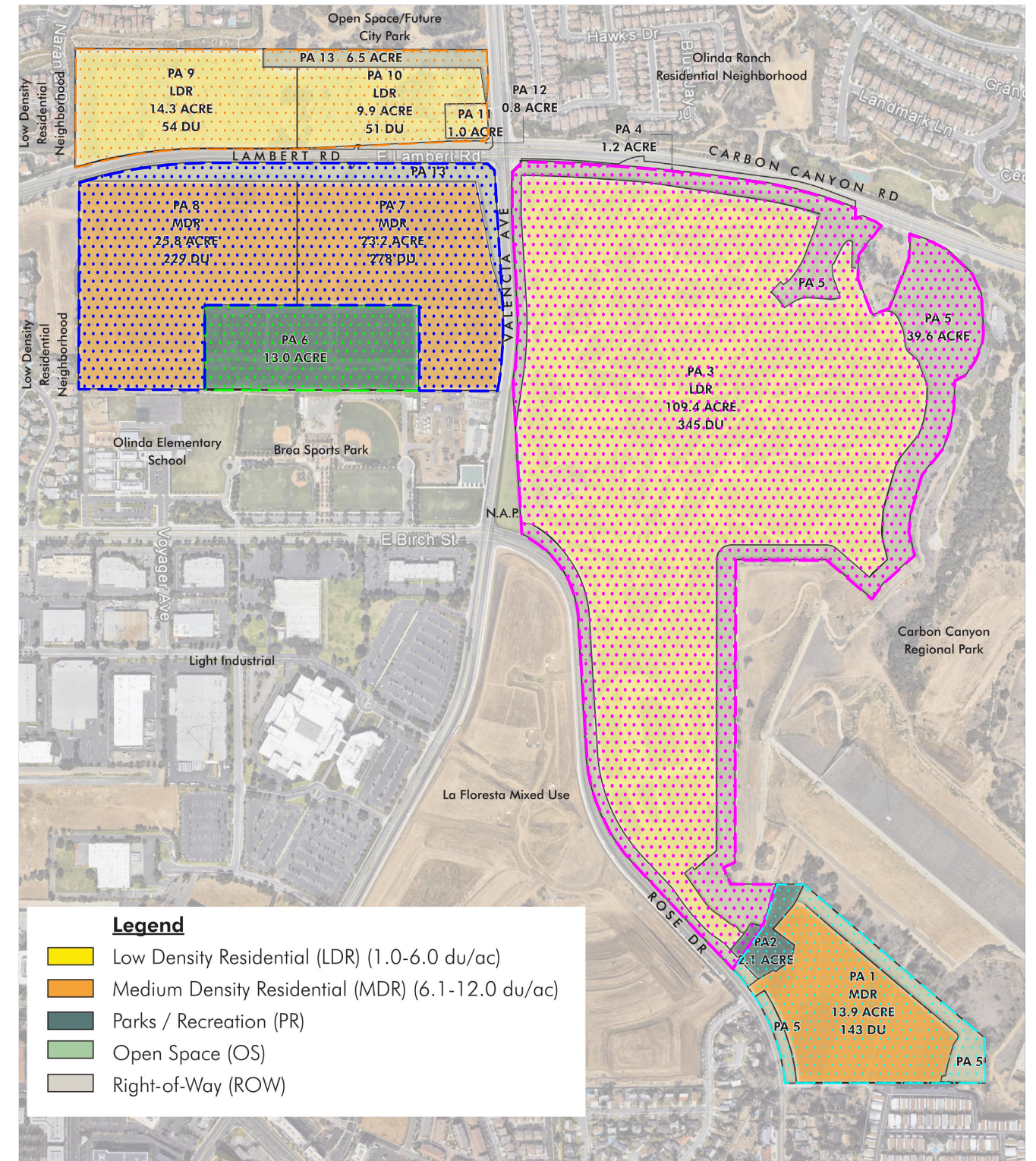
Table 3-1 Proposed Land Use Summary

Land Use	Gross Area (Acres)	Density Range (DU/AC)	Dwelling Units
Residential¹			
Low Density Residential (LDR)	134.6	1.0 – 6.0	450
Medium Density Residential (MDR)	62.9	6.1 – 12.0	650
Residential Subtotal	197.5		1,100
Nonresidential			
Park/Recreation (PR)	15.1	n/a	n/a
Open Space (OS) ²	47.5	n/a	n/a
Master Plan Right-of-Way	2.0	n/a	n/a
Nonresidential Subtotal	64.6	n/a	n/a
Total	262.1 acres	4.2	1,100 Units

¹ Units may be transferred between density designations and locations.
² Open Space category does not include private open space and recreation areas.

Table 3-2 Proposed Land Use Category Statistical Summary by Planning Area

Planning Area (PA)	Land Use Category	Gross Area (AC)	Density Range (DU/AC) ¹	Target Density (DU/AC) ²	Dwelling Units (DU) ³
1	MDR	13.9	6.1 – 12.0	10.3	143
2	PR	2.1	n/a	n/a	n/a
3	LDR	109.4	1.0 – 6.0	3.2	345
4	ROW	1.2	n/a	n/a	n/a
5	OS	39.6	n/a	n/a	n/a
6	PR	13.0	n/a	n/a	n/a
7	MDR	23.2	6.1 – 12.0	12.0	278
8	MDR	25.8	6.1 – 12.0	8.9	229
9	LDR	14.3	1.0 – 6.0	3.8	54
10	LDR	9.9	1.0 – 6.0	5.2	51
11 ⁴	LDR	1.0	1.0 – 6.0	n/a	n/a
12	ROW	0.8	n/a	n/a	n/a
13	OS	6.5	n/a	n/a	n/a
Specific Plan Total		260.7 acres		4.2	1,100
Not-a-Part	OS	1.4	n/a	n/a	n/a
Proposed Project Total		262.1	n/a	n/a	1,100



Legend

- Low Density Residential (LDR) (1.0-6.0 du/ac)
- Medium Density Residential (MDR) (6.1-12.0 du/ac)
- Parks / Recreation (PR)
- Open Space (OS)
- Right-of-Way (ROW)

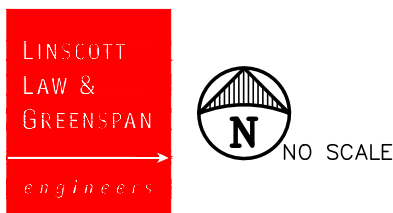
SOURCE: KTG ARCHITECTURE+PLANNING

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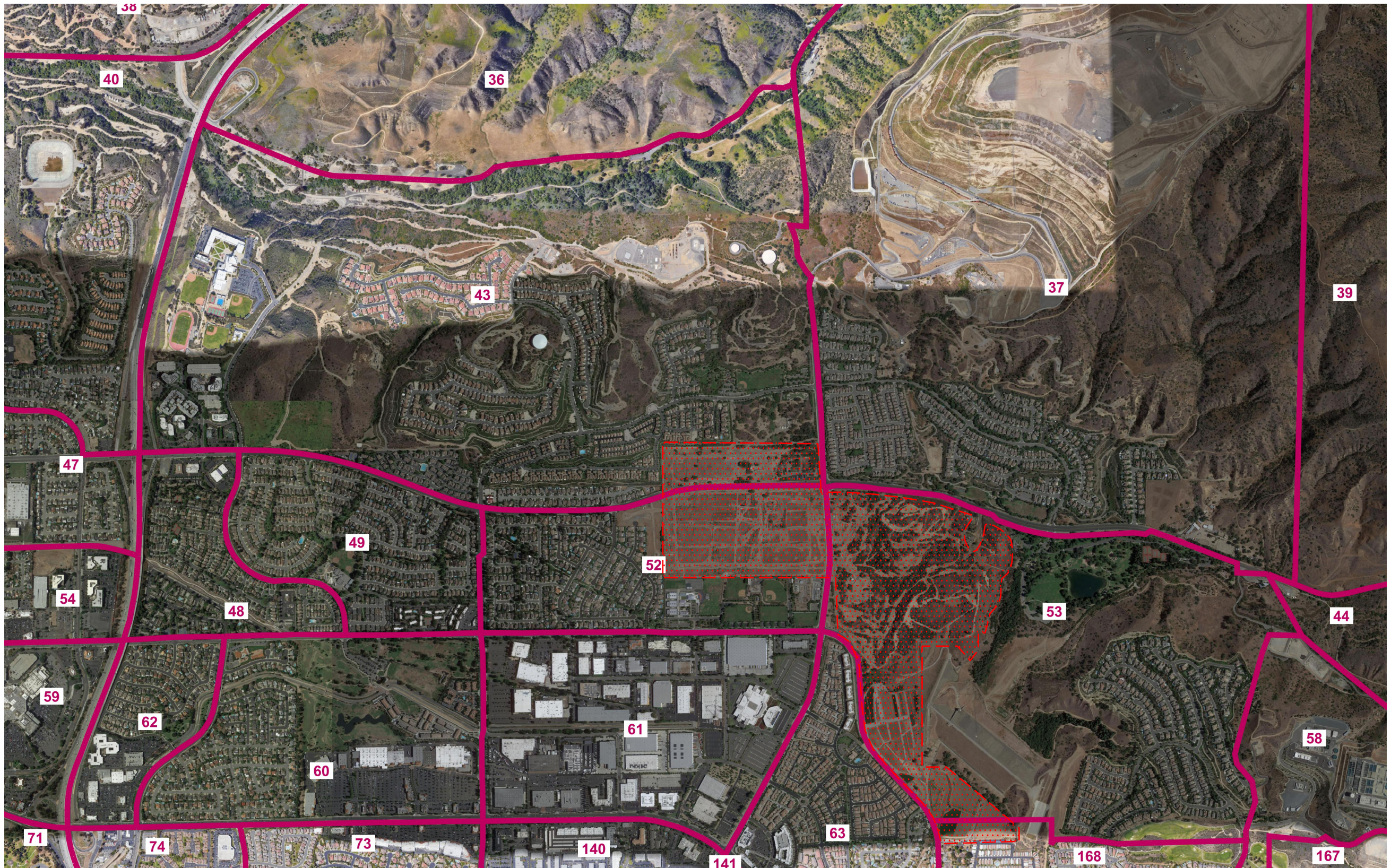
- = ZONE 1
- = ZONE 2A
- = ZONE 2B
- = ZONE 3A
- = ZONE 3B

FIGURE 3

PROPOSED LAND USES BY AREA
 BRE 265 SPECIFIC PLAN, BRE




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SOURCE: OCTAM

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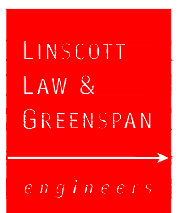


FIGURE 4

TAZ MAP

BREA 265 SPECIFIC PLAN, BREA